BFI Waste Systems™
BROWNING-FERRIS INDUSTRIES
Ox Mountain Sanitary Landfill

Recycled paper

March 22, 2013
JN 2013-0026

Mr. John Madigan, P.E.
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Subject: **NPDES Tentative Permit Comments**
Browning-Ferris Industries
Corinda Los Trancos (Ox Mountain) Landfill
Half Moon Bay, California

Dear Mr. Madigan:

We appreciate the opportunity to comment on the proposed Tentative Order to reissue NPDES permit No. R2-2007-0062, for the Corinda Los Trancos (Ox Mountain) Landfill Groundwater Treatment System, which expired on August 31, 2012. Per your request, please find attached comments and a redlined version of the Tentative Order for your consideration.

If you have any questions, please call me at (650) 726-1819.

Sincerely,

Kevin Iler, Operations Manager
Corinda Los Trancos/Ox Mountain Sanitary Landfill
12310 San Mateo Road
Half Moon Bay, California

c: Ms. Alyx Karpowicz - RWQCB

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COMMENTS TO
TENTATIVE ORDER NO. R2-2013-XXXX
NPDES NO. CA0029947
RECEIVED FEBRUARY 22, 2013

GENERAL

The comments included herein are intended to support changes to the tentative order presented in the redlined version (attached). Where useful, text suggested for addition are presented in **bold font**.

COMMENTS TO LIMITATIONS AND DISCHARGE REQUIREMENTS

SECTION I. FACILITY INFORMATION

Page 3, Table 4 states that Kevin Iler is the Division Manager. Please revise his title to Operations Manager.

Section II. FINDINGS

Page 4, Section II. B.1. Paragraph 3. This paragraph presents the groundwater treatment system (GWTS) design elements, some of which have been modified since the prior permit was issued. However, in the interest of accuracy, and because the pressure transducer may not always be operational (it may be removed periodically for cleaning and/or repair), BFI requests that the first sentence in this paragraph be revised to read "…two 5,000-pound granular activated carbon filtration units installed in series, **iron precipitation using pH control and air sparging** ~~air sparger~~, and a low permeable soil-lined sedimentation basin that discharges through a riser pipe to Corinda Los Trancos Creek. A weir ~~and pressure transducer~~ flow measurement system is installed at the outlet from the riser pipe to Corinda Los Trancos Creek."

Page 5. Section II.F. Technology-Based Effluent Limitations. It is unclear if this section is applicable to the Ox Mountain Landfill. The current GWTS has been designed to treat the majority of expected pollutants in the groundwater. Subsequent to issuance of the tentative order, BFI submitted a report presenting the infeasibility of available technologies to treat ammonia; the only other key pollutant found in effluent that is not treated by the GWTS. Please clarify the need for this Section, or revise this section, as appropriate.

Page 5, Section II.H. Water Quality Control Plan. Corinda Los Trancos Creek flow is intermittent within an agricultural area that may not be a suitable source for municipal and domestic supply. Since it is not identified in the current San Francisco Bay Basin Plan for municipal and domestic supply, the water within the creek should not be identified for municipal and domestic beneficial uses.

SECTION IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Page 8, Section IV.A.1. Table 6. BFI notes that the parameter, total suspended solids (TSS), has been added to the list of parameters with effluent limitations. Please clarify the reason for addition of this parameter.

Page 8, Section IV.A.1, Table 6. Based on review of the permit, for accuracy, the average monthly and maximum daily effluent limitations for zinc should be reversed.

Section VI. PROVISIONS

Page 12, Section VI.C.2.b(i)(b). For accuracy, reference to Fact Sheet Table F-8 should be revised; the correct table is **F-9** for the priority pollutants list.

Page13, Section VI.C.3. For clarification, in the middle of the paragraph, would the ambient receiving water sample point after the discharge be equivalent to the former E-Pond, renamed RSW-002 point? This is a reasonably accessible point for sampling.

Page 14, Section VI.C.4.b(v). Please clarify the annual reporting requirement referenced section. Section VI.C.3.b does not exist in the current tentative order.

Page 16, Section VI.C.7. Subsequent to issuance of the tentative order, BFI submitted the Ammonia Treatment Technology Report and concluded that of available technologies, it would be infeasible to treat ammonia at the landfill. To accurately address the recent report submittal, this section should be omitted from the permit.

Page 16, Footnote 8. At the bottom of the page, for accuracy, the work "Zeland" should be spelled "Zealand".

COMMENTS TO ATTACHMENTS A AND B

Because Attachment A –Definitions, consists of standardized language, BFI has no comments to Attachment A.

Attachment B –Facility Map, correctly locations the Ox Mountain Landfill and BFI has no comments on Attachment B.

COMMENTS TO ATTACHMENT C – PROCESS FLOW DIAGRAM

The title of this figure should be modified to omit the letter "T" in the word "LOST" to read "LOS".

COMMENTS TO ATTACHMENT D – STANDARD PROVISIONS

Page D-8, Section VII. Since the Ox Mountain GWTS is not a Publicly Owned Treatment Plant (POTW), this section is not applicable to this facility. BFI recommends that this section be omitted from the permit.

COMMENTS TO ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

SECTION III – INFLUENT MONITORING REQUIREMENTS

Page E-3, Section III. Table E-2. The GWTS is a closed system and the flows into the GWTS will be equivalent to the flows out of the GWTS. Therefore, BFI recommends removing the "Flow" parameter from this Influent Monitoring table and adding it into Table E-4 for Effluent Monitoring.

Page E-3, Section III. Table E-2. With the removal of Flow from Table E-2, footnotes below Table E-2, should be revised to reflect the updated table by removing the reference to "gpd", "Continuous" sample type, and all of footnote [3].

SECTION IV - EFFLUENT MONITORING REQUIREMENTS

Page E-3, Section IV. Table E-3. This table describes the requirements for monitoring of effluent at point EFF-001, in the outfall from the sedimentation basin prior to Corinda Los Trancos Creek. However, as currently configured, flow is measured at the weir after the effluent mixes with spring water from the top of Corinda Los Trancos Creek. In addition, minor modifications to the footnotes should be made to more correctly correspond with the table. The following revisions should be made to the Footnotes below Table E-3:

Footnote [1] add references to gpd, ^{o}C, and umhos/cm.

Footnote [2] Remove C-24 and replace it with "**Continuous**" sample Type.

Footnote [3] revise to read: "For effluent flows, **measurements will be obtained at the weir, including re-routed spring water, and** the following information shall also be reported monthly:" Also, because flows from the GWTS are relatively low, average daily and monthly flow are better measured in gallons per day (gpd) rather than Million Gallons per Day (MGD). Please revise the units accordingly.

Page E-4, Section IV. Table E-4. As presented above, in discussion of Table E-2, to measure flows at the GWTS, add **Flow** to this table, to be measured in **gallons per day (gpd**), with a sample type of **Continuous**, at least **once per day (1/Day)**.

Page E-5, Section IV. Table E-4. Bis(2-Ethylhexyl)Phthalate is a ubiquitous lab and field contaminant. It has not been confirmed at the Ox Mountain Landfill. Therefore, it is recommended that sampling frequency be conducted annually. BFI requests that the Minimum Sampling Frequency be reduced to once per year (**1/Year**).

Page E-5, Section IV. Table E-4. In the interest of accuracy, the Footnotes header should reference Table E-**4**. In addition, references to ^{o}C, mg/L, TUc, and S.U. should be omitted from Footnote [1] Unit Abbreviations.

SECTION V-WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

Page E-5, Section V.A.1. The text of this item references 96-hour continuous static bioassays. For accuracy, it should read: "96-hour continuous static **renewal** bioassays".

Page E-5 and E-6, Section V.A.5. No dechlorination is performed at the GWTS. In addition, ammonia concentrations generally do not vary over the course of a test. Therefore, testing for ammonia is typically performed as an initial measurement at the time the sample is received at the testing laboratory. The paragraph should be revised to read: "~~Effluent must be dechlorinated prior to testing~~. Monitoring of the bioassay water shall include **an initial ammonia measurement, and** ~~on a daily basis~~, the following parameters: pH, dissolved oxygen, ~~ammonia (if toxicity is observed)~~, temperature, hardness, and alkalinity **on a daily basis**. These results shall be reported. If a violation of acute toxicity requirements occurs, the bioassay test shall be repeated with new fish as soon as practical and shall be repeated until a test fish survival rate of 90 percent or greater is observed. If the control fish survival

rate is less than 90 percent, the bioassay test shall be restarted with new fish **as soon as practical** and shall continue ~~as soon as practical~~ until an acceptable test is completed (i.e., control fish survival rate is 90 percent or greater)."

Page E-7, Section V.B.1. As recommended by Pacific EcoRisk, it has been standard practice to run the chronic toxicity test using renewal samples collected on three days during a 7-day test period, rather than daily. Therefore, it is recommended that the second sentence in this section be revised to read: "Grab samples collected on ~~consecutive~~ **three** days **over the 7-day test period (e.g., Monday, Wednesday, and Friday)** are required for toxicity tests requiring renewals.

Page E-8, Section V.B.1.d. For accuracy, on the 10th line of the paragraph, add a period after "with justification**."**

SECTION VI – RECEIVING WATER MONITORING REQUIREMENTS

Page E-10, Section VI.A. Table E-5. In the interest of accuracy, the Footnotes header should reference Table E-**5**. In addition, a references to **ppt = parts per trillion** should be added to Footnote [1] Unit Abbreviations.

Page E-11, Section VI.B. Table E-6. In the interest of accuracy, the Footnotes header should reference Table E-**6**. In addition, references to gpd, and µg/L should be omitted from Footnote [1] Unit Abbreviations.

SECTION VII – REPORTING REQUIREMENTS

Page E-14, Section VII.D.1.f.2). Since the Ox Mountain Landfill GWTS treats groundwater from beneath the landfill, at the end of the last full line of this paragraph, the word "wastewater" should be replaced with "**groundwater**".

Page E-15, Section VII.D.1.f.6). It is not clear if this item is applicable to the Ox Mountain Landfill since it appears to relate to a wastewater treatment plant. BFI recommends that it be omitted.

Page E-15, Section VII.D.1.f.7). Since the Ox Mountain Landfill does not operate a wastewater treatment plant, the paragraph should be revised to read: " .. and the Spill Prevention Plan, so that..." In addition, remove the bracket "]" at the end of the paragraph.

COMMENTS TO ATTACHMENT F – FACT SHEET

SECTION I – PERMIT INFORMATION

Page F-3, Section I, Table F-1 states that Kevin Iler is the Division Manager. Please revise his title to Operations Manager.

SECTION II – FACILITY DESCRIPTION

Page F-4, Section II.A. Because the pressure transducer may not always be operational (it may be removed periodically for cleaning and/or repair), and to allow for flexibility in achieving the objective of flow monitoring, BFI recommends that the second to last sentence in the first paragraph should be revised to read: "A weir ~~and pressure transducer~~ flow measurement system measures the total flow

from the outlet of the riser pipe, including the spring water redirected from above the landfill. The weir is located approximately 200 feet downstream of the riser pipe inlet."

Page F-8, Section II.D. The second to last paragraph in this section presents the current GWTS configuration. However, to correctly describe the current system, BFI recommends that the third from last paragraph read: "The Discharger implemented **pH control and** air sparging **systems** to reduce ~~dissolved~~ iron levels in early 2012, and reconfigured its drainage system so that the sedimentation basin could become a part of the treatment system providing for additional ~~dissolved~~ iron ~~reduction~~ removal."

SECTION IV. RATIONALE FOR EFFLUENT LIMITATION AND DISCHARGE SPECIFICATIONS

Page F-12, Section IV.B.2. As stated above, because the pressure transducer may not always be operational when removed for cleaning and/or repair, and to allow for flexibility in achieving the objective of flow monitoring, the last bulleted item should be revised to read: "Installed flow monitoring by a weir ~~and transducer~~ **flow monitoring system** located at the outlet from the riser pipe, outside the sedimentation basin approximately 200 feet from the riser pipe inlet."

Page F-14, Section IV.C.2.d. Since the ammonia treatment technologies evaluation report was prepared after the tentative order was issued, this paragraph should be revised, starting with the second sentence to read: "Therefore, this Order does not establish technology-based limitations for ammonia. ~~Provision VI.C.7 requires the Discharger to study and report on the feasibility of applying further ammonia treatment technology at this site prior to the next permit reissuance.~~ **A study evaluating ammonia treatment options indicated that it is infeasible to treat ammonia in the groundwater to the technology-based limit.**

Page F-14, Section IV.C.2.e. Table F-7. There appear to be several errors in the table with daily maximum and monthly average values being reversed. For accuracy, the table should be revised as follows.

	Unit	Monthly Average	Daily Maximum
BOD_5	mg/L	**37**	**140**
TSS	mg/L	27	88
Vinyl Chloride	ug/L	--	0.5
Phenol	ug/L	**15**	**26**
Zinc	ug/L	**110**	**200**

Page F-21, Section IV.D.3.d. Table F-9. At the bottom of the table, the Maximum Background or Minimum DL for Total Ammonia is reported to be 0.025 mg/L. It appears that this value may be un-ionized ammonia rather than total ammonia. Please verify and revise this value as appropriate.

Page F-22, Section IV.D.4.b. For accuracy, in the second full paragraph of this section, line six, add the word "to" so that the sentence reads: "…corresponds **to** the section of the creek.."

Page F-23, Section IV.D.4.(i). For accuracy at the end of this paragraph, please correct "Coridna" to "**Corinda**".

SECTION VI – RATIONALE FOR MONITORING AND REPORTING

Page F-31, Section VI. A. For accuracy, please replace "chlorine" with "**chloride**" on line three.

SECTION VII – RATIONALE FOR PROVISIONS

Page F-32, Section VII.B. Table F-11. When comparing the tables in the MRP with this table there are a few inconsistencies. Also, as presented in above (Page E-3), because the GWTS is a closed system, BFI requests that flow through the GWTS be measured at the effluent point after treatment. Therefore, BFI requests that continuous monitoring at Influent INF-001 be removed.

Page F-33, Section VII.B. Table F-11. For accuracy, please delete the "C" before "BOD". In addition, since BOD is not included as a Parameter for the influent sample, please delete "1/Quarter" under Influent INF-001 on this line. Add "**Calcium**" to the list of Parameters and "**1/Quarter**" under the Influent INF-001 column. Add "**Vinyl Chloride**" to the Parameter column and "**1/Quarter**" under the Effluent EFF-001 and EFF-001A. To distinguish between analytes collected at the Effluent EFF-001 and EFF-001A sample locations, BFI recommends denoting samples collected at EFF-001A with an asterisk or other denotation. The asterisk would be added to correspond with the Parameters Total Phenols, Benzene, Vinyl Chloride, Bis(2-ethylhexyl) phthalate, a-Terpineol, Benzoic Acid, and p-Cresol. A note defining this notation should be added to read: "**Note: *Indicates sample to be collected at EFFL-001A. All others are to be taken at EFFL-001**." Finally, as requested above (Page E-4), since Bis(2-Ethylhexyl)Phthalate is a ubiquitous lab and field contaminant, BFI requests that testing for this parameter be reduced to a frequency of "**1/Year**".

Page F-34, Section VII.C.7. Since the Ammonia Treatment Technology Report has been submitted, reference to this provision should be omitted.

COMMENTS TO ATTACHMENT G

Since Attachment G contains standardized language, BFI has no comments on Attachment G.

CALIFORNIA Water Boards

EDMUND G. BROWN JR. GOVERNOR

MATTHEW RODRIQUEZ SECRETARY FOR ENVIRONMENTAL PROTECTION

San Francisco Bay Regional Water Quality Control Board

TENTATIVE ORDER NO. R2-2013-XXXX
NPDES NO. CA0029947

The following discharger and discharge point are subject to waste discharge requirements set forth in this Order.

Table 1. Discharger Information

Discharger	Browning-Ferris Industries
Name of Facility	Corinda Los Trancos (Ox Mountain) Landfill
Facility Address	12310 San Mateo Road, Half Moon Bay, CA 94019, San Mateo County
The U.S. Environmental Protection Agency and Regional Water Quality Control Board classify this discharge as a minor discharge.	

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Treated Groundwater	37º 29′ 34″ N	122º 24′ 42″ W	Corinda Los Trancos Creek

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	<< DATE>>
This Order shall become effective on:	July 1, 2013
This Order shall expire on:	June 30, 2018
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	180 days prior to the Order expiration date

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 the date indicated above.

_____

Bruce H. Wolfe, Executive Officer

Contents

I. Facility Information 3
II. Findings 3
III. Discharge Prohibitions 8
IV. Effluent Limitations and Discharge Specifications 8
A. Effluent Limitations 8
B. Whole Effluent Toxicity 9
V. Receiving Water Limitations 9
VI. Provisions 10
A. Standard Provisions 10
B. MRP Requirements 11
C. Special Provisions 11
1. Reopener Provisions 11
2. Effluent Characterization Study and Report 12
3. Ambient Background Study and Report 13
4. Best Management Practices and Pollutant Minimization Program 13
5. Facility Reliability Assurance Plan and Status Report 14
6. Bioassessment Monitoring Report 15
7. Ammonia Treatment Technology Report 16
VII. Compliance Determination 16

Tables

Table 1. Discharger Information 1
Table 2. Discharge Location 1
Table 3. Administrative Information 1
Table 4. Facility Information 3
Table 5. Basin Plan Beneficial Uses 5
Table 6. Effluent Limitations 8

Attachments

Attachment A – Definitions A-1
Attachment B – Facility Map B-1
Attachment C – Process Flow Diagram C-1
Attachment D – Federal Standard Provisions D-1
Attachment E – Monitoring and Reporting Program (MRP) E-1
Attachment F – Fact Sheet F-1
Attachment G – Regional Standard Provisions and Monitoring and Reporting Requirements G-1

I. FACILITY INFORMATION

The following facility is subject to the waste discharge requirements set forth in this Order:

Table 4. Facility Information

Discharger	Browning-Ferris Industries
Name of Facility	Corinda Los Trancos (Ox Mountain) Landfill
Facility Address	12310 San Mateo Road, Half Moon Bay, CA 94019, San Mateo County
CIWQS Place Number	215718
Facility Contact, Title, and Phone	Kevin Iler, ~~Division~~ Operations Manager (650) 726–1819
Mailing Address	12310 San Mateo Road, Half Moon Bay, CA 94019
CIWQS Party Number	5392
Type of Facility	Class III Solid Waste Disposal Site
Facility Permitted Flow	115,200 gallons per day (average daily discharge)
Facility Design Flow	115,200 gallons per day (average daily discharge)

II. FINDINGS

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

A. Background. Browning-Ferris Industries (hereinafter the Discharger) is currently discharging under Order No. R2-2007-0062 (CIWQS Regulatory Measure Number 332605), National Pollutant Discharge Elimination System (NPDES) Permit No. CA0029947. The Discharger is also subject to Order No. R2-2007-0063, a Cease and Desist Order (CDO) issued to address the Discharger's inability to immediately comply with Order No. R2-2007-0062. The Discharger submitted a Report of Waste Discharge, dated March 2, 2012, and applied for an NPDES permit reissuance to discharge treated wastewater from its Corinda Los Trancos (Ox Mountain) Landfill to waters of the State and the United States.

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 and Discharge Location

1. **Facility Description.** The Corinda Los Trancos (Ox Mountain) Landfill (hereinafter the Facility) is a Class III municipal refuse disposal site. Such facilities generate several types of wastewater, including leachate, truck and equipment wash water, storm water, and polluted groundwater. This Order only addresses naturally occurring groundwater polluted as a result of groundwater infiltration into the landfill or by pollutants released from the landfill liner system.

   The Facility consists of two solid waste disposal sections, an "old" section and a "new" section. Only the new section is currently active. The old section does not have a flexible membrane liner (FML) because it was constructed prior to the Resource Conservation and Recovery Act Subtitle D and 40 CFR Part 258 requirements. Groundwater is collected from beneath the old

and new sections by an underdrain system that directs the collected groundwater through a single influent pipe to a groundwater treatment system.

The groundwater treatment system consists of a basket strainer, a 13,000-gallon holding tank, three bag filters in series, two 5,000-pound granular activated carbon filtration units installed in series, iron precipitation using pH control and air sparging ~~air sparger~~, and a low permeable soil-lined sedimentation basin that discharges through a riser pipe to Corinda Los Trancos Creek. A weir ~~and pressure transducer~~ flow measurement system is installed at the outlet from the riser pipe to Corinda Los Trancos Creek.

2. **Discharge Description.** Treated effluent is re-used on site for dust suppression during dry weather; during wet weather when treated effluent is not needed for dust suppression, treated effluent is discharged to Corinda Los Trancos Creek. The 2011 daily average and maximum flow rates at Discharge Point 001 were 63,000 and 114,000 gallons per day.

3. **Discharge Location.** Treated wastewater is discharged at Discharge Point 001 to Corinda Los Trancos Creek, a water of the United States, and tributary to Pilarcitos Creek, within the San Mateo Coastal Basin watershed. The Discharger routes water from a perennial spring, located uphill of the landfill, through a 6-inch high-density polyethylene pipe around the landfill directly into the riser pipe for the sedimentation basin. The spring once formed or fed the headwaters of Corinda Los Trancos Creek. Spring water combines with water from the sedimentation basin in the riser pipe, and both flow into Corinda Los Trancos Creek. The creek bed initially consists of a built-up concrete drainage structure for about 275 feet, which eventually ends and drains into a more natural water course. Upgradient sources of water to Corinda Los Trancos Creek other than the spring water and sedimentation pond discharge are negligible during dry weather.

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 Clean Water Act (CWA) section 402 and implements regulations adopted by the U.S. Environmental Protection Agency (USEPA) and California Water Code (CWC) chapter 5.5, division 7 (commencing with section 13370). It serves as an NPDES permit for point source discharges from the Facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to CWC article 4, chapter 4, division 7 (commencing with section 13260).

D. Background and Rationale for Requirements. This Order's requirements are based on information provided in the application and on data submitted to comply with the previous order. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements of the Order, is hereby incorporated into this Order and constitutes part of the findings for this Order. Attachments A through E, and G, are also incorporated into this Order.

E. California Environmental Quality Act (CEQA). Under CWC section 13389, this action to reissue an NPDES permit is exempt from CEQA Chapter 3.

F. Technology-Based Effluent Limitations. CWA section 301(b) and Title 40 of the Code of Federal Regulations (40 CFR) section 122.44 require that permits include conditions meeting applicable technology-based requirements at minimum, and any more stringent effluent limitations necessary to meet applicable water quality 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 based on Effluent Limitation Guidelines for the Landfills Point Source Category. Technology-based requirements have been established using Best Professional Judgment (BPJ) pursuant to 40 CFR 125.3, using the Landfills Point Source Category Effluent Limitation Guidelines as guidance. The Fact Sheet further discusses the development of the technology based effluent limitations in this Order.

G. Water Quality-Based Effluent Limitations (WQBELs). CWA section 301(b) and 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. NPDES regulations at 40 CFR 122.44(d)(1)(i) mandate that permits include effluent limitations for all pollutants that are or may be discharged at levels that have a 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, WQBELs must be established using (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion (WQC), 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 Plan. *The Water Quality Control Plan for the San Francisco Bay Basin* (hereinafter the Basin Plan) is the Regional Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives (WQOs) for waters of the State, including surface and groundwater. It also includes implementation programs to achieve WQOs. The Basin Plan was duly adopted by the Regional Water Board and approved by the State Water Board, the Office of Administrative Law, and USEPA. Requirements of this Order implement the Basin Plan. The Basin Plan identifies beneficial uses for the receiving water for this discharge, Corinda Los Trancos Creek.

This Order also implements 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. The beneficial uses of Corinda Los Trancos Creek are summarized in Table 5, below.

Comment [SB1]: The basin plan does not include municipal or domestic supply for Corinda Los Trancos Creek.

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Use(s)
001	Corinda Los Trancos Creek	Municipal and Domestic Supply (MUN) Cold Freshwater Habitat (COLD) Preservation of Rare and Endangered Species (RARE) Warm Freshwater Habitat (WARM) Wildlife Habitat (WILD) Water Contact Recreation (REC1) Non-Contact Water Recreation (REC2)

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 40 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 applied in the State. The CTR was amended on February 13, 2001. These rules contain WQC for priority pollutants.

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* (hereinafter the State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated through the NTR and the priority pollutant objectives established in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria USEPA promulgated 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. Alaska Rule. On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes (65 Fed. Reg. 24641 [April 27, 2000], codified at 40 CFR 131.21). 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.

L. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on biochemical oxygen demand (BOD), total suspended solids (TSS), phenol, and zinc. Derivation of these technology-based limitations is discussed in the Fact Sheet. In addition, this Order contains effluent limitations that are necessary to meet water quality standards. These WQBELs are no more stringent than the CWA requires.

WQBELs have been derived to implement WQOs that protect beneficial uses. Both the beneficial uses and the WQOs have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The procedures for calculating individual WQBELs for priority pollutants are based on the SIP, which USEPA approved on May 18, 2000. Most beneficial uses and WQOs contained in the Basin Plan were approved under State law and submitted to USEPA. Any WQOs 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 the purposes of the CWA" pursuant to 40 CFR 131.21(c)(1).

M. 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, which incorporates the federal antidegradation policy where the federal policy applies under federal law and requires that the existing quality of waters be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The effluent limitations in this Order are consistent with applicable antidegradation requirements of the CWA and NPDES regulations, and State policy.

N. Safe, Clean, Affordable, and Accessible Water. CWC section 106.3 states that the policy of the State of California is that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to meet maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.

O. Anti-Backsliding Requirements. CWA sections 402(o)(2) and 303(d)(4) and 40 CFR 122.44(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 order, 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. Endangered Species Act. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the State. The Discharger is responsible for meeting all requirements of applicable State and federal law pertaining to threatened and endangered species.

Q. Monitoring and Reporting. NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. CWC sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. Attachment E, the Monitoring and Reporting Program (MRP), establishes monitoring and reporting requirements to implement federal and State requirements.

R. 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 apply under 40 CFR 122.42. The Discharger must also comply with the Regional Standard Provisions provided in Attachment G. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. The Fact Sheet provides the rationale for the special provisions.

S. Provisions and Requirements Implementing State Law. None of the requirements in this Order are included to implement State law only.

T. Notification of Interested Parties. The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided them with an opportunity to submit written comments and recommendations. The Fact Sheet provides details of the notification.

U. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. The Fact Sheet provides details of the public hearing.

IT IS HEREBY ORDERED, that this Order supersedes Order No. R2-2007-0062, except for enforcement purposes, and, in order to meet the provisions contained in CWC Division 7 (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal CWA and

regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. This Order also rescinds Cease and Desist Order No. R2-2007-0063, except for enforcement purposes.

III. DISCHARGE PROHIBITIONS

A. Discharge of treated or untreated groundwater from the Discharger's groundwater extraction system at a location or in a manner different from that described in this Order is prohibited.

B. Discharge of treated groundwater greater than 115,200 gallons per day (gpd) is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

In this section, the term "effluent" refers to treated groundwater effluent from the Discharger's groundwater extraction and treatment system, as discharged to Corinda Los Trancos Creek. Discharges at Discharge Point No. 001 shall comply with the following effluent limitations.

A. Effluent Limitations

1. Discharges at Discharge Point No. 001 shall comply with the following effluent limitations, at the indicated monitoring locations as described in the MRP.

Table 6. Effluent Limitations

Parameter	Units	Effluent Limitations[1]				Monitoring Location
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
BOD_5	mg/L	37	140	---	---	EFF-001
TSS	mg/L	27	88			EFF-001
pH[2]	Standard units	---	---	6.5	8.5	EFF-001
Phenol	mg/L	0.015	0.026	---	---	EFF-001A
Ammonia (as N)	mg/L	16	44			EFF-001
Lead	µg/L	1.7	3.5			EFF-001
Mercury	µg/L	0.013	0.041			EFF-001
Selenium	µg/L	3.1	9.1			EFF-001
Cyanide	µg/L	4.3	5.2			EFF-001
Benzene	µg/L	1.2	2.4			EFF-001A
Vinyl Chloride	µg/L	--	0.5			EFF-001A
Zinc	µg/L	~~200~~110	~~110~~200			EFF-001

Comment [SB2]: An EL for TSS is new.

Footnotes to Table 6:

[1] a. Limitations apply to the average concentration of all samples collected during the averaging period (daily = 24-hour period; monthly = calendar month)

b. All limitations for metals are expressed as total recoverable metals.

[2] If the Discharger monitors pH continuously, pursuant to 40 CFR 401.17, the Discharger shall be in compliance with the pH limitation specified herein provided that both of the following conditions are satisfied: (i) the total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (ii) no individual excursion from the range of pH values shall exceed 60 minutes.

B. Whole Effluent Toxicity

1. Whole Effluent Acute Toxicity

a. Discharges at Discharge Point No. 001 shall comply with the following limits for acute toxicity, with compliance measured at Monitoring Location EFF-001 as described in the MRP. Bioassays shall be conducted in accordance with MRP section V.A.

(i) A three (3) -sample median value of not less than 90 percent survival; and

(ii) A single-sample value of not less than 70 percent survival.

b. The three-sample median acute toxicity limitation is further defined as follows:

(i) **3 sample median:** If one of the past two or fewer bioassays shows less than 90 percent survival, then survival of less than 90 percent in the next bioassay is a violation of this effluent limitation

c. Bioassays shall be performed using the most up-to-date USEPA protocol and the most sensitive species as specified in MRP section V.A. 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). If these protocols prove unworkable, the Executive Officer and the Environmental Laboratory Accreditation Program may grant exceptions in writing upon the Discharger's request with justification.

d. If the Discharger can demonstrate that toxicity exceeding the levels cited above is caused by ammonia and that the ammonia in the discharge complies with effluent limits, then such toxicity does not constitute a violation of this effluent limitation.

2. Whole Effluent Chronic Toxicity

The discharge from Discharge Point 001 shall not contain chronic toxicity at a level that would cause or contribute to toxicity in the receiving water. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, or any other relevant measure of the health of an organism population or community. Compliance with this limit shall be determined by analyses of indicator organisms and toxicity tests. Compliance shall be measured at monitoring station EFF-001 as described in the MRP.

V. RECEIVING WATER LIMITATIONS

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

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

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

c. Alteration 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 that cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State at any place within 1 foot of the water surface:

a. Dissolved Oxygen	5.0 mg/L, minimum Furthermore, 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, the discharge shall not cause further reduction in ambient dissolved oxygen concentrations.
b. Dissolved Sulfide	Natural background levels
c. pH	The pH shall not be depressed below 6.5 or raised above 8.5. The discharge shall not cause changes greater than 0.5 pH units in normal ambient pH levels.
d. Un-ionized ammonia	0.025 mg/L, as N, annual median
e. 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. The discharge shall not cause a violation of any particular 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 may revise and modify this Order in accordance with such more stringent standards.

VI. PROVISIONS

A. Standard Provisions

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

2. **Regional Standard Provisions.** The Discharger shall comply with all applicable items of the Regional Standard Provisions, and Monitoring and Reporting Requirements (Supplement to Attachment D) for NPDES Wastewater Discharge Permits (Attachment G), including amendments thereto.

B. MRP Requirements

The Discharger shall comply with the MRP, and future revisions thereto, including applicable sampling and reporting requirements in the standard provisions listed in VI.A above.

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 discharges governed by this Order have or will have a reasonable potential to cause or contribute to, or will cease to have, adverse impacts on water quality or beneficial uses of the receiving waters.

b. If new or revised WQOs or total maximum daily loads (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 or TMDLs, or as otherwise permitted under federal regulations governing NPDES permit modifications.

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

d. If State Water Board precedential decisions, new policies, new laws, or new regulations on chronic toxicity or total chlorine residual become available.

e. If an administrative or judicial decision on a separate NPDES permit or WDRs addresses requirements similar to this discharge.

f. Or as otherwise authorized by law.

The Discharger may request permit modification based on any of the circumstances described above. In any such request, the Discharger shall include an antidegradation and anti-backsliding analysis.

With the consent of the Discharger, the Executive Officer may make minor modifications to this Order for the purposes set forth in 40 CFR 122.63.

2. Effluent Characterization Study and Report

a. Study Elements

The Discharger shall continue to characterize and evaluate effluent discharges from the following discharge point to verify that the "no" or "cannot determine" reasonable potential analysis conclusions of this Order remain valid and to inform the next permit reissuance. The Discharger shall collect representative samples of the discharge as set forth below, with locations as defined in the MRP:

Discharge Point	Monitoring Station	Frequency
001	EFF-001 or EFF-001A	Once per calendar year

The samples shall be analyzed for the priority pollutants listed in Attachment G, Table C, except for those priority pollutants with effluent limitations where the MRP already requires monitoring; and for those toxic pollutants measured by EPA methods 8260, 8270, and 608. Compliance with this requirement shall be achieved in accordance with the specifications of Attachment G, sections III.A.1 and III.A.2.

The Discharger shall evaluate on an annual basis if concentrations of any of these pollutants increase over past performance. The Discharger shall investigate the cause of any increase. The investigation may include, but need not be limited to, an increase in monitoring frequency, monitoring of internal process streams, and monitoring of influent sources. The Discharger shall establish remedial measures addressing any increase resulting in reasonable potential to cause or contribute to an excursion above applicable water quality objectives. This requirement may be satisfied through identification of the constituent as a "pollutant of concern" in the Discharger's Pollutant Minimization Program, described in Provision VI.C.4.

b. Reporting Requirements

(i) Routine Reporting

The Discharger shall, within 30 days of receipt of analytical results, report in the transmittal letter for the appropriate monthly self-monitoring report the following:

(a) Indication that a sample or samples for this characterization study was or were collected; and

(b) Identity of priority pollutants detected at or above their applicable water quality criteria (see Fact Sheet Table F-~~8~~ 9 for the criteria), together with the detected concentrations of those pollutants.

(ii) Annual Reporting

The Discharger shall provide a summary of the annual data evaluation and source investigation in the annual self-monitoring report.

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

3. Ambient Background Study and Report

The Discharger shall also collect background ambient receiving water monitoring data for priority pollutants that are required to perform a reasonable potential analysis and to calculate effluent limitations. The data on the conventional water quality parameters (pH, salinity, and hardness) shall also be sufficient to characterize these parameters in the ambient receiving water at a point after the discharge has mixed with the receiving waters. These data shall be collected once during the permit term within 12 months prior to applying to reissue the permit. The Discharger shall submit a report that presents all these data to the Regional Water Board no later than 180 days prior to the Order expiration date. The report shall be submitted with the application for permit reissuance.

Comment [SB3]: New requirement to sample the creek below the weir. May be specify at RSW-002 (E-Pond) because it is an accessible point in the creek

4. Best Management Practices and Pollutant Minimization Program

a. Pollutant Minimization Program for Pollutants with Effluent Limitations

The Discharger shall develop and conduct a Pollutant Minimization Program as further described below when there is evidence that a priority pollutant is present in the effluent above an effluent limitation (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) and either:

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

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

b. Pollutant Minimization Program Submittals for Pollutants with Effluent Limitations

If triggered by the reasons in section VI.C.4.a, above, the Discharger's Pollutant Minimization Program shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

(i) Annual review and semi-annual monitoring of potential sources of the reportable priority pollutants, which may include fish tissue monitoring and other bio-uptake sampling, or alternative measures approved by the Executive Officer when it is demonstrated that source monitoring is unlikely to produce useful analytical data;

(ii) Quarterly monitoring for the reportable priority pollutants in the influent to the wastewater treatment system, or alternative measures approved by the Executive Officer when it is demonstrated that influent monitoring is unlikely to produce useful analytical data;

(iii) Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutants in the effluent at or below effluent limitations;

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

(v) Annual report required by section VI.C.3.b, above, which shall specifically include the following items:

Comment [SB4]: Not sure of correct reference here. Please clarify reference.

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

(b) List of potential sources of the reportable priority pollutants;

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

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

5. Facility Reliability Assurance Plan and Status Report

a. The Discharger shall maintain a Facility Reliability Assurance Status Plan that describes measures in place (e.g., treatment/storage capacities, critical system redundancies and spare parts, warning alarms, etc.) to assure the reliability of the Discharger's system in preventing inadequately treated groundwater from being discharged into the receiving waters. Inadequately treated groundwater includes any polluted groundwater that bypasses any portion of the treatment system. The Facility Reliability Assurance Plan shall be maintained in usable condition and be available for reference and use by all relevant personnel.

b. The Discharger shall regularly review, revise, or update, as necessary, the Reliability Assurance Plan to ensure that the document remains useful and relevant to current equipment and operational 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, relevant revisions shall be completed as soon as practicable.

c. The Discharger shall submit a summary describing the current status of its Facility Reliability Assurance Plan, including any recommended or planned actions and an estimated time schedule for these actions. The Discharger shall submit this Facility Reliability Assurance Status Report by February 1 each year with the Annual SMR.

6. Bioassessment Monitoring Report

The Discharger shall conduct bioassessment monitoring of a representative reach of Corinda Los Trancos Creek downstream of Discharge Point 001 once during this Order's term at least 12 months prior to applying for permit reissuance. The Discharger shall report the data in electronic format to the California Environmental Data Exchange Network (CEDEN)[1] and submit a report presenting the data to the Regional Water Board no later than 180 days prior to the Order expiration date. The report shall be submitted with the application for permit reissuance.

The bioassessment shall be in accordance with Surface Water Ambient Monitoring Program (SWAMP) Standard Operating Procedures;[2,3,4] and shall include collection and reporting of in-stream biological and physical habitat data according to the *Full SWAMP Standard Operating Procedures for Bioassessment*[2], including algae, benthic macroinvertebrates, water chemistry, and physical habitat. Sampling shall occur between May 1 and June 30 of the same calendar year. The sampling crew shall be trained by a SWAMP-approved trainer and possess a Memorandum of Understanding or Scientific Collection Permit from the California Department of Fish and Wildlife.

Macroinvertebrates shall be identified and classified according to the *Standard Taxonomic Effort (STE) Level I of the Southwestern Association of Freshwater Invertebrate Taxonomists (SAFIT)*[5] using a fixed count of 600 organisms per sample. The laboratory shall follow the *SWAMP Standard Operating Procedures for Laboratory Processing and Identification of Benthic Macroinvertebrates in California*.[6] In general, quality assurance and quality control

[1] The Discharger shall submit raw data in CEDEN-approved Excel templates (found at http://www.ceden.org/ceden_datatemplates.shtml) that it has checked for errors and corrected prior to submission. The San Francisco Estuary Institute (SFEI) is the CEDEN Regional Data Center for the San Francisco Bay Region. Once the data have been transferred to SFEI, the Discharger shall confirm that the data are published on the CEDEN web site.

[2] Ode, P.R. 2007. *Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California,* California State Water Resources Control Board Surface Water Ambient Monitoring Program (SWAMP), as subsequently revised [http://swamp.mpsl.mlml.calstate.edu/resources-and-downloads/standard-operating-procedures]. The Discharger may modify its sampling procedures if these referenced procedures change during the Order term. In such case, the Discharger shall notify the Regional Water Board and follow the updated procedures.

[3] Biological assessments shall include benthic macroinvertebrates and algae. Bioassessment sampling method shall be multihabitat reach-wide. Macroinvertebrates shall be identified according to the *Standard Taxonomic Effort Level I of the Southwestern Association of Freshwater Invertebrate Taxonomists*, using the most current SWAMP-approved method. Current methods are documented in (1) *SWAMP Standard Operating Procedure (SOP) and Interim Guidance on Quality Assurance for SWAMP Bioassessments, Memorandum to SWAMP Roundtable from Beverly H. van Buuren and Peter R. Ode*, *May 21, 2007*, and (2) *Amendment to SWAMP Interim Guidance on Quality Assurance for SWAMP Bioassessments, Memorandum to SWAMP Roundtable from Beverly H. van Buuren and Peter R. Ode, September 17, 2008*. For algae, the assessment shall include mass (ash-free dry weight), chlorophyll a, pebble count algae information, and reach-wide algal percent cover. Diatom and soft algae taxonomy are not required. Physical Habitat (PHab) Assessment shall include the SWAMP Full Physical Habitat method. The Discharger may modify these sampling procedures if SWAMP procedures change during the Order term. In such case, the Discharger shall notify the Regional Water Board and follow the updated procedures.

[4] Guidance on algae sampling and evaluation is available in the following: Fetscher, A. and K. McLaughlin, May 16, 2008. *Incorporating Bioassessment Using Freshwater Algae into California's Surface Water Ambient Monitoring Program (SWAMP).* Technical Report 563 and current SWAMP-approved updates to Standard Operating Procedures therein. Available at http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/reports/563_periphyton_bioassessment.pdf.

[5] The current SAFIT STEs (November 28, 2006) list requirements for both the Level I and Level II taxonomic effort, and are located at http://www.swrcb.ca.gov/swamp/docs/safit/ste_list.pdf. When new editions are published by SAFIT, they will supersede all previous editions. All editions will be posted at the State Water Board's SWAMP website.

[6] http://swamp.mpsl.mlml.calstate.edu/resources-and-downloads/standard-operating-procedures.

steps specified in the *SWAMP Quality Assurance Program Plan*[7] shall be performed; however, duplicate field samples and benthic macroinvertebrate laboratory duplicates are not required.

The Discharger shall compare the monitoring results at Corinda Los Trancos Creek with an appropriate least-impacted reference location, such as SWAMP monitoring site 202SPE190 (sampled in 2009) or 202SMA160 (sampled in 2003), and an impacted comparison site such as 202PS0134 (sampled in 2011). Bioassessment and physical habitat data are available from CEDEN (http://www.ceden.org).

In conducting the required bioassessment monitoring, the Discharger and its consultants shall take precautions to prevent the introduction or spread of aquatic invasive species. At minimum, the Discharger and its consultants shall follow the recommendations of the California Department of Fish and Wildlife to minimize the introduction or spread of the New Zealand mudsnail.[8]

~~**7. Ammonia Treatment Technology Report**~~

~~The Discharger shall prepare a technical report on the feasibility of applying ammonia treatment technology to the discharge sufficient to meet the limits promulgated by the Effluent Limit Guidelines (ELGs) for the Landfill Point Source Category at 40 CFR 445. These limits are an AMEL of 4.9 mg/L and an MDEL of 10 mg/L. The Discharger shall submit this report to the Regional Water Board no later than 180 days prior to this Order's expiration date with the application for permit reissuance.~~

VII. COMPLIANCE DETERMINATION

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in Attachment A—Definitions, the MRP, Fact Sheet section VI, and the Regional Standard Provisions. 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).

[7] http://www.waterboards.ca.gov/water_issues/programs/swamp/tools.shtml#qa.

[8] Instructions for controlling the spread of New ~~Zeland~~Zealand mudsnails, including decontamination methods, can be found at: http://www.dfg.ca.gov/invasives/mudsnail/. More information on aquatic invasive species can be found at http://www.waterboards.ca.gov/water_issues/programs/swamp/ais/

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

Coefficient of Variation (CV)
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 this Order), 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)
DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

Dilution Credit
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)
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
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 San Francisco 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
The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries
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 include, but are not limited to, the Sacramento-San Joaquin Delta, as defined in California 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
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)
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
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)
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 title 40 of the Code of Federal Regulations (40 CFR), Part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML)
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
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)
Sample results less than the laboratory's MDL.

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

Pollutant Minimization Program (PMP)
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 California Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention
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 California 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)
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
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
Any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

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

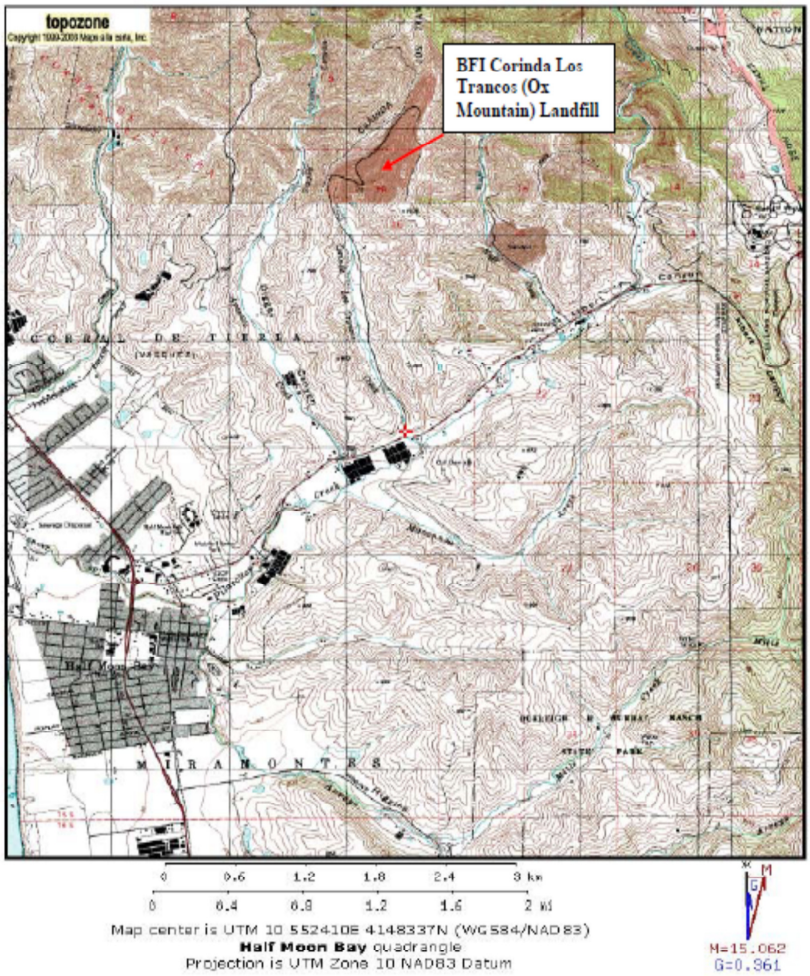
$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

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)
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.)

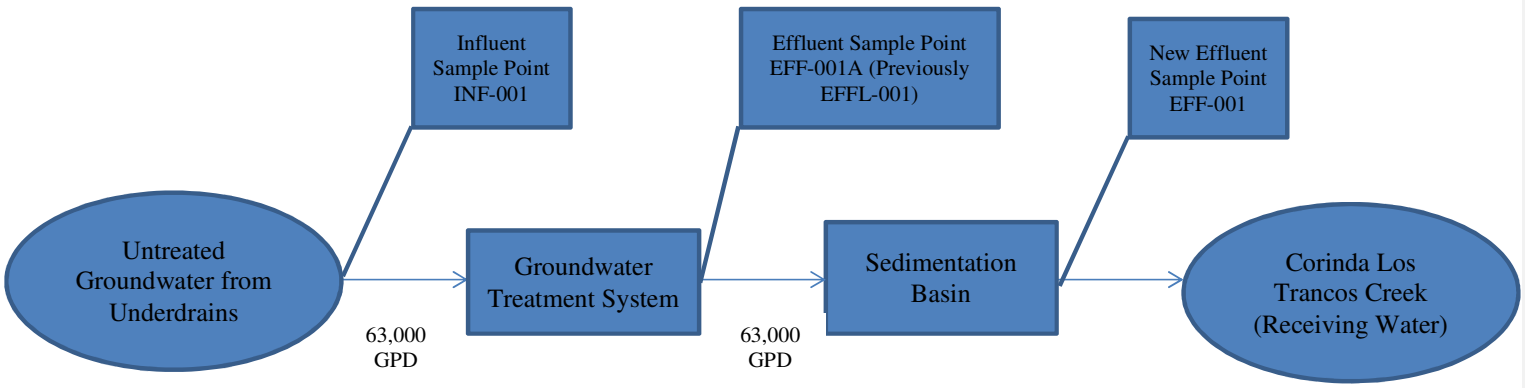
ATTACHMENT B – FACILITY MAP



ATTACHMENT C – PROCESS FLOW DIAGRAM

SCHEMATIC OF WATER FLOW FOR GROUNDWATER TREATMENT SYSTEM
CORINDA LOS~~T~~ TRANCOS (OX MOUNTAIN) LANDFILL

Comment [SB5]: Delete T from Lost in title.



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 Clean Water Act (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); Wat. 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 this 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); Wat. 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 either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR 122.22(a)(3).).

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 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 section 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 Order under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

~~VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS~~

~~A. Publicly-Owned Treatment Works (POTWs)~~

~~All POTWs shall provide adequate notice to the Regional Water Board of the following (40 CFR 122.42(b)):~~

~~1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 CFR 122.42(b)(1)); and~~

~~2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of this Order. (40 CFR 122.42(b)(2).)~~

~~3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 CFR 122.42(b)(3).)~~

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Contents

I. General Monitoring Provisions E-2
II. Monitoring Locations E-2
III. Influent Monitoring Requirements E-3
IV. Effluent Monitoring Requirements E-3
V. Whole Effluent Toxicity Testing Requirements E-5
VI. Receiving Water Monitoring Requirements ..... E-10~~E-9~~
VII. Reporting Requirements ..... E-11~~E-10~~
A. General Monitoring and Reporting Requirements ..... E-11~~E-10~~
B. Self-Monitoring Reports (SMRs) ..... E-11~~E-10~~
C. Discharge Monitoring Reports ..... E-13~~E-12~~
D. Modifications to Attachment G ..... E-14~~E-13~~

Tables

Table E-1. Monitoring Station Locations E-2
Table E-2. Influent Monitoring E-3
Table E-3. Effluent Monitoring at EFF-001 ..... E-3
Table E-4. Effluent Monitoring at EFF-001A E-4
Table E-5. Receiving Water Monitoring RSW-001 ..... E-10~~E-9~~
Table E-6. Receiving Water Monitoring RSW-002 and RSW-003 ..... E-10~~E-9~~
Table E-7. SMR Reporting for CIWQS ..... E-11~~E-10~~
Table E-8. Monitoring Periods and Reporting Schedule ..... E-12~~E-11~~

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

National Pollutant Discharge Elimination System (NPDES) regulations at 40 CFR 122.48 require that all NPDES permits specify monitoring and reporting requirements. California Water Code (CWC) sections 13267 and 13383 also authorize the Regional Water Quality Control Board (hereinafter the Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement the federal and State regulations.

I. GENERAL MONITORING PROVISIONS

A. The Discharger shall comply with this MRP. The Executive Officer may amend this MRP pursuant to 40 CFR 122.62, 122.63, and 124.5. If any discrepancies exist between the MRP and Regional Standard Provisions, this MRP prevails.

B. The Discharger shall conduct all monitoring in accordance with Attachment D, section III, as supplemented by Attachment G of this Order. Equivalent test methods must be more sensitive than those specified in 40 CFR 136 and must be specified in the permit.

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-1. Monitoring Station Locations

Type of Sampling Location	Monitoring Location Name	Monitoring Location Description	Approximate Latitude and Longitude
Influent	INF-001	At a point in the groundwater collection system immediately prior to treatment (previously identified as INFL-1).	---
Effluent	EFF-001	At any point in the outfall from the sedimentation basin prior to the receiving water at which all waste tributary to the outfall is present prior to mixing with the receiving water (Discharge Point No. 001)	37 º 29’ 34” N 122º 24’ 42” W
Effluent	EFF-001A	At a point immediately following treatment and prior to discharge to the sedimentation basin (previously identified as EFFL-1).	37 º 29’ 38” N 122º 24’ 41” W
Receiving Water	RSW-001	At the existing point (sampled since 1987) in Corinda Los Trancos Creek upstream of the landfill (previously identified as E-002).	---
Receiving Water	RSW-002	At a point in Corinda Los Trancos Creek, at least 100 feet, but no more than 500 feet, downstream from the discharge point of the sedimentation basin into Corinda Los Trancos Creek (previously identified as E-Pond).	---
Receiving Water	RSW-003	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 (previously identified as E-Pil/Down)	---

III. INFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor influent to the groundwater treatment system at INF-001, as follows.

Table E-2. Influent Monitoring

Parameter	Units[1]	Sample Type[2]	Minimum Sampling Frequency
~~Flow[3]~~	~~gpd~~	~~Continuous~~	~~1/Day~~
pH	Standard Units	Grab	1/Quarter
Total Dissolved Solids (TDS)	mg/L	Grab	1/Quarter
Total Suspended Solids (TSS)	mg/L	Grab	1/Quarter
Total Oil and Grease	mg/L	Grab	1/Quarter
Ammonia Nitrogen	mg/L	Grab	1/Month
Temperature	°C	Grab	1/Quarter
Electrical Conductivity	umhos/cm	Grab	1/Quarter
Calcium	mg/L	Grab	1/Quarter
Magnesium	mg/L	Grab	1/Quarter
Sodium	mg/L	Grab	1/Quarter
Potassium	mg/L	Grab	1/Quarter
Sulfate (SO_4)	mg/L	Grab	1/Quarter
Bicarbonate (HCO_3)	mg/L	Grab	1/Quarter
Chloride	mg/L	Grab	1/Quarter
Vinyl Chloride	µg/L	Grab	1/Year

[1] Unit Abbreviations:
~~gpd = gallons per day~~
°C = degree centigrade
mg/L = milligrams per liter
umhos/cm = micromhos per centimeter

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

~~[3] The following data shall also be reported monthly for influent flow:~~
~~Daily: Daily average flow (MGD)~~
~~Monthly: Monthly average flow (MGD)~~

Comment [SB6]: Use Effluent flow meter (GWTS is a flow through system)

IV. EFFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor treated effluent from the groundwater treatment system, in the outfall from the sedimentation basin prior to Corinda Los Trancos Creek at EFF-001, as follows.

Table E-3. Effluent Monitoring at EFF-001

Parameter	Units[1]	Sample Type[2]	Minimum Sampling Frequency
Flow Rate[3]	gpd	Continuous	Continuous/Recorded Daily
Total Suspended Solids (TSS)	mg/L	Grab	1/Quarter
pH	Standard Units	Grab	1/Quarter
Total Dissolved Solids (TDS)	mg/L	Grab	1/Quarter
Electrical Conductivity	umhos/cm	Grab	1/Quarter

Parameter	Units[1]	Sample Type[2]	Minimum Sampling Frequency
Temperature	°C	Grab	1/Quarter
Biological Oxygen Demand (BOD)	mg/L	Grab	1/Quarter
Chemical Oxygen Demand (COD)	mg/L	Grab	1/Quarter
Nitrite	mg/L	Grab	1/Quarter
Nitrate	mg/L	Grab	1/Quarter
Hardness	mg/L	Grab	1/Quarter
Lead	µg/L	Grab	1/Quarter
Mercury[4]	µg/L	Grab	1/Quarter
Selenium	µg/L	Grab	1/Quarter
Cyanide[5]	µg/L	Grab	1/Quarter
Zinc	µg/L	Grab	1/Year
Ammonia (as Nitrogen)[6]	mg/L	Grab	1/Quarter
Acute Toxicity[7],	% Survival	Grab	1/Quarter
Chronic Toxicity[8]	chronic toxicity units TUc	Grab	1/Quarter

Footnotes to Table E-3:

[1] Unit Abbreviations:
mg/L = milligrams per liter
gpd = gallons per day
ºC = degree centigrade
umhos/cm = micromhos per centimeter
TUc = chronic toxicity unit

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

[3] For effluent flows, measurements will be obtained at the weir, including re-routed spring water, and the following information shall also be reported monthly:
Daily: Daily average flow, ~~Million~~ Gallons per Day (~~MGD~~gpd)
Monthly: Monthly average flow (~~MGD~~gpd)

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

[5] Compliance may be demonstrated by measurement of weak acid dissociable cyanide.

[6] Monitoring for total ammonia shall occur concurrently with monitoring for temperature and pH, for determination of the un-ionized ammonia fraction.

[7] Acute bioassay tests shall be performed in accordance with MRP section V.A.

[8] Critical life stage toxicity tests shall be performed and reported in accordance with the Chronic Toxicity Requirements of specified in MRP section V.B.

The Discharger shall monitor treated effluent from the groundwater treatment system, at a point immediately following treatment and prior to discharge to the sedimentation basin at EFF-001A, as follows.

Table E-4. Effluent Monitoring at EFF-001A

Parameter	Units[1]	Sample Type[2]	Minimum Sampling Frequency
Flow	gpd	Continuous	1/Day
Total Phenols	mg/L	Grab	1/Quarter

Parameter	Units[1]	Sample Type[2]	Minimum Sampling Frequency
Benzene	µg/L	Grab	1/Quarter
Bis(2-Ethylhexyl)Phthalate	µg/L	Grab	~~1/Quarter~~1/Year
a-Terpineol,	mg/L	Grab	1/Year
Benzoic acid	mg/L	Grab	1/Year
p-Cresol	mg/L	Grab	1/Year
Vinyl Chloride	µg/L	Grab	1/Quarter

Footnotes to Table E-~~34~~:

[1] Unit Abbreviations:
gpd = gallons per day
~~ºC = 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

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

The Discharger shall monitor whole effluent acute and chronic toxicity at EFF-001 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 static renewal bioassays.

2. Test organisms shall be rainbow trout (*Oncorhynchus mykiss*). The Executive Officer may specify a more sensitive organism or, if testing a particular organism proves unworkable, the most sensitive organism available.

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

4. If the Discharger demonstrates that specific identifiable substances in the discharge are 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. The Discharger may manually adjust the pH of whole effluent acute toxicity samples prior to performing bioassays to minimize ammonia toxicity interference. Written acknowledgement that the Executive Officer concurs with the discharger's demonstration and that the adjustment will not remove the influence of other substances must be obtained prior to any other such adjustment.

5. ~~Effluent must be dechlorinated prior to testing~~. Monitoring of the bioassay water shall include an initial ammonia measurement, and~~,~~ ~~on a daily basis,~~ the following parameters: pH, dissolved oxygen, ~~ammonia (if toxicity is observed),~~ temperature, hardness, and alkalinity on a daily basis. These results shall be reported. If a violation of acute toxicity requirements

Comment [SB7]: This is a common field/lab contaminant. At most it should be tested 1/year.

Comment [SB8]: Effluent is not chlorinated.

Comment [SO9]: Analysis of effluent ammonia concentrations is generally limited to the analysis of the samples at the time of sample receipt at the testing lab. As ammonia concentrations typically do not vary in a particular sample during the course of testing, daily analysis in not necessary.

occurs, the bioassay test shall be repeated with new fish as soon as practical and shall be repeated until a test fish survival rate of 90 percent or greater is observed. If the control fish survival rate is less than 90 percent, the bioassay test shall be restarted with new fish as soon as practical and shall continue ~~as soon as practical~~ until an acceptable test is completed (i.e., control fish survival rate is 90 percent or greater).

B. Whole Effluent Chronic Toxicity

1. Chronic Toxicity Monitoring Requirements

a. Sampling. The Discharger shall monitor its effluent for chronic toxicity through critical life stage toxicity testing as indicated below. Grab samples collected on ~~consecutive~~ three days over the 7-day test period (e.g., Monday, Wednesday, and Friday) are required for toxicity tests requiring renewals.

b. Test Species. The test species shall be the fathead minnow (*Pimephales promelas*). The Discharger shall conduct a screening chronic toxicity screening test as described in Appendix E-1 following any significant change in the nature of the effluent. If there is no significant change, the Discharger shall conduct a screening test prior to application for permit reissuance. The most sensitive species shall be used thereafter for routine chronic toxicity monitoring. The Executive Officer may change to another test species if data suggest that another test species is more sensitive to the discharge.

c. Frequency. The frequency of routine and accelerated chronic toxicity monitoring shall be as specified below.

(1) Monitor routinely once per quarter.

(2) Accelerate monitoring to monthly after exceeding a three-sample median of 1 TU_c[1] or a single sample maximum of 2 TU_c. Based on the TUc results, the Executive Officer may specify a different frequency for accelerated monitoring to ensure that accelerated monitoring provides useful information.

(3) Return to routine monitoring if accelerated monitoring does not exceed either "trigger" in (2), above.

(4) If accelerated monitoring confirms consistent toxicity in excess of either "trigger" in (2), above, continue accelerated monitoring and initiate toxicity reduction evaluation (TRE) procedures in accordance with section V.B.3, below.

(5) Return to routine monitoring after implementing appropriate elements of the TRE, and either the toxicity drops below both "triggers" in (2), above, or, based on the TRE results, the Executive Officer determines that accelerated monitoring would no longer provide useful information.

Monitoring conducted pursuant to a TRE effort shall satisfy the requirements for routine and accelerated monitoring while the TRE investigation is underway.

d. 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*

[1] A TU_c equals 100 divided by the no observable effect level (NOEL). The NOEL is determined from IC_{25}, EC_{25}, or NOEC values. These terms, their usage, and other chronic toxicity monitoring program requirements are defined in the MRP.

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). If these protocols prove unworkable, the Executive Officer and the Environmental Laboratory Accreditation Program may grant exceptions in writing upon the Discharger's request with justification. If the Discharger demonstrates that specific identifiable substances in the discharge are rapidly rendered harmless upon discharge to the receiving water, compliance with the chronic toxicity limit may be determined after the test samples are adjusted to remove the influence of those substances. Written acknowledgement that the Executive Officer concurs with the Discharger's demonstration and that the adjustment will not remove the influence of other substances must be obtained prior to any other such adjustment.

e. Dilution Series. The Discharger shall conduct tests with a control and five effluent concentrations (including 100% effluent) and using a dilution factor ≥ 0.5. Test sample pH in each dilution in the series may be buffered using the biological buffer MOPS (3-[N-Morpholino]propanesulfonic Acid) to control pH drift and ammonia toxicity caused by increasing the pH during the test.

2. Chronic Toxicity Reporting Requirements

a. Toxicity test results for the current reporting period shall be provided in the self-monitoring report and shall include, at a minimum, for each test:

(1) Sample dates

(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 values in percent effluent

(6) IC_{15}, IC_{25}, IC_{40}, and IC_{50} values (or EC_{15}, EC_{25} ... etc.) as percent effluent

(7) TU_c values (100/NOEL, where NOEL = IC_{25}, EC_{25}, or NOEC as discussed in Appendix E-1)

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

(9) IC_{50} or EC_{50} values for reference toxicant tests

(10) Available water quality measurements for each test (pH, dissolved oxygen, temperature, conductivity, hardness, salinity, ammonia)

b. The results of the most recent three chronic toxicity tests and the 3-sample median shall be provided in the self-monitoring report as TUc's.

3. Chronic Toxicity Reduction Evaluation

a. The Discharger shall prepare a generic TRE work plan within 90 days of the effective date of this Order to be ready to respond to toxicity events. The Discharger shall review and update the work plan as necessary so that it remains current and applicable to the discharge and discharge facilities.

b. Within 30 days of receiving results of an accelerated monitoring test that shows continued exceedance of either trigger, the Discharger 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. Within 30 days of receiving results of accelerated monitoring tests that show continued exceedance of 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 requirements of section IV.C.2 of the Order).

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 sources 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 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. RECEIVING WATER MONITORING REQUIREMENTS

A. Monitoring Location RSW-001

The Discharger shall monitor ambient receiving water conditions in Corinda Los Trancos Creek at Monitoring Location RSW-001 as specified below.

Table E-5. Receiving Water Monitoring RSW-001

Parameter	Units[1]	Sample Type	Minimum Sampling Frequency
Flow	gpd	Estimate	1 / quarter
pH	Standard units.	Grab	1 / quarter
Temperature	°C	Grab	1 / quarter
Dissolved Oxygen (D.O.)	mg/L	Grab	1 / quarter
Hardness	mg/L	Grab	1 / quarter
Salinity	ppt	Grab	1 / quarter
Standard Observations[2]	---	---	1 / quarter
CTR Priority Pollutants	µg/L	Grab	1 / year

Footnotes to Table E-54:

[1] Unit Abbreviations:
gpd = gallons per day
°C = degrees centigrade
mg/L = milligrams per liter
ppt = parts per trillion
µg/L= micrograms per liter

[2] Standard observations are specified in Attachment G.

B. Monitoring Location RSW-002 and RSW-003

The Discharger shall monitor ambient receiving water conditions in Corinda Los Trancos Creek at Monitoring Locations RSW-002 and RSW-003 as specified below.

Table E-6. Receiving Water Monitoring RSW-002 and RSW-003

Parameter	Units[1]	Sample Type	Minimum Sampling Frequency
pH	Standard units.	Grab	2 / year
Ammonia (as Nitrogen)	mg/L	Grab	2 / year
Temperature	°C	Grab	2 / year
Dissolved Oxygen (D.O.)	mg/L	Grab	2 / year

Parameter	Units[1]	Sample Type	Minimum Sampling Frequency
Hardness	mg/L	Grab	2 / year
Standard Observations[2]	---	---	1 / quarter

Footnotes to Table E-~~4~~6:

[1] Unit Abbreviations:

~~gpd = gallons per day~~
ºC = degrees centigrade
mg/L = milligrams per liter
~~µg/L = micrograms per liter~~

[2] Standard observations are specified in Attachment G.

VII. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

The Discharger shall comply with all Federal Standard Provisions (Attachment D) and Regional Standard Provisions (Attachment G) related to monitoring, reporting, and recordkeeping, with modifications shown in section VII.D below.

B. Self-Monitoring Reports (SMRs)

1. **SMR Format.** The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS website will provide additional directions for SMR submittal in the event of a service interruption for electronic submittal.

2. **SMR Due Dates and Contents.** The Discharger shall submit SMRs by the due dates, and with the contents, specified below:

   a. **Monthly SMRs —** Monthly SMRs shall be due 30 days after the end of each calendar month, covering that calendar month. The monthly SMR shall contain the applicable items described in sections V.B and V.C of both Attachments D and G of this Order. See Provision VI.C.2 (Effluent Characterization Study and Report) of this Order for information that must also be reported with the monthly SMR.

   b. **Annual SMR —** Annual SMRs shall be due February 1 each year, covering the previous calendar year. The annual SMR shall contain the items described in Attachment G section V.C.1.f. See also Provisions VI.C.2.b.(ii) (*Annual Reporting*) and VI.C.5.c. (*Facility Reliability Assurance Plan and Status Report*) of the Order for requirements to submit reports with the annual SMR.

   c. **Additional Specifications for Submitting SMRs to CIWQS —** If the Discharger submits SMRs to CIWQS, it shall submit analytical results and other information using one of the following methods:

Table E-7. SMR Reporting for CIWQS

Parameter	Method of Reporting

	EDF/CDF data upload or manual entry	Attached File
All parameters identified in influent, effluent, and receiving water monitoring tables (except Dissolved Oxygen and Temperature)	Required for All Results	
Dissolved Oxygen Temperature	Required for Monthly Maximum and Minimum Results Only [1]	Discharger may use this method for all results or keep records
Cyanide Arsenic Cadmium Chromium Copper Lead Mercury Nickel Selenium Silver Zinc Dioxins and Furans (by USEPA Method 1613)	Required for All Results [2]	
Antimony Beryllium Thallium Pollutants by USEPA Methods 601, 602, 608, 610, 614, 624, and 625	Not Required (unless identified in influent, effluent, or receiving water monitoring tables), But Encouraged [1]	Discharger may use this method and submit results with application for permit reissuance, unless data submitted by CDF/EDF upload
Analytical Method	Not Required (Discharger may select "data unavailable") [1]	
Collection Time Analysis Time	Not Required (Discharger may select "0:00") [1]	

Footnotes for Table E-5:

[1] The Discharger shall continue to monitor at the minimum frequency specified in the monitoring tables, keep records of the measurements, and make the records available upon request.

[2] These parameters require EDF/CDF data upload or manual entry regardless of whether monitoring is required by this MRP or other provisions of this Order (except for biosolids, sludge, or ash provisions).

3. **Monitoring Periods.** Monitoring periods for all required monitoring shall be completed as set forth in the table below:

Table E-8. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period
Continuous	Permit effective date	All
1/Day	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.
1/Week 5/Week	Permit effective date	Sunday through Saturday
1/Month 2/Month	Permit effective date	First day of calendar month through last day of calendar month

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period
1/Quarter	Permit effective date	November 1 – January 31, February 1 – April 30, May 1 – July 31, August 1 – October 31
1/Year	Permit effective date	January 1through December 31
Once per permit term	Permit effective date	Once during the permit term within 12 months prior to applying for permit reissuance.

4. **RL and MDL Reporting.** The Discharger shall report with each sample result the RL and 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 purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. 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 the laboratory considers appropriate.

   c. Sample results less than the laboratory's MDL shall be reported as "Not Detected" or ND.

   d. The Discharger shall instruct laboratories to establish calibration standards so that the minimum level (ML) value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

C. Discharge Monitoring Reports

1. As described in section VII.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 SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs.) Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements described below.

2. Once notified by the State or Regional Water Board, the Discharger shall submit hard copy DMRs. DMRs must be signed and certified as required by the Standard Provisions. The Discharger shall submit the original DMR and one copy of the DMR to one of the addresses listed below:

Standard Mail	FedEx/UPS/Other Private Carriers
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15th Floor Sacramento, CA 95814

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 will not be accepted unless they follow the exact same format of EPA Form 3320-1.

D. Modifications to Attachment G

1. Attachment G sections V.C.1.f and V.C.1.g are revised as follows, and section V.C.1.h (Reporting data in electronic format) is deleted.

f. Annual self-monitoring report requirements

By the date specified in the MRP, the Discharger shall submit an annual report to the Regional Water Board covering the previous calendar year. The report shall contain the following:

1) Annual compliance summary table of treatment plant performance, including documentation of any blending events (this summary table is not required if the Discharger has submitted the year's monitoring results to CIWQS in electronic reporting format by EDF/CDF upload or manual entry);

2) Comprehensive discussion of treatment plant performance and compliance with the permit (This discussion shall include any corrective actions taken or planned, such as changes to facility equipment or operation practices that may be needed to achieve compliance, and any other actions taken or planned that are intended to improve performance and reliability of the Discharger's ~~wastewater~~ groundwater collection, treatment, or disposal practices.);

3) Both tabular and graphical summaries of the monitoring data for the previous year if parameters are monitored at a frequency of monthly or greater (this item is not required if the Discharger has submitted the year's monitoring results to CIWQS in electronic reporting format by EDF/CDF upload or manual entry);

4) List of approved analyses, including the following:

(i) List of analyses for which the Discharger is certified;

(ii) List of analyses performed for the Discharger by a separate certified laboratory (copies of reports signed by the laboratory director of that laboratory shall not be submitted but be retained onsite); and

(iii) List of "waived" analyses, as approved;

5) Plan view drawing or map showing the Discharger's facility, flow routing, and sampling and observation station locations;

6) ~~Results of annual facility inspection to verify that all elements of the SWPP Plan are accurate and up to date (only required if the Discharger does not route all storm water to the headworks of its wastewater treatment plant);~~ and

7) Results of facility report reviews (The Discharger shall regularly review, revise, and update, as necessary, the O&M Manual, the Contingency Plan, and the Spill Prevention Plan, ~~and Wastewater Facilities Status Report~~ so that these documents remain useful and relevant to current practices. At a minimum, reviews shall be conducted annually. The Discharger shall include, in each Annual Report, a description or summary of review and evaluation procedures, recommended or planned actions, and an estimated time schedule for implementing these actions. The Discharger shall complete changes to these documents to ensure they are up-to-date.)~~)~~

g. Report submittal

The Discharger shall submit SMRs addressed as follows, unless the Discharger submits SMRs electronically to CIWQS:

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

h. Reporting data in electronic format – *Deleted*

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.

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.

3. Appropriate controls.

4. Concurrent reference toxicant tests.

5. Dilution series of 100%, 50%, 25%, 12.5%, 6.25%, and 0 %, where "%" is percent effluent as discharged, or as otherwise approved the Executive Officer if different dilution ratios are needed to reflect discharge conditions.

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

APPENDIX E-2
SUMMARY OF TOXICITY TEST SPECIES REQUIREMENTS

Table AE-1. Critical Life Stage 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/821/R-02/014. October 2002.

Table AE-2. 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)*	Final cell density	4 days	4

Toxicity Test Reference:

4. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, fourth Edition Chronic manual (EPA-821-R-02-013, October 2002).

Table AE-3. Toxicity Test Requirements for Stage One Screening Phase

Requirements	Receiving Water Characteristics		
	Discharges to Coast	Discharges to San Francisco Bay[1]	
	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[2] Marine/Estuarine	0 4	1 or 2 3 or 4	3 0
Total number of tests	4	5	3

[1] (a) Marine refers to receiving water salinities greater than 1 part per thousand (ppt) at least 95 percent of the time during a normal water year.
(b) Freshwater refers to receiving water with salinities less than 1 ppt at least 95 percent of the time during a normal water year.
(c) Estuarine refers to receiving water salinities that fall between those of marine and freshwater, as described above.

[2] The freshwater species may be substituted with marine species if:
(a) The salinity of the effluent is above 1 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.

ATTACHMENT F - FACT SHEET

Contents

I. Permit Information F-3
II. Facility Description F-4
A. Description of Groundwater Treatment System F-4
B. Discharge Point and Receiving Waters F-5
C. Summary of Existing Requirements and Self-Monitoring Report Data F-5
D. Compliance Summary F-6
E. Planned Changes F-8
III. Applicable Plans, Policies, and Regulations F-8
A. Legal Authorities F-8
B. California Environmental Quality Act (CEQA) F-8
C. State and Federal Regulations, Policies, and Plans F-8
D. Impaired Water Bodies on CWA 303(d) List F-10
IV. Rationale For Effluent Limitations and Discharge Specifications F-10
A. Discharge Prohibitions F-10
B. Shallow Water Discharge and Basin Plan Discharge Prohibition 1 ..... F-11
C. Technology-Based Effluent Limitations F-12
1. Scope and Authority F-12
2. Effluent Limitations F-13
3. Regulatory Considerations F-14
D. WQBELs F-15
1. Scope and Authority F-15
2. Applicable Beneficial Uses and WQOs F-16
3. Determining the Need for WQBELs F-17
4. WQBEL Calculations F-21
5. Whole Effluent Acute Toxicity F-28
6. Whole Effluent Chronic Toxicity F-29
7. Temperature F-29
8. Anti-backsliding and Antidegradation F-30
V. Rationale for Receiving Water Limitations F-30
VI. Rationale for Monitoring and Reporting Requirements F-30
A. Influent Monitoring F-31
B. Effluent Monitoring F-31
C. Whole Effluent Toxicity Testing Requirements F-32
D. Receiving Water Monitoring F-32
VII. Rationale for Provisions F-32
A. Standard Provisions (Provision VI.A) F-32
B. MRP Requirements (Provision VI.B) F-32
C. Special Provisions (Provision VI.C) F-33
1. Reopener Provisions F-33
2. Effluent Characterization Study and Report ..... F-34~~F-33~~
3 Ambient Background Study and Report F-34
4. Best Management Practices and Pollution Minimization Program F-34
5. Reliability Assurance Plan and Status Report. F-34

6. Bioassessment Monitoring Report. F-34
7. Ammonia Treatment Technology Report F-34
VIII. Public Participation F-34
A. Notification of Interested Parties F-34
B. Written Comments ..... F-35~~F-34~~
C. Public Hearing F-35
D. Waste Discharge Requirements Petitions F-35
E. Information and Copying F-35
F. Register of Interested Persons ..... F-36~~F-35~~
G. Additional Information F-36

Tables

Table F-1. Facility Information F-3
Table F-2. Outfall Location F-5
Table F-3. Historic Effluent Limitations and Monitoring Data F-5
Table F-4. Numeric Effluent Limitation Violations F-6
Table F-5. Basin Plan Beneficial Uses F-9
Table F-6. Technology-Based Requirements for Municipal Landfill Discharges F-13
Table F-7. BPJ-Based Effluent Limitations F-14
Table F-8. Factors Considered Pursuant to 40 CFR 125.3(d) F-14
Table F-9. Reasonable Potential Analysis Summary F-18
Table F-10. WQBEL Calculations F-27
Table F-11. Monitoring Requirements Summary F-32

ATTACHMENT F – FACT SHEET

This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for this Order's requirements. 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 of this Order not specifically identified as "not applicable" fully apply to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to Browning-Ferris Industries Corinda Los Trancos (Ox Mountain) Landfill.

Table F-1. Facility Information

WDID	2 417053002
CIWQS Place ID	215718
Discharger	Browning-Ferris Industries
CIWQS Party No.	5392
Name of Facility	Corinda Los Trancos (Ox Mountain) Landfill
Facility Address	12310 San Mateo Road
	Half Moon Bay, CA 94019
CIWQS Regulatory Measure No.	
Facility Contact, Title, Phone	Kevin Iler, ~~Division~~ Operations Manager, (650) 726 - 1819
CIWQS Party No.	526578
Authorized Person to Sign and Submit Reports	Same as above
Mailing Address	12310 San Mateo Road, Half Moon Bay, CA 94019
Billing Address	Same as Mailing Address
Type of Facility	Class III Solid Waste Disposal Site
Major or Minor Facility	Minor
Threat to Water Quality	1
Complexity	B
Pretreatment Program	No
Reclamation Requirements	No
Facility Permitted Flow	115,200 Gallons per Day (gpd) (80 gpm)
Facility Design Flow	115,200 Gallons per Day (gpd) (80 gpm)
Watershed	San Mateo Coastal Basin
Receiving Water	Corinda Los Trancos Creek
Receiving Water Type	Freshwater

A. Browning-Ferris Industries (hereinafter the Discharger) is currently discharging under Order No. R2-2007-0062 and NPDES Permit No. CA0029947 from the Corinda Los Trancos (Ox Mountain) Landfill (hereinafter the Facility), a Class III municipal refuse disposal site.

B. Discharge of treated groundwater from the Facility to Corinda Los Trancos Creek, a fresh water tributary to Pilarcitos Creek and water of the State and the United States, is currently regulated by

Order No. R2-2007-0062 (CIWQS Regulatory Measure Number 332605, NPDES Permit No. CA0029947), which was adopted on August 8, 2007, became effective on September 1, 2007, and expired on August 31, 2012. The Discharger was also subject to Order No. R2-2007-0063, a Cease and Desist Order (CDO) issued to address the Discharger's inability to immediately comply with Order No. R2-2007-0062. The CDO is discussed further in section II.D.1, below. Because the CDO was intended to enforce Order No. R2-2007-0062, and because the Discharger complied with the requirements of the CDO, it is no longer necessary and this Order rescinds it.

C. The Discharger filed a Report of Waste Discharge and submitted a complete application for renewal of its waste discharge requirements (WDRs) and NPDES permit on March 2, 2012. The application was deemed complete and the previous order was administratively extended.

II. FACILITY DESCRIPTION

The Facility is located in Corinda Los Trancos Canyon, approximately 3 miles northeast of Half Moon Bay. Landfills of this type may generate several types of wastewater, including leachate, landfill gas condensate, truck and equipment wash water, storm water, and polluted groundwater. This Order addresses only the discharge of treated extracted naturally occurring groundwater, polluted as a result of groundwater infiltration into the landfill or by pollutants released from the landfill liner system, to Corinda Los Trancos Creek.

The Facility has operated since 1976; it covers 2,800 acres, with approximately 191 acres permitted for solid waste disposal. The Facility includes two solid waste disposal sections, an "old" section and a "new" section. Only the new section is currently active. The old section has no flexible membrane liner because it was constructed prior to the effective date of the Resource Conservation and Recovery Act Subtitle D and 40 CFR Part 258 requirements. The new section does include a flexible membrane liner, required for active municipal solid waste landfills as of October 9, 1993.

A. Description of Groundwater Treatment System

Groundwater is collected from beneath the old and new sections of the landfill by an underdrain system that directs collected groundwater through a single influent line to a groundwater treatment system. The groundwater treatment system consists of a 13,000-gallon holding tank for influent storage and equalization, filtration by three bag filters in series, granular activated carbon (GAC) adsorption in two 5,000-pound GAC vessels in series, pH adjustment by injection of sodium hydroxide solution, in-pipe air sparging to oxidize and promote precipitation of dissolved iron, and final clarification in a nominal 6.5-million gallon (MG) low permeable soil-lined sedimentation basin that discharges through a riser pipe to Corinda Los Trancos Creek. A weir ~~and pressure transducer~~ flow measurement system measures the total flow from the outlet of the riser pipe, including the spring water redirected from above the landfill. The weir is located approximately 200 feet downstream of the riser pipe inlet.

The sedimentation basin's operational capacity is approximately 3.0 MG, the approximate volume at which the water level reaches the inlet to the discharge riser pipe. The sedimentation basin receives effluent from the previous treatment steps, stormwater drainage, and road wash.

The groundwater treatment system's design capacity is 115,200 gallons per day (gpd) or 80 gallons per minute. According to the Discharger's 2011 Annual Report, the average daily flow through the treatment system was 63,000 gallons and the highest daily flow measured was 114,000 gallons.

B. Discharge Point and Receiving Waters

The Discharger discharges treated groundwater to Corinda Los Trancos Creek, a fresh water stream tributary to Pilarcitos Creek, which flows to the Pacific Ocean. The discharge to Corinda Los Trancos Creek is a shallow water discharge because the discharge does not receive 10:1 dilution. The discharge is located within the San Mateo Coastal Basin watershed as indicated below.

Table F-2. Outfall Location

Discharge Point	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	37º 29′ 34″ N	122º 24′ 42″ W	Corinda Los Trancos Creek

The Discharger routes water from a perennial spring, located uphill of the landfill, through a 6-inch high-density polyethylene pipe around the landfill directly into the riser pipe for the sedimentation basin. The spring once formed or fed the headwaters of Corinda Los Trancos Creek. Spring water combines with water from the sedimentation basin in the riser pipe, and both flow into Corinda Los Trancos Creek. The creek bed initially consists of a built-up concrete drainage structure for about 275 feet, which eventually ends and drains into a more natural water course. Upgradient sources of water to Corinda Los Trancos Creek other than the spring water and sedimentation pond discharge are negligible during dry weather.

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

Effluent limitations applicable to Discharge Point 001 contained in the previous order (Order No. R2-2007-0062) and representative monitoring data from the term of the previous order are presented below:

Table F-3. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitations		Monitoring Data (April 2007 – October 2011)
		Monthly Average	Daily Maximum	Highest Daily Discharge
pH	units	6.5 – 8.5		6.4 – 6.9
Copper	µg/L	5.1	10	2.2
Mercury	µg/L	0.018	0.046	0.03[1]
Nickel	µg/L	31	70	34
Selenium	µg/L	4.0	9.0	11
Silver	µg/L	1.0	2.4	1.3[2]
Cyanide	µg/L	4.3	5.2	6.1
Benzene	µg/L	---	1.0	2.1
Vinyl Chloride	µg/L	---	0.5	0.48[3]
Acute Toxicity	% Survival	90 [4]	70 [5]	0

[1] Estimated ("J" qualified) result; sample date was July 20, 2011.
[2] Estimated ("J" qualified) result; sample date was October 26, 2011.
[3] Estimated ("J" qualified) result; sample date was July 20, 2011.
[4] Minimum three-sample median survival
[5] Minimum single-sample survival

D. Compliance Summary

The Discharger reported 58 violations of numeric effluent limits during the term of the previous Order, as listed below.

Table F-4. Numeric Effluent Limitation Violations

Date of Violation	Exceeded Parameter	Units	Effluent Limitation	Reported Concentration	Enforcement Action [1]
11/26/2007	pH Instantaneous Minimum	Standard Units	6.5	6.4	NOV
11/26/2007	Selenium Maximum Daily	µg/L	9.0	12.0	CDO
11/26/2007	Selenium Monthly Average	µg/L	4.0	12.0	CDO
2/26/2008	Cyanide Monthly Average	µg/L	4.3	7	CDO
2/26/2008	Cyanide Maximum Daily	µg/L	5.2	7	CDO
2/26/2008	Selenium Maximum Daily	µg/L	9.0	12.0	CDO
2/26/2008	Selenium Monthly Average	µg/L	4.0	12.0	CDO
2/26/2008	Nickel Monthly Average	µg/L	31	33	CDO
5/13/2008	Acute Toxicity (3-sample median)	% Survival	90	75	NOV/CAO
8/12/2008	Acute Toxicity (3-sample median)	% Survival	90	75	NOV/CAO
9/16/2008	Acute Toxicity (3-sample median)	% Survival	90	75	NOV/CAO
11/17/2008	pH Instantaneous Minimum	Standard Units	6.5	6.4	NOV
11/18/2008	Acute Toxicity (3-sample median)	% Survival	90	85	NOV/CAO
12/10/2008	Acute Toxicity (3-sample median)	% Survival	90	85	NOV/CAO
2/17/2009	Acute Toxicity (3-sample median)	% Survival	90	85	NOV/CAO
2/17/2009	Acute Toxicity (single sample minimum)	% Survival	70	20	NOV/CAO
5/16/2009	pH Instantaneous Minimum	Standard Units	6.5	6.0	NOV/CAO
5/18/2009	Acute Toxicity (3-sample median)	% Survival	90	20	NOV/CAO
5/18/2009	Acute Toxicity (single sample minimum)	% Survival	70	5	NOV/CAO
6/3/2009	Acute Toxicity (3-sample median)	% Survival	90	20	NOV/CAO
6/3/2009	Acute Toxicity (single sample minimum)	% Survival	70	20	NOV/CAO
8/17/2009	Acute Toxicity (3-sample median)	% Survival	90	5	NOV/ CAO
8/17/2009	Acute Toxicity (single sample minimum)	% Survival	70	0	NOV/CAO
8/18/2009	Acute Toxicity (3-sample median)	% Survival	90	18	NOV/CAO
12/8/2009	Acute Toxicity (single sample minimum)	% Survival	70	40	CAO
12/8/2009	Acute Toxicity (3-sample median)	% Survival	90	40	CAO
12/14/2009	Acute Toxicity (single sample minimum)	% Survival	70	0	CAO
12/14/2009	Acute Toxicity (3-sample median)	% Survival	90	0	CAO
12/21/2009	Acute Toxicity (single sample minimum)	% Survival	70	5	CAO
12/21/2009	Acute Toxicity (3-sample median)	% Survival	90	5	CAO
12/29/2009	Acute Toxicity (single sample minimum)	% Survival	70	50	CAO
12/29/2009	Acute Toxicity (3-sample median)	% Survival	90	5	CAO
1/5/2010	Acute Toxicity (3-sample median)	% Survival	90	50	CAO
1/12/2010	Acute Toxicity (single sample minimum)	% Survival	70	0	CAO
1/12/2010	Acute Toxicity (3-sample median)	% Survival	90	50	CAO
1/15/2010	Acute Toxicity (3-sample median)	% Survival	90	85	CAO

Date of Violation	Exceeded Parameter	Units	Effluent Limitation	Reported Concentration	Enforcement Action [1]
1/20/2010	Acute Toxicity (3-sample median)	% Survival	90	80	CAO
1/28/2010	Acute Toxicity (single sample minimum)	% Survival	70	0	CAO
1/28/2010	Acute Toxicity (3-sample median)	% Survival	90	0	CAO
2/15/2010	Acute Toxicity (single sample minimum)	% Survival	70	0	CAO
2/15/2010	Acute Toxicity (3-sample median)	% Survival	90	0	CAO
3/10/2010	Acute Toxicity (single sample minimum)	% Survival	70	0	CAO
3/10/2010	Acute Toxicity (3-sample median)	% Survival	90	0	CAO
3/16/2010	Acute Toxicity (single sample minimum)	% Survival	70	0	CAO
3/16/2010	Acute Toxicity (3-sample median)	% Survival	90	0	CAO
3/23/2010	Acute Toxicity (3-sample median)	% Survival	90	0	CAO
3/30/2010	Acute Toxicity (single sample minimum)	% Survival	70	0	CAO
3/30/2010	Acute Toxicity (3-sample median)	% Survival	90	0	CAO
4/2/2010	Acute Toxicity (single sample minimum)	% Survival	70	0	CAO
4/6/2010	Acute Toxicity (single sample minimum)	% Survival	70	0	CAO
4/8/2010	Acute Toxicity (3-sample median)	% Survival	90	0	CAO
4/12/2010	Acute Toxicity (3-sample median)	% Survival	90	0	CAO
4/20/2010	Acute Toxicity (3-sample median)	% Survival	90	0	CAO
4/28/2010	Acute Toxicity (3-sample median)	% Survival	90	0	CAO
4/28/2010	Acute Toxicity (single sample minimum)	% Survival	70	0	CAO
5/4/2010	Acute Toxicity (3-sample median)	% Survival	90	0	CAO
5/4/2010	Acute Toxicity (single sample minimum)	% Survival	70	0	CAO
7/20/2011	Benzene Maximum Daily	µg/L	1.0	2.1	MMP

[1] CDO refers to Cease and Desist Order No. R2-2007-0063.
NOV refers to Notice of Violation dated November 29, 2011.
CAO refers to Cleanup and Abatement Order No. R2-2010-0092.
MMP refers to Mandatory Minimum Penalties pursuant to Order No. R2-2011-0099.

The Regional Water Board issued Cease and Desist Order (CDO) No. R2-2007-0063 because the Discharger could not immediately comply with the copper, mercury, cyanide, nickel, selenium, silver, and vinyl chloride effluent limits that were at the time new and more stringent in the previous order. That CDO served as the enforcement action for seven subsequent violations. The CDO required the Discharger to meet interim effluent limits; investigate and improve its sampling and analytical protocol; implement the improved protocol; and report on the improved protocol's effect on effluent concentrations. The Discharger complied with the CDO. Data collected using the improved sampling and analytical protocol showed the discharge has been in compliance with the previous order's limits for copper, mercury, cyanide, nickel, selenium, and silver since March 2008 when the new sampling and analysis protocol was implemented. The Discharger complied with the vinyl chloride limit from the date the CDO was adopted. Therefore, CDO No. R2-2007-0063 is no longer necessary, and this Order rescinds it.

The Regional Water Board Executive Officer sent a Notice of Violation on November 29, 2011, in response to acute toxicity violations that began in May 2008; the three pH violations on

November 26, 2007, November 17, 2008, and May 16, 2009; and the Discharger's failure to report its violations accurately or undertake required accelerated monitoring. The Discharger accelerated monitoring in November 2009 and began to investigate the causes of acute toxicity, but was unsuccessful and acute toxicity continued. The Executive Officer then issued Cleanup and Abatement Order (CAO) No. R2-2010-0092 requiring the Discharger to develop and implement a work plan and schedule to identify the cause and consistently reduce the toxicity of the discharge. The Discharger's investigation determined that the toxicity was caused by dissolved iron in the groundwater. The Discharger implemented pH control and air sparging systems to reduce ~~dissolved~~ iron levels in early 2012, and reconfigured its drainage system so that the sedimentation basin could become a part of the treatment system providing for additional ~~dissolved~~ iron ~~reduction~~removal. The Regional Water Board allowed the Discharger to cease accelerated monitoring in April 2012. These measures have satisfactorily addressed the acute toxicity violations, and the Cleanup and Abatement Order will be administratively rescinded by the Executive Officer after this Order becomes effective.

Finally, the Regional Water Board assessed a Mandatory Minimum Penalty of $3,000 for the July 20, 2011, benzene violation through Order No. R2-2011-0099. The Discharger changed the carbon in its GAC filters on August 17 and 18, 2011, and conducted accelerated monitoring for benzene, which showed it had returned to compliance.

E. Planned Changes

No changes to the treatment system are planned for the term of this Order.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

This Order's requirements are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order is issued pursuant to federal Clean Water Act (CWA) section 402 and implementing regulations adopted by the U. S. Environmental Protection Agency (USEPA) and California Water Code (CWC) chapter 5.5, division 7, commencing with section 13370. It serves as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as WDRs pursuant to CWC article 4, chapter 4, division 7 (commencing with section 13260).

B. California Environmental Quality Act (CEQA)

Under CWC section 13389, this action to reissue an NPDES permit is exempt from CEQA chapter 3.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plan.** *The Water Quality Control Plan for the San Francisco Bay Basin* (hereinafter the Basin Plan) is the Regional Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives (WQOs) for waters of the State, including surface and groundwater. It also includes implementation programs to achieve WQOs. The Basin Plan was duly adopted by the Regional Water Board and approved by the State Water Board, the Office of Administrative Law, and USEPA.

Requirements of this Order implement the Basin Plan. The Basin Plan identifies beneficial uses for the receiving water for this discharge, Corinda Los Trancos Creek.

This Order also implements 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. The beneficial uses of Corinda Los Trancos Creek are summarized in Table 5, below.

Table F-5. Basin Plan Beneficial Uses

Receiving Water Name	Beneficial Uses
Corinda Los Trancos Creek	Municipal and domestic supply (MUN) Cold Freshwater Habitat (COLD) Preservation of Rare and Endangered Species (RARE) Warm Freshwater Habitat (WARM) Wildlife Habitat (WILD) Water Contact Recreation (REC1) Non-Contact Water Recreation (REC2)

2. **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 40 criteria in the NTR and 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 applied in the State. The CTR was amended on February 13, 2001. These rules contain water quality criteria (WQC) for priority toxic pollutants.

3. **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* (hereinafter the State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated through the NTR and the WQOs established in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated 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.

4 **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes (65 Fed. Reg. 24641 [April 27, 2000], codified at 40 CFR 131.21). 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.

5 **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 68-16, which incorporates the federal antidegradation policy where the federal policy applies under federal law and

requires that the 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.

6. **Safe, Clean, Affordable, and Accessible Water.** CWC section 106.3 states that the policy of the State of California is that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to meet maximum contaminant levels designed to protect human health and ensure that water is safe for domestic use.

7. **Anti-Backsliding Requirements.** CWA sections 402(o)(2) and 303(d)(4) and 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous order, with some exceptions in which limitations may be relaxed.

D. Impaired Water Bodies on CWA 303(d) List

In October 2011, USEPA approved a list of impaired water bodies prepared pursuant to CWA section 303(d), which requires 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. Where it has not done so already, the Regional Water Board plans to adopt Total Maximum Daily Loads (TMDLs) for water bodies on the 303(d) list. TMDLs establish wasteload allocations for point sources and load allocations for non-point sources, and are established to achieve the water quality standards for the impaired water bodies. Corinda Los Trancos Creek is not on the 303(d) list, nor is Pilarcitos Creek to which Corinda Los Trancos Creek is tributary.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants discharged into 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 in the NPDES regulations: 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 WQOs to protect the beneficial uses of the receiving water.

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

A. Discharge Prohibitions

1. **Discharge Prohibition III.A (No discharge other than as described in this Order):** This prohibition is based on 40 CFR 122.21(a), duty to apply, and CWC section 13260, which requires filing an application and Report of Waste Discharge before discharges can occur. Discharges not described in the permit application and Report of Waste Discharge, and subsequently in this Order, are prohibited.

2. **Discharge Prohibition III.B (Flow not to exceed 115,200 gpd):** This prohibition is retained from the previous order and is meant to ensure that wastewater flows do not exceed the design capacity of the groundwater treatment facility.

B. Shallow Water Discharge and Basin Plan Discharge Prohibition 1

Basin Plan Discharge Prohibition 1 prohibits discharges not receiving a minimum 10:1 initial dilution or to dead end sloughs. In accordance with the Basin Plan, this Order continues to grant the Discharger an exception to this discharge prohibition for discharges to Corinda Los Trancos Creek. The basis for allowing the exception is described below.

The Basin Plan states that exceptions to Prohibition 1 will be considered for discharges where:

- an inordinate burden would be placed on the discharger relative to the beneficial uses protected and an equivalent level of environmental protection can be achieved by alternate means;
- a discharge is approved as part of a reclamation project; or
- net environmental benefits will be derived as a result of the discharge.

The Basin Plan further states:

> Significant factors to be considered by the Regional Water Board in reviewing requests for exceptions will be the reliability of the discharger's system in preventing inadequately treated wastewater from being discharged to the receiving water and the environmental consequences of such discharges.

This Order continues to grant an exception to Prohibition 1 for discharges to Corinda Los Trancos Creek based on these factors for the following reasons.

1. An inordinate burden would be placed on the Discharger relative to the beneficial uses protected to require the discharge to achieve a 10:1 dilution. Constructing and operating a deep water ocean outfall would require construction and operation of a discharge pipe several miles long.

2. The Discharger has modified its treatment process to ensure compliance with effluent limits as follows:
    - Increased the size of its two granular activated carbon (GAC) vessels to 5,000 lbs each;
    - Installed pH control by sodium hydroxide injection;
    - Added effluent aeration (air sparging) post-filtration and before the sedimentation basin;
    - Rerouted creek headwaters around the landfill and directly to the riser and pipe discharging from the sedimentation basin to Corinda Los Trancos Creek (i.e., effectively back to the natural channel) instead of through the sedimentation basin;
    - Incorporated the sedimentation basin into the treatment system as a final settling step;

- Installed flow monitoring by a weir ~~and transducer~~ flow monitoring system located at the outlet from the riser pipe, outside the sedimentation basin approximately 200 feet from the riser pipe inlet.

3. To address treatment reliability, Provision VI.C.5 of the Order requires a Facility Reliability Assurance Plan and Status Report that requires the Discharger to conduct routine analyses of its polluted groundwater collection and treatment system with attention toward preventing discharges of inadequately treated wastewater.

   This discharge satisfies the Basin Plan's inordinate burden / equivalent protection exception to Prohibition 1 because compliance with the requirements in this Order provides an alternate means to ensure an equivalent level of protection in lieu of imposing an inordinate burden on the Discharger. The Discharger has improved its treatment process to provide a level of treatment that will comply with effluent limits in this Order. The Discharger is also required to maintain a Reliability Status Report, which protects against discharge of inadequately treated wastewater, and provides protection against the potential effects of any abnormal discharges that could be caused by temporary treatment plant upsets or malfunctions.

C. Technology-Based Effluent Limitations

1. Scope and Authority

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

- Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

- Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

- Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

- New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

USEPA has established Effluent Limit Guidelines (ELGs) for the Landfill Point Source Category at 40 CFR 445. These ELGs do not apply to this discharge; USEPA found when developing these ELGs that discharges of treated extracted groundwater associated with landfills were adequately controlled by corrective actions under RCRA or State cleanup

actions. However, the Regional Water Board used some of these ELGs as guidance due to the likelihood of the same or similar pollutants to those identified by USEPA as being of concern for Subtitle D landfills being present in this discharge. This is discussed further in Fact Sheet section IV.C.2, below.

USEPA identified the following pollutants of concern for Subtitle D landfills: cyanide, biochemical oxygen demand (BOD), total suspended solids (TSS), pH, hexane extractable material, ammonia, chemical oxygen demand (COD), nitrite and nitrate, total dissolved solids (TDS), total organic carbon (TOC), and total phenols. Leachate at Subtitle D landfills has relatively low concentrations of metals, solvents used in household products (e.g., methyl ethyl ketone and acetone), industrial solvents (e.g., 4-methyl-2-pentanone and 1, 4-dioxane), pesticides, and 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]).

2. Effluent Limitations

Section 402(a)(1) of the CWA and section 125.3 of the Code of Federal Regulations authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. The Regional Water Board has established technology-based limitations for this discharge based on BPJ using the Landfill Point Source Category ELGs as guidance. Table F-6 shows the ELGs for discharges from municipal landfills as established at 40 CFR 445 Subpart B.

Table F-6. Technology-Based Requirements for Municipal Landfill Discharges

Parameters	Maximum Daily, mg/L	Maximum Monthly Average, mg/L
BOD_5	140	37
TSS	88	27
Ammonia (as N)	10	4.9
α-Terpineol	0.033	0.016
Benzoic acid	0.12	0.071
ρ-cresol	0.025	0.014
Phenol	0.026	0.015
Zinc	0.20	0.11
pH	6.0 – 9.0 standard units	

The Regional Water Board also used the USEPA Region 9 document *NPDES Permit Limitations for Discharge of Contaminated Groundwater: Guidance Document* (USEPA, 1986) as guidance in establishing technology-based effluent limitations. USEPA concluded that the cost of reducing concentrations of most organic compounds commonly detected in contaminated groundwater, including benzene to a concentration of 5 µg/L, and vinyl chloride to a concentration of 1 µg/L, is economically achievable.

Each of the pollutants mentioned in these two sources of guidance are addressed below.

a. TSS. Based on the ELGs and USEPA guidance cited above, this Order establishes technology-based limits for these remaining constituents based on BPJ, as listed in Table F-7.

b. Benzene and pH. Benzene is subject to more stringent water quality-based effluent limitations based on SIP section 1.4; and pH is subject to a more stringent water quality-based effluent limitation based on Basin Plan section 3.3.9. Therefore, this Order does not establish technology-based limitations for benzene and pH.

c. Benzoic acid, α-Terpineol, and ρ-Cresol. Effluent data are unavailable for benzoic acid, α-terpineol, and ρ-cresol; this Order, therefore, does not establish technology-based limitations for these parameters and instead requires monitoring.

d. Ammonia. Ammonia data collected at the sedimentation basin discharge point ranges from non-detect to 13 mg/L, with a mean of 5.4 mg/L, indicating that it is infeasible for the current treatment technology at the site to meet the technology-based AMEL of 4.9 mg/L and MDEL of 10 mg/L. Therefore, this Order does not establish technology-based limitations for ammonia~~. Provision VI.C.7 requires the Discharger to study and report on the feasibility of applying further ammonia treatment technology at this site prior to the next permit reissuance.~~ A study evaluating ammonia treatment options indicated that it is infeasible to treat ammonia in the groundwater to the technology-based limit.

e. BOD_5, Vinyl Chloride, Phenol, and Zinc. Based on the ELGs and USEPA guidance cited above, this Order establishes technology-based limits for these remaining constituents based on BPJ, as listed in Table F-7. The limit for vinyl chloride, however, is 0.5 µg/L instead of the 1.0 µg/L that USEPA suggested. This more stringent limit is retained from the previous order to comply with antibacksliding requirements. Based on past effluent data, it is achievable when the Discharger properly operates its GAC adsorbers.

Table F-7. BPJ-Based Effluent Limitations

	Unit	Monthly Average	Daily Maximum
BOD_5	mg/L	~~140~~37	~~37~~140
TSS	mg/L	27	88
Vinyl Chloride	ug/L	--	0.5
Phenol	ug/L	~~26~~15	~~15~~26
Zinc	ug/L	~~200~~110	~~110~~200

3. Regulatory Considerations

The above limits represent BPT, BAT, and BCT. Review of the effluent data shows that it is technologically feasible to meet these limits. In setting these limits, the factors specified in 40 CFR 125.3(d), as shown in the table below were considered.

Table F-8. Factors Considered Pursuant to 40 CFR 125.3(d)

Factors	Considerations
Cost relative to benefits	The cost of imposing these limits is reasonable given that it is expected that the Discharger can comply without modifying the updated treatment process.
Comparison of cost and pollutant reductions from publicly owned treatment works to cost and pollutant reductions from landfill polluted	The Facility groundwater treatment system is designed to remove trace level VOCs that have impacted groundwater. This type of treatment is far less costly than the treatment

Factors	Considerations
groundwater treatment systems.	necessary for publicly owned treatment works to comply with secondary treatment standards.
Age of equipment and facilities	The following upgrades have been made: installation of a sodium hydroxide injection system regulation by pH meter; addition of an air compressor to inject air into the effluent; rerouting of spring water around the sedimentation basin. Because these recent treatment upgrades are already installed, complying with these technology-based effluent limitations is economically achievable.
Process employed	Corinda Los Trancos Creek, previously diverted around the landfill and to the sedimentation basin, has been rerouted directly back to the natural creek bed This allows the sedimentation basin to serve as the final treatment stage before effluent is discharged to Corinda Los Trancos Creek. Because this change has already been made, complying with these technology-based effluent limitations is economically achievable,
Engineering aspects of various controls	It is expected that the existing controls and recent modifications to the groundwater treatment system are practicable and capable of meeting the imposed limits.
Process changes	No additional changes are necessary.
Non-water quality environmental impacts	Because no additional process changes are necessary, no non-water quality impacts are foreseeable.

D. WQBELs

WQBELs have been derived to implement WQOs that protect beneficial uses. Both the beneficial uses and the WQOs have been approved pursuant to federal law. The procedures for calculating individual WQBELs are based on the SIP and the Basin Plan. Most Basin Plan beneficial uses and WQOs were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any WQOs 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 [Clean Water] Act" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than those required by CWA water quality standards.

1. Scope and Authority

a. NPDES regulations at 40 CFR 122.44(d)(1)(i) mandate that permits include effluent limitations for all pollutants that are or may be discharged at levels that have reasonable potential to cause or contribute to an excursion of a water quality standard, including numeric and narrative objectives within a standard. As specified in 40 CFR 122.44(d)(1)(i), permits are required to include WQBELs for all pollutants "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard."

The process for determining "reasonable potential" and calculating WQBELs when necessary is intended to protect the designated beneficial uses of the receiving water as

specified in the Basin Plan, and achieve applicable WQOs contained in other state plans and policies, and applicable WQC contained in the CTR and NTR.

b. NPDES regulations and the SIP provide the basis to establish Maximum Daily Effluent Limitations (MDELs).

(1) NPDES regulations at 40 CFR 122.45(d) state, "For continuous discharges all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall *unless impracticable* be stated as maximum daily and average monthly discharge limitations for all discharges other than publicly owned treatment works."

(2) SIP section 1.4 requires WQBELs to be expressed as MDELs and average monthly effluent limitations (AMELs).

c. MDELs are used in this Order to protect against acute water quality effects. The MDELs are necessary for preventing fish kills or mortality to aquatic organisms.

2. Applicable Beneficial Uses and WQOs

The WQOs applicable to the receiving water for this discharge are from the Basin Plan; the CTR, established by USEPA at 40 CFR 131.38; and the NTR, established by USEPA at 40 CFR 131.36. Some pollutants have WQOs established by more than one of these three sources.

a. Basin Plan. The Basin Plan specifies numeric WQOs for 10 priority toxic pollutants, as well as narrative WQOs for toxicity to protect beneficial uses. The pollutants for which the Basin Plan specifies numeric objectives are arsenic, cadmium, chromium (VI), copper in marine and freshwater, lead, mercury, nickel, silver, zinc, and cyanide.

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 all inland surface waters and enclosed bays and estuaries of San Francisco Bay Region, although Basin Plan Tables 3-3 and 3-4 include numeric objectives for certain of these priority toxic pollutants that supersede CTR criteria. Human health criteria are further identified as for "water and organisms" and for "organisms only." The CTR criteria applicable to "water and organisms" and "organisms only" were used for this Order because the receiving water is suitable or potentially suitable for municipal or domestic supply pursuant to the State Drinking Water Policy (State Water Board Resolution No. 88-63)..

c. NTR. The NTR establishes numeric aquatic life criteria for trivalent chromium and cyanide, and numeric human health criteria for 36 toxic organic pollutants for inland waters of the State, including the receiving water for this Discharger.

d. Basin Plan Receiving Water Salinity Policy. The Basin Plan (like the CTR and the NTR) states that the salinity characteristics (i.e., freshwater vs. saltwater) of the receiving water are to be considered in determining the applicable WQOs. Freshwater criteria apply to discharges to waters with salinities equal to or less than one part per thousand (ppt) at

least 95 percent of the time. Saltwater criteria 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 between these two categories, or tidally influenced freshwaters that support estuarine beneficial uses, the WQOs are the lower of the salt or freshwater WQOs (the latter calculated based on ambient hardness) for each substance.

The receiving water for the discharge is Corinda Los Trancos Creek, an inland freshwater creek; therefore, the requirements in this Order are based on freshwater WQOs.

e. **Receiving Water Hardness.** Available ambient hardness values collected in Corinda Los Trancos Creek during the previous order term were used to calculate freshwater WQOs that are hardness-dependent. To calculate the WQOs for hardness-dependent metals, a hardness of 90 mg/L was used, which is the minimum hardness in 14 samples collected by the Discharger at location E-002 from February 2008 through July 2011.

f. **Site-Specific Metals Translators.** NPDES regulations at 40 CFR 122.45(c) require that effluent limitations for metals be expressed as total recoverable metal. Since metals WQOs are typically expressed as dissolved metal, translators must be used to convert metals concentrations from dissolved to total recoverable and vice versa. The CTR includes default translators; however, site-specific conditions, such as water temperature, pH, suspended solids, and organic carbon greatly affect the form of metal (dissolved, non-filterable, or otherwise) present in the water and therefore available to cause toxicity. In general, the dissolved form of the metal 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 WQOs. The Discharger has not developed site-specific translators; therefore, default translators established by USEPA in the CTR at 40 CFR 131.38(b)(2), Table 2, were used for determining the need for and calculating WQBELs.

3. Determining the Need for WQBELs

Assessing whether a pollutant has reasonable potential is the fundamental step in determining whether or not a WQBEL is required.

a. Reasonable Potential Methodology

Consistent with the methods and procedures prescribed in SIP Section 1.3, this reasonable potential analysis (RPA) considers the maximum effluent concentration (MEC) for each pollutant based on existing data, while accounting for a limited data set and effluent variability. There are three triggers in determining Reasonable Potential.

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

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

(3) The third trigger (Trigger 3) 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.

b. Effluent Data

The Discharger's priority pollutant data and the nature of the discharge were analyzed to determine if the discharge has reasonable potential. This RPA is based on effluent monitoring data collected by the Discharger from November 2007 through October 2011 for most inorganic pollutants, and from May 2008 through October 2011 for most organic pollutants. The Discharger submitted data in Annual Reports from 2007 through 2011. This RPA includes additional data the Discharger submitted in its Report of Waste Discharge.

c. Ambient Background Data

SIP section 1.4.3 allows background concentrations to be determined on a discharge-by-discharge or water body-by-water body basis. The SIP states that, for calculating WQBELs, ambient background concentrations are either the observed maximum ambient water column concentrations or, for objectives intended to protect human health from carcinogenic effects, the arithmetic mean of observed ambient water concentrations. Ambient background concentrations are the observed maximum detected water column concentrations for aquatic life protection. The Discharger submitted ambient background data for toxics collected from May 2001 to April 2011. The RPA is based on the ambient background data the Discharger submitted.

d. RPA Determination for Priority Pollutants

The MECs, most stringent applicable WQC, and background concentrations used in the RPA are presented in the following table, along with the RPA results (yes or no) for each pollutant. Reasonable potential was not determined for all pollutants because there are not applicable WQC for all pollutants, and monitoring data are not available for others. Based on a review of the effluent data collected during the previous order term, and ammonia data collected at Discharge Point 001 during sampling for acute toxicity bioassays, the pollutants that exhibit reasonable potential are lead, mercury, selenium, cyanide, benzene, and total ammonia by Trigger 1.

Table F-9. Reasonable Potential Analysis Summary

CTR #	Priority Pollutants	Governing WQC (µg/L)	MEC or Minimum DL [1][2] (µg/L)	Maximum Background or Minimum DL [1][2] (µg/L)	RPA Results [3]
1	Antimony	6	3.2	0.14	No
2	Arsenic	50	27	2.0	No
3	Beryllium	4	< 0.01	< 0.22	Ud
4	Cadmium	1.0	< 0.09	0.11	No
5a	Chromium (III)	50	2.2	< 5	No
5b	Chromium (VI)	11	2.2	4.0	No
6	Copper	8.5	2.2	6	No
7	**Lead**	**2.8**	**5.1**	**0.89**	**Yes**
8	**Mercury**	**0.025**	**0.03**	**0.068**	**Yes**

CTR #	Priority Pollutants	Governing WQC (µg/L)	MEC or Minimum DL [1][2] (µg/L)	Maximum Background or Minimum DL [1][2] (µg/L)	RPA Results [3]
9	Nickel	48	34	31	No
10	**Selenium**	**5.0**	**11**	**0.84**	**Yes**
11	Silver	3.4	1.3	1.6	No
12	Thallium	1.7	0.11	0.063	No
13	Zinc	110	24	38	No
14	**Cyanide**	**5.2**	**6.1**	**< 0.0028**	**Yes**
15	Asbestos	7000000	Not Available	Not Available	Ud
16	2,3,7,8-TCDD	1.3E-08	< 5.9E-07	6.3E-10	No
	Dioxin TEQ	1.3E-08	< 5.9E-07	6.3E-10	No
17	Acrolein	320	< 20	Not Available	No
18	Acrylonitrile	0.059	< 5	< 0.25	No
19	**Benzene**	**1.0**	**2.1**	**< 0.044**	**Yes**
20	Bromoform	4.3	< 0.5	< 0.062	No
21	Carbon Tetrachloride	0.25	< 0.5	< 0.053	No
22	Chlorobenzene	70	< 0.5	< 0.082	No
23	Chlorodibromomethane	0.401	0.12	< 0.089	No
24	Chloroethane	No Criteria	< 0.5	< 0.053	Ud
25	2-Chloroethylvinyl ether	No Criteria	< 10	< 1.5	Ud
26	Chloroform	No Criteria	< 0.5	< 0.074	Ud
27	Dichlorobromomethane	0.56	< 0.5	< 0.057	No
28	1,1-Dichloroethane	5	0.18	< 0.064	Ud
29	1,2-Dichloroethane	0.38	< 0.5	< 0.067	No
30	1,1-Dichloroethylene	0.057	< 0.5	< 0.054	No
31	1,2-Dichloropropane	0.52	< 0.5	< 0.066	No
32	1,3-Dichloropropylene	0.5	< 0.5	< 0.044	No
33	Ethylbenzene	300	< 0.5	< 0.051	No
34	Methyl Bromide	48	< 1	< 0.063	No
35	Methyl Chloride	No Criteria	< 0.5	< 0.04	Ud
36	Methylene Chloride	4.7	< 0.5	< 0.11	No
37	1,1,2,2-Tetrachloroethane	0.17	< 0.5	< 0.09	No
38	Tetrachloroethylene	0.8	< 0.5	< 0.062	No
39	Toluene	150	< 0.5	< 0.047	No
40	1,2-Trans-Dichloroethylene	10	< 0.5	< 0.062	No
41	1,1,1-Trichloroethane	200	< 0.5	< 0.053	Ud
42	1,1,2-Trichloroethane	0.6	< 0.5	< 0.099	No
43	Trichloroethylene	2.7	< 0.5	< 0.032	No
44	Vinyl Chloride	0.5	0.48	< 0.04	No
45	2-Chlorophenol	120	< 0.5	Not Available	No
46	2,4-Dichlorophenol	93	< 0.5	Not Available	No
47	2,4-Dimethylphenol	540	< 0.5	Not Available	No
48	2-Methyl- 4,6-Dinitrophenol	13.4	< 0.5	Not Available	No
49	2,4-Dinitrophenol	70	< 10	Not Available	No
50	2-Nitrophenol	No Criteria	< 2	Not Available	Ud
51	4-Nitrophenol	No Criteria	< 2	Not Available	Ud
52	3-Methyl 4-Chlorophenol	No Criteria	< 2	Not Available	Ud
53	Pentachlorophenol	0.28	< 10	Not Available	No
54	Phenol	21000	< 2	Not Available	No
55	2,4,6-Trichlorophenol	2.1	< 2	Not Available	No
56	Acenaphthene	1200	< 2	Not Available	No
57	Acenaphthylene	No Criteria	< 2	Not Available	Ud
58	Anthracene	9600	< 2	Not Available	No
59	Benzidine	0.00012	< 2	Not Available	No
60	Benzo(a)Anthracene	0.0044	< 2	Not Available	No

CTR #	Priority Pollutants	Governing WQC (µg/L)	MEC or Minimum DL [1][2] (µg/L)	Maximum Background or Minimum DL [1][2] (µg/L)	RPA Results [3]
61	Benzo(a)Pyrene	0.0044	< 2	Not Available	No
62	Benzo(b)Fluoranthene	0.0044	< 2	Not Available	No
63	Benzo(ghi)Perylene	No Criteria	< 2	Not Available	Ud
64	Benzo(k)Fluoranthene	0.0044	< 2	Not Available	No
65	Bis(2-Chloroethoxy)Methane	No Criteria	< 2	Not Available	Ud
66	Bis(2-Chloroethyl)Ether	0.031	< 2	Not Available	No
67	Bis(2-Chloroisopropyl)Ether	1400	< 2	Not Available	No
68	Bis(2-Ethylhexyl)Phthalate	1.8	< 5	Not Available	No
69	4-Bromophenyl Phenyl Ether	No Criteria	< 0.5	Not Available	Ud
70	Butylbenzyl Phthalate	3000	< 2	Not Available	No
71	2-Chloronaphthalene	1700	< 0.5	Not Available	No
72	4-Chlorophenyl Phenyl Ether	No Criteria	< 2	Not Available	Ud
73	Chrysene	0.0044	< 2	Not Available	No
74	Dibenzo(a,h)Anthracene	0.0044	< 2	Not Available	No
75	1,2-Dichlorobenzene	600	< 0.5	< 0.072	No
76	1,3-Dichlorobenzene	400	< 0.5	< 0.076	No
77	1,4-Dichlorobenzene	5	0.17	< 0.056	No
78	3,3 Dichlorobenzidine	0.04	< 0.5	Not Available	No
79	Diethyl Phthalate	23000	< 2	Not Available	No
80	Dimethyl Phthalate	313000	< 2	Not Available	No
81	Di-n-Butyl Phthalate	2700	< 2	Not Available	No
82	2,4-Dinitrotoluene	0.11	< 2	Not Available	No
83	2,6-Dinitrotoluene	No Criteria	< 2	Not Available	Ud
84	Di-n-Octyl Phthalate	No Criteria	< 2	Not Available	Ud
85	1,2-Diphenylhydrazine	0.04	< 2	Not Available	No
86	Fluoranthene	300	< 2	Not Available	No
87	Fluorene	1300	< 2	Not Available	No
88	Hexachlorobenzene	0.00075	< 2	Not Available	No
89	Hexachlorobutadiene	0.44	< 0.5	< 0.088	No
90	Hexachlorocyclopentadiene	50	< 2	Not Available	No
91	Hexachloroethane	1.9	< 0.5	Not Available	No
92	Indeno(1,2,3-cd)Pyrene	0.0044	< 2	Not Available	No
93	Isophorone	8.4	< 2	< 0.074	No
94	Naphthalene	No Criteria	< 2	Not Available	Ud
95	Nitrobenzene	17	< 2	Not Available	No
96	N-Nitrosodimethylamine	0.00069	< 2	Not Available	No
97	N-Nitrosodi-n-Propylamine	0.005	< 2	Not Available	No
98	N-Nitrosodiphenylamine	5	< 2	Not Available	No
99	Phenanthrene	No Criteria	< 2	Not Available	Ud
100	Pyrene	960	< 2	Not Available	No
101	1,2,4-Trichlorobenzene	5	< 2	< 0.06	Ud
102	Aldrin	0.00013	< 0.005	Not Available	No
103	Alpha-BHC	0.0039	< 0.005	Not Available	No
104	Beta-BHC	0.014	< 0.005	Not Available	No
105	Gamma-BHC	0.019	< 0.005	Not Available	No
106	Delta-BHC	No Criteria	< 0.005	Not Available	Ud
107	Chlordane	0.00057	< 0.50	Not Available	No
108	4,4'-DDT	0.00059	< 0.005	Not Available	No
109	4,4'-DDE (linked to DDT)	0.00059	< 0.005	Not Available	No
110	4,4'-DDD	0.00083	< 0.005	Not Available	No
111	Dieldrin	0.00014	< 0.005	Not Available	No
112	Alpha-Endosulfan	0.056	< 0.005	Not Available	No
113	beta-Endolsulfan	0.056	< 0.005	Not Available	No

CTR #	Priority Pollutants	Governing WQC (µg/L)	MEC or Minimum DL [1][2] (µg/L)	Maximum Background or Minimum DL [1][2] (µg/L)	RPA Results [3]
114	Endosulfan Sulfate	110	< 0.005	Not Available	No
115	Endrin	0.036	< 0.005	Not Available	No
116	Endrin Aldehyde	0.076	< 0.010	Not Available	No
117	Heptachlor	0.00021	< 0.005	Not Available	No
118	Heptachlor Epoxide	0.0001	< 0.005	Not Available	No
119-125	PCBs sum	0.00017	<0.02	Not Available	No
126	Toxaphene	0.0002	< 0.50	Not Available	No
	Tributylin	0.072	< 0.022	Not Available	Ud
	Total PAHs	No Criteria	< 2	Not Available	Ud
	Total Ammonia (mg/L)	**3.7**	**13**	**0.025**	**Yes**

Comment [SB10]: This appears to be unionized ammonia.

Footnotes to Table F-9:

[1] The MEC and maximum background concentration are the actual detected concentrations unless preceded by a "<" sign, in which case the value shown is the minimum detection level (DL).

[2] The MEC or maximum background concentration is "Not Available" when there are no monitoring data for the constituent.

[3] RPA Results = Yes, if MEC > WQC, B > WQC and MEC is detected, or Trigger 3;
= No, if MEC and B are < WQC or all effluent data are undetected;
= Undetermined (Ud), if no criteria have been promulgated or there are insufficient data.

e. **Constituents with limited data.** In some cases, reasonable potential cannot be determined because effluent data are limited, or ambient background concentrations are unavailable. 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 analysis will be conducted to determine whether numeric effluent limitations are necessary.

f. **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 (see Provision VI.C.2, and Monitoring and Reporting Program section IV, Table E-3). If concentrations of these constituents are found to have increased significantly, Provision VI.C.2 requires the Discharger to investigate the sources of the increases. Remedial measures are required if the increases pose a threat to receiving water quality.

4. WQBEL Calculations

a. **Pollutants with Reasonable Potential.** WQBELs were developed for the toxic and priority pollutants determined to have reasonable potential to cause or contribute to exceedances of the WQOs. The WQBELs were calculated based on applicable WQOs and the procedures specified in SIP section 1.4. The WQOs used for each pollutant with reasonable potential are discussed below.

b. **Dilution Credit.** Discharge from the Corinda Los Trancos (Ox Mountain) Landfill is through a shallow water outfall. The Discharger has provided evidence to support a dilution credit for ammonia in the discharge, but has not provided evidence to support a dilution credit for any other pollutant; therefore, this Order establishes a dilution credit

for ammonia as described below, but does not establish a dilution credit for any other pollutant.

On August 30, 2012, the Discharger submitted its *Ammonia Mixing Zone Study* report (hereinafter the Mixing Zone Study). It evaluated mixing and dilution of effluent discharges to Corinda Los Trancos Creek. The Mixing Zone Study proposed a mixing zone extending 275 feet below the flow measurement weir, for the Basin Plan's annual average un-ionized ammonia water quality objective of 0.025 mg/L. This mixing zone corresponds to the section of the creek that flows on a built up concrete drainage structure, and to a dilution ratio of 12:1 (12 parts total effluent plus ambient receiving water to one part effluent), and a dilution credit of D = 11. This mixing zone meets all SIP section 1.4.2.2.A and 1.4.2.2.B requirements, as discussed below. However, for the reasons explained later, this Order grants an ammonia mixing zone extending just 200 feet downstream of Discharge Point 001 (i.e., to the flow measurement weir) with an associated dilution ratio of 4:1. This smaller mixing zone also meets the SIP requirements.

In accordance with SIP section 1.4.2.2.A, a mixing zone extending 275 feet downstream from the flow measurement weir does not:

(a) *Compromise the integrity of the entire water body*. The mixing zone is small relative to size of Corinda Los Trancos Creek and does not compromise the integrity of the entire water body. A 275-foot distance from the weir is a fraction of the approximately 5,000-foot length of Corinda Los Trancos Creek before its confluence with Pilarcitos Creek.

(b) *Cause acutely toxic conditions to aquatic life passing through the mixing zone*. Waters within the mixing zone will not be acutely toxic. Acute toxicity has not been observed in the receiving water. Furthermore:

- The ammonia limits derived from the mixing zone are based on the annual average un-ionized ammonia water quality objective at Basin Plan section 3.3.20, which is a chronic toxicity objective, and is thus lower than necessary to protect against acute toxicity.

- Static acute toxicity 96-hr bioassays have been conducted using samples collected from the sedimentation basin (which discharges to the Creek) monthly since January 2010. These bioassays have shown 85% to 100% survival, indicating that the samples are not acutely toxic, except for results of 0% survival in June and August 2011, 65% survival in July 2012, and 60% survival in August 2012. Mortality in these samples was due to pH drift in the laboratory increasing the proportion of the more toxic un-ionized form of ammonia in the samples, and is considered artifactual. The Regional Water Board authorized the Discharger to use a MOPS buffer to prevent pH drift and ensure representative bioassay results at or near the pH of the water as discharged by letter dated September 12, 2011.

(c) *Restrict passage of aquatic life.* Passage of aquatic life is not restricted within the mixing zone. The mixing zone itself will not restrict the passage of aquatic life because it will not create a zone of acute toxicity or other objectionable impact that

aquatic life would avoid. Furthermore, the Discharger does not plan to discharge year-round; discharge typically occurs during the rainy season. Treated wastewater is otherwise re-used on-site.

(d) *Adversely impact biologically sensitive or critical habitats, including, but not limited to, habitat of species listed under federal or State endangered species laws*. Preservation of rare or endangered species (RARE) is a beneficial use of Corinda Los Trancos Creek listed in the Basin Plan. The discharge will not adversely impact biologically sensitive or critical habitats because based on the 96-hr toxicity tests, the discharge will not create a zone of acute toxicity or other adverse impact. Furthermore, no biologically sensitive or critical habitats are known to be located within the mixing zone. Provision VI.C.5 requires the Discharger to conduct a bioassessment of Corinda Los Trancos Creek downstream of Discharge Point 001 to confirm that the creek is not adversely effected.

(e) *Produce undesirable or nuisance aquatic life*. The Discharger installed and began operating its treatment system in 1993; its discharge has not resulted in undesirable or nuisance aquatic life in the creek. Nutrient contributions and loading are not expected to change, and might improve with the routing of the creek headwaters in 2012 directly to the creek rather than through the sedimentation basin.

(f) *Result in floating debris, oil, or scum.* Effluent from the Discharger's treatment system does not contain floating debris, oil, or scum; no floating debris, oil, or scum has been observed at the discharge point to the creek. Receiving water limits in section V.A of this Order prohibit floating debris, oil, and scum. The ammonia subject to the mixing zone is unlikely to cause floating debris, oil, or scum.

(g) *Produce objectionable color, odor, taste, or turbidity.* Effluent from the Discharger's treatment system does not contain objectionable color, odor, taste, or turbidity. No objectionable color, odor, taste or turbidity has been observed in the receiving water. Receiving water limits in section V.A of this Order prohibit objectionable color, odor, and turbidity. The ammonia subject to this mixing zone is unlikely to produce objectionable color, odor, taste, or turbidity.

(h) *Cause objectionable bottom deposits*. Effluent from the Discharger's treatment system does not cause objectionable bottom deposits; the treatment system removes settleable solids from the effluent. No objectionable bottom deposits have been observed in the receiving water. Receiving water limits in section V.A of this Order prohibit objectionable bottom deposits. The ammonia subject to this mixing zone is unlikely to cause objectionable bottom deposits.

(i) *Dominate the receiving water or overlap a mixing zone from a different outfall*. The mixing zone is small compared to the approximately 5,000-foot length of Corinda Los Trancos Creek below the discharge point; thus it does not dominate the receiving water. No other outfalls or mixing zones exist in ~~Coridna~~Corinda Los Trancos Creek.

(j) *Exist near any drinking water intake*. Although Corinda Los Trancos Creek is considered a potential source of drinking water pursuant to State Water Board Resolution No. 88-63, there is no drinking water intake in the Creek. This Order

includes effluent limitations based on the Maximum Contaminant Levels to protect the domestic and municipal supply (MUN) beneficial use of the receiving water. Provision VI.C.5 of this Order ensures that the Discharger will maintain their treatment system in a reliable condition to meet effluent limits and protect the receiving water.

In accordance with SIP section 1.4.2.2.B, a mixing zone extending 275 feet downstream from the weir protects beneficial uses and complies with all regulatory requirements. SIP section 1.4.2.2 requires that mixing zones be as small as practicable. For purposes of this Order, if the Discharger can comply with limits based on a dilution factor corresponding to a particular mixing zone, then that mixing zone is considered practicable.

Based on ammonia effluent data collected at Discharge Point 001 during sampling for acute toxicity bioassays from January 2010 through October 2012, a dilution ratio of 4:1 (D = 3) is sufficient for the Discharger to comply with the resulting total ammonia limits because the resulting MDEL (44 mg/L, as calculated below) is higher than the MEC (13 mg/L), and the resulting AMEL (16 mg/L, as calculated below) is higher than the mean of the data set (7.6 mg/L). Based on data provided in Tables 1 and 2 of the Mixing Zone Study, a dilution of 4:1 is achieved approximately 200 feet downstream of the discharge point, at the weir. Therefore, this Order establishes an ammonia mixing zone extending 200 feet downstream of the discharge point.

c. WQBEL Development

(1) Lead

(a) WQOs. The most stringent WQOs for lead are the Basin Plan freshwater aquatic life chronic and acute objectives of 2.8 and 71 µg/L, expressed as total metal and based on a hardness of 90 mg/L.

(b) RPA Results. This Order establishes effluent limitations for lead because the MEC (5.1 µg/L) exceeds the governing WQO (2.8 µg/L), demonstrating reasonable potential by Trigger 1.

(c) WQBELs. WQBELs for lead, calculated according to SIP procedures with a default CV of 0.6 and no dilution credit, are an AMEL of 2.3 µg/L and an MDEL of 4.6 µg/L.

(d) Anti-backsliding. Anti-backsliding requirements are satisfied because the previous order did not include lead limits.

(2) Mercury

(a) WQOs. The most stringent WQOs for mercury are the Basin Plan freshwater aquatic life chronic and acute objectives of 0.025 and 2.4 µg/L.

(b) RPA Results. This Order establishes effluent limitations for mercury because the MEC (0.0068 µg/L) exceeds the governing WQO (0.025 µg/L), demonstrating reasonable potential by Trigger 1.

(c) WQBELs. WQBELs for mercury, calculated according to SIP procedures with an effluent data CV of 1.4 and no dilution credit, are an AMEL of 0.016 µg/L and an MDEL of 0.046 µg/L.

(d) Anti-backsliding. Anti-backsliding requirements are satisfied because the new mercury limits are more stringent than those in the previous order.

(3) Selenium

(a) WQC. The most stringent WQC for selenium are the NTR freshwater aquatic life chronic and acute criteria of 5 and 20 µg/L.

(b) RPA Results. This Order establishes effluent limitations for selenium because the MEC (11µg/L) exceeds the governing WQC (5.0 µg/L), demonstrating reasonable potential by Trigger 1.

(c) WQBELs. WQBELs for selenium, calculated according to SIP procedures with an effluent data CV of 1.9 and no credit for dilution, are an AMEL of 2.9 µg/L and an MDEL of 8.8 µg/L.

(d) Anti-backsliding. Anti-backsliding requirements are satisfied because the new selenium limits are more stringent than those in the previous order.

(4) Cyanide

(a) WQC. The most stringent WQC for cyanide are the NTR freshwater aquatic life chronic and acute criteria of 5.2 and 22 µg/L.

(b) RPA Results. This Order establishes effluent limitations for cyanide because the MEC (6.1 µg/L) exceeds the governing WQC (5.2 µg/L), demonstrating reasonable potential by Trigger 1.

(c) WQBELs. WQBELs for cyanide, calculated according to SIP procedures with an effluent data CV of 0.41 and no dilution credit, are an AMEL of 4.5 µg/L and an MDEL of 7.7 µg/L. The previous order imposed an AMEL of 4.3 µg/L and an MDEL of 5.2 µg/L. This Order retains these more stringent limits.

(d) Anti-backsliding. Anti-backsliding requirements are satisfied because this Order retains the more stringent cyanide limits from the previous order.

(5) Benzene

(a) WQO. The most stringent WQO for benzene is the Title 22 Primary MCL of 1.0 µg/L, per Basin Plan section 3.3.22.

(b) RPA Results. This Order establishes effluent limitations for benzene because the MEC (2.1 µg/L) exceeds the governing WQO (1.0 µg/L), demonstrating reasonable potential by Trigger 1.

(c) WQBELs. WQBELs for benzene, calculated according to SIP procedures with a default CV of 0.60 and no dilution credit, are an AMEL of 1.0 µg/L and an MDEL of 2.0 µg/L. The previous order imposed no AMEL and an MDEL of 1.0 µg/L. This Order retains this more stringent limit.

(d) Anti-backsliding. Anti-backsliding requirements are satisfied for benzene because this Order retains the more stringent limit from the previous Order.

(6) Total Ammonia

(a) WQC. The Basin Plan contains a WQO for un-ionized ammonia of 0.025 milligrams per liter (mg/L) in all San Francisco Bay Region receiving waters. The WQO for un-ionized ammonia was translated to an equivalent total ammonia concentration (as nitrogen) since (1) sampling and laboratory methods are not available to analyze for un-ionized ammonia and (2) the fraction of total ammonia that exists in the toxic un-ionized form depends on the pH, salinity, and temperature of the receiving water. To translate the Basin Plan un-ionized ammonia objective, the following equations were used to determine the fraction of total ammonia that would exist in the toxic, un-ionized form in the receiving water [*1999 Update of Ambient Water Quality Criteria for Ammonia,* EPA Publication No. 822-R-99-014. USEPA, 1999]:

For salinity < 1 ppt: fraction of NH_3 = $\frac{1}{1+10^{(pK - pH)}}$

Where:

pK = 0.09018 + 2729.92/ (273 + T)
T = Temperature in Kelvin

To determine the fraction of un-ionized ammonia, site-specific pH and temperature receiving water data were used. These data were collected at upstream monitoring location E-002 from February 2007 through October 2011.

To convert the Basin Plan's un-ionized ammonia WQO to an equivalent total ammonia concentration, the median un-ionized ammonia fraction calculated from the data set was used. Using the median to express the un-ionized ammonia WQO in terms of an equivalent total ammonia concentration is consistent with USEPA guidance, as expressed by USEPA in *The Metals Translator: Guidance for Calculating a Total Recoverable Limit from a Dissolved Criterion* (EPA Publication Number 823-B-96-007, 1996). The total ammonia WQC is 3.7 mg/L.

(b) RPA Results. This Order establishes effluent limitations for total ammonia because the MEC (13 mg/L) exceeds the governing WQC (3.7 mg/L), demonstrating reasonable potential by Trigger 1.

(c) Total Ammonia WQBELs. To set limitations for toxic pollutants, Basin Plan section 4.5.5.2 indicates that WQBELs shall be calculated according to the SIP. Basin Plan section 3.3.20 refers to ammonia as a toxic pollutant; therefore, it is

consistent with the Basin Plan to use the SIP methodology as guidance to determine and establish total ammonia effluent limitations. The total ammonia WQBELs, calculated according to SIP procedures (using a CV of 0.62 with a dilution credit D = 3), are an AMEL of 16 mg/L and an MDEL of 44 mg/L.

To calculate these total ammonia limits, some statistical adjustments were made because the Basin Plan's chronic WQO for un-ionized ammonia is based on an annual median, while chronic criteria are usually based on a 4-day average; also, the SIP assumes a monthly sampling frequency of 4 days per month to calculate effluent limitations based on chronic criteria. To use the SIP methodology to calculate effluent limits for a Basin Plan objective that is based on an annual median, an averaging period of 365 days and a monitoring frequency of 30 days per month (the maximum daily sampling frequency in a month since the averaging period for a chronic criterion is longer than 30 days) were used. These statistical adjustments are supported by USEPA's *Water Quality Criteria; Notice of Availability; 1999 Update of Ambient Water Quality Criteria for Ammonia*, published on December 22, 1999, in the federal Register.

(d) Anti-backsliding. Anti-backsliding requirements are satisfied because the previous order did not include total ammonia limits.

d. Effluent Limit Calculations

The following table shows the WQBEL calculations for lead, mercury, selenium, cyanide, benzene, and total ammonia.

Table F-10. WQBEL Calculations

TOXIC POLLUTANTS	**Lead**	**Mercury**	**Selenium**	**Cyanide**	**Benzene**	**Total Ammonia**
Units	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**mg/L N**
Basis and Criteria type	CTR Freshwater Aquatic Life	Basin Plan	NTR Criterion	NTR Criterion	Title 22 Primary MCLs	Basin Plan Aquatic Life (Chronic)
Criteria -Acute	71	2.4	20	22	-----	
Criteria -Chronic	2.8	0.025	5	5.2	-----	3.7
SSO Criteria -Acute	-----	-----	-----	-----	-----	-----
SSO Criteria -Chronic	-----	-----	-----	-----	-----	-----
Water Effects ratio (WER)	1	1	1	1	1	1
Lowest WQO	2.8	0.025	5.0	5.2	1.0	3.7
Site Specific Translator - MDEL	-----	-----	-----	-----	-----	-----
Site Specific Translator - AMEL	-----	-----	-----	-----	-----	-----
Dilution Factor (D) (if applicable)	0	0	0	0	0	3
No. of samples per month	4	4	4	4	4	30
Aquatic life criteria analysis required? (Y/N)	Y	Y	Y	Y	N	Y
HH criteria analysis required? (Y/N)	N	Y	N	Y	Y	N
Applicable Acute WQO	71	2.4	20	22	-----	
Applicable Chronic WQO	2.8	0.025	5	5	-----	3.7

TOXIC POLLUTANTS	Lead	Mercury	Selenium	Cyanide	Benzene	Total Ammonia
Units	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**mg/L N**
HH criteria	-----	0.050	-----	700	1.0	----
Background (Maximum Conc for Aquatic Life calc)	0.89	0.068	0.84	0.4	0.044	0.025
Background (Average Conc for Human Health calc)	-----	0.029	-----	0.4	0.044	----
Is the pollutant on the 303d list (Y/N)?	N	N	N	N	N	N
ECA acute	71	2	20	22.0		No Acute WQO
ECA chronic	3	0	5	5.2		14.7
ECA HH		0.05		700	1.0	
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	Y	N	N	N	Y	N
Avg of effluent data points		0.0027	1.8	2.8		5.4
Std Dev of effluent data points		0.004	3.4	1.2		3.4
CV calculated	N/A	1.4	1.9	0.41	N/A	0.62
CV (Selected) - Final	0.60	1.4	1.9	0.41	0.60	0.62
ECA acute mult99	0.32	0.15	0.12	0.43		0.31
ECA chronic mult99	0.53	0.28	0.22	0.64		0.93
LTA acute	23	0.37	2.4	9.5		
LTA chronic	1.5	0.0071	1.1	3.3		20.5
minimum of LTAs	1.5	0.0071	1.1	3.3		20.5
AMEL mult95	1.55	2.30	2.70	1.37	1.55	13.7
MDEL mult99	3.11	6.50	8.20	2.32	3.11	13.7
AMEL (aq life)	2.3	0.016	2.9	4.5		16.4
MDEL(aq life)	4.6	0.046	8.8	7.7		43.9
MDEL/AMEL Multiplier	2.01	2.82	3.04	1.69	2.01	2.69
AMEL (human hlth)		0.05		700.00	1.00	
MDEL (human hlth)		0.14		1185.71	2.01	
minimum of AMEL for Aq. life vs HH	2.3	0.016	2.9	4.5	1.0	16.4
minimum of MDEL for Aq. Life vs HH	4.6	0.046	8.8	7.7	2.0	43.9
Current limit in permit (30-day average)	-----	0.018	4.0	4.3	-----	-----
Current limit in permit (daily)	-----	0.046	9.0	5.2	1.0	-----
Final limit - AMEL	2.3	0.016	2.9	4.3	1.0	16
Final limit - MDEL	4.6	0.046	8.8	5.2	2.0	44
Max Effl Conc (MEC)	5.1	0.007	11	6.1	2.1	13

5. Whole Effluent Acute Toxicity

This Order includes effluent limitations for whole effluent acute toxicity based on Basin Plan Table 4-3 that are unchanged from the previous order. All bioassays are to be performed

according to the USEPA approved method in 40 CFR 136, currently *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, 5th Edition. The Monitoring and Reporting Program specifies rainbow trout (*Oncorhynchus mykiss*) as the approved test species.

The ammonia WQBELs were derived to protect aquatic life. Therefore, if the Discharger can demonstrate that ammonia causes acute toxicity in excess of the acute toxicity limitations in this Order, and that the ammonia in the discharge complies with the ammonia effluent limitations in this Order, then such toxicity will not constitute a violation of the effluent limitations for whole effluent acute toxicity. This is based on Basin Plan section 3.3.20.

6. Whole Effluent Chronic Toxicity

a. Toxicity Objective. Basin Plan section 3.3.18 states, "There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community."

b. Reasonable Potential Analysis. The Discharger conducted quarterly chronic toxicity monitoring during the term of the previous Order using the test species fathead minnow (*Pimephales promelas)*. The results show that the discharge has reasonable potential to exceed the narrative water quality objective for chronic toxicity because the quarterly chronic toxicity results in 2011 (4.0 TUc, <1.0 TUc, 1.4 TUc and 2.0 TUc) exceeded the chronic toxicity triggers in Basin Plan Table 4-5 (three-sample median of >1.0 TUc and single-sample maximum of >2.0 TUc). These results would have triggered accelerated monitoring if the previous order had included a chronic toxicity limit.

c. Permit Requirements. The Order establishes a narrative effluent limitation for chronic toxicity based on the narrative Basin Plan objective. The Order establishes requirements to implement the narrative chronic toxicity objective, including numeric triggers for accelerated monitoring. These triggers are based on Basin Plan Table 4-5.

d. Screening Phase Study. The Discharger is required to conduct a chronic toxicity screening phase study, as described in Monitoring and Reporting Program Appendix E-1, prior to the next permit reissuance.

7. Temperature

Corinda Los Trancos Creek supports warm and cold water habitat beneficial uses; Basin Plan and Thermal Plan temperature objectives therefore apply. Available temperature data are insufficient to determine if the discharge to Corinda Los Trancos Creek causes exceedance of temperature objectives because they are not representative of the current discharge. Over the term of the previous order, the discharge to Corinda Los Trancos Creek consisted of treated groundwater comingled with spring water from above the landfill both combined in the sedimentation basin prior to discharge to the creek. The current configuration, in place since late 2012, directs the spring water directly to the discharge riser for the sedimentation pond, thus bypassing the pond. The Monitoring and Reporting Program therefore requires

monitoring of background, discharge, and downstream receiving water temperature to support a future reasonable potential analysis for temperature.

8. Anti-backsliding and Antidegradation

The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16. This Order continues the status quo with respect to the level of discharge authorized in the previous order and thus there will be no change in water quality beyond the level authorized in the last permit. The limitations in this Order comply with antidegradation requirements because they hold the Discharger to performance levels that will neither cause nor contribute to water quality impairment, nor to further water quality degradation. This is because this Order does not provide for an increase in the permitted design flow, allow for a reduced level of treatment, or increase effluent limitations.

Effluent limitations in this Order that are less stringent than those in the previous order or are not retained from the previous order comply with anti-backsliding and antidegradation requirements. The previous order contained effluent limitations for copper, nickel, and silver; however, the RPA shows that the discharge no longer demonstrates reasonable potential for these pollutants to cause or contribute to exceedances of their respective WQOs. Therefore, this Order does not retain these effluent limitations. Elimination of these limitations is consistent with State Water Board Order No. WQ 2001-16. Receiving water quality will not be degraded because the Discharger will maintain its current level of treatment.

Because there will be no lowering of water quality beyond the current level authorized in the previous order, which is the baseline by which to measure whether degradation will occur, further analysis in this Order is unnecessary, and findings authorizing degradation are thus unnecessary.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Receiving water limitations V.1 and V.2 are based on the narrative and numeric objectives in Basin Plan Chapter 3 and are retained from the previous order. Receiving water limitation V.3 is retained from the previous order and requires compliance with federal and State water quality standards.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

The principal purposes of a monitoring and reporting program (MRP) are to:

- Document compliance with waste discharge requirements and prohibitions established by the Regional Water Board,
- Facilitate self-policing by the Discharger in the prevention and abatement of pollution arising from waste discharge,
- Develop or assist in the development of limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards, and
- Prepare water and wastewater quality inventories.

The MRP is a standard requirement in almost all NPDES permits issued by the Regional Water Board, including this Order. It contains definitions of terms and sets out requirements for reporting of routine monitoring data in accordance with NPDES regulations, the CWC, and State and Regional Water Board policies. The MRP also 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.

The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

A. Influent Monitoring

Influent monitoring requirements at INF-001 for the following pollutants are retained from the previous order: flow, pH, calcium, magnesium, sodium, potassium, sulfate, bicarbonate, ~~chlorine~~chloride, TDS, TSS, oil and grease, ammonia, temperature, and electrical conductivity. Monitoring for these parameters is retained to characterize the general chemistry of the influent and detect changes in influent quality pertaining to pollutants commonly found in discharges from landfills.

B. Effluent Monitoring

The MRP retains most effluent monitoring requirements from the previous order. Changes in effluent monitoring are summarized as follows.

- An additional monitoring point is established and the existing monitoring point has been re-named. Effluent monitoring point EFF-001A, previously identified as EFFL-1, remains immediately following treatment and prior to discharge to the sedimentation basin; new effluent monitoring point EFF-001 is located at a point in the outfall from the sedimentation basin prior to the receiving water at which all waste tributary to the outfall is present prior to mixing with the receiving water.

- The MRP retains routine monitoring for the toxic pollutants with effluent limitations (mercury, selenium, cyanide, benzene, vinyl chloride, and ammonia). Monitoring for priority toxic pollutants is to be conducted in accordance with Provision VI.C.2 of the Order.

- Routine effluent monitoring for lead has been established to determine compliance with effluent limitations established by this Order.

- Routine effluent monitoring for bis(2-ethylhexyl)phthalate has been established to provide data for future reasonable potential analysis and because the reporting limit (5 ug/L) exceeds the lowest WQO (1.8 ug/L) for this pollutant.

- Routine effluent monitoring for zinc, a-terpineol, benzoic acid, and p-cresol has been established because these pollutants have been identified as possible pollutants of concern in the discharge and no monitoring data are currently available.

- Effluent monitoring requirements for the following pollutants are not retained from the previous order: copper, nickel, and silver. The RPA shows that the discharge no longer demonstrates reasonable potential for these pollutants to cause or contribute to exceedances of their WQOs.

C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity.** Quarterly 96-hour bioassay testing is required to demonstrate compliance with the effluent limitation for acute toxicity.

2. **Chronic Toxicity.** This Order carries over the requirement for the Discharger to conduct chronic toxicity testing quarterly to demonstrate compliance with the narrative effluent limitation for chronic toxicity.

D. Receiving Water Monitoring

Most receiving water monitoring requirements are retained from the previous order.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions (Provision VI.A)

Standard Provisions, which in accordance with 40 CFR 122.41and 122.42 apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D of this Order. NPDES regulations at 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. NPDES regulations at 40 CFR 123.25(a)(12) allow the state to omit or modify conditions to impose more stringent requirements. The Regional Standard Provisions supplement the Federal Standard Provisions. 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 CWC enforcement authority is more stringent. In lieu of these conditions, this Order incorporates by reference CWC section 13387(e).

B. MRP Requirements (Provision VI.B)

The Discharger is required to monitor the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are contained in the MRP, Attachment D, and Attachment G. This provision requires compliance with these documents and is authorized by 40 CFR 122.41(h) and (j) 122.63, and CWC sections 13267 and 13383.

The table below summarizes routine monitoring requirements. This table is for informational purposes only. Actual requirements are specified in the MRP and other applicable provisions of this Order.

Table F-11. Monitoring Requirements Summary

Parameter	Influent INF-001	Effluent EFF-001 or EFF-001A*	Receiving Water
Flow	~~Continuous~~	Continuous	1 / Quarter
pH	1 / Quarter	1 / Quarter	1 / Quarter
Total Dissolved Solids	1 / Quarter	1 / Quarter	--

Parameter	Influent INF-001	Effluent EFF-001 or EFF-001A*	Receiving Water
(TDS)			
Total Suspended Solids (TSS)	1 / Quarter	1 / Quarter	--
Total Oil and Grease	1 / Quarter	--	--
Ammonia (as Nitrogen)	1 / Quarter	1 / Quarter	--
Acute Toxicity	--	1 / Quarter	--
Chronic Toxicity	--	1 / Quarter	--
Temperature	1 / Quarter	1 / Quarter	1 / Quarter
Electrical Conductivity	1 / Quarter	1 / Quarter	--
Dissolved Oxygen (D.O.)		1 / Quarter	1 / Quarter
~~C~~BOD	~~1 / Quarter~~	1 / Quarter	--
COD	--	1 / Quarter	--
Nitrite	--	1 / Quarter	--
Nitrate	--	1 / Quarter	--
Hardness	--	1 / Quarter	1 / Quarter
Salinity	--	--	1 / Quarter
Total Phenols	--	1 / Quarter*	--
Lead	--	1 / Quarter	--
Mercury	--	1 / Quarter	--
Selenium	--	1 / Quarter	--
Cyanide	--	1 / Quarter	--
Benzene	--	1 / Quarter*	--
Vinyl Chloride		1 / Quarter*	
Bis(2-ethylhexyl)phthalate	--	1 / ~~Quarter~~Year*	--
Zinc	--	1 / Year	--
a-Terpineol,	--	1 / Year*	--
Benzoic acid	--	1 / Year*	--
p-Cresol	--	1 / Year*	--
Calcium	1 / Quarter		
Magnesium	1 / Quarter	--	--
Sodium	1 / Quarter	--	--
Potassium	1 / Quarter	--	--
Sulfate (SO_4)	1 / Quarter	--	--
Bicarbonate (HCO_3)	1 / Quarter	--	--
Chlorine	1 / Quarter	--	--
Standard Observations	--	--	1 / Quarter
Priority Pollutants	--	--	1 / Year

Note: *Indicates sample to be collected at EFFL-001A. All others are to be taken at EFFL-001.

C. Special Provisions (Provision VI.C)

1. Reopener Provisions

These provisions are based on 40 CFR 122.62 and 40 CFR 122.63, and allow modification of this Order and its effluent limitations as necessary in response to updated WQOs, regulations, or other new relevant information that may be established in the future and other circumstances allowed by law.

2. Effluent Characterization Study and Report

This Order does not include effluent limitations for priority pollutants that do not demonstrate reasonable potential, but this provision requires the Discharger to continue monitoring for these pollutants as described in the Regional Standard Provisions and as specified in the MRP. This requirement is authorized pursuant to CWC section 13267, and is necessary to inform the next permit reissuance and to ensure that the Discharger takes proper and timely steps in response to any changes in unanticipated effluent quality during the term of this Order.

3 Ambient Background Study and Report

This provision is based on the Basin Plan, the SIP, and the Regional Standard Provisions (Attachment G). This provision is necessary to provide data for future RPAs.

4. Best Management Practices and Pollution Minimization Program

This provision for a Pollutant Minimization Program is based on Basin Plan Chapter 4 (section 4.13.2) and SIP Chapter 2 (section 2.4.5).

5. Reliability Assurance Plan and Status Report.

This provision is required to support the Discharger's request for an exception to Basin Plan Discharge Prohibition 1. The exception is discussed in Section IV.B of this Fact Sheet.

6. Bioassessment Monitoring Report.

This provision is required to provide additional verification of the appropriateness of the mixing zone and dilution credit granted in this Order for Ammonia, and to confirm that the mixing zone meets the conditions of SIP section 1.4.2.2.

~~**7. Ammonia Treatment Technology Report**~~

~~This provision is required to confirm that further ammonia treatment is infeasible and technology-based ammonia effluent limitations are inappropriate for this discharge.~~

VIII. PUBLIC PARTICIPATION

The Regional Water Board considered the issuance of these WDRs that serve as an NPDES permit for the Facility. As a step in the WDRs adoption process, Regional Water Board staff developed tentative WDRs. The Regional Water Board encouraged public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided opportunity to submit written comments and recommendations. Notification was provided through publication in the San Mateo County Times.

B. Written Comments

Staff determinations are tentative. Interested persons were invited to submit written comments concerning the tentative WDRs. Comments were to be submitted either in person or by mail to the Executive Office at the Regional Water Board at 1515 Clay Street, Suite 1400, Oakland, California 94612, Attention: John Madigan.

To receive full consideration and a written response, written comments were to be received at the Regional Water Board offices by 5:00 p.m. on **March 25, 2013**.

C. Public Hearing

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

Date: May 8, 2013
Time: 9:00 a.m.
Location: Elihu Harris State Office Building
1515 Clay Street, 1st Floor Auditorium
Oakland, CA 94612

Contact: John Madigan, (510) 622 – 2405, email JMadigan@waterboards.gov

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

Dates and venues may change. The Regional Water Board web address is http://www.waterboards.ca.gov/sanfranciscobay where one 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, 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 8:00 a.m. and 5:00 p.m., Monday through Friday Copying of documents may be arranged 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 Madigan at (510) 622 – 2405 or email at JMadigan@waterboards.gov.

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

San Francisco Bay Regional Water Quality Control Board

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN FRANCISCO BAY REGION

ATTACHMENT G
REGIONAL STANDARD PROVISIONS, AND MONITORING AND REPORTING REQUIREMENTS
(SUPPLEMENT TO ATTACHMENT D)

For

NPDES WASTEWATER DISCHARGE PERMITS

March 2010

Contents

I. STANDARD PROVISIONS - PERMIT COMPLIANCE G-1
A. Duty to Comply G-1
B. Need to Halt or Reduce Activity Not a Defense G-1
C. Duty to Mitigate G-1
1. Contingency Plan G-1
2. Spill Prevention Plan G-2
D. Proper Operation & Maintenance G-2
1. Operation and Maintenance (O&M) Manual G-2
2. Wastewater Facilities Status Report G-2
3. Proper Supervision and Operation of Publicly Owned Treatment Works (POTWs) G-3
E. Property Rights G-3
F. Inspection and Entry G-3
G. Bypass G-3
H. Upset G-3
I. Other G-3
J. Storm Water G-3
1. Storm Water Pollution Prevention Plan (SWPP Plan) G-3
2. Source Identification G-4
3. Storm Water Management Controls G-5
4. Annual Verification of SWPP Plan G-6
K. Biosolids Management G-6
II. STANDARD PROVISIONS – PERMIT ACTION G-7
III. STANDARD PROVISIONS – MONITORING G-7
A. Sampling and Analyses G-7
1. Use of Certified Laboratories G-7
2. Use of Appropriate Minimum Levels G-7
3. Frequency of Monitoring G-7
B. Biosolids Monitoring G-10
1. Biosolids Monitoring Frequency G-10
2. Biosolids Pollutants to Monitor G-11
C. Standard Observations G-11
1. Receiving Water Observations G-11
2. Wastewater Effluent Observations G-11
3. Beach and Shoreline Observations G-12
4. Land Retention or Disposal Area Observations G-12
5. Periphery of Waste Treatment and/or Disposal Facilities Observations G-12
IV. STANDARD PROVISIONS – RECORDS G-12
A. Records to be Maintained G-12
B. Records of monitoring information shall include G-13
1. Analytical Information G-13
2. Flow Monitoring Data G-13

3. Wastewater Treatment Process Solids G-13
4. Disinfection Process G-13
5. Treatment Process Bypasses G-14
6. Treatment Facility Overflows G-14
V. STANDARD PROVISIONS – REPORTING G-14
A. Duty to Provide Information G-14
B. Signatory and Certification Requirements G-14
C. Monitoring Reports G-15
1. Self Monitoring Reports G-15
D. Compliance Schedules G-19
E. Twenty-Four Hour Reporting G-19
1. Spill of Oil or Other Hazardous Material Reports G-19
2. Unauthorized Discharges from Municipal Wastewater Treatment Plants G-20
F. Planned Changes G-23
G. Anticipated Noncompliance G-23
H. Other Noncompliance G-23
I. Other Information G-23
VI. STANDARD PROVISIONS – ENFORCEMENT G-23
VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS G-23
VIII. DEFINITIONS – This section is an addition to Standard Provisions (Attachment D) G-23

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

REGIONAL STANDARD PROVISIONS, AND MONITORING AND REPORTING REQUIREMENTS (SUPPLEMENT TO ATTACHMENT D)

FOR

NPDES WASTEWATER DISCHARGE PERMITS

APPLICABILITY

This document applies to dischargers covered by a National Pollutant Discharge Elimination System (NPDES) permit. This document does not apply to Municipal Separate Storm Sewer System (MS4) NPDES permits.

The purpose of this document is to supplement the requirements of Attachment D, Standard Provisions. The requirements in this supplemental document are designed to ensure permit compliance through preventative planning, monitoring, recordkeeping, and reporting. In addition, this document requires proper characterization of issues as they arise, and timely and full responses to problems encountered. To provide clarity on which sections of Attachment D this document supplements, this document is arranged in the same format as Attachment D.

I. STANDARD PROVISIONS - PERMIT COMPLIANCE

A. Duty to Comply – Not Supplemented

B. Need to Halt or Reduce Activity Not a Defense – Not Supplemented

C. Duty to Mitigate – This supplements I.C. of Standard Provisions (Attachment D)

1. **Contingency Plan** - The Discharger shall maintain a Contingency Plan as originally required by Regional Water Board Resolution 74-10 and as prudent in accordance with current municipal facility emergency planning. The Contingency Plan shall describe procedures to ensure that existing facilities remain in, or are rapidly returned to, operation in the event of a process failure or emergency incident, such as employee strike, strike by suppliers of chemicals or maintenance services, power outage, vandalism, earthquake, or fire. The Discharger may combine the Contingency Plan and Spill Prevention Plan into one document. Discharge in violation of the permit where the Discharger has failed to develop and implement a Contingency Plan as described below will be the basis for considering the discharge a willful and negligent violation of the permit pursuant to California Water Code Section 13387. The Contingency Plan shall, at a minimum, contain the provisions of a. through g. below.

    a. Provision of personnel for continued operation and maintenance of sewerage facilities during employee strikes or strikes against contractors providing services.

b. Maintenance of adequate chemicals or other supplies and spare parts necessary for continued operations of sewerage facilities.

c. Provisions of emergency standby power.

d. Protection against vandalism.

e. Expeditious action to repair failures of, or damage to, equipment and sewer lines.

f. Report of spills and discharges of untreated or inadequately treated wastes, including measures taken to clean up the effects of such discharges.

g. Programs for maintenance, replacement, and surveillance of physical condition of equipment, facilities, and sewer lines.

2. Spill Prevention Plan - The Discharger shall maintain a Spill Prevention Plan to prevent accidental discharges and minimize the effects of such events. The Spill Prevention Plan shall:

a. Identify the possible sources of accidental discharge, untreated or partially treated waste bypass, and polluted drainage;

b. Evaluate the effectiveness of present facilities and procedures, and state when they became operational; and

c. Predict the effectiveness of the proposed facilities and procedures, and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

This Regional Water Board, after review of the Contingency and Spill Prevention Plans or their updated revisions, may establish conditions it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions may be incorporated as part of the permit upon notice to the Discharger.

D. Proper Operation & Maintenance – This supplements I.D of Standard Provisions (Attachment D)

1. Operation and Maintenance (O&M) Manual - The Discharger shall maintain an O&M Manual to provide the plant and regulatory personnel with a source of information describing all equipment, recommended operational strategies, process control monitoring, and maintenance activities. To remain a useful and relevant document, the O&M Manual shall be kept updated to reflect significant changes in treatment facility equipment and operational practices. The O&M Manual shall be maintained in usable condition and be available for reference and use by all relevant personnel and Regional Water Board staff.

2. Wastewater Facilities Status Report - The Discharger shall regularly review, revise, or update, as necessary, its Wastewater Facilities Status Report. This report shall document how the Discharger operates and maintains its wastewater collection, treatment, and disposal facilities to ensure that all facilities are adequately staffed, supervised, financed, operated,

maintained, repaired, and upgraded as necessary 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.

3. **Proper Supervision and Operation of Publicly Owned Treatment Works (POTWs) -** POTWs shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Division 4, Chapter 14, Title 23 of the California Code of Regulations.

E. Property Rights – Not Supplemented

F. Inspection and Entry – Not Supplemented

G. Bypass – Not Supplemented

H. Upset – Not Supplemented

I. Other – This section is an addition to Standard Provisions (Attachment D)

1. Neither the treatment nor the discharge of pollutants shall create pollution, contamination, or nuisance as defined by California Water Code Section 13050.

2. Collection, treatment, storage, and disposal systems shall be operated in a manner that precludes public contact with wastewater, except in cases where excluding the public is infeasible, such as private property. If public contact with wastewater could reasonably occur on public property, warning signs shall be posted.

3. If the Discharger submits a timely and complete Report of Waste Discharge for permit reissuance, this permit continues in force and effect until a new permit is issued or the Regional Water Board rescinds the permit.

J. Storm Water – This section is an addition to Standard Provisions (Attachment D)

These provisions apply to facilities that do not direct all storm water flows from the facility to the wastewater treatment plant headworks.

1. **Storm Water Pollution Prevention Plan (SWPP Plan)**

The SWPP Plan shall be designed in accordance with good engineering practices and shall address the following objectives:

a. To identify pollutant sources that may affect the quality of storm water discharges; and

b. To identify, assign, and implement control measures and management practices to reduce pollutants in storm water discharges.

The SWPP Plan may be combined with the existing Spill Prevention Plan as required in accordance with Section C.2. The SWPP Plan shall be retained on-site and made available upon request of a representative of the Regional Water Board.

2. Source Identification

The SWPP Plan shall provide a description of potential sources that may be expected to add significant quantities of pollutants to storm water discharges, or may result in non-storm water discharges from the facility. The SWPP Plan shall include, at a minimum, the following items:

a. A topographical map (or other acceptable map if a topographical map is unavailable), extending one-quarter mile beyond the property boundaries of the facility, showing the wastewater treatment facility process areas, surface water bodies (including springs and wells), and discharge point(s) where the facility's storm water discharges to a municipal storm drain system or other points of discharge to waters of the State. The requirements of this paragraph may be included in the site map required under the following paragraph if appropriate.

b. A site map showing the following:

   1) Storm water conveyance, drainage, and discharge structures;

   2) An outline of the storm water drainage areas for each storm water discharge point;

   3) Paved areas and buildings;

   4) Areas of actual or potential pollutant contact with storm water or release to storm water, including but not limited to outdoor storage and process areas; material loading, unloading, and access areas; and waste treatment, storage, and disposal areas;

   5) Location of existing storm water structural control measures (i.e., berms, coverings, etc.);

   6) Surface water locations, including springs and wetlands; and

   7) Vehicle service areas.

c. A narrative description of the following:

   1) Wastewater treatment process activity areas;

   2) Materials, equipment, and vehicle management practices employed to minimize contact of significant materials of concern with storm water discharges;

   3) Material storage, loading, unloading, and access areas;

   4) Existing structural and non-structural control measures (if any) to reduce pollutants in storm water discharges; and

   5) Methods of on-site storage and disposal of significant materials.

d. A list of pollutants that have a reasonable potential to be present in storm water discharges in significant quantities.

3. Storm Water Management Controls

The SWPP Plan shall describe the storm water management controls appropriate for the facility and a time schedule for fully implementing such controls. The appropriateness and priorities of controls in the SWPP Plan shall reflect identified potential sources of pollutants. The description of storm water management controls to be implemented shall include, as appropriate:

a. Storm water pollution prevention personnel

Identify specific individuals (and job titles) that are responsible for developing, implementing, and reviewing the SWPP Plan.

b. Good housekeeping

Good housekeeping requires the maintenance of clean, orderly facility areas that discharge storm water. Material handling areas shall be inspected and cleaned to reduce the potential for pollutants to enter the storm drain conveyance system.

c. Spill prevention and response

Identify areas where significant materials can spill into or otherwise enter storm water conveyance systems and their accompanying drainage points. Specific material handling procedures, storage requirements, and cleanup equipment and procedures shall be identified, as appropriate. The necessary equipment to implement a cleanup shall be available, and personnel shall be trained in proper response, containment, and cleanup of spills. Internal reporting procedures for spills of significant materials shall be established.

d. Source control

Source controls include, for example, elimination or reduction of the use of toxic pollutants, covering of pollutant source areas, sweeping of paved areas, containment of potential pollutants, labeling of all storm drain inlets with “No Dumping” signs, isolation or separation of industrial and non-industrial pollutant sources so that runoff from these areas does not mix, etc.

e. Storm water management practices

Storm water management practices are practices other than those that control the sources of pollutants. Such practices include treatment or conveyance structures, such as drop inlets, channels, retention and detention basins, treatment vaults, infiltration galleries, filters, oil/water separators, etc. Based on assessment of the potential of various sources to contribute pollutants to storm water discharges in significant quantities, additional storm water management practices to remove pollutants from storm water discharges shall be implemented and design criteria shall be described.

f. Sediment and erosion control

Measures to minimize erosion around the storm water drainage and discharge points, such as riprap, revegetation, slope stabilization, etc., shall be described.

g. Employee training

Employee training programs shall inform all personnel responsible for implementing the SWPP Plan. Training shall address spill response, good housekeeping, and material management practices. New employee and refresher training schedules shall be identified.

h. Inspections

All inspections shall be done by trained personnel. Material handling areas shall be inspected for evidence of, or the potential for, pollutants entering storm water discharges. A tracking or follow up procedure shall be used to ensure appropriate response has been taken in response to an inspection. Inspections and maintenance activities shall be documented and recorded. Inspection records shall be retained for five years.

i. Records

A tracking and follow-up procedure shall be described to ensure that adequate response and corrective actions have been taken in response to inspections.

4. Annual Verification of SWPP Plan

An annual facility inspection shall be conducted to verify that all elements of the SWPP Plan are accurate and up-to-date. The results of this review shall be reported in the Annual Report to the Regional Water Board described in Section V.C.f.

K. Biosolids Management – This section is an addition to Standard Provisions (Attachment D)

Biosolids must meet the following requirements prior to land application. The Discharger must either demonstrate compliance or, if it sends the biosolids to another party for further treatment or distribution, must give the recipient the information necessary to ensure compliance.

1. Exceptional quality biosolids meet the pollutant concentration limits in Table III of 40 CFR Part 503.13, Class A pathogen limits, and one of the vector attraction reduction requirements in 503.33(b)(1)-(b)(8). Such biosolids do not have to be tracked further for compliance with general requirements (503.12) and management practices (503.14).

2. Biosolids used for agricultural land, forest, or reclamation shall meet the pollutant limits in Table I (ceiling concentrations) and Table II or Table III (cumulative loadings or pollutant concentration limits) of 503.13. They shall also meet the general requirements (503.12) and management practices (503.14) (if not exceptional quality biosolids) for Class A or Class B pathogen levels with associated access restrictions (503.32) and one of the 10 vector attraction reduction requirements in 503.33(b)(1)-(b)(10).

3. Biosolids used for lawn or home gardens must meet exceptional quality biosolids limits.

4. Biosolids sold or given away in a bag or other container must meet the pollutant limits in either Table III or Table IV (pollutant concentration limits or annual pollutant loading rate limits) of 503.13. If Table IV is used, a label or information sheet must be attached to the biosolids packing that explains Table IV (see 503.14). The biosolids must also meet the Class A pathogen limits and one of the vector attraction reduction requirements in 503.33(b)(1)-(b)(8).

II. STANDARD PROVISIONS – PERMIT ACTION – Not Supplemented

III. STANDARD PROVISIONS – MONITORING

A. Sampling and Analyses – This section is a supplement to III.A and III.B of Standard Provisions (Attachment D)

1. Use of Certified Laboratories

Water and waste analyses shall be performed by a laboratory certified for these analyses in accordance with California Water Code Section 13176.

2. Use of Appropriate Minimum Levels

Table C lists the suggested analytical methods for the 126 priority pollutants and other toxic pollutants that should be used, unless a particular method or minimum level (ML) is required in the MRP.

For priority pollutant monitoring, when there is more than one ML value for a given substance, the Discharger may select any one of the analytical methods cited in Table C for compliance determination, or any other method described in 40 CFR part 136 or approved by USEPA (such as the 1600 series) if authorized by the Regional Water Board. However, the ML must be below the effluent limitation and water quality objective. If no ML value is below the effluent limitation and water quality objective, then the method must achieve an ML no greater than the lowest ML value indicated in Table C. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

3. Frequency of Monitoring

The minimum schedule of sampling analysis is specified in the MRP portion of the permit.

a. Timing of Sample Collection

1) The Discharger shall collect samples of influent on varying days selected at random and shall not include any plant recirculation or other sidestream wastes, unless otherwise stipulated by the MRP.

2) The Discharger shall collect samples of effluent on days coincident with influent sampling unless otherwise stipulated by the MRP or the Executive Officer. The Executive Officer may approve an alternative sampling plan if it is demonstrated to be representative of plant discharge flow and in compliance with all other permit requirements.

3) The Discharger shall collect grab samples of effluent during periods of day-time maximum peak effluent flows (or peak flows through secondary treatment units for facilities that recycle effluent flows).

4) Effluent sampling for conventional pollutants shall occur on at least one day of any multiple-day bioassay test the MRP requires. During the course of the test, on at least one day, the Discharger shall collect and retain samples of the discharge. In the event a bioassay test does not comply with permit limits, the Discharger shall analyze these retained samples for pollutants that could be toxic to aquatic life and for which it has effluent limits.

   i. The Discharger shall perform bioassay tests on final effluent samples; when chlorine is used for disinfection, bioassay tests shall be performed on effluent after chlorination-dechlorination; and

   ii. The Discharger shall analyze for total ammonia nitrogen and calculate the amount of un-ionized ammonia whenever test results fail to meet the percent survival specified in the permit.

b. Conditions Triggering Accelerated Monitoring

1) If the results from two consecutive samples of a constituent monitored in a 30-day period exceed the monthly average limit for any parameter (or if the required sampling frequency is once per month and the monthly sample exceeds the monthly average limit), the Discharger shall, within 24 hours after the results are received, increase its sampling frequency to daily until the results from the additional sampling show that the parameter is in compliance with the monthly average limit.

2) If any maximum daily limit is exceeded, the Discharger shall increase its sampling frequency to daily within 24 hours after the results are received that indicate the exceedance of the maximum daily limit until two samples collected on consecutive days show compliance with the maximum daily limit.

3) If final or intermediate results of an acute bioassay test indicate a violation or threatened violation (e.g., the percentage of surviving test organisms of any single acute bioassay test is less than 70 percent), the Discharger shall initiate a new test as soon as practical, and the Discharger shall investigate the cause of the mortalities and report its findings in the next self monitoring report (SMR).

4) The Discharger shall calibrate chlorine residual analyzers against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, the Discharger shall collect grab samples at least every 30 minutes until compliance with the limit is achieved, unless the Discharger monitors chlorine residual continuously. In such cases, the Discharger shall continue to conduct continuous monitoring as required by its permit.

5) When a bypass occurs (except one subject to provision III.A.3.b.6 below), the Discharger shall monitor flows and collect samples on a daily basis for all constituents at affected discharge points that have effluent limits for the duration of

the bypass (including acute toxicity using static renewals), except chronic toxicity, unless otherwise stipulated by the MRP.

6) Unless otherwise stipulated by the MRP, when a bypass approved pursuant to Attachment D, Standard Provisions, Sections I.G.2 or I.G.4, occurs, the Discharger shall monitor flows and, using appropriate procedures as specified in the MRP, collect and retain samples for affected discharge points on a daily basis for the duration of the bypass. The Discharger shall analyze for total suspended solids (TSS) using 24-hour composites (or more frequent increments) and for bacteria indicators with effluent limits using grab samples. If TSS exceeds 45 mg/L in any composite sample, the Discharger shall also analyze the retained samples for that discharge for all other constituents that have effluent limits, except oil and grease, mercury, dioxin-TEQ, and acute and chronic toxicity. Additionally, at least once each year, the Discharger shall analyze the retained samples for one approved bypass discharge event for all other constituents that have effluent limits, except oil and grease, mercury, dioxin-TEQ, and acute and chronic toxicity. This monitoring shall be in addition to the minimum monitoring specified in the MRP.

c. Storm Water Monitoring

The requirements of this section only apply to facilities that are not covered by an NPDES permit for storm water discharges and where not all site storm drainage from process areas (i.e., areas of the treatment facility where chemicals or wastewater could come in contact with storm water) is directed to the headworks. For storm water not directed to the headworks during the wet season (October 1 to April 30), the Discharger shall:

1) Conduct visual observations of the storm water discharge locations during daylight hours at least once per month during a storm event that produces significant storm water discharge to observe the presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor, etc.

2) Measure (or estimate) the total volume of storm water discharge, collect grab samples of storm water discharge from at least two storm events that produce significant storm water discharge, and analyze the samples for oil and grease, pH, TSS, and specific conductance.

   The grab samples shall be taken during the first 30 minutes of the discharge. If collection of the grab samples during the first 30 minutes is impracticable, grab samples may be taken during the first hour of the discharge, and the Discharger shall explain in the Annual Report why the grab sample(s) could not be taken in the first 30 minutes.

3) Testing for the presence of non-storm water discharges shall be conducted no less than twice during the dry season (May 1 to September 30) at all storm water discharge locations. Tests may include visual observations of flows, stains, sludges, odors, and other abnormal conditions; dye tests; TV line surveys; or analysis and validation of accurate piping schematics. Records shall be maintained describing the method used, date of testing, locations observed, and test results.

4) Samples shall be collected from all locations where storm water is discharged. Samples shall represent the quality and quantity of storm water discharged from the facility. If a facility discharges storm water at multiple locations, the Discharger may sample a reduced number of locations if it establishes and documents through the monitoring program that storm water discharges from different locations are substantially identical.

5) Records of all storm water monitoring information and copies of all reports required by the permit shall be retained for a period of at least three years from the date of sample, observation, or report.

d. Receiving Water Monitoring

The requirements of this section only apply when the MRP requires receiving water sampling.

1) Receiving water samples shall be collected on days coincident with effluent sampling for conventional pollutants.

2) Receiving water samples shall be collected at each station on each sampling day during the period within one hour following low slack water. Where sampling during lower slack water is impractical, sampling shall be performed during higher slack water. Samples shall be collected within the discharge plume and down current of the discharge point so as to be representative, unless otherwise stipulated in the MRP.

3) Samples shall be collected within one foot of the surface of the receiving water, unless otherwise stipulated in the MRP.

B. Biosolids Monitoring – This section supplements III.B of Standard Provisions (Attachment D)

When biosolids are sent to a landfill, sent to a surface disposal site, or applied to land as a soil amendment, they must be monitored as follows:

1. Biosolids Monitoring Frequency

Biosolids disposal must be monitored at the following frequency:

Metric tons biosolids/365 days	Frequency
0-290	Once per year
290-1500	Quarterly
1500-15,000	Six times per year
Over 15,000	Once per month

(Metric tons are on a dry weight basis)

2. Biosolids Pollutants to Monitor

Biosolids shall be monitored for the following constituents:

Land Application: arsenic, cadmium, copper, mercury, molybdenum, nickel, lead, selenium, and zinc

Municipal Landfill: Paint filter test (pursuant to 40 CFR 258)

Biosolids-only Landfill or Surface Disposal Site (if no liner and leachate system): arsenic, chromium, and nickel

C. Standard Observations – This section is an addition to III of Standard Provisions (Attachment D)

1. Receiving Water Observations

The requirements of this section only apply when the MRP requires standard observations of the receiving water. Standard observations shall include the following:

a. *Floating and suspended materials* (e.g., 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. *Beneficial water use*: presence of water-associated waterfowl or wildlife, fisherpeople, and other recreational activities in the vicinity of each sampling station.

e. *Hydrographic condition*: time and height of corrected high and low tides (corrected to nearest National Oceanic and Atmospheric Administration location for the sampling date and time of sample collection).

f. *Weather conditions*:

1) Air temperature; and

2) Total precipitation during the five days prior to observation.

2. Wastewater Effluent Observations

The requirements of this section only apply when the MRP requires wastewater effluent standard observations. Standard observations shall include the following:

a. *Floating and suspended material of wastewater origin* (e.g., oil, grease, algae, and other macroscopic particulate matter): presence or absence.

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

3. Beach and Shoreline Observations

The requirements of this section only apply when the MRP requires beach and shoreline standard observations. Standard observations shall include the following:

a. *Material of wastewater origin*: presence or absence, description of material, estimated size of affected area, and source.

b. *Beneficial use*: estimate number of people participating in recreational water contact, non-water contact, or fishing activities.

4. Land Retention or Disposal Area Observations

The requirements of this section only apply to facilities with on-site surface impoundments or disposal areas that are in use. This section applies to both liquid and solid wastes, whether confined or unconfined. The Discharger shall conduct the following for each impoundment:

a. Determine the amount of freeboard at the lowest point of dikes confining liquid wastes.

b. Report evidence of leaching liquid from area of confinement and estimated size of affected area. Show affected area on a sketch and volume of flow (e.g., gallons per minute [gpm]).

c. Regarding odor, describe presence or absence, characterization, source, distance of travel, and wind direction.

d. Estimate number of waterfowl and other water-associated birds in the disposal area and vicinity.

5. Periphery of Waste Treatment and/or Disposal Facilities Observations

The requirements of this section only apply when the MRP specifies periphery standard observations. Standard observations shall include the following:

a. *Odor*: presence or absence, characterization, source, and distance of travel.

b. *Weather conditions*: wind direction and estimated velocity.

IV. STANDARD PROVISIONS – RECORDS

A. Records to be Maintained – This supplements IV.A of Standard Provisions (Attachment D)

The Discharger shall maintain records in a manner and at a location (e.g., wastewater treatment plant or Discharger offices) such that the records are accessible to Regional Water Board staff. The minimum period of retention specified in Section IV, Records, of the Federal Standard Provisions shall be extended during the course of any unresolved litigation regarding the subject discharge, or when requested by the Regional Water Board or Regional Administrator of USEPA, Region IX.

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

B. Records of monitoring information shall include – This supplements IV.B of Standard Provision (Attachment D)

1. Analytical Information

Records shall include analytical method detection limits, minimum levels, reporting levels, and related quantification parameters.

2. Flow Monitoring Data

For all required flow monitoring (e.g., influent and effluent flows), the additional records shall include the following, unless otherwise stipulated by the MRP:

a. Total volume for each day; and

b. Maximum, minimum, and average daily flows for each calendar month.

3. Wastewater Treatment Process Solids

a. For each treatment unit process that involves solids removal from the wastewater stream, records shall include the following:

1) Total volume or mass of solids removed from each collection unit (e.g., grit, skimmings, undigested biosolids, or combination) for each calendar month or other time period as appropriate, but not to exceed annually; and

2) Final disposition of such solids (e.g., landfill, other subsequent treatment unit).

b. For final dewatered biosolids from the treatment plant as a whole, records shall include the following:

1) Total volume or mass of dewatered biosolids for each calendar month;

2) Solids content of the dewatered biosolids; and

3) Final disposition of dewatered biosolids (disposal location and disposal method).

4. Disinfection Process

For the disinfection process, these additional records shall be maintained documenting process operation and performance:

a. For bacteriological analyses:

1) Wastewater flow rate at the time of sample collection; and

2) Required statistical parameters for cumulative bacterial values (e.g., moving median or geometric mean for the number of samples or sampling period identified in this Order).

b. For the chlorination process, when chlorine is used for disinfection, at least daily average values for the following:

1) Chlorine residual of treated wastewater as it enters the contact basin (mg/L);

2) Chlorine dosage (kg/day); and

3) Dechlorination chemical dosage (kg/day).

5. Treatment Process Bypasses

A chronological log of all treatment process bypasses, including wet weather blending, shall include the following:

a. Identification of the treatment process bypassed;

b. Dates and times of bypass beginning and end;

c. Total bypass duration;

d. Estimated total bypass volume; and

e. Description of, or reference to other reports describing, the bypass event, the cause, the corrective actions taken (except for wet weather blending that is in compliance with permit conditions), and any additional monitoring conducted.

6. Treatment Facility Overflows

This section applies to records for overflows at the treatment facility. This includes the headworks and all units and appurtenances downstream. The Discharger shall retain a chronological log of overflows at the treatment facility and records supporting the information provided in section V.E.2.

C. Claims of Confidentiality – Not Supplemented

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information – Not Supplemented

B. Signatory and Certification Requirements – Not Supplemented

C. Monitoring Reports – This section supplements V.C of Standard Provisions (Attachment D)

1. Self Monitoring Reports

For each reporting period established in the MRP, the Discharger shall submit an SMR to the Regional Water Board in accordance with the requirements listed in this document and at the frequency the MRP specifies. The purpose of the SMR is to document treatment performance, effluent quality, and compliance with the waste discharge requirements of this Order.

a. Transmittal letter

Each SMR shall be submitted with a transmittal letter. This letter shall include the following:

1) Identification of all violations of effluent limits or other waste discharge requirements found during the reporting period;

2) Details regarding violations: parameters, magnitude, test results, frequency, and dates;

3) Causes of violations;

4) Discussion of corrective actions taken or planned to resolve violations and prevent recurrences, and dates or time schedule of action implementation (if previous reports have been submitted that address corrective actions, reference to the earlier reports is satisfactory);

5) Data invalidation (Data should not be submitted in an SMR if it does not meet quality assurance/quality control standards. However, if the Discharger wishes to invalidate any measurement after it was submitted in an SMR, a letter shall identify the measurement suspected to be invalid and state the Discharger's intent to submit, within 60 days, a formal request to invalidate the measurement. This request shall include the original measurement in question, the reason for invalidating the measurement, all relevant documentation that supports invalidation [e.g., laboratory sheet, log entry, test results, etc.], and discussion of the corrective actions taken or planned [with a time schedule for completion] to prevent recurrence of the sampling or measurement problem.);

6) If the Discharger blends, the letter shall describe the duration of blending events and certify whether blended effluent was in compliance with the conditions for blending; and

7) Signature (The transmittal letter shall be signed according to Section V.B of this Order, Attachment D – Standard Provisions.).

b. Compliance evaluation summary

Each report shall include a compliance evaluation summary. This summary shall include each parameter for which the permit specifies effluent limits, the number of

samples taken during the monitoring period, and the number of samples that exceed applicable effluent limits.

c. Results of analyses and observations

1) Tabulations of all required analyses and observations, including parameter, date, time, sample station, type of sample, test result, method detection limit, method minimum level, and method reporting level, if applicable, signed by the laboratory director or other responsible official.

2) When determining compliance with an average monthly effluent limitation and more than one sample result is available in a month, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of detected but not quantified (DNQ) or nondetect (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

ii. 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.

If a sample result, or the arithmetic mean or median of multiple sample results, is below the reporting limit, and there is evidence that the priority pollutant is present in the effluent above an effluent limitation and the Discharger conducts a Pollutant Minimization Program, the Discharger shall not be deemed out of compliance.

3) Dioxin-TEQ Reporting: The Discharger shall report for each dioxin and furan congener the analytical results of effluent monitoring, including the quantifiable limit (reporting level), the method detection limit, and the measured concentration. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating dioxin-TEQ, the Discharger shall set congener concentrations below the minimum levels (ML) to zero. The Discharger shall calculate and report dioxin-TEQs using the following formula, where the MLs, toxicity equivalency factors (TEFs), and bioaccumulation equivalency factors (BEFs) are as provided in Table A:

$$\text{Dioxin-TEQ} = \Sigma\,(C_x \times TEF_x \times BEF_x)$$

where: C_x = measured or estimated concentration of congener x
TEF_x = toxicity equivalency factor for congener x
BEFx = bioaccumulation equivalency factor for congener x

Table A
Minimum Levels, Toxicity Equivalency Factors,
and Bioaccumulation Equivalency Factors

Dioxin or Furan Congener	Minimum Level (pg/L)	1998 Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
2,3,7,8-TCDD	10	1.0	1.0
1,2,3,7,8-PeCDD	50	1.0	0.9
1,2,3,4,7,8-HxCDD	50	0.1	0.3
1,2,3,6,7,8-HxCDD	50	0.1	0.1
1,2,3,7,8,9-HxCDD	50	0.1	0.1
1,2,3,4,6,7,8-HpCDD	50	0.01	0.05
OCDD	100	0.0001	0.01
2,3,7,8-TCDF	10	0.1	0.8
1,2,3,7,8-PeCDF	50	0.05	0.2
2,3,4,7,8-PeCDF	50	0.5	1.6
1,2,3,4,7,8-HxCDF	50	0.1	0.08
1,2,3,6,7,8-HxCDF	50	0.1	0.2
1,2,3,7,8,9-HxCDF	50	0.1	0.6
2,3,4,6,7,8-HxCDF	50	0.1	0.7
1,2,3,4,6,7,8-HpCDF	50	0.01	0.01
1,2,3,4,7,8,9-HpCDF	50	0.01	0.4
OCDF	100	0.0001	0.02

d. Data reporting for results not yet available

The Discharger shall make all reasonable efforts to obtain analytical data for required parameter sampling in a timely manner. Certain analyses require additional time to complete analytical processes and report results. For cases where required monitoring parameters require additional time to complete analytical processes and reports, and results are not available in time to be included in the SMR for the subject monitoring period, the Discharger shall describe such circumstances in the SMR and include the data for these parameters and relevant discussions of any observed exceedances in the next SMR due after the results are available.

e. Flow data

The Discharger shall provide flow data tabulation pursuant to Section IV.B.2.

f. Annual self monitoring report requirements

By the date specified in the MRP, the Discharger shall submit an annual report to the Regional Water Board covering the previous calendar year. The report shall contain the following:

1) Annual compliance summary table of treatment plant performance, including documentation of any blending events;

2) Comprehensive discussion of treatment plant performance and compliance with the permit (This discussion shall include any corrective actions taken or planned, such as changes to facility equipment or operation practices that may be needed to achieve compliance, and any other actions taken or planned that are intended to improve performance and reliability of the Discharger's wastewater collection, treatment, or disposal practices.);

3) Both tabular and graphical summaries of the monitoring data for the previous year if parameters are monitored at a frequency of monthly or greater;

4) List of approved analyses, including the following:

   (i) List of analyses for which the Discharger is certified;

   (ii) List of analyses performed for the Discharger by a separate certified laboratory (copies of reports signed by the laboratory director of that laboratory shall not be submitted but be retained onsite); and

   (iii) List of "waived" analyses, as approved;

5) Plan view drawing or map showing the Discharger's facility, flow routing, and sampling and observation station locations;

6) Results of annual facility inspection to verify that all elements of the SWPP Plan are accurate and up to date (only required if the Discharger does not route all storm water to the headworks of its wastewater treatment plant); and

7) Results of facility report reviews (The Discharger shall regularly review, revise, and update, as necessary, the O&M Manual, the Contingency Plan, the Spill Prevention Plan, and Wastewater Facilities Status Report so that these documents remain useful and relevant to current practices. At a minimum, reviews shall be conducted annually. The Discharger shall include, in each Annual Report, a description or summary of review and evaluation procedures, recommended or planned actions, and an estimated time schedule for implementing these actions. The Discharger shall complete changes to these documents to ensure they are up-to-date.).

g. Report submittal

The Discharger shall submit SMRs to:

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

h. Reporting data in electronic format

The Discharger has the option to submit all monitoring results in an electronic reporting format approved by the Executive Officer. If the Discharger chooses to submit SMRs electronically, the following shall apply:

1) *Reporting Method*: The Discharger shall submit SMRs electronically via a process approved by the Executive Officer (see, for example, the letter dated December 17, 1999, "Official Implementation of Electronic Reporting System [ERS]" and the progress report letter dated December 17, 2000).

2) *Monthly or Quarterly Reporting Requirements*: For each reporting period (monthly or quarterly as specified in the MRP), the Discharger shall submit an electronic SMR to the Regional Water Board in accordance with the provisions of Section V.C.1.a-e, except for requirements under Section V.C.1.c(1) where ERS does not have fields for dischargers to input certain information (e.g., sample time). However, until USEPA approves the electronic signature or other signature technologies, Dischargers that use ERS shall submit a hard copy of the original transmittal letter, an ERS printout of the data sheet, and a violation report (a receipt of the electronic transmittal shall be retained by the Discharger). This electronic SMR submittal suffices for the signed tabulations specified under Section V.C.1.c(1).

3) *Annual Reporting Requirements*: Dischargers who have submitted data using the ERS for at least one calendar year are exempt from submitting the portion of the annual report required under Section V.C.1.f(1) and (3).

D. Compliance Schedules – Not supplemented

E. Twenty-Four Hour Reporting – This section supplements V.E of Standard Provision (Attachment D)

1. Spill of Oil or Other Hazardous Material Reports

a. Within 24 hours of becoming aware of a spill of oil or other hazardous material that is not contained onsite and completely cleaned up, the Discharger shall report by telephone to the Regional Water Board at (510) 622-2369.

b. The Discharger shall also report such spills to the State Office of Emergency Services [telephone (800) 852-7550] only when the spills are in accordance with applicable reporting quantities for hazardous materials.

c. The Discharger shall submit a written report to the Regional Water Board within five working days following telephone notification unless directed otherwise by Regional Water Board staff. A report submitted electronically is acceptable. The written report shall include the following:

1) Date and time of spill, and duration if known;

2) Location of spill (street address or description of location);

3) Nature of material spilled;

4) Quantity of material involved;

5) Receiving water body affected, if any;

6) Cause of spill;

7) Estimated size of affected area;

8) Observed impacts to receiving waters (e.g., oil sheen, fish kill, water discoloration);

9) Corrective actions taken to contain, minimize, or clean up the spill;

10) Future corrective actions planned to be taken to prevent recurrence, and schedule of implementation; and

11) Persons or agencies notified.

2. Unauthorized Discharges from Municipal Wastewater Treatment Plants[1]

The following requirements apply to municipal wastewater treatment plants that experience an unauthorized discharge at their treatment facilities and are consistent with and supercede requirements imposed on the Discharger by the Executive Officer by letter of May 1, 2008, issued pursuant to California Water Code Section 13383.

a. Two (2)-Hour Notification

For any unauthorized discharges that result in a discharge to a drainage channel or a surface water, the Discharger shall, as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the State Office of Emergency Services (telephone 800-852-7550), the local health officers or directors of environmental health with jurisdiction over the affected water bodies, and the Regional Water Board. The notification to the Regional Water Board shall be via the Regional Water Board's online reporting system at www.wbers.net, and shall include the following:

1) Incident description and cause;

2) Location of threatened or involved waterway(s) or storm drains;

3) Date and time the unauthorized discharge started;

4) Estimated quantity and duration of the unauthorized discharge (to the extent known), and the estimated amount recovered;

[1] California Code of Regulations, Title 23, Section 2250(b), defines an unauthorized discharge to be a discharge, not regulated by waste discharge requirements, of treated, partially treated, or untreated wastewater resulting from the intentional or unintentional diversion of wastewater from a collection, treatment or disposal system.

5) Level of treatment prior to discharge (e.g., raw wastewater, primary treated, undisinfected secondary treated, and so on); and

6) Identity of the person reporting the unauthorized discharge.

b. 24-hour Certification

Within 24 hours, the Discharger shall certify to the Regional Water Board, at www.wbers.net, that the State Office of Emergency Services and the local health officers or directors of environmental health with jurisdiction over the affected water bodies have been notified of the unauthorized discharge.

c. 5-Day Written Report

Within five business days, the Discharger shall submit a written report, via the Regional Water Board's online reporting system at www.wbers.net, that includes, in addition to the information required above, the following:

1) Methods used to delineate the geographical extent of the unauthorized discharge within receiving waters;

2) Efforts implemented to minimize public exposure to the unauthorized discharge;

3) Visual observations of the impacts (if any) noted in the receiving waters (e.g., fish kill, discoloration of water) and the extent of sampling if conducted;

4) Corrective measures taken to minimize the impact of the unauthorized discharge;

5) Measures to be taken to minimize the chances of a similar unauthorized discharge occurring in the future;

6) Summary of Spill Prevention Plan or O&M Manual modifications to be made, if necessary, to minimize the chances of future unauthorized discharges; and

7) Quantity and duration of the unauthorized discharge, and the amount recovered.

d. Communication Protocol

To clarify the multiple levels of notification, certification, and reporting, the current communication requirements for unauthorized discharges from municipal wastewater treatment plants are summarized in Table B that follows.

Table B

Summary of Communication Requirements for Unauthorized Discharges[1] from Municipal Wastewater Treatment Plants

Discharger is required to:	Agency Receiving Information	Time frame	Method for Contact
1. Notify	California Emergency Management Agency (Cal EMA)	As soon as possible, but not later than **2 hours** after becoming aware of the unauthorized discharge.	Telephone – (800) 852-7550 (obtain a control number from Cal EMA)
	Local health department	As soon as possible, but not later than **2 hours** after becoming aware of the unauthorized discharge.	Depends on local health department
	Regional Water Board	As soon as possible, but not later than **2 hours** after becoming aware of the unauthorized discharge.	Electronic[2] www.wbers.net
2. Certify	Regional Water Board	As soon as possible, but not later than **24 hours** after becoming aware of the unauthorized discharge.	Electronic[3] www.wbers.net
3. Report	Regional Water Board	Within **5 business days** of becoming aware of the unauthorized discharge.	Electronic[4] www.wbers.net

[1] California Code of Regulations, Title 23, Section 2250(b), defines an unauthorized discharge to be a discharge, not regulated by waste discharge requirements, of treated, partially treated, or untreated wastewater resulting from the intentional or unintentional diversion of wastewater from a collection, treatment or disposal system.

[2] In the event that the Discharger is unable to provide online notification within 2 hours of becoming aware of an unauthorized discharge, it shall phone the Regional Water Board's spill hotline at (510) 622-2369 and convey the same information contained in the notification form. In addition, within 3 business days of becoming aware of the unauthorized discharge, the Discharger shall enter the notification information into the Regional Water Board's online system in electronic format.

[3] In most instances, the 2-hour notification will also satisfy 24-hour certification requirements. This is because the notification form includes fields for documenting that OES and the local health department have been contacted. In other words, if the Discharger is able to complete all the fields in the notification form within 2 hours, certification requirements are also satisfied. In the event that the Discharger is unable to provide online certification within 24 hours of becoming aware of an unauthorized discharge, it shall phone the Regional Water Board's spill hotline at (510) 622-2369 and convey the same information contained in the certification form. In addition, within 3 business days of becoming aware of the unauthorized discharge, the Discharger shall enter the certification information into the Regional Water Board's online system in electronic format.

[4] If the Discharger cannot satisfy the 5-day reporting requirements via the Regional Water Board's online reporting system, it shall submit a written report (preferably electronically in pdf) to the appropriate Regional Water Board case manager. In cases where the Discharger cannot satisfy the 5-day reporting requirements via the online reporting system, it must still complete the Regional Water Board's online reporting requirements within 15 calendar days of becoming aware of the unauthorized discharge.

F. Planned Changes – Not supplemented

G. Anticipated Noncompliance – Not supplemented

H. Other Noncompliance – Not supplemented

I. Other Information – Not supplemented

VI. STANDARD PROVISIONS – ENFORCEMENT – Not Supplemented

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS – Not Supplemented

VIII. DEFINITIONS – This section is an addition to Standard Provisions (Attachment D)

More definitions can be found in Attachment A of this NPDES Permit.

1. Arithmetic Calculations

a. Geometric mean is the antilog of the log mean or the back-transformed mean of the logarithmically transformed variables, which is equivalent to the multiplication of the antilogarithms. The geometric mean can be calculated with either of the following equations:

$$\text{Geometric Mean} = Anti\log\left(\frac{1}{N}\sum_{i=1}^{N} Log\left(C_i\right)\right)$$

or

$$\text{Geometric Mean} = (C_1 * C_2 * \ldots * C_N)^{1/N}$$

Where "N" is the number of data points for the period analyzed and "C" is the concentration for each of the "N" data points.

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

$$\text{Mass emission rate (lb/day)} = \frac{8.345}{N}\sum_{i=1}^{N} Q_i C_i$$

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

In which "N" is the number of samples analyzed in any calendar day and "Q_i" and "C_i" are the flow rate (MGD) and the constituent concentration (mg/L) associated with each of the "N" grab samples that may be taken in any calendar day. If a composite sample is taken, "C_i" is the concentration measured in the composite sample and "Q_i" is the average flow rate occurring during the period over which the samples are composited. The daily concentration of a constituent measured over any calendar day shall be determined from the flow-weighted average of the same constituent in the combined waste streams as follows:

C_d = Average daily concentration = $\frac{1}{Q_t}\sum_{i=1}^{N} Q_i C_i$

In which "N" is the number of component waste streams and "Q" and "C" are the flow rate (MGD) and the constituent concentration (mg/L) associated with each of the "N" waste streams. "Q_t" is the total flow rate of the combined waste streams.

c. Maximum allowable mass emission rate, whether for a 24-hour, weekly 7-day, monthly 30-day, or 6-month period, is a limitation expressed as a daily rate determined with the formulas in the paragraph above, using the effluent concentration limit specified in the permit for the period and the specified allowable flow.

d. POTW removal efficiency is the ratio of pollutants removed by the treatment facilities to pollutants entering the treatment facilities (expressed as a percentage). The Discharger shall determine removal efficiencies using monthly averages (by calendar month unless otherwise specified) of pollutant concentration of influent and effluent samples collected at about the same time and using the following equation (or its equivalent):

Removal Efficiency (%) = 100 × [1-(Effluent Concentration/Influent Concentration)]

2. Biosolids means the solids, semi-liquid suspensions of solids, residues, screenings, grit, scum, and precipitates separated from or created in wastewater by the unit processes of a treatment system. It also includes, but is not limited to, all supernatant, filtrate, centrate, decantate, and thickener overflow and underflow in the solids handling parts of the wastewater treatment system.

3. Blending is the practice of recombining wastewater that has been biologically treated with wastewater that has bypassed around biological treatment units.

4. Bottom sediment sample is (1) a separate grab sample taken at each sampling station for the determination of selected physical-chemical parameters, or (2) four grab samples collected from different locations in the immediate vicinity of a sampling station while the boat is anchored and analyzed separately for macroinvertebrates.

5. Composite sample is a sample composed of individual grab samples collected manually or by an automatic sampling device on the basis of time or flow as specified in the MRP. For flow-based composites, the proportion of each grab sample included in the composite sample shall be within plus or minus five percent (+/-5%) of the representative flow rate of the waste stream being measured at the time of grab sample collection. Alternatively, equal volume grab samples may be individually analyzed with the flow-weighted average calculated by averaging flow-weighted ratios of each grab sample analytical result. Grab samples comprising time-based composite samples shall be collected at intervals not greater than those specified in the MRP. The quantity of each grab sample comprising a time-based composite sample shall be a set of flow proportional volumes as specified in the MRP. If a particular time-based or flow-based composite sampling protocol is not specified in the MRP, the Discharger shall determine and implement the most representative sampling protocol for the given parameter subject to Executive Officer approval.

6. Depth-integrated sample is defined as a water or waste sample collected by allowing a sampling device to fill during a vertical traverse in the waste or receiving water body being sampled. The

Discharger shall collect depth-integrated samples in such a manner that the collected sample will be representative of the waste or water body at that sampling point.

7. Flow sample is an accurate measurement of the average daily flow volume using a properly calibrated and maintained flow measuring device.

8. Grab sample is an individual sample collected in a short period of time not exceeding 15 minutes. Grab samples represent only the condition that exists at the time the wastewater is collected.

9. Initial dilution is the process that results in the rapid and irreversible turbulent mixing of wastewater with receiving water around the point of discharge.

10. Overflow is the intentional or unintentional spilling or forcing out of untreated or partially treated wastes from a transport system (e.g., through manholes, at pump stations, and at collection points) upstream from the treatment plant headworks or from any part of a treatment plant facility.

11. Priority pollutants are those constituents referred to in 40 CFR Part 122 as promulgated in the Federal Register, Vol. 65, No. 97, Thursday, May 18, 2000, also known as the California Toxics Rule, the presence or discharge of which could reasonably be expected to interfere with maintaining designated uses.

12. Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage. It excludes infiltration and runoff from agricultural land.

13. Toxic pollutant means any pollutant listed as toxic under federal Clean Water Act section 307(a)(1) or under 40 CFR 401.15.

14. Untreated waste is raw wastewater.

15. Waste, waste discharge, discharge of waste, and discharge are used interchangeably in the permit. The requirements of the permit apply to the entire volume of water, and the material therein, that is disposed of to surface and ground waters of the State of California.

Table C

List of Monitoring Parameters and Analytical Methods

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
1.	Antimony	204.2					10	5	50	0.5	5	0.5		1000
2.	Arsenic	206.3				20		2	10	2	2	1		1000
3.	Beryllium						20	0.5	2	0.5	1			1000
4.	Cadmium	200 or 213					10	0.5	10	0.25	0.5			1000
5a.	Chromium (III)	SM 3500												
5b.	Chromium (VI)	SM 3500				10	5							1000
	Chromium (total)[3]	SM 3500					50	2	10	0.5	1			1000
6.	Copper	200.9					25	5	10	0.5	2			1000
7.	Lead	200.9					20	5	5	0.5	2			10,000
8.	Mercury	1631 (note)[4]												
9.	Nickel	249.2					50	5	20	1	5			1000
10.	Selenium	200.8 or SM 3114B or C						5	10	2	5	1		1000
11.	Silver	272.2					10	1	10	0.25	2			1000
12.	Thallium	279.2					10	2	10	1	5			1000
13.	Zinc	200 or 289					20		20	1	10			
14.	Cyanide	SM 4500 CN^- C or I				5								
15.	Asbestos (only required for dischargers to MUN waters)[5]	0100.2 [6]												
16.	2,3,7,8-TCDD and 17 congeners (Dioxin)	1613												
17.	Acrolein	603	2.0	5										
18.	Acrylonitrile	603	2.0	2										
19.	Benzene	602	0.5	2										
33.	Ethylbenzene	602	0.5	2										
39.	Toluene	602	0.5	2										
20.	Bromoform	601	0.5	2										
21.	Carbon Tetrachloride	601	0.5	2										
22.	Chlorobenzene	601	0.5	2										
23.	Chlorodibromomethane	601	0.5	2										
24.	Chloroethane	601	0.5	2										
25.	2-Chloroethylvinyl Ether	601	1	1										
26.	Chloroform	601	0.5	2										
75.	1,2-Dichlorobenzene	601	0.5	2										
76.	1,3-Dichlorobenzene	601	0.5	2										
77.	1,4-Dichlorobenzene	601	0.5	2										
27.	Dichlorobromomethane	601	0.5	2										
28.	1,1-Dichloroethane	601	0.5	1										
29.	1,2-Dichloroethane	601	0.5	2										
30.	1,1-Dichloroethylene or 1,1-Dichloroethene	601	0.5	2										
31.	1,2-Dichloropropane	601	0.5	1										
32.	1,3-Dichloropropylene or 1,3-Dichloropropene	601	0.5	2										
34.	Methyl Bromide or Bromomethane	601	1.0	2										
35.	Methyl Chloride or Chloromethane	601	0.5	2										
36.	Methylene Chloride or Dichlorormethane	601	0.5	2										

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
37.	1,1,2,2-Tetrachloroethane	601	0.5	1										
38.	Tetrachloroethylene	601	0.5	2										
40.	1,2-Trans-Dichloroethylene	601	0.5	1										
41.	1,1,1-Trichloroethane	601	0.5	2										
42.	1,1,2-Trichloroethane	601	0.5	2										
43.	Trichloroethene	601	0.5	2										
44.	Vinyl Chloride	601	0.5	2										
45.	2-Chlorophenol	604	2	5										
46.	2,4-Dichlorophenol	604	1	5										
47.	2,4-Dimethylphenol	604	1	2										
48.	2-Methyl-4,6-Dinitrophenol or Dinitro-2-methylphenol	604	10	5										
49.	2,4-Dinitrophenol	604	5	5										
50.	2-Nitrophenol	604		10										
51.	4-Nitrophenol	604	5	10										
52.	3-Methyl-4-Chlorophenol	604	5	1										
53.	Pentachlorophenol	604	1	5										
54.	Phenol	604	1	1		50								
55.	2,4,6-Trichlorophenol	604	10	10										
56.	Acenaphthene	610 HPLC	1	1	0.5									
57.	Acenaphthylene	610 HPLC		10	0.2									
58.	Anthracene	610 HPLC		10	2									
60.	Benzo(a)Anthracene or 1,2 Benzanthracene	610 HPLC	10	5										
61.	Benzo(a)Pyrene	610 HPLC		10	2									
62.	Benzo(b)Fluoranthene or 3,4 Benzofluoranthene	610 HPLC		10	10									
63.	Benzo(ghi)Perylene	610 HPLC		5	0.1									
64.	Benzo(k)Fluoranthene	610 HPLC		10	2									
74.	Dibenzo(a,h)Anthracene	610 HPLC		10	0.1									
86.	Fluoranthene	610 HPLC	10	1	0.05									
87.	Fluorene	610 HPLC		10	0.1									
92.	Indeno(1,2,3-cd) Pyrene	610 HPLC		10	0.05									
100.	Pyrene	610 HPLC		10	0.05									
68.	Bis(2-Ethylhexyl)Phthalate	606 or 625	10	5										
70.	Butylbenzyl Phthalate	606 or 625	10	10										
79.	Diethyl Phthalate	606 or 625	10	2										
80.	Dimethyl Phthalate	606 or 625	10	2										
81.	Di-n-Butyl Phthalate	606 or 625		10										
84.	Di-n-Octyl Phthalate	606 or 625		10										
59.	Benzidine	625		5										
65.	Bis(2-Chloroethoxy)Methane	625		5										
66.	Bis(2-Chloroethyl)Ether	625	10	1										
67.	Bis(2-Chloroisopropyl)Ether	625	10	2										
69.	4-Bromophenyl Phenyl Ether	625	10	5										
71.	2-Chloronaphthalene	625		10										
72.	4-Chlorophenyl Phenyl Ether	625		5										
73.	Chrysene	625		10	5									
78.	3,3'-Dichlorobenzidine	625		5										
82.	2,4-Dinitrotoluene	625	10	5										
83.	2,6-Dinitrotoluene	625		5										

CTR No.	Pollutant/Parameter	Analytical Method[1]	Minimum Levels[2] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
85.	1,2-Diphenylhydrazine (note)[7]	625		1										
88.	Hexachlorobenzene	625	5	1										
89.	Hexachlorobutadiene	625	5	1										
90.	Hexachlorocyclopentadiene	625	5	5										
91.	Hexachloroethane	625	5	1										
93.	Isophorone	625	10	1										
94.	Naphthalene	625	10	1	0.2									
95.	Nitrobenzene	625	10	1										
96.	N-Nitrosodimethylamine	625	10	5										
97.	N-Nitrosodi-n-Propylamine	625	10	5										
98.	N-Nitrosodiphenylamine	625	10	1										
99.	Phenanthrene	625		5	0.05									
101.	1,2,4-Trichlorobenzene	625	1	5										
102.	Aldrin	608	0.005											
103.	α-BHC	608	0.01											
104.	β-BHC	608	0.005											
105.	γ-BHC (Lindane)	608	0.02											
106.	δ-BHC	608	0.005											
107.	Chlordane	608	0.1											
108.	4,4'-DDT	608	0.01											
109.	4,4'-DDE	608	0.05											
110.	4,4'-DDD	608	0.05											
111.	Dieldrin	608	0.01											
112.	Endosulfan (alpha)	608	0.02											
113.	Endosulfan (beta)	608	0.01											
114.	Endosulfan Sulfate	608	0.05											
115.	Endrin	608	0.01											
116.	Endrin Aldehyde	608	0.01											
117.	Heptachlor	608	0.01											
118.	Heptachlor Epoxide	608	0.01											
119-125	PCBs: Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260	608	0.5											
126.	Toxaphene	608	0.5											

[1] The suggested method is the USEPA Method unless otherwise specified (SM = Standard Methods). The Discharger may use another USEPA-approved or recognized method if that method has a level of quantification below the applicable water quality objective. Where no method is suggested, the Discharger has the discretion to use any standard method.

[2] Minimum levels are from the *State Implementation Policy*. They are the concentration of the lowest calibration standard for that technique based on a survey of contract laboratories. 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., USEPA 200.9); Hydride = Gaseous Hydride Atomic Absorption; CVAA = Cold Vapor Atomic Absorption; DCP = Direct Current Plasma.

[3] Analysis for total chromium may be substituted for analysis of chromium (III) and chromium (VI) if the concentration measured is below the lowest hexavalent chromium criterion (11 ug/l).

[4] The Discharger shall use ultra-clean sampling (USEPA Method 1669) and ultra-clean analytical methods (USEPA Method 1631) for mercury monitoring. The minimum level for mercury is 2 ng/l (or 0.002 ug/l).

[5] MUN = Municipal and Domestic Supply. This designation, if applicable, is in the Findings of the permit.

[6] *Determination of Asbestos Structures over 10 [micrometers] in Length in Drinking Water Using MCE Filters*, USEPA 600/R-94-134, June 1994.

[7] Measurement for 1,2-Diphenylhydrazine may use azobenzene as a screen: if azobenzene is measured at >1 ug/l, then the Discharger shall analyze for 1,2-Diphenylhydrazine.