CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

CEASE AND DESIST ORDER NO. R2-2007-0063

REQUIRING BROWNING-FERRIS INDUSTRIES (BFI)
TO CEASE AND DESIST DISCHARGING PARTIALLY-TREATED WASTEWATER
TO WATERS OF THE STATE

WHEREAS the California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter "Regional Water Board"), finds that:

1. Browning-Ferris Industries (BFI) (hereinafter "Discharger") owns and operates the Corinda Los Trancos (Ox Mountain) Landfill, located north of Highway 92 and east of Half Moon Bay, San Mateo County. The Ox Mountain Landfill is a Class III municipal refuse disposal site. Such facilities can generate several types of wastewater, including polluted groundwater. To properly manage polluted groundwater, BFI has installed a groundwater extraction and treatment system (the Plant) consisting of two 2,000-pound granular activated carbon filtration units installed in series. The Plant treats only naturally-occurring groundwater that contains pollutants as a result of infiltration into the landfill or contact with the landfill liner system. It has a maximum permitted flow rate of 80 gallons per minute.

2. The Plant discharge has been regulated by waste discharge requirements in Order No. 93-146 (NPDES Permit No. CA0029947).

3. Concurrent with the adoption of this Cease and Desist Order, the Regional Water Board adopted Order No. R2-2007-0062 (hereinafter "Permit"), reissuing waste discharge requirements for the Discharger. The Permit contains prohibitions, limitations, and provisions regulating the discharge. The limitations include those listed in Table 1 below.

Table 1: Permit Effluent Limits

Parameter	Final Effluent Limits in Permit		Monitoring Station
	Average Monthly Effluent Limit (µg/L)	Maximum Daily Effluent Limit (µg/L)	
Copper	5.1	10	EFFL-1
Mercury	0.018	0.046	EFFL-1
Cyanide	4.3	5.2	EFFL-1
Nickel	31	70	EFFL-1
Selenium	4.0	9.0	EFFL-1
Silver	1.0	2.4	EFFL-1
Benzene	--	1.0	EFFL-1
Vinyl Chloride	--	0.5	EFFL-1

4. The Discharger submitted an infeasibility study demonstrating that it cannot comply with several of the effluent limits listed in Table 1. As stated in the Permit findings, the Regional Water Board concurs with the Discharger in the cases of copper, mercury, cyanide, nickel, and silver because the effluent limits are more stringent than the maximum effluent concentrations estimated for flow from the Plant; therefore, the Discharger will discharge waste in violation of the Permit. Additionally, it is infeasible for the Discharger to immediately comply with the Permit's limits on selenium and vinyl chloride; the Discharger violated Order No. 93-146's limits on these pollutants, and the Permit's limits on these pollutants are at least as stringent as in Order No. 93-146.

5. Water Code § 13301 authorizes the Regional Water Board to issue a Cease and Desist Order when it finds that a waste discharge is taking place, or threatening to take place, in violation of Regional Water Board requirements.

6. Because the Discharger will violate or threatens to violate required effluent limits, this Order is necessary to ensure that the Discharger achieves compliance. This Order establishes time schedules for the Discharger to complete necessary investigative, preventive, and remedial actions to address its imminent and threatened violations.

7. The time schedules in this Order are parameter-specific and intended to be as short as possible. They account for the considerable uncertainty in determining effective measures (e.g., treatment plant upgrades) necessary to achieve compliance. The time schedules are based on reasonably expected times needed to identify on-site treatment alternatives, test and select from among alternatives, and construct plant upgrades. The Regional Water Board may wish to revisit these assumptions as more information becomes available.

8. As part of the time schedules to achieve compliance, this Order requires the Discharger to comply with interim effluent limits, where feasible. These interim limits are intended to ensure that the Discharger maintains at least its existing performance while completing all tasks required during the time schedules. The interim limits are based on past performance or limits in previous orders, whichever are more stringent. If based on past performance, the interim limits represent the 99.87th percentile of actual measured discharge concentrations (three standard deviations from the mean). If insufficient monitoring data exist to derive a reliable performance-based limit, and if no previous order contained a limit, then this Order does not establish an interim limit.

9. This Order is an enforcement action and, as such, is exempt from the provisions of the California Environmental Quality Act (Public Resources Code § 21000 et seq.) in accordance with 14 CCR § 15321.

10. The Regional Water Board notified the Discharger and interested persons of its intent to consider adoption of this Cease and Desist Order, and provided an opportunity to submit written comments and appear at a public hearing. The Regional Water Board, in a public hearing, heard and considered all comments.

IT IS HEREBY ORDERED, in accordance with Water Code § 13301, that the Discharger shall cease and desist from discharging and threatening to discharge wastes in violation of its Permit by complying with the following provisions:

1. Prescribed Actions. The Discharger shall comply with the required actions in Table 2 in accordance with the time schedules provided therein to comply with all effluent limits contained in the Permit. All deliverables listed in Table 2 shall be acceptable to the Executive Officer, who will review them for adequacy and compliance with the Table 2 requirements. The Discharger shall further implement

all actions set forth in each deliverable, unless the Executive Officer finds the deliverable to be unacceptable.

2. Exceptions. The following exceptions apply to the parameter-specific time schedules and prescribed actions in Table 2.

   a. *Mercury*. The mercury-related time schedules and prescribed actions shall cease to be in effect upon the effective date of a permit* that supersedes the mercury limits in the Permit.

3. Reporting Delays. If the Discharger is delayed, interrupted, or prevented from meeting one or more of the time schedules in Table 3 due to circumstances beyond its reasonable control, the Discharger shall promptly notify the Executive Officer, provide the reasons and justification for the delay, and propose time schedules for resolving the delay.

Table 2: Time Schedules and Prescribed Actions

Action	Deadline						
	Mercury	**Cyanide**	**Selenium**	**Copper**	**Nickel**	**Silver**	**Vinyl Chloride**
a. Comply with the following interim effluent limits (at Monitoring Station EFFL-1): Mercury: Maximum daily effluent limit (MDEL) = 2.4 µg/L Cyanide: MDEL= 5.2 µg/L Copper: MDEL = 12 µg/L Nickel: MDEL = 120 µg/L Silver: MDEL = 4 µg/L	Upon the effective date of this Order	Upon the effective date of this Order	Not Applicable	Upon the effective date of this Order	Upon the effective date of this Order	Upon the effective date of this Order	Not Applicable
b. Investigate sampling and analytical protocol, develop comprehensive monitoring plan, and submit report.	Report by March 1, 2008						Not Applicable
c. Implement monitoring plan and submit report on effect of improved sampling and analytical protocol.	Report by March 1, 2009						Not Applicable
d. If data submitted in task c provide evidence that pollutant does not violate or threaten to violate final effluent limits specified in Effluent Limitations and Discharge Specifications A.2 of the Permit, then monitor and submit annual report.	Annually each February 1 in Annual Self-Monitoring Report required by Permit Attachment E, Monitoring and Reporting Program						Not Applicable

* In March 2007, Regional Water Board staff publicly noticed a draft permit that could supersede existing mercury requirements and implement the wasteload allocations for municipal and industrial wastewater discharges identified in the San Francisco Bay Mercury TMDL that the Regional Water Board adopted in August 2006.

Action	Deadline						
	Mercury	**Cyanide**	**Selenium**	**Copper**	**Nickel**	**Silver**	**Vinyl Chloride**
e. For vinyl chloride, and for mercury, cyanide, selenium, copper, nickel, and silver if data submitted in task c or d provide evidence of discharge that is or threatens to be out of compliance (as defined in Section 2.4.5 of the SIP) with final effluent limits, implement pilot studies evaluating improvements to the groundwater treatment system likely to reduce concentrations of cyanide, mercury, selenium, copper, nickel, silver, and/or vinyl chloride from the groundwater treatment system, and therefore to receiving waters.	March 1, 2009	March 1, 2009	March 1, 2009	March 1, 2009	March 1, 2009	March 1, 2009	Upon the effective date of this Order
f. Evaluate and report on the results of the pilot studies in reducing concentrations of cyanide, mercury, selenium, copper, nickel, silver, and/or vinyl chloride from the groundwater treatment system.	March 1, 2010	March 1, 2010	March 1, 2010	March 1, 2010	March 1, 2010	March 1, 2010	September 1, 2008
g. In the event that the pilot studies performed in task e are unsuccessful at bringing the discharge into compliance with final limits for cyanide, mercury, selenium, copper, nickel, silver, and/or vinyl chloride, identify additional treatment technologies and submit a schedule for implementation of additional actions to reduce the concentrations of these pollutants.	March 1, 2010	March 1, 2010	March 1, 2010	March 1, 2010	March 1, 2010	March 1, 2010	September 1, 2008
h. Implement the improvements and modifications to the groundwater treatment system in accordance with the schedule submitted in tasks f and g, as appropriate, and submit annual status reports.	Annually each February 1 in Annual Self-Monitoring Report required by Permit Attachment E, Monitoring and Reporting Program						
i. Submit documentation confirming complete plan implementation and comply with effluent limits in the Permit.	October 28, 2011	October 28, 2011	October 28, 2011	October 28, 2011	October 28, 2011	October 28, 2011	April 28, 2010

4. Consequences of Non-Compliance. If the Discharger fails to comply with the provisions of this Order, the Executive Officer is authorized to take further enforcement action or to request the Attorney General to take appropriate actions against the Discharger in accordance with Water Code §§ 13331, 13350, 13385, and 13386. Such actions may include injunctive and civil remedies, if appropriate, or the issuance of an Administrative Civil Liability Complaint for Regional Water Board consideration.

5. Effective Date. This Order shall be effective on the effective date of the Permit.

I, Bruce H. Wolfe, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on August 8, 2007.

Digitally signed by Bruce Wolfe
Date: 2007.09.13 15:01:12 -07'00'

BRUCE H. WOLFE
Executive Officer

California Regional Water Quality Control Board
San Francisco Bay Region

Linda S. Adams
Secretary for
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Arnold Schwarzenegger
Governor

ORDER NO. R2-2007-0062
NPDES NO. CA0029947

WASTE DISCHARGE REQUIREMENTS FOR THE BROWNING-FERRIS INDUSTRIES, CORINDA LOS TRANCOS (OX MOUNTAIN) LANDFILL DISCHARGE TO CORINDA LOS TRANCOS CREEK

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

Table 1. Discharger Information

Discharger	Browning-Ferris Industries (BFI)
Name of Facility	Corinda Los Trancos (Ox Mountain) Landfill
Facility Address	12310 San Mateo Road
	Half Moon Bay, CA 94019
	San Mateo County

The discharge by Browning-Ferris Industries from the discharge point identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Treated Groundwater	37° 29' 38" N	122° 24' 41" W	Corinda Los Trancos Creek

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**August 8, 2007**
This Order shall become effective on:	**September 1, 2007**
This Order shall expire on:	**August 31, 2012**
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge.	
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, not later than 180 days in advance of the Order expiration date as application for issuance of new waste discharge requirements.	

IT IS HEREBY ORDERED, that Order No. 93-146 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the federal Clean

Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on **August 8, 2007**.

Digitally signed by Bruce Wolfe
Date: 2007.09.13 15:00:01
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Bruce H. Wolfe, Executive Officer

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List of Tables

List of Attachments

Attachment G - The following documents are part of this Permit, but are not physically attached due to volume. They are available on the internet site at www.waterboards.ca.gov/sanfranciscobay

- Self-Monitoring Program, Part A, adopted August 1993
- Standard Provisions and Reporting Requirements, August 1993

- August 6, 2001 Staff Letter: Requirement for Priority Pollutant Monitoring in Receiving Water and Wastewater Discharges

I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	Browning-Ferris Industries
Name of Facility	Corinda Los Trancos (Ox Mountain) Landfill
Facility Address	North of Highway 92, east of Half Moon Bay
	Half Moon Bay, CA 94019
	San Mateo County
Facility Contact, Title, and Phone	Jim Gunderson (650) 726-1819
Mailing Address	12310 San Mateo Road, Half Moon Bay, California 94019
Type of Facility	Class III Solid Waste Disposal Site
Facility Design Flow	115,200 gpd (average daily discharge)

II. FINDINGS

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter Regional Water Board), finds:

A. **Background.** Browning-Ferris Industries (BFI) (hereinafter Discharger) is currently discharging pursuant to Order No. 93-146 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0029947. The Discharger submitted a Report of Waste Discharge, dated June 2006, and applied for an NPDES permit renewal to discharge up to 115,200 gpd of treated groundwater from the Corinda Los Trancos Landfill. The application was deemed complete on July 6, 2006.

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. **Facility Description.** The Discharger owns and operates a Class III municipal refuse disposal site. Such facilities can generate several types of wastewater, including leachate, truck/equipment wash water, storm water, and polluted groundwater. This Order addresses only polluted groundwater – naturally occurring groundwater that has been polluted as a result of infiltration into the landfill or by pollutants released from the landfill liner system. To control the migration of polluted groundwater the Discharger has installed a groundwater extraction and treatment system consisting of two 2,000-pound granular activated carbon filtration units installed in series. Treated groundwater is discharged at Discharge Point 001 (see table on cover page) to the Corinda Los Trancos Creek, waters of the United States, and tributary to Pilarcitos Creek, within the San Mateo Coastal Basin watershed. Attachment B provides a map of the area around the facility. Attachment C provides a flow schematic of the facility.

C. **Legal Authorities.** This Order is issued pursuant to CWA section 402 and implementing regulations adopted by the USEPA and Chapter 5.5, Division 7 of the California Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4, Division 7 of the Water Code (commencing with section 13260).

D. **Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through G are also incorporated into this Order.

E. **California Environmental Quality Act (CEQA).** Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.

F. **Technology-Based Effluent Limitations.** NPDES regulations at 40 CFR 122.44 (a)(1) require that permits include applicable technology-based limitations and standards. Although USEPA has published Effluent Limitation Guidelines for the Landfills Point Source Category at 40 CFR 445,

these technology-based requirements are expressly not applicable to polluted groundwater originating at landfill sites. This Order does not include technology-based effluent limitations.

G. Water Quality-Based Effluent Limitations. 40 CFR 122.44(d) requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) may be established: (1) using USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) on an indicator parameter for the pollutant of concern; or (3) using a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

H. Water Quality Control Plans. The Regional Water Board adopted a *Water Quality Control Plan for the San Francisco Bay Region* (hereinafter the Basin Plan) (revised in 2005) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan at Chapter 2.2.1 states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. The Basin Plan does not specifically identify beneficial uses for Corinda Los Trancos Creek, but does identify present and potential uses for Pilarcitos Creek, to which Corinda Los Trancos Creek is tributary. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Thus, as discussed in detail in the Fact Sheet, beneficial uses applicable to Corinda Los Trancos Creek are as follows:

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Corinda Los Trancos Creek	Existing: • Agricultural Supply (AGR) • Cold Freshwater Habitat (COLD) • Fish Migration (MIGR) • Municipal and Domestic Supply (MUN) • Preservation of Rare and Endangered Species (RARE) • Fish Spawning (SPWN) • Warm Freshwater Habitat (WARM) • Wildlife Habitat (WILD) Potential: • Water Contact Recreation (REC1) • Noncontact Water Recreation (REC2)

Requirements of this Order implement the Basin Plan.

The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on

May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for surface waters. Requirements of this Order implement the Thermal Plan.

I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR apply in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the State. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants and are applicable to this discharge.

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

K. **Compliance Schedules and Interim Requirements.** Section 2.1 of the SIP provides that, based on a Discharger's request and demonstration that it is infeasible for an existing discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order does not include compliance schedules and interim effluent limitations and/or discharge specifications.

L. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes. [40 CFR § 131.21; 65 Fed. Reg. 24641 (April 27, 2000)]. Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

M. **Stringency of Requirements for Individual Pollutants.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. Technology-based effluent limitations are not included in this Order. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the

extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order (specifically arsenic, cadmium, chromium VI, copper (freshwater), lead, nickel, silver (1-hour), zinc were approved by USEPA on January 5, 2005, respectively, and are applicable water quality standards pursuant to 40 CFR 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

N. **Antidegradation Policy.** NPDES regulations at 40 CFR 131.12 require that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements and incorporates by reference both the State and federal antidegradation policies. As discussed in detail in the Fact Sheet the permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

O. **Anti-Backsliding Requirements.** CWA Sections 402(o)(2) and 303(d)(4) and NPDES regulations at 40 CFR122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. The effluent limitations in this Order are consistent with applicable anti-backsliding requirements of the CWA and NPDES regulations.

P. **Monitoring and Reporting.** 40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

Q. **Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet (Attachment F).

R. **Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections IV.B, IV.C, and V.B of this Order are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently,

violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

S. **Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet (Attachment F).

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

III. DISCHARGE PROHIBITIONS

A. Discharge of treated or untreated groundwater from the Discharger's groundwater extraction system other than what is described in this Order is prohibited.

B. Discharge of treated groundwater greater than 115,200 gpd is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFFL-1 as described in the attached MRP:

a. The pH of the discharge shall not exceed 8.5 nor be less than 6.5.

b. Discharges from the facility shall not contain toxic pollutants at concentrations greater than the following maximum daily and average monthly effluent limitations.

Table 6. Effluent Limitations for Toxic Pollutants

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Copper	µg/L	5.1	10	---	---
Mercury	µg/L	0.018	0.046	---	---
Nickel	µg/L	31	70	---	---
Selenium	µg/L	4.0	9.0		
Silver	µg/L	1.0	2.4	---	---
Cyanide	µg/L	4.3	5.2	---	---
Benzene	µg/L	---	1.0	---	---
Vinyl Chloride	µg/L	---	0.5	---	---

c. Whole Effluent Acute Toxicity

(1) Representative samples of the effluent shall meet the following limits for acute toxicity: Bioassays shall be conducted in compliance with Section V.A of the Monitoring and Reporting Program (MRP, Attachment E).

(2) The survival of organisms in undiluted combined effluent shall be a three (3) sample median value of not less than 90 percent survival, and a single sample value of not less than 70 percent survival.

(3) These acute toxicity limitations are further defined as follows.

(4) 3 sample median: A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit, if one or more of the past three or less bioassay tests show less than 90 percent survival.

(5) Bioassays shall be performed using the most up-to-date USEPA protocol and the most sensitive species as specified in writing by the Executive Officer based on the most recent screening test results. Bioassays shall be conducted in compliance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms," currently 5th Edition (EPA-821-R-02-012), with

exceptions granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP) upon the Discharger's request with justification.

(6) If the Discharger can demonstrate to the satisfaction of the Executive Officer that toxicity exceeding the levels cited above is caused by ammonia and that the ammonia in the discharge is not adversely impacting receiving water quality or beneficial uses, then such toxicity does not constitute a violation of this effluent limitation.

B. Land Discharge Specifications

Not Applicable

C. Reclamation Specifications

Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in Corinda Los Trancos Creek:

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

   a. Floating, suspended, or deposited microscopic particulate matter or foam in concentrations that cause nuisance or adversely affect beneficial uses;

   b. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;

   c. Alterations of temperature, turbidity, or apparent color beyond present natural background levels;

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

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

2. The discharges shall not cause the following limits to be exceeded in waters of the State at any one place within one foot of the water surface:

   a. Dissolved Oxygen: 7.0 mg/L, minimum

The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, then the discharges shall not cause further reduction in ambient dissolved oxygen concentrations.

b. Dissolved Sulfide: Natural Background Levels

c. Un-ionized Ammonia: 0.025 mg/L as N, (annual median); and 0.16 mg/L as N, (maximum.)

d. Nutrients: Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

3. Discharges shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board as required by the CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to CWA Section 303, or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

B. Groundwater Limitations

Not applicable

VI. PROVISIONS

A. Standard Provisions

1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.

2. **Regional Water Board Standard Provisions.** The Discharger shall comply with all applicable items of the *Standard Provisions and Reporting Requirements, August* 1993 (Attachment G), including any amendments thereto. Where provisions or reporting requirements specified in this Order and/or Attachment G are different for equivalent or related provisions or reporting requirements given in the Standard Provisions in Attachment D, the specifications of this Order and/or Attachment G shall in apply in areas where those provisions are more stringent. Duplicative requirements in the federal Standard Provisions in VI.A.1.2 above (Attachment D) and the regional Standard Provisions (Attachment G) are not separate requirements. A violation of a duplicative requirement does not constitute two separate violations.

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order.

C. Special Provisions

1. Reopener Provisions

The Regional Water Board may modify or reopen this Order prior to its expiration date in any of the following circumstances as allowed by law:

a. If present or future investigations demonstrate that the discharge(s) governed by this Order will or have a reasonable potential to cause or contribute to, or will cease to, have adverse impacts on water quality and/or beneficial uses of the receiving waters.

b. If new or revised WQOs, or TMDLs come into effect for the San Francisco Bay estuary and contiguous water bodies (whether statewide, regional, or site-specific). In such cases, effluent limitations in this Order will be modified as necessary to reflect updated WQOs and waste load allocations in TMDLs. Adoption of effluent limitations contained in this Order is not intended to restrict in any way future modifications based on legally adopted WQOs, TMDLs, or as otherwise permitted under Federal regulations governing NPDES permit modifications.

c. If translator or other water quality studies provide a basis for determining that a permit condition(s) should be modified.

d. If administrative or judicial decision on a separate NPDES permit or WDR that addresses requirements similar to this discharge.

e. Or as otherwise authorized by law.

The Dischargers may request permit modification based on the above. The Dischargers shall include in any such request an antidegradation and antibacksliding analysis.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Characterization of Receiving Water and Effluent for Toxic Pollutants

The Discharger shall continue to monitor and evaluate receiving water and the discharge from Discharge Point 001 (measured at EFFL-1) for the constituents listed in Enclosure A of the Regional Water Board's August 6, 2001 Letter, according to the sampling frequency specified in the attached MRP (Attachment E). Compliance with this requirement shall be achieved in accordance with the specifications stated in the Regional Water Board's August 6, 2001 Letter under "Effluent Monitoring for Major Discharger" And "Receiving Water Monitoring for Dischargers to Upland Freshwater and Streams."

The Discharger shall evaluate on an annual basis if concentrations of any constituent increase over past performance. The Discharger shall investigate the cause of the increase. The investigation may include, but need not be limited to, an increase in the effluent monitoring frequency, monitoring of internal process streams, and monitoring of influent sources. This may be satisfied through identification of these constituents as "Pollutants of Concern" in the Discharger's Pollutant Minimization Program described in

Provision VI.C.3, below. A summary of the annual evaluation of data and source investigation activities shall also be reported in the annual self-monitoring report.

A final report that presents all the data shall be submitted to the Regional Water Board no later than 180 days prior to the Order expiration date. This final report shall be submitted with the application for permit reissuance.

b. Chronic Toxicity Screening

The Discharger shall perform Chronic Toxicity Screening Phase study as described in Appendix E-1 and E-2 of the MRP (Attachment E). The Discharger shall conduct this study anytime during the term of this Order but no later than 180 days prior to the expiration date, and shall submit a final report describing the results with the application for permit reissuance.

3. Best Management Practices and Pollution Prevention

a. The Discharger shall continue to improve, in a manner acceptable to the Executive Officer, its existing Pollutant Minimization Program to reduce pollutant loadings the groundwater treatment system and therefore to the receiving waters.

b. The Discharger shall submit an annual report, acceptable to the Executive Officer, no later than February 28th of each calendar year. The annual report shall cover January through December of the preceding year. Each annual report shall include at least the following information:

(1) A brief description of its treatment plant, treatment plant processes and service area.

(2) A discussion of the current pollutants of concern. Periodically, the Discharger shall determine which pollutants are currently a problem and/or which pollutants may be potential future problems. This discussion shall include the reasons why the pollutants were chosen.

(3) Identification of sources for the pollutants of concern. This discussion shall include how the Discharger intends to estimate and identify pollutant sources. The Discharger should also identify sources or potential sources not directly within the ability or authority of the Discharger to control, such as pollutants in the potable water supply and air deposition.

(4) Identification of tasks to reduce the sources of the pollutants of concern. This discussion shall identify and prioritize tasks to address the Discharger's pollutants of concern. The Discharger may implement the tasks themselves or participate in group, regional, or national tasks that will address its pollutants of concern whenever it is efficient and appropriate to do so. A time line shall be included for the implementation of each task.

(5) Outreach to employees. The Discharger shall inform its employees about the pollutants of concern, potential sources, and how they might be able to help reduce

the discharge of these pollutants. The Discharger may provide a forum for employees to provide input to the program.

(6) Continuation of Public Outreach Program. The Discharger shall prepare a public outreach program to communicate pollution minimization measures to its service area. Outreach may include participation in existing community events such as county fairs, initiating new community events such as displays and contests during Pollution Prevention Week, conducting school outreach programs, conducting plant tours, and providing public information in various media. Information shall be specific to target audiences. The Discharger shall coordinate with other agencies as appropriate.

(7) Discussion of criteria used to measure Program's and tasks' effectiveness. The Discharger shall establish criteria to evaluate the effectiveness of its Pollution Minimization Program. This discussion shall include of the specific criteria used to measure the effectiveness of each of the tasks in item b.iii, b.iv, b.v, and b.vi.

(8) Documentation of efforts and progress. This discussion shall detail all of the Discharger's activities in the Pollution Minimization Program during the reporting year.

(9) Evaluation of Program's and tasks' effectiveness. The Discharger shall use the criteria established in b.ii to evaluate the Program's and tasks' effectiveness.

(10) Identification of specific tasks and time schedules for future efforts. Based on the evaluation, the Discharger shall detail how it intends to continue or change its tasks to more effectively reduce the amount of pollutants to the treatment plant and subsequently its effluent.

c. Pollutant Minimization Program for Reportable Priority Pollutants

A priority pollutant is a "reportable priority pollutant" when there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that that priority pollutant is present in the effluent above an effluent limitation and either:

(1) A sample result is reported as DNQ and the effluent limitation is less than the RL; or

(2) A sample result is reported as ND and the effluent limitation is less than the MDL, using definitions described in the SIP.

The Discharger shall expand its Pollutant Minimization Program for reportable priority pollutants to include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

(1) An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;

(2) Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;

(3) Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;

(4) Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and

(5) Inclusion of the following items for the reportable priority pollutant(s) in the annual report required by 3.b. above:

(a) All Pollutant Minimization Program monitoring results for the previous year;

(b) A list of potential sources of the reportable priority pollutant(s);

(c) A summary of all actions undertaken pursuant to the control strategy; and

(d) A description of actions to be taken in the following year.

4. Construction, Operation and Maintenance Specifications

a. Groundwater Treatment System, Review and Evaluation, and Status Reports

(1) The Discharger shall operate and maintain its groundwater collection system, treatment, and disposal facilities in a manner to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as necessary, in order to provide adequate and reliable transport, treatment, and disposal of all wastewater from both existing and planned future wastewater sources under the Discharger's service responsibilities.

(2) The Discharger shall regularly review and evaluate its groundwater treatment system and operation practices in accordance with section a.1 above. Reviews and evaluations shall be conducted as an ongoing component of the Discharger's administration of its treatment facilities.

(3) The Discharger shall provide the Executive Officer, upon request, a report describing the current status of its wastewater facilities and operation practices, including any recommended or planned actions and an estimated time schedule for these actions. The Discharger shall also include, in each annual self-monitoring report, a description or summary of review and evaluation procedures, and applicable wastewater facility programs or capital improvement projects.

b. Operations and Maintenance Manual (O&M), Review and Status Reports

(1) The Discharger shall maintain an O&M Manual as described in the findings of this Order for the Discharger's wastewater facilities. The O&M Manual shall be maintained in usable condition and be available for reference and use by all applicable personnel.

(2) The Discharger shall regularly review, revise, or update, as necessary, the O&M Manual(s) so that the document(s) may remain useful and relevant to current equipment and operation practices. Reviews shall be conducted annually, and revisions or updates shall be completed as necessary. For any significant changes in treatment facility equipment or operation practices, applicable revisions shall be completed within 90 days of completion of such changes.

(3) The Discharger shall provide the Executive Officer, upon request, a report describing the current status of its O&M manual, including any recommended or planned actions and an estimated time schedule for these actions. The Discharger shall also include, in each annual self-monitoring report, a description or summary of review and evaluation procedures and applicable changes to its operations and maintenance manual.

c. Contingency Plan, Review and Status Reports

(1) The Discharger shall maintain a Contingency Plan as required by Regional Water Board Resolution 74-10 (Attachment G) and as prudent in accordance with current municipal facility emergency planning. The discharge of pollutants in violation of this Order where the Discharger has failed to develop and/or adequately implement a Contingency Plan will be the basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

(2) The Discharger shall regularly review and update, as necessary, the Contingency Plan so that the plan may remain useful and relevant to current equipment and operation practices. Reviews shall be conducted annually, and updates shall be completed as necessary.

(3) The Discharger shall provide the Executive Officer, upon request, a report describing the current status of its Contingency Plan review and update. The Discharger shall also include, in each annual self-monitoring report, a description or summary of review and evaluation procedures and applicable changes to its Contingency Plan.

5. Special Provisions for Municipal Facilities (POTWs Only)

Not applicable

6. Other Special Provisions

Not applicable

VII. COMPLIANCE DETERMINATION

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

A. General.

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

B. Multiple Sample Data.

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

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

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

ATTACHMENT A – DEFINITIONS

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

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

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

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

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

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

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

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

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

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

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

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

Effluent Concentration Allowance (ECA) is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of

variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in USEPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Pollutant Minimization Program (PMP) means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

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

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

For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

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

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

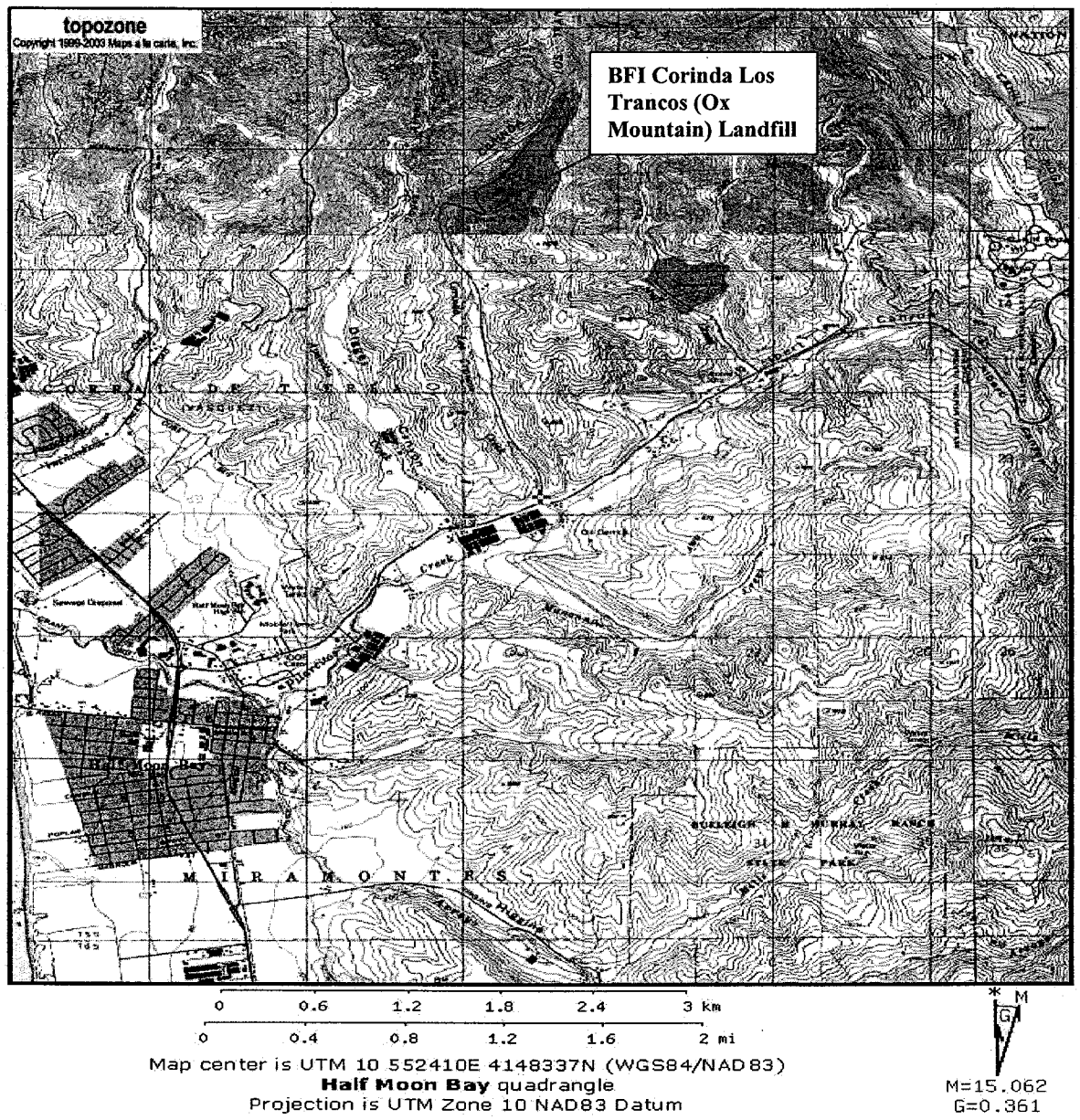
Standard Deviation (σ) is a measure of variability that is calculated as follows:

$$\sigma = (\Sigma[(x - \mu)^2]/(n - 1))^{0.5}$$

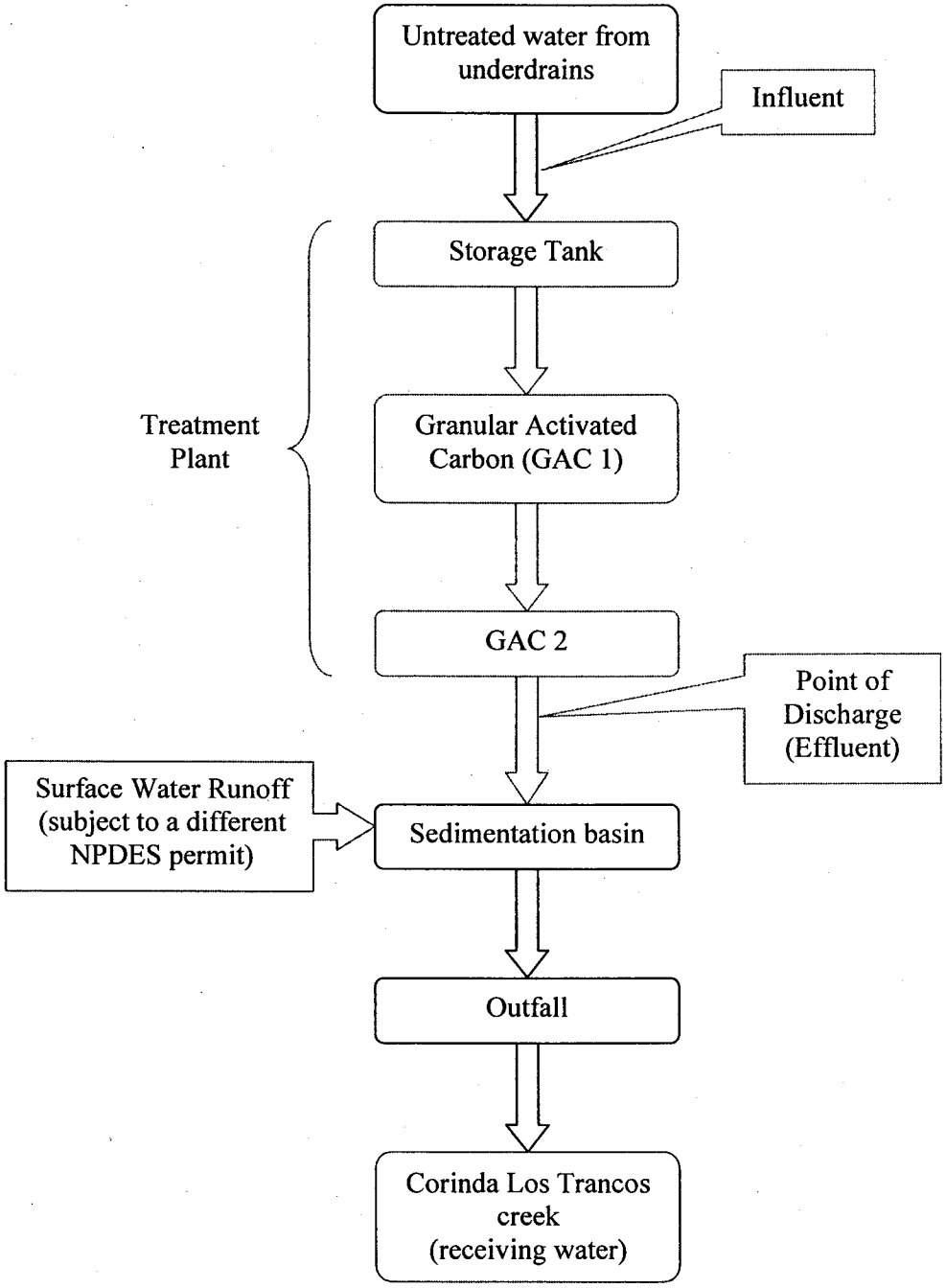
where:
x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

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

ATTACHMENT B – MAP



ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D –STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

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

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

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

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

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

F. Inspection and Entry

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

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

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

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

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

G. Bypass

1. Definitions

   a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR § 122.41(m)(1)(i).)

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

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

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

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

   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment

should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR § 122.41(m)(4)(i)(B)); and

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

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

5. Notice

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

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

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 CFR § 122.41(n)(1).)

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

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

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

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

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

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

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

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

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

IV. STANDARD PROVISIONS – RECORDS

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

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 CFR § 122.41(j)(3)(i));
2. The individual(s) who performed the sampling or measurements (40 CFR § 122.41(j)(3)(ii));
3. The date(s) analyses were performed (40 CFR § 122.41(j)(3)(iii));
4. The individual(s) who performed the analyses (40 CFR § 122.41(j)(3)(iv));
5. The analytical techniques or methods used (40 CFR § 122.41(j)(3)(v)); and
6. The results of such analyses. (40 CFR § 122.41(j)(3)(vi).)

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

1. The name and address of any permit applicant or Discharger (40 CFR § 122.7(b)(1)); and
2. Permit applications and attachments, permits and effluent data. (40 CFR § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger

shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR § 122.41(h); California Water Code, § 13267.)

B. Signatory and Certification Requirements

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

2. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 CFR § 122.22(a)(1).)

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

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

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

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

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

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

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

C. Monitoring Reports

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

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

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

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

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 CFR § 122.41(l)(6)(i).)

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

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

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

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

F. Planned Changes

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

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

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR § 122.41(l)(1)(ii).)

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 CFR§ 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements. (40 CFR § 122.41(l)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 CFR § 122.41(l)(7).)

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the

Regional Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 CFR § 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe (40 CFR § 122.42(a)):

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 CFR § 122.42(a)(1)):

   a. 100 micrograms per liter (µg/L) (40 CFR § 122.42(a)(1)(i));

   b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 CFR § 122.42(a)(1)(ii));

   c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 CFR § 122.42(a)(1)(iii)); or

   d. The level established by the Regional Water Board in accordance with 40 CFR 122.44(f). (40 CFR § 122.42(a)(1)(iv).)

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

   a. 500 micrograms per liter (µg/L) (40 CFR § 122.42(a)(2)(i));

   b. 1 milligram per liter (mg/L) for antimony (40 CFR § 122.42(a)(2)(ii));

   c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 CFR § 122.42(a)(2)(iii)); or

   d. The level established by the Regional Water Board in accordance with 40 CFR 122.44(f). (40 CFR § 122.42(a)(2)(iv).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

NPDES regulations at 40 CFR122.48 require that all NPDES permits specify monitoring and reporting requirements. California Water Code Sections13267 and 13383 also authorize the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and State regulations.

I. GENERAL MONITORING PROVISIONS

A. The Discharger shall comply with the MRP for this Order as adopted by the Regional Water Board, and with all of the requirements contained in Self-Monitoring Program, Part A, adopted August 1993 (SMP, **Attachment G**). If any discrepancies exist between the MRP and SMP, the MRP prevails.

B. Sampling is required during the entire year when discharging. All analyses shall be conducted using current USEPA methods, or that have been approved by the USEPA Regional Administrator pursuant to 40 CFR 136.4 and 40 CFR 136.5, or equivalent methods that are commercially and reasonably available, and that provide quantification of sampling parameters and constituents sufficient to evaluate compliance with applicable effluent limits and to perform reasonable potential analysis. Equivalent methods must be more sensitive than those specified in 40 CFR 136, must be specified in the permit, and must be approved for use by the Executive Officer, following consultation with the State Water Quality Control Board's Quality Assurance Program.

C. Sampling and analysis of additional constituents is required pursuant to Table 1 of the Regional Water Board's August 6, 2001 Letter titled Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy (**Attachment G**).

D. *Minimum Levels.* For compliance and reasonable potential monitoring, analyses shall be conducted using the commercially available and reasonably achievable detection levels that are lower than the WQOs/WQC or the effluent limitations, whichever is lower. The objective is to provide quantification of constituents sufficient to allow evaluation of observed concentrations with respect to the Minimum Levels given below. All Minimum Levels are expressed as µg/L approximately equal to parts per billion (ppb).

Table E-1 lists the test method the Discharger may use for compliance and reasonable potential monitoring for the pollutants with effluent limits.

Table E-1. Test Methods and Minimum Levels for Toxic Pollutants

CTR #	Constituent	Types of Analytical Methods [a] Minimum Levels (µg/L)											
		GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGF AA	HYD RIDE	CVAA	DCP
6	Copper						5		0.5	2			
8	Mercury [b]												
9	Nickel						5	20	1	5			
10	Selenium										1		
11	Silver						1		0.25				
14	Cyanide				5								
19	Benzene	0.5											

CTR #	Constituent	Types of Analytical Methods [a] Minimum Levels (µg/L)											
		GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
44	Vinyl Chloride	0.5											

[a] Analytical Methods / Laboratory techniques are defined as follows:

GC = Gas Chromatography;
GCMS = Gas Chromatography/Mass Spectrometry;
LC = High Pressure Liquid Chromatography
Color = Colorimetric;
FAA = Flame Atomic Absorption
GFAA = Graphite Furnace Atomic Absorption;
ICP = Inductively Coupled Plasma
ICPMS = Inductively Coupled Plasma/Mass Spectrometry;
SPGFAA = Stabilized Platform Graphite Furnace Atomic Absorption (i.e. EPA 200.9);
Hydride = Gaseous Hydride Atomic Absorption
CVAA = Cold Vapor Atomic Absorption and
DCP = Direct Current Plasma

[b] Use ultra-clean sampling (USEPA 1669) to the maximum extent practicable, and ultra-clean analytical methods (USEPA 1631) for mercury monitoring with an ML of 0.0005 ug/L.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-2. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude when available)
Influent	INFL-1	At a point in the groundwater collection system immediately prior to treatment.
Effluent	EFFL-1	At a point immediately following treatment and prior to discharge to the Sedimentation Pond.
Receiving Water	E-002	At the existing point (sampled since 1987) in Corinda Los Trancos Creek upstream of the landfill.
	E-Pond	At a point in Corinda Los Trancos Creek at least 100 feet, but no more than 200 feet, downstream from the discharge point of the Sedimentation Pond into Corinda Los Trancos Creek.
	E-Pil/Down	At a point in Pilarcitos Creek at least 100 feet, but no more than 200 feet, downstream from the confluence of Corinda Los Trancos Creek and Pilarcitos Creek.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INFL-1

The Discharger shall monitor influent to the groundwater treatment system at INFL-1 as follows:

Table E-3. Influent Monitoring

Parameter	Units[1]	Sample Type[2]	Minimum Sampling Frequency	Required Analytical Test Methods
Flow	gpd	Continuous	once / day	40 CFR 136
pH	S.U.	Grab	once / quarter	
Total Dissolved Solids (TDS)	mg/L	Grab	once / quarter	
Total Suspended Solids	mg/L	Grab	once / quarter	
Total Oil and Grease	mg/L	Grab	once / quarter	
Ammonia Nitrogen	mg/L	Grab	once / quarter	
Temperature	°C	Grab	once / quarter	
Electrical Conductivity	umhos/cm	Grab	once / quarter	
Ca, Mg, Na, K, SO_4, HCO_3, Cl	mg/L	Grab	once / quarter	
EPA Method 8260	µg/L	Grab	once / year	EPA Method 8260
EPA Method 8270	µg/L	Grab	once / year	EPA Method 8270
EPA Method 608	µg/L	Grab	once / year	EPA Method 608

[1] Unit Abbreviations:
gpd = gallons per day
° C = degree centigrade
mg/L = milligrams per liter
S.U. = pH standard units
umhos/cm = micromhos per centimeter

[2] Sample Type Abbreviations:
Continuous = Measured continuously, and recorded and reported daily
Grab = Grab sample

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFFL- 1

The Discharger shall monitor effluent at EFFL- 1 as follows.

Table E-4. Effluent Monitoring

Parameter	Units[1]	Sample Type[2]	Minimum Sampling Frequency	Required Analytical Test Method and Minimum Level, units, respectively[3]
Flow	gpd	continuous	continuous	40 CFR 136
pH	S.U.	Grab	once / quarter	
Total Suspended Solids (TSS)	mg/L	C-24	once / quarter	
Total Dissolved Solids (TDS)	mg/L	C-24	once / quarter	
Electrical Conductivity	umhos/cm	Grab	once / quarter	
Temperature	°C	Grab	once / quarter	
Dissolved Oxygen (DO)	mg/L	Grab	once / quarter	
Biological Oxygen Demand (BOD)	mg/l	Grab	once / quarter	
Chemical Oxygen Demand (COD)	mg/l	Grab	once / quarter	
Nitrite	mg/l	Grab	once / quarter	
Nitrate	mg/l	Grab	once / quarter	
Ammonia (as Nitrogen)	mg/l	C-24	once / quarter	

Parameter	Units[1]	Sample Type[2]	Minimum Sampling Frequency	Required Analytical Test Method and Minimum Level, units, respectively[3]
Hardness	mg/L	Grab	once / quarter	
Total Phenols	mg/l	C-24	once / quarter	
Acute Toxicity 96-hr.[4]	%survival	Flow through	once / quarter[5]	
Chronic Toxicity	TUc	C-24	once / quarter[5]	
Copper	µg/L	C-24	once / quarter	
Mercury [6]	µg/L	Grab	once / quarter	
Nickel	µg/L	C-24	once / quarter	
Selenium	µg/L	C-24	once / quarter	
Silver	µg/L	C-24	once / quarter	
Cyanide [7]	µg/L	Grab	once / quarter	
Benzene	µg/L	C-24	once / quarter	
Vinyl Chloride	µg/L	C-24	once / quarter	
CTR priority pollutants [8]	µg/L	C-24	1X / yr and otherwise in accordance with the August 6, 2001 letter	

[1] Unit Abbreviations:
gpd = gallons per day
° C = degree centigrade
mg/L = milligrams per liter
ug/L = micrograms per liter
TUc = chronic toxicity unit
S.U. = pH standard units

[2] Sample Type Abbreviations:
Continuous = Measured continuously, and recorded and reported daily
Grab = Grab sample
C-24 = 24-hour composite

[3] The Discharger has the option of substituting another method for those listed in this table, but only if that method has a level of quantification below the applicable criterion or below the lowest ML listed in section I.C of this MRP. This alternate method must also be USEPA approved.

[4] Acute bioassay tests shall be performed in accordance with Section V of this MRP.

[5] Acute and Chronic Toxicity monitoring shall be staggered so that the Discharger is conducting a WET test every other month.

[6] Mercury: The Discharger shall use ultra-clean sampling (USEPA 1669) to the maximum extent practicable, and ultra-clean analytical methods (USEPA 1631) for mercury monitoring.

[7] Cyanide: Compliance may be demonstrated by measurement of weak acid dissociable cyanide.

[8] Those pollutants identified as Compound Nos. 1 – 126 by the California Toxics Rule at 40 CFR 138. Annual analyses will satisfy a quarterly monitoring requirement for the specific CTR toxic pollutants with numeric effluent limitations established by the Order.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

The Discharger shall monitor acute and chronic toxicity at EFFL-1 as follows:

A. Whole Effluent Acute Toxicity

1. Compliance with the acute toxicity effluent limitations of this Order shall be evaluated by measuring survival of test organisms exposed to 96-hour continuous flow-through bioassays.

2. Test organisms shall be rainbow trout unless specified otherwise in writing by the Executive Officer.

3. All bioassays shall be performed according to the most up-to-date protocols in 40 CFR Part 136, currently in "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms," 5th Edition.

4. If specific identifiable substances in the discharge can be demonstrated by the Discharger as being rapidly rendered harmless upon discharge to the receiving water, compliance with the acute toxicity limit may be determined after the test samples are adjusted to remove the influence of those substances. Written approval from the Executive Officer must be obtained to authorize such an adjustment.

5. Effluent used for fish bioassays must be dechlorinated prior to testing. Monitoring of the bioassay water shall include, on a daily basis, the following parameters: pH, dissolved oxygen, ammonia (if toxicity is observed), temperature, hardness, and alkalinity. These results shall be reported. If a violation of acute toxicity requirements occurs or if the control fish survival rate is less than 90 percent, the bioassay test shall be restarted with new batches of fish and shall continue back to back until compliance is demonstrated.

B. Whole Effluent Chronic Toxicity

1. Chronic Toxicity Monitoring Requirements

   a. Sampling. The Discharger shall collect 24-hour composite samples of the effluent at the compliance point station specified in a table above, for critical life stage toxicity testing as indicated below. For toxicity tests requiring renewals, 24-hour composite samples collected on consecutive days are required.

   b. Test Species. Pimephales promelas. The Executive Officer may change to another test species if data suggest that another test species is more sensitive to the discharge.

   c. Methodology. Sample collection, handling, and preservation shall be in accordance with USEPA protocols. In addition, bioassays shall be conducted in compliance with the most recently promulgated test methods, as shown in Appendix E-1. These are "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms," currently third edition (EPA-821-R-02-014), and "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," currently fourth Edition (EPA-821-R-02-013), with exceptions granted the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP).

   d. Dilution Series. The Discharger shall conduct tests at 100%, 50%, 25%, 10%, 5% and 0.0%. The "%" represents percent effluent as discharged. Samples may be buffered using the biological buffer MOPS (3-(N-Morpholino)propanesulfonic Acid) to control pH drift and ammonia toxicity caused by increasing pH during the test. The Discharger may use a buffer only after obtaining written approval from the Executive Officer. This allowance may be based on the Discharger's studies in the mid-1990s with *ceriodaphnia dubia*. The Discharger conducted a full scale Phase III TIE that confirmed the toxicity

was due to ammonia caused by pH drift during static renewal testing. Use of the buffer in that case eliminated the toxicity. Another condition for the approval is a demonstration that the beneficial uses of the receiving waters are protected through demonstration of compliance with applicable ammonia objectives.

2. Chronic Toxicity Reporting Requirements

   a. Routine Reporting. Toxicity test results for the current reporting period shall include, at a minimum, for each test:

      (1) Sample date(s)

      (2) Test initiation date

      (3) Test species

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

      (5) NOEC value(s) in percent effluent

      (6) IC15, IC25, IC40, and IC50 values (or EC15, EC25 ... etc.) as percent effluent

      (7) TUc values (100/NOEC, 100/IC25, or 100/EC25)

      (8) Mean percent mortality (±s.d.) after 96 hours in 100% effluent (if applicable)

      (9) NOEC and LOEC values for reference toxicant test(s)

      (10) IC50 or EC50 value(s) for reference toxicant test(s)

      (11) Available water quality measurements for each test (pH, D.O., temperature, conductivity, hardness, salinity, ammonia)

   b. Compliance Summary. The results of the chronic toxicity testing shall be provided in the self-monitoring report and shall include a summary table of chronic toxicity data from at least eleven of the most recent samples. The information in the table shall include items listed above under 2.a, specifically item numbers i, iii, v, vi(IC25 or EC25), vii, and viii.

3. Chronic Toxicity Reduction Evaluation (TRE)

   a. Prepare Generic TRE Work Plan. To be ready to respond to toxicity events, the Discharger shall prepare a generic TRE work plan within 90 days of the effective date of this Order. The Discharger shall review and update the work plan as necessary to remain current and applicable to the discharge and discharge facilities.

   b. Submit Specific TRE Work Plan. Within 30 days of exceeding either trigger for accelerated monitoring, the Discharge shall submit to the Regional Water Board a TRE work plan, which should be the generic work plan revised as appropriate for this toxicity event after consideration of available discharge data.

c. Initiate TRE. Within 30 days of the date of completion of the accelerated monitoring tests observed to exceed either trigger, the Discharger shall initiate a TRE in accordance with a TRE work plan that incorporates any and all comments from the Executive Officer.

d. The TRE shall be specific to the discharge and be in accordance with current technical guidance and reference materials, including USEPA guidance materials. The TRE shall be conducted as a tiered evaluation process, such as summarized below:

(1) Tier 1 consists of basic data collection (routine and accelerated monitoring).

(2) Tier 2 consists of evaluation of optimization of the treatment process, including operation practices and in-plant process chemicals.

(3) Tier 3 consists of a toxicity identification evaluation (TIE).

(4) Tier 4 consists of evaluation of options for additional effluent treatment processes.

(5) Tier 5 consists of evaluation of options for modifications of in-plant treatment processes.

(6) Tier 6 consists of implementation of selected toxicity control measures, and follow-up monitoring and confirmation of implementation success.

e. The TRE may be ended at any stage if monitoring finds there is no longer consistent toxicity (complying with Effluent Limitations Section IV.6.a).

f. The objective of the TIE shall be to identify the substance or combination of substances causing the observed toxicity. All reasonable efforts using currently available TIE methodologies shall be employed.

g. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the source(s) and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with chronic toxicity evaluation parameters.

h. Many recommended TRE elements parallel required or recommended efforts of source control, pollution prevention and storm water control programs. TRE efforts should be coordinated with such efforts. To prevent duplication of efforts, evidence of complying with requirements or recommended efforts of such programs may be acceptable to comply with TRE requirements.

i. The Regional Water Board recognizes that chronic toxicity may be episodic and identification of causes of and reduction of sources of chronic toxicity may not be successful in all cases. Consideration of enforcement action by the Regional Water Board will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

Not Applicable.

VII. RECLAMATION MONITORING REQUIREMENTS

Not Applicable

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER

A. Monitoring Location E-002

1. The Discharger shall monitor Corinda Los Trancos Creek at E-002,

Table E-5a. Receiving Water Monitoring Requirements

Parameter	Units[1]	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[2]
Flow	gpd	estimate	1/quarter	40 CFR 136
pH	S.U.	Grab	1/quarter	
Temperature	° C	Grab	1/quarter	
Dissolved Oxygen (DO)	mg/L	Grab	1/quarter	
Hardness	mg/L	Grab	2X / year	
All applicable Standard Observations [3]	---	Grab	1/quarter	
CTR priority pollutants	µg/L	C-24	1X / yr and otherwise in accordance with the August 6, 2001 letter	

[1] Unit Abbreviations:
gpd = gallons per day
° C = degree centigrade
mg/L = milligrams per liter
ug/L = micrograms per liter
S.U. = pH standard units

[2] The Discharger has the option of substituting another method for those listed in this table, but only if that method has a level of quantification below the applicable criterion or below the lowest ML listed in section I.C of this MRP. This alternate method must also be USEPA approved.

[3] Standard Observations include:

a. Floating and suspended materials of waste origin (to include oil, grease, algae, and other macroscopic particulate matter): presence or absence, source, and size of affected area.

b. Discoloration and turbidity: description of color, source, and size of affected area.

c. Odor: presence or absence, characterization, source, distance of travel, and wind direction.

d. Weather conditions:

(1) Air temperatures.

(2) Wind-direction and estimated velocity.

(3) Total precipitation during the previous five days and on the day of observation.

B. Monitoring Locations E-POND and E-PIL/DOWN

1. The Discharger shall monitor Corinda Los Trancos Creek at E-POND and Pilarcitos Creek at E-PIL/DOWN.

Table E-5b. Receiving Water Monitoring Requirements

Parameter	Units[1]	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method[2]
pH	S.U.	Grab	2X/year	40 CFR 136
Ammonia (as Nitrogen)	mg/l	Grab	2X/year	
Dissolved Oxygen (DO)	mg/L	Grab	2X/year	
Hardness	mg/L	Grab	2X/year	
Temperature	° C	Grab	2X/year	
All applicable Standard Observations [3]	---	Grab	1/quarter	

[1] Unit Abbreviations:
° C = degree centigrade
mg/L = milligrams per liter
S.U. = pH standard units

[2] The Discharger has the option of substituting another method for those listed in this table, but only if that method has a level of quantification below the applicable criterion or below the lowest ML listed in section I.C of this MRP. This alternate method must also be USEPA approved.

[3] Standard Observations include:

a. Floating and suspended materials of waste origin (to include oil, grease, algae, and other macroscopic particulate matter): presence or absence, source, and size of affected area.

b. Discoloration and turbidity: description of color, source, and size of affected area.

c. Odor: presence or absence, characterization, source, distance of travel, and wind direction.

d. Weather conditions:

(1) Air temperatures.

(2) Wind-direction and estimated velocity.

(3) Total precipitation during the previous five days and on the day of observation.

IX. OTHER MONITORING REQUIRMENTS

N/A

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this Order, the State or Regional Water Board may notify the Discharger to electronically submit self-monitoring reports. Until such notification is given, the Discharger shall submit self-monitoring reports in accordance with the requirements described below.

2. The Discharger shall submit monthly Self-Monitoring Reports including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order for each calendar month. Monthly SMRs shall be due on the 30th day following the end of each calendar month, covering samples collected during that calendar month; Annual reports shall be due on February 1 following each calendar year.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule as given in Table E-6:

Table E-6. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period
Continuous	Day after permit effective date	All
Hourly	Day after permit effective date	Hourly
Daily	Day after permit effective date	Midnight through 11:59 PM or any 24-hour period that reasonably represents a calendar day for purposes of sampling.
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1st day of calendar month through last day of calendar month
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31
Semiannually	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31
Annually	January 1 following (or on) permit effective date	January 1 through December 31
Per Discharge Event	Anytime during the discharge event or as soon as possible after aware of the event	At a time when sampling can characterize the discharge event

4. The Discharger shall report with each sample result the applicable Minimum Level (ML) or Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR §136.

   The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

   a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

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

   For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include

numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

a. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND. In the ERS, the MDL is to be reported and a qualifier of "<" may be reported.

b. The Discharger shall instruct laboratories to establish calibration standards so that the RL value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. The Discharger shall not use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

5. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations.

6. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

7. SMRs must be submitted to the Regional Water Board, signed and certified as required by the standard provisions (Attachment D), to the address shown below:

   Executive Officer
   California Regional Water Quality Control Board
   San Francisco Bay Region
   1515 Clay Street, Suite 1400
   Oakland, CA 94612
   ATTN: NPDES Wastewater Division

8. The Discharger has the option to submit all monitoring results in an electronic reporting format approved by the Executive Officer. The Electronic Reporting System (ERS) format includes, but is not limited to, a transmittal letter, summary of violation details and corrective actions, and transmittal receipt. If there are any discrepancies between the ERS requirements and the "hard copy" requirements listed in the MRP, then the approved ERS requirements supersede.

C. Discharge Monitoring Reports (DMRs)

1. As described in Section IX.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the discharger to electronically submit self-monitoring reports. Until such notification is given, the Discharger shall submit discharge monitoring reports (DMRs) in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharge shall submit the original DMR and one copy of the DMR to the address listed below:

State Water Resources Control Board, Division of Water Quality
Discharge Monitoring Report Processing Center
Post Office Box 100
Sacramento, CA 95812-1000

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated or modified cannot be accepted.

D. Other Reports

1. **Annual Reports.** By February 1st of each year, the Discharger shall submit an annual report to the Regional Water Board covering the previous calendar year. The report shall contain the items described in *Standard Provisions and Reporting Requirements, and SMP Part A, August 1993* (Attachment G).

APPENDIX E-1. CHRONIC TOXICITY

DEFINITION OF TERMS AND SCREENING PHASE REQUIREMENTS

I. Definition of Terms

A. No observed effect level (NOEL) for compliance determination is equal to IC_{25} or EC_{25}. If the IC_{25} or EC_{25} cannot be statistically determined, the NOEL shall be equal to the NOEC derived using hypothesis testing.

B. Effective concentration (EC) is a point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Karber. EC_{25} is the concentration of toxicant (in percent effluent) that causes a response in 25 percent of the test organisms.

C. Inhibition concentration (IC) is a point estimate of the toxicant concentration that would cause a given percent reduction in a nonlethal, nonquantal biological measurement, such as growth. For example, an IC_{25} is the estimated concentration of toxicant that would cause a 25 percent reduction in average young per female or growth. IC values may be calculated using a linear interpolation method such as USEPA's Bootstrap Procedure.

D. No observed effect concentration (NOEC) is the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation. It is determined using hypothesis testing.

II. Chronic Toxicity Screening Phase Requirements

A. The Discharger shall perform screening phase monitoring:

1. Subsequent to any significant change in the nature of the effluent discharged through changes in sources or treatment, except those changes resulting from reductions in pollutant concentrations attributable to source control efforts, or

2. Prior to permit reissuance. Screening phase monitoring data shall be included in the NPDES permit application for reissuance. The information shall be as recent as possible, but may be based on screening phase monitoring conducted within 5 years before the permit expiration date.

B. Design of the screening phase shall, at a minimum, consist of the following elements:

1. Use of test species specified in **Appendix E-2**, attached, and use of the protocols referenced in those tables, or as approved by the Executive Officer.

2. Two stages:

a. Stage 1 shall consist of a minimum of one battery of tests conducted concurrently. Selection of the type of test species and minimum number of tests shall be based on **Appendix E-2** (attached).

b. Stage 2 shall consist of a minimum of two test batteries conducted at a monthly frequency using the three most sensitive species based on the Stage 1 test results and as approved by the Executive Officer.

3. Appropriate controls.

4. Concurrent reference toxicant tests.

5. Dilution series 100%, 50%, 25%, 10%, 5%, 0 %, where "%" is percent effluent as discharged, or as otherwise approved the Executive Officer.

C. The Discharger shall submit a screening phase proposal acceptable to the Executive Officer. The proposal shall address each of the elements listed above. If within 30 days, the Executive Officer does not comment, the Discharge shall commence with screening phase monitoring.

APPENDIX E-2. SUMMARY OF TOXICITY TEST SPECIES REQUIREMENTS

Critical Life State Toxicity Tests for Estuarine Waters

Species	(Scientific Name)	Effect	Test Duration	Reference
Alga	*(Skeletonema costatum)* *(Thalassiosira pseudonana)*	Growth rate	4 days	1
Red alga	*(Champia parvula)*	Number of cystocarps	7–9 days	3
Giant kelp	*(Macrocystis pyrifera)*	Percent germination; germ tube length	48 hours	2
Abalone	*(Haliotis rufescens)*	Abnormal shell development	48 hours	2
Oyster Mussel	*(Crassostrea gigas)* *(Mytilus edulis)*	Abnormal shell development; percent survival	48 hours	2
Echinoderms -Urchins Sand dollar	*(Strongylocentrotus purpuratus, S. franciscanus)* *(Dendraster excentricus)*	Percent fertilization	1 hour	2
Shrimp	*(Mysidopsis bahia)*	Percent survival; growth	7 days	3
Shrimp	*(Holmesimysis costata)*	Percent survival; growth	7 days	2
Topsmelt	*(Atherinops affinis)*	Percent survival; growth	7 days	2
Silversides	*(Menidia beryllina)*	Larval growth rate; percent survival	7 days	3

Toxicity Test References:

1. American Society for Testing Materials (ASTM). 1990. Standard Guide for Conducting Static 96-Hour Toxicity Tests with Microalgae. Procedure E 1218-90. ASTM, Philadelphia, PA.
2. Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine and Estuarine Organisms. EPA/600/R-95/136. August 1995.
3. Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to Marine and Estuarine Organisms. EPA/600/4-90/003. July 1994.

Critical Life Stage Toxicity Tests for Fresh Waters

Species	(Scientific Name)	Effect	Test Duration	Reference
Fathead minnow	*(Pimephales promelas)*	Survival; growth rate	7 days	4
Water flea	*(Ceriodaphnia dubia)*	Survival; number of young	7 days	4
Alga	*(Selenastrum capricornutum)*	Cell division rate	4 days	4

Toxicity Test Reference:

4. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, third edition. EPA/600/4-91/002. July 1994.

Toxicity Test Requirements for Stage One Screening Phase

Requirements	Receiving Water Characteristics		
	Discharges to Coast	Discharges to San Francisco Bay[2]	
	Ocean	Marine/Estuarine	Freshwater
Taxonomic diversity	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish
Number of tests of each salinity type: Freshwater[1] Marine/Estuarine	 0 4	 1 or 2 3 or 4	 3 0
Total number of tests	4	5	3

[1] The freshwater species may be substituted with marine species if:

(a) The salinity of the effluent is above 1 part per thousand (ppt) greater than 95 percent of the time, or

(b) The ionic strength (TDS or conductivity) of the effluent at the test concentration used to determine compliance is documented to be toxic to the test species.

[2] (a) Marine/Estuarine refers to receiving water salinities greater than 1 ppt at least 95 percent of the time during a normal water year.

(b) Fresh refers to receiving water with salinities less than 1 ppt at least 95 percent of the time during a normal water year.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for dischargers in California. Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	2 417053002
Discharger	Browning-Ferris Industries
Name of Facility	Corinda Los Trancos (Ox Mountain) Landfill
Facility Address	North of Highway 92, east of Half Moon Bay
	Half Moon Bay, CA
	San Mateo County
Facility Contact, Title and Phone	Jim Gunderson (650) 726-1819
Authorized Person to Sign and Submit Reports	Jim Gunderson (650) 726-1819
Mailing Address	12310 San Mateo Road, Half Moon Bay, CA 94019
Billing Address	12310 San Mateo Road, Half Moon Bay, CA 94019
Type of Facility	Class III Solid Waste Disposal Site
Major or Minor Facility	Minor
Threat to Water Quality	1
Complexity	B
Pretreatment Program	N/A
Reclamation Requirements	N/A
Facility Permitted Flow	115,200 gpd (80 gpm)
Facility Design Flow	---
Watershed	San Mateo Coastal Basin
Receiving Water	Corinda Los Trancos Creek
Receiving Water Type	Surface Water

A. Browning-Ferris Industries is currently discharging under Order No. 93-146 and NPDES Permit No. CA0029947 from one location within the Corinda Los Trancos Landfill to Corinda Los Trancos Creek, a water of the United States. Order 93-146 was adopted on November 19, 1993, and has continued in effect past its expiration date of November 10, 1998, until new Waste Discharge Requirements (WDRs) and NPDES permit requirements are adopted pursuant to this Order.

B. The Discharger filed a Report of Waste Discharge and submitted an application for renewal of its WDRs and National Pollutant Discharge Elimination System (NPDES) permit on June 2006.

II. FACILITY DESCRIPTION

The Discharger owns and operates a Class III municipal refuse disposal site in Corinda Los Trancos Canyon approximately 3 miles northeast of Half Moon Bay. This Order addresses only polluted groundwater from the landfill – naturally occurring water in a zone of saturation below the ground surface that has pollutants released from the landfill liner system or polluted when the water table rises and groundwater infiltrates the landfill.

A. Description of Groundwater Treatment

Landfill activities may generate several types of wastewater including leachate, landfill gas condensate, truck/equipment wash water, drained liquids, floor washings, polluted groundwater, and storm water.

USEPA has identified the following pollutants of concern for Subtitle D landfills, such as the Ox Mountain Landfill: cyanide, BOD, TSS, pH, hexane extractable material, ammonia, COD, nitrite and nitrate, TDS, TOC, and total phenols. Leachate at Subtitle D landfills were found to have relatively low concentrations of metals, the presence of some common solvents used in household products (e.g., methyl ethyl ketone and acetone) and common industrial solvents (e.g., 4-methyl-2-pentanone and 1, 4-dioxane), trace concentrations of a few pesticides, and high loads of organic acids resulting from anaerobic decomposition of solid waste [*Development Document for Proposed Effluent Limitations Guidelines and Standards for the Landfills Point Source Category*, EPA-821-R-97-022 (1998)].

The Discharger treats polluted groundwater using two 2,000-pound granular activated carbon filtration units installed in series.

B. Discharge Points and Receiving Waters

The Discharger discharges treated groundwater through Discharge Point 001 (37° 29' 38" N, 122° 24' 41" W) to Corinda Los Trancos Creek, a fresh water stream tributary to Pilarcitos Creek, which flows to the Pacific Ocean. The discharge is located within the San Mateo Coastal Basin watershed.

On June 6, 2003, the USEPA approved a revised list of impaired water bodies prepared by the State [the 303(d) List]. The State Water Board had prepared the 303(d) List pursuant to provisions of section 303(d) of the CWA requiring identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. Corinda Los Trancos Creek and Pilarcitos Creek are not identified as impaired on the current 303(d) List.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

1. Effluent limitations contained in the previous permit for discharges from Discharge Point 001 and representative monitoring data from the term of the previous permit are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data (Discharge Point EFFL-1)

Parameter	Units	Previous Effluent Limitation	Monitoring Data EFFL-1 (2001 – 2005)	
		Instantaneous Maximum	Monthly Discharge	
			No. of data points	Maximum
benzene	µg/L	1	22	1.4
cis-1,2-dichloroethene	µg/L	5	22	0.32
trans-1,2-dichloroethene	µg/L	5	22	< 0.5
tetrachloroethene	µg/L	5	22	< 0.5
1,1,1-trichloroethane	µg/L	5	22	< 0.5
trichloroethene	µg/L	5	22	< 0.5
vinyl chloride	µg/L	0.5	22	2.4
Any other organic compound[1]	µg/L	5	[2]	[2] [3]
Arsenic	µg/L	190	11	28
Cadmium	µg/L	1.1	11	0.64
Chromium VI	µg/L	11	11	7.5
Copper	µg/L	11.8	11	10
Cyanide	µg/L	5.2	11	7.5
Lead	µg/L	3.2	11	1.1
Mercury	µg/L	2.4	11	0.12
Nickel	µg/L	160	11	80
Selenium	µg/L	5	11	37
Silver	µg/L	4	11	9
Zinc	µg/L	110	11	29

(1) As identified by EPA Method 608, 8260, or 8270

(2) These pollutants were monitored 4 – 20 times in 2001 – 2005.

(3) Maximum effluent Concentrations (MECs) in all sampling events were below the effluent limitation, with the exception of ethylbenzene, which was measured one time on 8/3/2005 at 5 µg/L.

D. Compliance Summary

Table F-3 summarizes the number of effluent limitation exceedances, based on review of effluent data submitted to the Regional Water Board, for Discharge Point 001 during the period from February 2001 through May 2006.

Table F-3. Compliance Summary

Parameter[1]	Number of Exceedances					
	2001	2002	2003	2004	2005	2006
Vinyl chloride	2	1	2	1	2	1
Cyanide	-	-	-	1	-	1
Selenium	-	2	2	2	2	1
Silver	-	1	-	-	-	-

[1] Parameters not listed did not exceed effluent limitations during the period from 2/2001 – 5/2006.

The Regional Water Board will be evaluating appropriate enforcement for the above violations.

E. Planned Changes

Not Applicable

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. **Legal Authorities.** This Order is issued pursuant to CWA section 402 and implementing regulations adopted by the USEPA and California Water Code Chapter 5.5, Division 7. It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to California Water Code Article 4, Chapter 4, Division 7 for discharges that are not subject to regulation under CWA section 402.

B. **Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through G are also incorporated into this Order.

C. **California Environmental Quality Act (CEQA).** Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.

D. **Technology-Based Effluent Limitations.** NPDES regulations at 40 CFR 122.44(a)(1) require that permits include applicable technology-based limitations and standards. This Order does not include technology-based effluent limitations.

E. **Water Quality-Based Effluent Limitations.** 40 CFR 122.44(d) requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) may be established: (1) using USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) on an indicator parameter for the pollutant of concern; or (3) using a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

F. **Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan for the San Francisco Bay Region* (hereinafter the Basin Plan) (revised in 2005) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan at Chapter 2, page 7 states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. The Basin Plan does not specifically identify beneficial uses for Corinda Los Trancos Creek, but does identify present and potential uses for Pilarcitos Creek, to

which Corinda Los Trancos Creek is tributary. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Thus, as discussed in detail in the Fact Sheet, beneficial uses applicable to Corinda Los Trancos Creek are as follows:

Table F-4. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Corinda Los Trancos Creek	Existing: • Agricultural Supply (AGR) • Cold Freshwater Habitat (COLD) • Fish Migration (MIGR) • Municipal and Domestic Supply (MUN) • Preservation of Rare and Endangered Species (RARE) • Fish Spawning (SPWN) • Warm Freshwater Habitat (WARM) • Wildlife Habitat (WILD) Potential: • Water Contact Recreation (REC1) • Noncontact Water Recreation (REC2)

Requirements of this Order implement the Basin Plan.

The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for surface waters. Requirements of this Order implement the Thermal Plan.

G. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and amended it on May 4, 1995, and November 9, 1999. About forty criteria in the NTR apply in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the State. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants and are applicable to this discharge.

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

I. **Compliance Schedules and Interim Requirements.** Section 2.1 of the SIP provides that, based on a Discharger's request and demonstration that it is infeasible for an existing Discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order does not include compliance schedules or interim effluent limitations.

J. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes [40 CFR § 131.21; 65 Fed. Reg. 24641 (April 27, 2000)]. Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

K. **Stringency of Requirements for Individual Pollutants.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. Technology-based effluent limitations are not included in this Order. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order (specifically arsenic, cadmium, chromium VI, copper (freshwater), lead, nickel, silver (1-hour), zinc were approved by USEPA on January 5, 2005, respectively, and are applicable water quality standards pursuant to 40 CFR 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

L. **Antidegradation Policy.**

40 CFR 131.12 requires that State water quality standards include an antidegradation policy consistent with the Federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16, which incorporates the requirements of the

federal antidegradation policy. Resolution 68-16 requires that existing water quality is maintained unless degradation is justified based on specific findings. The permitted discharge is consistent with the antidegradation provision of 40 CFR §131.12 and State Water Board Resolution No. 68-16, and the final limitations in this Order are in compliance with antidegradation requirements and meet the requirements of the SIP because these limits hold the Discharger to performance levels that will not cause or contribute to water quality impairment or further water quality degradation.

This is because this Order does not provide for an increase in the permitted flow, allow for a reduction in the level of treatment, or increase effluent limitations with the exception of vinyl chloride. The new, higher, effluent limits for vinyl chloride in this order are consistent with the SIP and CTR. The SIP addressed anti-degradation so an analysis in this permit is unnecessary. The new limits are also consistent with the current treatment performance. As such, there will be no lowering of water quality. The Order continues the status quo with respect to the level of discharge authorized in the previous permit and thus there will be no change in water quality beyond the level that was authorized in the last permit. Findings authorizing degradation are thus not applicable.

M. Anti-Backsliding Requirements. CWA Sections 402(o)(2) and 303(d)(4) and NPDES regulations at 40 CFR122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. The effluent limitations in this Order are consistent with applicable anti-backsliding requirements of the CWA and NPDES regulations.

N. Monitoring and Reporting. 40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

O. Standard and Special Provisions. Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in this Fact Sheet.

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

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

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

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source discharges to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations: 40 CFR 122.44 (a) requires that permits include applicable technology-based limitations and standards; and 40 CFR 122.44 (d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, three options exist to protect water quality: 1) 40 CFR 122.44 (d) specifies that WQBELs may be established using USEPA criteria guidance under CWA Section 304 (a); 2) proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information may be used; or 3) an indicator parameter may be established.

Several specific factors affecting the development of limitations and requirements in this Order are discussed as follows.

A. Discharge Prohibitions

1. Prohibition III.A (no discharge except as described by this Order). This prohibition is similar to the previous permit and is based on California Water Code (CWC) Section 13260 that requires filing of a ROWD before a permit to discharge can be granted. The Discharger submitted a ROWD, dated June 2006, for permission to discharge as specified in this permit, thus any discharges other than as described in this Order are prohibited.

2. Prohibition III.B (flow not to exceed 115,200 gpd). This prohibition is retained from the previous permit and is meant to ensure that wastewater flows do not exceed the design capacities of the groundwater treatment facility.

B. Technology-Based Effluent Limitations

1. Scope and Authority

NPDES regulations at 40 CFR 122.44 (a) require that permits include applicable technology-based limitations and standards. Effluent Limitations Guidelines (technology-based requirements) for the Landfills Point Source Category are established at 40 CFR Part 445. These guidelines are not applicable to polluted groundwater, because, when developing the guidelines, USEPA determined that, as a result of corrective action measures, polluted groundwaters from landfill sites are, typically, highly treated and adequately controlled, so that further regulation by the Effluent Limitations Guidelines was unnecessary. USEPA Office of Water, *Development Document for Proposed Effluent Limitations Guidelines and Standards for the Landfills Point Source Category*, page 6-4, EPA-821-R-97-022 (1998).

Pursuant to CWA section 402(a)(1), the Regional Water Board may use best professional judgment (BPJ) to establish technology-based effluent limitations for discharges not covered by Effluent Limitations Guidelines.

2. Applicable Technology-Based Effluent Limitations

This Order does not establish any technology-based effluent limitations.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

NPDES regulations at 40 CFR 122.44 (d)(1)(i) require permits to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard (Reasonable Potential). The process for determining Reasonable Potential and calculating WQBELs, when necessary, is intended to protect the designated uses of receiving waters, as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other State plans and policies and in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The WQC and WQOs applicable to the receiving waters for this discharge are from the Basin Plan; the California Toxics Rule (CTR), codifed at 40 CFR 131.38 (Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California); and the National Toxics Rule (NTR), codified at 40 CFR 131.36 (Toxics Criteria for Those States not Complying with Clean Water Act Section 303 (c) (2) (B).

a. **Basin Plan.** The Basin Plan specifies numeric WQOs for 10 priority toxic pollutants, as well as narrative WQOs for toxicity and bioaccumulation in order to protect beneficial uses. The pollutants for which the Basin Plan specifies numeric objectives are arsenic, cadmium, chromium (VI), copper in freshwater, lead, mercury, nickel, silver, zinc, and cyanide (see also c., below). The narrative toxicity objective states, in part, that "all waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms." The bioaccumulation objective states, in part, "controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered." Effluent limitations and provisions contained in this Order are designed to implement these objectives, based on available information.

b. **CTR.** The CTR specifies numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for 57 priority toxic pollutants. These criteria apply to inland surface waters and enclosed bays and estuaries, except where numeric objectives from Tables 3-3 and/or 3-4 of the Basin Plan supersede criteria of the CTR (except in the South Bay south of the Dumbarton Bridge).

c. **NTR.** The NTR establishes numeric, chronic, and acute criteria for trivalent chromium and cyanide for the protection of aquatic life, as well as numeric criteria for 36 toxic,

organic pollutants for the protection of human health, which are applicable to many fresh waters of the State.

d. **Technical Support Document for Water Quality-Based Toxics Controls.** Where numeric objectives have not been established or updated in the Basin Plan, NPDES regulations at 40 CFR Part 122.44 (d) require that WQBELs be established based on USEPA criteria, supplemented where necessary by other relevant information, to attain and maintain narrative WQOs to fully protect designated beneficial uses.

To determine the need for and establish WQBELs, when necessary, the Regional Water Board staff has followed the requirements of applicable NPDES regulations, including 40 CFR Parts 122 and 131, as well as guidance and requirements established by the Basin Plan; USEPA's *Technical Support Document for Water Quality-Based Toxics Control* (the TSD, EPA/505/2-90-001, 1991); and the State Water Resources Control Board's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (the SIP, 2005).

e. **Basin Plan Receiving Water Salinity Policy.** The Basin Plan states that the salinity characteristics (i.e., freshwater vs. saltwater) of the receiving water shall be considered in determining the applicable WQC. Freshwater criteria shall apply to discharges to waters with salinities equal to or less than one ppt at least 95 percent of the time. Saltwater criteria shall apply to discharges to waters with salinities equal to or greater than 10 ppt at least 95 percent of the time in a normal water year. For discharges to water with salinities in between these two categories, or tidally influenced freshwaters that support estuarine beneficial uses, the criteria shall be the lower of the salt or freshwater criteria, (the latter calculated based on ambient hardness), for each substance.

(1) **Receiving Water Salinity.** The receiving water for the subject discharge is Corinda Los Trancos Creek which in turn drains into the lower portion of Pilarcitos Creek, both fresh water streams, and therefore, the reasonable potential analysis (RPA) and limitations in this Order are based on fresh water WQOs/WQC.

f. **Dilution Credit.** Discharge from the Ox Mountain facility to Corinda Los Trancos Creek is through a shallow water outfall. The Discharger has not provided evidence to support a dilution credit for the discharge; therefore, water quality based effluent limitations established by this Order are based on zero dilution credit.

The Basin Plan prohibits discharge of wastewater which has "particular characteristics of concern to beneficial uses (1) at any point in San Francisco Bay south of the Dumbarton Bridge; and (2) at any point where the wastewater does not receive a minimum initial dilution of at least 10:1 or into any nontidal water, dead-end slough, similar confined water, or any immediate tributary thereof." Exceptions to the prohibitions are listed the Basin Plan (page 4-5). This discharge has been granted an exception to the Basin Plan's prohibition against discharges to shallow and non-tidal waters. The Regional Water Board grants such exceptions for discharges of treated groundwaters if it is approved as part of a groundwater cleanup project, and in accordance with Resolution 88-160, "Regional Board Position on the Disposal of Extracted Groundwater from Groundwater Cleanup Projects", and it has been demonstrated that neither reclamation nor discharge to a POTW is technically and economically feasible, and the discharger has provided

certification of the adequacy and reliability of treatment facilities and a plan that describes procedures for proper operation and maintenance of all treatment facilities.

Based on the criteria in Resolution 88-160 and on the information submitted by the Discharger, the Regional Water Board finds that treated groundwater reclamation, re-use, or discharge to a POTW from the Ox Mountain Landfill is not feasible at this time. As such, the Regional Water Board is granting an exception to the discharge prohibition to allow the discharge of treated groundwater.

g. **Translators for Metals.** Because NPDES regulations at 40 CFR 122.45 (c) require effluent limitations for metals to be expressed as total recoverable metal, and applicable water quality criteria for the metals are typically expressed as dissolved metal, factors or translators must be used to convert metals concentrations from total recoverable to dissolved and vice versa. In the CTR, USEPA establishes default translators which are used in NPDES permitting activities; however, site-specific conditions such as water temperature, pH, suspended solids, and organic carbon greatly impact the form of metal (dissolved, filterable, or otherwise) which is present and therefore available in the water to cause toxicity. In general, the dissolved form of the metals is more available and more toxic to aquatic life than filterable forms. Site-specific translators can be developed to account for site-specific conditions, thereby preventing exceedingly stringent or under protective water quality objectives.

As site-specific translators have not been developed for Corinda Los Trancos Creek, the Regional Water Board has used default translators established by the CTR at 40 CFR 131.38 (b)(2), Table 2 to conduct the reasonable potential analysis and calculate WQBELs, when necessary.

3. Determining the Need for WQBELs.

NPDES regulations at 40 CFR 122.44 (d)(1)(i) require permits to include WQBELs for all pollutants (non-priority or priority) "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 narrative or numeric criteria within a State water quality standard" (have Reasonable Potential). Thus, assessing whether a pollutant has Reasonable Potential is the fundamental step in determining whether or not a WQBEL is required. For non-priority pollutants, Regional Water Board staff used available monitoring data, receiving water's designated uses, and/or previous permit pollutant limitations to determine Reasonable Potential as described in Sections 3.a. and 3.b. below. For priority pollutants, Regional Water Board staff used the methods prescribed in Section 1.3 of the SIP to determine if the discharge to Corinda Los Trancos Creek demonstrates Reasonable Potential.

a. **Reasonable Potential Analysis.** Using the methods prescribed in Section 1.3 of the SIP, Regional Water Board staff analyzed available effluent data from approximately February 2001 through May 2006 for the discharger to determine if the discharge demonstrates Reasonable Potential. The Reasonable Potential Analysis (RPA) compares the effluent data with numeric and narrative WQOs in the Basin Plan and numeric WQC from the NTR, and the CTR.

b. **Reasonable Potential Methodology.** Using the methods and procedures prescribed in Section 1.3 of the SIP, Regional Water Board staff analyzed the effluent and background data and the nature of facility operations to determine if the discharge has reasonable potential to cause or contribute to exceedances of applicable SSOs or WQC. Appendix A of this Fact Sheet shows the stepwise process described in Section 1.3 of the SIP.

The RPA identifies the observed maximum effluent concentration (MEC) in the effluent for each pollutant, based on effluent concentration data. There are three triggers in determining Reasonable Potential:

(1) The first trigger is activated if the MEC is greater than the lowest applicable WQO (MEC ≥ WQO), which has been adjusted, if appropriate, for pH, hardness, and translator data. If the MEC is greater than the adjusted WQO, then that pollutant has reasonable potential, and a WQBEL is required.

(2) The second trigger is activated if the observed maximum ambient background concentration (B) is greater than the adjusted WQO (B>WQO) and the pollutant was detected in any of the effluent samples.

(3) The third trigger is activated if a review of other information determines that a WQBEL is required to protect beneficial uses, even though both MEC and B are less than the WQO/WQC. A limitation may be required under certain circumstances to protect beneficial uses.

c. **Effluent Data.** The Regional Water Board's August 6, 2001 letter titled *Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy* (hereinafter referred to as the Regional Water Board's August 6, 2001 Letter) to all permittees, formally required the Discharger (pursuant to California Water Code Section 13267) to initiate or continue to monitor for the priority pollutants using analytical methods that provide the best detection limits reasonably feasible. Regional Water Board staff analyzed these effluent data to determine if the discharge has Reasonable Potential. The RPA for this permit was based on the effluent monitoring data collected between approximately February 2001 and May 2006.

d. **Ambient Background Data.** Ambient background values are used in the reasonable potential analysis (RPA) and in the calculation of effluent limitations. For the RPA, ambient background concentrations are the observed maximum detected water column concentrations. The SIP states that for calculating WQBELs, ambient background concentrations are either the observed maximum ambient water column concentrations or, for criteria/objectives intended to protect human health from carcinogenic effects, the arithmetic mean of observed ambient water concentrations.

The Discharger has provided background data from monitoring location E-002 from May 2001 through May 2006. Background data was provided for a total of 43 analytes, including 10 metals.

4. WQBEL Calculations

a. RPA Determination. The MECs, WQOs/WQC, basis for the WQOs/WQC, background concentrations used, and Reasonable Potential conclusions from the RPA are listed in the following table for all constituents analyzed. Some of the constituents in the CTR were not determined because of the lack of an objective/criteria or effluent data. Based on the RPA methodology in the SIP, some constituents did not demonstrate Reasonable Potential. The RPA results are shown in Table F-5 below and Appendix A of this Fact Sheet. The pollutants that exhibit Reasonable Potential are copper, mercury, nickel, selenium, silver, cyanide, benzene, and vinyl chloride.

Table F-5. Summary of RPA Results

CTR #	Priority Pollutants	MEC or Minimum DL [a][b] (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL [a][b] (µg/L)	RPA Results[c]
1	Antimony	Not Available	14	Not Available	Ud
2	Arsenic	**28**	150	2	No
3	Beryllium	Not Available	No Criteria	Not Available	Ud
4	Cadmium	**0.64**	0.89	0.1	No
5a	Chromium (III)	Not Available	160	Not Available	Ud
5b	Chromium (VI)	**7.5**	11.4	4.0	No
6	Copper	**10**	7.1	6.0	**Yes**
7	Lead	**1.1**	2.1	0.89	No
8	Mercury	**0.12**	0.025	0.068	**Yes**
9	Nickel	**80**	40	31	**Yes**
10	Selenium	**37**	5	0.84	**Yes**
11	Silver	**9**	2.4	1.6	**Yes**
12	Thallium	Not Available	1.7	Not Available	Ud
13	Zinc	**29**	92	38	No
14	Cyanide	**7.5**	5.2	< 6.3	**Yes**
15	Asbestos	Not Available	7000000	Not Available	Ud
16	2,3,7,8-TCDD	Not Available	0.000000013	Not Available	Ud
16-TEQ	Dioxin TEQ	Not Available	0.000000014	Not Available	Ud
17	Acrolein	Not Available	320	Not Available	Ud
18	Acrylonitrile	< 0.25	0.059	< 0.25	No
19	Benzene	**1.4**	1.2	< 0.044	**Yes**
20	Bromoform	< 0.05	4.3	< 0.062	No
21	Carbon Tetrachloride	< 0.053	0.25	< 0.053	No
22	Chlorobenzene	**2.7**	680	< 0.082	No
23	Chlorodibromomethane	< 0.073	0.40	< 0.089	No
24	Chloroethane	**0.26**	No Criteria	< 0.053	Ud
25	2-Chloroethylvinyl ether	< 0.27	No Criteria	< 1.5	Ud
26	Chloroform	< 0.048	No Criteria	< 0.074	Ud
27	Dichlorobromomethane	< 0.057	0.56	< 0.057	No
28	1,1-Dichloroethane	**0.16**	No Criteria	< 0.064	Ud
29	1,2-Dichloroethane	**0.13**	0.38	< 0.067	No
30	1,1-Dichloroethylene	< 0.05	0.057	< 0.054	No
31	1,2-Dichloropropane	< 0.053	0.52	< 0.066	No
32	1,3-Dichloropropylene	< 0.038	10	< 0.044	No
33	Ethylbenzene	**5**	3100	< 0.051	No
34	Methyl Bromide	**3.1**	48	< 0.063	No
35	Methyl Chloride	**0.66**	No Criteria	< 0.04	Ud
36	Methylene Chloride	**0.12**	4.7	< 0.11	No

CTR #	Priority Pollutants	MEC or Minimum DL [a][b] (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL [a][b] (µg/L)	RPA Results[c]
37	1,1,2,2-Tetrachloroethane	< 0.078	0.17	< 0.09	No
38	Tetrachloroethylene	< 0.049	0.8	< 0.062	No
39	Toluene	**0.71**	6800	< 0.047	No
40	1,2-Trans-Dichloroethylene	< 0.061	700	< 0.062	No
41	1,1,1-Trichloroethane	< 0.053	No Criteria	< 0.053	Ud
42	1,1,2-Trichloroethane	< 0.094	0.6	< 0.099	No
43	Trichloroethylene	< 0.032	2.7	< 0.032	No
44	Vinyl Chloride	**2.4**	2	< 0.04	**Yes**
45	2-Chlorophenol	< 0.12	120	Not Available	No
46	2,4-Dichlorophenol	< 0.25	93	Not Available	No
47	2,4-Dimethylphenol	< 0.31	540	Not Available	No
48	2-Methyl- 4,6-Dinitrophenol	< 0.18	13.4	Not Available	No
49	2,4-Dinitrophenol	< 0.18	70	Not Available	No
50	2-Nitrophenol	< 0.24	No Criteria	Not Available	Ud
51	4-Nitrophenol	< 0.075	No Criteria	Not Available	Ud
52	3-Methyl 4-Chlorophenol	Not Available	No Criteria	Not Available	Ud
53	Pentachlorophenol	< 0.3	0.28	Not Available	No
54	Phenol	< 0.15	21000	Not Available	No
55	2,4,6-Trichlorophenol	< 0.24	2.1	Not Available	No
56	Acenaphthene	< 0.2	1200	Not Available	No
57	Acenaphthylene	< 0.19	No Criteria	Not Available	Ud
58	Anthracene	< 0.27	9600	Not Available	No
59	Benzidine	< 0.74	0.00012	Not Available	No
60	Benzo(a)Anthracene	< 0.19	0.0044	Not Available	No
61	Benzo(a)Pyrene	< 0.21	0.0044	Not Available	No
62	Benzo(b)Fluoranthene	< 0.38	0.0044	Not Available	No
63	Benzo(ghi)Perylene	< 0.19	No Criteria	Not Available	Ud
64	Benzo(k)Fluoranthene	< 0.21	0.0044	Not Available	No
65	Bis(2-Chloroethoxy)Methane	< 0.25	No Criteria	Not Available	Ud
66	Bis(2-Chloroethyl)Ether	< 0.28	0.031	Not Available	No
67	Bis(2-Chloroisopropyl)Ether	< 0.19	1400	Not Available	No
68	Bis(2-Ethylhexyl)Phthalate	**3.4** (d)	1.8	Not Available	No
69	4-Bromophenyl Phenyl Ether	< 0.28	No Criteria	Not Available	Ud
70	Butylbenzyl Phthalate	< 0.25	3000	Not Available	No
71	2-Chloronaphthalene	< 0.15	1700	Not Available	No
72	4-Chlorophenyl Phenyl Ether	< 0.24	No Criteria	Not Available	Ud
73	Chrysene	< 0.38	0.0044	Not Available	No
74	Dibenzo(a,h)Anthracene	< 0.19	0.0044	Not Available	No
75	1,2-Dichlorobenzene	**0.55**	2700	< 0.072	No
76	1,3-Dichlorobenzene	< 0.059	400	< 0.076	No
77	1,4-Dichlorobenzene	**2.1**	400	< 0.056	No
78	3,3 Dichlorobenzidine	< 0.25	0.04	Not Available	No
79	Diethyl Phthalate	< 0.26	23000	Not Available	No
80	Dimethyl Phthalate	< 0.21	313000	Not Available	No
81	Di-n-Butyl Phthalate	< 0.19	2700	Not Available	No
82	2,4-Dinitrotoluene	< 0.21	0.11	Not Available	No
83	2,6-Dinitrotoluene	< 0.22	No Criteria	Not Available	Ud
84	Di-n-Octyl Phthalate	< 0.22	No Criteria	Not Available	Ud
85	1,2-Diphenylhydrazine	< 0.22	0.04	Not Available	No
86	Fluoranthene	< 0.28	300	Not Available	No
87	Fluorene	< 0.27	1300	Not Available	No
88	Hexachlorobenzene	< 0.32	0.00075	Not Available	No

CTR #	Priority Pollutants	MEC or Minimum DL [a][b] (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL [a][b] (µg/L)	RPA Results[c]
89	Hexachlorobutadiene	< 0.059	0.44	< 0.088	No
90	Hexachlorocyclopentadiene	< 0.3	240	Not Available	No
91	Hexachloroethane	< 0.43	1.9	Not Available	No
92	Indeno(1,2,3-cd)Pyrene	< 0.24	0.0044	Not Available	No
93	Isophorone	< 0.24	8.4	Not Available	No
94	Naphthalene	**2.4**	No Criteria	< 0.074	Ud
95	Nitrobenzene	< 0.2	17	Not Available	No
96	N-Nitrosodimethylamine	< 0.14	0.00069	Not Available	No
97	N-Nitrosodi-n-Propylamine	< 0.2	0.005	Not Available	No
98	N-Nitrosodiphenylamine	< 0.24	5	Not Available	No
99	Phenanthrene	< 0.19	No Criteria	Not Available	Ud
100	Pyrene	< 0.2	960	Not Available	No
101	1,2,4-Trichlorobenzene	**0.84**	No Criteria	< 0.06	Ud
102	Aldrin	< 0.00092	0.00013	Not Available	No
103	alpha-BHC	< 0.0008	0.0039	Not Available	No
104	beta-BHC	< 0.00063	0.014	Not Available	No
105	gamma-BHC	< 0.00081	0.019	Not Available	No
106	delta-BHC	< 0.00054	No Criteria	Not Available	Ud
107	Chlordane	< 0.005	0.00057	Not Available	No
108	4,4'-DDT	< 0.00047	0.00059	Not Available	No
109	4,4'-DDE	< 0.00063	0.00059	Not Available	No
110	4,4'-DDD	< 0.00057	0.00083	Not Available	No
111	Dieldrin	< 0.00068	0.00014	Not Available	No
112	alpha-Endosulfan	< 0.00085	0.056	Not Available	No
113	beta-Endolsulfan	< 0.00082	0.056	Not Available	No
114	Endosulfan Sulfate	< 0.001	110	Not Available	No
115	Endrin	< 0.00067	0.036	Not Available	No
116	Endrin Aldehyde	< 0.00087	0.76	Not Available	No
117	Heptachlor	< 0.0006	0.00021	Not Available	No
118	Heptachlor Epoxide	< 0.0002	0.0001	Not Available	No
119-125	PCBs sum	Not Available	0.00017	Not Available	Ud
126	Toxaphene	< 0.36	0.0002	Not Available	No
	Tributylin	Not Available	No Criteria	Not Available	Ud
	Total PAHs	Not Available	No Criteria	Not Available	Ud

(a) The MEC or maximum background concentration is the actual detected concentration unless there is a "<" sign before it, in which case the value shown is the minimum detection level.

(b) The MEC or maximum background concentration is "Not Available" when there are no monitoring data for the constituent.

(c) RPA Results = Yes, if MEC > WQO/WQC, or B > WQO/WQC and MEC is detected;
= No, if MEC and B are < WQO/WQC or all effluent data are undetected;
= Undetermined (Ud), if no criteria have been promulgated or no effluent data;
= Cannot Determine, if there are insufficient data.

(d) Concentration is estimated below the ML but above the MDL, and pollutant was detected in the analytical method blank.

(1) Constituents with limited data. In some cases, Reasonable Potential cannot be determined because effluent data are limited, or ambient background concentrations are not available. The Discharger will continue to monitor for these constituents in the effluent using analytical methods that provide the best feasible detection limits. When additional data become available, further RPA will be conducted to determine whether to add numeric effluent limitations to this Order or to continue monitoring.

(2) Pollutants with no Reasonable Potential. WQBELs are not included in this Order for constituents that do not demonstrate Reasonable Potential; however, monitoring for those pollutants is still required. If concentrations of these constituents are found to have increased significantly, the Discharger will be required to investigate the source(s) of the increase(s). Remedial measures are required if the increases pose a threat to water quality in the receiving water.

The previous permit (Order No. 93-146) included WQBELs for cis-1,2-dichloroethene, trans-1,2-dichloroethene, tetrachloroethene, 1,1,1-trichloroethane, trichloroethene, arsenic, cadmium, chromium VI, lead, selenium, zinc and other organic compounds (identified by EPA Method 608, 8260 or 8270); however, because the reasonable potential analysis showed that discharges from the Ox Mountain Landfill no longer demonstrate a reasonable potential to cause or contribute to exceedances of applicable water quality criteria for these pollutants, limitations from the previous permit are not retained and new limitations are not included for these pollutants in this Order.

Elimination of WQBELs for cis-1,2-dichloroethene, trans-1,2-dichloroethene, tetrachloroethene, 1,1,1-trichloroethane, trichloroethene, arsenic, cadmium, chromium VI, lead, zinc and other organic compounds (identified by EPA Method 608, 8260 or 8270) in this Order satisfies the exception to anti-backsliding requirements expressed at CWA Section 402(1), which allows a reissued permit to include less stringent limitations when incompliance with 303(d)(4).

b. Calculation of WQBELs. WQBELs were developed for the toxic and priority pollutants that were determined to have reasonable potential to cause or contribute to exceedances of the WQOs or WQC. The WQBELs were calculated based on appropriate WQOs/WQC and the appropriate procedures specified in Section 1.4 of the SIP. Applicable WQOs and WQC for each pollutant with Reasonable Potential is discussed below and presented in Attachment 1 of this Fact Sheet.

(1) Copper

(a) *Copper WQC.* The most stringent applicable water quality criteria for copper are established by the Basin Plan and the CTR for fresh water aquatic life. The chronic and acute criteria from the Basin Plan and the CTR for copper for protection of aquatic life are 7.1 and 10.4 µg/L, respectively. These criteria are based on a receiving water hardness of 73 mg/L $CaCO_3$ and were determined using default translators established by the CTR at 40 CFR 131.38(b)(2), Table 2. These criteria were used to perform the RPA and to calculate effluent limitations.

(b) *RPA Results.* This Order establishes effluent limitations for copper, as the maximum observed effluent concentration of 10 µg/L exceeds the applicable chronic water quality criterion for this pollutant, demonstrating reasonable potential by Trigger 1 of the RPA.

(c) *Copper WQBELs.* Final WQBELs for copper, calculated according to SIP procedures, are 5.1 and 10 µg/L – the average monthly and maximum daily effluent limitations, respectively.

(d) *Infeasibility of Compliance with Final WQBELs.* On October 27, 2006, the Discharger submitted a Feasibility Study in response to the Reasonable Potential Analysis (RPA) prepared by Regional Water Board staff, which concluded that WQBELs are necessary for copper. In its study, the Discharger asserted that Regional Water Board staff, by using inappropriate receiving water hardness figures and by failing to convert "dissolved metal" concentrations to "total recoverable metal," did not determine appropriate water quality criteria for copper. The Discharger also asserted that when appropriate water quality criteria for copper are calculated, they are higher than those calculated by Regional Water Board staff; there is no reasonable potential for effluent copper concentrations to contribute to exceedances of applicable water quality criteria; and WQBELs for copper are not required. In its Feasibility Study, the Discharger did not address the question of whether it is feasible to achieve immediate compliance with final WQBELs for copper.

Regional Water Board staff conducted an RPA for this facility using a background/receiving water hardness concentration of 73 mg/L $CaCO_3$, which is the lowest observed hardness concentration in the receiving water (at sampling station E-002) in 13 samples collected between April 17, 2002, and December 19, 2003. The average hardness in those 13 samples is 102 mg/L $CaCO_3$. If this average hardness value was used in the RPA, there would still be a finding of "reasonable potential" for copper. Regional Water Board staff also used the specific conversion factors that are presented in and required by the CTR and the SIP for converting "dissolved metal" to "total recoverable metal." In its Feasibility Study, the Discharger did not present the background/receiving water hardness data or the conversion factors that it felt should be used to determine water quality criteria for copper.

The Discharger presented a second infeasibility analysis as an attachment to its comments on the tentative draft of this Order. This infeasibility analysis asserts the Discharger cannot immediately comply with final WQBELs for copper. Regional Water Board staff examined the Discharger's effluent data from May 2001 through May 2006. The 95th percentile of the effluent data set (11 µg/L) exceeds the AMEL (5.1 µg/L); the 99th percentile of the effluent data set (14 µg/L) exceeds the MDEL (10 µg/L); and the mean of the effluent data set (4.5 µg/L) is less than the long term average of the projected normal distribution of the effluent data set after accounting for effluent variability (3.3 µg/L). Therefore, the Regional Water Board concurs with the Discharger's assertion of infeasibility to comply.

(e) *Need for Cease and Desist Order.* Pursuant to State Water Board Order WQ-2007-0004, compliance schedules are not authorized for numeric objectives or criteria that were in effect prior to the SIP. This includes the Basin Plan objectives for copper. Because it is infeasible for the Discharger to immediately comply with final WQBELs for mercury, the Discharger will discharge waste in violation of this Order. Therefore, a Cease and Desist Order has been adopted concurrently with this Order. The Cease and Desist Order is necessary to ensure that the Discharger achieves compliance; it establishes time schedules for the

Discharger to complete necessary investigative, preventive, and remedial actions to address its imminent and threatened violations.

(f) *Antibacksliding.* Antibacksliding requirements are satisfied, as the effluent limitations established for copper by this Order are more stringent than those established by Order 93-146.

(2) Mercury

(a) *Mercury WQC.* The fresh water, chronic and acute criteria from the Basin Plan for mercury for protection of aquatic life are 0.025 and 2.4 µg/L, respectively. These criteria were used to perform the RPA and to calculate effluent limitations.

(b) *RPA Results.* This Order establishes effluent limitations for mercury because the maximum observed effluent concentration of 0.12 µg/L exceeds the applicable chronic water quality criterion for this pollutant, demonstrating reasonable potential by Trigger 1 of the RPA.

(c) *Mercury WQBELs.* Final WQBELs for mercury, calculated according to SIP procedures, are 0.018 and 0.046 µg/L – the average monthly and maximum daily effluent limitations, respectively.

(d) *Immediate Compliance with Final WQBELs Infeasible.* The Discharger's Feasibility Study asserts the Discharger cannot immediately comply with final WQBELs for mercury. Regional Water Board staff examined the Discharger's effluent data from May 2001 through May 2006. The high percentage of non-detects (73%) did not allow for a statistical analysis of the data. Comparison of the MEC (0.12 µg/L) to the average monthly effluent limit (AMEL) (0.018 µg/L) and maximum daily effluent limit (MDEL) (0.046 µg/L), however, indicates that the Discharger cannot meet the final limitations, and therefore, the Regional Water Board concurs with the Discharger's assertion of infeasibility to comply.

(e) *Need for Cease and Desist Order.* Pursuant to State Water Board Order WQ-2007-0004, compliance schedules are not authorized for numeric objectives or criteria that were in effect prior to the SIP. This includes the Basin Plan objectives for mercury. Because it is infeasible for the Discharger to immediately comply with final WQBELs for mercury, the Discharger will discharge waste in violation of this Order. Therefore, a Cease and Desist Order has been adopted concurrently with this Order. The Cease and Desist Order is necessary to ensure that the Discharger achieves compliance; it establishes time schedules for the Discharger to complete necessary investigative, preventive, and remedial actions to address its imminent and threatened violations.

(f) *Antibacksliding.* Antibacksliding requirements are satisfied as interim and final effluent limitations established by the Order are at least as stringent as limitations established by Order No. 93-146.

(3) Nickel

(a) *Nickel WQC.* The most stringent criteria applicable to nickel are the fresh water, chronic (40 µg/L) and acute (360 µg/L) criteria from the Basin Plan and CTR for protection of aquatic life. These criteria are based on a receiving water hardness of 73 mg/L $CaCO_3$ and were determined using default translators established by the CTR at 40 CFR 131.38(b)(2), Table 2. These criteria were used to perform the RPA and to calculate effluent limitations.

(b) *RPA Results.* This Order establishes effluent limitations for nickel because the maximum observed effluent concentration of 80 µg/L exceeds the applicable chronic water quality criterion for this pollutant, demonstrating reasonable potential by Trigger 1 of the RPA.

(c) *Nickel WQBELs.* Final WQBELs for nickel, calculated according to SIP procedures, are 31 and 70 µg/L – the average monthly and maximum daily effluent limitations, respectively.

(d) *Infeasibility of Compliance with Final WQBELs.* On October 27, 2006, the Discharger submitted a Feasibility Study in response to the Reasonable Potential Analysis (RPA) prepared by Regional Water Board staff, which concluded that WQBELs are necessary for nickel. In its study, the Discharger asserted that Regional Water Board staff, by using inappropriate receiving water hardness figures and by failing to convert "dissolved metal" concentrations to "total recoverable metal," did not determine appropriate water quality criteria for nickel. The Discharger also asserted that when appropriate water quality criteria for nickel are calculated, they are higher than those calculated by Regional Water Board staff; there is no reasonable potential for effluent concentrations of nickel to contribute to exceedances of applicable water quality criteria; and WQBELs for nickel are not required. In its Feasibility Study, the Discharger did not address the question of whether it is feasible to achieve immediate compliance with final WQBELs for nickel.

Regional Water Board staff conducted an RPA for this facility using a background/receiving water hardness concentration of 73 mg/L $CaCO_3$, which is the lowest observed hardness concentration in the receiving water (at sampling station E-002) in 13 samples collected between April 17, 2002, and December 19, 2003. The average hardness in those 13 samples is 102 mg/L $CaCO_3$. If this average hardness value is used in the RPA, there would still be a finding of "reasonable potential" for nickel. Regional Water Board staff also used the specific conversion factors that are presented in and required by the CTR and the SIP for converting "dissolved metal" to "total recoverable metal." In its Feasibility Study, the Discharger did not present the background/receiving water hardness data or the conversion factors that it felt should be used to determine water quality criteria for nickel.

The Discharger presented a second infeasibility analysis as an attachment to its comments on the tentative draft of this Order. This infeasibility analysis asserts the Discharger cannot immediately comply with final WQBELs for nickel.

Regional Water Board staff examined the Discharger's effluent data from May 2001 through May 2006. The 95th percentile of the effluent data set (54 µg/L) exceeds the AMEL (31 µg/L); the 99th percentile of the effluent data set (81 µg/L) exceeds the MDEL (70 µg/L); and the mean of the effluent data set (25 µg/L) is less than the long term average of the projected normal distribution of the effluent data set after accounting for effluent variability (18 µg/L). Therefore, the Regional Water Board concurs with the Discharger's assertion of infeasibility to comply.

(e) *Need for Cease and Desist Order.* Pursuant to State Water Board Order WQ-2007-0004, compliance schedules are not authorized for numeric objectives or criteria that were in effect prior to the SIP. This includes the Basin Plan objectives for nickel. Because it is infeasible for the Discharger to immediately comply with final WQBELs for mercury, the Discharger will discharge waste in violation of this Order. Therefore, a Cease and Desist Order has been adopted concurrently with this Order. The Cease and Desist Order is necessary to ensure that the Discharger achieves compliance; it establishes time schedules for the Discharger to complete necessary investigative, preventive, and remedial actions to address its imminent and threatened violations.

(f) *Antibacksliding.* Antibacksliding requirements are satisfied, as the effluent limitations established for nickel by this Order are more stringent than those established by Order 93-146.

(4) Selenium

(a) *Selenium WQC.* The most stringent criteria applicable to selenium are the fresh water, chronic (5 µg/L) and acute (20 µg/L) criteria from the CTR for protection of aquatic life. These criteria were determined using default translators established by the CTR at 40 CFR 131.38(b)(2), Table 2. These criteria were used to perform the RPA and to calculate effluent limitations.

(b) *RPA Results.* This Order establishes effluent limitations for selenium because the maximum observed effluent concentration of 37 µg/L exceeds the applicable chronic water quality criterion for this pollutant, demonstrating reasonable potential by Trigger 1 of the RPA.

(c) *Selenium WQBELs.* Final WQBELs for selenium, calculated according to SIP procedures, are 4 and 9 µg/L, the average monthly and maximum daily effluent limitations, respectively. The previous permit included a WQBEL of 5 µg/L as an instantaneous maximum. Although the calculated MDEL is higher than Order 93-146's selenium instantaneous maximum limitation, the new WQBELs derived using the SIP procedures are considered to be more protective of the water quality. The AMEL will limit the discharge to a lower long-term average level than the previous permit limitation, which only limited the instantaneous maximum concentration of the effluent, and as a result, the Discharger could practically discharge an effluent with long-term average at the previous

instantaneous maximum level. Therefore, the new WQBELs are considered to be more stringent, and are established as the new WQBELs.

(d) *Immediate Compliance with Final WQBELs Infeasible.* Since these Selenium limits are more stringent than the previous permit limit (see c, above), and the Discharger has violated the previous permit limit in nine of the past eleven discharge samples, the Regional Water Board concludes that it is infeasible for the Discharger to immediately comply with the new more stringent limits.

(e) *Need for Cease and Desist Order.* Pursuant to State Water Board Order WQ-2007–0004, compliance schedules are not authorized for numeric objectives or criteria that were in effect prior to the SIP. This includes the NTR criteria for selenium. Because it is infeasible for the Discharger to immediately comply with final WQBELs for mercury, the Discharger will discharge waste in violation of this Order. Therefore, a Cease and Desist Order has been adopted concurrently with this Order. The Cease and Desist Order is necessary to ensure that the Discharger achieves compliance; it establishes time schedules for the Discharger to complete necessary investigative, preventive, and remedial actions to address its imminent and threatened violations.

(f) *Antibacksliding.* Antibacksliding requirements are satisfied as effluent limitations being established for selenium are more stringent the previous permit.

(5) Silver

(a) *Silver WQC.* The fresh water, acute criteria from the Basin Plan and CTR for silver for protection of aquatic life is 2.4 µg/L. This criteria is based on a receiving water hardness of 73 mg/L $CaCO_3$ and was determined using default translators established by the CTR at 40 CFR 131.38(b)(2), Table 2. This criterion was used to perform the RPA and to calculate effluent limitations.

(b) *RPA Results.* This Order establishes effluent limitations for silver because the maximum observed effluent concentration of 9 µg/L exceeds the applicable acute water quality criterion for this pollutant, demonstrating reasonable potential by Trigger 1 of the RPA.

(c) *Silver WQBELs.* Final WQBELs for silver, calculated according to SIP procedures, are 1.0 and 2.4 µg/L – the average monthly and maximum daily effluent limitations, respectively.

(d) *Infeasibility of Compliance with Final WQBELs.* On October 27, 2006, the Discharger submitted a Feasibility Study in response to the Reasonable Potential Analysis (RPA) prepared by Regional Water Board staff, which concluded that WQBELs are necessary for silver. In its study, the Discharger asserted that Regional Water Board staff, by using inappropriate receiving water hardness figures and by failing to convert "dissolved metal" concentrations to "total recoverable metal," did not determine appropriate water quality criteria for silver. The Discharger also asserted that when appropriate water quality criteria for silver are calculated, they are higher than those calculated by Regional Water

Board staff; there is no reasonable potential for effluent concentrations of silver to contribute to exceedances of applicable water quality criteria; and WQBELs for silver are not required. In its Feasibility Study, the Discharger did not address the question of whether it is feasible to achieve immediate compliance with final WQBELs for silver.

Regional Water Board staff conducted an RPA for this facility using a background/receiving water hardness concentration of 73 mg/L $CaCO_3$, which is the lowest observed hardness concentration in the receiving water (at sampling station E-002) in 13 samples collected between April 17, 2002, and December 19, 2003. The average hardness in those 13 samples is 102 mg/L $CaCO_3$. If this average hardness value was used in the RPA, there would still be a finding of "reasonable potential" for silver. Regional Water Board staff also used the specific conversion factors that are presented in and required by the CTR and the SIP for converting "dissolved metal" to "total recoverable metal." In its Feasibility Study, the Discharger did not present background/receiving water hardness data or the conversion factors that it felt should be used to determine water quality criteria for silver.

The Discharger presented a second infeasibility analysis as an attachment to its comments on the tentative draft of this Order. This infeasibility analysis asserts the Discharger cannot immediately comply with final WQBELs for silver. Regional Water Board staff examined the Discharger's effluent data from May 2001 through May 2006 and, due to a high percentage of non-detects (64%), was not able to perform a statistical analysis. Comparison of the MEC (9.0 µg/L) to the AMEL (1.0 µg/L) and MDEL (2.4 µg/L), however, indicates that the Discharger cannot meet the final limitations. Therefore, the Regional Water Board concurs with the Discharger's assertion of infeasibility to comply.

(e) *Need for Cease and Desist Order.* Pursuant to State Water Board Order WQ-2007-0004, compliance schedules are not authorized for numeric objectives or criteria that were in effect prior to the SIP. This includes the Basin Plan objectives for silver. Because it is infeasible for the Discharger to immediately comply with final WQBELs for mercury, the Discharger will discharge waste in violation of this Order. Therefore, a Cease and Desist Order has been adopted concurrently with this Order. The Cease and Desist Order is necessary to ensure that the Discharger achieves compliance; it establishes time schedules for the Discharger to complete necessary investigative, preventive, and remedial actions to address its imminent and threatened violations.

(f) *Antibacksliding.* Antibacksliding requirements are satisfied, as effluent limitations established for silver by this Order are more stringent than those established by Order 93-146.

(6) Cyanide

(a) *Cyanide WQC.* The NTR includes WQC for cyanide applicable to inland fresh waters that are designated as domestic and municipal supplies. Criteria from the NTR, which are applicable to Corinda Los Trancos Creek, are 22 µg/L, a

Criterion Maximum Concentration (acute criterion), and 5.2 µg/L, a Criterion Chronic Concentration (chronic criterion).

(b) *RPA Results.* This Order establishes effluent limitations for cyanide because the 7.5 µg/L MEC is greater than the most stringent applicable criterion, demonstrating reasonable potential by Trigger 1 of the RPA procedure.

(c) *Cyanide WQBELs.* Final WQBELs for cyanide, calculated according to SIP procedures, are 4.3 µg/L and 8.5 µg/L – the AMEL and MDEL, respectively. Because Order No. 93-146 included an MDEL for cyanide of 5.2 µg/L, which is more stringent than the newly calculated MDEL, this Order retains the MDEL of 5.2 µg/L from Order 93-146 and establishes an AMEL of 4.3 µg/L.

(d) *Immediate Compliance with Final WQBELs Infeasible.* The Discharger's Feasibility Study asserts the Discharger cannot immediately comply with final WQBELs for cyanide. Regional Water Board staff examined the Discharger's effluent data from May 2001 through May 2006 and, due to a high percentage of non-detects (82%), was not able to perform a statistical analysis. Comparison of the MEC (7.5 µg/L) to the AMEL (4.3 µg/L) and MDEL (5.2 µg/L), however, indicates that the Discharger cannot meet the final limitations, and therefore, the Regional Water Board concurs with the Discharger's assertion of infeasibility to comply.

(e) *Need for Cease and Desist Order.* Pursuant to State Water Board Order WQ-2007-0004, compliance schedules are not authorized for numeric objectives or criteria that were in effect prior to the SIP. This includes the NTR criteria for cyanide. Because it is infeasible for the Discharger to immediately comply with final WQBELs for cyanide, the Discharger will discharge waste in violation of this Order. Therefore, Cease and Desist Order has been adopted concurrently with this Order. The Cease and Desist Order is necessary to ensure that the Discharger achieves compliance; it establishes time schedules for the Discharger to complete necessary investigative, preventive, and remedial actions to address its imminent and threatened violations.

(f) *Antibacksliding.* Antibacksliding requirements are satisfied as the effluent limitation of Order 93-146 is being retained as an interim limitation until more stringent final limitations for cyanide become effective.

(7) Benzene

(a) *Benzene WQC.* The most stringent applicable water quality criterion for benzene is 1.2 µg/L, established by the CTR for protection of human health when both water and organisms may be consumed from the receiving stream.

(b) *RPA Results.* The maximum observed effluent concentration of benzene of 1.4 µg/L, exceeds the applicable water quality criterion for this pollutant and demonstrates reasonable potential by Trigger 1 of the RPA. This Order, therefore, establishes effluent limitations for benzene.

(c) *Benzene WQBELs.* Final WQBELs for benzene, calculated according to SIP procedures, are 2.4 and 1.2 µg/L as the MDEL and the AMEL, respectively. Because Order No. 93-146 included an MDEL for benzene of 1.0 µg/L, which is more stringent than the newly calculated MDEL and AMEL, this Order retains the MDEL of Order 93-146 and does not establish new effluent limitations for benzene.

(d) *Immediate Compliance Feasible.* The MDEL for benzene, established by this Order, has been effective since 1993. The Discharger has been in compliance with the limit at least since 2001.

(e) *Antibacksliding.* Antibacksliding requirements are satisfied as the previous limit of 1.0 µg/L is retained.

(8) Vinyl Chloride

(a) *Vinyl Chloride WQC.* The most stringent applicable water quality criterion for vinyl chloride is 2.0 µg/L, established by the CTR for protection of human health when both water and organisms may be consumed from the receiving stream.

(b) *RPA Results.* Because the maximum observed effluent concentration of vinyl chloride (2.4 µg/L) exceeds the applicable water quality criterion for this pollutant and demonstrates reasonable potential by Trigger 1 of the RPA, the Order establishes effluent limitations for vinyl chloride.

(c) *Vinyl Chloride WQBELs.* Final WQBELs for vinyl chloride, calculated according to SIP procedures, are 2.0 and 5.0 µg/L as the MDEL and the AMEL, respectively.

(d) *Antibacksliding.* Order No. 93-146 included an MDEL for vinyl chloride of 0.5 µg/L, which is more stringent than the newly calculated MDEL and AMEL. The 0.5 µg/L limit was based on BPJ. It appears that this technology-based BPJ limit could have been established in error because 9 out of the past 22 samples have shown that the implemented technology cannot achieve that limit at this site. CWA Section 402 (o) (2) allows for exception to antibacksliding if there was a technical mistake. However, the Discharger has not provided evidence that it is operating its treatment system as effectively as possible, or of what other technology might be necessary to meet the more stringent limit. Therefore, the previous limit of 0.5 µg/L is retained. The Regional Water Board will consider allowing backsliding for vinyl chloride if the Discharger presents evidence that the WQBELs cannot be met with the existing treatment system or with feasible upgrades.

c. Effluent Limit Calculations

Table F-6. Calculation of WQBELs

Priority Pollutants	Copper	Mercury	Nickel	Selenium	Silver	Cyanide	Benzene	Vinyl Chloride
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Basis and Criteria Type	BP & CTR, FW Aq Lf	BP FW Aq LF	BP & CTR FW Aq Lf	CTR FW	CTR FW	NTR	CTR HH	CTR HH
Lowest WQO		0.025	39.97	5	2.4	5.2	1.2	2
CTR Conversion Factor for Freshwater (acute&Chron)	1.0							
Dilution Factor (D) (if applicable)	0	0	0	0	0	0	0	0
No. of samples per month	4.0	4	4	4	4	4	4	4
Aquatic life criteria analysis required? (Y?N)	N	Y	Y	Y	N	Y	Y	Y
HH criteria analysis required? (Y/N)	N	Y	Y	N	N	Y	Y	Y
Applicable Acute WQO	10.41	2.40	359.50	20	2.40	22	0	0
Applicable Chronic WQO	7.13	0.025	39.97	5		5.2	0	2
HH criteria	1300	0.05	610.0			700	1.2	2
Background (Maximum Conc for Aquatic Life calc)	6.0	0.068	31	0.84	1.6	0	0	0
Background (Average Conc for Human Health calc)		0.088	4.404			0	0	0
Is the pollutant Bioaccumulative (y/N)? (e.g., Hg)	N	Y	N	Y	N	N	N	N
ECA acute	10.4	2.4	359.5	20	2.4	22.0	0	0
ECA chronic	7.1	0.025	39.97	5		5.2	0	0
ECA HH		0.05	610			700	1.2	2
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	N	N	N	N	N	Y	Y	N
Avg of effluent data points	5.35	0.13	24.85	14.14	3.16			0.63
Std Dev of effluent data points	3.27	0.127	19.51	10.86	2.87			0.61
CV calculated	0.61	1.01	0.79	0.77	0.91	N/A	N/A	0.97
CV (selected) – Final	0.61	1.01	0.79	0.77	0.91	0.60	0.60	0.97
ECA acute mult99	0.32	0.20	0.25	0.26	0.22	0.32		
ECA chronic mult99	0.52	0.37	0.45	0.45	0.40	0.53		
LTA acute	3.29	0.48	91.20	5.18	0.53	7.06		
LTA chronic	3.72	0.009	17.80	2.26		2.74		
Minimum of LTAs	3.29	0.009	17.80	2.26	0.533	2.743		
AMEL mult95	1.56	1.96	1.74	1.72	1.86	1.55	1.55	1.91
MDEL mult99	3.16	4.95	3.94	3.86	4.50	3.11	3.11	4.76
AMEL (aq life)	5.15	0.02	30.89	3.88	0.99	4.26		
MDEL (aq life)	10.41	0.05	70.17	8.74	2.40	8.54		
MDEL/AMEL Multiplier	2.02	2.53	2.27	2.25	2.42	2.01	2.01	2.49
AMEL (human hlth)		0.05	610.0			700.00	1.20	2.00
MDEL (human hlth)		0.127	1385.81				2.407	4.975
Minimum of AMEL for Aq. Life vs HH	5.15	0.02	30.89	3.9	0.99	4.26	1.2	2.00
Minimum of MDEL for Aq. Life vs HH	10.41	0.05	70.17	8.7	2.40	8.54	2.4	4.98
Current limit in permit (daily)	11.8	2.4	160	5	4	5.2	1	0.5
Final limit – AMEL	5.1	0.018	31	4	1.0	4.3		2.0
Final limit – MDEL	10.0	0.046	70	9	2.4	5.2	1.0	5.0
Max Effl Conc (MEC)	10	0.12	80	37	9	7.5	1.4	2.4

5. Whole Effluent Toxicity (WET).

The Basin Plan requires all dischargers to either conduct flow-through effluent toxicity tests or perform static renewal bioassays (Chapter 4, Acute Toxicity) to measure the toxicity of wastewaters and to assess negative impacts upon water quality and beneficial uses caused by the aggregate toxic effect of the discharge of pollutants. This Order includes effluent limitations for whole effluent acute toxicity from Table 4-4 of the Basin Plan. Compliance evaluation is based on 96-hour static-renewal bioassays. All bioassays are required to be performed according to the USEPA-approved method in 40 CFR Part 136, currently "*Methods for Measuring the Acute Toxicity of Effluents and Receiving Water, 5th Edition.*"

6. Chronic Toxicity.

Due to the characteristics of the influent (low volume, naturally occurring groundwater), the Regional Water Board has determined there is no RPA for chronic toxicity; therefore, there are no chronic toxicity monitoring requirements in this permit. This discharge is considered minor (0.11 mgd), and the majority of the pollutants associated with this site (e.g., landfill leachate, polluted groundwater) are regulated by another Regional Water Board Order (Order No. R2-2006-0040).

D. Final Effluent Limitations

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001.

1. Discharge from the facility shall not exceed 115,200 gpd.

2. The pH of the discharge shall not exceed 8.5 nor be less than 6.5.

3. Discharges from the facility shall not contain toxic pollutants at concentrations greater than the following maximum daily and average monthly effluent limitations.

Table F-7. Effluent Limitations for Toxic Pollutants

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Copper	µg/L	5.1	10	---	---
Mercury	µg/L	0.018	0.046	---	---
Nickel	µg/L	31	70	---	---
Silver	µg/L	4	9	---	---
Silver	µg/L	1.0	2.4	---	---
Cyanide	µg/L	4.3	5.2	---	---
Benzene	µg/L	---	1.0	---	---
Vinyl Chloride	µg/L	---	0.5	---	---

4. Whole Effluent Acute Toxicity

(a) Representative samples of the effluent shall meet the following limits for acute toxicity: Bioassays shall be conducted in compliance with Section V.A of the Monitoring and Reporting Program (MRP, Attachment E).

The survival of organisms in undiluted combined effluent shall be a three (3) sample median value of not less than 90 percent survival, and single sample of not less than 70 percent survival.

(b) These acute toxicity limitations are further defined as follows.

- 3 sample median: A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit, if one or more of the past three or less bioassay tests show less than 90 percent survival.

E. Land Discharge Specifications

Not Applicable

F. Reclamation Specifications

Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Receiving Water Limitations V.A. and B. (conditions to be avoided): These limitations are in the existing permit, edited to more closely reflect the Basin Plan, and are based on water quality objectives for physical, chemical, and biological characteristics of receiving waters from Chapter III of the Basin Plan.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

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

A. Influent Monitoring

The following bulleted text summarizes influent monitoring requirements in the Monitoring and Reporting Program accompanying this Order, including changes from the previous Program.

- Influent monitoring requirements for the following pollutants are retained from Order 93-146: flow, pH, calcium, magnesium, sodium, potassium, sulfate, bicarbonate, chlorine total dissolved solids (TDS), total suspended solids (TSS), oil and grease, ammonia, temperature, electrical conductivity, and those toxic pollutants measured by EPA methods 8260, 8270, and 608.

B. Effluent Monitoring

The following bulleted text summarizes effluent monitoring requirements in the Monitoring and Reporting Program, which accompanies this Order, including changes from the previous Program.

- Continuous effluent flow monitoring is retained from Order 93-146.

- Quarterly effluent monitoring requirements for the following pollutants are retained from Order 93-146: dissolved oxygen (DO), electrical conductivity, total dissolved solids (TDS), and total suspended solids (TSS).

- Effluent monitoring requirements for acute toxicity are retained from Order 93-146, but the sampling frequency has been increased from once per year to once per quarter. This discharge has the reasonable potential to be toxic to aquatic life; however, the specific pollutants of concern are difficult to identify and may have a cumulative effect. More frequent monitoring for whole effluent acute toxicity will, therefore, assure that this discharge is properly controlled.

- Effluent monitoring requirements for ammonia nitrogen are retained from Order 93-146, but the sampling frequency has been increased to quarterly; Order 93-146 required ammonia analysis whenever fish bioassay test results failed to meet the specified percent survival. As ammonia is a contaminant associated with granular activated carbon, routine monitoring for this pollutant allows determination of this pollutant's impacts on whole effluent toxicity.

- Most specific requirements pertaining to monitoring of toxic pollutants (arsenic, cadmium, hexavalent chromium, lead, zinc, volatile organic compounds as identified by EPA Method 8260, PCBs and organochlorine pesticides as identified by EPA Method 608, and semivolatile organic compounds as identified by EPA Methods 8270) have not been retained from Order 93-146. Provision VI.C.2.a of this Order, instead, requires the Discharger to adhere to its Sampling Plan for toxic pollutants, approved pursuant to the Regional Water Board's letter of August 6, 2001. The August 6, 2001 letter was sent to all dischargers in the San Francisco Bay Region pursuant to California Water Code Section 13267 and required the Discharger to prepare a Sampling Plan and to conduct monitoring of receiving water and effluent for toxic pollutants to provide on-going characterization.

- Effluent monitoring is required one time per quarter for biochemical oxygen demand (BOD), chemical oxygen demand (COD), nitrite, nitrate, and total phenols. These are pollutants of concern in discharges from landfills, and routine monitoring will provide more complete characterization of discharges from this facility.

- Effluent monitoring is required one time per quarter for copper, mercury, nickel, selenium, silver, cyanide, benzene, and vinyl chloride - toxic pollutants which are specifically limited by this Order. Routine monitoring for these pollutants is necessary to determine compliance with effluent limitations established by the Order.

- Effluent monitoring is required one time per quarter for hardness. Because the toxicity of certain metals is hardness dependent, measurement of hardness in effluent will allow determination of metals toxicity, particularly in times when flow in the receiving stream is effluent dominated.

- Effluent monitoring samples for total suspended solids, total dissolved solids, ammonia (as nitrogen), copper, nickel, and silver are no longer required to be collected by grab samples, as results may not be representative of effluent. 24-hour composite samples of effluent are required for monitoring these parameters in addition to total phenols, benzene, and vinyl chloride.

- Effluent monitoring requirements for the following pollutants are not retained from Order 93-146: oil and grease, turbidity, calcium, magnesium, sodium, potassium, sulfate, bicarbonate, and chlorine.

C. Whole Effluent Toxicity Testing Requirements

The Basin Plan requires dischargers to conduct flow-through effluent toxicity tests (Chapter 4, Acute Toxicity) to measure the toxicity of wastewaters and to assess negative impacts upon water quality and beneficial uses caused by the aggregate toxic effect of the discharge of pollutants. This Order includes effluent limitations for whole effluent acute toxicity and monitoring requirements for whole effluent chronic toxicity. All tests shall be performed according to the USEPA-approved method in 40 CFR Part 136, currently "*Methods for Measuring the Acute Toxicity of Effluents and Receiving Water, 5th Edition.*"

This Order requires that the Discharger continue its effluent toxicity monitoring efforts as part of the compliance requirements. This requirement is based on the Basin Plan and BPJ.

D. Receiving Water Monitoring

1. Surface Water

The Monitoring and Reporting Program removes the monitoring requirements at monitoring location E-Pil/Up. Background monitoring locations for Pilarcitos Creek are not necessary to judge the Discharger's compliance with NPDES regulations. Specific monitoring requirements for toxic pollutants at monitoring locations E-002, E-Pond and E-Pil/Dn are not included in the Monitoring and Reporting Program. Instead, provision VI.C.2.a of the Order requires the Discharger to adhere to its Sampling Plan for toxic pollutants, approved pursuant to the Regional Water Board's letter of August 6, 2001.

- For monitoring location E-002, receiving water monitoring requirements for the following pollutants are not retained from Order 93-146: electrical conductivity, calcium, magnesium, sodium, potassium, sulfate, bicarbonate, chlorine, total dissolved solids (TDS), total suspended solids (TSS), and turbidity. Monitoring for these parameters in receiving water does not provide information regarding compliance with the effluent limitations and requirements of the Order.

- For monitoring locations E-POND and E-PIL/DOWN, receiving water monitoring requirements for the following pollutants are not retained from Order 93-146: flow, bioassay 96-hour percent survival (acute toxicity, previously required at E-POND only), electrical conductivity, calcium, magnesium, sodium, potassium, sulfate, bicarbonate, chlorine, total dissolved solids (TDS), total suspended solids (TSS), and oil and grease. Monitoring for these parameters in receiving water does not provide information regarding compliance with the effluent limitations and requirements of the Order.

- Receiving water monitoring is required two times per year for hardness at all surface water monitoring locations to allow for calculation of water quality criteria for hardness-dependent metals.

2. Groundwater

Not applicable

E. Other Monitoring Requirements

Not applicable

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

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

40 CFR 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 CFR 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Monitoring and Reporting Requirements.

The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are contained in the MRP (Attachment E), Standard Provisions and SMP, Part A (Attachment G) of the Permit. This provision requires compliance with these documents, and is based on 40 CFR 122.63. The Standard Provisions and SMP, Part A are standard requirements in almost all NPDES permits issued by the Regional Water Board, including this Order. They contain definitions of terms, specify general sampling and analytical protocols, and set out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Regional Water Board's policies. The MRP contains a sampling program specific for the facility. It defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents, for which no effluent limitations are established, is also required to provide data for future completion of RPAs for them.

C. Special Provisions

1. Reopener Provisions

These provisions are based on 40 CFR 123 and allow future modification of this Order and its effluent limitations as necessary in response to updated WQOs that may be established in the future.

2. Special Studies and Additional Monitoring Requirements

a. **Characterization of Receiving Water and Effluent for Toxic Pollutants.** This provision, which requires the Discharger to continue to conduct receiving water monitoring is based on Order 93-146 and the Basin Plan.

b. **Chronic Toxicity Screening.** With the high level of treatment and the lack of industrial sources, little or no chronic toxicity is expected. However, since this discharge does not receive initial dilution, discharges to a sensitive wetlands, and has not previously determined tested for chronic toxicity, it is appropriate to require Chronic Toxicity Screening to determine what chronic toxicity requirements are warranted in future permits.

3. Best Management Practices and Pollution Prevention

This provision is based on Chapter 4 of the Basin Plan, Section 4.13, and Section 2.4.5 of the SIP.

4. Construction, Operation, and Maintenance Specifications

a. Wastewater Facilities, Review and Evaluation, Status Reports: This provision is based on the previous permit and the Basin Plan.

b. Operations and Maintenance Manual, Review and Status Reports: This provision is based on the Basin Plan, the requirements of 40 CFR §122, and the previous permit.

c. Contingency Plan, Review and Status Reports: This provision is based on the Basin Plan, the requirements of 40 CFR §122, and the previous permit.

5. Special Provisions for Municipal Facilities (POTWs Only)

Not Applicable

6. Other Special Provisions

Not Applicable

7. Compliance Determination

Compliance determination provisions are based on 2.4.5 of the SIP.

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the Corinda Los Trancos (Ox Mountain) Landfill. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the Regional Water Board web site and publication in the San Mateo Times.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on **July 10, 2007**

C. Public Hearing

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: **August 8, 2007**
Time: **9:00 AM**
Location: **Elihu Harris State Office Building**
1515 Clay Street, 1st Floor Auditorium
Oakland, California

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

Please be aware that dates and venues may change. Our Web address is www.waterboards.ca.gov/sanfranciscobay where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

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

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (510) 622-2300.

F. Register of Interested Persons

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

G. Additional Information

Requests for additional information or questions regarding this order should be directed to John H. Madigan at 510-622-2405.