California Regional Water Quality Control Board
San Francisco Bay Region
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ORDER NO. R2-2007-0033
NPDES NO. CAG912004

GENERAL WASTE DISCHARGE REQUIREMENTS FOR: Discharge or Reuse of Extracted Brackish Groundwater and Reverse Osmosis Concentrate Resulting from Treatment of Groundwater by Reverse Osmosis and Discharge or Reuse of Extracted and Treated Groundwater Resulting from Structural Dewatering

Table 1. Administrative Information

This Order was adopted by the Regional Water Board on:	**April 11, 2007**
This Order shall become effective on:	**July 1, 2007**
This Order shall expire on:	**July 1, 2012**
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Board have classified the discharges under this General National Pollutant Discharge Elimination System (NPDES) Permit as minor discharges.	
To obtain coverage under this general permit, Dischargers must submit a Notice of Intent (NOI) Form as described in Attachments B and C and a filing fee equivalent to the first year's annual fee. If the NOI is complete, authorization to initiate discharge will be issued by the Regional Water Board Executive Officer.	
Authorized Dischargers who need to continue discharging after the expiration date of this Order shall file a completed NOI form no later than 180 days in advance of this Order's expiration date. The terms and conditions of the Order will automatically continue after its expiration date for such Dischargers that meet criteria for coverage under the General Permit and that have submitted an NOI deemed complete by the Executive Officer before the stated deadline. The terms and conditions of the General Permit will remain in effect until a new Order is adopted by the Regional Water Board. Such Dischargers for which coverage is extended will become subject to the new Order upon authorization by the Executive Officer.	

IT IS HEREBY ORDERED, that 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 and regulations and guidelines adopted thereunder, the Dischargers shall comply with the requirements in this Order.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on April 11, 2007.

Bruce H. Wolfe, Executive Officer

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San Francisco Bay Region

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I. FACILITY INFORMATION

The regulated facilities under this Order are groundwater discharges that fall under one of the three categories (typically long term) explained in Finding I.A below and are not otherwise covered by municipal stormwater permits or other applicable NPDES permits as explained in Findings below:

A. Three discharge categories are as follows:

1. Aquifer protection and salinity barrier well discharges (for example, extracted groundwater discharges related to efforts aimed at protecting, reclaiming, and restoring ground water quality impacted by, or the possible occurrence of, salinity intrusion);
2. Reverse osmosis (RO) concentrate from aquifer protection well discharges; and,
3. Structural dewatering resulting in greater than 10,000 gallons per day and requiring treatment before discharging.

B. Specific Facility information for each discharge shall be included in the Notice of Intent (NOI) Form submitted for that discharge (see Attachments B and C).

C. Examples of typical discharges to be covered by this permit are provided in Findings II.B.1 through II.B.3. Any discharger proposing similar discharges at multiple sites may be covered under one discharge authorization letter subject to the approval of the Executive Officer on a case-by-case basis. Each outfall will be subject to individual fees.

II. FINDINGS

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

A. Background. The Regional Water Board has issued municipal stormwater permits to urbanized areas, requiring the municipalities to prohibit the discharge of non-stormwater into their storm drain systems that they own and/or operate. However, non-polluted groundwater discharges are exempt from the prohibition and thousands of these non-polluted groundwater discharges may be occurring in the San Francisco Bay Region. There are instances when these discharges may become polluted by pollutants not covered by the General Waste Discharge Requirements for Discharge or Reuse of Extracted and Treated Groundwater Resulting from the Cleanup of Groundwater Polluted by Fuel Leaks and other Related Wastes at Service Stations and Similar Sites, NPDES Permit No. CAG912002 (hereinafter Fuels General NPDES permit); or, Discharge or Reuse of Extracted and Treated Groundwater Resulting from the Cleanup of

Groundwater Polluted by Volatile Organic Compounds, NPDES Permit No. CAG912003 (hereinafter VOC General NPDES permit). There may also be instances when discharges cause degradation of the receiving water bodies due to the volume and/or velocity of the discharged water. These discharges are not covered by the municipal stormwater permits' exemption and need to be regulated by a NPDES permit such as this general permit. Drinking water aquifer remediation/protection well discharges in Alameda County are an example of a discharge that does not qualify for coverage under the municipal stormwater permits' exemption.

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(s) herein.

B. Facility Description. This Order regulates discharges to surface water from the following sources:

1. Aquifer protection and salinity barrier well discharges (typically long term). These groundwater extraction facilities are in operation to protect drinking water supply aquifers or other municipal facilities from salt water intrusion. For example, the Alameda County Water District (ACWD) operates a series of wells along the southeast side of San Francisco Bay. Historically, ACWD has discharged and in the future may again discharge up to 30 MGD of extracted brackish potable groundwater and RO concentrate in the Fremont-Newark area to flood control channels. The ACWD drinking water protection well discharges are currently regulated under an individual NPDES Permit No. CA0038059, Order No. 00-029. The Regional Water Board plans to rescind this individual permit after this Order becomes effective.

2. RO concentrate from aquifer protection well discharges that discharge to storm drain systems and/or to engineered flood control channels that drain to estuarine environments or directly discharge to estuarine environments (discharges are typically long term). Pumped groundwater may be treated by RO so that the groundwater may be returned to the drinking water supply, and the RO concentrate discharged as waste. For example, this is the case with the ACWD RO facility located in Newark. The ACWD RO discharge is currently regulated under NPDES Permit No. CA0038059, Order No. 00-029. The Regional Water Board plans to rescind this individual permit once ACWD obtains coverage under this Order. ACWD plans to double the capacity of the existing Newark RO facility in the near future and bring another similar facility on line in Fremont within the next 15 years.

RO Concentrate discharges that are permitted under industrial pretreatment requirements to a permitted publicly-owned treatment works (POTW) are not required to obtain coverage under this Order.

3. Long-term structural dewatering resulting in greater than 10,000 gallons per day and requiring treatment. These are long-term dewatering systems under or around buildings and pipelines to remove groundwater infiltration. Buildings and underpass structures are two examples of structures that may require continuous dewatering. Treatment is required where a physical, biological, or chemical treatment process is necessary in order for the structural dewatering discharge to comply with the prohibitions and limitations of this order.

This Order requires Dischargers to provide a complete description of the treatment system installed at each Facility, if any, and the pollutants that the system will remove, in the Notice of Intent NOI (Attachments B and C).

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

States may request authority to issue general NPDES permits pursuant to 40 CFR Section 122.28. On June 8, 1989, the State Water Resources Control Board (State Water Board) submitted an application to the USEPA requesting revisions to its NPDES Program in accordance with 40 CFR 122.28, 123.62, and 403.10. The application included 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 and granted authorization for the State to issue general NPDES permits.

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

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

F. **Technology-Based Effluent Limitations**. 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. Technology-based effluent limitations have not been established by USEPA for the types of discharges authorized by this Order.

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

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

The Basin Plan at Page 2-5 states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. The Basin Plan may not specifically identify beneficial uses for every receiving water regulated under this permit, but may identify present and potential uses for the downstream water body, to which the receiving water, via an intermediate water body, is tributary. These potential and existing beneficial uses are municipal and domestic supply, fish migration and fish spawning, industrial service supply, navigation, industrial process supply, marine habitat, agricultural supply, estuarine habitat, groundwater recharge, shellfish harvesting, water contact and non-contact recreation, ocean, commercial, and sport fishing, wildlife habitat, areas of special biological significance, cold freshwater and warm freshwater habitat, and preservation of rare and endangered species for surface waters and

municipal and domestic supply, industrial service supply, industrial process supply, agricultural supply, and freshwater replenishment for groundwaters. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Requirements of this Order implement the Basin Plan.

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

I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and 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 toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority, toxic pollutants, applicable to inland surface waters, enclosed bays, and estuaries of the State.

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

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

compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order does not include compliance schedules and interim effluent limitations and/or discharge specifications.

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

M. **Antidegradation Policy.** 40 CFR 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 the Fact Sheet, the permitted discharge is consistent with the antidegradation provision of 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. All effluent limitations in this Order are at least as stringent as the effluent limitations in NPDES Permit No. CA0038059, Order No. 00-029, and the effluent limitations, prohibitions, provisions, and control measures/BMPs in the San Francisco Bay Region's municipal stormwater permits.

O. **Monitoring and Reporting.** 40 CFR Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes 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 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 40 CFR section 122.41, and additional

conditions applicable to specified categories of permits in accordance with 40 CFR section 122.42 and as modified for this general permit, are provided in Attachment D. The Discharger 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 the Dischargers. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.

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

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

S. 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 of this Order.

III. DISCHARGE PROHIBITIONS

The following discharges are prohibited and cannot be authorized for coverage under this General Permit:

A. Discharges of groundwater or RO concentrate at a location or in a manner different from that described in this Order are prohibited.

B. Discharges at flow rates greater than authorized by the Executive Officer are prohibited, unless an increase in the flow rate is approved by the Executive Officer.

C. Discharges authorized by the Order shall not cause pollution, contamination, or nuisance as defined by Section 13050 of the California Water Code.

D. Discharges authorized by the Order shall not occur at a volume or velocity to cause erosion and/or scouring to the banks or bottoms of receiving waters.

E. Discharges of filter backwash water, membrane cleaning solutions, or other waste streams resulting from or associated with the treatment of uncontaminated brackish ground water by RO and not described as RO concentrate, are prohibited.

F. Discharges of drilling fluids are prohibited.

G. Discharges of groundwater contaminated with volatile organic compounds (VOCs) are prohibited. Discharges with VOC contamination shall apply for coverage under the VOC general NPDES permit No CAG912003.

H. Discharges of groundwater contaminated with fuels are prohibited. Discharges with fuels contamination shall apply for coverage under the Fuels general NPDES permit No CAG912002.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations

Discharges of effluent shall comply with the following effluent limitations:

1. **Residual Chlorine:** There shall be no detectable levels of residual chlorine in the effluent (a non-detect result using a detection level equal or less than 0.08 milligram per liter will not be deemed to be out of compliance). This limit only applies to Dischargers that chlorinate their well water.

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

3. **Toxicity:** The survival of rainbow trout test fish in 96-hour static renewal bioassays (EPA-821-R-02-012 Test method 2019.0 or later edition) of the discharge shall be not less than a three sample moving median of 90% survival and a single test value of not less than 70% survival. Alternate test species and methods may be authorized by the Executive Officer.

B. Discharge Specifications

All authorized Dischargers shall conduct receiving water, effluent monitoring, and/or special studies as specified in the attached MRP (Attachment E) and compare analytical results with the triggers described in Provisions VI.C.6. These triggers are not effluent limitations. Exceedances of triggers, however, do lead to additional requirements, which are designed to mitigate potential adverse impacts and to determine if discharges continue to be suitable for coverage under the General Permit. All Dischargers shall adhere to applicable procedures, described by Provisions IV.C.6.

C. Reclamation and Land Discharge Specifications

1. **Reuse Policy:** The Regional Water Board adopted Resolution No. 88-160 on October 19, 1988. The Resolution urges dischargers of extracted groundwater from site cleanup projects to reclaim their effluent and that when reclamation is not technically and/or economically feasible, to discharge to a publicly owned treatment works (POTW). If neither reclamation nor discharge to a POTW is technically or economically feasible and if beneficial uses of the receiving water are not adversely affected, it is the intent of the Regional Water Board to authorize the discharge of groundwater in accordance with the requirements of this Order.

2. **Reuse Allowed:** This Order permits reuse or reclamation of extracted or extracted and treated groundwater in conjunction with the discharge to surface water, except for purposes of recharge or reinjection. Reuse of extracted or extracted and treated groundwater can take many forms, such as irrigation of landscaping or agriculture, dust control or soil compaction on construction sites, and industrial water supply.

3. **Water Reclamation Specifications (Water Reuse Only)**
   Reclaimed waters that are used for potable water shall meet the requirements established by the Department of Health Services for potable use. Water Reclamation projects other than for potable use will meet the following requirements:

   a. Water reclaimed for beneficial reuse as applied shall meet the requirements in Section IV.A - Effluent Limitations.
   b. The water reclamation activities shall be described in the Discharger's NOI, including method of any additional treatment and location and type of water reuse.
   c. No reclaimed water shall be allowed to escape from the authorized use area by airborne spray, nor by surface flow except in minor amounts associated with good irrigation practice, nor from conveyance facilities.
   d. Reclamation involving irrigation shall not occur when the ground is saturated.
   e. The use of reclaimed water shall not impair the quality of waters of the State, nor shall it create a nuisance as defined by Section 13050(m) of the California Water Code.
   f. Adequate measures shall be taken to minimize public contact with reclaimed water and to prevent the breeding of flies, mosquitoes, and other vectors of public health significance during the process of reuse.
   g. Appropriate public warnings must be posted to advise the public that the water is not suitable for drinking. Signs must be posted in

the area, and all reclaimed water valves and outlets appropriately labeled.

h. There shall be no cross-connection between the potable water supply and piping containing extracted or extracted and treated groundwater intended for reuse.

i. Water reclamation consisting of recharge or reinjection is not authorized under this Order.

4. **Land Discharge Specifications.** This Order permits limited land discharges of groundwater in conjunction with the discharge to surface water, except for purposes of significant recharge or reinjection. In general, the specifications in Section IV.C.3 also apply to land discharges.

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. Discharges shall not cause the following conditions to exist in the receiving water.

1. Narrative Limits

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

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

c. Alteration of temperature, turbidity, taste, odor, or apparent color beyond present natural background levels;

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

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

2. Numerical Limits

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

b. Dissolved Sulfide. Discharges shall not cause dissolved sulfide concentrations to be above natural background levels in receiving waters.
c. pH. Discharges shall not cause pH of receiving waters to be less than 6.5 or greater than 8.5. In receiving water that are naturally alkaline (i.e. greater than pH 8.0), the discharges shall not cause changes greater that 0.5 units in background ambient pH levels.
d. Turbidity. In non-tidal receiving waters, where background turbidity is greater than 50 NTU, the discharges shall not cause an increase of more than 10 percent above upstream background turbidity.
e. Un-Ionized Ammonia. The discharge of waste shall not cause receiving waters to contain concentrations of un ionized Ammonia in excess of the following limits (in mg/l as N):

Annual Median	0.025
Maximum, Central Bay	0.16
Maximum, Lower Bay	0.40

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

B. Groundwater Limitations

The discharge shall cause no violation of the Basin Plan water quality standards for receiving groundwaters with existing and potential beneficial uses of municipal and domestic supply, industrial water supply, industrial process water supply, agricultural water supply, and/or freshwater replenishment to surface water (see Table 2 numerical triggers in column A which are protective of municipal and domestic supply, agricultural water supply, and freshwater replenishment to surface water beneficial uses).

VI. PROVISIONS

A. Standard Provisions.

Dischargers shall comply with all Standard Provisions in Attachment D of this Order.

B. Monitoring and Reporting Program Requirements.

1. Dischargers shall comply with the Monitoring and Reporting Program (MRP), and future revisions thereto, in Attachment E of this Order.

2. Dischargers authorized under this permit may be required to comply with additional monitoring requirements. The Executive Officer will specify such additional monitoring requirements in the authorization letter that will include an explanation of the need for the information. Examples of additional monitoring that could be required are listed below:

    a. Monitoring Required to Respond to a Complaint received about a Facility authorized to discharge under this permit,
    b. Storm Water Monitoring,
    c. Dioxins and Furans Monitoring,
    d. Regional Monitoring Program Monitoring,
    e. Additional Discharge Observations, and
    f. Additional Effluent and Ambient Priority Pollutant Analysis.

C. Special Provisions.

1. **Reopener Provisions**: The Regional Water Board may modify or reopen this Order prior to its expiration date in any of the following circumstances:

    a. If present or future investigations demonstrate that the discharge(s) governed by this Order will, or cease to, have adverse impacts on water quality and/or beneficial uses of the receiving waters;
    b. As new or revised WQOs come into effect for the San Francisco Bay estuary and contiguous water bodies (whether statewide, regional, or site-specific). In such cases, effluent limitations in this Order will be modified as necessary to reflect updated WQOs;
    c. If translator or other water quality studies provide a basis for determining that a permit condition(s) should be modified;
    d. An administrative or judicial decision on a separate NPDES permit or WDR that addresses requirements similar to this discharge; and
    e. As authorized by law.

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

2. **Notice of Intent (NOI) or Modified NOI Application:** The NOI or Modified NOI application for each point of proposed discharge to a storm drain system shall contain the information required in the Notice of Intent

Form as explained in Attachments B and C of this Order and as may be amended by the Executive Officer.

3. **NOI Review:** Upon receipt of a complete NOI application package for proposed discharge, the Executive Officer will review the application to determine whether the proposed Discharger is eligible to discharge waste under this general permit. The application package shall document that the proposed treatment system and associated operation, maintenance, and monitoring plans are capable of ensuring that the discharge will meet the provisions, prohibitions, effluent limitations, and receiving water limitations of this Order.

4. **Discharge Authorization and Termination:** If the Executive Officer determines that the proposed Discharger is eligible to discharge waste under this general permit, the Executive Officer will authorize the proposed discharge. Any discharger proposing similar discharges at multiple sites may be covered under one discharge authorization letter subject to the approval of the Executive Officer on a case-by-case basis. Each outfall will be subject to individual fees. After notice and opportunity for a hearing, coverage of an individual discharge under this General Permit may be terminated or modified for cause, including but not limited to, the following:
   a. Violation of any term or condition of this General Permit;
   b. In obtaining coverage under this General Permit, misrepresentation or failure to disclose all relevant facts; and
   c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

5. **Non-Compliance as a Violation:** Upon receipt of the Executive Officer's discharge authorization, the Discharger(s) shall comply with all applicable conditions and limitations of this Order and its Attachments. Any permit noncompliance (violations of requirements in this Order or Monitoring Program) constitutes a violation of the Clean Water Act and the California Water Code and is grounds for enforcement action, permit or authorization termination, revocation and reissuance, modification, the issuance of an individual permit, or denial of a renewal application.

6. **Triggers:** The triggers listed in Table 2 are not effluent limitations and should not be construed as such. Instead, they are levels at which additional investigation is warranted to determine whether a numeric limit for a particular constituent is necessary. Aquifer protection and salinity barrier well and RO Concentrate from aquifer protection well discharges occur either in an estuarine area or to a flood control channel near and tributary to an estuarine area. These types of discharges will follow Column "B" of Table 2. Trigger Compounds or Constituents in Column "A" within Table 2 is intended for use where discharges are to drinking water sources. The authorization issued to each Discharger will indicate which

trigger column is applicable to that specific discharge. If any constituent in the effluent of a discharge exceeds the corresponding trigger as listed in the Table 2, then, if applicable, the Discharger shall compare the monitoring results with an adjusted trigger (adjusted based on hardness, pH, site specific objectives, translators, and/or other factors). If the constituent of concern in the effluent still exceeds the adjusted trigger, then the Discharger shall take three additional samples (three influent, if applicable, and three effluent) for each exceeded constituent during the following calendar quarter and if confirmed, the Discharger shall follow Provisions VI.C.6a and VI.C.6b. If this monitoring activity has already been completed in the past, then summarize the results including the design of any installed treatment unit.

a. Within 90 days of confirming, through accelerated monitoring, that effluent concentrations of a pollutant exceed one or more of the above triggers, the Discharger shall submit a Feasibility Analysis to the Regional Water Board that describes if methods to control levels of pollutant(s) of concern are feasible, and if yes, describes the selected methods of source control, operational control (e.g., blending ratio if applicable), and/or treatment to control the pollutant(s) of concern and ensure that levels of pollutant(s) of concern in effluent will not be discharged at levels exceeding applicable water quality criteria. Source control, operational control, and/or treatment design shall be implemented within 90 days following submittal of the Feasibility Study.

b. If treatment is not feasible, the Discharger's Feasibility Study shall document the possibility of relocating the discharge to a different receiving water, to discharge to land, or to discharge to the sanitary sewer. Alternative disposal methods design or arrangement, if deemed acceptable by the Executive Officer, shall be finalized within 90 days of submittal of the Feasibility Study.

c. Based on the results of the above evaluations, the Executive Officer may require termination of discharge and/or require application for an individual NPDES permit consistent with Provisions C.4 and C.5.

Table 2. Trigger Compounds or Constituents

Compound	CAS Number	Column A for Discharges to freshwater bodies with municipal and domestic supply, agricultural water supply, and/or freshwater replenishment beneficial uses (ug/L)	Column B for Discharges to Bay/Estuary (See Note 2) (ug/L)
Turbidity (Units)		5	
Total Dissolved Solids		500,000	

Compound	CAS Number	Column A for Discharges to freshwater bodies with municipal and domestic supply, agricultural water supply, and/or freshwater replenishment beneficial uses (ug/L)	Column B for Discharges to Bay/Estuary (See Note 2) (ug/L)
(TDS)			
Conductivity (mmhoms/cm)		200	
Chloride		142,000	
Antimony	7440360	6	4300
Arsenic	7440382	10	36
Beryllium	7440417	4	
Cadmium	7440439	2.2	2.2
Chromium (total)	18540299	11 (See Note 1)	11 (See Note 1)
Chromium (VI)	18540299	11	11
Copper	7440508	3.1	3.1
Lead	7439921	2.5	2.5
Mercury	7439976	0.025	0.025
Nickel	7440020	52	8.2
Selenium	7782492	5.0	5.0
Silver	7440224	3.4	1.9
Thallium	7440280	1.7	6.3
Zinc	7440666	120	81
Cyanide	57125	1.0	1.0
Asbestos	1332214	7 MFibers/L	
2,3,7,8-TCDD (Dioxin)	1746016	1.3E-08	1.4E-08
Acrylonitrile	107131	0.059	0.66
Bromoform	75252	4.3	360
Chlorodibromomethane	124481	0.401	34
Dichlorobromomethane	75274	0.56	46
1,2-Dichloropropane	78875	0.52	39
1,3-Dichloropropylene	542756	0.5	1,700
1,1,2,2-Tetrachloroethane	79345	0.17	11
Pentachlorophenol	87865	0.28	7.9
2,4,6-Trichlorophenol	88062	2.1	6.5
Benzidine	92875	0.00012	0.00054
Benzo(a)Anthracene	56553	0.0044	0.049
Benzo(a)Pyrene	50328	0.0044	0.049
Benzo(b)Fluoranthene	205992	0.0044	0.049
Benzo(k)Fluoranthene	207089	0.0044	0.049
Bis(2-Chloroethyl)Ether	111444	0.031	1.4
Bis(2-Ethylhexyl)Phthalate	117817	1.8	5.9
Chrysene	218019	0.0044	0.049
Dibenzo(a,h)Anthracene	53703	0.0044	0.049
3,3'-Dichlorobenzidine	91941	0.04	0.077
2,4-Dinitrotoluene	121142	0.11	9.1
1,2-Diphenylhydrazine	122667	0.04	0.54
Hexachlorobenzene	118741	0.00075	0.00077

Compound	CAS Number	Column A for Discharges to freshwater bodies with municipal and domestic supply, agricultural water supply, and/or freshwater replenishment beneficial uses (ug/L)	Column B for Discharges to Bay/Estuary (See Note 2) (ug/L)
Hexachlorobutadiene	87683	0.44	50
Hexachloroethane	67721	1.9	8.9
Indeno(1,2,3-cd)Pyrene	193395	0.0044	0.049
N-Nitrosodimethylamine	62759	0.00069	8.1
N-Nitrosodi-n-Propylamine	621647	0.005	1.4
Aldrin	309002	0.00013	0.00014
alpha-BHC	319846	0.0039	0.013
beta-BHC	319857	0.014	0.046
gamma-BHC	58899	0.019	0.063
Chlordane	57749	0.00057	0.00059
4,4'-DDT	50293	0.00059	0.00059
4,4'-DDE	72559	0.00059	0.00059
4,4'-DDD	72548	0.00083	0.00084
Dieldrin	60571	0.00014	0.00014
alpha-Endosulfan	959988	0.0087	0.0087
beta-Endosulfan	33213659	0.0087	0.0087
Endrin	72208	0.036	0.0023
Endrin Aldehyde	7421934	0.76	0.81
Heptachlor	76448	0.00021	0.00021
Heptachlor Epoxide	1024573	0.0001	0.00011
Polychlorinated biphenyls (PCBs) total	1336363	0.00017	0.00017
Toxaphene	8001352	0.0002	0.0002
Turbidity (Units)	-	5	
Odor-Threshold (Units)	-	3	
Sulfate	-	250,000	
Foaming Agents	-	500	
Color (Units)	-	15	
Aluminum		5,000	
Boron		500	
Cobalt		50	
Fluoride		1,000	
Iron		300	
Lithium		2500	
Manganese		50	
Molybdenum		10	
Nitrate (as NO3)		45,000	
Nitrate + Nitrite (as N) NO3 + NO2 (as N)		5,000	
Nitrite (as N)		1,000	
Vanadium		100	
Combined Radium-226 and Radium-228 (IN pCi/l)		5	

Compound	CAS Number	Column A for Discharges to freshwater bodies with municipal and domestic supply, agricultural water supply, and/or freshwater replenishment beneficial uses (ug/L)	Column B for Discharges to Bay/Estuary (See Note 2) (ug/L)
Gross Alpha Particle (includes Radium-226 but excludes Radon and Uranium) (IN pCi/l)		15	
Tritium (IN pCi/l)		20,000	
Strontium-90 (IN pCi/l)		8	
Gross Beta Particle Activity (IN pCi/l)		50	
Uranium (IN pCi/l)		20	
Fuels Related Pollutants		Apply for NPDES No. CAG912002	Apply for NPDES No. CAG912002
Solvents Related Pollutants		Apply for NPDES No. CAG912003	Apply for NPDES No. CAG912003

Legend: CAS = Chemical Abstract System, MCL = Maximum Contaminant Level, and CTR = California Toxics Rule
Note1: If total chromium concentration exceeds 11 then Chromium (VI) analysis shall also be done
Note 2: This column also includes RO concentrate from aquifer protection well discharges that discharges to storm drain systems and/or to engineered flood control channels that drain to estuarine environments or directly discharge to estuarine environments

7. **Individual NPDES Permit May Be Required:** The USEPA Administrator may request the Executive Officer to require any discharger authorized to discharge waste by a general permit to subsequently apply for and obtain an individual NPDES permit. The Executive Officer may require any discharger authorized to discharge waste by a general permit to subsequently apply for and obtain an individual NPDES permit. An interested person may petition the Executive Officer or the Regional Administrator to take action under this provision. Cases where an individual NPDES permit may be required include the following.

    a. The discharger is not in compliance with the conditions of this Order or as authorized by the Executive Officer;
    b. A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;
    c. Effluent limitation guidelines are promulgated for point sources covered by the general NPDES permit;
    d. A water quality control plan containing requirements applicable to such point sources is approved; or
    e. The requirements of 40 CFR 122.28(a), as explained in Finding No. II.C, are not met.

8. **Treatment Reliability:** Dischargers shall keep in a state of readiness all systems necessary to achieve compliance with the conditions of this Order. All systems, both those in service and reserve, shall be inspected and maintained on a regular basis. Records shall be kept of the tests and made available to the Regional Water Board for at least five years.

9. **No Preemption:** This Order permits the discharge of uncontaminated extracted groundwater, extracted and treated groundwater, and RO concentrate resulting from treatment of uncontaminated extracted ground water by RO, to waters of the State subject to the prohibitions, effluent limitations and specifications, and provisions of this Order. It does not pre-empt or supersede the authority of municipalities, flood control agencies, or other local agencies to prohibit, restrict, or control discharges of waste to storm drain systems or other watercourses subject to their jurisdiction.

VII. COMPLIANCE DETERMINATION

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

A. General.

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

B. Multiple Sample Data.

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

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

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

ATTACHMENT A – DEFINITIONS

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

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

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

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

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

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

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

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

Duly Authorized Representative is one whose:

a. Authorization is made in writing by a principal executive officer or ranking elected official;

b. Authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as general partner in a partnership, sole proprietor in a sole proprietorship, 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).

Effluent Concentration Allowance (ECA) is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-

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

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

Field Blank is defined as an individual sample demonstrated to be free from the contaminants of interest and other potentially interfering substances, and treated as a sample in all respects, including exposure to grab-sampling site conditions, storage, preservation, and all analytical procedures. The purpose of the field blank is to determine if the field or sample transporting procedures and environments have contaminated the sample.

Flow Sample is defined as the accurate measurement of the average daily flow volume using a properly calibrated and maintained flow-measuring device.

Grab Sample is defined as an individual sample collected in a short period of time not exceeding 15 minutes. Grab samples shall be collected during normal peak loading conditions for the parameter of interest, which may or may not be during hydraulic peaks. It is used primarily in determining compliance with maximum daily limits and average monthly limits. Grab samples represent only the condition that exists at the time the wastewater is collected.

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

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

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

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

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

Minimum Level (ML) is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample

that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

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

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

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

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

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

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

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

where:

x is the observed value;

μ is the arithmetic mean of the observed values; and

n is the number of samples.

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

ATTACHMENT B - NOTICE OF INTENT APPLICATION FORM
To Receive
Authorization to Discharge or Reuse of Extracted Brackish Groundwater and Reverse Osmosis Concentrate Resulting from Treatment of Groundwater by Reverse Osmosis and Discharge or Reuse of Extracted and Treated Groundwater Resulting from Structural Dewatering
under the Requirements of
ORDER NO. R2-2007-0033, NPDES Permit No. CAG912004

For Groundwater Discharge Facility located at:

_____

Type or Print Facility Address above the line
File No: 1210.60

This is an application to receive authorization to discharge wastewater as described below in Table 1:

Table 1. Mark Applicable Discharge Category

Category	Notice of Intent for:	
Category 1	Aquifer protection and salinity barrier well discharges	
Category 2	RO concentrate from aquifer protection well discharges	
Category 3	Structural dewatering discharges greater than 10,000 gallons per day and requiring treatment. Treatment is required where a physical, biological, or chemical treatment process is necessary in order for the structural dewatering discharge to comply with the prohibitions and limitations of this order	

Discharger's Certification
I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated 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.

_____ _____
Name (print) Signature and Date

_____ _____
Title/Organization Address

Complete Table 2. Facility Information

1	Discharger's Name	
2	Name of Facility	
3	Facility Address	
4	Facility Contact, Title, and Phone	
5	Authorized Person to Sign & Submit Reports	
6	Mailing Address	
7	Billing Address	
8	Brief description and purpose of discharge	
9	Watershed (Please note that Watershed may have a different name than receiving water)[1]	
10	Receiving Water	
11	Receiving Water Type. For example, enclosed bay, estuary, inland surface water, or Sacramento-San Joaquin Delta	

[1] **If you do not know in which watershed your project is located, you may check web sites such as "San Francisco Bay Area Creek & Watershed Finder", at http://www.museumca.org/creeks/resc.html.**

I understand that if this discharge is eligible under the requirements of Order No. R2-2007-0033 (Order), authorization to discharge extracted or extracted and treated groundwater from the above facility will be granted providing the following conditions are met:

1. I must comply with all applicable requirements of the Order and the associated Self-Monitoring Program (SMP). The effluent shall not contain constituents in excess of the effluent limits in this Order.

2. A system including the elements described in Table 3 below and the schematic shown in Attachment 1 will be used for this discharge.

Complete Table 3. Treatment System and/or Best Management Practices (BMP) Description

	Unit	Number	Further Description (such as size, capacity, location, and function),
1	Extraction Well(s)		
2	Extraction Wells with Dedicated Treatment Unit(s)		
3	Dedicated Treatment Unit(s)		
4	Settling Tank(s) in series		
5	Settling Tank(s) in parallel		
6	Oil/Water Separator(s)		
7	Filter(s)		
8	Air Strippers with Air Filters		
9	Air Strippers without Air Filters		
10	Oxygenation Treatment Unit(s)		
11	Advanced Treatment Unit(s)		
12	Liquid-phase Granular Activated Carbon (GAC) vessel(s) in series		
13	GAC vessel(s) in parallel		
14	Dechlorination Unit (applies to the Dischargers that chlorinate their well water).		
15	Effluent reuse Infrastructure (If so, provide additional detail)		
16	Effluent land discharge Infrastructure (If so, provide additional detail)		
17	Energy Dissipater System		
18	Other Treatment Systems		
21	Other BMPs (e.g. range of the RO facility blending ratio)		
22	Bay edge Groundwater Dewatering for Landfills dischargers shall provide full description that the Groundwater Dewatering facility is completely separate from the landfill leachate collection system.		

3. Attachment 2 is a report certifying the adequacy of each component of the proposed system, and including the table of contents of the associated Operation and Maintenance (O&M) Manual. This certification report contains an item-by-item analysis, based on accepted engineering practice, of how the process and physical design of the system will ensure compliance with the Order. This report also certifies that:

   i. All facility startup and operation instruction manuals are adequate and available to operating personnel.

   ii. Adequate facility maintenance and testing schedules are included in the facility O&M Manual.

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

   iv. The residual concentration of any chemical additive or additives used in the process is designed to be zero and will never exceed the No Adverse Effect Concentration (NOEC) as documented in the ecological section of the applicable Material Safety Data Sheet (MSDS). A copy of the MSDS for every chemical used is provided as an attachment in the O&M Manual.

   v. If any chemical used in the treatment process may cause pH variances in the effluent, the frequency of pH monitoring in the effluent shall be increased to be more frequent than the frequency as explained in the Tables E-2 through E-5 of Attachment E – Monitoring and Reporting Program and as required by the O&M Manual.

   vi. The design engineer has affixed his/her signature and engineering license number to this certification report in Attachment 2.

Complete Table 4. Responsible Party(ies) and Other Information

1	Design Engineer's Name, California License Number, Address, and Phone Number	
2	Operation and Maintenance Responsible Party Name (If applicable, Engineer's California License Number), Address, and Phone Number	

4. The maximum discharge rate of effluent shall not exceed _____ million gallons per day (MGD). The system is designed for _____ MGD. I understand this discharge shall not cause pollution, contamination, or nuisance. For

example, the discharge shall cause no scouring or erosion at the point where the storm drain or outfall-pipe discharges into the receiving water(s).

5. The effluent will be discharged (directly or via a storm drain) to the receiving water(s) described in Table 5 below and shown on the aerial map in Attachment 3.

Complete Table 5. Discharge and Discharge Monitoring Locations

Discharge Point Location	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
Influent Monitoring Point(s)			
Effluent Monitoring Point			
Storm Drain Location (if applicable):			Storm Drain (if applicable)
Outfall Location: Include the distance between the outfall and the Bay or a lake here: _____Mile			
Upstream Receiving Water Monitoring Location (RSW-001U)			At a point 50 feet upstream from the point of discharge into the receiving water, or if access is limited, at the first point upstream which is accessible.
Downstream Receiving Water Monitoring Location (RSW-001D)			At a point 50 feet downstream from the point of discharge into the receiving water, or if access is limited, at the first point downstream which is accessible.

6. A copy of the Order, a complete copy of this Notice of Intent, documentation of the authorization to discharge received from the Regional Water Board, a full copy of the O&M Manual, and any other documents recommended by the design engineer shall be stored at or near the facility. These documents shall be made available to Regional Water Board staff during inspections. No O&M Manual shall be submitted to the Regional Water Board office, unless requested.

7. Self-Monitoring Reports shall be submitted on a quarterly calendar basis, no later than 45 days following the last day of the quarter. The laboratory results shall be summarized in tabular form, but the laboratory data sheets need not be included in the reports (unless requested). The reports shall summarize the monitoring data and include information such as the sample location (extraction well(s), influent, effluent, or receiving water); the constituents analyzed; the analytical methods used; the laboratory reporting levels in micrograms per liter (ug/l); the sample results (ug/l); the date sampled; and the date samples were analyzed. A summary of quality assurance/quality control data such as field, trip, and laboratory blank results shall be reported for each analyzed constituent or group of constituents. These reports shall also include a description of the operation and maintenance of the groundwater extraction and treatment system. An annual report summarizing system operation and maintenance for the last four quarters shall be prepared and submitted no later than February 15 of the following year. The last calendar quarter monitoring report may be combined with the annual report. The annual report shall document that the annual fee has been paid.

8. I understand that it is the responsibility of any person proposing to discharge to a storm drain system or other watercourses to obtain authorization to discharge from the agency having jurisdiction over the use of the storm drain system or watercourse. I also understand any discharge authorization granted by the Regional Water Board is conditional and may be terminated at any time after notice and opportunity for a public hearing pursuant to General Permit Special Provision C.4).

9. Table 6 lists the sampling results for each influent or projected influent, and effluent or projected effluent (as applicable). If you have two or more substantially identical outfalls, you may request to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls. If your request is granted, on a separate sheet attached to the application form, identify which outfall you did test, and describe why the outfalls that you did not test are substantially identical to the outfall that you did test. Unless requested, no laboratory reports have been included in this NOI. Of the constituents listed below in Table 6, Structural Dewatering Dischargers shall provide monitoring data for the subset of constituents for which they have evidence may be present in the extracted groundwater. This subset of constituents is the same for which the Discharger will install treatment system(s), pursuant to this permit.

Table 6. Expected Compounds or Constituents in the Discharge

Compound	CAS Number	Maximum Levels of Pollutants expected in the influent (note the unit unless the unit is microgram per liter)	Maximum Levels of Pollutants expected in the effluent (note the unit unless the unit is microgram per liter)
Chlorine Residue (applies to Dischargers that chlorinate their well water)			
pH (please include both maximum and minimum)			

Compound	CAS Number	Maximum Levels of Pollutants expected in the influent (note the unit unless the unit is microgram per liter)	Maximum Levels of Pollutants expected in the effluent (note the unit unless the unit is microgram per liter)
Acute Whole Effluent Toxicity (Species used and percent survival)			
Turbidity (Units)			
Total Dissolved Solids (TDS)			
Conductivity (mmhoms/cm)			
Chloride			
Antimony	7440360		
Arsenic	7440382		
Beryllium	7440417		
Cadmium	7440439		
Chromium (total)	18540299		
Chromium (VI)	18540299		
Copper	7440508		
Lead	7439921		
Mercury	7439976		
Nickel	7440020		
Selenium	7782492		
Silver	7440224		
Thallium	7440280		
Zinc	7440666		
Cyanide	57125		
Asbestos	1332214		
2,3,7,8-TCDD (Dioxin)	1746016		
Acrylonitrile	107131		
Bromoform	75252		
Chlorodibromomethane	124481		
Dichlorobromomethane	75274		
1,2-Dichloropropane	78875		
1,3-Dichloropropylene	542756		
1,1,2,2-Tetrachloroethane	79345		
Pentachlorophenol	87865		
2,4,6-Trichlorophenol	88062		
Benzidine	92875		
Benzo(a)Anthracene	56553		
Benzo(a)Pyrene	50328		
Benzo(b)Fluoranthene	205992		
Benzo(k)Fluoranthene	207089		
Bis(2-Chloroethyl)Ether	111444		
Bis(2-Ethylhexyl)Phthalate	117817		
Chrysene	218019		
Dibenzo(a,h)Anthracene	53703		
3,3'-Dichlorobenzidine	91941		

Compound	CAS Number	Maximum Levels of Pollutants expected in the influent (note the unit unless the unit is microgram per liter)	Maximum Levels of Pollutants expected in the effluent (note the unit unless the unit is microgram per liter)
2,4-Dinitrotoluene	121142		
1,2-Diphenylhydrazine	122667		
Hexachlorobenzene	118741		
Hexachlorobutadiene	87683		
Hexachloroethane	67721		
Indeno(1,2,3-cd)Pyrene	193395		
N-Nitrosodimethylamine	62759		
N-Nitrosodi-n-Propylamine	621647		
Aldrin	309002		
alpha-BHC	319846		
beta-BHC	319857		
gamma-BHC	58899		
Chlordane	57749		
4,4'-DDT	50293		
4,4'-DDE	72559		
4,4'-DDD	72548		
Dieldrin	60571		
alpha-Endosulfan	959988		
beta-Endosulfan	33213659		
Endrin	72208		
Endrin Aldehyde	7421934		
Heptachlor	76448		
Heptachlor Epoxide	1024573		
Polychlorinated biphenyls (PCBs) total	1336363		
Toxaphene	8001352		
Turbidity (Units)			
Odor-Threshold (Units)			
Sulfate			
Constituents Below are Only Applicable to Discharges to Freshwaters with Municipal and Domestic Supply and Related Beneficial Uses			
Foaming Agents			
Color (Units)			
Aluminum			
Boron			
Cobalt			
Fluoride			
Iron			
Lithium			
Manganese			
Molybdenum			
Nitrate (as NO3)			

Compound	CAS Number	Maximum Levels of Pollutants expected in the influent (note the unit unless the unit is microgram per liter)	Maximum Levels of Pollutants expected in the effluent (note the unit unless the unit is microgram per liter)
Nitrate + Nitrite (as N) NO3 + NO2 (as N)			
Nitrite (as N)			
Vanadium			
Combined Radium-226 and Radium-228 (IN pCi/l)			
Gross Alpha Particle (includes Radium-226 but excludes Radon and Uranium) (IN pCi/l)			
Tritium (IN pCi/l)			
Strontium-90 (IN pCi/l)			
Gross Beta Particle Activity (IN pCi/l)			
Uranium (IN pCi/l)			
Fuels Related Pollutants, please apply for NPDES No. CAG912002			
Solvents Related Pollutants, please apply for NPDES No. CAG912003.			
Other Pollutants not listed above but there is evidence to be present in the influent and/or effluent			

Legend: CAS = Chemical Abstract System

10. Any other relevant information about this project that may be necessary to evaluate the eligibility of this discharge under the Order is included in Attachment 5.

11. Mark as applicable:
_____A Check for $ 5,688 is attached (This discharge requires a treatment system to meet priority toxic pollutant limits and that could impair beneficial uses if limits are violated);
_____ A Check for $ 3,437 is attached (This Discharge requires a treatment system to meet non-priority pollutant limits, but are not expected to impair beneficial uses if limits are violated. Examples of non-priority pollutants include, but are not limited to, nutrients, inorganic compounds, pH, and temperature); or,
_____ A Check for $ 1,185 is attached (This Discharge requires minimal or no treatment system to meet limits and pose no significant threat to water quality).

12. Add the following five attachments to this form:
Attachment 1: Flow Schematics
Attachment 2: Engineering Certification Report
Attachment 3: Aerial Map (highlight the discharge path)
Attachment 4: Check for $_____
Attachment 5: Other Information

Note: The Regional Water Board may modify this form at any time to reflect any new fees and other needed improvements as applicable.

ATTACHMENT C - INSTRUCTIONS FOR COMPLETING NOTICE OF INTENT (NOI) FORM To Receive

Authorization to Discharge or Reuse of Extracted Brackish Groundwater and Reverse Osmosis Concentrate Resulting from Treatment of Groundwater by Reverse Osmosis and Discharge or Reuse of Extracted and Treated Groundwater Resulting from Structural Dewatering under the Requirements of

Order No. R2-2007-0033, NPDES Permit No. CAG912004

Facility Address: Please include Zip code and County for the Facility Address.

Table 1. Please Mark Applicable Discharge Category

Category	Notice of Intent for:	
Category 1	Aquifer protection and salinity barrier well discharges	These groundwater extraction facilities are in operation to protect drinking water supply aquifers or other municipal facilities from salt water intrusion.
Category 2	RO concentrate from aquifer protection well discharges	Pumped groundwater may be treated by RO so that the groundwater may be returned to the drinking water supply, and the RO concentrate discharged as waste.
Category 3	Structural dewatering discharges greater than 10,000 gallons per day and requiring treatment. Treatment is required where a physical, biological, or chemical treatment process is necessary in order for the structural dewatering discharge to comply with the prohibitions and limitations of this order	These are long-term dewatering systems under or around buildings and pipelines to remove groundwater infiltration. Buildings and underpass structures are two examples of structures that may require continuous dewatering.

Discharger's Certification

This form must be signed by an appropriate corporate officer, general partner, principal executive officer, or ranking elected official. In no case should the consultant sign the forms.

Administrative Information
Complete Table 2. Facility Information

1	Discharger's Name	
2	Name of Facility	
3	Facility Address	
4	Facility Contact, Title, and Phone	
5	Authorized Person to Sign & Submit Reports	
6	Mailing Address	
7	Billing Address	
8	Type of site or project.	For example: (1) temporary or permanent groundwater dewatering systems, operated to prevent groundwater infiltration or to remove collected groundwater, 2) groundwater extraction systems operated to protect or remediate drinking water supply aquifers from salt water intrusion, 3) facilities which treat groundwater by reverse osmosis (RO), or 4) other (please explain if "Other")
9	Watershed (Please note that Watershed may have a different name than receiving water)	If you do not know, you may check web sites such as "San Francisco Bay Area Creek & Watershed Finder", at http://www.museumca.org/creeks/resc.html.
10	Receiving Water	
11	Receiving Water Type	<enclosed bay, estuary, inland surface water, or Sacramento-San Joaquin Delta>

Condition 1. Please review the Order before completing this form.
Condition 2. The system shall be fully described. The Dischargers that chlorinate their extracted groundwater shall dechlorinate their effluent to nondetectable levels (a non-detect result using a detection level equal or less than 0.08 milligrams per liter will not be deemed to be out of compliance).

Condition 3. This permit requires a professional engineer (PE) certified in the State of California to oversee the design of the system.

Condition 4. A PE shall certify the adequacy of each component of the proposed system. Other relevant information such as the reason(s) if any chemical additive or additives are needed to be used in the treatment system, method of application and disposal shall also be fully explained in the PE certification. Please note that the design engineer has the authority to reject usage of any chemical which has an inadequate MSDS or may cause an adverse effect on most sensitive Beneficial Uses of the receiving water. If you have a batch discharge, provide the frequency, volume, and maximum flow rate.

Condition 5. Some of this information may be obtained from the municipalities. The discharge path shall be highlighted from the facility to the final receiving water.
Condition 6. All documents needed by the facility technicians to properly operate or maintain the treatment facility shall be at or near the facility.

Condition 7. Late Self-Monitoring Reports are considered in violation of the permit's requirements and are subject to mandatory minimum penalty if more than 30 days late.

Condition 8. Prepare a contact List.

Condition 9: No application will be considered complete without complete delineation of constituents in the discharge. The NOI shall include analytical results, including the date the samples were taken, for influent (except for mercury, this may be a weighted average of individual extraction wells for non-operating facilities) and effluent (not required for proposed discharges with no prior operating experience). Please note that Category 2 and 3 discharges (as listed in Table 1) may not receive treatment, and therefore effluent samples only will be required. If you have two or more substantially identical outfalls, you may request to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls. If your request is granted, on a separate sheet attached to the application form, identify which outfall you did test, and describe why the outfalls that you did not test are substantially identical to the outfall that you did test. This NOI requires screening (meaning at least one grab sample analysis for all constituents listed in Table 6 of NOI Form in Attachment B). If you have other monitoring data not specifically listed in Table 6, the highest concentrations of these pollutants shall be reported as an attachment to your NOI application. All analytical test methods number and technique shall be reported. All analytical methods used shall be federally approved methods (in this case, please include 40 CFR part number), USEPA approved methods, Standard Methods, or equivalent. For equivalent methods, the lab director certification and name of the approved method shall be provided as an attachment to the NOI Form.

The Dischargers that dechlorinate their effluents shall document the non detectable levels (e.g. < 0.01 milligram per liter).

Condition 10. Other information such as vicinity to a highly polluted site shall also be provided in Attachment 5.

Condition 12. No application will be considered complete without the applicable fee. For discharges regulated under this General NPDES Permit, annual fees are based on California Code of Regulations (CCR) Title 23, Division 3, Chapter 9, Section 2200 (b) (9). The Regional Water Board may modify this instruction at any time to reflect a new CCR fee schedule. At this time, please follow the fee schedule explained on the next page.

1) Attach a Check for $ 5,688 if your facility includes a treatment system to meet priority toxic pollutant limits and that could impair beneficial uses if limits are violated,

2) Attach a Check for $ 3,437 if your facility includes a treatment system to treat non-priority pollutant, but are not expected to impair beneficial uses if limits are violated. Examples of non-priority pollutants include, but are not limited to, nutrients, inorganic compounds, pH, and temperature); or,

3) Attach a Check for $ 1,185 if your facility includes minimal or no treatment system to meet limits and pose no significant threat to water quality.

Condition 13. All attachments are mandatory.

Please submit the PDF version of completed NOI Form and all attachments to the responsible staff member at the Regional Water Board office. At this time, the responsible staff member is Farhad Azimzadeh and his email address is fazimzadeh@waterboards.ca.gov

Note: The Regional Water Board may modify this instruction at any time as needed.

ATTACHMENT D –STANDARD PROVISIONS

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ATTACHMENT D –STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

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

2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants 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 in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 CFR § 122.41(d).)

D. Proper Operation and Maintenance

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

E. Property Rights

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

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

F. Inspection and Entry

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

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

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

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

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

G. Bypass

1. Definitions

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

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

2. Bypass of uncontaminated extracted groundwater. During a dewatering project, the Discharger may allow any bypass of uncontaminated extracted groundwater to occur which originates from uncontaminated extraction well(s). The Discharger shall monitor the water quality of these extractions wells to confirm that the extracted water remains uncontaminated.

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

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

b. There were no feasible alternatives to the bypass, such as turning off the extraction wells pump(s), discharge to a POTW, retention of untreated wastes, maintenance during normal periods of equipment downtime, or the use of auxiliary treatment facilities. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR § 122.41(m)(4)(i)(B)); and

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

4. The Regional Water Board may not take enforcement action against a Discharger for bypass, if the Regional Water Board determines that the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above have been met. (40 CFR § 122.41(m)(4)(ii).)

5. Notice

a. Anticipated bypass of uncontaminated extracted groundwater. If the Discharger knows in advance of the need for a bypass of uncontaminated extracted groundwater, it shall submit the necessary information in the initial or modified Notice of Intent, if possible at least 45 days before the date of the bypass. The necessary information includes but not limited to the name and number of extraction wells, flow rates for each well, the distance to other contaminated wells, and monitoring data such as turbidity, color, conductivity, pH, temperature, metals, TPH, VOC, SVOC, PAHs, Oxygenates.

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

H. Upset

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

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was

caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR § 122.41(n)(2).).

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

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

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

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

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

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must submit a completed Notice of Intent form (see Attachment B), 180 days in advance of the Order expiration date, **to** obtain a new permit. (40 CFR § 122.41(b).)

C. Transfers

Any authorization to discharge issued under this Order is not transferable to any person except after filing a modified Notice of Intent with the Regional Water Board. If the new Discharger has a different professional engineer, the modified Notice of Intent shall be revised accordingly.

III. STANDARD PROVISIONS – MONITORING

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

B. Monitoring results must be conducted according to test procedures under Part 136 or other test procedures specified in this Order. (40 CFR § 122.41(j)(4); § 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

A. 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 five (5) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time (40 CFR § 122.41(j)(2).)

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 CFR § 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 CFR § 122.41(j)(3)(ii));

3. The date(s) analyses were performed (40 CFR § 122.41(j)(3)(iii));

4. The individual(s) who performed the analyses (40 CFR § 122.41(j)(3)(iv));

5. The analytical techniques or methods used (40 CFR § 122.41(j)(3)(v)); and

6. The results of such analyses. (40 CFR § 122.41(j)(3)(vi).)

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

1. The name and address of any permit applicant or Discharger (40 CFR § 122.7(b)(1)); and

2. Permit applications and attachments, permits and effluent data. (40 CFR § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR § 122.41(h); Wat. Code, § 13267.)

B. Signatory and Certification Requirements

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

2. All permit applications shall be signed by a responsible person as explained below:

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

    b. **For a partnership or sole proprietorship.** All permit applications shall be signed by a general partner or the proprietor, respectively. (40 CFR § 122.22(a)(2).)

    c. **For a municipality, State, federal, or other public agency.** All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a

principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR § 122.22(a)(3).).

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

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

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

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

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

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

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

C. Monitoring Reports

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

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form (40 CFR § 122.41(l)(4)(i).) or paper or electronic forms provided or specified by the Regional Water Board or State Water Board.

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or other 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 uploaded on GeoTracker 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 file with the Executive Officer an amended Notice of Intent at least 60 days before making any material change in the character, location, or volume of the discharge. In case of proposing any change of treatment system or operation and maintenance procedures, a professional engineer certified in State of California shall certify the adequacy of the design and/or the procedures. A modified Notice of Intent is required under this provision only when (40 CFR § 122.41(l)(1)) the alteration or addition could significantly change the nature or increase the quantity of pollutants discharged (pollutants regulated or not regulated by this Order).

G. Anticipated Noncompliance

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

H. Other Noncompliance

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

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 CFR § 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

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

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

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List of Tables

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations section 122.48 requires that all NPDES permits specify monitoring and reporting requirements. Water Code Sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

A. Reporting responsibilities of waste Dischargers are specified in Sections 13225(a), 13267(b), 13268, 13383 and 13387(b) of the California Water Code and this Regional Water Board's Resolution No. 73-16.

B. The principal purposes of a monitoring program by a waste Discharger, also referred to as self-monitoring program, are: (1) to document compliance with waste discharge requirements and prohibitions established by the Regional Water Board, (2) to facilitate self-policing by the waste Discharger in the prevention and abatement of pollution arising from waste discharge, (3) to develop or assist in the development of effluent or other limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards, and (4) to prepare water and wastewater quality inventories.

C. Laboratories analyzing monitoring samples shall be certified by the Department of Health Services, in accordance with the provision of Water Code section 13176, and must include quality assurance/quality control data with their reports.

D. Written reports, strip charts, calibration and maintenance records, and other records shall be maintained by the Discharger and accessible and retained for a minimum of five years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Water Board or Regional Administrator of the U.S. Environmental Protection Agency, Region IX. Such records shall show the following for **each** sample:

1. Identity of sampling and observation stations by number.
2. Date and time of sampling and/or observations.
3. Method of sampling.
4. Full report for rainbow trout bioassay test (96-hour static bioassay renewal).
5. Date and time that analyses are started and completed, and name of personnel performing the analyses.
6. Complete procedure used, including method of preserving sample and identity and volumes of reagents used. A reference to a specific section of

Standard Methods (SM) or the standard USEPA method number is satisfactory.

7. Calculations of results.
8. Results of analyses and/or observations.

E. Monthly discharge flow volume shall be recorded, as well as totalized quarterly and annual flow.

F. A tabulation reflecting bypassing and accidental waste spills shall be maintained.

G. A copy of this Order, a complete copy of the Notice of Intent filed, documentation of the authorization to discharge received from the Regional Water Board, a full copy of the O&M Manual, and any other documents relevant to the operation and maintenance of the treatment facility shall be stored at or near the treatment facility. These documents help the Dischargers' staff responsible for compliance assurance activities and shall be made available to Regional Water Board staff during inspections. The Dischargers' staff responsible for compliance assurance activities shall inspect the Facility as frequent as required by the O&M Manual. No O&M Manual shall be submitted to the Regional Water Board office, unless requested.

II. MONITORING LOCATIONS

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

Table E.1 Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude when available)
--	INF-001	At a point in the extraction system immediately prior to inflow to the treatment unit.
	EFF-001	At a point in the discharge line immediately following treatment and before it joins or is diluted by any other waste stream, body of water, or substance.
	RSW-001U	At a point 50 feet upstream from the point of discharge into the receiving water, or if access is limited, at the first point upstream which is accessible.
	RSW-001D	At a point 50 feet downstream from the point of discharge into the receiving water, or if access is limited, at the first point downstream which is accessible.
	REU-001	At a point immediately prior to reuse location. Not Applicable if reused reclaimed water is the same as effluent or reclamation is in place.
	LDE-001	At a point immediately prior to land discharge. Not Applicable if land discharge groundwater is the same as effluent.

III. INFLUENT MONITORING REQUIREMENTS

The Discharger shall perform sampling and analyses according to the schedule in Table E-2 and E-4 (if applicable) or Table E-3 and E-4 (if applicable), and, if applicable, no Influent samples shall include any treatment system recirculation. No influent monitoring is required for discharges that consist entirely of extracted groundwater, RO concentrate, or a blend of these two (except for RO facility with an unblended RO concentrate of inorganic compounds exceeding the corresponding triggers in the Table 2 of the Order).

IV. EFFLUENT MONITORING REQUIREMENTS

The Discharger shall perform sampling and analyses according to the schedule in Tables E-2 and E-4 (if applicable) or Table E-3 and E-4 (if applicable) in accordance with the following conditions:

A. Samples of effluent shall be collected on days coincident with influent sampling.

B. When any type of bypass of treatment systems occur, grab samples shall be collected on a daily basis for all constituents at all affected discharge points that have effluent limits for the duration of the bypass.

V. WHOLE EFFLUENT ACUTE TOXICITY TESTING REQUIREMENTS

The Discharger shall perform sampling and analyses according to the schedule in Tables E-2 and E-3 in accordance with the following conditions:

A. Fish bioassay samples shall be collected on days coincident with effluent sampling.
B. Bioassay tests should be performed on effluent samples after chlorination-dechlorination.
C. Total ammonia nitrogen of the effluent shall be analyzed and un-ionized ammonia calculated whenever fish bioassay test results fail to meet the specified percent survival.
D. If the final or intermediate results of any single bioassay test indicate a threatened violation (i.e. the percentage of surviving test organisms is less than the required survival percentage), a new test will begin and the Discharger shall investigate the cause of the mortalities and report the finding in the next self-monitoring report.

TABLE E.2 Schedule for Sampling, Measurements, and Analysis for Structural Dewatering Discharges

Sampling Station	Minimum Sampling Frequency for Effluent EFF-001, Effluent for Reuse REU-001, or Effluent for Land Discharge LDE-001	Minimum Sampling Frequency for Receiving Surface Water RSW-001U and RSW-001D	Required Analytical Test Method Number, Technique, Standard Methods (SM), USEPA Report Number, 40 CFR Part (or equivalent)
Unit is "µg/L" and Type of Sample is "Grab" unless noted otherwise	**Grab**	**Grab**	
Flow Rate (MGD)	Daily (Meter or calculation based on time and pump capacity)		
Acute Whole Effluent Toxicity (% survival)	Once during the first year of operation and if at least with 90% survival rate for the first year, then every three years thereafter		EPA-821-R-02-012 Test, Method 2019.0
pH	Quarterly during the first year of operation and if in full compliance during the first year, then once a year thereafter		USEPA Methods 150, 9040,or SM 4500-H+
Hardness (mg/L as $CaCO_3$)	Once every three years		USEPA Method 130 or SM 2340
Total Solids (mg/L)	Once every three years		SM 2540
Total Dissolved Solids (mg/L)	Once every three years		SM 2540
Temperature (deg. C)	Once every three years		Field Measurement
Salinity (parts per thousand)	Once every three years		EPA430/9-86-004 or SM 2520
Turbidity	Once every three years	Once every three years	USEPA Method 180 or SM 2130
Chlorine (mg/L)—applicable to Facilities that treat effluent with chlorine	Daily for the first month of operation and if in full compliance then Quarterly thereafter		Field Kit, USEPA Method 330, or SM 4500-Cl
Chlorides (mg/L)	Once every three years		SM 4500 Cl-
Dissolved Oxygen (mg/L)	Once every three years		SM 4500 O
Conductivity (mmhoms/cm)	Once every three years		SM 2510
Antimony Total (See Note 1)	Once during the first year of operation and if not detected or triggered then once every three years thereafter		USEPA Method 206.3
Arsenic Total (See Note 1)	Once during the first year of operation and if not detected or triggered then once every three years thereafter		USEPA Methods using GFAA or ICPMS Techniques
Beryllium Total (See Note 1)	Once during the first year of operation and if not detected or triggered then once		USEPA Methods using GFAA or ICPMS Techniques

Sampling Station	Minimum Sampling Frequency for Effluent EFF-001, Effluent for Reuse REU-001, or Effluent for Land Discharge LDE-001	Minimum Sampling Frequency for Receiving Surface Water RSW-001U and RSW-001D	Required Analytical Test Method Number, Technique, Standard Methods (SM), USEPA Report Number, 40 CFR Part (or equivalent)
	every three years thereafter		
Cadmium Total (See Note 1)	Once during the first year of operation and if not detected or triggered then once every three years thereafter		Standard Method (SM) 3500
Chromium Hexavalent and Total Chromium (See Note 1)	Once during the first year of operation and if not detected or triggered then once every three years thereafter		USEPA Method 200.9
Copper Total (See Note 1)	Once during the first year of operation and if not detected or triggered then once every three years thereafter		SM 4500-CN- C or I
Cyanide Total (See Note 1)	Once during the first year of operation and if not detected or triggered then once every three years thereafter		USEPA Method 200.9
Lead Total (See Note 1)	Once during the first year of operation and if not detected or triggered then once every three years thereafter		USEPA Method 1631
Mercury Total (See Note 1)	Once during the first year of operation and if not detected or triggered then once every three years thereafter		USEPA Method 249.2
Nickel Total (See Note 1)	Once during the first year of operation and if not detected or triggered then once every three years thereafter		SM 3114B or C
Selenium Total (See Note 1)	Once during the first year of operation and if not detected or triggered then once every three years thereafter		USEPA Method 272.2
Silver Total (See Note 1)	Once during the first year of operation and if not detected or triggered then once every three years thereafter		USEPA Method 279.2
Thallium Total (See Note 1)	Once during the first year of operation and if not detected or triggered then once every three years thereafter		USEPA Method 200 or 289

Sampling Station	Minimum Sampling Frequency for Effluent EFF-001, Effluent for Reuse REU-001, or Effluent for Land Discharge LDE-001	Minimum Sampling Frequency for Receiving Surface Water RSW-001U and RSW-001D	Required Analytical Test Method Number, Technique, Standard Methods (SM), USEPA Report Number, 40 CFR Part (or equivalent)
Zinc Total (See Note 1)	Once during the first year of operation and if not detected or triggered then once every three years thereafter		USEPA Method 204.2
Volatile Organic Compounds	Once within first year of operation		USEPA Method 8260
Semi Volatile Organic Compounds except Polynuclear Aromatic Hydrocarbons	Once within first year of operation		USEPA Method 8270
Polynuclear Aromatic Hydrocarbons	Once within first year of operation		USEPA Method 8310
Other Pollutants not listed above but there is evidence to be present in the influent and/or effluent and being treated	Quarterly for first year of operation and if not detected or triggered then once every three years thereafter		40 CFR or USEPA Approved Method, SM, or equivalent
All Applicable Standard Observations (No Unit) (See Note 2)	Quarterly or whenever attending the Facility	Quarterly or whenever sampling the receiving water	

TABLE E.3 Schedule for Sampling, Measurements, and Analysis for Aquifer Protection Well discharges

Sampling Station	Minimum Sampling Frequency for Effluent EFF-001, Effluent for Reuse REU-001, or Effluent for Land Discharge LDE-001	Minimum Sampling Frequency for Receiving Surface Water RSW-001U and RSW-001D	Required Analytical Test Method Number, Technique, Standard Methods (SM), USEPA Report Number, 40 CFR Part (or equivalent)
Unit is "µg/L" and Type of Sample is "Grab" unless noted otherwise	**Grab**	**Grab**	
Flow Rate (MGD)	Daily (Meter or calculation based on time and pump capacity)		
Acute Whole Effluent Toxicity (% survival)	Y		EPA-821-R-02-012 Test, Method 2019.0
pH	Q		USEPA Methods 150, 9040,or SM 4500-H+
Hardness (mg/L as $CaCO_3$)	Y		USEPA Method 130 or SM 2340
Total Solids (mg/L)	Q		SM 2540
Total Dissolved Solids (mg/L)	Q		SM 2540
Temperature (deg. C)	Q		Field Measurement
Salinity (parts per thousand)	Q		EPA430/9-86-004 or SM 2520
Turbidity	Q	Q	USEPA Method 180 or SM 2130
Chlorine (mg/L)—applicable to facilities that treat effluent with chlorine	D		Field Kit, USEPA Method 330, or SM 4500-Cl

Sampling Station	Minimum Sampling Frequency for Effluent EFF-001, Effluent for Reuse REU-001, or Effluent for Land Discharge LDE-001	Minimum Sampling Frequency for Receiving Surface Water RSW-001U and RSW-001D	Required Analytical Test Method Number, Technique, Standard Methods (SM), USEPA Report Number, 40 CFR Part (or equivalent)
Unit is "µg/L" and Type of Sample is "Grab" unless noted otherwise	**Grab**	**Grab**	
Chlorides (mg/L)	Q		SM 4500 Cl-
Dissolved Oxygen (mg/L)	Q		SM 4500 O
Conductivity (mmhoms/cm)	Q		SM 2510
Antimony Total (See Note 1)	Y		USEPA Method 206.3
Arsenic Total (See Note 1)	Y		USEPA Methods using GFAA or ICPMS Techniques
Beryllium Total (See Note 1)	Y		USEPA Methods using GFAA or ICPMS Techniques
Cadmium Total (See Note 1)	Y		Standard Method (SM) 3500
Chromium Hexavalent and Total Chromium (See Note 1)	Y		USEPA Method 200.9
Copper Total (See Note 1)	Y		SM 4500-CN- C or I
Cyanide Total (See Note 1)	Y		USEPA Method 200.9
Lead Total (See Note 1)	Y		USEPA Method 1631
Mercury Total (See Note 1)	Y		USEPA Method 249.2
Nickel Total (See Note 1)	Y		SM 3114B or C
Selenium Total (See Note 1)	Y		USEPA Method 272.2
Silver Total (See Note 1)	Y		USEPA Method 279.2
Thallium Total (See Note 1)	Y		USEPA Method 200 or 289
Zinc Total (See Note 1)	Y		USEPA Method 204.2
Volatile Organic Compounds	Once within permit term from each outfall		USEPA Method 8260
Semi Volatile Organic Compounds except Polynuclear Aromatic Hydrocarbons	Once within permit term from each outfall		USEPA Method 8270
Polynuclear Aromatic Hydrocarbons	Once within permit term from each outfall		USEPA Method 8310
Other Pollutants not listed above but there is evidence to be present in the influent and/or effluent	Q		40 CFR or USEPA Approved Method, SM, or equivalent
All Applicable Standard Observations (No Unit) (See Note 2)	Q or whenever attending the Facility	Q or whenever sampling the receiving water	

Notes for Table E-3 Legends: Q Once each quarter and Y Once each year.

Note 1: Inorganic compounds samples shall be analyzed for total (unfiltered) constituents with the reporting levels not exceeding the following: 0.002 ug/l for Mercury; 0.25 ug/l for Cadmium and Silver; 1 ug/l for Nickel, Thallium, and Zinc; 2.0 ug/l for Arsenic and Selenium; 1 ug/l for Cyanide; and 0.5 ug/l for Antimony, Beryllium, Total Chromium, Copper, and Lead (SIP Appendix 4 Minimum Levels http://www.waterboards.ca.gov/iswp/docs/final.pdf). If the Discharger exceeds the trigger for mercury of 0.025, the Discharger may consider re-sampling and re-analyzing another sample using ultra-clean techniques as described in USEPA methods 1669 and 1631 to eliminate the possibility of artifactual contamination of the sample.

Note 2: Standard Observations are explained in Provisions IX.C through IX.E of this document.

Definitions: ug/L = microgram per liter or parts per billion (ppb), g/day = grams per day, gpm = gallons per minute, mg/L = milligram per liter or parts per million (ppm), gpd = gallons per day, MFL = million fibers per liter

GC = Gas Chromatography; GCMS = Gas Chromatography/Mass Spectrometry; FAA = Flame Atomic Absorption; GFAA = Graphite Furnace Atomic Absorption; Hydride = Gaseous Hydride Atomic Absorption; ICP = Inductively Coupled Plasma; and ICPMS = Inductively Coupled Plasma/Mass Spectrometry.

TABLE E.4 Schedule for Sampling, Measurements, and Analysis for RO Concentrate

Sampling Station	Minimum Sampling Frequency for Effluent EFF-001, Effluent for Reuse REU-001, or Effluent for Land Discharge LDE-001	Minimum Sampling Frequency for Receiving Surface Water RSW-001U and RSW-001D)	Required Analytical Test Method Number, Technique, Standard Methods (SM), USEPA Report Number, 40 CFR Part (or equivalent)
Unit is "µg/L" and Type of Sample is "Grab" unless noted otherwise	**Grab**	**Grab**	
Flow Rate (MGD)	Daily (Meter or calculation based on time and pump capacity)		
Acute Whole Effluent Toxicity (% survival)	M/Q		EPA-821-R-02-012 Test, Method 2019.0
pH	M		USEPA Methods 150, 9040,or SM 4500-H+
Hardness (mg/L as $CaCO_3$)	Q		USEPA Method 130 or SM 2340
Total Solids (mg/L)	M		SM 2540
Total Dissolved Solids (mg/L)	M		SM 2540
Temperature (deg. C)	M		Field Measurement
Salinity (parts per thousand)	M		EPA430/9-86-004 or SM 2520
Turbidity (NTU)	Q	Q	USEPA Method 180 or SM 2130
Chlorine (mg/L)—applicable to facilities that treat effluent with chlorine	D		Field Kit, USEPA Method 330, or SM 4500-Cl
Chlorides (mg/L)	M		SM 4500 Cl-
Dissolved Oxygen (mg/L)	M		SM 4500 O
Conductivity (mmhoms/cm)	M		SM 2510
Antimony Total (See Note 1)	Q		USEPA Method 204.2
Arsenic Total (See Note 1)	Q		USEPA Method 206.3
Beryllium Total (See Note 1)	Q		USEPA Methods using GFAA or ICPMS Techniques
Cadmium Total (See Note 1)	Q		USEPA Methods using GFAA or ICPMS Techniques
Chromium Hexavalent and Total Chromium (See Note 1)	Q		Standard Method (SM) 3500
Copper Total (See Note 1)	Q		USEPA Method 200.9
Cyanide Total (See Note 1)	Q		SM 4500-CN- C or I
Lead Total (See Note 1)	Q		USEPA Method 200.9
Mercury Total (See Note 1)	Q		USEPA Method 1631
Nickel Total (See Note 1)	Q		USEPA Method 249.2
Selenium Total (See Note 1)	Q		SM 3114B or C
Silver Total (See Note 1)	Q		USEPA Method 272.2
Thallium Total (See Note 1)	Q		USEPA Method 279.2

Sampling Station	Minimum Sampling Frequency for Effluent EFF-001, Effluent for Reuse REU-001, or Effluent for Land Discharge LDE-001	Minimum Sampling Frequency for Receiving Surface Water RSW-001U and RSW-001D)	Required Analytical Test Method Number, Technique, Standard Methods (SM), USEPA Report Number, 40 CFR Part (or equivalent)
Unit is "µg/L" and Type of Sample is "Grab" unless noted otherwise	**Grab**	**Grab**	
Zinc Total (See Note 1)	Q		USEPA Method 200 or 289
Volatile Organic Compounds	Once within first year,,		USEPA Method 8260
Semi Volatile Organic Compounds except Polynuclear Aromatic Hydrocarbons	Once within first year		USEPA Method 8270
Polynuclear Aromatic Hydrocarbons	Once within first year		USEPA Method 8310
Other Pollutants not listed above but there is evidence to be present in the influent and/or effluent	Q		40 CFR or USEPA Approved Method, SM, or equivalent
All Applicable Standard Observations (No Unit) (See Note 2)	Q or whenever attending the Facility	Q or whenever sampling the receiving water	

Notes for Table E-4

Note 1: Inorganic compounds samples shall be analyzed for total (unfiltered) constituents with the reporting levels not exceeding the following: 0.002 ug/l for Mercury; 0.25 ug/l for Cadmium and Silver; 1 ug/l for Nickel, Thallium, and Zinc; 2.0 ug/l for Arsenic and Selenium; 1 ug/l for Cyanide; and 0.5 ug/l for Antimony, Beryllium, Total Chromium, Copper, and Lead (SIP Appendix 4 Minimum Levels http://www.waterboards.ca.gov/iswp/docs/final.pdf). If the Discharger exceeds the trigger for mercury of 0.025, the Discharger may consider re-sampling and re-analyzing another sample using ultra-clean techniques as described in USEPA methods 1669 and 1631 to eliminate the possibility of artifactual contamination of the sample.

Note 2: Standard Observations are explained in Provisions IX.C through IX.E of this document.

Definitions: ug/L = microgram per liter or parts per billion (ppb), g/day = grams per day, gpm = gallons per minute, mg/L = milligram per liter or parts per million (ppm), gpd = gallons per day, MFL = million fibers per liter

GFAA = Graphite Furnace Atomic Absorption and ICPMS = Inductively Coupled Plasma/Mass Spectrometry.

Legends

D Once each day.
M Once each month.
Q Once each quarter.
Y Once each year.
M/Q Monthly for first year of operation, Quarterly thereafter.

TABLE E.5 Additional Monitoring Requirements: Applicable when Limit or Trigger Value Exceeded in Previous Sample Set

Monitoring per this table is required for up to two quarters (as specified below) following an exceedance of an effluent limit or trigger value.

Sampling Station	Minimum Sampling Frequency for Influent INF-001	Minimum Sampling Frequency for Effluent EFF-001	Minimum Sampling Frequency for Receiving Surface Water RSW-001U and RSW-001D	Required Analytical Test Method Number, Technique, Standard Methods (SM), USEPA Report Number, 40 CFR Part (or equivalent)
Unit is "µg/L" and Type of Sample is "Grab" unless noted otherwise	**Grab**	**Grab**	**Grab**	
	The monitoring requirements in these two columns apply when any constituent in the effluent of a discharge, as monitored per Table E-2 or E-3, exceeds the corresponding trigger as listed in the Table 2 of the Order:			
Flow Rate (MGD)		Daily (Meter or calculation		

Sampling Station	Minimum Sampling Frequency for Influent INF-001	Minimum Sampling Frequency for Effluent EFF-001	Minimum Sampling Frequency for Receiving Surface Water RSW-001U and RSW-001D	Required Analytical Test Method Number, Technique, Standard Methods (SM), USEPA Report Number, 40 CFR Part (or equivalent)
Unit is "µg/L" and Type of Sample is "Grab" unless noted otherwise	**Grab**	**Grab**	**Grab**	
	The monitoring requirements in these two columns apply when any constituent in the effluent of a discharge, as monitored per Table E-2 or E-3, exceeds the corresponding trigger as listed in the Table 2 of the Order:			
		based on time and pump capacity)		
Acute Whole Effluent Toxicity (% survival)		V		EPA-821-R-02-012 Test, Method 2019.0
pH	V	V	V, Q[4]	USEPA Methods 150, 9040,or SM 4500-H+
Hardness (mg/L as $CaCO_3$)			Q[5]	USEPA Method 130 or SM 2340
Total Solids (mg/L)			Q[4]	SM 2540
Total Dissolved Solids (mg/L)	3 per Q	3 per Q	3 per Q[3]	SM 2540
Temperature (deg. C)			Q[4]	Field Measurement
Salinity (parts per thousand)		M[4]	M[4]	EPA430/9-86-004 or SM 2520
Turbidity (NTU)	3 per Q	3 per Q	3 per Q[3]	USEPA Method 180 or SM 2130
Chlorine (mg/L)—applicable to facilities that treat effluent with chlorine		V		Field Kit, USEPA Method 330, or SM 4500-Cl
Chlorides (mg/L)	3 per Q	3 per Q	3 per Q[3]	SM 4500 Cl-
Dissolved Oxygen (mg/L)			3 per Q[3]	SM 4500 O
Conductivity (mmhoms/cm)	3 per Q	3 per Q	3 per Q[3]	SM 2510
Antimony Total (See Note 1)	3 per Q	3 per Q	3 per Q[3]	USEPA Method 204.2
Arsenic Total (See Note 1)	3 per Q	3 per Q	3 per Q[3]	USEPA Method 206.3
Beryllium Total (See Note 1)	3 per Q	3 per Q	3 per Q[3]	USEPA Methods using GFAA or ICPMS Techniques
Cadmium Total (See Note 1)	3 per Q	3 per Q	3 per Q[3]	USEPA Methods using GFAA or ICPMS Techniques
Chromium Hexavalent and Total Chromium (See Note 1)	3 per Q	3 per Q	3 per Q[3]	Standard Method (SM) 3500
Copper Total (See Note 1)	3 per Q	3 per Q	3 per Q[3]	USEPA Method 200.9
Cyanide Total (See Note 1)	3 per Q	3 per Q	3 per Q[3]	SM 4500-CN- C or I
Lead Total (See Note 1)	3 per Q	3 per Q	3 per Q[3]	USEPA Method 200.9
Mercury Total (See Note 1)	3 per Q	3 per Q	3 per Q[3]	USEPA Method 1631
Nickel Total (See Note 1)	3 per Q	3 per Q	3 per Q[3]	USEPA Method 249.2

Sampling Station	Minimum Sampling Frequency for Influent INF-001	Minimum Sampling Frequency for Effluent EFF-001	Minimum Sampling Frequency for Receiving Surface Water RSW-001U and RSW-001D	Required Analytical Test Method Number, Technique, Standard Methods (SM), USEPA Report Number, 40 CFR Part (or equivalent)
Unit is "µg/L" and Type of Sample is "Grab" unless noted otherwise	**Grab**	**Grab**	**Grab**	
	The monitoring requirements in these two columns apply when any constituent in the effluent of a discharge, as monitored per Table E-2 or E-3, exceeds the corresponding trigger as listed in the Table 2 of the Order:			
Selenium Total (See Note 1)	3 per Q	3 per Q	3 per Q^3	SM 3114B or C
Silver Total (See Note 1)	3 per Q	3 per Q	3 per Q^3	USEPA Method 272.2
Thallium Total (See Note 1)	3 per Q	3 per Q	3 per Q^3	USEPA Method 279.2
Zinc Total (See Note 1)	3 per Q	3 per Q	3 per Q^3	USEPA Method 200 or 289
Volatile Organic Compounds	3 per Q	3 per Q	3 per Q^3	USEPA Method 8260
Semi Volatile Organic Compounds except Polynuclear Aromatic Hydrocarbons	3 per Q	3 per Q	3 per Q^3	USEPA Method 8270
Polynuclear Aromatic Hydrocarbons	3 per Q	3 per Q	3 per Q^3	USEPA Method 8310
All Applicable Standard Observations, No Unit (See Note 2)	Q or whenever attending the Facility	Q or whenever attending the Facility	Q or whenever sampling the receiving water	

Legend:
V: Sampling should be performed within 24 hours after an effluent limit violation is confirmed in E-001.
Q Once each quarter

Notes for Table E-5
1: Inorganic compounds samples shall be analyzed for total (unfiltered) constituents with the reporting levels not exceeding the following: 0.002 ug/l for Mercury; 0.25 ug/l for Cadmium and Silver; 1 ug/l for Nickel, Thallium, and Zinc; 2.0 ug/l for Arsenic and Selenium; 1 ug/l for Cyanide; and 0.5 ug/l for Antimony, Beryllium, Total Chromium, Copper, and Lead (SIP Appendix 4 Minimum Levels http://www.waterboards.ca.gov/iswp/docs/final.pdf). If the Discharger exceeds the trigger for mercury of 0.025, the Discharger may consider re-sampling and re-analyzing another sample using ultra-clean techniques as described in USEPA methods 1669 and 1631 to eliminate the possibility of artifactual contamination of the sample.
2: Standard Observations are explained in Provisions IX.B through IX.D of this document.
3: In addition to the monitoring required per Note 3, during the same period, the Discharger shall take three additional samples (three up-gradient receiving surface water (RSW-001U) and three down-gradient receiving surface water (RSW-001D)) for each exceeded constituent.
4: This parameter should monitored If changes in this parameter may cause changes in the concentration of the triggered constituent
5: Sampling should be performed when Cadmium, Chromium (total), Copper, Lead, Nickel, Silver, or Zinc triggers are exceeded.
Definitions: ug/L = microgram per liter or parts per billion (ppb), g/day = grams per day, gpm = gallons per minute, mg/L = milligram per liter or parts per million (ppm), gpd = gallons per day, MFL = million fibers per liter
GFAA = Graphite Furnace Atomic Absorption and ICPMS = Inductively Coupled Plasma/Mass Spectrometry.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

The same as effluent and see section IX-E.

VII. RECLAMATION MONITORING REQUIREMENTS

The same as effluent and see section IX-E.

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER

A. The Discharger is required to perform sampling and analyses according to the schedule in Tables E-2 through E-4 as applicable.

IX. OTHER MONITORING REQUIREMENTS

A. Chemical Additives Monitoring: If applicable, monitoring related to chemical usage shall be conducted by the Discharger as required in its treatment system design specification and Operation and Maintenance Manual.

B. Standard Observations for Receiving Water

1. Floating and suspended materials of waste origin (to include oil, grease, algae, and other macroscopic particulate matter): presence or absence, source, and size of affected area.
2. Discoloration and turbidity: description of color, source, and size of affected area.
3. Odor: presence or absence, characterization, source, distance of travel, and wind direction.
4. Evidence of beneficial water use: presence of waterfowl or wildlife, people fishing, and other recreational activities in the vicinity of the site.
5. Hydrographic condition, if relevant:
    a. Time and height of corrected high and low tides (corrected to nearest National Oceanic and Atmospheric Administration (also known as NOAA) location for the sampling date and time of sample and collection).
    b. Depth of water columns and sampling depths.
6. Weather condition:
    a. Air temperature.
    b. Wind direction and estimated velocity.
    c. Total precipitation during the previous five days and on the day of observation.

C. Standard Observations for Onsite Usage of Reclaimed Water

1. Floating and suspended materials of waste origin (to include oil, grease, algae, and other macroscopic particulate matter): presence or absence, source, and size of affected area.
2. Discoloration and turbidity: description of color, source, and size of affected area.
3. Odor: presence or absence, characterization, source, distance of travel, and wind direction.
4. Weather condition:
    a. Air temperature.
    b. Wind direction and estimated velocity.
    c. Total precipitation during the previous five days and on the day of observation.

5. Deposits, discolorations, and/or plugging in the conveyance system that could adversely affect the system reliability and performance.
6. Operation of the valves, outlets, sprinkler heads, and/or pressure shutoff valves in conveyance system.

E. Standard Observations for Groundwater Treatment and/or Discharge System

1. Odor: presence or absence, characterization, source, distance of travel, and wind direction.
2. Weather condition: wind direction and estimated velocity.
3. Deposits, discolorations, and/or plugging in the treatment system (stripping tower, carbon filters, etc.) that could adversely affect the system reliability and performance.
4. Operation of the float and/or pressure shutoff valves installed to prevent system overflow or bypass.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

The Discharger shall comply with all Standard Provisions in Attachment D and in this document related to monitoring, reporting, and recordkeeping.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Dischargers to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site, and will also provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal (http://www.waterboards.ca.gov/ciwqs/index.html).

2. The Dischargers shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Dischargers shall submit quarterly SMRs, no later than 45 days after end of each calendar quarter, 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 E.6 Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	Effective start up date	All	See Note 1
Daily	Effective start up date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	See Note 1
Weekly	Effective start up date	Effective start up day through one week after Effective start up date	See Note 1
Monthly	First day of calendar month following the last day of the start up date	1st day of calendar month through last day of calendar month	See Note 1
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) the last day of the start up date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	See Note 1
Semiannually	Closest of January 1 or July 1 following (or on) the last day of the start up date	January 1 through June 30 July 1 through December 31	See Note 1
Annually	January 1 following (or on) the last day of the start up date	January 1 through December 31	See Note 1
Note 1: Quarterly Self-Monitoring Reports shall also be submitted the Regional Water Board on a quarterly calendar basis, no later than forty five (45) days following the last day of the quarter. Annual Reports shall be submitted by February 15 of each year, covering the previous calendar year. The annual report shall contain all data required for the fourth quarter in addition to summary data required for annual reporting. This report may be submitted in lieu of the report for the fourth quarter of a calendar year.			

4. Reporting Protocols. The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in Part 136. The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

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

   b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

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

   d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical

data derived from *extrapolation* beyond the lowest point of the calibration curve.

5. The Discharger shall submit SMRs in accordance with the following requirements:

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

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

   c. Monitoring reports must be submitted to the Regional Water Board signed, and certified as required by the Standard Provisions (Attachment D) to the address listed below:

      California Regional Water Quality Control Board
      San Francisco Bay Region
      1515 Clay Street, Suite 1400
      Attn: NPDES Wastewater Division
      General NPDES NO. CAG912004

   d. The monitoring reports shall also include a description of operation and maintenance (O&M) of the groundwater extraction and treatment system consistent with the O&M manual, which shall be available to all personnel who are responsible for operation and maintenance activities.

   e. The monitoring reports shall include the results of analyses and observations as follows:
      1. Calculations for all limitations that require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.
      2. A table identifying by method number the analytical procedures used for analyses. Any special methods shall be identified and should have prior approval of the Regional Water Board's Executive Officer.
      3. Laboratory results shall be summarized in tabular form but do not need to be included in the report. A summary of quality assurance/quality control activities data such as field,

travel, and laboratory blanks shall be reported for each analyzed constituent or group of constituents.

4. A summary of the monitoring data to include information such as source of the sample (influent, effluent, or receiving water); the constituents; the methods of analysis used; the laboratory reporting limits in ug/l; the sample results (ug/l); the date sampled; and the date sample was analyzed.
5. Flow (in gpm) and mass removal data (in kilograms).
6. Summary of treatment system status during the reporting period (e.g. in operation/on standby) and reason(s) for non-routine treatment system shut down.
7. The annual reports shall contain tabular summary of the monitoring data obtained during the previous year. In addition, the annual reports shall contain a comprehensive discussion of the compliance record and the corrective actions taken or planned which may be needed to bring the Discharger into full compliance with the waste discharge requirements. The annual report shall document that the annual fee has been paid.

C. Discharge Monitoring Reports (DMRs) Not Applicable

D. Other Reports

1. Trigger Study Report: The Discharger shall report the results of any trigger study required by Special Provisions – VI.C.6 and the progress in satisfaction of compliance schedule dates specified in Special Provisions VI.C.7, VI.C.8, and VI.C.9 of this Order.

2. Spill Reports: If any hazardous substance is discharged in or on any waters of the state, or discharged and deposited where it is, or probably will be discharged in or on any waters of the state, the Discharger shall report such a discharge to this Regional Water Board, at (510) 622-2300 on weekdays during office hours from 8 a.m. to 12 p.m. and 1 p.m. to 5 p.m, and to the Office of Emergency Services at (800) 852-7550 during non-office hours. A written report shall be submitted, with a confirmation email to staff, within five (5) working days and shall contain information relative to:
   a. Nature of waste or pollutant,
   b. Quantity involved,
   c. Duration of incident,
   d. Cause of spilling,
   e. Spill Prevention, Control, and Countermeasure Plan (SPCC) in effect, if any,
   f. Estimated size of affected area,
   g. Nature of effects (i.e., fish kill, discoloration of receiving water, etc.),

h. Corrective measures that have been taken or planned, and a schedule of these activities, and
i. Persons/agencies notified.

3. Reports of Treatment Unit Bypass and Permit Violation: In the event the Discharger violates or threatens to violate the conditions of the waste discharge requirements and prohibitions or intends to permit a treatment unit bypass due to:
   a. Maintenance work, power failures, or breakdown of waste treatment equipment,
   b. Accidents caused by human error or negligence,
   c. The self-monitoring program results exceeding effluent limitations,
   d. Any activity that would result in a frequent or routine discharge of any toxic pollutant not limited by this Order, or
   e. Other causes, such as acts of nature.

   The Discharger shall notify the Regional Water Board within 24 hours of when the Discharger or Discharger's agent has knowledge of the incident and confirm this notification in writing and with a confirmation email to staff, within 5 working days of the initial notification. The written report shall include time, date, duration and estimated volume of waste bypassed, method used in estimating volume and person notified of the incident. The report shall include pertinent information explaining reasons for the noncompliance and shall indicate what steps were taken to prevent the problem from recurring.

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

This Order represents a new NPDES General Permit issued by the Regional Water Board. Dischargers expected to seek coverage under the Order include some that have been authorized to discharge by individual NPDES permits and/or Waste Discharge Requirements and some that are new dischargers.

II. DISCHARGE DESCRIPTION

A. Description of Wastewater

All discharges authorized under this Order originate as groundwater. The Regional Water Board acknowledges that groundwater may contain naturally occurring or incidental pollutants and various organic pollutants not addressed by the Fuels or VOC general permits at levels that exceed those found in surface waters, and in limited circumstances, at concentrations above applicable water quality criteria for surface waters. Such naturally occurring pollutants of concern include total dissolved solids (TDS), the common metals, and various organic pollutants not addressed by the Fuels or VOC general permits. In addition, discharges authorized by the Order may include suspended and settleable solids and turbidity that are introduced to discharges due to poorly constructed or deteriorating wells and at the points of discharge by erosion and scouring of the banks and bottoms of receiving waters.

The Order also authorizes the discharge of reverse osmosis concentrate resulting from treatment of uncontaminated ground water by reverse osmosis. Such discharges will contain the naturally occurring dissolved pollutants that are present in well waters, but these dissolved materials may be concentrated by the reverse osmosis process. In these discharges, therefore, pollutants of concern include TDS and the common metals; however, the reverse osmosis process and pre-filtering will remove all suspended and settleable material that is attributed to poorly constructed or deteriorating wells. Such discharges can introduce suspended and settleable solids and turbidity at the points of discharge due to erosion and scouring of the banks and bottoms of receiving waters. In summary, this Order regulates discharges to surface water from the three following sources:

1. Aquifer protection and salinity barrier well discharges (typically long term). These groundwater extraction facilities are in operation to protect drinking water supply

aquifers or other municipal facilities from salt water intrusion. For example, Alameda County Water District (ACWD) operates a series of wells along the southeast side of San Francisco Bay. Historically, ACWD has discharged and in the future may again discharge up to 30 MGD of extracted brackish potable groundwater and RO concentrate in the Fremont-Newark area to flood control channels. The ACWD drinking water protection well discharges are regulated under an individual NPDES Permit No. CA0038059, Order No. 00-029. The Regional Water Board plans to rescind this individual permit after this Order becomes effective.

2. RO concentrate from aquifer protection well discharges that discharges to storm drain systems and/or to engineered flood control channels that drain to estuarine environments or directly discharge to estuarine environments (discharges are typically long term). Pumped groundwater may be treated by RO so that the groundwater may be returned to the drinking water supply, and the RO concentrate discharged as waste. For example, this is the case with the ACWD RO facility located in Newark. The ACWD RO discharge was regulated under NPDES Permit No. CA0038059, Order No. 00-029. The Regional Water Board plans to rescind this individual permit once ACWD obtains coverage under this Order. ACWD plans to double the capacity of the existing Newark RO facility in the near future and bring another similar facility on line in Fremont within the next 15 years. RO Concentrate discharges that are permitted under industrial pretreatment requirements to a permitted publicly-owned treatment works (POTW) are not required to obtain coverage under this Order.

3. Structural dewatering resulting in greater than 10,000 gallons per day and requiring treatment (typically long term). These are long-term dewatering systems under or around buildings and pipelines to remove groundwater infiltration. Buildings and underpass structures are two examples of structures that may require continuous dewatering. Treatment is required where a physical, biological, or chemical treatment process is necessary in order for the structural dewatering discharge to comply with the prohibitions and limitations of this order.

B. Discharge Points and Receiving Waters

The Order authorizes otherwise qualified discharges to all receiving waters of the San Francisco Bay Region, including inland surface waters, enclosed bays, estuaries. The beneficial uses of these receiving waters are described in Section II, Findings, of the Order. Condition No. 5 of the Notice of Intent (NOI) Form (Attachment B) requires the Discharger to provide discharge location data and a map with the discharge path highlighted.

C. Summary of Existing Requirements

Dischargers expected to seek coverage under the General Permit include some that have been authorized to discharge by individual NPDES permits and/or Waste Discharge

Requirements. For example, the individual NPDES permit for discharges of uncontaminated groundwater that have previously been issued to ACWD by the Regional Water Board has established effluent limitations only for acute toxicity.

D. Compliance Summary

This is a new Order. As applicable to ACWD, this Discharger complied with the Order No. 00-029 requirements.

E. Planned Changes

As required in Attachment D, a Discharger authorized under this Order shall submit a modified NOI before making any material change in the character, location, or volume of the discharge.

III. 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 (WDRs) 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 be used to 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.

This Order shall become effective about two months after the date of its adoption provided the Regional Administrator, USEPA, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn. This general permit does not cover direct discharges to the Pacific Ocean.

B. California Environmental Quality Act (CEQA)

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

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Water Board and approved by the State Water Resources Control Board, Office of Administrative Law and the U.S. EPA, where required. The Basin Plan designates beneficial uses of receiving waters, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed by the Plan. Beneficial uses of any water body specifically identified in Chapter 2 of the Basin Plan generally apply to its tributary streams. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes a policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses are designated for all waters of the San Francisco Bay Region and are designated for coastal and inland waters, wetlands, and ground waters. Applicable beneficial uses of surface waters of the San Francisco Bay Region are listed below.

   - Agricultural Supply
   - Areas of Special Biological Significance
   - Cold Freshwater Habitat
   - Ocean, Commercial and Sport Fishing
   - Estuarine Habitat
   - Freshwater Replenishment
   - Groundwater Recharge
   - Industrial Service Supply
   - Marine Habitat
   - Fish Migration
   - Municipal and Domestic Supply
   - Navigation
   - Industrial Process Supply

- Preservation of Rare or Endangered Species
- Water Contact Recreation
- Non-Contact Water Recreation
- Shellfish Harvesting
- Fish Spawning
- Warm Freshwater Habitat
- Wildlife Habitat

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 water of the State.

This Order implements applicable provisions of the Basin 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.

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 chronic toxicity control. Requirements of this Order implement the SIP.

4. **Alaska Rule.** On March 30, 2000, at 40 CFR 131.32, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes. [65 Fed. Reg. 24641 (April 27, 2000)] 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 before May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

5. **Antidegradation Policy.** NPDES regulations require that State water quality standards include an antidegradation policy consistent with the federal policy established at 40 CFR 131.12. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16, which incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Basin Plan implements and incorporates by reference both the state and federal antidegradation policies. As discussed in the Fact Sheet, 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.** CWA Sections 402 (o) (2) and 303 (d) (4) and NPDES regulations at 40 CFR 122.44 (l) prohibit backsliding in NPDES permits; i.e., effluent limitations in a reissued permit must be at least as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. This Order/General Permit is consistent with applicable anti-backsliding requirements, as dischargers, previously subject to individual NPDES permits with limitations more stringent than imposed by this Order, will not be authorized to discharge under the Order/General Permit.

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

On June 6, 2003, 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 and associated waste load allocations.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants 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 NPDES regulations: 40 CFR 122.44 (a) requires that permits include applicable technology-based limitations and standards; and 40 CFR 122.44 (d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative 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). The Basin Plan contains a prohibition of discharge of any wastewater which has particular constituents of concern to beneficial uses at any point at which the wastewater does not receive a minimum initial dilution of at

least 10:1, or into any non-tidal water, dead-end slough, similar confined waters, or immediate tributaries thereof, or to San Francisco Bay south of the Dumbarton Bridge. In general the groundwater discharges regulated by this Order may be exempted from these prohibitions because these discharges are normally associated with drinking water or infrastructure protection activities.

A. Discharge Prohibitions

1. Discharge Prohibition III. A (no discharge other than that described in this Order). This prohibition is based on California Water Code section 13260, which requires the filing of a Report of Waste Discharge (ROWD) before discharges can occur. Discharges not described in the ROWD (here, the NOI), and subsequently in the Order, are prohibited.

2. Discharge Prohibition III. B (no discharges at flow rates greater than authorized). Discharges authorized under the Order shall be no greater than as described to the Regional Water Board in an NOI. When considering authorization, the Regional Water Board will consider the proportion of the receiving water flow contributed by the discharge and will consider potential erosive effects of the discharge on the receiving water. Flow rate will, therefore, be an important consideration in the authorization process, and flows greater than those considered in the authorization process will be prohibited to assure protection of receiving waters.

3. Discharge Prohibition III. C (discharges shall not cause pollution, contamination, or nuisance). This prohibition is established to assure protection of receiving waters from the effects of pollution, contamination, and nuisance, as those terms are defined by as defined by CWC Section 13050 of the California Water Code.

4. Discharge Prohibition III. D (no discharges at a volume or velocity that causes erosion and/or scouring). This prohibition is established to protect receiving waters from potential adverse physical effects of excessive discharger volumes and velocities at the points of discharge to receiving waters.

5. Discharge Prohibition III. E (no discharges of filter backwash water, membrane cleaning solutions, or other waste streams associated with reverse osmosis (other than reverse osmosis concentrate). Although the Order authorizes only the discharge of ground water and concentrate resulting from treatment of ground water by reverse osmosis, this prohibition clarifies that the discharge of filter backwash water, membrane cleaning solutions, or other waste streams associated with reverse osmosis (other than reverse osmosis concentrate) are not authorized by the Order.

6. Discharge Prohibition III. F (no discharges of well drilling fluids). Although the Order authorizes only the discharge of uncontaminated ground water and concentrate resulting from treatment of uncontaminated ground water by reverse osmosis, this prohibition clarifies that the discharge of well drilling fluids are not authorized by the Order.

7. Discharge Prohibition III. G and H (Discharges of groundwater contaminated with volatile organic compounds (VOCs) and Fuels are prohibited). Although these prohibitions are obvious, they are included to remind Dischargers of VOCs or Fuels contaminated groundwater to apply for coverage under these specific permits.

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 - ELGs) 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 ELGs 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

Except for chlorine residue and pH, the Order does not establish technology-based effluent limitations. The effluent chlorine residue limitation limit applies only to the Dischargers that chlorinate their well water. Whether the chlorine limitation applies to a particular covered facility shall be determined based on its NOI, and confirmed in the notice authorization to discharge for that facility.

Effluent Limitations A.1 for chlorine residue and A.2 for pH are both pursuant to Table 4-2 (page 4-69) of the Basin Plan. While the Basin Plan defines the effluent limit as 0.0 mg/l, a measurement of greater than 0.08 mg/l is considered a violation. This figure originally came from negotiations with the water treatment plants who were using field chlorine test kits. Since the discharges to which this limit applies are likely to be in remote areas, field kits may be the only measurement tool available, and therefore, the 0.08 mg/l reporting level is appropriate. If during the 5-year term of this permit, the water treatment plants start using more sensitive field kits with reporting levels lower than 0.08, then a lower reporting level may be considered for the next permit reissuance.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Order authorizes certain discharges to inland surface waters, enclosed bays, and estuaries within the San Francisco Bay Region. Beneficial uses of these receiving waters, as designated by the Basin 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, and the Basin Plan.

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

b. NTR. The NTR establishes numeric aquatic life criteria for selenium, numeric aquatic life and human health criteria for cyanide, and numeric human health criteria for 34 toxic organic pollutants for waters of San Francisco Bay upstream to, and including Suisun Bay and the Delta.

c. 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 such as San Francisco Bay, except where the Basin Plan's Tables 3-3 and 3-4 specify numeric objectives for certain of these priority toxic pollutants. The Basin Plan's numeric objectives apply over the CTR (except in the South Bay south of the Dumbarton Bridge).

3. 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.

Because discharges authorized by the Order originate as groundwater, discharges are expected to have minimal impact on receiving water quality, therefore the Regional Water Board is establishing WQBELS only for acute toxicity and pH. These limitations are based on Basin Plan Table 4-4 (page 4-70) and page 3-3.

For discharges of reverse osmosis concentrate, the Regional Water Board understands that naturally occurring constituents will be concentrated by the process. Although the Regional Water Board cannot identify or project specific constituents in these discharges that have a reasonable potential to contribute to exceedances of applicable water quality criteria, the concentration effect may lead to effluent quality that has adverse impacts on receiving water quality. The Order, therefore, establishes effluent limitations for whole effluent acute toxicity, as a parameter that will indicate poor effluent quality. The Order also establishes discharge specifications and monitoring requirements that are meant to highlight pollutants of concern in all discharges.

4. WQBEL Calculations

Not Applicable

5. Whole Effluent Toxicity (WET)

The basis for Effluent Limitations A.3 (toxicity) is Table 4-4 (Chapter 4, Page 70) of the Basin Plan. The basis for using rainbow trout and 96-hour static renewal bioassays is in Chapter 4, Page 9, of the Basin Plan. The basis for repeating the toxicity testing if the percentage of surviving test organisms is less than the required survival percentage, and the requirements to investigate the cause of mortality is based on 40 CFR 122.41(d), which is needed to minimize adverse impacts from discharges in violation of requirements. Non-compliance is also a cause for termination of the authorization to discharge (40 CFR 122.64).

D. Discharge Specifications

Because discharges authorized by the Order originate as groundwater, the Order establishes only a few specific effluent limitations and otherwise relies on implementation of Best Management Practices (BMP) Plans to control authorized discharges. Discharge Limitations established by the Order require authorized dischargers to compare effluent data, generated through routine monitoring, to certain criteria. Exceedance of any of the

specified criteria triggers additional discharger requirements, which, in extreme circumstances, may lead to discontinuance of coverage under the Order (following public notice and opportunity for a hearing pursuant to Special Provision C.4). The Discharge Specifications are designed to allow the Order to impose few specific effluent limitations, while assuring that authorized discharges are not creating adverse impacts on receiving water quality. When adverse impacts are highlighted following exceedance of a trigger, dischargers are directed to confirm the findings, to treat the discharge, evaluate its effect on receiving waters, and may be required to seek coverage under an individual NPDES permit.

E. Interim Effluent Limitations

Not Applicable

F. Reclamation and Land Discharge Specifications

In general, these specifications are consistent with sound common reuse practices and the Regional Water Board Resolution No. 88-160.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Receiving water limitations are based on water quality objectives contained in the Basin Plan and and are a required part of this Order.

A. Surface Water

These limitations are based on the narrative/numerical objectives contained in Chapter 3 of the Basin Plan and as identified in Section V.A. of this Order.

The basis for V.A.1.a is on page 3-3 of the Basin Plan;
The basis for V.A.1.b is on page 3-2 of the Basin Plan;
The basis for V.A.1.c is on pages 3-3 and 3-4 of the Basin Plan
The basis for V.A.1.d is on page 3-3 of the Basin Plan;
The basis for V.A.1.e is on pages 3-2, 3-3, and 3-4 of the Basin Plan;
The basis for V.A.2.a is on page 3-3 of the Basin Plan;
The basis for V.A.2.b is on page 3-3 of the Basin Plan;
The basis for V.A.2.c is on page 3-3 of the Basin Plan; and
The basis for V.A.2.d is on pages 3-4 of the Basin Plan.
The basis for V.A.2.e is on pages 3-4 of the Basin Plan.

B. Groundwater

Not Applicable.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

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

4. Prepare water and wastewater quality inventories.

Section 122.48 of 40 CFR requires all NPDES permits to specify recording and reporting of monitoring results. Sections 13267 and 13383 of the California Water Code authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program, Attachment D 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 the facilities covered by this Order.

The MRP is a standard requirement in almost all NPDES permits issued by the Regional Water Board, including this Order. It contains definitions of terms, 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 California Water Code, and Regional Water Board's policies. The MRP also contains a sampling program specific for the Facilities covered by this Order. It defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents, for which no effluent limitations are established, is also required to provide data for decision-making whether additional effluent limitations are required (e.g. effluent limitations for a subset of inorganic compounds for RO discharges).

A. Influent Monitoring

No influent monitoring is required by the Order, unless effluent violations or trigger constituent values are exceeded in the previous self monitoring report. In that event, influent monitoring would be required as an investigatory to determine the cause of the exceedance.

B. Effluent Monitoring

Effluent monitoring is required to determine compliance with effluent limitations and to allow ongoing characterization of discharges to determine potential adverse impacts and to determine continued suitability for coverage under the Order.

In addition to discharge rate, effluent is monitored for hardness, pH, totals suspended and total dissolved solids, salinity, and turbidity. If chlorine is applied to well water, chlorine monitoring is required to assure that no measurable chlorine residual remains in effluent. Acute toxicity monitoring is required to determine compliance with effluent limitations and as a general measure of effluent quality. And, monitoring is required for the metals and other priority, toxic pollutants which have water quality criteria established by the NTR and CTR.

C. Whole Effluent Toxicity Testing Requirements

The selected test species and frequency of testing are specified in Basin Plan Page 4-9 and Table 4-4 (Page 4-70), respectively, and are appropriate for the range of discharges to be covered by this Order.

D. Receiving Water Monitoring

The receiving water monitoring program is described in the Monitoring and Reporting Program (MRP) (Attachment E), and for the majority of constituents, is only required by the Order if effluent violations or trigger constituent values are exceeded in the previous self monitoring report. The exceptions are flow rate, salinity, and turbidity, which dischargers are required to monitor on a quarterly basis. Collecting data on flow rate and salinity will help the Regional Water Board staff evaluate the overall impacts of discharges covered in this permit, over the 5-year permit cycle. Turbidity, because it is caused by the force of the discharge as it enters the receiving water, can only be accurately assessed by monitoring the receiving water.

E. Other Monitoring Requirements

The purpose of additional monitoring requirements is to investigate complaints, identify the discharges that should be regulated by individual NPDES permits, coordinate storm water monitoring with municipalities, and quantify potential impacts of extracted and treated groundwater discharge on the receiving water and the ambient conditions of the receiving waters.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

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

40 CFR 122.41 (a) (1) and (b) - (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly

or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 CFR 123.25 (a) (12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 122.41 (j) (5) and (k) (2), because the enforcement authority under the California Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387 (e).

B. Monitoring and Reporting Requirements

The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are contained in the MRP (Attachment E) of the Permit. This provision requires compliance with Attachment E, which is based on 40 CFR 122.63, 122.41, 122.48, 122.62, and 124.5, CWC Sections 13267 and 13383. The Standard Provisions and SMP, Part A are standard requirements in almost all NPDES permits issued by the Regional Water Board, including this Order. They contain definitions of terms, specify general sampling and analytical protocols, and set out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Regional Water Board's policies. The MRP contains sampling programs for authorized facilities. It defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents is required to provide ongoing characterization of authorized to discharges to assure that receiving waters are protected and that authorized discharges remain suitable for coverage under the Order.

C. Special Provisions

1. Reopener Provisions. These provisions are based on 40 CFR 122.41(f) and allow future modification of this Order and its effluent limitations as necessary in response to updated WQOs that may be established in the future.

2. Basis for Notice of Intent (NOI) Application. Provision VI.C.2, Notice of Intent (NOI) Application, is based on 40 CFR 122.28(b).

3. Basis for NOI Review. Provision VI.C.3, NOI Review, is based on 40 CFR 122.28(b).

4. Basis for Discharge Authorization. Provision VI.C.4, Discharge Authorization, is based on 40 CFR 122.28(b).

5. Basis for Non-Compliance as a Violation. Provision VI.C.5, Non-Compliance as a Violation, is based on 40 CFR 122.41(a).

6. Basis for Provision VI.C.6. In general, the Dischargers authorized under this Order are expected to use Best Management Practices (BMP) to reduce the potential negative impacts of pollutants in their discharges. However, some pollutants may be detected in

the effluent of some of the treatment or discharge systems. These pollutants include both organic and inorganic compounds. The purpose of these provisions is to require Dischargers to do additional activities should any pollutants exceed the triggers in Table F-1. These triggers are not effluent limitations and should not be construed as such. Instead, they are levels at which additional investigation is warranted to determine whether a numeric limit for a particular pollutant is necessary. The Table F-1, Column A for discharges to freshwater bodies, concentration-based triggers are set at the lowest value of the following: Basin Plan Table 3-6 Water Quality Objectives for Agricultural Supply, State Maximum Contaminant Levels, Federal Maximum Contaminant Levels, California Toxics Rule lowest freshwater criterion, or California Toxics Rule criterion for drinking the water and fish consumption. Table F-1, Column B for Discharges to Bay/Estuary, concentration-based triggers are set at the lowest value of the following: California Toxics Rule lowest saltwater criterion, California Toxics Rule lowest freshwater criterion, or California Toxics Rule criterion for fish consumption. The reason for this approach is explained below.

a. **Triggers for Inorganic Compounds.** Antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc (hereinafter called inorganic compounds) may be present in groundwater dewatering discharges, primarily due to background concentrations in the groundwater being extracted. Water Board staff's best professional judgment is that the loading of inorganic compounds from discharges covered by this Order is negligible when compared to loadings from municipal and industrial point-source discharges and stormwater discharges. Therefore, it is acceptable to utilize the trigger monitoring system for these compounds instead of designating them as effluent limits.

b. **Triggers for Organic Compounds.** Dischargers authorized under this Order are expected to use BMPs. Sites where pesticides or other conservative pollutants have adversely impacted groundwater are not eligible for coverage under this Order. It is possible that organic compounds may be detected in the effluent of some of the discharge systems. This could be due to the movement of the contaminated groundwater from a neighboring site into the capture zone of the facility authorized under this Order, and may occur after discharge has been authorized, and groundwater is mobilized. Table F-1 contains concentration-based triggers for conducting additional activities when the trigger compounds have been detected above the trigger value. This provision would allow Dischargers to continue the discharge while investigating the toxicity and ability to treat any detected volatile or semi volatile organic compounds, in excess of Table F-1 triggers. If a Discharger detects any Fuels or Solvent related pollutants in the effluent or any extraction wells, the Discharger shall apply for discharge authorization under general NPDES No. CAG912002 (Fuels) or NPDES No. CAG912003 (Solvent), respectively.

Table F-1. Trigger Compounds or Constituents

Compound	CAS Number	Agricultural ug/L	State MCL ug/L	Federal MCL ug/L	CTR Lowest Freshwater Criterion ug/L	CTR Criteria Water and Organisms ug/L	Column A for Discharges to Freshwater bodies with municipal and domestic supply, agricultural water supply, and/or freshwater replenishment beneficial uses ug/L	CTR Lowest Saltwater Criterion ug/L	CTR Lowest Freshwater Criterion ug/L	CTR Criteria Organisms Only ug/L	Column B for Discharges to Bay/Estuary (ug/L)
Turbidity (Units)	-		5	5	-		5		-		
Total Dissolved Solids (TDS)		10,000,000	500,000				500,000				
Conductivity (mmhoms/cm)		200	900				200				
Chloride		142,000	250,000				142,000				
Antimony	7440360		6	6		14	6			4300	4300
Arsenic	7440382	100	50	10	150		10	36	150		36
Beryllium	7440417	100	4	4			4				
Cadmium	7440439		5	5	2.2		2.2	9.3	2.2		2.2
Chromium (total)	18540299	100	50	100	180		11 (See Note 1)		180		11 (See Note 1)
Chromium (VI)	18540299		-	-	11		11	50	11		11
Copper	7440508	200	1000	1000	3.1		3.1		3.1		3.1
Lead	7439921	5,000	15	15	2.5		2.5	8.1	2.5		2.5
Mercury	7439976		2	2		0.050	0.025	0.025 (See Note 2)		0.051	0.025
Nickel	7440020	200	100	-	52	610	52	8.2	52	4600	8.2
Selenium	7782492	20	50	50	5.0		5.0	71	5.0		5.0
Silver	7440224		100	100	3.4		3.4	1.9	3.4		1.9
Thallium	7440280		2	2		1.7	1.7			6.3	6.3
Zinc	7440666	2,000	5000	5000	120		120	81	120		81
Cyanide	57125		200/150	200	5.2	5.2	1.0	1	5.2	220,000	1.0
Asbestos	1332214		7 MFL	7 MFL		7 MFL	7 MFibers/L				
2,3,7,8-TCDD (Dioxin)	1746016		0.00003	0.00003		1.3E-08	1.3E-08			1.4E-08	1.4E-08
Acrylonitrile	107131		-	-		0.059	0.059			0.66	0.66
Bromoform	75252		100/80	100/80		4.3	4.3			360	360
Chlorodibromomethane	124481		100/80	100/80		0.401	0.401			34	34
Dichlorobromomethane	75274		100/80	100/80		0.56	0.56			46	46
1,2-Dichloropropane	78875		5	5		0.52	0.52			39	39
1,3-Dichloropropylene	542756		0.5	-		10	0.5			1700	1700
1,1,2,2-Tetrachloroethane	79345		1	-		0.17	0.17			11	11
Pentachlorophenol	87865		1	1	15	0.28	0.28	7.9	15	8.2	8.2
2,4,6-Trichlorophenol	88062		-	-		2.1	2.1			6.5	6.5
Benzidine	92875		-	-		0.00012	0.00012			0.00054	0.00054
Benzo(a)Anthracene	56553		-	0.1		0.0044	0.0044			0.049	0.049
Benzo(a)Pyrene	50328		0.2	0.2		0.0044	0.0044			0.049	0.049
Benzo(b)Fluoranthene	205992		-	-		0.0044	0.0044			0.049	0.049

Compound	CAS Number	Agricultural ug/L	State MCL ug/L	Federal MCL ug/L	CTR Lowest Freshwater Criterion ug/L	CTR Criteria Water and Organisms ug/L	Column A for Discharges to Freshwater bodies with municipal and domestic supply, agricultural water supply, and/or freshwater replenishment beneficial uses ug/L	CTR Lowest Saltwater Criterion ug/L	CTR Lowest Freshwater Criterion ug/L	CTR Criteria Organisms Only ug/L	Column B for Discharges to Bay/Estuary (ug/L)
Benzo(k)Fluoranthene	207089		-	-		0.0044	0.0044			0.049	0.049
Bis(2-Chloroethyl)Ether	111444		-	-		0.031	0.031			1.4	1.4
Bis(2-Ethylhexyl)Phthalate	117817		-	-		1.8	1.8			5.9	5.9
Chrysene	218019		-	-		0.0044	0.0044			0.049	0.049
Dibenzo(a,h)Anthracene	53703		-	-		0.0044	0.0044			0.049	0.049
3,3'-Dichlorobenzidine	91941		-	-		0.04	0.04			0.077	0.077
2,4-Dinitrotoluene	121142		-	-		0.11	0.11			9.1	9.1
1,2-Diphenylhydrazine	122667		-	-		0.04	0.04			0.54	0.54
Hexachlorobenzene	118741		1	1		0.00075	0.00075			0.00077	0.00077
Hexachlorobutadiene	87683		-	-		0.44	0.44			50	50
Hexachloroethane	67721		-	-		1.9	1.9			8.9	8.9
Indeno(1,2,3-cd)Pyrene	193395		-	-		0.0044	0.0044			0.049	0.049
N-Nitrosodimethylamine	62759		-	-		0.00069	0.00069			8.1	8.1
N-Nitrosodi-n-Propylamine	621647		-	-		0.005	0.005			1.4	1.4
Aldrin	309002		-	-	3	0.00013	0.00013	1.3	3	0.00014	0.00014
alpha-BHC	319846		-	-		0.0039	0.0039			0.013	0.013
beta-BHC	319857		-	-		0.014	0.014			0.046	0.046
gamma-BHC	58899		0.2	0.2		0.019	0.019			0.063	0.063
Chlordane	57749		0.1	2	0.0043	0.00057	0.00057	0.004	0.0043	0.00059	0.00059
4,4'-DDT	50293		-	-	0.001	0.00059	0.00059	0.001	0.001	0.00059	0.00059
4,4'-DDE	72559		-	-		0.00059	0.00059			0.00059	0.00059
4,4'-DDD	72548		-	-		0.00083	0.00083			0.00084	0.00084
Dieldrin	60571		-	-	0.056	0.00014	0.00014	0.0019	0.056	0.00014	0.00014
alpha-Endosulfan	959988		-	-	0.056	110	0.0087	0.0087	0.056	240	0.0087
beta-Endosulfan	33213659		-	-	0.056	110	0.0087	0.0087	0.056	240	0.0087
Endrin	72208		2	2	0.036	0.76	0.036	0.0023	0.036	0.81	0.0023
Endrin Aldehyde	7421934		-	-		0.76	0.76			0.81	0.81
Heptachlor	76448		0.01	0.4	0.0038	0.00021	0.00021	0.0036	0.0038	0.00021	0.00021
Heptachlor Epoxide	1024573		0.01	0.2	0.0038	0.0001	0.0001	0.0036	0.0038	0.00011	0.00011
Polychlorinated biphenyls (PCBs) total	1336363		0.5	0.5	0.014	0.00017	0.00017	0.03	0.014	0.00017	0.00017
Toxaphene	8001352		3	3	0.0002	0.00073	0.0002	0.0002	0.0002	0.00075	0.0002
Turbidity (Units)	-		5	5	-		5		-		
Odor-Threshold (Units)	-		3	3	-		3		-		
Sulfate	-		250,000	250,000	-		250,000		-		

Compound	CAS Number	Agricultural ug/L	State MCL ug/L	Federal MCL ug/L	CTR Lowest Freshwater Criterion ug/L	CTR Criteria Water and Organisms ug/L	Column A for Discharges to Freshwater bodies with municipal and domestic supply, agricultural water supply, and/or freshwater replenishment beneficial uses ug/L	CTR Lowest Saltwater Criterion ug/L	CTR Lowest Freshwater Criterion ug/L	CTR Criteria Organisms Only ug/L	Column B for Discharges to Bay/Estuary (ug/L)
Foaming Agents	-		500	500	-		500		-		
Color (Units)	-		15	15	-		15		-		
Aluminum		5,000					5,000				
Boron		500					500				
Cobalt		50					50				
Fluoride		1,000					1,000				
Iron		5,000	300				300				
Lithium		2500					2500				
Manganese		200	50				50				
Molybdenum		10					10				
Nitrate (as NO3)			45,000				45,000				
Nitrate + Nitrite (as N) NO3 + NO2 (as N)		5,000	10,000				5,000				
Nitrite (as N)			1,000				1,000				
Vanadium		100					100				
Combined Radium-226 and Radium-228 (IN pCi/l)			5				5				
Gross Alpha Particle (includes Radium-226 but excludes Radon and Uranium) (IN pCi/l)			15				15				
Tritium (IN pCi/l)			20,000				20,000				
Strontium-90 (IN pCi/l)			8				8				
Gross Beta Particle Activity (IN pCi/l)			50				50				
Uranium (IN pCi/l)			20				20				
Fuels Related Pollutants							Apply for NPDES No. CAG912002				Apply for NPDES No. CAG912002
Solvents Related Pollutants							Apply for NPDES No. CAG912003				Apply for NPDES No. CAG912003

Legend:
CAS = Chemical Abstract System
MCL = Maximum Contaminant Level
CTR = California Toxics Rule
Notes:
1 If total chromium concentration exceeds 11 then Chromium (VI) analysis shall also be done
2 Basin Plan
3: If a Discharger is reporting monitoring data with a detection level higher than 50 ug/l, the reason for a higher detection level shall be fully explained in the monitoring report.

7. Basis for Individual NPDES Permit may be Required. Provision VI.C.11, Individual NPDES Permit may be Required, is based on 40 CFR 122.28(b)(3).

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) is considering the reissuance of general waste discharge requirements (GWDRs) that willl serve as an NPDES permit. As a step in the process towards adoption of the Order, the Regional Water Board staff has developed a tentative Order. The Regional Water Board encourages public participation in the adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Dischargers 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 a legal notice published in the Recorder.

B. Written Comments

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

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on March 15, 2007.

C. Public Hearing

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

Date: April 11, 2007 Time: 9:00 AM
Location: Elihu Harris State Building (1st Floor auditorium)
1515 Clay Street
(Walking distance from City Center 12th Street BART station)
Oakland, CA 94612

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

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

D. Waste Discharge Requirements Petitions

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

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

E. Information and Copying

The Report of Waste Discharges (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above during regular office hours, which are generally weekdays from 8:00 a.m. to 5:00 p.m., excluding 12:00 p.m. to 1:00 p.m. lunch hours and holidays. Copying of documents may be arranged through the Regional Water Board by calling (510) 622-2300.

F. Register of Interested Persons

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

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Farhad Azimzadeh at (510) 622-2310 or by e-mail at **fazimzadeh@waterboards.ca.gov**.

ATTACHMENT G - NOTICE OF TERMINATION

A PDF electronic copy of this Form shall be submitted by an email to the responsible Water Board staff member at this office, currently Farhad Azimzadeh, at fazimzadeh@waterboards.ca.gov.

For Facilities Permitted to Discharge Extracted or Extracted and Treated Groundwater under the Requirements of
ORDER NO. R2-2007-0033
NPDES PERMIT NO. CAG912004

For the Facility located at:

_____ _____

Type or Print Facility Address above the line
File No: 1210.60

WDID No.
Please refer to Authorization Letter

The following category of discharge has been terminated:

Category	Notice of Termination for:	
Category 1	Aquifer protection and salinity barrier well discharges	
Category 2	RO concentrate from aquifer protection well discharges	
Category 3	Structural dewatering discharges greater than 10,000 gallons per day and requiring treatment. Treatment is required where a physical, biological, or chemical treatment process is necessary in order for the structural dewatering discharge to comply with the prohibitions and limitations of this order	

I certify under penalty of law that this notice is prepared under my direction or supervision and the effective termination date of this Discharge is _____. I am aware that discharging without a discharge authorization is in violation of California Water Code.

_____ _____

Name (print) Signature and Date

_____ _____

Title/Organization Address

Note: The Regional Water Board may modify this form at any time to reflect the new requirements and other needed improvements.