State of California
California Regional Water Quality Control Board
Santa Ana Region

July 20, 2012

ITEM: *6

SUBJECT: Renewal of General Groundwater Cleanup Permit for Discharges to Surface Waters of Extracted and Treated Groundwater Resulting From the Cleanup of Groundwater Polluted by Petroleum Hydrocarbons and/or Solvents, Order No. R8-2012-0027

DISCUSSION:

See attached Fact Sheet (Attachment E)

RECOMMENDATIONS:

Adopt Order No. R8-2012-0027 as presented.

COMMENT SOLICITATION:

Comments were solicited from the discharger and the following agencies:

US Environmental Protection Agency, Permits Issuance Section (WTR-5)
US Army District, Los Angeles, Corps of Engineers – Regulatory Branch
US Fish and Wildlife Service, Carlsbad
State Water Resources Control Board, Office of the Chief Counsel – David Rice
State Water Resources Control Board, Division of Water Quality – Phil Isorena
State Department of Water Resources, Glendale
State Department of Fish and Game, Ontario
California Coastal Commission – Carl Schwing
California Department of Public Health, Santa Ana – Shu-Fang Orr
California Department of Public Health, San Diego – Steve Williams
California Department of Public Health, San Bernardino – Sean McCarthy
Riverside County Flood Control and Water Conservation District – Jason Uhley
San Bernardino County Flood Control – Annesley Ignatius / Gia Kim
Orange County Health Care Agency – Larry Honeybourne
Orange County Public Works, Flood Control – Andy Ngo
Orange County Public Works – Chris Crompton
Orange County Water District – Nira Yamachika / Greg Woodside
South Coast Air Quality Management District – Dr. Barry Wallerstein
Orange County Coastkeeper – Garry Brown
Lawyers for Clean Water c/o San Francisco Baykeeper
Current R8-2007-0008 enrollees

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Santa Ana Region

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ORDER NO. R8-2012-0027
NPDES NO. CAG918001

GENERAL GROUNDWATER CLEANUP PERMIT FOR DISCHARGES TO SURFACE WATERS OF EXTRACTED AND TREATED GROUNDWATER RESULTING FROM THE CLEANUP OF GROUNDWATER POLLUTED BY PETROLEUM HYDROCARBONS AND/OR SOLVENTS

A Discharger, as described in the following table, who has complied with the requirements for coverage under this Order, is authorized to discharge under this Order, once permit coverage is effective, as described in this Order.

Table 1. Discharger Information

Dischargers	Persons who propose to discharge to surface waters extracted and treated groundwater resulting from the cleanup of groundwater polluted by petroleum hydrocarbons and/or solvents at service stations and similar sites.
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified these discharges as **minor** discharges.	

Table 2. Administrative Information

This Order was adopted by the Regional Water Board on:	July 20, 2012
This Order shall become effective on:	July 20, 2012
This Order shall expire on:	July 1, 2017

IT IS HEREBY ORDERED, that this Order supersedes Order No. R8-2007-0008 except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (commencing with Section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, Kurt V. Berchtold, 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, Santa Ana Region, on July 20, 2012.

Kurt V. Berchtold

Kurt V. Berchtold, Executive Officer

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I. DISCHARGER[1] INFORMATION

Order No. R8-2007-0008, NPDES No. CAG918001, was adopted by the California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Water Board), on February 2, 2007 for discharges to surface waters of extracted and treated groundwater resulting from the cleanup of groundwater polluted by petroleum hydrocarbons and/or solvents at service stations and similar sites. The Order served as a general National Pollutant Discharge Elimination System (NPDES) permit and facilitated the processing of applications and the early implementation of groundwater cleanup projects within the Santa Ana Region. Order No. R8-2007-0008 expired on February 1, 2012. Many current dischargers have submitted renewal applications for continued discharges from their groundwater cleanup operations. Furthermore, additional applications are expected for sites recently determined to require groundwater remediation. The demand for permit issuance will continue to exceed the available staff resources to develop and bring individual tentative waste discharge requirements to the Board for adoption. These circumstances necessitated the renewal of this general permit.

II. NOTIFICATION REQUIREMENTS

A. New Dischargers

At least 45 days before the start of a new discharge, the Discharger shall submit to the Executive Officer of the Regional Water Board an application to obtain an authorization letter from the Executive Officer to discharge treated groundwater. The application shall include the following information:

1. A Notice of Intent to be covered under this general permit (see Attachment A of this Order).

2. A site characterization study that defines the onsite contaminants and their properties and the three-dimensional extent and concentration of contaminants in the subsurface, and includes a description of the geologic and hydrologic factors that control the migration of the contaminants.

3. A fixed hardness value, for approval by the Executive Officer of the Regional Water Board, based on the 5th percentile of effluent hardness measurements or the average ambient receiving water hardness measurements for those sites polluted with leaded gasoline.

4. A report including the following:

    a. Chemical analysis of the untreated groundwater. Representative groundwater samples shall be analyzed for organic pollutants using EPA method 8260B, priority pollutants, and included total dissolved solids, total inorganic nitrogen, hardness, 1,4-dioxane and

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[1] *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.*

perchlorate. Test results shall be reported with the reported minimum levels (ML) and method detection limit (MDL);

b. The name of the receiving water;

c. The estimated average and maximum daily flow rates;

d. A map showing the path from the point of initial discharge to its terminus point;

e. A list of known or suspected leaking underground tanks and other facilities or operations that have, or may have impacted the quality of the underlying groundwater within the expected groundwater capture zone;

f. A discussion of the proposed cleanup project, including a review of the extraction system design and the known location of the free product and dissolved product plumes;

g. A description of the proposed treatment system and a certification report on the adequacy of each component of the proposed treatment system. This certification report shall contain a requirement-by-requirement analysis, based on accepted engineering practice, of how the process(es) and physical design(s) of the treatment system will ensure compliance with this Order. The design engineer shall affix his/her signature and engineering license number to this certification report. The report(s) shall also certify the following:

   (1) all treatment facility startup and operation instruction manuals are adequate and available to operating personnel;

   (2) all treatment facility maintenance and testing schedules are included in the treatment facility operation and maintenance manual (O&M Manual), which shall be kept readily accessible to onsite operating personnel; and

   (3) influent and effluent sampling locations and ports are located in areas where samples representative of the waste stream to be monitored can be obtained.

h. A discussion of a plan for the prevention of run-on, interception and diversion of runoff, and prevention of infiltration and runoff from contaminated soils stored on-site, if the discharge is associated with a groundwater remediation project and soils containing petroleum projects or other pollutants will be maintained on-site.

i. Any other information deemed necessary by the Executive Officer.

5. The appropriate filing fee.

B. Existing Dischargers

Existing dischargers shall submit a new Notice of Intent.

C. Effective Date of Coverage

Coverage under this Order shall be effective on the date that the Executive Officer issues a discharge authorization letter, which shall include a self-monitoring program for the proposed discharge.

D. Termination of Coverage

The Discharger shall inform the Regional Water Board by letter if coverage under this Order is no longer needed. The Regional Water Board Executive Officer or a designee shall issue a letter terminating coverage under the Order.

E. Election of Permit Coverage

Dischargers already covered under the NPDES program by an individual permit may elect to continue coverage under the existing valid permit or may submit a complete application for coverage under this Order. Dischargers who submit a complete application under this Order are not required to submit an individual permit application. The Regional Water Board may request additional information and determine that a Discharger is not eligible for coverage under this Order and would be better regulated under an individual or other general NPDES permit or, for discharges to land, under waste discharge requirements (WDR). If the Regional Water Board adopts an NPDES permit or WDR, the applicability of this Order to the specified discharge is immediately terminated on the effective date of the NPDES permit or WDR.

III. FINDINGS

The Regional Water Board finds:

A. Background.

This Order replaces Order No. R8-2007-0008. The NPDES permit number, No. CAG918001, remains the same. Dischargers enrolled under the previous Order No. R8-2007-0008 must obtain coverage under this new Order to continue their authorization to discharge. To obtain authorization for continued and future discharge to waters of the United States, Dischargers must submit a complete application, as described in II.A. and B. above, and obtain coverage in order to be regulated under this Order as provided in 40 Code of Federal Regulations (CFR) Section 122.28 (b)(2).

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. **Industry Description.** This Order regulates discharges to surface water from temporary (mobile) or permanent groundwater remediation systems, operated to clean up groundwater contamination from petroleum based products and from solvents. The discharges are to inland fresh, estuarine or ocean surface waters within the Santa Ana Region. (See additional discussions in the Fact Sheet (Attachment F.))

C. **Legal Authorities.** This Order is issued pursuant to Chapter 5.5, Division 7 of the California Water Code (CWC) (commencing with Section 13370) and Section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA). This Order serves as Waste Discharge Requirements (WDR) pursuant to Article 4, Chapter 4, Division 7, of the California Water Code (commencing with Section 13260). It shall also serve as an NPDES permit for point source discharges to surface waters.

D. **Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information obtained through issuance and enforcement of the prior general permits for groundwater cleanup discharges, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and thus constitutes part of the Findings for this Order. Attachments A through E and G through I are also incorporated into this Order.

E. **California Environmental Quality Act (CEQA).** Under Water Code Section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code Sections 21000 et seq.

F. **Technology-based Effluent Limitations.** Section 301(b) of the CWA and implementing USEPA permit regulations at Section 122.44, title 40 of the Code of Federal Regulations[2], requires that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards (WQS). The discharges authorized by this Order must meet federal technology-based requirements and/or Best Professional Judgment (BPJ) standard in accordance with Part 125, Section 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet.

G. **Water Quality-Based Effluent Limitations.** Section 301(b) of the CWA and Section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable WQS. This Order contains requirements that are more stringent than technology-based requirements and are necessary to meet applicable water quality standards. These standards are expressed as technology equivalence requirements. The rationale for these requirements is discussed in the Fact Sheet.

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2 *All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.*

Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations 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, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in Section 122.44(d)(1)(vi).

H. **Water Quality Control Plans.** The Regional Water Board adopted a revised Water Quality Control Plan for the Santa Ana Region (hereinafter Basin Plan) that became effective on January 24, 1995 (Resolution No. 94-1). The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters in the Santa Ana Region addressed through the Basin Plan. More recently, Resolution No. R8-2004-0001 amended the Basin Plan significantly to incorporate revised boundaries for groundwater subbasins, now termed "management zones", new nitrate-nitrogen and TDS objectives for the new management zones, and new nitrogen and TDS management strategies applicable to both surface and ground waters. This Basin Plan amendment was adopted by the Regional Water Board on January 22, 2004. The State Water Resources Control Board (State Water Board) and Office of Administrative Law (OAL) approved the amendment on September 30, 2004 and December 23, 2004, respectively. EPA approved the surface water standards components of the nitrogen/total dissolved solids (N/TDS) amendment on June 20, 2007.

The existing and potential beneficial uses of surface waters in the Santa Ana Region are designated in Chapter 3 of the Basin Plan and may include:

1. Municipal and Domestic Supply,
2. Agricultural Supply,
3. Industrial Service Supply,
4. Industrial Process Supply,
5. Groundwater Recharge,
6. Hydropower Generation,
7. Water Contact Recreation,
8. Non-contact Water Recreation,
9. Warm Freshwater Habitat,
10. Limited Warm Freshwater Habitat,
11. Cold Freshwater Habitat,

12. Preservation of Biological Habitats of Special Significance,
13. Wildlife Habitat,
14. Marine Habitat,
15. Shellfish Harvesting,
16. Estuarine Habitat,
17. Rare, Threatened or Endangered Species, and
18. Spawning, Reproduction, and Development.

Many surface waters within the region recharge underlying groundwater basins. The existing and potential beneficial uses of groundwater within the Santa Ana Region generally include:

1. Municipal and Domestic Supply,
2. Agricultural Supply,
3. Industrial Service Supply, and
4. Industrial Process Supply

Requirements of this Order implement the Basin Plan.

I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new, numeric criteria for certain priority pollutants in California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the State. The CTR was amended on February 13, 2001. The NTR and CTR contain water quality criteria 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 (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for 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 WQS become effective for CWA purposes. (40 C.F.R. Section 131.21; 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to

USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

L. **Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based and water quality based effluent limitations for individual pollutants. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum, federal technology-based requirements that are necessary to meet WQS. The limitations are not more stringent than required by the CWA.

Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR and SIP, which was approved by USEPA on May 18, 2000. Apart from certain surface water standards changes resulting from the N/TDS Basin Plan amendment, all beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR 131.21©(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

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

N. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations Section 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 permit, with

some exceptions where limitations may be relaxed. As discussed in the Fact Sheet, the limitations in this Order are at least as stringent as the effluent limitations in the prior Order.

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

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

Q. **Notification of Interested Parties**. The Regional Water Board has notified the Dischargers currently regulated under Order No. R8-2007-0008 and interested agencies and persons of its intent to prescribe WDR for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of this notification are provided in the Fact Sheet (Attachment F) of this Order.

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

IV. DISCHARGE PROHIBITIONS

A. The discharge of oil, trash, industrial waste sludge, or other solids directly to the surface waters in this region or in any manner that will ultimately affect surface waters in this region is prohibited.

B. The discharge of any substances in concentrations toxic to aquatic life, animal life, or plant life is prohibited.

C. The discharge of wastes to property not owned or controlled by the Discharger is prohibited, unless authorized in the authorization letter issued by the Executive Officer.

D. Odors, vectors, and other nuisances of waste origin are prohibited beyond the limits of each Discharger's facility.

E. The addition of chemicals to the extracted groundwater, exclusive of chlorine to control biofouling in treatment systems, is prohibited except when approved in writing by the Executive Officer.

F. There shall be no direct discharges of waste to Areas of Special Biological Significance such as Newport Beach Marine Life Refuge and Irvine Coast Marine Life Refuge.

V. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations and Discharge Specifications

1. Final Effluent Limitations

a. The Discharger shall maintain compliance with the following effluent limitations at approved compliance point monitoring locations:

Table 3. Effluent Limitations for MUN Designated Receiving Waters

EFFLUENT LIMITATIONS APPLICABLE TO DISCHARGES INTO OR TRIBUTARY TO RECEIVING WATERS **DESIGNATED MUN** (see Basin Plan Table 3-1)		
Constituent	Maximum Daily Concentration Limit (µg/L)	Average Monthly Concentration Limit (µg/L)
1,1,1-Trichloroethane (TCA)	10	5
1,1-Dichloroethane	10	5
1,1-Dichloroethylene	0.115	0.057
1,2-Dichloroethane	1.0	0.5
1,2-Dichloroethylene (sum of cis & trans)	20	10
1,2-Dichloroethylene (trans)	20	10
1,2- Dichloroethylene (cis)	12	6
1,4-Dioxane	2	1
Benzene	2	1
Carbon Tetrachloride	0.5	0.25
Dichlorobromomethane	1.13	0.56
Ethylbenzene	20	10
Methyl Ethyl Ketone	241	120
Methyl Isobutyl Ketone	241	120
Methyl Tertiary Butyl Ether (MTBE)	26	13
Naphthalene	20	10
Perchlorate	12	6
Tert Butyl Alcohol (TBA)	24	12
Tetrachloroethylene (PCE)	1.6	0.8

Table 3. Effluent Limitations for MUN Designated Receiving Waters

EFFLUENT LIMITATIONS APPLICABLE TO DISCHARGES INTO OR TRIBUTARY TO RECEIVING WATERS **DESIGNATED MUN** (see Basin Plan Table 3-1)		
Constituent	Maximum Daily Concentration Limit (µg/L)	Average Monthly Concentration Limit (µg/L)
Toluene	20	10
Total Petroleum Hydrocarbons	200	100
Trichloroethylene (TCE)	5.4	2.7
Vinyl Chloride	1.0	0.5
Xylene (Total)	20	10

Table 4. Effluent Limitations for MUN Excepted Receiving Waters

EFFLUENT LIMITATIONS APPLICABLE TO DISCHARGES INTO OR TRIBUTARY TO **MUN EXCEPTED** RECEIVING WATERS (see Basin Plan Table 3-1)		
Constituent	Maximum Daily Concentration Limit (µg/L)	Average Monthly Concentration Limit (µg/L)
1,1,1-Trichloroethane (TCA)	10	5
1,1-Dichloroethane	10	5
1,1-Dichloroethylene	12	6
1,2-Dichloroethane	1.0	0.5
1,2-Dichloroethylene (sum of cis & trans)	20	10
1,2- Dichloroethylene (cis)	12	6
1,2-Dichloroethylene (trans)	20	10
1,4-Dioxane	2	1
Benzene	2	1
Carbon Tetrachloride	1.0	0.5
Dichlorobromomethane	10	5
Ethylbenzene	20	10
Methyl Ethyl Ketone	241	120

Table 4. Effluent Limitations for MUN Excepted Receiving Waters

EFFLUENT LIMITATIONS APPLICABLE TO DISCHARGES INTO OR TRIBUTARY TO **MUN EXCEPTED** RECEIVING WATERS (see Basin Plan Table 3-1)		
Constituent	Maximum Daily Concentration Limit (µg/L)	Average Monthly Concentration Limit (µg/L)
Methyl Isobutyl Ketone	241	120
Methyl Tertiary Butyl Ether (MTBE)	26	13
Naphthalene	20	10
Perchlorate	12	6
Tert Butyl Alcohol (TBA)	24	12
Tetrachloroethene (PCE)	10	5
Toluene	20	10
Total Petroleum Hydrocarbons	200	100
Trichloroethylene (TCE)	10	5
Vinyl Chloride	1.0	0.5
Xylene (total)	20	10

Table 5. Effluent Limitations for All Receiving Waters

EFFLUENT LIMITATIONS APPLICABLE TO ALL RECEIVING WATERS	
Constituent	Maximum Daily Concentration Limit (mg/l)
Total Dissolved Solids (TDS)	See Section A.6. and Section A.7., below
Total Inorganic Nitrogen (TIN)	See Section A.6. and Section A.7., below
Total Residual Chlorine[3]	0.1 mg/l
Suspended Solids	75 mg/l
Sulfides	0.4 mg/l

2. The pH of the discharge shall be within 6.5 and 8.5 pH units (see also Receiving Water Limitations B.2.g.).

3. There shall be no visible oil and grease in the discharge.

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3 *If chlorine is used for treatment or disinfection of wastes.*

4. For discharges to freshwater[4] bodies, the maximum daily and average monthly effluent limitations for lead shall not exceed the lead concentrations tabulated in Attachment B of this Order, corresponding to the effluent or receiving water hardness[5], as approved by the Executive Officer.

5. For saltwater discharges, the total lead maximum daily concentration of the discharge shall not exceed 8 micrograms per liter (µg/l).

6. For discharges to surface waters where groundwater will not be affected by the discharge, the TDS and/or TIN of the effluent shall not exceed the water quality objectives for the receiving surface water where the effluent is discharged, as specified in Table 4-1 of the Basin Plan for the Santa Ana Region.

7. For discharges to surface waters where the groundwater will be affected by the discharge, the TDS and/or TIN concentrations of the effluent shall not exceed the water quality objectives for the surface water where the effluent is discharged nor the affected groundwater management zone, as specified in Table 4-1 of the Basin Plan for the Santa Ana Region. The more restrictive water quality objectives shall govern. However, treated effluent exceeding the groundwater management zone water quality objectives may be returned to the same management zone from which it was extracted without reduction of the TDS or TIN concentrations so long as the concentrations of those constituents are no greater than when the groundwater was first extracted. Incidental increases in the TDS and TIN concentrations (such as may occur during air stripping) of treated effluent will not be considered increases for the purposes of determining compliance with this discharge specification.

B. Land Discharge Specifications – Not Applicable

C. Reclamation Specifications – Not Applicable

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4 *Waters in which the salinity is equal to or less than 1 part per thousand 95% or more of the time.*

5 *For direct discharges into receiving water, this hardness value is the 5th percentile hardness of either the receiving water or the treated effluent, whichever is more restrictive. Where discharges are into storm drains with wastewater/nuisance flows, the effluent 5th percentile hardness value shall be used.*

VI. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

1. The discharge of wastes shall not cause a violation of any applicable WQS for receiving waters adopted by the Regional Water Board or the State Water Board, as required by the Federal CWA and any regulations adopted thereunder.

2. The discharge shall not cause any of the following:

   a. Coloration of the receiving waters that causes a nuisance or adversely affects beneficial uses. The natural color of fish, shellfish or other inland, bay and estuarine water resources used for human consumption shall not be impaired.

   b. Deposition of oil, grease, wax or other materials in the receiving waters in concentrations that result in a visible film or in coating objects in the water, or which cause a nuisance or adversely affect beneficial uses.

   c. An increase in the amounts of suspended or settleable solids in the receiving waters that will cause a nuisance or adversely affect beneficial uses as a result of controllable water quality factors.

   d. Taste or odor producing substances in the receiving waters at concentrations that cause a nuisance or adversely affect beneficial uses.

   e. The presence of radioactive materials in the receiving waters in concentrations that is deleterious to human, plant or animal life.

   f. The depletion of the dissolved oxygen concentration below 5.0 mg/L.

   g. The temperature of the receiving waters to be raised above 90°F (32°C) during the period of June through October, or above 78°F (26°C) during the rest of the year.

   h. Change the ambient pH levels more than 0.5 pH units.

   i. The concentration of pollutants in the water column, sediments, or biota to adversely affect the beneficial uses of the receiving water. The discharge shall not result in the degradation of inland surface water communities and populations, including vertebrate, invertebrate, and plant species.

3. Pollutants not specifically mentioned and limited in this Order shall not be discharged at levels that will bioaccumulate in aquatic resources to levels which are harmful to human health or animal life.

B. Groundwater Limitations – Not Applicable

VII. PROVISIONS

A. Standard Provisions

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

2. Neither the treatment nor the discharge of waste shall create, or threaten to create, a nuisance or pollution as defined by Section 13050 of the California Water Code.

3. This Order expires on July 1, 2017. However, coverage under the Order shall continue in force and effect until a new Order is issued. Only those Dischargers authorized to discharge under the expiring Order are covered by the continued Order. Upon reissuance of a new Order, the Dischargers shall file a new application within 45 days of the effective date of the new order and obtain a new authorization to discharge from the Executive Officer.

4. The Executive Officer shall determine whether the proposed discharge is eligible for coverage under this Order, after which, the Executive Officer may;

   a. Authorize the proposed discharge by transmitting a "Discharge Authorization Letter" to the discharge proponent (now an "Authorized Discharger") authorizing the initiation of the discharge under the conditions of this Order and any other conditions consistent with this Order which are necessary to protect the beneficial uses of the receiving waters; or,

   b. Require the discharge proponent to obtain an individual NPDES permit prior to any discharge to surface waters within the Santa Ana Region.

5. The Discharger shall comply with all the requirements of this Order and the terms and conditions of the discharge authorization letter. The discharge authorization letter from the Executive Officer shall identify the discharge location(s), specify any conditions necessary to protect the beneficial uses of the receiving waters, and shall specify the Self-Monitoring Program for the proposed discharge in accordance with this Order. The discharge authorization letter may be terminated or revised by the Executive Officer at any time. Any and all discharge authorization letters, which may be issued by the Executive Officer pursuant to this Order, are incorporated by reference into this Order.

6. The Discharger shall comply with all requirements of this Order and the terms, conditions and limitations of the discharge authorization letter.

7. The discharge shall be limited to extracted and treated groundwater and added treatment chemicals approved by the Executive Officer.

8. The Discharger shall give advance notice to the Regional Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order.

9. The Discharger shall take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.

10. The Discharger shall take all reasonable steps to minimize any adverse impacts to receiving waters resulting from noncompliance with any effluent limitations specified in this Order, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge. When adverse impacts are identified following exceedance of effluent limitation(s), and/or violation of discharge prohibitions and provisions, Dischargers shall mitigate impacts in accordance with a plan approved by the Executive Officer. The proposed plan shall be submitted within 30 days of the finding of an adverse impact.

11. The Discharger shall, at all times, properly operate and maintain[6] all facilities and systems of treatment (and related appurtenances) and control which are installed or used by the Discharger to achieve compliance with this Order and the conditions of the discharge authorization letter(s) from the Executive Officer. Proper operation and maintenance shall include the following:

    a. Effective performance, adequate funding, adequate operator staffing and training and adequate laboratory and process controls and appropriate quality assurance procedures.

    b. Regular maintenance and inspection of all systems.

    c. Maintenance of records of the inspection results that shall be made available to the Regional Water Board whenever required and demanded.

12. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate these requirements.

13. This Order does not convey any property rights of any sort, or any exclusive privilege.

14. This Order is not transferable to any person except after notice to and approval by the Regional Water Board.

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6 *Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls and appropriate quality assurance procedures.*

15. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the Discharger from liabilities arising under federal, State, or local laws, nor guarantee the Discharger a capacity right in the receiving waters.

16. The provisions of this Order are severable, and if any provision of this Order, or the application of any provisions of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order shall not be affected thereby.

17. Any violation of this Order constitutes a violation of the CWA, its regulations, and the California Water Code, and is grounds for enforcement action and/or termination of the authorization to discharge.

18. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, State, or federal law enforcement entities.

19. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, discharge limitation (e.g., maximum daily effluent limitation), or receiving water limitation of this Order, the Discharger shall notify the Regional Water Board by telephone (951) 782-4130 within 24 hours of having knowledge of such noncompliance that may endanger public health or the environment, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.

20. All treatment facility startup and operation instruction manuals shall be maintained and available to operating personnel at the site where groundwater remediation is being conducted.

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the monitoring and reporting program issued by the Executive Officer with the discharge authorization letter. Revision of this monitoring and reporting program by the Executive Officer may be necessary to confirm that the Discharger is in compliance with the requirements and provisions contained in this Order. Revisions may be made by the Executive Officer at any time during the term of this Order, and may include a reduction or an increase in the number of constituents to be monitored, the frequency of monitoring or the number and size of samples collected. Reduction in the

number of constituents being monitored and/or frequency of monitoring shall be considered only if the following conditions are satisfied:

1. Constituents with effluent limitations shall be monitored at least once per year.
2. Reductions in monitoring frequency can be considered by the Executive Officer under the following conditions:
   a. For a specific constituent, reduction of weekly monitoring to bi-monthly (every two weeks) monitoring can be considered for approval by the Executive Officer when the effluent monitoring data for the last 3 months shows compliance with effluent limitations.
   b. For a specific constituent, reduction of bi-monthly (every two weeks) monitoring to monthly monitoring can be considered for approval by the Executive Officer when the effluent monitoring data for the last 6 months shows compliance with effluent limitations.
   c. For a specific constituent, reduction of monthly monitoring to quarterly monitoring can be considered for approval by the Executive Officer when the effluent monitoring data for the last 12 months show compliance with effluent limitations.
3. Should any of the weekly, bi-monthly, monthly, quarterly or annual monitoring for a specific constituent show effluent concentrations above the effluent limit, the frequency of monitoring for that constituent shall be increased to weekly or daily as directed by the Executive Officer.
4. Should groundwater treatment and discharge stop for more than one month and then restarted; the frequency of monitoring may be increased back to weekly as directed by the Executive Officer.

C. Special Provisions

1. Reopener Provisions

a. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.

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

c. This Order may be reopened to address any changes in State or federal plans, policies or regulations that would affect the requirements for the discharges covered by this Order.

d. Any permit noncompliance constitutes a violation of the CWA and the California Water Code and is grounds for: (1) an enforcement action; (2) permit or authorization letter termination, revocation and reissuance, or modification; (3) the issuance of an individual permit; or (4) for denial of a renewal application.

e. This Order may be modified by the Regional Water Board prior to the expiration date to include effluent or receiving water limitations for toxic constituents determined to be present in significant amounts in the discharge through the comprehensive monitoring program included as part of this Order.

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

2. Application for Coverage under the General Permit

a. At least 45 days before the start of a new discharge, the Discharger shall submit an application and obtain the authorization letter from the Executive Officer to discharge treated groundwater. The application shall consist of the information specified in II.A, above.

b. Within forty five (45) days of the effective date of this Order, those dischargers regulated under Order No. R8-2007-0008, and those dischargers under individual waste discharge requirements who wish to be regulated under this Order, shall submit a notice of intent. Additional information may be required if there has been a change in ownership of facility or changes in the character and/or treatment of the discharges.

c. Each Discharger shall submit to the Executive Officer, as part of the application for proposed discharge, a report certifying the adequacy of each component of the proposed treatment system and the associated Operation and Maintenance (O&M) Manual. This certification shall contain a requirement-by-requirement analysis, based on accepted engineering practice, of how the process and physical design of the treatment systems will ensure compliance with this Order. The design engineer[7] shall affix his/her signature, professional license number and seal to this certification.

3. Special Studies, Technical Reports and Additional Monitoring Requirements – Not Applicable

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7 *A registered civil engineer, registered geologist, or certified engineering geologist licensed in the State of California (Sections 6735, 7835, and 7835.1 of the California Business and Profession's Code).*

4. Best Management Practices and Pollution Prevention

a. Pollutant Minimization Program

The Discharger shall develop and conduct a Pollutant Minimization Program (PMP) as further described below when there is evidence (e.g., sample results reported as Detected, but Not Quantified (DNQ) when the effluent limitation is less than the Method Detection Limit (MDL), sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation 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 Not Detected (ND) and the effluent limitation is less than the MDL, using reporting protocols described in MRP Section X.

The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

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

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

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

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

v. An annual status report that shall be sent to the Regional Water Board including:

   1. All PMP monitoring results for the previous year;

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

   3. A summary of all actions undertaken pursuant to the control strategy; and

   4. A description of actions to be taken in the following year.

5. Construction, Operation and Maintenance Specifications

a. An Operation and Maintenance (O&M) Manual shall be developed prior to the initiation of the discharge and shall be readily accessible to site operating personnel. The O&M Manual shall include the following:

(1) Detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation and equipment.

(2) Process and equipment inspection and maintenance schedules.

(3) Describe preventive (fail-safe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events.

(4) Identification and description of the possible sources of accidental loss, bypass of untreated or partially treated wastes, and polluted drainage including power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes and possible spills.

6. Special Provisions for Municipal Facilities (POTWs Only) - Not Applicable

7. Other Special Provisions

a. The Discharger shall file with the Board a report of waste discharge at least 140 days before making any material change or proposed change in the character, location, volume, treatment, or disposal methods of the discharge.

b. In the event of any change in control or ownership of real property or waste discharge facility currently owned or controlled by the Discharger and which facility or real property are subject to this Order , the Discharger shall notify the succeeding owner of the real property or operator of the facility of the existence of this Order by letter, a copy of which signed by the new owner accepting responsibility for complying with this Order shall be forwarded to the Executive Officer at least 30 days in advance of transfer of ownership.

c. The Discharger shall furnish, within a reasonable time, any information the Executive Officer may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the Dischargers coverage under this Order. The Discharger shall also furnish to the Executive Officer, upon request, copies of records required to be kept by this Order.

8. Compliance Schedules - Not Applicable

VIII. COMPLIANCE DETERMINATION

1. Compliance with Discharge Specification A.1. shall be based on the minimum levels specified in Attachment "H" of this Order, unless an alternative minimum level[8] (ML) is approved for the pollutant of concern by the Regional Water Board's Executive Officer. If the Discharger develops a limit of quantitation (LOQ) specific to their matrix, the LOQ shall serve as the ML with the approval of the Executive Officer of the Regional Water Board. If no minimum level is specified for a constituent, the method detection limit (MDL) specified in 40 CFR 136 shall be used. If no MDL is available, the lowest practicable detection limit shall be used with the approval of the Executive Officer. 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).

2. Compliance determinations shall be based on available analyses for the time interval associated with the effluent limitation. Where only one sample analysis is available in a specified time interval (e.g., weekly, monthly, quarterly), that sample shall serve to characterize the discharge for the entire interval.

3. When determining compliance, based on a single sample, with a single effluent limitation that applies to a group of chemicals (e.g., PCBs), concentrations of individual members of the group may be considered to be zero if the analytical response for individual chemicals falls below the MDL for that chemical.

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

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

   b. 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.

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8 *Minimum level is the concentration at which the entire analytical system must give a recognizable signal and acceptable 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.*

5. **Average Monthly Effluent Limitation (AMEL)**. If the average (or when applicable, the median determined by paragraph VIII.4., above, for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

6. **Maximum Daily Effluent Limitation (MDEL).** If a daily discharge (or when applicable, the median determined by paragraph VIII.4., above, for multiple sample data of a daily discharge) exceeds the MDEL for a given parameter, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

7. Compliance determination with the Tert Butyl Alcohol (TBA) average monthly limit shall be based on all samples taken within the month or if the monitoring frequency requirement is once monthly, every two months or quarterly, a minimum of four test results from the most recent sample events.

California Regional Water Quality Control Board
Santa Ana Region

NOTICE OF INTENT

TO COMPLY WITH THE TERMS AND CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE TREATED GROUNDWATER POLLUTED BY PETROLEUM HYDROCARBONS, SOLVENTS, METALS AND/OR SALTS
(Order No. R8-2012-0027, NPDES No. CAG918001)

I. PERMITTEE (*Person/Agency Responsible for the Discharge*)

Agency/Company Name: _____

Address: _____

Street *City* *State* *ZIP*

Contact Person: _____ Phone :(_____)_____

II. **FACILITY**

Name: _____

Location: _____

Street *City* *State* *ZIP*

Contact Person: _____ Phone :(_____)_____

a. Projected Flow Rate (*gpd*):_____, b. Receiving Water (*identify*):_____

III. BILLING INFORMATION (*Where annual fee invoices should be sent*)

Agency/Company Name: _____

Address: _____

Street *City* *State* *ZIP*

Contact Person: _____ Phone :(_____)_____

IV. INDICATE EXISTING PERMIT NUMBER: (*if applicable*)

a. Individual permit Order No. _____ NPDES No. _____

b. General Permit Enrollee No. R8-2007-0008-_____

V. CERTIFICATION:

I certify under penalty of law that I am an authorized representative of the permittee and that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the permittee will comply with the terms and conditions stipulated in Order No. R8-2012-0027 including the monitoring and reporting program issued by the Executive Officer of the Regional Board.

Name and Official Title: _____
(type or print)

Signature: _____ Date: _____

NEW DISCHARGERS MUST SUBMIT THE FOLLOWING INFORMATION WITH THEIR APPLICATION (NOI)

1. A site characterization study that defines the onsite contaminants and their properties and the three-dimensional extent and concentration of contaminants in the subsurface, and includes a description of the geologic and hydrologic factors that control the migration of the contaminants.

2. A proposed fixed hardness value for those sites polluted with leaded gasoline based on the 5th percentile of effluent hardness measurements or the average ambient receiving water hardness measurements, for approval by the Executive Officer of the Regional Board.

3. A report including the following:

   a. Chemical analysis of the untreated groundwater. Representative groundwater samples shall be analyzed for organic pollutants using EPA method 8260B, priority pollutants, and including total dissolved solids, total inorganic nitrogen, hardness, 1,4-dioxane and perchlorate. Test results shall be reported with Minimum levels (ML) and method detection limit (MDL);

   b. The name of the receiving water;

   c. The estimated average and maximum daily flow rates;

   d. A map showing the path from the point of initial discharge to its terminus point;

   e. A list of known or suspected leaking underground tanks and other facilities or operations that have, or may have impacted the quality of the underlying groundwater within the expected radius of influence.

   f. A discussion of the proposed cleanup project, including a review of the extraction system design and the known location of free product and dissolved product plumes;

   g. A description of the proposed treatment system and a certification report on the adequacy of each component of the proposed treatment system. This certification report shall contain a requirement-by-requirement analysis, based on accepted engineering practice, of how the process(es) and physical design(s) of the treatment system will ensure compliance with this Order. The design engineer shall affix his/her signature and engineering license number to this certification report. The report(s) shall also certify the following:

      (1) all treatment facility startup and operation instruction manuals are adequate and available to operating personnel;

      (2) all treatment facility maintenance and testing schedules are included in the treatment facility operation and maintenance manual (O&M Manual), which shall be kept readily accessible to onsite operating personnel; and

(3) Influent and effluent sampling locations and ports are located in areas where samples representative of the waste stream to be monitored can be obtained.

h. A discussion of a plan for the prevention of run-on, interception and diversion of runoff, and prevention of infiltration and runoff from contaminated soils stored on-site, if the discharge is associated with a groundwater remediation project and soils containing petroleum projects or other pollutants will be maintained on-site.

i. Any other information deemed necessary by the Executive Officer.

LEAD EFFLUENT LIMIT TABLE				
Hardness	For Discharges to surface waters not within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches		For Discharges to surface waters within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches	
	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)
20	0.67	0.33	4.20	2.10
21	0.72	0.36	4.44	2.21
22	0.76	0.38	4.68	2.33
23	0.80	0.40	4.92	2.45
24	0.85	0.42	5.17	2.57
25	0.89	0.45	5.41	2.70
26	0.94	0.47	5.65	2.82
27	0.98	0.49	5.90	2.94
28	1.03	0.51	6.14	3.06
29	1.08	0.54	6.39	3.19
30	1.13	0.56	6.64	3.31
31	1.17	0.59	6.89	3.43
32	1.22	0.61	7.14	3.56
33	1.27	0.63	7.39	3.68
34	1.32	0.66	7.64	3.81
35	1.37	0.68	7.89	3.93
36	1.42	0.71	8.14	4.06
37	1.47	0.73	8.40	4.18
38	1.52	0.76	8.65	4.31
39	1.57	0.78	8.90	4.44
40	1.62	0.81	9.16	4.57
41	1.68	0.84	9.42	4.69
42	1.73	0.86	9.67	4.82
43	1.78	0.89	9.93	4.95
44	1.83	0.91	10.19	5.08
45	1.89	0.94	10.44	5.21
46	1.94	0.97	10.70	5.33
47	1.99	0.99	10.96	5.46
48	2.05	1.02	11.22	5.59
49	2.10	1.05	11.48	5.72
50	2.16	1.08	11.74	5.85
51	2.21	1.10	12.00	5.98
52	2.27	1.13	12.26	6.11
53	2.32	1.16	12.52	6.24
54	2.38	1.19	12.79	6.37
55	2.44	1.21	13.05	6.50
56	2.49	1.24	13.31	6.63
57	2.55	1.27	13.58	6.77
58	2.61	1.30	13.84	6.90
59	2.66	1.33	14.10	7.03
60	2.72	1.36	14.37	7.16
61	2.78	1.39	14.63	7.29
62	2.84	1.41	14.90	7.42
63	2.90	1.44	15.16	7.56
64	2.95	1.47	15.43	7.69
65	3.01	1.50	15.69	7.82
66	3.07	1.53	15.96	7.95
67	3.13	1.56	16.23	8.09
68	3.19	1.59	16.49	8.22
69	3.25	1.62	16.76	8.35
70	3.31	1.65	17.03	8.49
71	3.37	1.68	17.30	8.62
72	3.43	1.71	17.56	8.75
73	3.49	1.74	17.83	8.89
74	3.55	1.77	18.10	9.02
75	3.62	1.80	18.37	9.16

LEAD EFFLUENT LIMIT TABLE				
Hardness	For Discharges to surface waters not within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches		For Discharges to surface waters within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches	
	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)
76	3.68	1.83	18.64	9.29
77	3.74	1.86	18.91	9.42
78	3.80	1.89	19.18	9.56
79	3.86	1.93	19.45	9.69
80	3.93	1.96	19.72	9.83
81	3.99	1.99	19.99	9.96
82	4.05	2.02	20.26	10.10
83	4.11	2.05	20.53	10.23
84	4.18	2.08	20.80	10.37
85	4.24	2.11	21.07	10.50
86	4.30	2.14	21.34	10.64
87	4.37	2.18	21.61	10.77
88	4.43	2.21	21.89	10.91
89	4.50	2.24	22.16	11.04
90	4.56	2.27	22.43	11.18
91	4.62	2.30	22.70	11.31
92	4.69	2.34	22.97	11.45
93	4.75	2.37	23.25	11.59
94	4.82	2.40	23.52	11.72
95	4.88	2.43	23.79	11.86
96	4.95	2.47	24.07	11.99
97	5.02	2.50	24.34	12.13
98	5.08	2.53	24.61	12.27
99	5.15	2.57	24.89	12.40
100	5.21	2.60	25.16	12.54
101	5.28	2.63	25.43	12.68
102	5.35	2.67	25.71	12.81
103	5.41	2.70	25.98	12.95
104	5.48	2.73	26.26	13.09
105	5.55	2.77	26.53	13.22
106	5.62	2.80	26.81	13.36
107	5.68	2.83	27.08	13.50
108	5.75	2.87	27.36	13.63
109	5.82	2.90	27.63	13.77
110	5.89	2.93	27.91	13.91
111	5.96	2.97	28.18	14.05
112	6.02	3.00	28.46	14.18
113	6.09	3.04	28.73	14.32
114	6.16	3.07	29.01	14.46
115	6.23	3.10	29.29	14.60
116	6.30	3.14	29.56	14.73
117	6.37	3.17	29.84	14.87
118	6.44	3.21	30.11	15.01
119	6.51	3.24	30.39	15.15
120	6.58	3.28	30.67	15.28
121	6.65	3.31	30.94	15.42
122	6.72	3.35	31.22	15.56
123	6.79	3.38	31.50	15.70
124	6.86	3.42	31.78	15.84
125	6.93	3.45	32.05	15.97
126	7.00	3.49	32.33	16.11
127	7.07	3.52	32.61	16.25
128	7.14	3.56	32.88	16.39
129	7.21	3.59	33.16	16.53
130	7.28	3.63	33.44	16.67
131	7.35	3.66	33.72	16.80

LEAD EFFLUENT LIMIT TABLE				
Hardness	For Discharges to surface waters not within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches		For Discharges to surface waters within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches	
	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)
132	7.43	3.70	33.99	16.94
133	7.50	3.74	34.27	17.08
134	7.57	3.77	34.55	17.22
135	7.64	3.81	34.83	17.36
136	7.71	3.84	35.11	17.50
137	7.79	3.88	35.39	17.64
138	7.86	3.92	35.66	17.77
139	7.93	3.95	35.94	17.91
140	8.00	3.99	36.22	18.05
141	8.08	4.02	36.50	18.19
142	8.15	4.06	36.78	18.33
143	8.22	4.10	37.06	18.47
144	8.29	4.13	37.34	18.61
145	8.37	4.17	37.61	18.75
146	8.44	4.21	37.89	18.89
147	8.52	4.24	38.17	19.02
148	8.59	4.28	38.45	19.16
149	8.66	4.32	38.73	19.30
150	8.74	4.35	39.01	19.44
151	8.81	4.39	39.29	19.58
152	8.89	4.43	39.57	19.72
153	8.96	4.47	39.85	19.86
154	9.04	4.50	40.13	20.00
155	9.11	4.54	40.41	20.14
156	9.18	4.58	40.69	20.28
157	9.26	4.61	40.97	20.42
158	9.33	4.65	41.25	20.56
159	9.41	4.69	41.53	20.70
160	9.49	4.73	41.81	20.84
161	9.56	4.77	42.09	20.98
162	9.64	4.80	42.37	21.11
163	9.71	4.84	42.65	21.25
164	9.79	4.88	42.93	21.39
165	9.86	4.92	43.21	21.53
166	9.94	4.95	43.49	21.67
167	10.02	4.99	43.77	21.81
168	10.09	5.03	44.05	21.95
169	10.17	5.07	44.33	22.09
170	10.25	5.11	44.61	22.23
171	10.32	5.15	44.89	22.37
172	10.40	5.18	45.17	22.51
173	10.48	5.22	45.45	22.65
174	10.55	5.26	45.73	22.79
175	10.63	5.30	46.01	22.93
176	10.71	5.34	46.29	23.07
177	10.79	5.38	46.57	23.21
178	10.86	5.41	46.85	23.35
179	10.94	5.45	47.13	23.49
180	11.02	5.49	47.41	23.63
181	11.10	5.53	47.70	23.77
182	11.18	5.57	47.98	23.91
183	11.25	5.61	48.26	24.05
184	11.33	5.65	48.54	24.19
185	11.41	5.69	48.82	24.33
186	11.49	5.73	49.10	24.47
187	11.57	5.77	49.38	24.61

LEAD EFFLUENT LIMIT TABLE				
Hardness	For Discharges to surface waters not within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches		For Discharges to surface waters within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches	
	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)
188	11.65	5.80	49.66	24.75
189	11.73	5.84	49.94	24.89
190	11.81	5.88	50.23	25.03
191	11.88	5.92	50.51	25.17
192	11.96	5.96	50.79	25.31
193	12.04	6.00	51.07	25.45
194	12.12	6.04	51.35	25.59
195	12.20	6.08	51.63	25.73
196	12.28	6.12	51.91	25.87
197	12.36	6.16	52.20	26.01
198	12.44	6.20	52.48	26.15
199	12.52	6.24	52.76	26.29
200	12.60	6.28	53.04	26.43
201	12.68	6.32	53.32	26.58
202	12.76	6.36	53.60	26.72
203	12.84	6.40	53.89	26.86
204	12.92	6.44	54.17	27.00
205	13.00	6.48	54.45	27.14
206	13.08	6.52	54.73	27.28
207	13.17	6.56	55.01	27.42
208	13.25	6.60	55.29	27.56
209	13.33	6.64	55.58	27.70
210	13.41	6.68	55.86	27.84
211	13.49	6.72	56.14	27.98
212	13.57	6.76	56.42	28.12
213	13.65	6.80	56.70	28.26
214	13.74	6.85	56.99	28.40
215	13.82	6.89	57.27	28.54
216	13.90	6.93	57.55	28.68
217	13.98	6.97	57.83	28.82
218	14.06	7.01	58.11	28.96
219	14.14	7.05	58.40	29.10
220	14.23	7.09	58.68	29.24
221	14.31	7.13	58.96	29.38
222	14.39	7.17	59.24	29.53
223	14.47	7.21	59.52	29.67
224	14.56	7.26	59.81	29.81
225	14.64	7.30	60.09	29.95
226	14.72	7.34	60.37	30.09
227	14.81	7.38	60.65	30.23
228	14.89	7.42	60.93	30.37
229	14.97	7.46	61.22	30.51
230	15.06	7.50	61.50	30.65
231	15.14	7.55	61.78	30.79
232	15.22	7.59	62.06	30.93
233	15.31	7.63	62.35	31.07
234	15.39	7.67	62.63	31.21
235	15.47	7.71	62.91	31.35
236	15.56	7.75	63.19	31.49
237	15.64	7.80	63.47	31.64
238	15.73	7.84	63.76	31.78
239	15.81	7.88	64.04	31.92
240	15.89	7.92	64.32	32.06
241	15.98	7.96	64.60	32.20
242	16.06	8.01	64.89	32.34
243	16.15	8.05	65.17	32.48

LEAD EFFLUENT LIMIT TABLE				
Hardness	For Discharges to surface waters not within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches		For Discharges to surface waters within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches	
	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)
244	16.23	8.09	65.45	32.62
245	16.32	8.13	65.73	32.76
246	16.40	8.17	66.01	32.90
247	16.49	8.22	66.30	33.04
248	16.57	8.26	66.58	33.18
249	16.66	8.30	66.86	33.32
250	16.74	8.34	67.14	33.46
251	16.83	8.39	67.43	33.61
252	16.91	8.43	67.71	33.75
253	17.00	8.47	67.99	33.89
254	17.08	8.51	68.27	34.03
255	17.17	8.56	68.56	34.17
256	17.25	8.60	68.84	34.31
257	17.34	8.64	69.12	34.45
258	17.43	8.69	69.40	34.59
259	17.51	8.73	69.69	34.73
260	17.60	8.77	69.97	34.87
261	17.68	8.81	70.25	35.01
262	17.77	8.86	70.53	35.15
263	17.86	8.90	70.82	35.29
264	17.94	8.94	71.10	35.43
265	18.03	8.99	71.38	35.58
266	18.12	9.03	71.66	35.72
267	18.20	9.07	71.95	35.86
268	18.29	9.12	72.23	36.00
269	18.38	9.16	72.51	36.14
270	18.46	9.20	72.79	36.28
271	18.55	9.25	73.08	36.42
272	18.64	9.29	73.36	36.56
273	18.73	9.33	73.64	36.70
274	18.81	9.38	73.92	36.84
275	18.90	9.42	74.20	36.98
276	18.99	9.46	74.49	37.12
277	19.08	9.51	74.77	37.26
278	19.16	9.55	75.05	37.41
279	19.25	9.59	75.33	37.55
280	19.34	9.64	75.62	37.69
281	19.43	9.68	75.90	37.83
282	19.52	9.73	76.18	37.97
283	19.60	9.77	76.46	38.11
284	19.69	9.81	76.75	38.25
285	19.78	9.86	77.03	38.39
286	19.87	9.90	77.31	38.53
287	19.96	9.95	77.59	38.67
288	20.05	9.99	77.88	38.81
289	20.13	10.03	78.16	38.95
290	20.22	10.08	78.44	39.09
291	20.31	10.12	78.72	39.23
292	20.40	10.17	79.01	39.38
293	20.49	10.21	79.29	39.52
294	20.58	10.26	79.57	39.66
295	20.67	10.30	79.85	39.80
296	20.76	10.35	80.13	39.94
297	20.85	10.39	80.42	40.08
298	20.94	10.43	80.70	40.22
299	21.03	10.48	80.98	40.36

LEAD EFFLUENT LIMIT TABLE				
Hardness	For Discharges to surface waters not within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches		For Discharges to surface waters within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches	
	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)
300	21.11	10.52	81.26	40.50
301	21.20	10.57	81.55	40.64
302	21.29	10.61	81.83	40.78
303	21.38	10.66	82.11	40.92
304	21.47	10.70	82.39	41.06
305	21.56	10.75	82.67	41.20
306	21.65	10.79	82.96	41.35
307	21.74	10.84	83.24	41.49
308	21.83	10.88	83.52	41.63
309	21.92	10.93	83.80	41.77
310	22.02	10.97	84.09	41.91
311	22.11	11.02	84.37	42.05
312	22.20	11.06	84.65	42.19
313	22.29	11.11	84.93	42.33
314	22.38	11.15	85.21	42.47
315	22.47	11.20	85.50	42.61
316	22.56	11.24	85.78	42.75
317	22.65	11.29	86.06	42.89
318	22.74	11.33	86.34	43.03
319	22.83	11.38	86.62	43.17
320	22.92	11.42	86.91	43.31
321	23.01	11.47	87.19	43.45
322	23.11	11.52	87.47	43.59
323	23.20	11.56	87.75	43.74
324	23.29	11.61	88.03	43.88
325	23.38	11.65	88.32	44.02
326	23.47	11.70	88.60	44.16
327	23.56	11.74	88.88	44.30
328	23.65	11.79	89.16	44.44
329	23.75	11.84	89.44	44.58
330	23.84	11.88	89.73	44.72
331	23.93	11.93	90.01	44.86
332	24.02	11.97	90.29	45.00
333	24.11	12.02	90.57	45.14
334	24.21	12.06	90.85	45.28
335	24.30	12.11	91.14	45.42
336	24.39	12.16	91.42	45.56
337	24.48	12.20	91.70	45.70
338	24.58	12.25	91.98	45.84
339	24.67	12.30	92.26	45.98
340	24.76	12.34	92.55	46.12
341	24.85	12.39	92.83	46.26
342	24.95	12.43	93.11	46.40
343	25.04	12.48	93.39	46.55
344	25.13	12.53	93.67	46.69
345	25.23	12.57	93.95	46.83
346	25.32	12.62	94.24	46.97
347	25.41	12.67	94.52	47.11
348	25.51	12.71	94.80	47.25
349	25.60	12.76	95.08	47.39
350	25.69	12.81	95.36	47.53
351	25.79	12.85	95.64	47.67
352	25.88	12.90	95.93	47.81
353	25.97	12.95	96.21	47.95
354	26.07	12.99	96.49	48.09
355	26.16	13.04	96.77	48.23

LEAD EFFLUENT LIMIT TABLE				
Hardness	For Discharges to surface waters not within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches		For Discharges to surface waters within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches	
	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)
356	26.25	13.09	97.05	48.37
357	26.35	13.13	97.33	48.51
358	26.44	13.18	97.61	48.65
359	26.54	13.23	97.90	48.79
360	26.63	13.27	98.18	48.93
361	26.73	13.32	98.46	49.07
362	26.82	13.37	98.74	49.21
363	26.91	13.41	99.02	49.35
364	27.01	13.46	99.30	49.49
365	27.10	13.51	99.58	49.63
366	27.20	13.55	99.87	49.77
367	27.29	13.60	100.15	49.91
368	27.39	13.65	100.43	50.05
369	27.48	13.70	100.71	50.19
370	27.58	13.74	100.99	50.33
371	27.67	13.79	101.27	50.47
372	27.77	13.84	101.55	50.61
373	27.86	13.89	101.83	50.75
374	27.96	13.93	102.11	50.89
375	28.05	13.98	102.40	51.03
376	28.15	14.03	102.68	51.17
377	28.24	14.08	102.96	51.31
378	28.34	14.12	103.24	51.45
379	28.43	14.17	103.52	51.59
380	28.53	14.22	103.80	51.73
381	28.62	14.27	104.08	51.87
382	28.72	14.31	104.36	52.01
383	28.82	14.36	104.64	52.15
384	28.91	14.41	104.93	52.29
385	29.01	14.46	105.21	52.43
386	29.10	14.50	105.49	52.57
387	29.20	14.55	105.77	52.71
388	29.30	14.60	106.05	52.85
389	29.39	14.65	106.33	52.99
390	29.49	14.70	106.61	53.13
391	29.58	14.74	106.89	53.27
392	29.68	14.79	107.17	53.41
393	29.78	14.84	107.45	53.55
394	29.87	14.89	107.73	53.69
395	29.97	14.94	108.01	53.83
396	30.07	14.98	108.29	53.97
397	30.16	15.03	108.58	54.11
398	30.26	15.08	108.86	54.25
399	30.36	15.13	109.14	54.39
400	30.45	15.18	109.42	54.53

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 (CWC) 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 Quality Control Board (RWQCB), State Water Resources Control Board (SWRCB), 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)*] [*CWC 13383(c)*]:

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)*];

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the CWC, 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)(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)(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)(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 Section 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 permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper 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 Section 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)(i)*];

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

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

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the CWC [*40 CFR §122.41(l)(3)*] [*40 CFR §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 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order [*40 CFR §122.41(j)(4)*] [*40 CFR §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 40 CFR 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, SWRCB, or USEPA within a reasonable time, any information which the Regional Water Board, SWRCB, 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, SWRCB, or USEPA copies of records required to be kept by this Order [*40 CFR §122.41(h)*] [*CWC 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 Section 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 Section 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 Section 122.22(b)(1)*];

   b. The authorization specified 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 Section 122.22(b)(2)*]; and

   c. The written authorization is submitted to the Regional Water Board and State Water Board [*40 CFR Section 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, State Water Board or USEPA prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 CFR Section 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 Section 122.22(d)*].

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order [*40 CFR §122.41(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 SWRCB 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 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board [*40 CFR §122.41(l)(4)(ii)*].

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

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

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

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

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

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

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

F. Planned Changes

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

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

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in this Order nor to notification requirements under 40 CFR Part 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [*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 SWRCB 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 Section 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, SWRCB, or USEPA, the Discharger shall promptly submit such facts or information [*40 CFR §122.41(l)(8)*].

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, 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 Section 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 Section 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 the Order [*40 CFR Section 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 Section 122.42(b)(3)*].

Attachment E – Monitoring and Reporting Program

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM

The Code of Federal Regulations (CFR) at 40 CFR §122.48 requires that all NPDES permits specify monitoring and reporting requirements. CWC Sections 13267 and 13383 also authorize the Regional Water Quality Control Board to require technical and monitoring reports. This Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements that implement the California and federal regulations.

I. GENERAL MONITORING PROVISIONS

A. General Monitoring Provision

1. All sampling and sample preservation shall be in accordance with the current edition of "*Standard Methods for the Examination of Water and Wastewater*" (American Public Health Association).

2. All laboratory analyses shall be performed in accordance with test procedures under 40 CFR 136 (revised as of May 14, 1999) "Guidelines Establishing Test Procedures for the Analysis of Pollutants," promulgated by the United States Environmental Protection Agency (EPA), unless otherwise specified in this MRP. In addition, the Regional Water Board Executive Officer and/or EPA Regional Administrator, at their discretion, may specify test methods that are more sensitive than those specified in 40 CFR 136. (See also I.A.6., below)

3. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the California Department of Public Health in accordance with the provision of Water Code Section 13176, and must include quality assurance/quality control data with their reports, or EPA or at laboratories approved by the Regional Water Board's Executive Officer

4. Whenever the Discharger monitors any pollutant more frequently than is required by this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the discharge monitoring report specified by the Executive Officer.

5. In conformance with federal regulations 40 CFR 122.45(c), analyses to determine compliance with the effluent limitations for metals shall be conducted using the total recoverable method. For Chromium (VI), the dissolved method in conformance with 40 CFR 136 may be used to measure compliance with the Chromium (VI) limitation.

6. For wastewater monitoring:

   a. The discharger shall require its testing laboratory to calibrate the analytical system down to the minimum level (ML)[1] specified in Attachment "I" for priority pollutants with effluent limitations in this Order, unless an alternative minimum level is approved by the Regional Water Board's Executive Officer. When there is more than one ML value for a given substance, the discharger shall use the ML values, and their associated analytical methods, listed in Attachment "I" that are below the calculated effluent limitation. The discharger may select any one of those cited analytical methods for compliance determination. If no ML value is below the effluent limitation, then the lowest ML value and its associated analytical method, listed in Attachment "I" shall be used. Any internal quality control data associated with the sample must be reported when requested by the Executive Officer. The Regional Water Board will reject the quantified laboratory data if quality control data is unavailable or unacceptable.

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

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

      2) Sample results less than the reported ML, but greater than or equal to the laboratory's current Method Detection Limit (MDL)[2], shall be reported as "Detected, but Not Quantified," or "DNQ." The estimated chemical concentration of the sample shall also be reported.

      3) Sample results not detected above the laboratory's MDL shall be reported as "not detected" or "ND."

   c. The Discharger shall submit to the Regional Water Board reports necessary to determine compliance with effluent limitations in this Order and shall follow the chemical nomenclature and sequential order of priority pollutant constituents shown in Attachment "G" – Priority Pollutant Lists. The Discharger shall report with each sample result:

      1) The reporting level achieved by the testing laboratory; and

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1 *Minimum level is the concentration at which the entire analytical system must give a recognizable signal and acceptable 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.*

2 *MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analytical concentration is greater than zero, as defined in 40 CFR 136, Appendix B, revised as of May 14, 1999.*

2) The laboratory's current MDL, as determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999).

d. For receiving water monitoring and for those priority pollutants without effluent limitations, the Discharger shall require its testing laboratory to quantify constituent concentrations to the lowest achievable MDL as determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999). In situations where the most stringent applicable receiving water objective (freshwater or human health (consumption of organisms only), as specified for that pollutant in 40 CFR 131.38[3] is below the minimum level value specified in Attachment "G" and the Discharger cannot achieve an MDL value for that pollutant below the ML value, the Discharger shall submit justification why a lower MDL value cannot be achieved. Justification shall be submitted together with monthly monitoring reports.

7. For non-priority pollutants monitoring, all analytical data shall be reported with identification of practical quantitation levels and with method detection limits, as determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999).

8. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. Duplicate chemical analyses must be conducted on a minimum of ten percent (10%) of the samples, or at least one sample per month, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples. When requested by the Regional Water Board or EPA, the Discharger will participate in the NPDES discharge monitoring report QA performance study.

9. For every item of monitoring data where the requirements are not met, the monitoring report shall include a statement discussing the reasons for noncompliance, the actions undertaken or proposed that will bring the discharge into full compliance with requirements at the earliest time, and an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when compliance with the time schedule has been achieved.

10. The Discharger shall assure that records of all monitoring information are maintained and accessible for a period of at least five years (this retention period supersedes the retention period specified in Section IV.A. of Attachment D) from the date of the sample, report, or application. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or by the request of the Regional Water Board at any time. Records of monitoring information shall include:

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3 *See Federal Register/ Vol. 65, No. 97 / Thursday, May 18, 2000 / Rules and Regulations.*

a. The information listed in Attachment D- IV Standard Provisions – Records, subparagraph B. of this Order;
b. The laboratory which performed the analyses;
c. The date(s) analyses were performed;
d. The individual(s) who performed the analyses;
e. The modification(s) to analytical techniques or methods used;
f. All sampling and analytical results, including
    1) Units of measurement used;
    2) Minimum reporting level for the analysis (minimum level, practical quantitation level (PQL));
    3) Results less than the reporting level but above the method detection limit (MDL);
    4) Data qualifiers and a description of the qualifiers;
    5) Quality control test results (and a written copy of the laboratory quality assurance plan);
    6) Dilution factors, if used; and
    7) Sample matrix type.
g. All monitoring equipment calibration and maintenance records;
h. All original strip charts from continuous monitoring devices;
i. All data used to complete the application for this Order; and,
j. Copies of all reports required by this Order.
k. Electronic data and information generated by the Supervisory Control And Data Acquisition (SCADA) System.

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

12. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. In the event that continuous monitoring equipment is out of service for greater than a 24-hour period, the Discharger shall obtain a representative grab sample each day the equipment is out of service. The Discharger shall correct the cause(s) of failure of the continuous monitoring equipment as soon as practicable. In its monitoring report, the Discharger shall specify the period(s) during which the equipment was out of service and if the problem has not been corrected, shall identify the steps which the Discharger is taking or proposes to take to bring the equipment back into service and the schedule for these actions.

13. Monitoring and reporting shall be in accordance with the following:

a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

b. The monitoring and reporting of influent and effluent shall be done more frequently as necessary to maintain compliance with this Order and or as specified in this Order.

c. Whenever the Discharger monitors any pollutant more frequently than is required by this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the discharge monitoring report specified by the Executive Officer.

d. A "grab" sample is defined as any individual sample collected in less than 15 minutes.

e. A composite sample is defined as a combination of no fewer than eight individual grab samples obtained over the specified sampling period. The volume of each individual grab sample shall be proportional to the discharge flow rate at the time of sampling. The compositing period shall equal the specific sampling period, or 24 hours, if no period is specified.

f. Daily samples shall be collected on each day of the week.

g. Monthly samples shall be collected on any representative day of each month.

h. Quarterly samples: A representative grab sample shall be taken on any representative day of January, April, July, and October and test results shall be reported in micrograms/liter (ug/L) by the last day of the month following the month that the sample was taken.

i. Semi-annual samples shall be collected in January and July.

j. Annual samples shall be collected in accordance with the following schedule:

Table 1. Annual Sampling Schedule

Year	Annual Samples
2012	October
2013	January
2014	April
2015	July
2016	October
2017	January

14. The discharger shall multiply each measured or estimated congener concentration by its respective toxic equivalency factor (TEF) as shown below and report the sum of these values. The discharger shall use the U.S. EPA approved test method 1613 for dioxins and furans. Dioxin testing is required for new dischargers only.

Table 2. Toxic Equivalency Factors for 2,3,7, 8-TCDD Equivalents

Congener	TEF
2,3,7,8-TetraCDD	1
1,2,3,7,8-PentaCDD	1.0
1,2,3,4,7,8-HexaCDD	0.1
1,2,3,6,7,8-HexaCDD	0.1
1,2,3,7,8,9-HexaCDD	0.1
1,2,3,4,6,7,8-HeptaCDD	0.01
OctaCDD	0.0001
2,3,7,8-TetraCDF	0.1
1,2,3,7,8-PentaCDF	0.05
2,3,4,7,8-PentaCDF	0.5
1,2,3,4,7,8-HexaCDF	0.1
1,2,3,6,7,8-HexaCDF	0.1
1,2,3,7,8,9-HexaCDF	0.1
2,3,4,6,7,8-HexaCDF	0.1
1,2,3,4,6,7,8-HeptaCDF	0.01
1,2,3,4,7,8,9-HeptaCDF	0.01
OctaCDF	0.0001

II. MONITORING LOCATIONS

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

III. INFLUENT MONITORING REQUIREMENTS

A grab[4] sample of the influent to the treatment system shall be monitored on a monthly basis for compounds using EPA method 8260B and for total petroleum hydrocarbons.

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4 *A "grab" sample is defined as any individual sample collected in less than 15 minutes.*

IV. EFFLUENT MONITORING REQUIREMENTS

1. The following shall constitute the effluent monitoring program:

Table 3. Effluent Monitoring Requirements

Constituent	Units	Type of Sample	Minimum Frequency of Sampling & Analysis	Required Analytical Test Method and ML
Flow	GPD	------	Continuous	See Sections I.A.2.& I.A.6. above
Total Petroleum Hydrocarbons[6]	µg/L	Grab	Weekly	"
Benzene	µg/L	"	"	"
Toluene	µg/L	"	"	"
Xylene (total)	µg/L	"	"	"
Ethylbenzene	µg/L	"	"	"
Carbon Tetrachloride	µg/L	"	"	"
Chloroform	µg/L	"	"	"
Dichlorobromomethane	µg/L	"	"	"
Methyl Ethyl Ketone	µg/L	"	"	
Methyl Isobutyl Ketone	µg/L	"	"	"
Methyl Tertiary Butyl Ether (MTBE)	µg/L	"	"	"
Napthalene	µg/L	"	"	"
Tetrachloroethylene (PCE)	µg/L	"	"	"
Trichloroethylene (TCE)	µg/L	"	"	"
1,1-Dichloroethane (1,1-DCA)	µg/L	"	"	"
1,2-Dichloroethane (1,2-DCA)	µg/L	"	"	"
1,1-Dichloroethylene (1,1-DCE)	µg/L	"	"	"
1,2-Dichloroethylene (cis)	µg/L	"	"	"
1,2-Dichloroethylene (trans)	µg/L	"	"	"
1,1,1-Trichloroethane (1,1,1,-TCA)	µg/L	"	"	"
1,4-Dioxane	µg/L	"	"	"
Tert Butyl Alcohol (TBA)	µg/L	"	"	"
Acrolein	µg/L	"	"	"
Acrylonitrile	µg/L	"	"	"
Ethylene Dibromide (EDB)	µg/L	"	"	"
Perchlorate	µg/L	"	"	"
Total Phenols	µg/L	"	"	"
Total Residual Chloride[7]	mg/L	"	"	"
Total Dissolved Solids	mg/L	"	"	"
Total Inorganic Nitrogen (TIN)	mg/L	"	"	"

6 *Total Petroleum Hydrocarbons by method 8015 modified for gasoline and/or diesel, if present.*

7 *If chlorine is used for treatment or disinfection of wastes.*

Table 3. Effluent Monitoring Requirements

Constituent	Units	Type of Sample	Minimum Frequency of Sampling & Analysis	Required Analytical Test Method and ML
Total Phosphorous[8]	mg/L	Grab	Weekly	See Sections I.A.2.& I.A.6. above
Selenium[8]	mg/L	"	"	"
Suspended Solids	mg/L	"	"	"
Sulfide	mg/L	"	"	"
Total Recoverable Lead	mg/L	"	"	"
Hardness	mg/L	"	"	"
2,3,7,8-TetraCDD	µg/L	"	Semi-Annual	"
1,2,3,7,8-PentaCDD	µg/L	"	"	"
1,2,3,4,7,8-HexaCDD	µg/L	"	"	"
1,2,3,6,7,8-HexaCDD	µg/L	"	"	"
1,2,3,7,8,9-HexaCDD	µg/L	"	"	"
1,2,3,4,6,7,8-HeptaCDD	µg/L	"	"	"
OctaCDD	µg/L	"	"	"
2,3,7,8-TetraCDF	µg/L	"	"	"
1,2,3,7,8-PentaCDF	µg/L	"	"	"
2,3,4,7,8-PentaCDF	µg/L	"	"	"
1,2,3,4,7,8-HexaCDF	µg/L	"	"	"
1,2,3,6,7,8-HexaCDF	µg/L	"	"	"
1,2,3,7,8,9-HexaCDF	µg/L	"	"	"
2,3,4,6,7,8-HexaCDF	µg/L	"	"	"
1,2,3,4,6,7,8-HeptaCDF	µg/L	"	"	"
1,2,3,4,7,8,9-HeptaCDF	µg/L	"	"	"
OctaCDF	µg/L	"	"	"
Priority Pollutants (See Attachment G)	µg/L	"	Once during the first year of remediation and upon renewal	"
Toxicity Testing (see Section V., below)	µg/L	"	At the initiation of the project and annually thereafter (See Section I.A.13.j., above)	"
Volatile organic portion of EPA Priority Pollutants (See Attachment G)	µg/L	"	Annually (See Sections I.A.13.j., above and IV. A.2., below)	"

8 *Applicable to those dischargers discharging within the San Diego Creek/Newport Bay Watershed.*

2. The monitoring frequency for those priority pollutants that are detected during the required annual monitoring at a concentration greater than the concentration specified for that pollutant in Attachment I shall be accelerated to quarterly for one year. To return to the monitoring frequency specified, the Discharger shall request and receive approval from the Regional Water Board's Executive Officer or designee.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Toxicity Monitoring Requirements

The discharger shall conduct acute toxicity testing as specified in Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms (EPA/821-R-02-012, October 2002). Using a control and 100% effluent, static renewal survival (pass/fail) tests for 96 hours shall be conducted using the two test species specified in the table below corresponding to the onsite groundwater salinity, for the first required annual test under this permit. Based on the results, the Discharger shall determine the most sensitive test species. For the required succeeding toxicity monitoring, the Discharger shall use the most sensitive species with prior approval from the Regional Board Executive Officer. The Discharger shall submit documentation supporting the Discharger's determination of the most sensitive test species. The effluent tests must be conducted concurrent with reference toxicant tests. The effluent and reference toxicant tests must meet all test acceptability criteria as specified in the acute manual[10]. If the test acceptability criteria are not achieved, then the discharger must re-sample and re-test within 14 days. The test results must be reported according to the acute manual chapter on Report Preparation, and shall be attached to the monitoring reports. The use of alternative methods for measuring acute toxicity may be considered by the Regional Water Board Executive Officer on a case-by-case basis.

Table 4. Test species:

IF THE EFFLUENT OR RECEIVING WATER SALINITY IS:	TEST SPECIES	TEST
Less than 1,000 mg/l salinity	Fathead minnow, *Pimphales promelas*	Larval survival test
	Water flea, *Ceriodaphnia dubia*	Survival test
Equal to or greater than 1,000 mg/l salinity	Silverside, *Menedia beryllina*	Survival Test
	Pacific mysid, *Holmesimysis costata*	Survival Test

10 *"Acute manual" refers to protocols described in "Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms" (EPA/821-R-02-012, October 2002).*

In the event that the required annual toxicity test fails, the Discharger shall stop any discharge of wastewater to waters of the U.S. and shall retest within 14 days of receiving the notice of failure and shall determine the cause of the failure. The discharge of wastewater to waters of the U.S. may not resume until such time that the cause of toxicity is determined and appropriately addressed. Commencement of any discharge shall be with prior approval by the Regional Water Board Executive Officer.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECEIVING WATER MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

2. All analytical data shall be reported with method detection limit[9] (MDLs) and with identification of either reporting level or limits of quantitation (LOQs).

3. Any internal quality control data associated with the sample must be reported when requested by the Executive Officer. The Regional Water Board will reject the quantified laboratory data if quality control data is unavailable or unacceptable.

4. Discharge monitoring data shall be submitted in a format acceptable by the Regional Water Board. Specific reporting format may include preprinted forms and/or electronic media. The results of all monitoring required by this Order shall be reported to the Regional Water Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this order.

5. The Discharger shall tabulate the monitoring data to clearly illustrate compliance and/or noncompliance with the requirements of the Order.

6. The Discharger shall submit to the Regional Water Board reports necessary to determine compliance with effluent limitations in this Order and shall follow the chemical nomenclature and sequential order of priority pollutant constituents shown in Attachment "G" – Priority Pollutant Lists. The Discharger shall report with each sample result:

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9 *The standardized test procedure to be used to determine the method detection limit (MDL) is given at Appendix B, 'Definition and Procedure for the Determination of the Method Detection Limit' of 40 CFR 136.*

a. The reporting level achieved by the testing laboratory; and
b. The laboratory's current MDL, as determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999).
c. For those priority pollutants without effluent limitations, the Discharger shall require its testing laboratory to quantify constituent concentrations to the lowest achievable MDL as determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999). In situations where the most stringent applicable receiving water objective (freshwater or human health (consumption of organisms only), as specified for that pollutant in 40 CFR 131.38[12] is below the minimum level value specified in Attachment "H" and the Discharger cannot achieve an MDL value for that pollutant below or equal to the ML value, the Discharger shall submit justification why a lower MDL value cannot be achieved. Justification shall be submitted together with monthly monitoring reports.

7. For every item of monitoring data where the requirements are not met, the monitoring report shall include a statement discussing the reasons for noncompliance, and of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when compliance with the time schedule has been achieved.

8. For non-priority pollutants monitoring, all analytical data shall be reported with identification of method detection limits, as determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999).

9. The State or Regional Water Board may notify the Discharger to discontinue submittal of hard copies of reports. When such notification is given, the Discharger shall stop submitting hard copies of required monitoring reports.

B. Reporting shall be in accordance with the following:

1. All monitoring reports, or information submitted to the Regional Board shall be signed and certified in accordance with 40 CFR 122.22 and shall be submitted under penalty of perjury.

2. All reports shall be arranged in a tabular format to clearly show compliance or noncompliance with each discharge limitation.

3. One week before groundwater extraction, treatment, and discharge is commenced, the Discharger shall notify the Regional Board or its designated compliance officer by email and/or orally by telephone.

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12 *See Federal Register/ Vol. 65, No. 97 / Thursday, May 18, 2000 / Rules and Regulations.*

4. If no discharge occurs during the previous monitoring period, a letter to that effect shall be submitted in lieu of a monitoring report.

5. The Discharger shall notify the Regional Water Board in writing when groundwater treatment and discharge is stopped for more than a week. The report shall include a discussion as to why groundwater remediation is stopped and when treatment will commence.

6. Noncompliance Reporting

   a. The discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided to the Executive Officer (951-782-4130) and the Office of Emergency Services (1-800-852-7550) orally within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within 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.

   b. Any violation of a maximum daily discharge limitation for any of the pollutants listed in this Order shall be included as information that must be reported within 24 hours.

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

7. Except for data determined to be confidential under Section 308 of the Clean Water Act (CWA), all reports prepared in accordance with the terms of this Order shall be available for public inspection at the offices of the Regional Water Quality Control Board and the Regional Administrator of EPA. As required by the CWA, effluent data shall not be considered confidential.

8. Monitoring reports shall be submitted by the 30th day of each month following the monitoring period and shall include:

   a. The results of all chemical analyses for the previous month, and annual samples whenever applicable,

   b. The daily flow data,

   c. A summary of the month's activities including a report detailing compliance or noncompliance with the task for the specific schedule date, and

d. For every item of monitoring data where the requirements are not met, the monitoring report shall include a statement discussing the reasons for noncompliance, and of the actions undertaken or proposed which will bring the discharger into full compliance with requirements at the earliest time, and an estimate of the date when the discharger will be in compliance. The discharger shall notify the Regional Board by letter when compliance with the time schedule has been achieved.

9. For Dischargers discharging at a volume equal to or greater than 150,000 gallons per day, the Discharger shall submit semi-annual reports that tabulate all measured flows and measured parameters within the most recent six month period. Where discharges associated with these projects last less than 6 months, a report covering the period of discharges shall be submitted. Copies of these monitoring reports shall be submitted to the Regional Board and to the Water Quality Director of the Orange County Water District at P.O. Box 8300, Fountain Valley, CA 92728-8300.

C. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMR) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, the Discharger shall submit hard copy SMR in accordance with the requirements described in subsection B.5 below. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. Additionally, the Discharger shall report in the SMR the results of any special studies, acute and chronic toxicity testing, TRE/TIE, PMP, and Pollution Prevention Plan required by Special Provisions – VI.C. of this Order. The Discharger shall submit monthly, quarterly, and annual SMR including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table 5. Monitoring and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Continuous	The date of the Authorization Letter	All	30th day of the month following the sampling month
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	30th day of the month following the sampling month
Monthly	First day of calendar month following the date of the Authorization Letter or on date of the Authorization Letter if that date is first day of the month	First day of calendar month through last day of calendar month	30th day of the month following the sampling month
Quarterly	Closest of January 1, April 1, July 1, or October 1 following the date of the Authorization Letter	January 1 through March 31, samples are collected in January; April 1 through June 30; samples are collected in April; July 1 through September 30; samples are collected in July; October 1 through December 31; samples are collected in October	April 30 July 30 October 30 January 30
Semi-Annually	Closest of January 1 or July 1 following the date of the Authorization Letter	January 1 through June 30 July 1 through December 31	July 30 January 30
Annually	The date of the Authorization Letter	See Section I.A.13.j., above	30th day of the month following the sampling month
Per Discharge Event	Anytime during the discharge event or as soon as possible after aware of the event	At a time when sampling can characterize the discharge event	30th day of the month following the sampling month

D. Other Reports – Not Applicable

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

The Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for dischargers in California. Some sections or subsections of the Order have therefore been identified as "not applicable" to this group of dischargers. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to the dischargers authorized by the Order.

I. PERMIT INFORMATION

Order No. R8-2007-0008, NPDES No. CAG918001, was adopted by the California Regional Water Quality Control Board, Santa Ana Region, on February 2, 2007 for discharges to surface waters of extracted and treated groundwater resulting from the cleanup of groundwater polluted by petroleum hydrocarbons and/or solvents at service stations and similar sites. The Order served as a general National Pollutant Discharge Elimination System (NPDES) permit and facilitated the processing of applications and the early implementation of groundwater cleanup projects within the Santa Ana Region. Below is a tabulation of the number of authorizations to discharge under the previous Order No. R8-2002-0007 and the present Order No. R8-2007-0008 that have been issued, by county. The tabulation shows a decrease in the number of enrollees from 2007 through 2011.

Table 1. Enrollees Information

COUNTY	Orange[1]		Riverside		San Bernardino		Total	
Previous Order No.	R8-2002-0007	R8-2007-0008	R8-2002-0007	R8-2007-0008	R8-2002-0007	R8-2007-0008	R8-2002-0007	R8-2007-0008
Enrollees	121[2]	37	12	5	10	3	143	45
Active Sites	42	13	6	3	4	1	52	17
Coverage terminated	79	24	6	2	6	2	91	28

1 *51 facilities are located within the San Diego Creek/Newport Bay Watershed.*

2 *These include mobile dischargers who treat hydrocarbon or solvent contaminated purged waters from groundwater monitoring wells at various locations within the Santa Ana Region.*

It is anticipated that most of the dischargers at active sites will be submitting renewal applications for continued discharges from their groundwater cleanup operations. Additional applications are expected and pending for sites recently determined to require groundwater remediation. The demand for permit issuance will continue to exceed the available staff resources to develop and bring individual tentative waste discharge requirements to the Board for adoption. These circumstances necessitate the renewal of this general permit.

II. NOTIFICATION REQUIREMENTS

General Permit Application

This Order requires each existing discharger regulated under the previous Order No. R8-2007-0008 and who requires ongoing regulatory coverage, to submit an updated Notice of Intent form to be covered under this permit.

This Order requires each new discharger[3] to submit to the Executive Officer an application for the proposed discharge. Submission of the application will constitute a "Notice of Intent" to be covered under this Order. The application for the proposed discharge will require, at the minimum, the following information:

1. Notice of Intent to be covered under this general permit.

2. A site characterization study that defines the onsite contaminants and their properties, the three-dimensional extent and concentration of contaminants in the subsurface, and includes a description of the geologic and hydrologic factors that control the migration of the contaminants.

3. A fixed hardness value, for approval by the Executive Officer of the Regional Water Board, based on the 5th percentile of effluent hardness measurements or the average ambient receiving water hardness measurements for those sites polluted with leaded gasoline

4. A report including the following:

    a. Chemical analysis of the untreated groundwater. Representative groundwater samples shall be analyzed for organic pollutants using EPA method 8260B, priority pollutants, and including total dissolved solids, total inorganic nitrogen, hardness, 1,4-dioxane and perchlorate. Test results shall be reported with Minimum levels (ML) and method detection limit (MDL);

    b. The name of the proposed receiving water body;

    c. The estimated average and maximum daily flow rates;

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3 *"New discharger" refers to those proposing to discharge wastewater under Order No. R8-2012-0027 and not currently covered under Order No. R8-2007-0008.*

d. A map showing the path from the point of initial discharge to its terminus point;

e. A list of known or suspected leaking underground tanks and other facilities or operations which have, or may have impacted the quality of the underlying groundwater within the expected groundwater capture zone.

f. A discussion of the proposed cleanup project, including a review of the extraction system design and the known location of free product and dissolved product plumes;

g. A description of the proposed treatment system and a certification report on the adequacy of each component of the proposed treatment system along with the associated operation. This certification report shall contain a requirement-by-requirement analysis, based on accepted engineering practice, of how the process(es) and physical design(s) of the treatment system will ensure compliance with this Order. The design engineer shall affix his/her signature and engineering license number to this certification report. The report(s) shall also certify the following:

   1) All treatment facility startup and operation instruction manuals are adequate and available to operating personnel;
   2) All treatment facility maintenance and testing schedules are included in the treatment facility operation and maintenance manual (O&M Manual), which shall be kept readily accessible to onsite operating personnel; and
   3) Influent and effluent sampling locations and ports are located in areas where samples representative of the waste stream to be monitored can be obtained.

h. A discussion of a plan for the prevention of run-on, interception and diversion of runoff, and prevention of infiltration and runoff from contaminated soils stored on-site, if the discharge is associated with a groundwater remediation project and soils containing petroleum projects or other pollutants will be maintained on-site; and

i. Any other information deemed necessary by the Executive Officer.

III. INDUSTRY DESCRIPTION

This Order regulates discharges to surface water from temporary or permanent groundwater remediation systems, operated to clean up groundwater contamination from petroleum based products and from solvents. Discharges are or may be to inland fresh, estuarine or ocean waters. For discharges within the San Diego Creek/Newport Bay watershed, coverage under a separate general permit, Order No. R8-2007-0041, NPDES No. CAG918002, may be required.

Groundwater pollutant plumes are often complex mixtures of hundreds of petroleum-related compounds (e.g., gasoline contains over 200 chemicals), which makes complete chemical analyses very expensive and sometimes impractical or impossible due to sample matrix interferences, constituent masking, or the lack of standard analytical techniques. Further,

neither the State nor the U.S. EPA has proposed/established quality objectives for many of the petroleum hydrocarbon compounds. Therefore, indicator constituents for the detection and evaluation of complex mixtures of petroleum related compounds such as gasoline and diesel will be used in monitoring groundwater discharged to surface waters in the Santa Ana Region[4]. The indicator constituents used for evaluating compliance for discharges of gasoline and diesel related products are benzene, toluene, ethylbenzene, xylene (BTEX) and total petroleum hydrocarbons. For chlorinated hydrocarbon solvents such as trichloroethylene (TCE) and tetrachloroethylene (PCE), the specific chemical constituents and/or their degradation products can be used to evaluate compliance with the permit limitations.

Diesel fuel consists primarily of straight-chained hydrocarbons (alkenes and alkanes) ranging in length from C10 to C23, with C16 and C17 predominating. The C10-C23 straight-chain hydrocarbons in groundwater can be quantified using standard analytical techniques. Since the predominant components of diesel fuel are the straight-chain hydrocarbons, the California Department of Public Health recommended analytical procedure for total petroleum hydrocarbons-diesel[5] is used to indicate groundwater polluted by diesel fuel.

To reduce the amount of carbon monoxide in the atmosphere and abate air pollution, oxygenated fuels were required by the U.S. EPA in select metropolitan areas such as Southern California. Fuel oxygenates are also used to enhance the octane of conventional gasoline. Methyl tertiary-butyl ether (MTBE) has been the most commonly used fuel oxygenate. Oxygenates in limited commercial use also include ethyl tert-butyl ether (ETBE) and tert-amyl methyl ether (TAME), tert-butyl alcohol (TBA), methanol (MeOH), and diisopropyl ether (DIPE). Accidental releases of gasoline to the subsurface from underground storage tanks, pipelines, refueling facilities, and landfills provide point sources for entry of oxygenates into the hydrologic cycle, together with the gasoline hydrocarbons. MTBE, as well as other alkyl ether oxygenates, ETBE and TAME are much less biodegradable than BTEX hydrocarbons in ground water. Tert butyl alcohol (TBA) is also being detected in effluent streams and, like MTBE, poses a threat to water quality. Furthermore, the fuel oxygenates sorb only weakly to soil and aquifer material, thereby increasing the risk of groundwater contamination.

The presence of MTBE was found in over 60% of surface water supply reservoirs and groundwater water supply wells in California. Data from a Lawrence Livermore National Laboratory study showed that MTBE has been detected at over 4,600 leaking underground tank sites. Consequently, on March 26, 1999, the Governor concluded that the use of MTBE in California gasoline poses a significant risk to California's environment, and directed that MTBE be phased out of California gasoline as soon as possible. The risks to

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4 *It is believed that fuels have been adequately studied to justify limiting the analysis to these compounds (see "Leaking Underground Storage Tank Manual: guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure," State of California, Leaking Underground Fuel Tank Task Force, May 1988).*

5 *Leaking Underground Fuel Tank (LUFT) Manual: Guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure, October 1989.*

California's environment prompted the State Department of Public Health (DPH) to establish a maximum contaminant level for MTBE in drinking water of 13 micrograms per liter.

1,2-Dichloroethane was used as an anti-knock additive in leaded fuels. 1,2-Dichloroethane (1,2-DCA) is a colorless, oily, organic liquid with a sweet, chloroform-like odor. The greatest use of 1,2-dichloroethane is in making chemicals involved in plastics, rubber and synthetic textile fibers. Other uses include: as a solvent for resins and fats, photography, photocopying, cosmetics, drugs; and as a fumigant for grains and orchards (USEPA fact sheet).

Vinyl chloride (chlorethene or chloroethylene) is also being detected at low concentrations at sites with chlorinated solvents release. Vinyl chloride is normally the result of the breakdown of chlorinated solvents. Due to the significant toxicity and regular presence in the soils and groundwater at chlorinated solvents release sites, the compound vinyl chloride is being added to the list of constituents with effluent limitations.

1,4-dioxane is a man-made compound primarily used as an industrial solvent or solvent stabilizer. 1,4-dioxane is generally not biodegradable and is effectively treated through an advance oxidation process in the form of ultraviolet light combined with hydrogen peroxide. This treatment breaks down the compound into mostly carbon dioxide and water.

Perchlorate is both a naturally occurring and man-made chemical. Perchlorate is the primary ingredient of solid rocket propellant. Perchlorate affects human health by interfering with the uptake of iodide into the thyroid gland and disrupts the function of the thyroid. To remove perchlorate from water, biological treatment and ion (anion) exchange systems are among the technologies that are being used.

A. Description of Wastewater

Groundwater contaminated with petroleum hydrocarbon based products and/or solvents are extracted and undergo treatment. A number of treatment methods are available for the treatment of contaminated groundwater. The more commonly used methods include air stripping, air sparging, granular activated carbon adsorption, UV-peroxidation, nutrient enhanced biodegradation, and a combination of two or more of the above technologies. To remediate subsurface soil contamination, vapor extraction systems and in-situ bio-remediation are commonly used. Most of these systems, if designed and operated properly, can lower the concentrations of the pollutants to below detection limits.

B. Discharge Points and Receiving Waters

This Order authorizes permitted discharges to inland surface and ocean waters, enclosed bays, and estuaries within the Santa Ana Region. The beneficial uses of these receiving waters are described in Section II, Findings, of the Order.

In some cases, discharges resulting from groundwater cleanup operations occur to surface waters that are impaired due to one or more pollutants not regulated by this Order. These include groundwater cleanup discharges to waters in the San Diego Creek/Newport Bay watershed that are impaired by selenium or other constituents. Those discharges are generally regulated under Order No. 2007-0041, NPDES No. CAG918002. Where no appropriate permit has yet been issued, temporary authorization to conduct the discharge under the terms and conditions of this Order may be granted by the Executive Officer, provided that (1) the discharger demonstrates that temporary authorization is necessary to allow ongoing cleanup and wastewater discharges in order to prevent the migration and spread of the pollutants of concern; (2) the discharger demonstrates that all reasonable efforts to avoid, reduce or eliminate the discharge of impairing constituents to surface waters have been implemented; (3) the discharger demonstrates that the discharge will not contribute to the impairment of the receiving waters; and, (4) the discharge will be authorized under an appropriate individual or general permit when developed and approved by the Regional Water Board.

C. Summary of Existing Requirements

Order No. R8-2007-0008 included effluent limitations for MUN designated and MUN-excepted surface waters for Total Petroleum Hydrocarbons, Benzene, Toluene, Xylene, Ethylbenzene, Carbon Tetrachloride, Dichlorobromomethane, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, Methyl Tertiary Butyl Ether (MTBE), Naphthalene, Tetrachloroethylene (PCE), Trichloroethylene (TCE), 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,2-Dichloroethylene, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1-Trichloroethane (TCA), Tert Butyl Alcohol (TBA), 1,4-Dioxane, and Perchlorate. This Order includes the requirements of Order No. R8-2007-0008.

D. Compliance Summary - Not Applicable

E. Planned Changes - Not Applicable

IV. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and its implementing regulations adopted by the USEPA, and Chapter 5.5, Division 7 of the California Water Code (commencing with section 13370). It shall serve as an NPDES permit for the point source discharges described herein to surface waters of the Region. This Order also serves as Waste Discharge Requirements (WDR) pursuant to article 4, chapter 4, Division 7 of the California Water Code (commencing with section 13260). Pursuant to NPDES regulations at 40 CFR 122.28, States may request authority to issue general NPDES permits. On June 8, 1989, the State Water Board applied to the USEPA requesting revisions to its NPDES Program in accordance with 40 CFR 122.28, 123.62,

and 403.10, including a request to add general permit authority to its approved NPDES Program. On September 22, 1989, the USEPA, Region 9, approved the State Water Board's request, granting authorization for the State to issue general NPDES permits. Pursuant to NPDES regulations at 40 CFR 122.28 (a) (2), general permits may regulate point source discharges that:

1. Involve the same or substantially similar types of operations,
2. Discharge the same types of wastes,
3. Require the same effluent limitations,
4. Require the same or similar monitoring, and
5. In the opinion of the Executive Officer, are more appropriately controlled under a general permit than under individual permits.

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to reissue an NPDES permit is exempt from the provisions of CEQA, Public Resources Code Sections 21100-21177.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Board adopted a Water Quality Control Plan for the Santa Ana Basin (hereinafter Basin Plan) that became effective on January 24, 1995. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, State Water Board Resolution No. 88-63 (Sources of Drinking Water Policy) requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic water supply use to water bodies.

   On January 22, 2004, the Regional Water Board adopted Resolution No. R8-2004-0001, amending the Basin Plan to incorporate revised boundaries for groundwater subbasins, now termed "management zones", new nitrate-nitrogen and TDS objectives for the new management zones, and new nitrogen and TDS management strategies applicable to both surface and ground waters. The State Water Resources Control Board and Office of Administrative Law (OAL) approved the N/TDS Amendment on September 30, 2004 and December 23, 2004, respectively. The surface water standards components of the N/TDS Amendment are awaiting EPA approval.

   The existing and potential beneficial uses of surface waters in the Santa Ana Region are designated in Chapter 3 of the Basin Plan and may include:

   a. Municipal and Domestic Supply,
   b. Agricultural Supply,
   c. Industrial Service Supply,
   d. Industrial Process Supply,
   e. Groundwater Recharge,

f. Hydropower Generation,
g. Water Contact Recreation,
h. Non-contact Water Recreation,
i. Warm Freshwater Habitat,
j. Limited Warm Freshwater Habitat,
k. Cold Freshwater Habitat,
l. Preservation of Biological Habitats of Special Significance,
m. Wildlife Habitat,
n. Marine Habitat,
o. Shellfish Harvesting,
p. Estuarine Habitat,
q. Rare, Threatened or Endangered Species, and
r. Spawning, Reproduction, and Development.

Many surface waters within the region recharge underlying groundwater basins. The existing and potential beneficial uses of groundwater within the Santa Ana Region are designated in Chapter 3 of the Basin Plan and generally include:

a. Municipal and Domestic Supply,
b. Agricultural Supply,
c. Industrial Service Supply, and
d. Industrial Process Supply

The Basin Plan incorporates by reference the Water Quality Control Plan for Ocean Waters of California (the Ocean Plan), which was adopted by the State Water Board in 1972 and was most recently amended on February 14, 2006. The Ocean Plan establishes water quality standards and identifies the following beneficial uses for ocean waters of the State.

a. Industrial Water Supply
b. Water Contact and Non-Contact Recreation, including Aesthetic Enjoyment
c. Navigation
d. Commercial and Sport Fishing
e. Mariculture
f. Preservation and Enhancement of Areas of Special Biological Significance
g. Rare and Endangered Species
h. Marine Habitat
i. Fish Migration
j. Fish Spawning and Shellfish Harvesting

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

This Order implements applicable provisions of the Basin Plan, the Ocean Plan, and the Thermal Plan.

2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995, and November 9, 1999. Approximately forty water quality criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR, which established new criteria for toxics in the State and incorporated the previously adopted criteria of the NTR. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority, toxic pollutants, applicable to inland surface waters, enclosed bays and estuaries of the State; and the Ocean Plan contains water quality criteria for priority, toxic pollutants in the ocean waters of the State.

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* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for 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 (WQS) become effective for CWA purposes (40 CFR 131.21, 65 FR 24641, April 27, 2000). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

5. **Antidegradation Policy.** Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality 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. The discharges authorized under this Order are consistent with applicable antidegradation provisions of NPDES regulations at 40 CFR 131.12 and with State Water Board Resolution No. 68-16.

6. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations[6] section 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 permit, with some exceptions in which limitations may be relaxed. This Order/General Permit is consistent with applicable anti-backsliding requirements. Effluent limitations in this Order are at least as stringent as those in the previous Order/General Permit.

7. **Monitoring and Reporting Requirements.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in Attachment E.

C. Impaired Water Bodies on CWA 303(d) List. On November 12, 2010, the USEPA approved a revised list of impaired water bodies prepared by the State [hereinafter referred to as the 303(d) list]. The SIP requires final effluent limitations for all 303(d)-listed pollutants to be based on total maximum daily loads (TMDLs) and associated waste load allocations. Discharges to surface waters within the Santa Ana Region that have been identified as impaired are or will be regulated under separate waste discharge requirements (see III. B.), relying on TMDLs and associated waste load allocations where these have been developed.

V. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: Section 122.44(a) requires that permits include applicable technology-based limitations and standards; and Section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs may be established: (1) using USEPA criteria guidance under CWA section 304 (a), supplemented where necessary by other relevant information; (2) on an indicator parameter for the pollutant of concern; or (3) using a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44 (d) (1) (vi).

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6 *All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.*

A. Discharge Prohibitions

The discharge prohibitions are based on the Federal Clean Water Act, Basin Plan, State Water Resources Control Board's plans and policies, U.S. Environmental Protection Agency guidance and regulations, and previous permit Order No. R8-2007-0008 provisions and are consistent with the requirements set for other discharges regulated by NPDES permits adopted by the Regional Water Board.

In accordance with the requirements of the California Ocean Plan, this Order prohibits direct discharges of wastes to the Newport Beach Marine Life Refuge and Irvine Coast Marine Life Refuge Areas of Special Biological Significance.

B. Technology-Based Effluent Limitations

1. Scope and Authority

CWA Section 301 (b) and NPDES regulations at 40 CFR 122.44 require permits to, at a minimum, meet applicable technology-based requirements and any more stringent effluent limitations necessary to meet applicable water quality standards. The CWA requires the USEPA to develop effluent limitations, guidelines and standards (Effluent Limitations Guidelines - ELG) representing application of best practicable treatment control technology (BPT), best available technology economically achievable (BAT), best conventional pollutant control technology (BCT), and best available demonstrated control technology for new sources (NSPS), for specific industrial categories. Where USEPA has not yet developed ELG for a particular industry or a particular pollutant, Section 402 (a) (1) of the CWA and USEPA regulations at 40 CFR 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis. When BPJ is used, the permit writer must consider specific factors outlined at 40 CFR 125.3.

2. Applicable Technology-Based Effluent Limitations

Effluent limitations guidelines have not been developed for the category of dischargers authorized to discharge by this Order. However, since authorized dischargers are discharging treated wastewaters, it is appropriate to establish technology-based effluent limitations using BPJ. The Order establishes technology-based effluent limitations for several pollutants.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and Section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) 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, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in Section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Order authorizes certain discharges to inland surface waters, enclosed bays and estuaries, and the Pacific Ocean within the Santa Ana Region. Beneficial uses of these receiving waters, as designated by the Basin Plan and the Ocean Plan, are described in Section II, Findings, of the Order. The water quality criteria applicable to these receiving waters are established by the NTR, CTR, Basin Plan and the Ocean Plan.

a. The Basin Plan specifies narrative and numeric water quality objectives applicable to surface water as follows.

   TDS and TIN: TDS and TIN limitations are specified in the Order for discharges to surface waters. The proposed TDS/TIN limits for direct discharges into surface waters within the Santa Ana Region are based on the objectives specified in Table 4-1 of the Basin Plan, as amended.

   In accordance with 40 CFR Section 122.45(d), there may be instances in which the basis for a limit for a particular continuous discharge may be impracticable to be stated as a maximum daily, average weekly, or average monthly effluent

limitation. The Regional Water Board has determined that it is not practicable to express TDS and TIN effluent limitations as average weekly and average monthly effluent limitations because the TDS and TIN objectives in the Basin Plan were established to protect the underlying groundwater. Consequently, a 12-month average period is more appropriate.

b. CTR and SIP

The California Toxics Rule (CTR) and State Implementation Policy (SIP) specify numeric objectives for toxic substances and the procedures whereby these objectives are to be implemented. The procedures include those used to conduct reasonable potential analysis to determine the need for effluent limitations for priority and non-priority pollutants.

The CTR specifies numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for 57 priority toxic pollutants. These criteria apply to inland surface waters and enclosed bays and estuaries within the Santa Ana Region.

The Ocean Plan establishes water quality criteria for 21 pollutants for protection of aquatic life and for 62 pollutants for protection of human health.

3. Determining the Need for WQBELs

NPDES regulations at 40 CFR 122.44 (d) (1) (i) require permits to include WQBELs for all pollutants (non-priority or priority) "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any narrative or numeric criteria within a State water quality standard" (have Reasonable Potential). Thus, assessing whether a pollutant has Reasonable Potential is the fundamental step in determining whether or not a WQBEL is required.

4. WQBEL Calculations

Discharge limitations for lead are also included in the Order. For discharges to fresh water and enclosed bays and estuaries, the limits are based on the California Toxics Rule lead objectives. For freshwater, the objectives are equations in which hardness is the variable. The actual numeric value of the objectives is calculated using hardness measurements. To determine the effluent limitation for lead for each freshwater discharge, and to facilitate the determination of compliance, a fixed effluent hardness value will be used in the objective equations. Federal regulations require that the effluent limits for metals be expressed as the total recoverable form. To comply with this requirement, the dissolved criteria are translated into total recoverable effluent limits using ratios of the total recoverable metals to dissolved metals (t/d) concentrations. The State Implementation Policy stipulates that in the absence of site-specific information, the conversion factors cited in the CTR should

be used as the t/d translators. The Order includes a tabulation of calculated effluent limits for lead corresponding to fixed hardness values (20 through 400 milligrams per liter) (see Attachment "B"). The calculations for arriving at the effluent limits for lead are in the Regional Water Board's file for the general groundwater cleanup permit. At sites polluted with leaded gasoline, the discharger is required to propose the hardness value that will be used in determining the appropriate numeric limit for the discharge. The fixed hardness value, which shall be based on the 5th percentile of effluent hardness measurements or the ambient receiving water hardness measurements (whichever is more restrictive), shall be determined and submitted for approval by the Executive Officer of the Regional Water Board. Upon approval of the hardness value for the discharge, the effluent limit for lead discharges to freshwater bodies is determined from the table. For ocean water discharges, the limits for lead are based on the California Ocean Plan.

Step 6 of the permit limit calculation procedure specified in the SIP stipulates that the average monthly effluent limitation is set equal to the effluent concentration allowance[7]. Where there is no mixing zone allowance and a California Toxics Rule human health objective applies, the effluent concentration allowance is equal to the applicable human health objective. Therefore, in these circumstances the average monthly limit (AML) is equal to the human health objective. The SIP stipulates that where receiving waters are designated with the municipal water supply beneficial use (MUN), the human health objective for the consumption of water and organisms applies in calculating the effluent limitation; where the water is excepted from MUN, the human health objective for the consumption of organisms only applies. This Order includes effluent limits for discharges to receiving waters that are designated MUN and for those that are not. For discharges to receiving waters designated MUN, the AMLs were taken either from the California Toxics Rule human health objectives for the consumption of water and organisms or from the CDPH' MCL. Each AML effluent limitation was multiplied by a 2.01 factor to determine the maximum daily concentration effluent limit. This factor is the average monthly effluent limit multiplier taken from Table 2 of the Policy. The multiplier corresponds to a coefficient of variation of 0.6 and number of samples equal to 4. For receiving waters not designated MUN, the AML were taken either from the California Toxics Rule human health objectives for the consumption of organisms only or from the CDPH' MCLs for the protection of public health. The same multiplier factor (2.01) was used to derive the maximum daily effluent limit. The Order includes average monthly limit and maximum daily limits as required by federal regulations and the State Board's Policy.

No mixing zone allowance is included in the calculation of effluent limits in this Order and, consequently, compliance with the effluent limits is required to be determined at

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7 *The Effluent Concentration Allowance (ECA) is a value derived from the water quality 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 U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).*

the end of the discharge pipe. If a discharger requests that a mixing zone allowance be included in the determination of appropriate effluent limits, consideration of an individual permit will be required.

5. Whole Effluent Toxicity (WET)

This Order does not specify numeric WET limits. However, the Order requires that the discharge shall not result in acute toxicity in ambient receiving waters. The effluent is deemed to cause acute toxicity when the toxicity test of 100% effluent as required in monitoring and reporting program, results in failure of the test as determined using the pass or fail test protocol specified in Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms (EPA/821-R-02-012, October 2002).

D. Best Professional Judgment-Based Effluent Limitations

The limits for total petroleum hydrocarbons, toluene, ethylbenzene, xylenes, 1,2–Dichloroethylene and naphthalene are carried over from the previous permit and are based on Best Professional Judgment.

Since 1991, the same effluent limits for 1,2–Dichloroethylene have been included in permits regulating these discharges. However in 2003, effluent lirnitations for the two isomers (Cis and Trans) that make up 1,2–Dichloroethylene were added. To avoid triggering the antibacksliding provisions of the federal regulations, the effluent limitations for 1,2–Dichloroethylene are retained, with the specific condition that the sum of the isomers Cis 1,2–Dichloroethylene and trans 1,2–Dichloroethylene shall not exceed the effluent limitations for 1,2–Dichloroethylene.

This Order specifies limits for methyl isobutyl ketone (MIBK), Tert Butyl Alcohol (TBA), 1,4-dioxane, and methyl ethyl ketone (MEK) that are the same as those specified in Order No. R8-2007-0008 (with the exception of 1,4-dioxane) and were based on notification levels identified by the California Department of Public Health (CDPH)/Office of Environmental Health Hazard Assessment (OEHHA). (In the case of MEK, the notification level is for methyl isobutyl ketone (MIBK), which is in the same class of liquid organic compounds as MEK). The notification level for 1,4-dioxane was revised by CDPH in November 2010 and is included in this Order.

CDPH replaced the notification level for perchlorate with an MCL on October 18, 2007. The limit for perchlorate in this Order is based on this new MCL.

D. Discharge Specifications

Discharge limitations are included in this Order for those other chemicals of concern that typically pollute groundwater at service stations and similar sites in the Santa Ana Region. In addition, the monitoring program includes analyses for additional constituents to determine the overall impact of individual discharges and to screen for unexpected chemicals.

Discharge Limitations established by the Order require authorized dischargers to compare effluent data, generated through routine monitoring, to effluent limitations. Exceedance of any of the specified effluent limitations triggers mandatory minimum penalties, accelerated monitoring for certain constituents and may lead to discontinuance of coverage under the General Permit. The Discharge Specifications impose specific effluent limitations, assuring that authorized discharges are not creating adverse impacts on receiving water quality. When adverse impacts are highlighted following exceedance of an effluent limitation(s), dischargers are directed to confirm the findings, to mitigate impacts, to sewer or stop the discharge and/or to seek coverage under an individual NPDES permit.

E. Final Effluent Limitations

1. Satisfaction of Anti-Backsliding Requirements

   All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order. See also D, above.

2. Satisfaction of Antidegradation Policy

   Discharges in conformance with the requirements of this Order will not result in a lowering of water quality and therefore conform to antidegradation requirements specified in Resolution No. 68-16, which incorporates the federal antidegradation policy at 40 CFR 131.12 where, as here, it is applicable.

3. Stringency of Requirements for Individual Pollutants

   Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR Section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. Apart from certain standards changes resulting from the N/TDS Basin Plan amendment, all beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

4. Summary of Final Effluent Limitations:

Final effluent limitations for discharges into receiving waters designated MUN are based on the most restrictive value of either CTR Human Health Criteria (water and organisims), CDPH MCLs, or Best Professional Judgement (BPJ).

Although many surface water bodies within the Santa Ana Region are excepted from the MUN designation, most that receive discharges covered by this Order recharge underlying groundwater management zones with MUN as a beneficial use. Therefore, final effluent limitations for discharges into receiving waters MUN excepted are based on CDPH MCLs, or Best Professional Judgement (BPJ), whichever is more restrictive.

The following table shows the basis for the final effluent limitations for discharges into receiving waters designated MUN. Bolded numbers are the basis of limitations that are based on either CRT Human Health Criteria or CDPH MCLs. The remaining limits were based on BPJ.

Table 2. Limitations Applicable to Discharges into Receiving Waters Designated MUN

BASES OF EFFLUENT LIMITATIONS									
Constituent	Current Limitations		Basis of Limitations						
				CTR (µg/L)				Ocean Plan Table B (µg/L)	
	Maximum Daily Concentration Limit (µg/L)	Average Monthly Concentration Limit (µg/L)	MCL of CDPH (µg/L)	Fresh Water	Salt water	Human Health Water and Organisms	Human Health Organisms only	Daily Max	30-Day Avg
Total Petroleum Hydrocarbons	201	100							
Benzene	2	1	**1**			1.2	71		5.9
Toluene	20.1	10	150			6800	200000		
Xylenes	20.1	10	1750						
Ethylbenzene	20.1	10	300						
Carbon Tetrachloride	0.5	0.25	0.5			**0.25**	4.4		0.9
Dichlorobromomethane	1.13	0.56				**0.56**	46		6.2
Methyl Ethyl Ketone	241.2	120							
Methyl Isobutyl Ketone	241.2	120	***120****						
Methyl Tertiary Butyl Ether (MTBE)	26.1	13	**13**						
Naphthalene	20.1	10	*17**						
Tetrachloroethylene (PCE)	1.6	0.8	5			**0.8**	8.85		2
Trichloroethylene (TCE)	5.4	2.7	5			**2.7**	81		27
1,1-Dichloroethane	10.1	5	**5**						
1,1-Dichloroethylene	0.115	0.057	6			**0.057**	3.2		0.9
1,2-Dichloroethylene (sum of Cis & Trans)	20.1	10							
1,2-Dichloroethylene (cis)	12.1	6	**6**						

Table 2. Limitations Applicable to Discharges into Receiving Waters Designated MUN

BASES OF EFFLUENT LIMITATIONS										
Constituent	Current Limitations		Basis of Limitations							
				CTR (µg/L)				Ocean Plan Table B (µg/L)		
	Maximum Daily Concentration Limit (µg/L)	Average Monthly Concentration Limit (µg/L)	MCL of CDPH (µg/L)	Fresh Water	Salt water	Human Health Water and Organisms	Human Health Organisms only	Daily Max	30-Day Avg	
1,2-Dichloroethylene (trans)	20.1	10	**10**							
1,1,1-Trichloroethane (TCA)	10.1	5	200							
Tert Butyl Alcohol (TBA)	24	12	**12***							
1,4-Dioxane	2	1	**1***							
Perchlorate	12	6	**6**							

*: Notification Level

F. Interim Effluent Limitations – Not Applicable

G. Land Discharge Specifications – Not Applicable

H. Reclamation Specifications – Not Applicable

VI. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

The surface water receiving water limitations in the proposed Order are based upon the water quality objectives contained in the Basin Plan and in the Ocean Plan and are a required part of this Order.

B. Groundwater

The receiving groundwater limitations in the proposed Order are based upon the water quality objectives contained in the Basin Plan.

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 of 40 CFR requires all NPDES permits to specify recording and reporting of monitoring results. Sections 13267 and 13383 of the CWC authorize the Water Boards to require technical and monitoring reports. The MRP, Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

The principal purposes of a monitoring program by a Discharger are to:

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

The MRP is a standard requirement in almost all waste discharge requirements issued by the Regional Water Board, including this Order. It contains definitions of terms, specifies general sampling and analytical protocols, and sets out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES

regulations; the Monitoring is the primary means of ensuring that waste discharge requirements are met. It is also the basis for enforcement actions against dischargers who are in violation of the waste discharge requirements issued by the Regional Water Board. All dischargers enrolled under this general permit will be required to conduct monitoring in accordance with a monitoring program issued by the Executive Officer. Each monitoring and reporting program will be customized for each enrollee based on the characteristics of the groundwater being treated and discharged. The typical required constituents and frequency of analyses are tabulated in the self-monitoring program attached to this general permit as "Attachment E." This monitoring and reporting program will be revised as appropriate. An increase of the parameters or frequency of monitoring will be required when monitoring data show the presence of petroleum hydrocarbons that are not limited in this Order, or toxicity test failures. A reduction of the parameters or frequency of monitoring may be implemented with prior approval of the Executive Officer when monitoring data demonstrate that such reduction is warranted. In accordance with the SIP, **for new dischargers**, this Order requires dischargers applying for coverage to monitor for the 17 congeners specified in the Policy, once during dry weather and once during wet weather for a one-year period. Existing dischargers will not be required to monitor for the 17 congeners if monitoring for these substances has been conducted and nothing has been detected.

A. Influent Monitoring

Influent monitoring is required to determine the effectiveness of the treatment program and assess treatment plant performance.

B. Effluent Monitoring

The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit conditions and to allow ongoing characterization of discharges to determine potential adverse impacts and to determine continued suitability for coverage under this Order. Monitoring requirements are given in the proposed monitoring and reporting program (Attachment E). This provision requires compliance with the monitoring and reporting program, and is based on 40 CFR 122.44(i), 122.62, 122.63 and 124.5. The self-monitoring program is a standard requirement in almost all NPDES permits (including the proposed Order) issued by the Regional Water Board. In addition to containing definitions of terms, it specifies general sampling/analytical protocols and the requirements of reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Regional Water Board's policies. Pollutants to be monitored include all pollutants for which effluent limitations are specified.

In addition to discharge rate, effluent is monitored for hardness, pH, total suspended and total dissolved solids, salinity, and turbidity. Monitoring is also required for certain metals and other priority, toxic pollutants that have water quality criteria established by the NTR, CTR, and the Ocean Plan and are determined to be present in the groundwater at a specific site location.

C. Whole Effluent Toxicity Testing Requirements

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

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

This Order requires the Discharger to conduct acute toxicity testing of the effluent annually. The Order also requires the Discharger to conduct an Initial Investigation Toxicity Reduction Evaluation (IITRE) program when the acute toxicity test fails. Based on a review of monitoring data, there have been instances in which acute test failures can be attributed to salinity additions required to conduct the test. When this situation occurs, the discharger normally performs additional acute testing of the effluent coupled with testing for all the priority pollutants. If the additional acute testing still fails and the priority pollutant scan shows no pollutants at levels of concern, acute testing is stopped and the acute test failure is presumed to be caused by ionic imbalance in the waste effluent (as described in relevant literature).

D. Receiving Water Monitoring - Not Applicable

The MRP does not require characterization of receiving waters because most oftentimes treated discharges are to storm drains which are distant to receiving waters.

E. Other Monitoring Requirements - Not Applicable

VIII. RATIONALE FOR PROVISIONS

A. Standard Provisions

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 to the general Order. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

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

B. Special Provisions

1. Reopener Provisions

This provision is based on 40 CFR Part 123. The Regional Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new regulations, or adoption of new regulations by the State Board or Regional Water Board, including revisions to the Basin Plan.

2. Special Studies and Additional Monitoring Requirements - Not Applicable

3. Best Management Practices and Pollution Prevention – Not Applicable

4. Construction, Operation, and Maintenance Specifications - Not Applicable.

5. Special Provisions for Municipal Facilities - Not Applicable

6. Other Special Provisions- Not Applicable

7. Compliance Schedules - Not Applicable

IX. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Santa Ana Region is considering the reissuance of these general waste discharge requirements that will serve as an NPDES permit. As a step in the adoption process, the Regional Water Board staff has developed this tentative Order. The Regional Water Board encourages public participation in the Order adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the posting of Notice of Public Hearing at the Regional Water Board website: http://www.waterboards.ca.gov/santaana/board_decisions/tentative_orders/index.shtml on or before June 20, 2012 and publication in the Orange County Register, Press Enterprise and the San Bernardino County Sun for one day.

B. Written Comments

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

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. no later than July 6, 2012 and addressed to:

Gary Stewart
California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501-3348

C. Public Hearing

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

Date:	July 20, 2012
Time:	9:00 A.M.
Location:	City Council Chambers of Loma Linda 25541 Barton Road City of Loma Linda, CA

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

Please be aware that dates and venues may change. Our web address http://www.waterboards.ca.gov/santaana/board_info/agendas/ where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final Order. 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

Permit applications, 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 9:00 a.m. and 3:00 p.m. Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (951) 782-4130.

F. Register of Interested Persons

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

G. Additional Information

Requests for additional information or questions regarding this Order should be directed to Gary Stewart at (951) 782-4379.

ATTACHMENT G - EPA PRIORITY POLLUTANT LIST

EPA PRIORITY POLLUTANT LIST					
Metals		**Acid Extractibles**		**Base/Neutral Extractibles (continuation)**	
1.	Antimony	45.	2-Chlorophenol	91.	Hexachloroethane
2.	Arsenic	46.	2,4-Dichlorophenol	92.	Indeno (1,2,3-cd) Pyrene
3.	Beryllium	47.	2,4-Dimethylphenol	93.	Isophorone
4.	Cadmium	48.	2-Methyl-4,6-Dinitrophenol	94.	Naphthalene
5a.	Chromium (III)	49.	2,4-Dinitrophenol	95.	Nitrobenzene
5b.	Chromium (VI)	50.	2-Nitrophenol	96.	N-Nitrosodimethylamine
6.	Copper	51.	4-Nitrophenol	97.	N-Nitrosodi-N-Propylamine
7.	Lead	52.	3-Methyl-4-Chlorophenol	98.	N-Nitrosodiphenylamine
8.	Mercury	53.	Pentachlorophenol	99.	Phenanthrene
9.	Nickel	54.	Phenol	100.	Pyrene
10.	Selenium	55.	2, 4, 6 – Trichlorophenol	101.	1,2,4-Trichlorobenzene
11.	Silver	**Base/Neutral Extractibles**		**Pesticides**	
12.	Thallium	56.	Acenaphthene	102.	Aldrin
13.	Zinc	57.	Acenaphthylene	103.	Alpha BHC
Miscellaneous		58.	Anthracene	104.	Beta BHC
14.	Cyanide	59.	Benzidine	105.	Delta BHC
15.	Asbestos (not required unless requested)	60.	Benzo (a) Anthracene	106.	Gamma BHC
16.	2,3,7,8-Tetrachlorodibenzo-P-Dioxin (TCDD)	61.	Benzo (a) Pyrene	107.	Chlordane
Volatile Organics		62.	Benzo (b) Fluoranthene	108.	4, 4' - DDT
17.	Acrolein	63.	Benzo (g,h,i) Perylene	109.	4, 4' - DDE
18.	Acrylonitrile	64.	Benzo (k) Fluoranthene	110.	4, 4' - DDD
19.	Benzene	65.	Bis (2-Chloroethoxy) Methane	111.	Dieldrin
20.	Bromoform	66.	Bis (2-Chloroethyl) Ether	112.	Alpha Endosulfan
21.	Carbon Tetrachloride	67.	Bis (2-Chloroisopropyl) Ether	113.	Beta Endosulfan
22.	Chlorobenzene	68.	Bis (2-Ethylhexyl) Phthalate	114.	Endosulfan Sulfate
23.	Chlorodibromomethane	69.	4-Bromophenyl Phenyl Ether	115.	Endrin
24.	Chloroethane	70.	Butylbenzyl Phthalate	116.	Endrin Aldehyde
25.	2-Chloroethyl Vinyl Ether	71.	2-Chloronaphthalene	117.	Heptachlor
26.	Chloroform	72.	4-Chlorophenyl Phenyl Ether	118.	Heptachlor Epoxide
27.	Dichlorobromomethane	73.	Chrysene	119.	PCB 1016
28.	1,1-Dichloroethane	74.	Dibenzo (a,h) Anthracene	120.	PCB 1221
29.	1,2-Dichloroethane	75.	1,2-Dichlorobenzene	121.	PCB 1232
30.	1,1-Dichloroethylene	76.	1,3-Dichlorobenzene	122.	PCB 1242
31.	1,2-Dichloropropane	77.	1,4-Dichlorobenzene	123.	PCB 1248
32.	1,3-Dichloropropylene	78.	3,3'-Dichlorobenzidine	124.	PCB 1254
33.	Ethylbenzene	79.	Diethyl Phthalate	125.	PCB 1260
34.	Methyl Bromide	80.	Dimethyl Phthalate	126.	Toxaphene
35.	Methyl Chloride	81.	Di-n-Butyl Phthalate		
36.	Methylene Chloride	82.	2,4-Dinitrotoluene		
37.	1,1,2,2-Tetrachloroethane	83.	2-6-Dinitrotoluene		
38.	Tetrachloroethylene	84.	Di-n-Octyl Phthalate		
39.	Toluene	85.	1,2-Dipenylhydrazine		
40.	1,2-Trans-Dichloroethylene	86.	Fluoranthene		
41.	1,1,1-Trichloroethane	87.	Fluorene		
42.	1,1,2-Trichloroethane	88.	Hexachlorobenzene		
43.	Trichloroethylene	89.	Hexachlorobutadiene		
44.	Vinyl Chloride	90.	Hexachlorocyclopentadiene		

ATTACHMENT H – MINIMUM LEVELS

MINIMUM LEVELS IN PPB (µg/l)

Table 1- VOLATILE SUBSTANCES[1]	GC	GCMS
Acrolein	2.0	5
Acrylonitrile	2.0	2
Benzene	0.5	2
Bromoform	0.5	2
Carbon Tetrachloride	0.5	2
Chlorobenzene	0.5	2
Chlorodibromomethane	0.5	2
Chloroethane	0.5	2
Chloroform	0.5	2
Dichlorobromomethane	0.5	2
1,1 Dichloroethane	0.5	1
1,2 Dichloroethane	0.5	2
1,1 Dichloroethylene	0.5	2
1,2 Dichloropropane	0.5	1
1,3 Dichloropropylene (volatile)	0.5	2
Ethylbenzene	0.5	2
Methyl Bromide (*Bromomethane*)	1.0	2
Methyl Chloride (*Chloromethane*)	0.5	2
Methylene Chloride (*Dichloromethane*)	0.5	2
1,1,2,2 Tetrachloroethane	0.5	1
Tetrachloroethylene	0.5	2
Toluene	0.5	2
trans-1,2 Dichloroethylene	0.5	1
1,1,1 Trichloroethane	0.5	2
1,1,2 Trichloroethane	0.5	2
Trichloroethylene	0.5	2
Vinyl Chloride	0.5	2
1,2 Dichlorobenzene (volatile)	0.5	2
1,3 Dichlorobenzene (volatile)	0.5	2
1,4 Dichlorobenzene (volatile)	0.5	2

Selection and Use of Appropriate ML Value:

ML Selection: When there is more than one ML value for a given substance, the discharger may select any one of those ML values, and their associated analytical methods, listed in this Attachment that are below the calculated effluent limitation for compliance determination. If no ML value is below the effluent limitation, then the discharger shall select the lowest ML value, and its associated analytical method, listed in the PQL Table.

ML Usage: The ML value in this Attachment represents the lowest quantifiable concentration in a sample based on the proper application of all method-based analytical procedures and the absence of any matrix interferences. Assuming that all method-specific analytical steps are followed, the ML value will also represent, after the appropriate application of method-specific factors, the lowest standard in the calibration curve for that specific analytical technique. Common analytical practices sometimes require different treatment of the sample relative to calibration standards.
Note: chemical names in parenthesis and italicized is another name for the constituent.

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

MINIMUM LEVELS IN PPB (µg/l)

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

MINIMUM LEVELS IN PPB (µg/l)

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

Table 3– INORGANICS[4]	FAA	GFAA	ICP	ICPMS	SPGFAA	HYDRIDE	CVAA	COLOR	DCP
Antimony	10	5	50	0.5	5	0.5			1000
Arsenic		2	10	2	2	1		20	1000
Beryllium	20	0.5	2	0.5	1				1000
Cadmium	10	0.5	10	0.25	0.5				1000
Chromium (total)	50	2	10	0.5	1				1000
Chromium VI	5							10	
Copper	25	5	10	0.5	2				1000
Lead	20	5	5	0.5	2				10000
Mercury				0.5			0.2		
Nickel	50	5	20	1	5				1000
Selenium		5	10	2	5	1			1000
Silver	10	1	10	0.25	2				1000
Thallium	10	2	10	1	5				1000
Zinc	20		20	1	10				1000
Cyanide								5	

2 *With the exception of phenol by colorimetric technique, the normal method-specific factor for these substances is 1000, therefore, the lowest standards concentration in the calibration curve is equal to the above ML value for each substance multiplied by 1000.*

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

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

MINIMUM LEVELS IN PPB (µg/l)

Table 4- PESTICIDES – PCBs[5]	GC
Aldrin	0.005
alpha–BHC (*a-Hexachloro-cyclohexane*)	0.01
beta–BHC (*b-Hexachloro-cyclohexane*)	0.005
Gamma–BHC (*Lindane; g-Hexachloro-cyclohexane*)	0.02
Delta-BHC (*d-Hexachloro-cyclohexane*)	0.005
Chlordane	0.1
4,4'-DDT	0.01
4,4'-DDE	0.05
4,4'-DDD	0.05
Dieldrin	0.01
Alpha-Endosulfan	0.02
Beta-Endosulfan	0.01
Endosulfan Sulfate	0.05
Endrin	0.01
Endrin Aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
PCB 1016	0.5
PCB 1221	0.5
PCB 1232	0.5
PCB 1242	0.5
PCB 1248	0.5
PCB 1254	0.5
PCB 1260	0.5
Toxaphene	0.5

Techniques:
GC - Gas Chromatography
GCMS - Gas Chromatography/Mass Spectrometry
HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)
LC - High Pressure Liquid Chromatography
FAA - Flame Atomic Absorption
GFAA - Graphite Furnace Atomic Absorption
HYDRIDE - Gaseous Hydride Atomic Absorption
CVAA - Cold Vapor Atomic Absorption
ICP - Inductively Coupled Plasma
ICPMS - Inductively Coupled Plasma/Mass Spectrometry
SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)
DCP - Direct Current Plasma
COLOR - Colorimetric

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

California Regional Water Quality Control Board
Santa Ana Region

NOTICE OF INTENT

TO COMPLY WITH THE TERMS AND CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE TREATED GROUNDWATER POLLUTED BY PETROLEUM HYDROCARBONS, SOLVENTS, METALS AND/OR SALTS
(Order No. R8-2012-0027, NPDES No. CAG918001)

I. PERMITTEE (*Person/Agency Responsible for the Discharge*)

Agency/Company Name: _____

Address: _____

Street *City* *State* *ZIP*

Contact Person: _____ Phone :(_____)_____

II. **FACILITY**

Name: _____

Location: _____

Street *City* *State* *ZIP*

Contact Person: _____ Phone :(_____)_____

a. Projected Flow Rate (*gpd*):_____, b. Receiving Water (*identify*):_____

III. BILLING INFORMATION (*Where annual fee invoices should be sent*)

Agency/Company Name: _____

Address: _____

Street *City* *State* *ZIP*

Contact Person: _____ Phone :(_____)_____

IV. INDICATE EXISTING PERMIT NUMBER: (*if applicable*)

a. Individual permit Order No. _____ NPDES No. _____

b. General Permit Enrollee No. R8-2007-0008-_____

V. CERTIFICATION:

I certify under penalty of law that I am an authorized representative of the permittee and that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the permittee will comply with the terms and conditions stipulated in Order No. R8-2012-0027 including the monitoring and reporting program issued by the Executive Officer of the Regional Board.

Name and Official Title: _____
(type or print)

Signature: _____ Date: _____

NEW DISCHARGERS MUST SUBMIT THE FOLLOWING INFORMATION WITH THEIR APPLICATION (NOI)

1. A site characterization study that defines the onsite contaminants and their properties and the three-dimensional extent and concentration of contaminants in the subsurface, and includes a description of the geologic and hydrologic factors that control the migration of the contaminants.

2. A proposed fixed hardness value for those sites polluted with leaded gasoline based on the 5th percentile of effluent hardness measurements or the average ambient receiving water hardness measurements, for approval by the Executive Officer of the Regional Board.

3. A report including the following:

   a. Chemical analysis of the untreated groundwater. Representative groundwater samples shall be analyzed for organic pollutants using EPA method 8260B, priority pollutants, and including total dissolved solids, total inorganic nitrogen, hardness, 1,4-dioxane and perchlorate. Test results shall be reported with Minimum levels (ML) and method detection limit (MDL);

   b. The name of the receiving water;

   c. The estimated average and maximum daily flow rates;

   d. A map showing the path from the point of initial discharge to its terminus point;

   e. A list of known or suspected leaking underground tanks and other facilities or operations that have, or may have impacted the quality of the underlying groundwater within the expected radius of influence.

   f. A discussion of the proposed cleanup project, including a review of the extraction system design and the known location of free product and dissolved product plumes;

   g. A description of the proposed treatment system and a certification report on the adequacy of each component of the proposed treatment system. This certification report shall contain a requirement-by-requirement analysis, based on accepted engineering practice, of how the process(es) and physical design(s) of the treatment system will ensure compliance with this Order. The design engineer shall affix his/her signature and engineering license number to this certification report. The report(s) shall also certify the following:

      (1) all treatment facility startup and operation instruction manuals are adequate and available to operating personnel;

      (2) all treatment facility maintenance and testing schedules are included in the treatment facility operation and maintenance manual (O&M Manual), which shall be kept readily accessible to onsite operating personnel; and

(3) Influent and effluent sampling locations and ports are located in areas where samples representative of the waste stream to be monitored can be obtained.

h. A discussion of a plan for the prevention of run-on, interception and diversion of runoff, and prevention of infiltration and runoff from contaminated soils stored on-site, if the discharge is associated with a groundwater remediation project and soils containing petroleum projects or other pollutants will be maintained on-site.

i. Any other information deemed necessary by the Executive Officer.

LEAD EFFLUENT LIMIT TABLE				
Hardness	For Discharges to surface waters not within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches		For Discharges to surface waters within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches	
	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)
20	0.67	0.33	4.20	2.10
21	0.72	0.36	4.44	2.21
22	0.76	0.38	4.68	2.33
23	0.80	0.40	4.92	2.45
24	0.85	0.42	5.17	2.57
25	0.89	0.45	5.41	2.70
26	0.94	0.47	5.65	2.82
27	0.98	0.49	5.90	2.94
28	1.03	0.51	6.14	3.06
29	1.08	0.54	6.39	3.19
30	1.13	0.56	6.64	3.31
31	1.17	0.59	6.89	3.43
32	1.22	0.61	7.14	3.56
33	1.27	0.63	7.39	3.68
34	1.32	0.66	7.64	3.81
35	1.37	0.68	7.89	3.93
36	1.42	0.71	8.14	4.06
37	1.47	0.73	8.40	4.18
38	1.52	0.76	8.65	4.31
39	1.57	0.78	8.90	4.44
40	1.62	0.81	9.16	4.57
41	1.68	0.84	9.42	4.69
42	1.73	0.86	9.67	4.82
43	1.78	0.89	9.93	4.95
44	1.83	0.91	10.19	5.08
45	1.89	0.94	10.44	5.21
46	1.94	0.97	10.70	5.33
47	1.99	0.99	10.96	5.46
48	2.05	1.02	11.22	5.59
49	2.10	1.05	11.48	5.72
50	2.16	1.08	11.74	5.85
51	2.21	1.10	12.00	5.98
52	2.27	1.13	12.26	6.11
53	2.32	1.16	12.52	6.24
54	2.38	1.19	12.79	6.37
55	2.44	1.21	13.05	6.50
56	2.49	1.24	13.31	6.63
57	2.55	1.27	13.58	6.77
58	2.61	1.30	13.84	6.90
59	2.66	1.33	14.10	7.03
60	2.72	1.36	14.37	7.16
61	2.78	1.39	14.63	7.29
62	2.84	1.41	14.90	7.42
63	2.90	1.44	15.16	7.56
64	2.95	1.47	15.43	7.69
65	3.01	1.50	15.69	7.82
66	3.07	1.53	15.96	7.95
67	3.13	1.56	16.23	8.09
68	3.19	1.59	16.49	8.22
69	3.25	1.62	16.76	8.35
70	3.31	1.65	17.03	8.49
71	3.37	1.68	17.30	8.62
72	3.43	1.71	17.56	8.75
73	3.49	1.74	17.83	8.89
74	3.55	1.77	18.10	9.02
75	3.62	1.80	18.37	9.16

LEAD EFFLUENT LIMIT TABLE				
Hardness	For Discharges to surface waters not within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches		For Discharges to surface waters within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches	
	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)
76	3.68	1.83	18.64	9.29
77	3.74	1.86	18.91	9.42
78	3.80	1.89	19.18	9.56
79	3.86	1.93	19.45	9.69
80	3.93	1.96	19.72	9.83
81	3.99	1.99	19.99	9.96
82	4.05	2.02	20.26	10.10
83	4.11	2.05	20.53	10.23
84	4.18	2.08	20.80	10.37
85	4.24	2.11	21.07	10.50
86	4.30	2.14	21.34	10.64
87	4.37	2.18	21.61	10.77
88	4.43	2.21	21.89	10.91
89	4.50	2.24	22.16	11.04
90	4.56	2.27	22.43	11.18
91	4.62	2.30	22.70	11.31
92	4.69	2.34	22.97	11.45
93	4.75	2.37	23.25	11.59
94	4.82	2.40	23.52	11.72
95	4.88	2.43	23.79	11.86
96	4.95	2.47	24.07	11.99
97	5.02	2.50	24.34	12.13
98	5.08	2.53	24.61	12.27
99	5.15	2.57	24.89	12.40
100	5.21	2.60	25.16	12.54
101	5.28	2.63	25.43	12.68
102	5.35	2.67	25.71	12.81
103	5.41	2.70	25.98	12.95
104	5.48	2.73	26.26	13.09
105	5.55	2.77	26.53	13.22
106	5.62	2.80	26.81	13.36
107	5.68	2.83	27.08	13.50
108	5.75	2.87	27.36	13.63
109	5.82	2.90	27.63	13.77
110	5.89	2.93	27.91	13.91
111	5.96	2.97	28.18	14.05
112	6.02	3.00	28.46	14.18
113	6.09	3.04	28.73	14.32
114	6.16	3.07	29.01	14.46
115	6.23	3.10	29.29	14.60
116	6.30	3.14	29.56	14.73
117	6.37	3.17	29.84	14.87
118	6.44	3.21	30.11	15.01
119	6.51	3.24	30.39	15.15
120	6.58	3.28	30.67	15.28
121	6.65	3.31	30.94	15.42
122	6.72	3.35	31.22	15.56
123	6.79	3.38	31.50	15.70
124	6.86	3.42	31.78	15.84
125	6.93	3.45	32.05	15.97
126	7.00	3.49	32.33	16.11
127	7.07	3.52	32.61	16.25
128	7.14	3.56	32.88	16.39
129	7.21	3.59	33.16	16.53
130	7.28	3.63	33.44	16.67
131	7.35	3.66	33.72	16.80

LEAD EFFLUENT LIMIT TABLE				
Hardness	For Discharges to surface waters not within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches		For Discharges to surface waters within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches	
	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)
132	7.43	3.70	33.99	16.94
133	7.50	3.74	34.27	17.08
134	7.57	3.77	34.55	17.22
135	7.64	3.81	34.83	17.36
136	7.71	3.84	35.11	17.50
137	7.79	3.88	35.39	17.64
138	7.86	3.92	35.66	17.77
139	7.93	3.95	35.94	17.91
140	8.00	3.99	36.22	18.05
141	8.08	4.02	36.50	18.19
142	8.15	4.06	36.78	18.33
143	8.22	4.10	37.06	18.47
144	8.29	4.13	37.34	18.61
145	8.37	4.17	37.61	18.75
146	8.44	4.21	37.89	18.89
147	8.52	4.24	38.17	19.02
148	8.59	4.28	38.45	19.16
149	8.66	4.32	38.73	19.30
150	8.74	4.35	39.01	19.44
151	8.81	4.39	39.29	19.58
152	8.89	4.43	39.57	19.72
153	8.96	4.47	39.85	19.86
154	9.04	4.50	40.13	20.00
155	9.11	4.54	40.41	20.14
156	9.18	4.58	40.69	20.28
157	9.26	4.61	40.97	20.42
158	9.33	4.65	41.25	20.56
159	9.41	4.69	41.53	20.70
160	9.49	4.73	41.81	20.84
161	9.56	4.77	42.09	20.98
162	9.64	4.80	42.37	21.11
163	9.71	4.84	42.65	21.25
164	9.79	4.88	42.93	21.39
165	9.86	4.92	43.21	21.53
166	9.94	4.95	43.49	21.67
167	10.02	4.99	43.77	21.81
168	10.09	5.03	44.05	21.95
169	10.17	5.07	44.33	22.09
170	10.25	5.11	44.61	22.23
171	10.32	5.15	44.89	22.37
172	10.40	5.18	45.17	22.51
173	10.48	5.22	45.45	22.65
174	10.55	5.26	45.73	22.79
175	10.63	5.30	46.01	22.93
176	10.71	5.34	46.29	23.07
177	10.79	5.38	46.57	23.21
178	10.86	5.41	46.85	23.35
179	10.94	5.45	47.13	23.49
180	11.02	5.49	47.41	23.63
181	11.10	5.53	47.70	23.77
182	11.18	5.57	47.98	23.91
183	11.25	5.61	48.26	24.05
184	11.33	5.65	48.54	24.19
185	11.41	5.69	48.82	24.33
186	11.49	5.73	49.10	24.47
187	11.57	5.77	49.38	24.61

LEAD EFFLUENT LIMIT TABLE				
Hardness	For Discharges to surface waters not within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches		For Discharges to surface waters within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches	
	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)
188	11.65	5.80	49.66	24.75
189	11.73	5.84	49.94	24.89
190	11.81	5.88	50.23	25.03
191	11.88	5.92	50.51	25.17
192	11.96	5.96	50.79	25.31
193	12.04	6.00	51.07	25.45
194	12.12	6.04	51.35	25.59
195	12.20	6.08	51.63	25.73
196	12.28	6.12	51.91	25.87
197	12.36	6.16	52.20	26.01
198	12.44	6.20	52.48	26.15
199	12.52	6.24	52.76	26.29
200	12.60	6.28	53.04	26.43
201	12.68	6.32	53.32	26.58
202	12.76	6.36	53.60	26.72
203	12.84	6.40	53.89	26.86
204	12.92	6.44	54.17	27.00
205	13.00	6.48	54.45	27.14
206	13.08	6.52	54.73	27.28
207	13.17	6.56	55.01	27.42
208	13.25	6.60	55.29	27.56
209	13.33	6.64	55.58	27.70
210	13.41	6.68	55.86	27.84
211	13.49	6.72	56.14	27.98
212	13.57	6.76	56.42	28.12
213	13.65	6.80	56.70	28.26
214	13.74	6.85	56.99	28.40
215	13.82	6.89	57.27	28.54
216	13.90	6.93	57.55	28.68
217	13.98	6.97	57.83	28.82
218	14.06	7.01	58.11	28.96
219	14.14	7.05	58.40	29.10
220	14.23	7.09	58.68	29.24
221	14.31	7.13	58.96	29.38
222	14.39	7.17	59.24	29.53
223	14.47	7.21	59.52	29.67
224	14.56	7.26	59.81	29.81
225	14.64	7.30	60.09	29.95
226	14.72	7.34	60.37	30.09
227	14.81	7.38	60.65	30.23
228	14.89	7.42	60.93	30.37
229	14.97	7.46	61.22	30.51
230	15.06	7.50	61.50	30.65
231	15.14	7.55	61.78	30.79
232	15.22	7.59	62.06	30.93
233	15.31	7.63	62.35	31.07
234	15.39	7.67	62.63	31.21
235	15.47	7.71	62.91	31.35
236	15.56	7.75	63.19	31.49
237	15.64	7.80	63.47	31.64
238	15.73	7.84	63.76	31.78
239	15.81	7.88	64.04	31.92
240	15.89	7.92	64.32	32.06
241	15.98	7.96	64.60	32.20
242	16.06	8.01	64.89	32.34
243	16.15	8.05	65.17	32.48

LEAD EFFLUENT LIMIT TABLE				
Hardness	For Discharges to surface waters not within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches		For Discharges to surface waters within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches	
	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)
244	16.23	8.09	65.45	32.62
245	16.32	8.13	65.73	32.76
246	16.40	8.17	66.01	32.90
247	16.49	8.22	66.30	33.04
248	16.57	8.26	66.58	33.18
249	16.66	8.30	66.86	33.32
250	16.74	8.34	67.14	33.46
251	16.83	8.39	67.43	33.61
252	16.91	8.43	67.71	33.75
253	17.00	8.47	67.99	33.89
254	17.08	8.51	68.27	34.03
255	17.17	8.56	68.56	34.17
256	17.25	8.60	68.84	34.31
257	17.34	8.64	69.12	34.45
258	17.43	8.69	69.40	34.59
259	17.51	8.73	69.69	34.73
260	17.60	8.77	69.97	34.87
261	17.68	8.81	70.25	35.01
262	17.77	8.86	70.53	35.15
263	17.86	8.90	70.82	35.29
264	17.94	8.94	71.10	35.43
265	18.03	8.99	71.38	35.58
266	18.12	9.03	71.66	35.72
267	18.20	9.07	71.95	35.86
268	18.29	9.12	72.23	36.00
269	18.38	9.16	72.51	36.14
270	18.46	9.20	72.79	36.28
271	18.55	9.25	73.08	36.42
272	18.64	9.29	73.36	36.56
273	18.73	9.33	73.64	36.70
274	18.81	9.38	73.92	36.84
275	18.90	9.42	74.20	36.98
276	18.99	9.46	74.49	37.12
277	19.08	9.51	74.77	37.26
278	19.16	9.55	75.05	37.41
279	19.25	9.59	75.33	37.55
280	19.34	9.64	75.62	37.69
281	19.43	9.68	75.90	37.83
282	19.52	9.73	76.18	37.97
283	19.60	9.77	76.46	38.11
284	19.69	9.81	76.75	38.25
285	19.78	9.86	77.03	38.39
286	19.87	9.90	77.31	38.53
287	19.96	9.95	77.59	38.67
288	20.05	9.99	77.88	38.81
289	20.13	10.03	78.16	38.95
290	20.22	10.08	78.44	39.09
291	20.31	10.12	78.72	39.23
292	20.40	10.17	79.01	39.38
293	20.49	10.21	79.29	39.52
294	20.58	10.26	79.57	39.66
295	20.67	10.30	79.85	39.80
296	20.76	10.35	80.13	39.94
297	20.85	10.39	80.42	40.08
298	20.94	10.43	80.70	40.22
299	21.03	10.48	80.98	40.36

LEAD EFFLUENT LIMIT TABLE				
Hardness	For Discharges to surface waters not within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches		For Discharges to surface waters within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches	
	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)
300	21.11	10.52	81.26	40.50
301	21.20	10.57	81.55	40.64
302	21.29	10.61	81.83	40.78
303	21.38	10.66	82.11	40.92
304	21.47	10.70	82.39	41.06
305	21.56	10.75	82.67	41.20
306	21.65	10.79	82.96	41.35
307	21.74	10.84	83.24	41.49
308	21.83	10.88	83.52	41.63
309	21.92	10.93	83.80	41.77
310	22.02	10.97	84.09	41.91
311	22.11	11.02	84.37	42.05
312	22.20	11.06	84.65	42.19
313	22.29	11.11	84.93	42.33
314	22.38	11.15	85.21	42.47
315	22.47	11.20	85.50	42.61
316	22.56	11.24	85.78	42.75
317	22.65	11.29	86.06	42.89
318	22.74	11.33	86.34	43.03
319	22.83	11.38	86.62	43.17
320	22.92	11.42	86.91	43.31
321	23.01	11.47	87.19	43.45
322	23.11	11.52	87.47	43.59
323	23.20	11.56	87.75	43.74
324	23.29	11.61	88.03	43.88
325	23.38	11.65	88.32	44.02
326	23.47	11.70	88.60	44.16
327	23.56	11.74	88.88	44.30
328	23.65	11.79	89.16	44.44
329	23.75	11.84	89.44	44.58
330	23.84	11.88	89.73	44.72
331	23.93	11.93	90.01	44.86
332	24.02	11.97	90.29	45.00
333	24.11	12.02	90.57	45.14
334	24.21	12.06	90.85	45.28
335	24.30	12.11	91.14	45.42
336	24.39	12.16	91.42	45.56
337	24.48	12.20	91.70	45.70
338	24.58	12.25	91.98	45.84
339	24.67	12.30	92.26	45.98
340	24.76	12.34	92.55	46.12
341	24.85	12.39	92.83	46.26
342	24.95	12.43	93.11	46.40
343	25.04	12.48	93.39	46.55
344	25.13	12.53	93.67	46.69
345	25.23	12.57	93.95	46.83
346	25.32	12.62	94.24	46.97
347	25.41	12.67	94.52	47.11
348	25.51	12.71	94.80	47.25
349	25.60	12.76	95.08	47.39
350	25.69	12.81	95.36	47.53
351	25.79	12.85	95.64	47.67
352	25.88	12.90	95.93	47.81
353	25.97	12.95	96.21	47.95
354	26.07	12.99	96.49	48.09
355	26.16	13.04	96.77	48.23

LEAD EFFLUENT LIMIT TABLE				
Hardness	For Discharges to surface waters not within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches		For Discharges to surface waters within Reach 2, 3, or 4 of the Santa River or Tributaries to these Reaches	
	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)	Maximum Daily Effluent Limit (µg/l)	Average Monthly Effluent Limit (µg/l)
356	26.25	13.09	97.05	48.37
357	26.35	13.13	97.33	48.51
358	26.44	13.18	97.61	48.65
359	26.54	13.23	97.90	48.79
360	26.63	13.27	98.18	48.93
361	26.73	13.32	98.46	49.07
362	26.82	13.37	98.74	49.21
363	26.91	13.41	99.02	49.35
364	27.01	13.46	99.30	49.49
365	27.10	13.51	99.58	49.63
366	27.20	13.55	99.87	49.77
367	27.29	13.60	100.15	49.91
368	27.39	13.65	100.43	50.05
369	27.48	13.70	100.71	50.19
370	27.58	13.74	100.99	50.33
371	27.67	13.79	101.27	50.47
372	27.77	13.84	101.55	50.61
373	27.86	13.89	101.83	50.75
374	27.96	13.93	102.11	50.89
375	28.05	13.98	102.40	51.03
376	28.15	14.03	102.68	51.17
377	28.24	14.08	102.96	51.31
378	28.34	14.12	103.24	51.45
379	28.43	14.17	103.52	51.59
380	28.53	14.22	103.80	51.73
381	28.62	14.27	104.08	51.87
382	28.72	14.31	104.36	52.01
383	28.82	14.36	104.64	52.15
384	28.91	14.41	104.93	52.29
385	29.01	14.46	105.21	52.43
386	29.10	14.50	105.49	52.57
387	29.20	14.55	105.77	52.71
388	29.30	14.60	106.05	52.85
389	29.39	14.65	106.33	52.99
390	29.49	14.70	106.61	53.13
391	29.58	14.74	106.89	53.27
392	29.68	14.79	107.17	53.41
393	29.78	14.84	107.45	53.55
394	29.87	14.89	107.73	53.69
395	29.97	14.94	108.01	53.83
396	30.07	14.98	108.29	53.97
397	30.16	15.03	108.58	54.11
398	30.26	15.08	108.86	54.25
399	30.36	15.13	109.14	54.39
400	30.45	15.18	109.42	54.53

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 (CWC) 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 Quality Control Board (RWQCB), State Water Resources Control Board (SWRCB), 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)*] [*CWC 13383(c)*]:

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)*];

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the CWC, 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)(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)(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)(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 Section 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 permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper 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 Section 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)(i)*];

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

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

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the CWC [*40 CFR §122.41(l)(3)*] [*40 CFR §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 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order [*40 CFR §122.41(j)(4)*] [*40 CFR §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 40 CFR 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, SWRCB, or USEPA within a reasonable time, any information which the Regional Water Board, SWRCB, 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, SWRCB, or USEPA copies of records required to be kept by this Order [*40 CFR §122.41(h)*] [*CWC 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 Section 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 Section 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 Section 122.22(b)(1)*];

   b. The authorization specified 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 Section 122.22(b)(2)*]; and

   c. The written authorization is submitted to the Regional Water Board and State Water Board [*40 CFR Section 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, State Water Board or USEPA prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 CFR Section 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 Section 122.22(d)*].

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order [*40 CFR §122.41(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 SWRCB 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 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board [*40 CFR §122.41(l)(4)(ii)*].

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

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

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

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

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

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

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

F. Planned Changes

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

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

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in this Order nor to notification requirements under 40 CFR Part 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [*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 SWRCB 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 Section 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, SWRCB, or USEPA, the Discharger shall promptly submit such facts or information [*40 CFR §122.41(l)(8)*].

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, 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 Section 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 Section 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 the Order [*40 CFR Section 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 Section 122.42(b)(3)*].

Attachment E – Monitoring and Reporting Program

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM

The Code of Federal Regulations (CFR) at 40 CFR §122.48 requires that all NPDES permits specify monitoring and reporting requirements. CWC Sections 13267 and 13383 also authorize the Regional Water Quality Control Board to require technical and monitoring reports. This Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements that implement the California and federal regulations.

I. GENERAL MONITORING PROVISIONS

A. General Monitoring Provision

1. All sampling and sample preservation shall be in accordance with the current edition of "*Standard Methods for the Examination of Water and Wastewater*" (American Public Health Association).

2. All laboratory analyses shall be performed in accordance with test procedures under 40 CFR 136 (revised as of May 14, 1999) "Guidelines Establishing Test Procedures for the Analysis of Pollutants," promulgated by the United States Environmental Protection Agency (EPA), unless otherwise specified in this MRP. In addition, the Regional Water Board Executive Officer and/or EPA Regional Administrator, at their discretion, may specify test methods that are more sensitive than those specified in 40 CFR 136. (See also I.A.6., below)

3. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the California Department of Public Health in accordance with the provision of Water Code Section 13176, and must include quality assurance/quality control data with their reports, or EPA or at laboratories approved by the Regional Water Board's Executive Officer

4. Whenever the Discharger monitors any pollutant more frequently than is required by this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the discharge monitoring report specified by the Executive Officer.

5. In conformance with federal regulations 40 CFR 122.45(c), analyses to determine compliance with the effluent limitations for metals shall be conducted using the total recoverable method. For Chromium (VI), the dissolved method in conformance with 40 CFR 136 may be used to measure compliance with the Chromium (VI) limitation.

6. For wastewater monitoring:

   a. The discharger shall require its testing laboratory to calibrate the analytical system down to the minimum level (ML)[1] specified in Attachment "I" for priority pollutants with effluent limitations in this Order, unless an alternative minimum level is approved by the Regional Water Board's Executive Officer. When there is more than one ML value for a given substance, the discharger shall use the ML values, and their associated analytical methods, listed in Attachment "I" that are below the calculated effluent limitation. The discharger may select any one of those cited analytical methods for compliance determination. If no ML value is below the effluent limitation, then the lowest ML value and its associated analytical method, listed in Attachment "I" shall be used. Any internal quality control data associated with the sample must be reported when requested by the Executive Officer. The Regional Water Board will reject the quantified laboratory data if quality control data is unavailable or unacceptable.

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

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

      2) Sample results less than the reported ML, but greater than or equal to the laboratory's current Method Detection Limit (MDL)[2], shall be reported as "Detected, but Not Quantified," or "DNQ." The estimated chemical concentration of the sample shall also be reported.

      3) Sample results not detected above the laboratory's MDL shall be reported as "not detected" or "ND."

   c. The Discharger shall submit to the Regional Water Board reports necessary to determine compliance with effluent limitations in this Order and shall follow the chemical nomenclature and sequential order of priority pollutant constituents shown in Attachment "G" – Priority Pollutant Lists. The Discharger shall report with each sample result:

      1) The reporting level achieved by the testing laboratory; and

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1 *Minimum level is the concentration at which the entire analytical system must give a recognizable signal and acceptable 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.*

2 *MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analytical concentration is greater than zero, as defined in 40 CFR 136, Appendix B, revised as of May 14, 1999.*

2) The laboratory's current MDL, as determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999).

d. For receiving water monitoring and for those priority pollutants without effluent limitations, the Discharger shall require its testing laboratory to quantify constituent concentrations to the lowest achievable MDL as determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999). In situations where the most stringent applicable receiving water objective (freshwater or human health (consumption of organisms only), as specified for that pollutant in 40 CFR 131.38[3] is below the minimum level value specified in Attachment "G" and the Discharger cannot achieve an MDL value for that pollutant below the ML value, the Discharger shall submit justification why a lower MDL value cannot be achieved. Justification shall be submitted together with monthly monitoring reports.

7. For non-priority pollutants monitoring, all analytical data shall be reported with identification of practical quantitation levels and with method detection limits, as determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999).

8. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. Duplicate chemical analyses must be conducted on a minimum of ten percent (10%) of the samples, or at least one sample per month, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples. When requested by the Regional Water Board or EPA, the Discharger will participate in the NPDES discharge monitoring report QA performance study.

9. For every item of monitoring data where the requirements are not met, the monitoring report shall include a statement discussing the reasons for noncompliance, the actions undertaken or proposed that will bring the discharge into full compliance with requirements at the earliest time, and an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when compliance with the time schedule has been achieved.

10. The Discharger shall assure that records of all monitoring information are maintained and accessible for a period of at least five years (this retention period supersedes the retention period specified in Section IV.A. of Attachment D) from the date of the sample, report, or application. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or by the request of the Regional Water Board at any time. Records of monitoring information shall include:

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3 *See Federal Register/ Vol. 65, No. 97 / Thursday, May 18, 2000 / Rules and Regulations.*

a. The information listed in Attachment D- IV Standard Provisions – Records, subparagraph B. of this Order;
b. The laboratory which performed the analyses;
c. The date(s) analyses were performed;
d. The individual(s) who performed the analyses;
e. The modification(s) to analytical techniques or methods used;
f. All sampling and analytical results, including
    1) Units of measurement used;
    2) Minimum reporting level for the analysis (minimum level, practical quantitation level (PQL));
    3) Results less than the reporting level but above the method detection limit (MDL);
    4) Data qualifiers and a description of the qualifiers;
    5) Quality control test results (and a written copy of the laboratory quality assurance plan);
    6) Dilution factors, if used; and
    7) Sample matrix type.
g. All monitoring equipment calibration and maintenance records;
h. All original strip charts from continuous monitoring devices;
i. All data used to complete the application for this Order; and,
j. Copies of all reports required by this Order.
k. Electronic data and information generated by the Supervisory Control And Data Acquisition (SCADA) System.

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

12. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. In the event that continuous monitoring equipment is out of service for greater than a 24-hour period, the Discharger shall obtain a representative grab sample each day the equipment is out of service. The Discharger shall correct the cause(s) of failure of the continuous monitoring equipment as soon as practicable. In its monitoring report, the Discharger shall specify the period(s) during which the equipment was out of service and if the problem has not been corrected, shall identify the steps which the Discharger is taking or proposes to take to bring the equipment back into service and the schedule for these actions.

13. Monitoring and reporting shall be in accordance with the following:

a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

b. The monitoring and reporting of influent and effluent shall be done more frequently as necessary to maintain compliance with this Order and or as specified in this Order.

c. Whenever the Discharger monitors any pollutant more frequently than is required by this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the discharge monitoring report specified by the Executive Officer.

d. A "grab" sample is defined as any individual sample collected in less than 15 minutes.

e. A composite sample is defined as a combination of no fewer than eight individual grab samples obtained over the specified sampling period. The volume of each individual grab sample shall be proportional to the discharge flow rate at the time of sampling. The compositing period shall equal the specific sampling period, or 24 hours, if no period is specified.

f. Daily samples shall be collected on each day of the week.

g. Monthly samples shall be collected on any representative day of each month.

h. Quarterly samples: A representative grab sample shall be taken on any representative day of January, April, July, and October and test results shall be reported in micrograms/liter (ug/L) by the last day of the month following the month that the sample was taken.

i. Semi-annual samples shall be collected in January and July.

j. Annual samples shall be collected in accordance with the following schedule:

Table 1. Annual Sampling Schedule

Year	Annual Samples
2012	October
2013	January
2014	April
2015	July
2016	October
2017	January

14. The discharger shall multiply each measured or estimated congener concentration by its respective toxic equivalency factor (TEF) as shown below and report the sum of these values. The discharger shall use the U.S. EPA approved test method 1613 for dioxins and furans. Dioxin testing is required for new dischargers only.

Table 2. Toxic Equivalency Factors for 2,3,7, 8-TCDD Equivalents

Congener	TEF
2,3,7,8-TetraCDD	1
1,2,3,7,8-PentaCDD	1.0
1,2,3,4,7,8-HexaCDD	0.1
1,2,3,6,7,8-HexaCDD	0.1
1,2,3,7,8,9-HexaCDD	0.1
1,2,3,4,6,7,8-HeptaCDD	0.01
OctaCDD	0.0001
2,3,7,8-TetraCDF	0.1
1,2,3,7,8-PentaCDF	0.05
2,3,4,7,8-PentaCDF	0.5
1,2,3,4,7,8-HexaCDF	0.1
1,2,3,6,7,8-HexaCDF	0.1
1,2,3,7,8,9-HexaCDF	0.1
2,3,4,6,7,8-HexaCDF	0.1
1,2,3,4,6,7,8-HeptaCDF	0.01
1,2,3,4,7,8,9-HeptaCDF	0.01
OctaCDF	0.0001

II. MONITORING LOCATIONS

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

III. INFLUENT MONITORING REQUIREMENTS

A grab[4] sample of the influent to the treatment system shall be monitored on a monthly basis for compounds using EPA method 8260B and for total petroleum hydrocarbons.

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4 *A "grab" sample is defined as any individual sample collected in less than 15 minutes.*

IV. EFFLUENT MONITORING REQUIREMENTS

1. The following shall constitute the effluent monitoring program:

Table 3. Effluent Monitoring Requirements

Constituent	Units	Type of Sample	Minimum Frequency of Sampling & Analysis	Required Analytical Test Method and ML
Flow	GPD	------	Continuous	See Sections I.A.2.& I.A.6. above
Total Petroleum Hydrocarbons[5]	µg/L	Grab	Weekly	"
Benzene	µg/L	"	"	"
Toluene	µg/L	"	"	"
Xylene (total)	µg/L	"	"	"
Ethylbenzene	µg/L	"	"	"
Carbon Tetrachloride	µg/L	"	"	"
Chloroform	µg/L	"	"	"
Dichlorobromomethane	µg/L	"	"	"
Methyl Ethyl Ketone	µg/L	"	"	"
Methyl Isobutyl Ketone	µg/L	"	"	"
Methyl Tertiary Butyl Ether (MTBE)	µg/L	"	"	"
Napthalene	µg/L	"	"	"
Tetrachloroethylene (PCE)	µg/L	"	"	"
Trichloroethylene (TCE)	µg/L	"	"	"
1,1-Dichloroethane (1,1-DCA)	µg/L	"	"	"
1,2-Dichloroethane (1,2-DCA)	µg/L	"	"	"
1,1-Dichloroethylene (1,1-DCE)	µg/L	"	"	"
1,2-Dichloroethylene (cis)	µg/L	"	"	"
1,2-Dichloroethylene (trans)	µg/L	"	"	"
1,1,1-Trichloroethane (1,1,1,-TCA)	µg/L	"	"	"
1,4-Dioxane	µg/L	"	"	"
Tert Butyl Alcohol (TBA)	µg/L	"	"	"
Acrolein	µg/L	"	"	"
Acrylonitrile	µg/L	"	"	"
Ethylene Dibromide (EDB)	µg/L	"	"	"
Perchlorate	µg/L	"	"	"
Total Phenols	µg/L	"	"	"
Total Residual Chloride[6]	mg/L	"	"	"
Total Dissolved Solids	mg/L	"	"	"
Total Inorganic Nitrogen (TIN)	mg/L	"	"	"

5 *Total Petroleum Hydrocarbons by method 8015 modified for gasoline and/or diesel, if present.*

6 *If chlorine is used for treatment or disinfection of wastes.*

Table 3. Effluent Monitoring Requirements

Constituent	Units	Type of Sample	Minimum Frequency of Sampling & Analysis	Required Analytical Test Method and ML
Total Phosphorous[7]	mg/L	Grab	Weekly	See Sections I.A.2.& I.A.6. above
Selenium[8]	mg/L	"	"	"
Suspended Solids	mg/L	"	"	"
Sulfide	mg/L	"	"	"
Total Recoverable Lead	mg/L	"	"	"
Hardness	mg/L	"	"	"
2,3,7,8-TetraCDD	µg/L	"	Semi-Annual	"
1,2,3,7,8-PentaCDD	µg/L	"	"	"
1,2,3,4,7,8-HexaCDD	µg/L	"	"	"
1,2,3,6,7,8-HexaCDD	µg/L	"	"	"
1,2,3,7,8,9-HexaCDD	µg/L	"	"	"
1,2,3,4,6,7,8-HeptaCDD	µg/L	"	"	"
OctaCDD	µg/L	"	"	"
2,3,7,8-TetraCDF	µg/L	"	"	"
1,2,3,7,8-PentaCDF	µg/L	"	"	"
2,3,4,7,8-PentaCDF	µg/L	"	"	"
1,2,3,4,7,8-HexaCDF	µg/L	"	"	"
1,2,3,6,7,8-HexaCDF	µg/L	"	"	"
1,2,3,7,8,9-HexaCDF	µg/L	"	"	"
2,3,4,6,7,8-HexaCDF	µg/L	"	"	"
1,2,3,4,6,7,8-HeptaCDF	µg/L	"	"	"
1,2,3,4,7,8,9-HeptaCDF	µg/L	"	"	"
OctaCDF	µg/L	"	"	"
Priority Pollutants (See Attachment G)	µg/L	"	Once during the first year of remediation and upon renewal	"
Toxicity Testing (see Section V., below)	µg/L	"	At the initiation of the project and annually thereafter (See Section I.A.13.j., above)	"
Volatile organic portion of EPA Priority Pollutants (See Attachment G)	µg/L	"	Annually (See Sections I.A.13.j., above and IV. A.2., below)	"

7 *Applicable to those dischargers discharging within the San Diego Creek/Newport Bay Watershed.*

2. The monitoring frequency for those priority pollutants that are detected during the required annual monitoring at a concentration greater than the concentration specified for that pollutant in Attachment I shall be accelerated to quarterly for one year. To return to the monitoring frequency specified, the Discharger shall request and receive approval from the Regional Water Board's Executive Officer or designee.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Toxicity Monitoring Requirements

The discharger shall conduct acute toxicity testing as specified in Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms (EPA/821-R-02-012, October 2002). Using a control and 100% effluent, static renewal survival (pass/fail) tests for 96 hours shall be conducted using the two test species specified in the table below corresponding to the onsite groundwater salinity, for the first required annual test under this permit. Based on the results, the Discharger shall determine the most sensitive test species. For the required succeeding toxicity monitoring, the Discharger shall use the most sensitive species with prior approval from the Regional Board Executive Officer. The Discharger shall submit documentation supporting the Discharger's determination of the most sensitive test species. The effluent tests must be conducted concurrent with reference toxicant tests. The effluent and reference toxicant tests must meet all test acceptability criteria as specified in the acute manual[8]. If the test acceptability criteria are not achieved, then the discharger must re-sample and re-test within 14 days. The test results must be reported according to the acute manual chapter on Report Preparation, and shall be attached to the monitoring reports. The use of alternative methods for measuring acute toxicity may be considered by the Regional Water Board Executive Officer on a case-by-case basis.

Table 4. Test species:

IF THE EFFLUENT OR RECEIVING WATER SALINITY IS:	TEST SPECIES	TEST
Less than 1,000 mg/l salinity	Fathead minnow, *Pimphales promelas*	Larval survival test
	Water flea, *Ceriodaphnia dubia*	Survival test
Equal to or greater than 1,000 mg/l salinity	Silverside, *Menedia beryllina*	Survival Test
	Pacific mysid, *Holmesimysis costata*	Survival Test

8 *"Acute manual" refers to protocols described in "Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms" (EPA/821-R-02-012, October 2002).*

In the event that the required annual toxicity test fails, the Discharger shall stop any discharge of wastewater to waters of the U.S. and shall retest within 14 days of receiving the notice of failure and shall determine the cause of the failure. The discharge of wastewater to waters of the U.S. may not resume until such time that the cause of toxicity is determined and appropriately addressed. Commencement of any discharge shall be with prior approval by the Regional Water Board Executive Officer.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECEIVING WATER MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

2. All analytical data shall be reported with method detection limit[9] (MDLs) and with identification of either reporting level or limits of quantitation (LOQs).

3. Any internal quality control data associated with the sample must be reported when requested by the Executive Officer. The Regional Water Board will reject the quantified laboratory data if quality control data is unavailable or unacceptable.

4. Discharge monitoring data shall be submitted in a format acceptable by the Regional Water Board. Specific reporting format may include preprinted forms and/or electronic media. The results of all monitoring required by this Order shall be reported to the Regional Water Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this order.

5. The Discharger shall tabulate the monitoring data to clearly illustrate compliance and/or noncompliance with the requirements of the Order.

6. The Discharger shall submit to the Regional Water Board reports necessary to determine compliance with effluent limitations in this Order and shall follow the chemical nomenclature and sequential order of priority pollutant constituents shown in Attachment "G" – Priority Pollutant Lists. The Discharger shall report with each sample result:

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9 *The standardized test procedure to be used to determine the method detection limit (MDL) is given at Appendix B, 'Definition and Procedure for the Determination of the Method Detection Limit' of 40 CFR 136.*

a. The reporting level achieved by the testing laboratory; and

b. The laboratory's current MDL, as determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999).

c. For those priority pollutants without effluent limitations, the Discharger shall require its testing laboratory to quantify constituent concentrations to the lowest achievable MDL as determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999). In situations where the most stringent applicable receiving water objective (freshwater or human health (consumption of organisms only), as specified for that pollutant in 40 CFR 131.38[10] is below the minimum level value specified in Attachment "H" and the Discharger cannot achieve an MDL value for that pollutant below or equal to the ML value, the Discharger shall submit justification why a lower MDL value cannot be achieved. Justification shall be submitted together with monthly monitoring reports.

7. For every item of monitoring data where the requirements are not met, the monitoring report shall include a statement discussing the reasons for noncompliance, and of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when compliance with the time schedule has been achieved.

8. For non-priority pollutants monitoring, all analytical data shall be reported with identification of method detection limits, as determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999).

9. The State or Regional Water Board may notify the Discharger to discontinue submittal of hard copies of reports. When such notification is given, the Discharger shall stop submitting hard copies of required monitoring reports.

B. Reporting shall be in accordance with the following:

1. All monitoring reports, or information submitted to the Regional Board shall be sig ıed and certified in accordance with 40 CFR 122.22 and shall be submitted under penalty of perjury.

2. All reports shall be arranged in a tabular format to clearly show compliance or noncompliance with each discharge limitation.

3. One week before groundwater extraction, treatment, and discharge is commenced; the Discharger shall notify the Regional Board or its designated compliance officer by email and/or orally by telephone.

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10 *See Federal Register/ Vol. 65, No. 97 / Thursday, May 18, 2000 / Rules and Regulations.*

4. If no discharge occurs during the previous monitoring period, a letter to that effect shall be submitted in lieu of a monitoring report.

5. The Discharger shall notify the Regional Water Board in writing when groundwater treatment and discharge is stopped for more than a week. The report shall include a discussion as to why groundwater remediation is stopped and when treatment will commence.

6. Noncompliance Reporting

   a. The discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided to the Executive Officer (951-782-4130) and the Office of Emergency Services (1-800-852-7550) orally within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within 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.

   b. Any violation of a maximum daily discharge limitation for any of the pollutants listed in this Order shall be included as information that must be reported within 24 hours.

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

7. Except for data determined to be confidential under Section 308 of the Clean Water Act (CWA), all reports prepared in accordance with the terms of this Order shall be available for public inspection at the offices of the Regional Water Quality Control Board and the Regional Administrator of EPA. As required by the CWA, effluent data shall not be considered confidential.

8. Monitoring reports shall be submitted by the 30th day of each month following the monitoring period and shall include:

   a. The results of all chemical analyses for the previous month, and annual samples whenever applicable,

   b. The daily flow data,

   c. A summary of the month's activities including a report detailing compliance or noncompliance with the task for the specific schedule date, and

d. For every item of monitoring data where the requirements are not met, the monitoring report shall include a statement discussing the reasons for noncompliance, and of the actions undertaken or proposed which will bring the discharger into full compliance with requirements at the earliest time, and an estimate of the date when the discharger will be in compliance. The discharger shall notify the Regional Board by letter when compliance with the time schedule has been achieved.

9. For Dischargers discharging at a volume equal to or greater than 150,000 gallons per day, the Discharger shall submit semi-annual reports that tabulate all measured flows and measured parameters within the most recent six month period. Where discharges associated with these projects last less than 6 months, a report covering the period of discharges shall be submitted. Copies of these monitoring reports shall be submitted to the Regional Board and to the Water Quality Director of the Orange County Water District at P.O. Box 8300, Fountain Valley, CA 92728-8300.

C. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMR) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, the Discharger shall submit hard copy SMR in accordance with the requirements described in subsection B.5 below. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. Additionally, the Discharger shall report in the SMR the results of any special studies, acute and chronic toxicity testing, TRE/TIE, PMP, and Pollution Prevention Plan required by Special Provisions – VI.C. of this Order. The Discharger shall submit monthly, quarterly, and annual SMR including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table 5. Monitoring and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Continuous	The date of the Authorization Letter	All	30th day of the month following the sampling month
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	30th day of the month following the sampling month
Monthly	First day of calendar month following the date of the Authorization Letter or on date of the Authorization Letter if that date is first day of the month	First day of calendar month through last day of calendar month	30th day of the month following the sampling month
Quarterly	Closest of January 1, April 1, July 1, or October 1 following the date of the Authorization Letter	January 1 through March 31, samples are collected in January; April 1 through June 30; samples are collected in April; July 1 through September 30; samples are collected in July; October 1 through December 31; samples are collected in October	April 30 July 30 October 30 January 30
Semi-Annually	Closest of January 1 or July 1 following the date of the Authorization Letter	January 1 through June 30 July 1 through December 31	July 30 January 30
Annually	The date of the Authorization Letter	See Section I.A.13.j., above	30th day of the month following the sampling month
Per Discharge Event	Anytime during the discharge event or as soon as possible after aware of the event	At a time when sampling can characterize the discharge event	30th day of the month following the sampling month

D. Other Reports – Not Applicable

Attachment E – Monitoring and Reporting Program

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ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

The Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for dischargers in California. Some sections or subsections of the Order have therefore been identified as "not applicable" to this group of dischargers. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to the dischargers authorized by the Order.

I. PERMIT INFORMATION

Order No. R8-2007-0008, NPDES No. CAG918001, was adopted by the California Regional Water Quality Control Board, Santa Ana Region, on February 2, 2007 for discharges to surface waters of extracted and treated groundwater resulting from the cleanup of groundwater polluted by petroleum hydrocarbons and/or solvents at service stations and similar sites. The Order served as a general National Pollutant Discharge Elimination System (NPDES) permit and facilitated the processing of applications and the early implementation of groundwater cleanup projects within the Santa Ana Region. Below is a tabulation of the number of authorizations to discharge under the previous Order No. R8-2002-0007 and the present Order No. R8-2007-0008 that have been issued, by county. The tabulation shows a decrease in the number of enrollees from 2007 through 2011.

Table 1. Enrollees Information

COUNTY	Orange[1]		Riverside		San Bernardino		Total	
Previous Order No.	R8-2002-0007	R8-2007-0008	R8-2002-0007	R8-2007-0008	R8-2002-0007	R8-2007-0008	R8-2002-0007	R8-2007-0008
Enrollees	121[2]	37	12	5	10	3	143	45
Active Sites	42	13	6	3	4	1	52	17
Coverage terminated	79	24	6	2	6	2	91	28

1 *51 facilities are located within the San Diego Creek/Newport Bay Watershed.*

2 *These include mobile dischargers who treat hydrocarbon or solvent contaminated purged waters from groundwater monitoring wells at various locations within the Santa Ana Region.*

It is anticipated that most of the dischargers at active sites will be submitting renewal applications for continued discharges from their groundwater cleanup operations. Additional applications are expected and pending for sites recently determined to require groundwater remediation. The demand for permit issuance will continue to exceed the available staff resources to develop and bring individual tentative waste discharge requirements to the Board for adoption. These circumstances necessitate the renewal of this general permit.

II. NOTIFICATION REQUIREMENTS

General Permit Application

This Order requires each existing discharger regulated under the previous Order No. R8-2007-0008 and who requires ongoing regulatory coverage, to submit an updated Notice of Intent form to be covered under this permit.

This Order requires each new discharger[3] to submit to the Executive Officer an application for the proposed discharge. Submission of the application will constitute a "Notice of Intent" to be covered under this Order. The application for the proposed discharge will require, at the minimum, the following information:

1. Notice of Intent to be covered under this general permit.

2. A site characterization study that defines the onsite contaminants and their properties, the three-dimensional extent and concentration of contaminants in the subsurface, and includes a description of the geologic and hydrologic factors that control the migration of the contaminants.

3. A fixed hardness value, for approval by the Executive Officer of the Regional Water Board, based on the 5th percentile of effluent hardness measurements or the average ambient receiving water hardness measurements for those sites polluted with leaded gasoline

4. A report including the following:

    a. Chemical analysis of the untreated groundwater. Representative groundwater samples shall be analyzed for organic pollutants using EPA method 8260B, priority pollutants, and including total dissolved solids, total inorganic nitrogen, hardness, 1,4-dioxane and perchlorate. Test results shall be reported with Minimum levels (ML) and method detection limit (MDL);

    b. The name of the proposed receiving water body;

    c. The estimated average and maximum daily flow rates;

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3 *"New discharger" refers to those proposing to discharge wastewater under Order No. R8-2012-0027 and not currently covered under Order No. R8-2007-0008.*

d. A map showing the path from the point of initial discharge to its terminus point;

e. A list of known or suspected leaking underground tanks and other facilities or operations which have, or may have impacted the quality of the underlying groundwater within the expected groundwater capture zone.

f. A discussion of the proposed cleanup project, including a review of the extraction system design and the known location of free product and dissolved product plumes;

g. A description of the proposed treatment system and a certification report on the adequacy of each component of the proposed treatment system along with the associated operation. This certification report shall contain a requirement-by-requirement analysis, based on accepted engineering practice, of how the process(es) and physical design(s) of the treatment system will ensure compliance with this Order. The design engineer shall affix his/her signature and engineering license number to this certification report. The report(s) shall also certify the following:

   1) All treatment facility startup and operation instruction manuals are adequate and available to operating personnel;
   2) All treatment facility maintenance and testing schedules are included in the treatment facility operation and maintenance manual (O&M Manual), which shall be kept readily accessible to onsite operating personnel; and
   3) Influent and effluent sampling locations and ports are located in areas where samples representative of the waste stream to be monitored can be obtained.

h. A discussion of a plan for the prevention of run-on, interception and diversion of run off, and prevention of infiltration and runoff from contaminated soils stored on-site, if the discharge is associated with a groundwater remediation project and soils containing petroleum projects or other pollutants will be maintained on-site; and

i. Any other information deemed necessary by the Executive Officer.

III. INDUSTRY DESCRIPTION

This Order regulates discharges to surface water from temporary or permanent groundwater remediation systems, operated to clean up groundwater contamination from petroleum based products and from solvents. Discharges are or may be to inland fresh, estuarine or ocean waters. For discharges within the San Diego Creek/Newport Bay watershed, coverage under a separate general permit, Order No. R8-2007-0041, NPDES No. CAG918002, may be required.

Groundwater pollutant plumes are often complex mixtures of hundreds of petroleum-related compounds (e.g., gasoline contains over 200 chemicals), which makes complete chemical analyses very expensive and sometimes impractical or impossible due to sample matrix interferences, constituent masking, or the lack of standard analytical techniques. Further,

neither the State nor the U.S. EPA has proposed/established quality objectives for many of the petroleum hydrocarbon compounds. Therefore, indicator constituents for the detection and evaluation of complex mixtures of petroleum related compounds such as gasoline and diesel will be used in monitoring groundwater discharged to surface waters in the Santa Ana Region[4]. The indicator constituents used for evaluating compliance for discharges of gasoline and diesel related products are benzene, toluene, ethylbenzene, xylene (BTEX) and total petroleum hydrocarbons. For chlorinated hydrocarbon solvents such as trichloroethylene (TCE) and tetrachloroethylene (PCE), the specific chemical constituents and/or their degradation products can be used to evaluate compliance with the permit limitations.

Diesel fuel consists primarily of straight-chained hydrocarbons (alkenes and alkanes) ranging in length from C10 to C23, with C16 and C17 predominating. The C10-C23 straight-chain hydrocarbons in groundwater can be quantified using standard analytical techniques. Since the predominant components of diesel fuel are the straight-chain hydrocarbons, the California Department of Public Health recommended analytical procedure for total petroleum hydrocarbons-diesel[5] is used to indicate groundwater polluted by diesel fuel.

To reduce the amount of carbon monoxide in the atmosphere and abate air pollution, oxygenated fuels were required by the U.S. EPA in select metropolitan areas such as Southern California. Fuel oxygenates are also used to enhance the octane of conventional gasoline. Methyl tertiary-butyl ether (MTBE) has been the most commonly used fuel oxygenate. Oxygenates in limited commercial use also include ethyl tert-butyl ether (ETBE) and tert-amyl methyl ether (TAME), tert-butyl alcohol (TBA), methanol (MeOH), and diisopropyl ether (DIPE). Accidental releases of gasoline to the subsurface from underground storage tanks, pipelines, refueling facilities, and landfills provide point sources for entry of oxygenates into the hydrologic cycle, together with the gasoline hydrocarbons. MTBE, as well as other alkyl ether oxygenates, ETBE and TAME are much less biodegradable than BTEX hydrocarbons in ground water. Tert butyl alcohol (TBA) is also being detected in effluent streams and, like MTBE, poses a threat to water quality. Furthermore, the fuel oxygenates sorb only weakly to soil and aquifer material, thereby increasing the risk of groundwater contamination.

The presence of MTBE was found in over 60% of surface water supply reservoirs and groundwater water supply wells in California. Data from a Lawrence Livermore National Laboratory study showed that MTBE has been detected at over 4,600 leaking underground tank sites. Consequently, on March 26, 1999, the Governor concluded that the use of MTBE in California gasoline poses a significant risk to California's environment, and directed that MTBE be phased out of California gasoline as soon as possible. The risks to

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4 *It is believed that fuels have been adequately studied to justify limiting the analysis to these compounds (see "Leaking Underground Storage Tank Manual: guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure," State of California, Leaking Underground Fuel Tank Task Force, May 1988).*

5 *Leaking Underground Fuel Tank (LUFT) Manual: Guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure, October 1989.*

California's environment prompted the State Department of Public Health (DPH) to establish a maximum contaminant level for MTBE in drinking water of 13 micrograms per liter.

1,2-Dichloroethane was used as an anti-knock additive in leaded fuels. 1,2-Dichloroethane (1,2-DCA) is a colorless, oily, organic liquid with a sweet, chloroform-like odor. The greatest use of 1,2-dichloroethane is in making chemicals involved in plastics, rubber and synthetic textile fibers. Other uses include: as a solvent for resins and fats, photography, photocopying, cosmetics, drugs; and as a fumigant for grains and orchards (USEPA fact sheet).

Vinyl chloride (chlorethene or chloroethylene) is also being detected at low concentrations at sites with chlorinated solvents release. Vinyl chloride is normally the result of the breakdown of chlorinated solvents. Due to the significant toxicity and regular presence in the soils and groundwater at chlorinated solvents release sites, the compound vinyl chloride is being added to the list of constituents with effluent limitations.

1,4-dioxane is a man-made compound primarily used as an industrial solvent or solvent stabilizer. 1,4-dioxane is generally not biodegradable and is effectively treated through an advance oxidation process in the form of ultraviolet light combined with hydrogen peroxide. This treatment breaks down the compound into mostly carbon dioxide and water.

Perchlorate is both a naturally occurring and man-made chemical. Perchlorate is the primary ingredient of solid rocket propellant. Perchlorate affects human health by interfering with the uptake of iodide into the thyroid gland and disrupts the function of the thyroid. To remove perchlorate from water, biological treatment and ion (anion) exchange systems are among the technologies that are being used.

A. Description of Wastewater

Groundwater contaminated with petroleum hydrocarbon based products and/or solvents are extracted and undergo treatment. A number of treatment methods are available for the treatment of contaminated groundwater. The more commonly used methods include air stripping, air sparging, granular activated carbon adsorption, UV-peroxidation, nutrient enhanced biodegradation, and a combination of two or more of the above technologies. To remediate subsurface soil contamination, vapor extraction systems and in-situ bio-remediation are commonly used. Most of these systems, if designed and operated properly, can lower the concentrations of the pollutants to below detection limits.

B. Discharge Points and Receiving Waters

This Order authorizes permitted discharges to inland surface and ocean waters, enclosed bays, and estuaries within the Santa Ana Region. The beneficial uses of these receiving waters are described in Section II, Findings, of the Order.

In some cases, discharges resulting from groundwater cleanup operations occur to surface waters that are impaired due to one or more pollutants not regulated by this Order. These include groundwater cleanup discharges to waters in the San Diego Creek/Newport Bay watershed that are impaired by selenium or other constituents. Those discharges are generally regulated under Order No. 2007-0041, NPDES No. CAG918002. Where no appropriate permit has yet been issued, temporary authorization to conduct the discharge under the terms and conditions of this Order may be granted by the Executive Officer, provided that (1) the discharger demonstrates that temporary authorization is necessary to allow ongoing cleanup and wastewater discharges in order to prevent the migration and spread of the pollutants of concern; (2) the discharger demonstrates that all reasonable efforts to avoid, reduce or eliminate the discharge of impairing constituents to surface waters have been implemented; (3) the discharger demonstrates that the discharge will not contribute to the impairment of the receiving waters; and, (4) the discharge will be authorized under an appropriate individual or general permit when developed and approved by the Regional Water Board.

C. Summary of Existing Requirements

Order No. R8-2007-0008 included effluent limitations for MUN designated and MUN-excepted surface waters for Total Petroleum Hydrocarbons, Benzene, Toluene, Xylene, Ethylbenzene, Carbon Tetrachloride, Dichlorobromomethane, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, Methyl Tertiary Butyl Ether (MTBE), Naphthalene, Tetrachloroethylene (PCE), Trichloroethylene (TCE), 1,1-Dichloroethane, 1,1-Dichloroethylene, 1,2-Dichloroethylene, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1,1-Trichloroethane (TCA), Tert Butyl Alcohol (TBA), 1,4-Dioxane, and Perchlorate. This Order includes the requirements of Order No. R8-2007-0008.

D. Compliance Summary - Not Applicable

E. Planned Changes - Not Applicable

IV. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and its implementing regulations adopted by the USEPA, and Chapter 5.5, Division 7 of the California Water Code (commencing with section 13370). It shall serve as an NPDES permit for the point source discharges described herein to surface waters of the Region. This Order also serves as Waste Discharge Requirements (WDR) pursuant to article 4, chapter 4, Division 7 of the California Water Code (commencing with section 13260). Pursuant to NPDES regulations at 40 CFR 122.28, States may request authority to issue general NPDES permits. On June 8, 1989, the State Water Board applied to the USEPA requesting revisions to its NPDES Program in accordance with 40 CFR 122.28, 123.62,

and 403.10, including a request to add general permit authority to its approved NPDES Program. On September 22, 1989, the USEPA, Region 9, approved the State Water Board's request, granting authorization for the State to issue general NPDES permits. Pursuant to NPDES regulations at 40 CFR 122.28 (a) (2), general permits may regulate point source discharges that:

1. Involve the same or substantially similar types of operations,
2. Discharge the same types of wastes,
3. Require the same effluent limitations,
4. Require the same or similar monitoring, and
5. In the opinion of the Executive Officer, are more appropriately controlled under a general permit than under individual permits.

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to reissue an NPDES permit is exempt from the provisions of CEQA, Public Resources Code Sections 21100-21177.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Board adopted a Water Quality Control Plan for the Santa Ana Basin (hereinafter Basin Plan) that became effective on January 24, 1995. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, State Water Board Resolution No. 88-63 (Sources of Drinking Water Policy) requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic water supply use to water bodies.

   On January 22, 2004, the Regional Water Board adopted Resolution No. R8-2004-0001, amending the Basin Plan to incorporate revised boundaries for groundwater subbasins, now termed "management zones", new nitrate-nitrogen and TDS objectives for the new management zones, and new nitrogen and TDS management strategies applicable to both surface and ground waters. The State Water Resources Control Board and Office of Administrative Law (OAL) approved the N/TDS Amendment on September 30, 2004 and December 23, 2004, respectively. The surface water standards components of the N/TDS Amendment are awaiting EPA approval.

   The existing and potential beneficial uses of surface waters in the Santa Ana Region are designated in Chapter 3 of the Basin Plan and may include:

   a. Municipal and Domestic Supply,
   b. Agricultural Supply,
   c. Industrial Service Supply,
   d. Industrial Process Supply,
   e. Groundwater Recharge,

f. Hydropower Generation,
g. Water Contact Recreation,
h. Non-contact Water Recreation,
i. Warm Freshwater Habitat,
j. Limited Warm Freshwater Habitat,
k. Cold Freshwater Habitat,
l. Preservation of Biological Habitats of Special Significance,
m. Wildlife Habitat,
n. Marine Habitat,
o. Shellfish Harvesting,
p. Estuarine Habitat,
q. Rare, Threatened or Endangered Species, and
r. Spawning, Reproduction, and Development.

Many surface waters within the region recharge underlying groundwater basins. The existing and potential beneficial uses of groundwater within the Santa Ana Region are designated in Chapter 3 of the Basin Plan and generally include:

a. Municipal and Domestic Supply,
b. Agricultural Supply,
c. Industrial Service Supply, and
d. Industrial Process Supply

The Basin Plan incorporates by reference the Water Quality Control Plan for Ocean Waters of California (the Ocean Plan), which was adopted by the State Water Board in 1972 and was most recently amended on February 14, 2006. The Ocean Plan establishes water quality standards and identifies the following beneficial uses for ocean waters of the State.

a. Industrial Water Supply
b. Water Contact and Non-Contact Recreation, including Aesthetic Enjoyment
c. Navigation
d. Commercial and Sport Fishing
e. Mariculture
f. Preservation and Enhancement of Areas of Special Biological Significance
g. Rare and Endangered Species
h. Marine Habitat
i. Fish Migration
j. Fish Spawning and Shellfish Harvesting

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

This Order implements applicable provisions of the Basin Plan, the Ocean Plan, and the Thermal Plan.

2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995, and November 9, 1999. Approximately forty water quality criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR, which established new criteria for toxics in the State and incorporated the previously adopted criteria of the NTR. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority, toxic pollutants, applicable to inland surface waters, enclosed bays and estuaries of the State; and the Ocean Plan contains water quality criteria for priority, toxic pollutants in the ocean waters of the State.

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* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for 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 (WQS) become effective for CWA purposes (40 CFR 131.21, 65 FR 24641, April 27, 2000). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

5. **Antidegradation Policy.** Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality 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. The discharges authorized under this Order are consistent with applicable antidegradation provisions of NPDES regulations at 40 CFR 131.12 and with State Water Board Resolution No. 68-16.

6. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations[6] section 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 permit, with some exceptions in which limitations may be relaxed. This Order/General Permit is consistent with applicable anti-backsliding requirements. Effluent limitations in this Order are at least as stringent as those in the previous Order/General Permit.

7. **Monitoring and Reporting Requirements.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in Attachment E.

C. **Impaired Water Bodies on CWA 303(d) List.** On November 12, 2010, the USEPA approved a revised list of impaired water bodies prepared by the State [hereinafter referred to as the 303(d) list]. The SIP requires final effluent limitations for all 303(d)-listed pollutants to be based on total maximum daily loads (TMDLs) and associated waste load allocations. Discharges to surface waters within the Santa Ana Region that have been identified as impaired are or will be regulated under separate waste discharge requirements (see III. B.), relying on TMDLs and associated waste load allocations where these have been developed.

V. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: Section 122.44(a) requires that permits include applicable technology-based limitations and standards; and Section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs may be established: (1) using USEPA criteria guidance under CWA section 304 (a), supplemented where necessary by other relevant information; (2) on an indicator parameter for the pollutant of concern; or (3) using a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44 (d) (1) (vi).

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6 *All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.*

A. Discharge Prohibitions

The discharge prohibitions are based on the Federal Clean Water Act, Basin Plan, State Water Resources Control Board's plans and policies, U.S. Environmental Protection Agency guidance and regulations, and previous permit Order No. R8-2007-0008 provisions and are consistent with the requirements set for other discharges regulated by NPDES permits adopted by the Regional Water Board.

In accordance with the requirements of the California Ocean Plan, this Order prohibits direct discharges of wastes to the Newport Beach Marine Life Refuge and Irvine Coast Marine Life Refuge Areas of Special Biological Significance.

B. Technology-Based Effluent Limitations

1. Scope and Authority

CWA Section 301 (b) and NPDES regulations at 40 CFR 122.44 require permits to, at a minimum, meet applicable technology-based requirements and any more stringent effluent limitations necessary to meet applicable water quality standards. The CWA requires the USEPA to develop effluent limitations, guidelines and standards (Effluent Limitations Guidelines - ELG) representing application of best practicable treatment control technology (BPT), best available technology economically achievable (BAT), best conventional pollutant control technology (BCT), and best available demonstrated control technology for new sources (NSPS), for specific industrial categories. Where USEPA has not yet developed ELG for a particular industry or a particular pollutant, Section 402 (a) (1) of the CWA and USEPA regulations at 40 CFR 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis. When BPJ is used, the permit writer must consider specific factors outlined at 40 CFR 125.3.

2. Applicable Technology-Based Effluent Limitations

Effluent limitations guidelines have not been developed for the category of dischargers authorized to discharge by this Order. However, since authorized dischargers are discharging treated wastewaters, it is appropriate to establish technology-based effluent limitations using BPJ. The Order establishes technology-based effluent limitations for several pollutants.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and Section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) 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, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in Section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Order authorizes certain discharges to inland surface waters, enclosed bays and estuaries, and the Pacific Ocean within the Santa Ana Region. Beneficial uses of these receiving waters, as designated by the Basin Plan and the Ocean Plan, are described in Section II, Findings, of the Order. The water quality criteria applicable to these receiving waters are established by the NTR, CTR, Basin Plan and the Ocean Plan.

a. The Basin Plan specifies narrative and numeric water quality objectives applicable to surface water as follows.

   TDS and TIN: TDS and TIN limitations are specified in the Order for discharges to surface waters. The proposed TDS/TIN limits for direct discharges into surface waters within the Santa Ana Region are based on the objectives specified in Table 4-1 of the Basin Plan, as amended.

   In accordance with 40 CFR Section 122.45(d), there may be instances in which the basis for a limit for a particular continuous discharge may be impracticable to be stated as a maximum daily, average weekly, or average monthly effluent

limitation. The Regional Water Board has determined that it is not practicable to express TDS and TIN effluent limitations as average weekly and average monthly effluent limitations because the TDS and TIN objectives in the Basin Plan were established to protect the underlying groundwater. Consequently, a 12-month average period is more appropriate.

b. CTR and SIP

The California Toxics Rule (CTR) and State Implementation Policy (SIP) specify numeric objectives for toxic substances and the procedures whereby these objectives are to be implemented. The procedures include those used to conduct reasonable potential analysis to determine the need for effluent limitations for priority and non-priority pollutants.

The CTR specifies numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for 57 priority toxic pollutants. These criteria apply to inland surface waters and enclosed bays and estuaries within the Santa Ana Region.

The Ocean Plan establishes water quality criteria for 21 pollutants for protection of aquatic life and for 62 pollutants for protection of human health.

3. Determining the Need for WQBELs

NPDES regulations at 40 CFR 122.44 (d) (1) (i) require permits to include WQBELs for all pollutants (non-priority or priority) "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any narrative or numeric criteria within a State water quality standard" (have Reasonable Potential). Thus, assessing whether a pollutant has Reasonable Potential is the fundamental step in determining whether or not a WQBEL is required.

4. WQBEL Calculations

Discharge limitations for lead are also included in the Order. For discharges to fresh water and enclosed bays and estuaries, the limits are based on the California Toxics Rule lead objectives. For freshwater, the objectives are equations in which hardness is the variable. The actual numeric value of the objectives is calculated using hardness measurements. To determine the effluent limitation for lead for each freshwater discharge, and to facilitate the determination of compliance, a fixed effluent hardness value will be used in the objective equations. Federal regulations require that the effluent limits for metals be expressed as the total recoverable form. To comply with this requirement, the dissolved criteria are translated into total recoverable effluent limits using ratios of the total recoverable metals to dissolved metals (t/d) concentrations. The State Implementation Policy stipulates that in the absence of site-specific information, the conversion factors cited in the CTR should

be used as the t/d translators. The Order includes a tabulation of calculated effluent limits for lead corresponding to fixed hardness values (20 through 400 milligrams per liter) (see Attachment "B"). The calculations for arriving at the effluent limits for lead are in the Regional Water Board's file for the general groundwater cleanup permit. At sites polluted with leaded gasoline, the discharger is required to propose the hardness value that will be used in determining the appropriate numeric limit for the discharge. The fixed hardness value, which shall be based on the 5th percentile of effluent hardness measurements or the ambient receiving water hardness measurements (whichever is more restrictive), shall be determined and submitted for approval by the Executive Officer of the Regional Water Board. Upon approval of the hardness value for the discharge, the effluent limit for lead discharges to freshwater bodies is determined from the table. For ocean water discharges, the limits for lead are based on the California Ocean Plan.

Step 6 of the permit limit calculation procedure specified in the SIP stipulates that the average monthly effluent limitation is set equal to the effluent concentration allowance[7]. Where there is no mixing zone allowance and a California Toxics Rule human health objective applies, the effluent concentration allowance is equal to the applicable human health objective. Therefore, in these circumstances the average monthly limit (AML) is equal to the human health objective. The SIP stipulates that where receiving waters are designated with the municipal water supply beneficial use (MUN), the human health objective for the consumption of water and organisms applies in calculating the effluent limitation; where the water is excepted from MUN, the human health objective for the consumption of organisms only applies. This Order includes effluent limits for discharges to receiving waters that are designated MUN and for those that are not. For discharges to receiving waters designated MUN, the AMLs were taken either from the California Toxics Rule human health objectives for the consumption of water and organisms or from the CDPH' MCL. Each AML effluent limitation was multiplied by a 2.01 factor to determine the maximum daily concentration effluent limit. This factor is the average monthly effluent limit multiplier taken from Table 2 of the Policy. The multiplier corresponds to a coefficient of variation of 0.6 and number of samples equal to 4. For receiving waters not designated MUN, the AML were taken either from the California Toxics Rule human health objectives for the consumption of organisms only or from the CDPH' MCLs for the protection of public health. The same multiplier factor (2.01) was used to derive the maximum daily effluent limit. The Order includes average monthly limit and maximum daily limits as required by federal regulations and the State Board's Policy.

No mixing zone allowance is included in the calculation of effluent limits in this Order and, consequently, compliance with the effluent limits is required to be determined at

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7 *The Effluent Concentration Allowance (ECA) is a value derived from the water quality 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 U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).*

the end of the discharge pipe. If a discharger requests that a mixing zone allowance be included in the determination of appropriate effluent limits, consideration of an individual permit will be required.

5. Whole Effluent Toxicity (WET)

This Order does not specify numeric WET limits. However, the Order requires that the discharge shall not result in acute toxicity in ambient receiving waters. The effluent is deemed to cause acute toxicity when the toxicity test of 100% effluent as required in monitoring and reporting program, results in failure of the test as determined using the pass or fail test protocol specified in Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms (EPA/821-R-02-012, October 2002).

D. Best Professional Judgment-Based Effluent Limitations

The limits for total petroleum hydrocarbons, toluene, ethylbenzene, xylenes, 1,2–Dichloroethylene and naphthalene are carried over from the previous permit and are based on Best Professional Judgment.

Since 1991, the same effluent limits for 1,2–Dichloroethylene have been included in permits regulating these discharges. However in 2003, effluent limitations for the two isomers (Cis and Trans) that make up 1,2–Dichloroethylene were added. To avoid triggering the antibacksliding provisions of the federal regulations, the effluent limitations for 1,2–Dichloroethylene are retained, with the specific condition that the sum of the isomers Cis 1,2–Dichloroethylene and trans 1,2–Dichloroethylene shall not exceed the effluent limitations for 1,2–Dichloroethylene.

This Order specifies limits for methyl isobutyl ketone (MIBK), Tert Butyl Alcohol (TBA), 1,4-dioxane, and methyl ethyl ketone (MEK) that are the same as those specified in Order No. R8-2007-0008 (with the exception of 1,4-dioxane) and were based on notification levels identified by the California Department of Public Health (CDPH)/Office of Environmental Health Hazard Assessment (OEHHA). (In the case of MEK, the notification level is for methyl isobutyl ketone (MIBK), which is in the same class of liquid organic compounds as MEK). The notification level for 1,4-dioxane was revised by CDPH in November 2010 and is included in this Order.

CDPH replaced the notification level for perchlorate with an MCL on October 18, 2007. The limit for perchlorate in this Order is based on this new MCL.

D. Discharge Specifications

Discharge limitations are included in this Order for those other chemicals of concern that typically pollute groundwater at service stations and similar sites in the Santa Ana Region. In addition, the monitoring program includes analyses for additional constituents to determine the overall impact of individual discharges and to screen for unexpected chemicals.

Discharge Limitations established by the Order require authorized dischargers to compare effluent data, generated through routine monitoring, to effluent limitations. Exceedance of any of the specified effluent limitations triggers mandatory minimum penalties, accelerated monitoring for certain constituents and may lead to discontinuance of coverage under the General Permit. The Discharge Specifications impose specific effluent limitations, assuring that authorized discharges are not creating adverse impacts on receiving water quality. When adverse impacts are highlighted following exceedance of an effluent limitation(s), dischargers are directed to confirm the findings, to mitigate impacts, to sewer or stop the discharge and/or to seek coverage under an individual NPDES permit.

E. Final Effluent Limitations

1. Satisfaction of Anti-Backsliding Requirements

   All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order. See also D, above.

2. Satisfaction of Antidegradation Policy

   Discharges in conformance with the requirements of this Order will not result in a lowering of water quality and therefore conform to antidegradation requirements specified in Resolution No. 68-16, which incorporates the federal antidegradation policy at 40 CFR 131.12 where, as here, it is applicable.

3. Stringency of Requirements for Individual Pollutants

   Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR Section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. Apart from certain standards changes resulting from the N/TDS Basin Plan amendment, all beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

4. Summary of Final Effluent Limitations:

Final effluent limitations for discharges into receiving waters designated MUN are based on the most restrictive value of either CTR Human Health Criteria (water and organisims), CDPH MCLs, or Best Professional Judgement (BPJ).

Although many surface water bodies within the Santa Ana Region are excepted from the MUN designation, most that receive discharges covered by this Order recharge underlying groundwater management zones with MUN as a beneficial use. Therefore, final effluent limitations for discharges into receiving waters MUN excepted are based on CDPH MCLs, or Best Professional Judgement (BPJ), whichever is more restrictive.

The following table shows the basis for the final effluent limitations for discharges into receiving waters designated MUN. Bolded numbers are the basis of limitations that are based on either CRT Human Health Criteria or CDPH MCLs. The remaining limits were based on BPJ.

Table 2. Limitations Applicable to Discharges into Receiving Waters Designated MUN

BASES OF EFFLUENT LIMITATIONS										
Constituent	Current Limitations		Basis of Limitations							
				CTR (µg/L)				Ocean Plan Table B (µg/L)		
	Maximum Daily Concentration Limit (µg/L)	Average Monthly Concentration Limit (µg/L)	MCL of CDPH (µg/L)	Fresh Water	Salt water	Human Health Water and Organisms	Human Health Organisms only	Daily Max	30-Day Avg	
Total Petroleum Hydrocarbons	201	100								
Benzene	2	1	**1**			1.2	71		5.9	
Toluene	20.1	10	150			6800	200000			
Xylenes	20.1	10	1750							
Ethylbenzene	20.1	10	300							
Carbon Tetrachloride	0.5	0.25	0.5			**0.25**	4.4		0.9	
Dichlorobromomethane	1.13	0.56				**0.56**	46		6.2	
Methyl Ethyl Ketone	241.2	120								
Methyl Isobutyl Ketone	241.2	120	***120****							
Methyl Tertiary Butyl Ether (MTBE)	26.1	13	**13**							
Naphthalene	20.1	10	*17**							
Tetrachloroethylene (PCE)	1.6	0.8	5			**0.8**	8.85		2	
Trichloroethylene (TCE)	5.4	2.7	5			**2.7**	81		27	
1,1-Dichloroethane	10.1	5	**5**							
1,1-Dichloroethylene	0.115	0.057	6			**0.057**	3.2		0.9	
1,2-Dichloroethylene (sum of Cis & Trans)	20.1	10								
1,2-Dichloroethylene (cis)	12.1	6	**6**							

Table 2. Limitations Applicable to Discharges into Receiving Waters Designated MUN

BASES OF EFFLUENT LIMITATIONS										
Constituent	Current Limitations		Basis of Limitations							
				CTR (µg/L)				Ocean Plan Table B (µg/L)		
	Maximum Daily Concentration Limit (µg/L)	Average Monthly Concentration Limit (µg/L)	MCL of CDPH (µg/L)	Fresh Water	Salt water	Human Health Water and Organisms	Human Health Organisms only	Daily Max	30-Day Avg	
1,2-Dichloroethylene (trans)	20.1	10	**10**							
1,1,1-Trichloroethane (TCA)	10.1	5	200							
Tert Butyl Alcohol (TBA)	24	12	**12***							
1,4-Dioxane	2	1	**1***							
Perchlorate	12	6	**6**							

*: Notification Level

F. Interim Effluent Limitations – Not Applicable

G. Land Discharge Specifications – Not Applicable

H. Reclamation Specifications – Not Applicable

VI. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

The surface water receiving water limitations in the proposed Order are based upon the water quality objectives contained in the Basin Plan and in the Ocean Plan and are a required part of this Order.

B. Groundwater

The receiving groundwater limitations in the proposed Order are based upon the water quality objectives contained in the Basin Plan.

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 of 40 CFR requires all NPDES permits to specify recording and reporting of monitoring results. Sections 13267 and 13383 of the CWC authorize the Water Boards to require technical and monitoring reports. The MRP, Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

The principal purposes of a monitoring program by a Discharger are to:

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

The MRP is a standard requirement in almost all waste discharge requirements issued by the Regional Water Board, including this Order. It contains definitions of terms, specifies general sampling and analytical protocols, and sets out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES

regulations; the Monitoring is the primary means of ensuring that waste discharge requirements are met. It is also the basis for enforcement actions against dischargers who are in violation of the waste discharge requirements issued by the Regional Water Board. All dischargers enrolled under this general permit will be required to conduct monitoring in accordance with a monitoring program issued by the Executive Officer. Each monitoring and reporting program will be customized for each enrollee based on the characteristics of the groundwater being treated and discharged. The typical required constituents and frequency of analyses are tabulated in the self-monitoring program attached to this general permit as "Attachment E." This monitoring and reporting program will be revised as appropriate. An increase of the parameters or frequency of monitoring will be required when monitoring data show the presence of petroleum hydrocarbons that are not limited in this Order, or toxicity test failures. A reduction of the parameters or frequency of monitoring may be implemented with prior approval of the Executive Officer when monitoring data demonstrate that such reduction is warranted. In accordance with the SIP, **for new dischargers**, this Order requires dischargers applying for coverage to monitor for the 17 congeners specified in the Policy, once during dry weather and once during wet weather for a one-year period. Existing dischargers will not be required to monitor for the 17 congeners if monitoring for these substances has been conducted and nothing has been detected.

A. Influent Monitoring

Influent monitoring is required to determine the effectiveness of the treatment program and assess treatment plant performance.

B. Effluent Monitoring

The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit conditions and to allow ongoing characterization of discharges to determine potential adverse impacts and to determine continued suitability for coverage under this Order. Monitoring requirements are given in the proposed monitoring and reporting program (Attachment E). This provision requires compliance with the monitoring and reporting program, and is based on 40 CFR 122.44(i), 122.62, 122.63 and 124.5. The self-monitoring program is a standard requirement in almost all NPDES permits (including the proposed Order) issued by the Regional Water Board. In addition to containing definitions of terms, it specifies general sampling/analytical protocols and the requirements of reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Regional Water Board's policies. Pollutants to be monitored include all pollutants for which effluent limitations are specified.

In addition to discharge rate, effluent is monitored for hardness, pH, total suspended and total dissolved solids, salinity, and turbidity. Monitoring is also required for certain metals and other priority, toxic pollutants that have water quality criteria established by the NTR, CTR, and the Ocean Plan and are determined to be present in the groundwater at a specific site location.

C. Whole Effluent Toxicity Testing Requirements

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

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

This Order requires the Discharger to conduct acute toxicity testing of the effluent annually. The Order also requires the Discharger to conduct an Initial Investigation Toxicity Reduction Evaluation (IITRE) program when the acute toxicity test fails. Based on a review of monitoring data, there have been instances in which acute test failures can be attributed to salinity additions required to conduct the test. When this situation occurs, the discharger normally performs additional acute testing of the effluent coupled with testing for all the priority pollutants. If the additional acute testing still fails and the priority pollutant scan shows no pollutants at levels of concern, acute testing is stopped and the acute test failure is presumed to be caused by ionic imbalance in the waste effluent (as described in relevant literature).

D. Receiving Water Monitoring - Not Applicable

The MRP does not require characterization of receiving waters because most oftentimes treated discharges are to storm drains which are distant to receiving waters.

E. Other Monitoring Requirements - Not Applicable

VIII. RATIONALE FOR PROVISIONS

A. Standard Provisions

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 to the general Order. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

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

B. Special Provisions

1. Reopener Provisions

This provision is based on 40 CFR Part 123. The Regional Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new regulations, or adoption of new regulations by the State Board or Regional Water Board, including revisions to the Basin Plan.

2. Special Studies and Additional Monitoring Requirements - Not Applicable

3. Best Management Practices and Pollution Prevention – Not Applicable

4. Construction, Operation, and Maintenance Specifications - Not Applicable.

5. Special Provisions for Municipal Facilities - Not Applicable

6. Other Special Provisions- Not Applicable

7. Compliance Schedules - Not Applicable

IX. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Santa Ana Region is considering the reissuance of these general waste discharge requirements that will serve as an NPDES permit. As a step in the adoption process, the Regional Water Board staff has developed this tentative Order. The Regional Water Board encourages public participation in the Order adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the posting of Notice of Public Hearing at the Regional Water Board website: http://www.waterboards.ca.gov/santaana/board_decisions/tentative_orders/index.shtml on or before June 20, 2012 and publication in the Orange County Register, Press Enterprise and the San Bernardino County Sun for one day.

B. Written Comments

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

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. no later than July 6, 2012 and addressed to:

Gary Stewart
California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501-3348

C. Public Hearing

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

Date:	July 20, 2012
Time:	9:00 A.M.
Location:	City Council Chambers of Loma Linda 25541 Barton Road City of Loma Linda, CA

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

Please be aware that dates and venues may change. Our web address http://www.waterboards.ca.gov/santaana/board_info/agendas/ where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final Order. 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

Permit applications, 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 9:00 a.m. and 3:00 p.m. Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (951) 782-4130.

F. Register of Interested Persons

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

G. Additional Information

Requests for additional information or questions regarding this Order should be directed to Gary Stewart at (951) 782-4379.

ATTACHMENT G - EPA PRIORITY POLLUTANT LIST

EPA PRIORITY POLLUTANT LIST					
Metals		**Acid Extractibles**		**Base/Neutral Extractibles (continuation)**	
1.	Antimony	45.	2-Chlorophenol	91.	Hexachloroethane
2.	Arsenic	46.	2,4-Dichlorophenol	92.	Indeno (1,2,3-cd) Pyrene
3.	Beryllium	47.	2,4-Dimethylphenol	93.	Isophorone
4.	Cadmium	48.	2-Methyl-4,6-Dinitrophenol	94.	Naphthalene
5a.	Chromium (III)	49.	2,4-Dinitrophenol	95.	Nitrobenzene
5b.	Chromium (VI)	50.	2-Nitrophenol	96.	N-Nitrosodimethylamine
6.	Copper	51.	4-Nitrophenol	97.	N-Nitrosodi-N-Propylamine
7.	Lead	52.	3-Methyl-4-Chlorophenol	98.	N-Nitrosodiphenylamine
8.	Mercury	53.	Pentachlorophenol	99.	Phenanthrene
9.	Nickel	54.	Phenol	100.	Pyrene
10.	Selenium	55.	2, 4, 6 – Trichlorophenol	101.	1,2,4-Trichlorobenzene
11.	Silver	**Base/Neutral Extractibles**		**Pesticides**	
12.	Thallium	56.	Acenaphthene	102.	Aldrin
13.	Zinc	57.	Acenaphthylene	103.	Alpha BHC
Miscellaneous		58.	Anthracene	104.	Beta BHC
14.	Cyanide	59.	Benzidine	105.	Delta BHC
15.	Asbestos (not required unless requested)	60.	Benzo (a) Anthracene	106.	Gamma BHC
16.	2,3,7,8-Tetrachlorodibenzo-P-Dioxin (TCDD)	61.	Benzo (a) Pyrene	107.	Chlordane
Volatile Organics		62.	Benzo (b) Fluoranthene	108.	4, 4' - DDT
17.	Acrolein	63.	Benzo (g,h,i) Perylene	109.	4, 4' - DDE
18.	Acrylonitrile	64.	Benzo (k) Fluoranthene	110.	4, 4' - DDD
19.	Benzene	65.	Bis (2-Chloroethoxy) Methane	111.	Dieldrin
20.	Bromoform	66.	Bis (2-Chloroethyl) Ether	112.	Alpha Endosulfan
21.	Carbon Tetrachloride	67.	Bis (2-Chloroisopropyl) Ether	113.	Beta Endosulfan
22.	Chlorobenzene	68.	Bis (2-Ethylhexyl) Phthalate	114.	Endosulfan Sulfate
23.	Chlorodibromomethane	69.	4-Bromophenyl Phenyl Ether	115.	Endrin
24.	Chloroethane	70.	Butylbenzyl Phthalate	116.	Endrin Aldehyde
25.	2-Chloroethyl Vinyl Ether	71.	2-Chloronaphthalene	117.	Heptachlor
26.	Chloroform	72.	4-Chlorophenyl Phenyl Ether	118.	Heptachlor Epoxide
27.	Dichlorobromomethane	73.	Chrysene	119.	PCB 1016
28.	1,1-Dichloroethane	74.	Dibenzo (a,h) Anthracene	120.	PCB 1221
29.	1,2-Dichloroethane	75.	1,2-Dichlorobenzene	121.	PCB 1232
30.	1,1-Dichloroethylene	76.	1,3-Dichlorobenzene	122.	PCB 1242
31.	1,2-Dichloropropane	77.	1,4-Dichlorobenzene	123.	PCB 1248
32.	1,3-Dichloropropylene	78.	3,3'-Dichlorobenzidine	124.	PCB 1254
33.	Ethylbenzene	79.	Diethyl Phthalate	125.	PCB 1260
34.	Methyl Bromide	80.	Dimethyl Phthalate	126.	Toxaphene
35.	Methyl Chloride	81.	Di-n-Butyl Phthalate		
36.	Methylene Chloride	82.	2,4-Dinitrotoluene		
37.	1,1,2,2-Tetrachloroethane	83.	2-6-Dinitrotoluene		
38.	Tetrachloroethylene	84.	Di-n-Octyl Phthalate		
39.	Toluene	85.	1,2-Dipenylhydrazine		
40.	1,2-Trans-Dichloroethylene	86.	Fluoranthene		
41.	1,1,1-Trichloroethane	87.	Fluorene		
42.	1,1,2-Trichloroethane	88.	Hexachlorobenzene		
43.	Trichloroethylene	89.	Hexachlorobutadiene		
44.	Vinyl Chloride	90.	Hexachlorocyclopentadiene		

ATTACHMENT H – MINIMUM LEVELS

MINIMUM LEVELS IN PPB (µg/l)

Table 1- VOLATILE SUBSTANCES[1]	GC	GCMS
Acrolein	2.0	5
Acrylonitrile	2.0	2
Benzene	0.5	2
Bromoform	0.5	2
Carbon Tetrachloride	0.5	2
Chlorobenzene	0.5	2
Chlorodibromomethane	0.5	2
Chloroethane	0.5	2
Chloroform	0.5	2
Dichlorobromomethane	0.5	2
1,1 Dichloroethane	0.5	1
1,2 Dichloroethane	0.5	2
1,1 Dichloroethylene	0.5	2
1,2 Dichloropropane	0.5	1
1,3 Dichloropropylene (volatile)	0.5	2
Ethylbenzene	0.5	2
Methyl Bromide (*Bromomethane*)	1.0	2
Methyl Chloride (*Chloromethane*)	0.5	2
Methylene Chloride (*Dichloromethane*)	0.5	2
1,1,2,2 Tetrachloroethane	0.5	1
Tetrachloroethylene	0.5	2
Toluene	0.5	2
trans-1,2 Dichloroethylene	0.5	1
1,1,1 Trichloroethane	0.5	2
1,1,2 Trichloroethane	0.5	2
Trichloroethylene	0.5	2
Vinyl Chloride	0.5	2
1,2 Dichlorobenzene (volatile)	0.5	2
1,3 Dichlorobenzene (volatile)	0.5	2
1,4 Dichlorobenzene (volatile)	0.5	2

Selection and Use of Appropriate ML Value:

ML Selection: When there is more than one ML value for a given substance, the discharger may select any one of those ML values, and their associated analytical methods, listed in this Attachment that are below the calculated effluent limitation for compliance determination. If no ML value is below the effluent limitation, then the discharger shall select the lowest ML value, and its associated analytical method, listed in the PQL Table.

ML Usage: The ML value in this Attachment represents the lowest quantifiable concentration in a sample based on the proper application of all method-based analytical procedures and the absence of any matrix interferences. Assuming that all method-specific analytical steps are followed, the ML value will also represent, after the appropriate application of method-specific factors, the lowest standard in the calibration curve for that specific analytical technique. Common analytical practices sometimes require different treatment of the sample relative to calibration standards.
Note: chemical names in parenthesis and italicized is another name for the constituent.

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

MINIMUM LEVELS IN PPB (µg/l)

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

MINIMUM LEVELS IN PPB (µg/l)

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

Table 3– INORGANICS[4]	FAA	GFAA	ICP	ICPMS	SPGFAA	HYDRIDE	CVAA	COLOR	DCP
Antimony	10	5	50	0.5	5	0.5			1000
Arsenic		2	10	2	2	1		20	1000
Beryllium	20	0.5	2	0.5	1				1000
Cadmium	10	0.5	10	0.25	0.5				1000
Chromium (total)	50	2	10	0.5	1				1000
Chromium VI	5							10	
Copper	25	5	10	0.5	2				1000
Lead	20	5	5	0.5	2				10000
Mercury				0.5			0.2		
Nickel	50	5	20	1	5				1000
Selenium		5	10	2	5	1			1000
Silver	10	1	10	0.25	2				1000
Thallium	10	2	10	1	5				1000
Zinc	20		20	1	10				1000
Cyanide								5	

2 *With the exception of phenol by colorimetric technique, the normal method-specific factor for these substances is 1000, therefore, the lowest standards concentration in the calibration curve is equal to the above ML value for each substance multiplied by 1000.*

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

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

MINIMUM LEVELS IN PPB (µg/l)

Table 4- PESTICIDES – PCBs[5]	GC
Aldrin	0.005
alpha–BHC (*a-Hexachloro-cyclohexane*)	0.01
beta–BHC (*b-Hexachloro-cyclohexane*)	0.005
Gamma–BHC (*Lindane; g-Hexachloro-cyclohexane*)	0.02
Delta-BHC (*d-Hexachloro-cyclohexane*)	0.005
Chlordane	0.1
4,4'-DDT	0.01
4,4'-DDE	0.05
4,4'-DDD	0.05
Dieldrin	0.01
Alpha-Endosulfan	0.02
Beta-Endosulfan	0.01
Endosulfan Sulfate	0.05
Endrin	0.01
Endrin Aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
PCB 1016	0.5
PCB 1221	0.5
PCB 1232	0.5
PCB 1242	0.5
PCB 1248	0.5
PCB 1254	0.5
PCB 1260	0.5
Toxaphene	0.5

Techniques:
GC - Gas Chromatography
GCMS - Gas Chromatography/Mass Spectrometry
HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)
LC - High Pressure Liquid Chromatography
FAA - Flame Atomic Absorption
GFAA - Graphite Furnace Atomic Absorption
HYDRIDE - Gaseous Hydride Atomic Absorption
CVAA - Cold Vapor Atomic Absorption
ICP - Inductively Coupled Plasma
ICPMS - Inductively Coupled Plasma/Mass Spectrometry
SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)
DCP - Direct Current Plasma
COLOR - Colorimetric

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