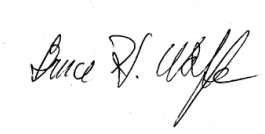
ORDER No. R2-2015-0035
NPDES PERMIT No. CAG982001

GENERAL WASTE DISCHARGE REQUIREMENTS FOR Discharges of Process Wastewaters from Aggregate Mining, Marine Sand Washing, and Sand Offloading Facilities to Surface Waters

Table 1. Administrative Information

This Order was adopted by the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board), on:	July 8, 2015
This Order shall become effective on:	September 1, 2015
This Order shall expire on:	August 30, 2020
CIWQS Place Number	813254
CIWQS Regulatory Measure Number	399945
The U.S. Environmental Protection Agency (U.S. EPA) and the Regional Water Board have classified the discharges under this general National Pollutant Discharge Elimination System (NPDES) permit (General Permit) as minor discharges based on the discharges' impact to receiving waters.	
To obtain coverage under this General Permit, prospective Dischargers must submit a Notice of Intent (NOI) form as shown in Attachment B and a filing fee equivalent to the first year's annual fee. If the NOI is complete, the Regional Water Board Executive Officer will issue an Authorization to Discharge to the Discharger.	
Authorized Dischargers that intend to continue discharging after August 30, 2020, shall file a new NOI form no later than November 30, 2019. Discharges for which coverage is extended will become subject to a reissued order upon Executive Officer authorization.	

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



Digitally signed by Bruce H. Wolfe
DN: cn=Bruce H. Wolfe, o=SWRCB, ou=Region 2, email=bwolfe@waterboards.ca.gov, c=US
Date: 2015.07.15 16:32:50 -07'00'

Bruce H. Wolfe, Executive Officer

Contents

Tables

Attachments

I. SCOPE OF GENERAL PERMIT

These Waste Discharge Requirements (WDRs) shall serve as an NPDES General Permit for discharges from aggregate mining, marine sand washing, and sand offloading facilities. This General Permit covers the following discharges:

1. Effluent from wastewater treatment facilities, such as settling ponds and sand and gravel filter systems;
2. Stormwater from aggregate mining, sand washing, and sand dredging facilities commingled with other wastewater from such facilities;
3. Water used for sand screening and washing; and
4. San Francisco Bay water or return flow during hydraulic sand offloading and reclamation (where no sand-washing is practiced).

This General Permit does not cover:

1. Discharges to sanitary sewer systems,
2. Sewage,
3. Discharges covered under an individual NPDES permit or WDRs, or
4. Stormwater not commingled with other wastewater from aggregate mining, marine sand washing, and sand offloading facilities.

Fact Sheet (Attachment F) sections I and II provide additional information describing covered discharges.

II. FINDINGS

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

A. Legal Authorities. This Order serves as WDRs pursuant to California Water Code article 4, chapter 4, division 7 (commencing with § 13260). This Order is also issued pursuant to federal Clean Water Act (CWA) section 402 and implementing regulations adopted by U.S. EPA and Water Code chapter 5.5, division 7 (commencing with § 13370).

B. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information obtained through monitoring and reporting programs and other available information. The Fact Sheet contains background information and rationale for the requirements in this Order and is hereby incorporated into and constitutes findings for this Order. Attachments A through E are also incorporated into this Order.

C. Provisions and Requirements Implementing State Law. No provisions or requirements in this Order are included to implement State law only.

D. Notification of Interested Parties. The Regional Water Board notified prospective enrollees and interested agencies and persons of its intent to prescribe these WDRs and provided an opportunity to submit written comments and recommendations. The Fact Sheet provides details regarding the notification.

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

THEREFORE, IT IS HEREBY ORDERED that Order No. R2-2008-0011 (previous order) is rescinded upon the effective date of this Order, except for enforcement purposes, and in order to meet the provisions of Water Code division 7 (commencing with § 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, Dischargers authorized to discharge pursuant to this Order shall comply with the requirements in this Order. This action in no way prevents the Regional Water Board from taking enforcement action for past violations of the previous order.

III. DISCHARGE PROHIBITIONS

A. Discharge of waste at a location or in a manner different than that described in an NOI and Authorization to Discharge is prohibited.

B. Discharge of silt, sand, clay, or other earthen materials from any activity in quantities sufficient to cause deleterious bottom deposits, turbidity, or discoloration in surface waters, or to unreasonably affect or threaten to affect beneficial uses, is prohibited.

C. Discharge of floating debris, oil, grease, scum, or other floating materials is prohibited.

D. Bypassing retention ponds is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations for Aggregate Mining Facilities

Discharge from each aggregate mining facility discharge outfall, as defined in the NOI and Authorization to Discharge, shall comply with the following effluent limits:

Table 2. Aggregate Mining Facility Effluent Limitations

Pollutant	Units	Daily Maximum	Weekly Average	Monthly Average	Instantaneous Maximum	Instantaneous Minimum
Total Suspended Solids (TSS)	mg/L	---	45	30	---	---
Turbidity	NTU	40	---	--	---	---
Settleable Matter	mL/L-hr	0.2	---	0.1	---	---
pH [1]	s.u.	---	---	---	8.5	6.5
Total Dissolved Solids (TDS)	mg/L	500	---	---	---	---
Chloride [2]	mg/L	250	---	---	---	---
Total Residual Chlorine [3]	mg/L	---	---	---	0.0	---
Whole Effluent Acute Toxicity [4]	%	---	---	---	70 [4]	---

Abbreviations:

mg/L = milligrams per liter
NTU = nephelometric turbidity units
mL/L-hr = milliliters per liter-hour
s.u. = standard units
% = percent

Footnotes:

[1] Exceedance of the pH limit will not constitute a violation of this Order if the Discharger can demonstrate (e.g., through upstream and downstream receiving water monitoring) that the discharge does not cause the natural background pH of the receiving water to be depressed below 6.5 nor raised above 8.5, or, if outside this range, the natural background pH of the receiving water has not been altered by more than 0.5 standard units. In no case shall the effluent pH be below 6.0 or above 9.0.

[2] The chloride limit applies only to discharges to Alameda Creek and its tributaries above Niles. In lieu of this effluent limitation, the Discharger may demonstrate no net chloride load in accordance with Provision VI.C.4.b.

[3] The total residual chlorine limit applies only to facilities that use potable water as wash or screening water.

[4] Whole effluent acute toxicity tests shall measure the survival of bioassay test organisms in 96-hour bioassays of undiluted effluent. Bioassays shall be performed using the most up-to-date U.S. EPA protocols and species as specified in MRP section IV. A bioassay test showing survival of less than 70% represents a violation of this effluent limit.

B. Marine Sand Washing Facility Effluent Limitations

Discharge from each marine sand washing facility discharge outfall, as defined in the NOI and Authorization to Discharge, shall comply with the following effluent limits:

Table 3. Marine Sand Washing Facility Effluent Limitations

Pollutant	Units	Daily Maximum	Weekly Average	Monthly Average	Instantaneous Maximum	Instantaneous Minimum
Turbidity	NTU	50	---	--	---	---
Settleable Matter	mL/L-hr	0.2	---	0.1	---	---
pH [1]	s.u.	---	---	---	8.5	6.5
Total Residual Chlorine [2]	mg/L	---	---	---	0.0	---
Whole Effluent Acute Toxicity [3]	%	---	---	---	---	70 [3]
Copper	µg/L	11	---	5.4	---	---

Abbreviations:

NTU = nephelometric turbidity units
mL/L-hr = milliliters per liter-hour
s.u. = standard units
mg/L = milligrams per liter
% = percent
µg/L = micrograms per liter

Footnotes:

[1] Exceedance of the pH limit will not constitute a violation of this Order if the Discharger can demonstrate (e.g., through receiving water monitoring) that the discharge does not cause the natural background pH of the receiving water to be depressed below 6.5 nor raised above 8.5, or, if outside this range, the natural background pH of the receiving water has not been altered by more than 0.5 standard units. In no case shall the effluent pH be below 6.0 or above 9.0.

[2] The total residual chlorine limit applies only to facilities that use municipal water supply as wash water.

[3] Whole effluent acute toxicity tests shall measure the survival of bioassay test organisms in 96-hour bioassays of undiluted effluent. Bioassays shall be performed using the most up-to-date U.S.EPA protocols and species as specified in MRP section IV. A bioassay test showing survival of less than 70% represents a violation of this effluent limit.

Discharge from each marine sand washing facility (all facility discharge outfalls combined) shall comply with the following mercury and PCBs effluent limits, unless and until a watershed permit (e.g., NPDES Permit No. CA0038849) covers mercury and PCBs discharges from such facilities. Compliance with these limitations shall be determined by summing the annual loads for each facility outfall. The annual loads shall be calculated as the average concentration measured during the year multiplied by the 12-month sum of the average monthly flows.

Table 4. Marine Sand Washing Facility Mercury Effluent Limitations

Facility	Annual Maximum (kilograms)
Hanson Aggregates, Amador Street, San Francisco	0.000005
Hanson Aggregates, Tidewater Avenue, Oakland	0.000005
Other facilities	0.000000

Table 5. Marine Sand Washing Facility PCBs Effluent Limitations

Facility	Annual Maximum (kilograms)
Hanson Aggregates, Amador Street, San Francisco	0.00003
Hanson Aggregates, Tidewater Avenue, Oakland	0.00003
Other facilities	0.00000

Compliance with the effluent limitations in Table 4 shall be determined annually for each Discharger each calendar year and shall be attained if the sum of the individual mercury mass emissions for the Dischargers covered by this Order plus those of all the industrial dischargers subject to NPDES Permit No. CA0038849 is not greater than 1.0 kilogram. If the sum of all these emissions is greater than 1.0 kilogram, a Discharger whose mercury mass emission exceeds the limitation in Table 4 shall be deemed to be in violation of the limitation in Table 4. (Relevant calculations are described in Order No. R2-2012-0096, Table 6A, Footnote 1.)

C. Sand Offloading Facility Effluent Limitations

Discharge from each sand offloading facility discharge outfall, as defined in the NOI and Authorization to Discharge, shall comply with the following effluent limits:

Table 6. Sand Offloading Facility Effluent Limitations

Pollutant	Units	Daily Maximum	Weekly Average	Monthly Average	Instantaneous Maximum	Instantaneous Minimum
Settleable Matter	mL/L-hr	1.0	---	---	---	---
pH [1]	s.u.	---	---	---	8.5	6.5

Abbreviations:

mL/L-hr = milliliters per liter-hour
s.u. = standard units

Footnote:

[1] Exceedance of the pH limit will not constitute a violation of this Order if the Discharger can demonstrate (e.g., through receiving water monitoring) that the discharge does not cause the natural background pH of the receiving water to be depressed below 6.5 nor raised above 8.5, or, if outside this range, the natural background pH of the receiving water has not been altered by more than 0.5 standard units. In no case shall the effluent pH be below 6.0 or above 9.0.

V. RECEIVING WATER LIMITATIONS

A. Discharge shall not cause the following conditions to exist in receiving waters:

1. Floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses;

2. Alteration of suspended sediment in such a manner as to cause nuisance, or to adversely affect beneficial uses, or to cause detrimental increase in the concentrations of toxic pollutants in sediments or aquatic life;

3. Suspended material in concentrations that cause nuisance or adversely affect beneficial uses;

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

5. Alteration of temperature beyond present natural background levels;

6. Changes in turbidity that cause nuisance or adversely affect beneficial uses or increases from normal background light penetration or turbidity greater than 10 percent in areas where natural turbidity is greater than 50 nephelometric turbidity units;

7. Coloration that causes nuisance or adversely affects beneficial uses;

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

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

B. Discharge shall not cause the following limits to be exceeded in receiving waters within one foot of the water surface:

1. Dissolved Oxygen

a. For San Francisco Bay and tidal waters, the following limitations shall apply:

Downstream of Carquinez Bridge: 5.0 mg/L, minimum
Upstream of Carquinez Bridge: 7.0 mg/L, minimum

b. For non-tidal waters, the following limitations shall apply:

Cold habitat waters: 7.0 mg/L, minimum
Warm habitat waters: 5.0 mg/L, minimum

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

2. Dissolved Sulfide. Dissolved sulfide shall not exceed natural background levels (0.1 mg/L maximum).

3. Total Dissolved Solids (TDS) and Chloride. For Alameda Creek and its tributaries above Niles, the following limitations shall apply:

TDS:	250 mg/L (90-day arithmetic mean) 360 mg/L (90-day 90th percentile)
Chloride:	60 mg/L (90-day arithmetic mean)

100 mg/L (90-day 90th percentile)

Compliance with these limitations shall be evaluated each month based on data for the most recent three calendar months. In lieu of these receiving water limits, the Discharger may demonstrate no net TDS and chloride load in accordance with Provision VI.C.4.b.

C. Discharge shall not cause a violation of any water quality standard for receiving waters adopted by the Regional Water Board or State Water Resources Control Board (State Water Board) as required by the CWA and regulations adopted thereunder.

VI. PROVISIONS

A. Standard Provisions

The Discharger shall comply with the "Standard Provisions" in Attachment D.

B. Monitoring and Reporting Provisions

The Discharger shall comply with the Monitoring and Reporting Program (MRP) in Attachment E, and future revisions thereto, and applicable sampling and reporting requirements in Attachment D. The Executive Officer may specify additional monitoring requirements in individual Authorizations to Discharge.

C. Special Provisions

1. Reopener Provisions

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

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

b. If new or revised water quality standards or total maximum daily loads (TMDLs) come into effect for San Francisco Bay or contiguous waters (whether statewide, regional, or site-specific). In such cases, effluent limitations in this Order may be modified as necessary to reflect the updated water quality standards or TMDL wasteload allocations. Adoption of the effluent limitations in this Order is not intended to restrict in any way future modifications based on legally-adopted water quality standards or TMDLs or as otherwise permitted under federal regulations governing NPDES permit modifications.

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

d. If State Water Board-precedential decisions, new policies, new laws, or new regulations are adopted.

e. If an administrative or judicial decision on a separate NPDES permit or WDR addresses requirements similar to those applicable to these discharges.

f. Or as otherwise authorized by law.

A Discharger may request a permit modification based on any of the circumstances above. With any such request, the Discharger shall include antidegradation and anti-backsliding analyses.

2. Application for General Permit Coverage and Authorization to Discharge

a. Notice of Intent (NOI). A prospective discharger seeking Authorization to Discharge pursuant to this Order shall complete and submit the NOI form in Attachment B. A prospective discharger seeking coverage for similar discharges at multiple sites may complete one NOI that describes all proposed discharges; however, it shall submit separate fees for each site.

The Executive Officer may modify the NOI form in Attachment B or require additional information prior to authorizing any discharge.

b. Facility Modifications. At least 90 days prior to any significant facility modification (e.g., such as reducing storage or treatment pond capacity or changing an outfall location), the Discharger proposing the modifications shall submit a modified NOI form (e.g., a mark-up of the original NOI form showing all changes and including a new signature and date). The Discharger shall include a letter describing the changes, their purpose, when they are to go into effect, and any new or additional measures taken or planned to prevent potential non-compliance with this Order's requirements.

c. Authorization to Discharge. If the Executive Officer concludes that a proposed discharge is eligible for coverage under this Order, the Executive Officer will issue an Authorization to Discharge. Upon the effective date of the Authorization to Discharge, the Discharger shall comply with the requirements of this Order and its attachments. Any non-compliance with this Order's requirements shall constitute a violation of the CWA and Water Code and may be grounds for enforcement; termination, revocation and reissuance, or modification of the Authorization to Discharge; issuance of an individual permit; or denial of an application for reissuance.

d. Application to Extend Coverage. A Discharger that intends to continue discharging after the expiration date stated on the first page of this Order shall file a new NOI form no later than the date specified on the first page of this Order.

e. Discharge Termination. A Discharger may terminate its coverage under this Order by submitting a letter rescinding its NOI and stating the reason for termination. The Executive Officer may also terminate or revoke coverage under this Order for any of the causes specified for an individual permit as set forth in 40 C.F.R. section 122.28(b)(3). After providing notice and opportunity for a hearing, coverage under this Order may be terminated or modified for cause, including, but not limited to, the following:

i. Violation of any term or condition of this Order;

ii. Misrepresentation or failure to disclose all relevant facts in obtaining coverage under this Order; or

iii. Change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

f. Need for Individual NPDES Permit. The Executive Officer may require any Discharger authorized to discharge pursuant to this Order to subsequently apply for and obtain an individual NPDES permit in the following circumstances:

i. The Discharger is not in compliance with the requirements of this Order,

ii. A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants from the facility,

iii. Effluent limitation guidelines are promulgated for the discharges covered by this Order,

iv. A new or revised water quality control plan containing requirements applicable to the discharge is approved,

v. The requirements of 40 C.F.R. section 122.28(a) (the circumstances under which the Regional Water Board is authorized to issue a general permit) are not met, or

vi. Any other condition specified in 40 C.F.R. section 122.28(b)(3) is met.

3. Construction, Operation, and Maintenance Specifications

a. Wastewater Facilities Review and Evaluation, and Status Reports

i. The Discharger shall operate and maintain wastewater treatment facilities in a manner to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded, as necessary, in order to provide adequate and reliable treatment and disposal of all wastewater.

ii. The Discharger shall regularly review and evaluate its wastewater facilities and operational practices in accordance with the paragraph above. The Discharger shall conduct these reviews and evaluations as an ongoing component of the administration of its wastewater facilities.

iii. The Discharger shall provide the Executive Officer, upon request, a report describing the current status of wastewater facilities and operational practices, including any recommended or planned actions and a time schedule for these actions.

iv. The Discharger shall describe its review and evaluation procedures, and applicable wastewater facility programs or capital improvement projects, in each annual self-monitoring report.

b. Operations and Maintenance Manual Review and Status Reports

i. The Discharger shall maintain Operations and Maintenance Manuals for its wastewater facilities in usable condition and make them available for reference and use by appropriate personnel, including those working onsite.

ii. The Discharger shall regularly review, and revise or update as necessary, its Operations and Maintenance Manuals so that they remain useful and relevant to current equipment and operational practices. The Discharger shall review Operations and Maintenance Manuals at least annually. In the event of any significant changes in treatment facility equipment or operational practices, the Discharger shall complete revisions within 90 days of completing such changes.

iii. The Discharger shall provide the Executive Officer, upon request, a report describing the current status of its Operations and Maintenance Manuals, including any recommended or planned actions and a time schedule for these actions.

iv. The Discharger shall describe its review and evaluation procedures, and applicable changes to its Operations and Maintenance Manuals, in each annual self-monitoring report.

4. Best Management Practices, Special Studies, and Additional Monitoring Requirements

a. Best Management Practices Plan

i. The Discharger shall submit a Best Management Practices (BMPs) plan with its NOI form.

ii. The BMPs plan shall describe specific means of controlling pollutant discharges and, at a minimum, include the following information:

(a) Facility Operations. Describe the nature of facility operations:

(1) Type of facility (e.g., aggregate mining, marine sand washing, or sand offloading);

(2) Types of products; and

(3) Types of materials and equipment used.

(b) Potential Pollutants. Identify and describe potential pollutants that could be generated by facility operations, including but not be limited to the following:

(1) Soil, sediment, or silt from rock and sand washing;

(2) Discharges associated with equipment operations and maintenance, including but not limited to conveyor belts spilling over creeks, leaks, and spills;

(3) Debris;

(4) Stormwater runoff from exposed oil, fuel, or other hazardous material storage locations or containment structures; and

(5) Alkaline materials from cement mix operations.

(c) Pollution Control and Effluent Treatment Methods. Describe control and treatment measures for each potential pollutant identified as follows:

(1) Measures to prevent pollutants from entering the discharge and receiving waters (such as cover and/or secondary containment of hazardous material storage and cement mix areas);

(2) Measures to remove pollutants in the discharge; and

(3) Maintenance procedures and schedules to maintain pollution control and treatment systems.

iii. The Discharger shall implement its BMPs plan upon receipt of Authorization to Discharge. The Executive Officer may require additional pollutant control and treatment measures if existing measures are found to be inadequate to control pollutant discharges.

iv. The Discharger shall review and update the effectiveness and adequacy of its BMPs as often as necessary and at least annually. The Discharger shall submit updates to the BMPs plan annually with annual self-monitoring reports.

b. No Net TDS and Chloride Load *(optional)*. A Discharger discharging to Alameda Creek and its tributaries above Niles that is subject to the TDS and chloride effluent limitations in section IV.A and the TDS and chloride receiving water limitations in section V.B.4 may, in lieu of meeting those limits, submit a study demonstrating that its operations and discharges result in no net TDS and chloride load to the groundwater basin. If, based on the study, the Executive Officer concurs in writing that the Discharger contributes no net TDS and chloride load, then that Discharger shall not be subject to the TDS and chloride effluent limitations in section IV.A and the TDS and chloride receiving water limitations in section V.B.4. The Discharger shall continue to comply with the other effluent limitations in Table 2 and shall continue TDS and chloride monitoring in accordance with the MRP.

To demonstrate that operations and discharges result in no net TDS and chloride load to the groundwater basin, a study should compare the TDS and chloride in the discharge against the TDS and chloride in the groundwater used onsite. The study may consider the relative portion of TDS and chloride returned to the groundwater basin through onsite and offsite percolation and the portion leaving the watershed via Alameda Creek.

If the Executive Officer has approved a Discharger's exception to the TDS and chloride effluent and receiving water limitations and a Discharger wishes to continue the exception, it shall include with each subsequent annual self-monitoring report an analysis of its TDS and chloride data for the previous calendar year and demonstrate that its discharge quality and ambient conditions remain unchanged. If the annual self-monitoring report does not contain this information, the exception shall discontinue as of the date that the annual self-monitoring report is due (see MRP section VI.B.2.b). The Executive Officer may revoke the exception if the data submitted with annual self-monitoring reports no longer demonstrates that the discharge contributes no net TDS and chloride load to the groundwater basin.

ATTACHMENT A – DEFINITIONS

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

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

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

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

Bioaccumulative
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
Known to cause cancer in living organisms.

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

Daily Discharge
Either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit) for a constituent with limitations expressed in units of mass; or (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration). The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day. For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period is considered the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ)
Sample result less than the RL, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Dilution Credit
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 by conducting a mixing zone study or modeling the discharge and receiving water.

Effluent Concentration Allowance (ECA)
Value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the CV for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in U.S. EPA guidance (*Technical Support Document For Water Quality-based Toxics Control*, March 1991, second printing, EPA/505/2-90-001).

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

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

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

Inland Surface Waters
All surface waters of the state that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation
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
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)
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
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 n/2 and n/2+1).

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

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

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

Not Detected (ND)
Sample results less than the laboratory's MDL.

Persistent Pollutants
Substances for which degradation or decomposition in the environment is nonexistent or very slow.

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

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

Reporting Level (RL)
ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order, including an additional factor if applicable as discussed herein. 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 SIP Appendix 4 in accordance with SIP section 2.4.2 or established in accordance with SIP section 2.4.3. 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
Any water designated as having a municipal or domestic supply (MUN) beneficial use.

Standard Deviation (σ)
Measure of variability 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)
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 chemicals responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.

ATTACHMENT B – NOTICE OF INTENT FORM

NOTICE OF INTENT to comply with NPDES Permit No. CAG982001, authorizing discharges from aggregate mining, marine sand washing, and sand offloading facilities to waters of the United States.

I. FACILITY OWNER AND OPERATOR INFORMATION

Owner Name			Land Owner Type (Check One) ☐ Public ☐ Private ☐ Other, specify the type:
Street Address			
City	State	Zip Code	Phone No.
Contact Person's Name and Title			
Contact Person's Email			Contact Person's Phone No.

☐ Check here if information for additional owners is attached to this form.

Operator Name			Facility Owner Type (Check One) ☐ Public ☐ Private ☐ Other, specify the type:
Street Address			
City	State	Zip Code	Phone No.
Contact Person's Name and Title			
Contact Person's Email			Contact Person's Phone No.

☐ Check here if information for additional operators is attached to this form.

II. BILLING INFORMATION

Name			
Street Address			
City	State	Zip Code	Phone No.
Contact Person's Name			
Contact Person's Email			Contact Person's Phone No.

III. DISCHARGE TYPE

Select one: ☐ Aggregate Mining Facility ☐ Marine Sand Washing Facility ☐ Sand Offloading Facility	Select one: ☐ New Facility ☐ Previously Permitted Facility

IV. DISCHARGE POINTS AND RECEIVING WATERS*

Discharge Points	Latitude	Longitude	Receiving Water Name
1			
2			
3			
4			

* If discharging to a storm drain system, attach documentation indicating approval to discharge from the agency responsible for the system.

☐ Check here if information for additional outfalls is attached to this form.

V. EFFLUENT DESCRIPTION

Describe discharges and potential pollutants. Attach additional sheets if needed.

Discharge Types:

☐ Settling pond overflow	☐ Stormwater	☐ San Francisco Bay water from sand piles	☐ Sand wash or screening water — Specify source water composition (e.g., potable water, X%, etc.):
☐ Other, specify:			

Average daily discharge flow (gallons/day) when discharging:

Maximum daily discharge flow (gallons/day):

Discharge Frequency:

☐ Continuous ☐ Daily ☐ Intermittent ☐ Emergency – explain:

VI. DISCHARGE AND RECEIVING WATER QUALITY

Summarize discharge and receiving water monitoring data collected during the past five years. New dischargers may estimate future concentrations. Provide separate data summary tables for each discharge point (outfall) and receiving water.

A. EFFLUENT DISCHARGE DATA

Discharge Point No. _____ – Conventional and Non-Conventional Pollutants

Parameter	Highest Value	Range	Units	Test Method	Method Detection Limit	Number of Samples
pH			s.u.			
Turbidity			NTU			
Total Suspended Solids			mg/L			
Settleable Matter			ml/L-hr			
Total Dissolved Solids			mg/L			
Dissolved Oxygen			mg/L			
Chloride			mg/L			
Chlorine Residual			mg/L			
Acute Toxicity			% survival			

Discharge Point No. _____ – Priority Pollutants

CTR No.	Parameter	Highest Value	Range	Units	Test Method	Method Detection Limit	Number of Samples
1	Antimony			µg/L			
2	Arsenic			µg/L			
3	Beryllium			µg/L			
4	Cadmium			µg/L			
5a	Chromium (III)			µg/L			
5b	Chromium (VI)			µg/L			
6	Copper			µg/L			
7	Lead			µg/L			
8	Mercury			µg/L			
9	Nickel			µg/L			
10	Selenium			µg/L			
11	Silver			µg/L			
12	Thallium			µg/L			
13	Zinc			µg/L			
14	Cyanide			µg/L			
15	Asbestos			fibers/L			
16	2,3,7,8-TCDD (Dioxin)			µg/L			
17	Acrolein			µg/L			
18	Acrylonitrile			µg/L			
19	Benzene			µg/L			
20	Bromoform			µg/L			
21	Carbon Tetrachloride			µg/L			
22	Chlorobenzene			µg/L			
23	Chlorodibromomethane			µg/L			
24	Chloroethane			µg/L			
25	2-Chloroethylvinyl ether			µg/L			
26	Chloroform			µg/L			
27	Dichlorobromomethane			µg/L			
28	1,1-Dichloroethane			µg/L			
29	1,2-Dichloroethane			µg/L			
30	1,1-Dichloroethylene			µg/L			
31	1,2-Dichloropropane			µg/L			
32	1,3-Dichloropropylene			µg/L			
33	Ethylbenzene			µg/L			
34	Methyl Bromide			µg/L			
35	Methyl Chloride			µg/L			
36	Methylene Chloride			µg/L			
37	1,1,2,2-Tetrachloroethane			µg/L			

CTR No.	Parameter	Highest Value	Range	Units	Test Method	Method Detection Limit	Number of Samples
38	Tetrachloroethylene			µg/L			
39	Toluene			µg/L			
40	1,2-Trans-Dichloroethylene			µg/L			
41	1,1,1-Trichloroethane			µg/L			
42	1,1,2-Trichloroethane			µg/L			
43	Trichloroethylene			µg/L			
44	Vinyl Chloride			µg/L			
45	2-Chlorophenol			µg/L			
46	2,4-Dichlorophenol			µg/L			
47	2,4-Dimethylphenol			µg/L			
48	2-Methyl- 4,6-Dinitrophenol			µg/L			
49	2,4-Dinitrophenol			µg/L			
50	2-Nitrophenol			µg/L			
51	4-Nitrophenol			µg/L			
52	3-Methyl 4-Chlorophenol			µg/L			
53	Pentachlorophenol			µg/L			
54	Phenol			µg/L			
55	2,4,6-Trichlorophenol			µg/L			
56	Acenaphthene			µg/L			
57	Acenaphthylene			µg/L			
58	Anthracene			µg/L			
59	Benzidine			µg/L			
60	Benzo(a)Anthracene			µg/L			
61	Benzo(a)Pyrene			µg/L			
62	Benzo(b)Fluoranthene			µg/L			
63	Benzo(ghi)Perylene			µg/L			
64	Benzo(k)Fluoranthene			µg/L			
65	Bis(2-Chloroethoxy)Methane			µg/L			
66	Bis(2-Chloroethyl)Ether			µg/L			
67	Bis(2-Chloroisopropyl)Ether			µg/L			
68	Bis(2-Ethylhexyl)Phthalate			µg/L			
69	4-Bromophenyl Phenyl Ether			µg/L			
70	Butylbenzyl Phthalate			µg/L			
71	2-Chloronaphthalene			µg/L			
72	4-Chlorophenyl Phenyl Ether			µg/L			
73	Chrysene			µg/L			
74	Dibenzo(a,h)Anthracene			µg/L			
75	1,2-Dichlorobenzene			µg/L			
76	1,3-Dichlorobenzene			µg/L			
77	1,4-Dichlorobenzene			µg/L			
78	3,3 Dichlorobenzidine			µg/L			
79	Diethyl Phthalate			µg/L			
80	Dimethyl Phthalate			µg/L			
81	Di-n-Butyl Phthalate			µg/L			
82	2,4-Dinitrotoluene			µg/L			
83	2,6-Dinitrotoluene			µg/L			
84	Di-n-Octyl Phthalate			µg/L			
85	1,2-Diphenylhydrazine			µg/L			
86	Fluoranthene			µg/L			
87	Fluorene			µg/L			
88	Hexachlorobenzene			µg/L			
89	Hexachlorobutadiene			µg/L			
90	Hexachlorocyclopentadiene			µg/L			
91	Hexachloroethane			µg/L			

CTR No.	Parameter	Highest Value	Range	Units	Test Method	Method Detection Limit	Number of Samples
92	Indeno(1,2,3-cd)Pyrene			µg/L			
93	Isophorone			µg/L			
94	Naphthalene			µg/L			
95	Nitrobenzene			µg/L			
96	N-Nitrosodimethylamine			µg/L			
97	N-Nitrosodi-n-Propylamine			µg/L			
98	N-Nitrosodiphenylamine			µg/L			
99	Phenanthrene			µg/L			
100	Pyrene			µg/L			
101	1,2,4-Trichlorobenzene			µg/L			
102	Aldrin			µg/L			
103	alpha-BHC			µg/L			
104	beta-BHC			µg/L			
105	gamma-BHC			µg/L			
106	delta-BHC			µg/L			
107	Chlordane (303d listed)			µg/L			
108	4,4'-DDT (303d listed)			µg/L			
109	4,4'-DDE			µg/L			
110	4,4'-DDD			µg/L			
111	Dieldrin (303d listed)			µg/L			
112	alpha-Endosulfan			µg/L			
113	beta-Endolsulfan			µg/L			
114	Endosulfan Sulfate			µg/L			
115	Endrin			µg/L			
116	Endrin Aldehyde			µg/L			
117	Heptachlor			µg/L			
118	Heptachlor Epoxide			µg/L			
119-125	PCBs sum (303d listed)			µg/L			
126	Toxaphene			µg/L			

Discharge Point No. _____ – Other Pollutants

Parameter	Highest Value	Range	Units	Test Method	Method Detection Limit	Number of Samples
Odor			odor number			
Sulfate			mg/L			
Color			color units			
Electric conductivity			mmhos/cm			
Aluminum			mg/L			
Barium			mg/L			
Iron			mg/L			
Manganese			mg/L			
Nitrate (as N)			mg/L			
Nitrate + Nitrite			mg/L as N			
Nitrite			mg/L as N			
Combined Radium-226 and Radium-228			pCi/L			
Gross Alpha Particle Activity			pCi/L			
Tritium			pCi/L			
Strontium-90			pCi/L			
Gross Beta Particle Activity			millirems/year			
Uranium			pCi/L			

B. RECEIVING WATER DATA

Receiving Water Name: _____ – Conventional and Non-Conventional Pollutants

Parameter	Highest Value	Range	Units	Test Method	Method Detection Limit	Number of Samples
pH			s.u.			
Turbidity			NTU			
Total Suspended Solids			mg/L			
Settleable Matter			ml/L-hr			
Total Dissolved Solids			mg/L			
Dissolved Oxygen			mg/L			
Chloride			mg/L			
Chlorine Residual			mg/L			
Acute Toxicity			% survival			

Receiving Water Name: _____ – Priority Pollutants

CTR No.	Parameter	Highest Value	Range	Units	Test Method	Method Detection Limit	Number of Samples
1	Antimony			µg/L			
2	Arsenic			µg/L			
3	Beryllium			µg/L			
4	Cadmium			µg/L			
5a	Chromium (III)			µg/L			
5b	Chromium (VI)			µg/L			
6	Copper			µg/L			
7	Lead			µg/L			
8	Mercury			µg/L			
9	Nickel			µg/L			
10	Selenium			µg/L			
11	Silver			µg/L			
12	Thallium			µg/L			
13	Zinc			µg/L			
14	Cyanide			µg/L			
15	Asbestos			fibers/L			
16	2,3,7,8-TCDD (Dioxin)			µg/L			
17	Acrolein			µg/L			
18	Acrylonitrile			µg/L			
19	Benzene			µg/L			
20	Bromoform			µg/L			
21	Carbon Tetrachloride			µg/L			
22	Chlorobenzene			µg/L			
23	Chlorodibromomethane			µg/L			
24	Chloroethane			µg/L			
25	2-Chloroethylvinyl ether			µg/L			
26	Chloroform			µg/L			
27	Dichlorobromomethane			µg/L			
28	1,1-Dichloroethane			µg/L			
29	1,2-Dichloroethane			µg/L			
30	1,1-Dichloroethylene			µg/L			
31	1,2-Dichloropropane			µg/L			
32	1,3-Dichloropropylene			µg/L			
33	Ethylbenzene			µg/L			
34	Methyl Bromide			µg/L			
35	Methyl Chloride			µg/L			
36	Methylene Chloride			µg/L			
37	1,1,2,2-Tetrachloroethane			µg/L			

CTR No.	Parameter	Highest Value	Range	Units	Test Method	Method Detection Limit	Number of Samples
38	Tetrachloroethylene			µg/L			
39	Toluene			µg/L			
40	1,2-Trans-Dichloroethylene			µg/L			
41	1,1,1-Trichloroethane			µg/L			
42	1,1,2-Trichloroethane			µg/L			
43	Trichloroethylene			µg/L			
44	Vinyl Chloride			µg/L			
45	2-Chlorophenol			µg/L			
46	2,4-Dichlorophenol			µg/L			
47	2,4-Dimethylphenol			µg/L			
48	2-Methyl- 4,6-Dinitrophenol			µg/L			
49	2,4-Dinitrophenol			µg/L			
50	2-Nitrophenol			µg/L			
51	4-Nitrophenol			µg/L			
52	3-Methyl 4-Chlorophenol			µg/L			
53	Pentachlorophenol			µg/L			
54	Phenol			µg/L			
55	2,4,6-Trichlorophenol			µg/L			
56	Acenaphthene			µg/L			
57	Acenaphthylene			µg/L			
58	Anthracene			µg/L			
59	Benzidine			µg/L			
60	Benzo(a)Anthracene			µg/L			
61	Benzo(a)Pyrene			µg/L			
62	Benzo(b)Fluoranthene			µg/L			
63	Benzo(ghi)Perylene			µg/L			
64	Benzo(k)Fluoranthene			µg/L			
65	Bis(2-Chloroethoxy)Methane			µg/L			
66	Bis(2-Chloroethyl)Ether			µg/L			
67	Bis(2-Chloroisopropyl)Ether			µg/L			
68	Bis(2-Ethylhexyl)Phthalate			µg/L			
69	4-Bromophenyl Phenyl Ether			µg/L			
70	Butylbenzyl Phthalate			µg/L			
71	2-Chloronaphthalene			µg/L			
72	4-Chlorophenyl Phenyl Ether			µg/L			
73	Chrysene			µg/L			
74	Dibenzo(a,h)Anthracene			µg/L			
75	1,2-Dichlorobenzene			µg/L			
76	1,3-Dichlorobenzene			µg/L			
77	1,4-Dichlorobenzene			µg/L			
78	3,3 Dichlorobenzidine			µg/L			
79	Diethyl Phthalate			µg/L			
80	Dimethyl Phthalate			µg/L			
81	Di-n-Butyl Phthalate			µg/L			
82	2,4-Dinitrotoluene			µg/L			
83	2,6-Dinitrotoluene			µg/L			
84	Di-n-Octyl Phthalate			µg/L			
85	1,2-Diphenylhydrazine			µg/L			
86	Fluoranthene			µg/L			
87	Fluorene			µg/L			
88	Hexachlorobenzene			µg/L			
89	Hexachlorobutadiene			µg/L			
90	Hexachlorocyclopentadiene			µg/L			
91	Hexachloroethane			µg/L			

CTR No.	Parameter	Highest Value	Range	Units	Test Method	Method Detection Limit	Number of Samples
92	Indeno(1,2,3-cd)Pyrene			µg/L			
93	Isophorone			µg/L			
94	Naphthalene			µg/L			
95	Nitrobenzene			µg/L			
96	N-Nitrosodimethylamine			µg/L			
97	N-Nitrosodi-n-Propylamine			µg/L			
98	N-Nitrosodiphenylamine			µg/L			
99	Phenanthrene			µg/L			
100	Pyrene			µg/L			
101	1,2,4-Trichlorobenzene			µg/L			
102	Aldrin			µg/L			
103	alpha-BHC			µg/L			
104	beta-BHC			µg/L			
105	gamma-BHC			µg/L			
106	delta-BHC			µg/L			
107	Chlordane (303d listed)			µg/L			
108	4,4'-DDT (303d listed)			µg/L			
109	4,4'-DDE			µg/L			
110	4,4'-DDD			µg/L			
111	Dieldrin (303d listed)			µg/L			
112	alpha-Endosulfan			µg/L			
113	beta-Endolsulfan			µg/L			
114	Endosulfan Sulfate			µg/L			
115	Endrin			µg/L			
116	Endrin Aldehyde			µg/L			
117	Heptachlor			µg/L			
118	Heptachlor Epoxide			µg/L			
119-125	PCBs sum (303d listed)			µg/L			
126	Toxaphene			µg/L			

Receiving Water Name: _____ – Other Pollutants

Parameter	Highest Value	Range	Units	Test Method	Method Detection Limit	Number of Samples
Odor			odor number			
Sulfate			mg/L			
Color			color units			
Electric conductivity			mmhos/cm			
Aluminum			mg/L			
Barium			mg/L			
Iron			mg/L			
Manganese			mg/L			
Nitrate (as N)			mg/L			
Nitrate + Nitrite			mg/L as N			
Nitrite			mg/L as N			
Combined Radium-226 and Radium-228			pCi/L			
Gross Alpha Particle Activity			pCi/L			
Tritium			pCi/L			
Strontium-90			pCi/L			
Gross Beta Particle Activity			millirems/year			
Uranium			pCi/L			

VII. LOCATION MAP

Attach a topographic map (or maps) showing the following:

1. Legal facility boundaries;
2. Locations of treatment units and processes, such as detention ponds;
3. Intake and discharge point locations; and
4. Receiving waters (or storm drains).

VIII. FLOW CHART

Attach a flow chart, line drawing, or diagram showing the water flow from intake to discharge.

IX. BEST MANAGEMENT PRACTICES (BMPs) PLAN

Attach a site-specific BMPs plan that addresses all specific means of controlling pollutant discharges from the facility (see Provision VI.C.4.a of the Order).

X. RECEIVING WATER pH

(Optional) Submit a statistical analysis of receiving water pH based on historical receiving water monitoring to establish ambient receiving water background conditions that can be used to demonstrate compliance with pH effluent limitations. The Regional Water Board *may* use this information and future monitoring data when evaluating compliance.

XI. DULY AUTHORIZED REPRESENTATIVE

The following individual (or any individual occupying the position listed below) may act as the facility's duly authorized representative, and may sign and certify submittals in accordance with Attachment D section V.B.3. This individual shall be responsible for the overall operation of the facility or for facility environmental matters.

Duly Authorized Representative		
Title		
Company / Organization		
Street Address		
City	State	Zip Code
Email		Phone No.

XII. CERTIFICATION

This certification shall be signed in accordance with Attachment D section V.B.2. The Discharger hereby agrees to comply with and be responsible for all the conditions specified in NPDES Permit No. CAG982001.

I certify under penalty of law that this document and all attachments were prepared under my direct supervision in accordance with a system designed to ensure 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 directly responsible for gathering the information, the information submitted is, true, accurate, and complete to the best of my knowledge and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. In addition, I certify that the provisions of the permit, including but not limited to the criteria for eligibility, will be complied with. Signature Date	
Printed Name	
Title	
Company / Organization	
Email	Phone No.

XIII. APPLICATION FEE AND MAILING INSTRUCTIONS

Submit a check payable to "State Water Resources Control Board" for the appropriate application fee to the following address:

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

Submit this form (with signature and attachments) to Lourdes.Gonzales@waterboards.ca.gov, or as otherwise indicated at www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/general_permits.shtml. If the form cannot be submitted electronically, submit a hard copy to the address above.

ATTACHMENT C – INSTRUCTIONS FOR NOTICE OF INTENT FORM

These instructions explain how to complete the Notice of Intent (NOI) form in Attachment B. Submittal of an NOI indicates a Discharger's commitment to comply with the terms of this Order, which authorizes discharges to surface waters from aggregate mining, marine sand washing, and sand offloading facilities. Fact Sheet section II more specifically describes the types of discharges that may be covered by this Order.

I. FACILITY OWNER AND OPERATOR INFORMATION

The land and facility owners are the organizations or persons who own (or lease) the land and facility where the aggregate mining, marine sand washing, or sand offloading operation is located. Provide the street address or a description of the facility location (e.g., corner of 1st Street and 2nd Avenue). When an organization owns more than one facility, indicate the organization name and the specific facility name. A separate NOI must be completed for each facility. Attach additional pages as necessary.

II. BILLING INFORMATION

Indicate to whom the annual permit fee should be billed.

III. DISCHARGE TYPE

Select one of the three types of facilities covered by this Order and indicate whether the NOI is for a new facility or a previously permitted facility.

IV. DISCHARGE POINTS AND RECEIVING WATERS

Identify all points where the facility discharges wastewater to surface waters or storm drains, and provide latitudes and longitudes (using degrees, minutes, and seconds, or at least five decimal places). Name the receiving waters to which discharges flow (permitted discharges may flow through storm drains if authorized by storm drain system owners). Attach additional pages as necessary.

V. EFFLUENT DESCRIPTION

Describe facility operations, and narratively describe discharges and potential pollutants. Refer to Fact Sheet section II for the types of discharges that may be covered by this Order. Attach additional sheets if needed.

Check all discharge types that apply and describe any others that may be present. If using water to wash or screen sand, indicate water sources and their relative percentages (e.g., 40 percent potable water, 30 percent recycled water, 20 percent groundwater, and 10 percent stormwater).

Estimate average and maximum daily discharge flows (when discharging), and discharge frequency, based on representative past operations or anticipated future operations. Specify whether discharges will be continuous, daily, or intermittent, or will occur only on an emergency basis (if so, explain).

VI. DISCHARGE AND RECEIVING WATER QUALITY

Summarize discharge and receiving water monitoring data collected during the past five years. New Dischargers may estimate concentrations. Provide separate data summary tables for each discharge point and receiving water. Aggregate mining facilities must submit data for conventional and non-

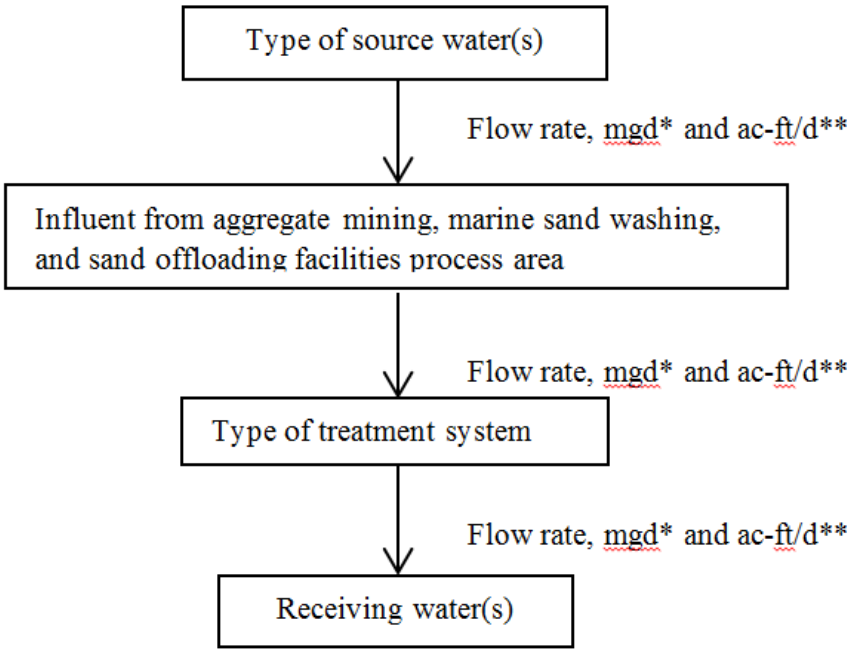
conventional pollutants, priority pollutants, and other pollutants. Marine sand washing and sand offloading facilities need only submit data for conventional and non-conventional pollutants, and priority pollutants. Marine sand washing and sand offloading facilities need not submit data for the other pollutants listed in the NOI form. Attach additional sheets if needed.

VII. LOCATION MAP

Provide a location map on standard 8.5 x 11 inch paper. Indicate the locations of all treatment units and processes, such as detention ponds. The map should illustrate the legal facility boundaries and extend at least one mile beyond the boundaries. Identify discharge points with numbers that correspond to the discharge points in section IV. On the map, discharge points may be shown where the discharge enters receiving waters, or where the discharge leaves the facility and enters a separate storm drain system. If relevant, also show intake locations.

VIII. FLOW CHART

Attach a flow chart, line drawing, or diagram showing the water flow from intake to discharge (see example below). Indicate how the discharge flows from where it is generated to where it enters the receiving water, including all the treatment systems. If applicable, indicate when the discharge is to a separate storm drain system before going to the receiving water. Estimate approximate flows.



* mgd = million gallons per day

** ac-ft/d = acre-feet per day

IX. BEST MANAGEMENT PRACTICES (BMPs) PLAN

Submit a site-specific BMPs plan that includes the elements listed in Provision VI.C.4.a of the Order.

X. RECEIVING WATER pH

Dischargers may submit a statistical analysis of receiving water pH based on historical receiving water monitoring to establish ambient receiving water background conditions that can be used to demonstrate compliance with pH effluent limitations (see footnote 1 of Tables 2, 3, and 6 of the Order). Submitting this information is optional. The Regional Water Board *may* use this information and future monitoring data when evaluating compliance.

When performing the statistical analysis, a Discharger should consider available receiving water data and any increasing or decreasing trend. The Discharger may undertake a seasonal analysis if the data show seasonality. The submittal should include the detailed analysis and a compilation of the data used.

XI. DULY AUTHORIZED REPRESENTATIVE

The person described in Attachment D section V.B.2 and signing the certification in section XII of the NOI form may designate a duly authorized representative to sign permit-related submittals in accordance with Attachment D section V.B.3. Alternatively, a duly authorized representative may be designated through separate correspondence, particularly if the NOI form language does not sufficiently limit the delegated authority.

XII. CERTIFICATION

The person certifying the NOI form must meet the requirements described in Attachment D section V.B.2. *Review these requirements carefully.* Specific requirements apply to corporations, partnerships, sole proprietorships, and public agencies.

XIII. APPLICATION FEE AND MAILING INSTRUCTIONS

The NOI is incomplete without the applicable permit fee. Submit the fee by sending a check payable to "State Water Resources Control Board" to the Regional Water Board address indicated on the NOI form. A separate fee is required for each facility. At the time of permit reissuance, the application fee was **$7,177**. The State Water Resources Control Board may modify the fee at any time. For the current fee, see http://www.waterboards.ca.gov/resources/fees/water_quality/#npdes).

Submit this form (with signatures and attachments) to Lourdes.Gonzales@waterboards.ca.gov, or as otherwise indicated at www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/general_permits.shtml. If the form cannot be submitted electronically, submit a hard copy to the address listed on the NOI form.

ATTACHMENT D –STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the terms, requirements, and 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; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. § 122.41(a); Wat. Code §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)

2. The Discharger shall comply with effluent standards or prohibitions established under CWA section 307(a) for toxic pollutants and with standards for sewage sludge use or disposal established under CWA section 405(d) 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 C.F.R. § 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 C.F.R. § 122.41(c).)

C. Duty to Mitigate

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

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 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 C.F.R. § 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, U.S. EPA, 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 (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i); Wat. Code, §§ 13267, 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 (33 U.S.C. § 1318(a)(4)(B)(i); 40 C.F.R. § 122.41(i)(1); Wat. Code, §§ 13267, 13383);

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(2); Wat. Code, §§ 13267, 13383);

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(3); Wat. Code, §§ 13267, 13383); 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. (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i)(4); Wat. Code, §§ 13267, 13383.)

G. Bypass

1. Definitions

a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 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 C.F.R. § 122.41(m)(1)(ii).)

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

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

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

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

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

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

5. Notice

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

b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(n)(3)):

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

b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 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 C.F.R. § 122.41(n)(3)(iii)); and

d. The Discharger complied with any remedial measures required under Standard Provisions—Permit Compliance I.C above. (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(f).)

B. Duty to Reapply

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

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

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

B. Monitoring results must be conducted according to test procedures approved under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R. subchapters N or O. In the case of pollutants for which there are no approved methods under 40 C.F.R. part 136 or otherwise required under 40 C.F.R. subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants. (40 C.F.R. §§ 122.41(j)(4), 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS—RECORDS

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

B. Records of monitoring information shall include the following:

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

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

3. The date(s) the analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));

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

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

6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

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

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

2. Permit applications and attachments, permits, and effluent data. (40 C.F.R. § 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 U.S. EPA within a reasonable time, any information which the Regional Water Board, State Water Board, or U.S. EPA 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 U.S. EPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, §§ 13267, 13383.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or U.S. EPA 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 C.F.R. § 122.41(k).)

2. 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 C.F.R. § 122.22(a)(1).)

For a partnership or sole proprietorship, all permit applications shall be signed by a general partner or the proprietor, respectively. (40 C.F.R. § 122.22(a)(2).)

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 U.S. EPA). (40 C.F.R. § 122.22(a)(3).).

3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or U.S. EPA 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 C.F.R. § 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 C.F.R. § 122.22(b)(2)); and

c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.22(d).)

C. Monitoring Reports

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

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

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(l)(5).)

E. Twenty-Four Hour Reporting

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

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

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

b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 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 C.F.R. § 122.41(l)(6)(iii).)

F. Planned Changes

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

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

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (Alternatively, for an existing manufacturing, commercial, mining, or silvicultural discharge as referenced in 40 C.F.R. section 122.42(a), this notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under 40 C.F.R. section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1).) (40 C.F.R. § 122.41(l)(1)(ii).)

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

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 C.F.R. § 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 C.F.R. § 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 U.S. EPA, the Discharger shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Regional Water Board is authorized to enforce the terms of this Order under several provisions of the Water Code, including, but not limited to, sections 13268, 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS—NOTIFICATION LEVELS

A. Non-Municipal Facilities

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

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(1)):
   - **a.** 100 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(1)(i));
   - **b.** 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(1)(ii));
   - **c.** Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or
   - **d.** The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)
2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(2)):
   - **a.** 500 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(2)(i));
   - **b.** 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(2)(ii));
   - **c.** Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or
   - **d.** The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

B. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following (40 C.F.R. § 122.42(b)):

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

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

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

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Contents

Tables

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Clean Water Act section 308 and 40 C.F.R. sections 122.41(h), 122.41(j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This MRP establishes monitoring, reporting, and recordkeeping requirements that implement federal and State laws and regulations.

I. GENERAL MONITORING PROVISIONS

A. The Discharger shall comply with this MRP. The Executive Officer may amend this MRP pursuant to 40 C.F.R. sections 122.62, 122.63, and 124.5.

B. The Discharger shall conduct all monitoring in accordance with Attachment D, section III. Equivalent test methods must be more sensitive than those specified in 40 C.F.R. part 136 and must be specified in this Order or the Discharger's Authorization to Discharge. Water and waste analyses shall be performed by a laboratory certified for these analyses in accordance with Water Code section 13176.

C. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

II. MONITORING LOCATIONS

The Discharger shall establish monitoring locations as set forth below to demonstrate compliance with this Order:

Table E-1. Monitoring Locations

Monitoring Location Type	Monitoring Location Name [1]	Monitoring Location Description
Effluent	EFF-001 through EFF-"*n*" (M-001 through M-"n")	Any point in the outfall between the point of discharge to the receiving water and the point at which all waste tributary to the outfall is present. [2]
Receiving Water	RSW-001(A,B,C…) (R-001[A,B,C…]) [3]	A point in the receiving water where discharge effects would not be expected (e.g., upstream of the outfall).
	RSW-002(A,B,C…) (R-002[A,B,C…]) [3]	A point in the receiving water within 50 feet of the outfall where discharge effects, if any, would be expected (e.g., downstream of the outfall).

Footnotes:

[1] The previous order used the monitoring location names in parentheses.

[2] If discharge is to a storm drain system prior to reaching the receiving water, the monitoring location shall be a point before the discharge commingles with storm drain water.

[3] If there is only one discharge outfall, the Discharger should use the names RSW-001 and RSW-002. Otherwise, the Discharger should use RSW-001A and RSW-002A for Discharge Point No. 001, RSW-001B and RSW-002B for Discharge Point No. 002, and so on.

[4] A Discharger that cannot safely access receiving water within 50 feet downstream of the outfall may collect samples at the nearest safe alternative location after receiving written Executive Officer concurrence.

III. EFFLUENT SAMPLING, ANALYSES, AND OBSERVATIONS

A. When discharging, the Discharger shall monitor the discharge at Monitoring Locations EFF-001 through EFF-"n" in accordance with the applicable tables below.

B. Grab samples shall be collected on random days during periods of daytime maximum flow (if flow varies significantly during the day).

C. When a sampling result is above an effluent limitation or outside of the pH effluent limitation range, the sampling frequency for the exceeded parameter shall be immediately increased to daily until at least two consecutive daily samples demonstrate compliance with the limitation.

Table E-2. Effluent Monitoring for Aggregate Mining Facilities

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow [1]	MGD/MG	Continuous	1/day
Total Suspended Solids	mg/L	Grab	1/week
Turbidity	NTU	Grab	1/week
Settleable Matter	mL/L/hr	Grab	1/week
pH	standard units	Grab	1/week
Total Dissolved Solids	mg/L	Grab	1/week
Chloride	mg/L	Grab	1/week
Total Chlorine Residual [2]	mg/L	Grab	1/week
Iron, Total	mg/L	Grab	1/month
Acute Toxicity [3]	% survival	Grab	2/year
Other Pollutants (see Fact Sheet Table F-5) [4]	µg/L	Grab	once [6]
Standard Observations [5]	--	--	1/day

Abbreviations:

MGD = million gallons per day
MG = million gallons
NTU = nephelometric turbidity units
ml/L/hr = milliliters per liter per hour
% survival = percent survival
mg/L = milligrams per liter
µg/L = micrograms per liter

Footnotes:

[1] Flows shall be monitored at each outfall by flow meter or estimated if no flow meter is in place. The following shall be reported in self-monitoring reports:

a. Daily total flow volume (MG)
b. Daily discharge duration (hours)
c. Daily average flow (MGD) (if not measured directly, calculated based on daily flow volume and discharge duration)
d. Monthly total flow volume (MG)
e. Discharge days per month
f. Monthly average and daily maximum and minimum flows (MGD) on discharge days (averages should not include days without flows).

The Executive Officer may waive some flow monitoring if such monitoring would not provide useful information. The Executive Officer may also require the Discharger to install flow meters.

[2] Total chlorine residual monitoring is only required for facilities using potable water as wash or screening water. The Discharger shall calibrate and maintain total residual chlorine analyzers to reliably quantify values of 0.1 mg/L and greater. This 0.1 mg/L shall be the minimum level (ML) and reporting limit (RL) for total residual chlorine.

[3] Acute toxicity monitoring shall be performed according to MRP section IV.

[4] Monitoring is required for all pollutants listed in Fact Sheet Table F-5. For mercury, the Discharger shall use ultra-clean sampling methods (U.S. EPA Method 1669) to the maximum extent practicable and ultra-clean analytical methods (U.S. EPA Method 1631) for mercury monitoring. The Discharger may use alternative methods of analysis (such as U.S. EPA Method 245) if the alternate method has a method detection limit (MDL) of 0.0002 µg/L or less. For chlorinated dibenzodioxins and chlorinated dibenzofurans, the Discharger shall use U.S. EPA Method 1613.

[5] Standard observations include the following:

a. Floating and suspended materials (e.g., oil, grease, algae, sand, and other macroscopic particulate matter): presence or absence

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

[6] Monitoring shall be completed within 12 months of the due date for, and submitted with, the new NOI required on the first page of the Order.

Table E-3. Effluent Monitoring for Marine Sand Washing Facilities

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow [1]	MGD/MG	Continuous or Daily	1/day
Turbidity	NTU	Grab	1/week
Settleable Matter	mL/L/hr	Grab	1/week
pH	standard units	Grab	1/week
Total Chlorine Residual [2]	mg/L	Grab	1/week
Acute Toxicity [3]	% survival	Grab	2/year
Copper, Total Recoverable	µg/L	Grab	1/quarter
Mercury [4]	µg/L	Grab	2/year
PCBs [5]	µg/L	Grab	2/year [5]
Other Pollutants (see Fact Sheet Table F-6) [6]	µg/L	Grab	once [8]
Standard Observations [7]	--	--	1/day

Abbreviations:

MGD = million gallons per day
MG = million gallons
NTU = nephelometric turbidity units
ml/L/hr = milliliters per liter per hour
% survival = percent survival
mg/L = milligrams per liter
µg/L = micrograms per liter

Footnotes:

[1] Flows shall be monitored at each outfall by flow meter or estimated if no flow meter is in place. The following shall be reported in self-monitoring reports:

a. Daily total flow volume (MG)
b. Daily discharge duration (hours)
c. Daily average flow (MGD) (if not measured directly, calculated based on daily flow volume and discharge duration)
d. Monthly total flow volume (MG)
e. Discharge days per month
f. Monthly average daily maximum and minimum flows (MGD) on discharge days (averages should not include days without flows.

The Executive Officer may waive some flow monitoring if such monitoring would not provide useful information. The Executive Officer may also require the Discharger to install flow meters.

[2] Total chlorine residual monitoring is only required for facilities using potable water as wash or screening water. The Discharger shall calibrate and maintain total residual chlorine analyzers to reliably quantify values of 0.1 mg/L and greater. This 0.1 mg/L shall be the minimum level (ML) and reporting limit (RL) for total residual chlorine.

[3] Acute toxicity monitoring shall be performed according to MRP section IV.

[4] The Discharger shall use ultra-clean sampling methods (U.S. EPA Method 1669) to the maximum extent practicable and ultra-clean analytical methods (U.S. EPA Method 1631) for mercury monitoring. The Discharger may use alternative methods of analysis (such as U.S. EPA Method 245) if the alternate method has a method detection limit (MDL) of 0.0002 µg/L or less.

[5] The Discharger shall use both U.S. EPA Method 608 and U.S. EPA Method 1668C for PCBs monitoring. Compliance with effluent limitations shall be evaluated using U.S. EPA Method 608.

[6] Monitoring is required for all pollutants listed in Fact Sheet Table F-6. For chlorinated dibenzodioxins and chlorinated dibenzofurans, the Discharger shall use U.S. EPA Method 1613.

[7] Standard observations include the following:

a. Floating and suspended materials (e.g., oil, grease, algae, sand, and other macroscopic particulate matter): presence or absence

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

[8] Monitoring shall be completed within 12 months of the due date for, and submitted with, the new NOI required on the first page of the Order.

Table E-4. Effluent Monitoring for Sand Offloading Facilities

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow [1]	MGD/MG	Continuous or Daily	1/day
Total Settleable Matter	mL/L/hr	Grab	1/week
pH	standard units	Grab	1/week
Standard Observations [2]	--	--	1/day when discharging

Abbreviations:

MGD = million gallons per day
MG = million gallons
ml/L/hr = milliliters per liter per hour

Footnotes:

[1] Flows shall be monitored at each outfall by flow meter or estimated if no flow meter is in place. The following shall be reported in self-monitoring reports:

a. Daily total flow volume (MG)
b. Daily discharge duration (hours)
c. Daily average flow (MGD) (if not measured directly, calculated based on daily flow volume and discharge duration)
d. Monthly total flow volume (MG)
e. Discharge days per month
f. Monthly average daily maximum and minimum flows (MGD) on discharge days (averages should not include days without flows.

The Executive Officer may waive some flow monitoring if such monitoring would not provide useful information. The Executive Officer may also require the Discharger to install flow meters.

[2] Standard observations include the following:

a. Floating and suspended materials (e.g., oil, grease, algae, sand, and other macroscopic particulate matter): presence or absence

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

IV. WHOLE EFFLUENT ACUTE TOXICITY TESTING

A. Compliance with the acute toxicity effluent limitations shall be evaluated at Monitoring Locations EFF-001 through EFF-"n" by measuring survival of test organisms exposed to 96-hour static renewal bioassays. Samples shall be collected on days coincident with effluent sampling.

B. Test species shall be the species used under the previous order or a species the Executive Officer approves. The Executive Officer may specify a more sensitive species or, if testing a particular species proves unworkable, the most sensitive species available.

C. All bioassays shall be performed according to 40 C.F.R. part 136, currently *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, 5th Edition (EAP-821-R-02-012), with exceptions granted in writing by the Executive Officer and the Environmental Laboratory Accreditation Program upon a Discharger request with justification.

D. If a Discharger demonstrates that specific identifiable substances in the discharge are rapidly rendered harmless upon discharge to the receiving water, compliance with the acute toxicity limit may be determined after test samples are adjusted to remove the influence of those substances. Written acknowledgement that the Executive Officer concurs with the Discharger's demonstration and that the adjustment will not remove the influence of other substances must be

obtained prior to any such adjustment. The Discharger may manually adjust the pH of whole effluent acute toxicity samples prior to performing bioassays. Effluent shall be dechlorinated prior to testing if it contains chlorine.

E. Bioassay water monitoring shall include, on a daily basis, pH, dissolved oxygen, ammonia (if toxicity is observed), temperature, hardness, and alkalinity. These results shall be reported. If final or intermediate results of an acute bioassay test indicate a violation or threatened violation (e.g., the percentage of surviving test organisms is less than 70 percent), the Discharger shall initiate a new test as soon as practical and shall investigate the cause of the mortalities and report its findings in the next self-monitoring report. The Discharger shall repeat the test until a test fish survival rate of 90 percent or greater is observed. If the control fish survival rate is less than 90 percent, the bioassay test shall be restarted with new fish and shall continue as soon as practical until an acceptable test is completed (i.e., control fish survival rate is 90 percent or greater).

F. The Discharger shall investigate the cause of any mortalities and report its findings in the next self-monitoring report.

V. RECEIVING WATER MONITORING

The Discharger shall monitor receiving waters at Monitoring Locations RSW-001(A,B,C…) and RSW-002(A,B,C…) as indicated in the table below.

A. Receiving water samples shall be collected on days coincident with effluent sampling within 1 hour following low slack water. Samples shall be collected within one foot of the surface.

B. Receiving water monitoring is not required when there is no water in the receiving water other than the discharge. In such cases, the Discharger shall collect samples at a nearby location and indicate the location in their self-monitoring reports.

C. The Executive Officer may waive receiving water monitoring requirements for discharges directly to estuarine wetlands where access for sampling is excessively difficult.

Table E-5. Receiving Water Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Turbidity	NTU	Grab	1/month
pH	standard units	Grab	1/week
Total Dissolved Solids [1]	mg/L	Grab	1/week
Chloride [1]	mg/L	Grab	1/week
Hardness [1]	mg/L as $CaCO_3$	Grab	1/month
Salinity [1]	ppt	Grab	1/month
Other Pollutants (see Fact Sheet Tables F-5 and F-6) [1,2]	µg/L	Grab	once [3]
Standard Observations [4]	--	--	1/day

Abbreviations:

NTU = nephelometric turbidity units
mg/L = milligrams per liter
$CaCO_3$ = calcium carbonate
ppt = parts per trillion

Footnotes:

[1] Monitoring for total dissolved solids, chloride, hardness, salinity, and "other pollutants" is only required for aggregate mining facilities.

[2] Monitoring is required for all pollutants listed in Fact Sheet Table F-5. For mercury, the Discharger shall use ultra-clean sampling methods (U.S. EPA Method 1669) to the maximum extent practicable and ultra-clean analytical methods (U.S. EPA Method 1631) for mercury monitoring. The Discharger may use alternative methods of analysis (such as U.S. EPA Method 245) if the alternate method has a method detection limit (MDL) of 0.0002 µg/L or less. For chlorinated dibenzodioxins and chlorinated dibenzofurans, the Discharger shall use U.S. EPA Method 1613.

[3] Monitoring shall be completed such that the results are reported with the new NOI required on the first page of the Order.

[4] Standard observations include the following:

a. Floating and suspended materials (e.g., oil, grease, algae, sand, and other macroscopic particulate matter): presence or absence, source, and size of affected area.

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

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

d. Beneficial water use: presence of water-associated waterfowl or wildlife, fisherpeople, and other recreational activities in the vicinity of each sampling station.

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

f. Weather conditions: air temperature, total precipitation during previous five days, and, if there is a meteorological station onsite, total precipitation on day of observation.

VI. REPORTING

A. General Reporting Requirements

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

B. Self-Monitoring Reports

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

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

   a. Quarterly SMRs — Quarterly SMRs shall be due 30 days after the end of each calendar quarter, covering that calendar quarter. The quarterly SMR shall contain the items below:

   i. Quarterly SMRs shall include the applicable items described in Attachment D, sections V.B and V.C.

   ii. Quarterly SMRs shall include the results of all monitoring specified in the MRP. The Discharger shall arrange all reported data in a tabular format and summarize data to clearly illustrate whether the Facility is operating in compliance with effluent limitations.

   iii. The Discharger shall attach a cover letter to each SMR that includes the following:

   (a) Clear identification of any violations of the Order or a clear statement that there were no violations.

(b) Compliance evaluation summary that identifies each parameter for which the Order specifies an effluent limit, the number of samples taken during the monitoring period, and the number of samples that exceed the effluent limits

(c) Detailed description of any violations, their causes, and proposed time schedule for any corrective actions taken or planned to resolve the violations and prevent recurrences. (If previous reports address the corrective actions, reference to the earlier reports is satisfactory.)

(d) Tabulations of required analyses and observations, including parameters, dates, times, monitoring locations, sample types, test results, method detection limits, MLs, and RLs, signed by the laboratory director or other responsible official.

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

(f) Signature. (The transmittal letter shall be signed in accordance with Attachment D, section V.B.)

iv. Quarterly SMRs shall include all new monitoring results obtained since the last SMR was submitted. If the analytical data for samples collected during a quarter are unavailable for incorporation into that quarterly SMR, then the data shall be included in the next quarterly SMR.

v. If the Discharger monitors any pollutant more frequently than required by this Order, the Discharger shall include the results of such monitoring in the calculations and reporting for the applicable SMR.

b. Annual Reports — Annual reports shall be due February 15 each year, covering the previous calendar year. Annual reports shall cover the period of January 1 through December 31. Annual reports shall contain the items described below:

i. Annual compliance summary.

ii. Comprehensive discussion of performance and compliance. (This summary shall include any corrective actions taken or planned, such as changes to equipment or operations that may be needed to achieve compliance, and any other actions taken or planned that are intended to improve the performance and reliability of the Discharger's practices.)

iii. Both tabular and graphical summaries of monitoring data. (the Discharger shall identify trends, if any, in pollutant concentrations found in effluent or receiving water samples for the previous year or years.)

iv. Submittals required by Provisions VI.C.3 and VI.C.4 of the Order.

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

Table E-6. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period
Continuous	Effective date of Authorization to Discharge	All times while the facility is discharging
1/Day	Effective date of Authorization to Discharge	Midnight through 11:59 p.m.
1/Week	First Sunday following (or on) effective date of Authorization to Discharge	Sunday through Saturday
1/Month	First day of calendar month following (or on) effective date of Authorization to Discharge	First day of calendar month through last day of calendar month
2/Year	Closest May 1 or November 1 before or after effective date of Authorization to Discharge [1]	November 1 through April 30 and May 1 through October 31
Once	Effective date of Authorization to Discharge	Once such that the results are reported with the new NOI form required on the first page of the Order

Footnote:

[1] Monitoring conducted during the term of the previous order may be used to satisfy monitoring required with this sampling frequency.

4. RL and MDL Reporting. The Discharger shall report with each sample result the Reporting Level (RL) and Method Detection Limit (MDL) as determined by the procedure in 40 C.F.R. part 136. The Discharger may select any analytical methods described in 40 C.F.R. part 136; however, the RLs shall be below applicable water quality objectives (see Fact Sheet Tables F-5 and F-6) and any effluent limitations. Otherwise, RLs shall be as low as possible. The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

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

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

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

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

Table E-7. Minimum Levels

CTR No.	Pollutant/Parameter	Suggested Analytical Method [1]	Minimum Level for Aggregate Mining Facilities (µg/l)	Minimum Level for Marine Sand Washing and Sand Offloading Facilities (µg/l)
1	Antimony	204.2	5	1000
2	Arsenic	206.3	2	20
3	Beryllium		2	1000
4	Cadmium	200 or 213	0.5	0.5
5a	Chromium (III)	SM 3500		
5b	Chromium (VI)	SM 3500	5	10
	Chromium (total) [2]	SM 3500	2	10
6	Copper	200.9	10	5
7	Lead	200.9	2	5
8	Mercury	1631	0.002	0.002
9	Nickel	249.2	50	5
10	Selenium	200.8 or SM 3114B or C	2	2
11	Silver	272.2	2	2
12	Thallium	279.2	1	5
13	Zinc	200 or 289	20	20
14	Cyanide	SM 4500 CN^- C or I	5	5
15	Asbestos	0100.2		
16	2,3,7,8-TCDD (Dioxin)	1613		
17	Acrolein	603	5	5
18	Acrylonitrile	603	2	2
19	Benzene	602	0.5	2
33	Ethylbenzene	602	2	2
39	Toluene	602	2	2
20	Bromoform	601	2	2
21	Carbon Tetrachloride	601	0.5	2
22	Chlorobenzene	601	2	2
23	Chlorodibromomethane	601	0.5	2
24	Chloroethane	601	2	2
25	2-Chloroethylvinyl Ether	601	1	1
26	Chloroform	601	2	2
75	1,2-Dichlorobenzene	601	2	2
76	1,3-Dichlorobenzene	601	2	2
77	1,4-Dichlorobenzene	601	2	2

27	Dichlorobromomethane	601	0.5	2
28	1,1-Dichloroethane	601	1	1
29	1,2-Dichloroethane	601	0.5	2
30	1,1-Dichloroethylene or 1,1-Dichloroethene	601	0.5	2
31	1,2-Dichloropropane	601	0.5	1
32	1,3-Dichloropropylene or 1,3-Dichloropropene	601	0.5	2
34	Methyl Bromide or Bromomethane	601	2	2
35	Methyl Chloride or Chloromethane	601	2	2
36	Methylene Chloride or Dichlorormethane	601	2	2
37	1,1,2,2-Tetrachloroethane	601	0.5	2
38	Tetrachloroethylene	601	0.5	2
40	1,2-Trans-Dichloroethylene	601	1	2
41	1,1,1-Trichloroethane	601	2	2
42	1,1,2-Trichloroethane	601	0.5	2
43	Trichloroethene	601	2	2
44	Vinyl Chloride	601	0.5	2
45	2-Chlorophenol	604	5	5
46	2,4-Dichlorophenol	604	5	5
47	2,4-Dimethylphenol	604	2	2
48	2-Methyl-4,6-Dinitrophenol or Dinitro-2-methylphenol	604	10	10
49	2,4-Dinitrophenol	604	5	5
50	2-Nitrophenol	604	10	10
51	4-Nitrophenol	604	10	10
52	3-Methyl-4-Chlorophenol	604	5	5
53	Pentachlorophenol	604	1	5
54	Phenol	604	1	50
55	2,4,6-Trichlorophenol	604	10	10
56	Acenaphthene	610 HPLC	1	1
57	Acenaphthylene	610 HPLC	10	10
58	Anthracene	610 HPLC	10	10
60	Benzo(a)Anthracene or 1,2 Benzanthracene	610 HPLC	5	5
61	Benzo(a)Pyrene	610 HPLC	2	2
62	Benzo(b)Fluoranthene or 3,4 Benzofluoranthene	610 HPLC	10	10
63	Benzo(ghi)Perylene	610 HPLC	5	5
64	Benzo(k)Fluoranthene	610 HPLC	2	2
74	Dibenzo(a,h)Anthracene	610 HPLC	0.1	0.1
86	Fluoranthene	610 HPLC	10	10
87	Fluorene	610 HPLC	10	10
92	Indeno(1,2,3-cd) Pyrene	610 HPLC	0.05	0.05
100	Pyrene	610 HPLC	10	10
68	Bis(2-Ethylhexyl)Phthalate	606 or 625	5	5

70	Butylbenzyl Phthalate	606 or 625	10	10
79	Diethyl Phthalate	606 or 625	10	10
80	Dimethyl Phthalate	606 or 625	10	10
81	Di-n-Butyl Phthalate	606 or 625	10	10
84	Di-n-Octyl Phthalate	606 or 625	10	10
59	Benzidine	625	5	5
65	Bis(2-Chloroethoxy)Methane	625	5	5
66	Bis(2-Chloroethyl)Ether	625	1	1
67	Bis(2-Chloroisopropyl)Ether	625	10	10
69	4-Bromophenyl Phenyl Ether	625	10	10
71	2-Chloronaphthalene	625	10	10
72	4-Chlorophenyl Phenyl Ether	625	5	5
73	Chrysene	625	5	5
78	3,3'-Dichlorobenzidine	625	5	5
82	2,4-Dinitrotoluene	625	5	5
83	2,6-Dinitrotoluene	625	5	5
85	1,2-Diphenylhydrazine [3]	625	1	1
88	Hexachlorobenzene	625	1	1
89	Hexachlorobutadiene	625	1	5
90	Hexachlorocyclopentadiene	625	5	5
91	Hexachloroethane	625	1	5
93	Isophorone	625	1	10
94	Naphthalene	625	10	10
95	Nitrobenzene	625	10	10
96	N-Nitrosodimethylamine	625	5	5
97	N-Nitrosodi-n-Propylamine	625	5	5
98	N-Nitrosodiphenylamine	625	1	10
99	Phenanthrene	625	5	5
101	1,2,4-Trichlorobenzene	625	1	5
102	Aldrin	608	0.005	0.005
103	α-BHC	608	0.01	0.01
104	β-BHC	608	0.005	0.005
105	γ-BHC (Lindane)	608	0.02	0.02
106	δ-BHC	608	0.005	0.005
107	Chlordane	608	0.1	0.1
108	4,4'-DDT	608	0.01	0.01
109	4,4'-DDE	608	0.05	0.05
110	4,4'-DDD	608	0.05	0.05
111	Dieldrin	608	0.01	0.01
112	Endosulfan (alpha)	608	0.02	0.02
113	Endosulfan (beta)	608	0.01	0.01
114	Endosulfan Sulfate	608	0.05	0.05
115	Endrin	608	0.01	0.01
116	Endrin Aldehyde	608	0.01	0.01
117	Heptachlor	608	0.01	0.01
118	Heptachlor Epoxide	608	0.01	0.01

119-125	PCBs: Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260	608 and 1668C [4]	0.5	0.5
126	Toxaphene	608	0.5	0.5

Footnotes:

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

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

[3] Measurement for 1,2-diphenylhydrazine may use azobenzene as a screen. If azobenzene is measured at >1 ug/l, then the Discharger shall analyze for 1,2 diphenylhydrazine.

[4] MRP Table E-3, footnote 5, requires analysis using both methods.

5. Compliance Determination

a. Compliance with effluent limitations shall be determined using sample reporting protocols defined above and in the Fact Sheet and Attachments A and D. For purposes of reporting and administrative enforcement, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of a pollutant is greater than the effluent limitation and greater than or equal to the reporting level (RL).

b. When determining compliance with an average effluent limitation 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 nondetect (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

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

C. Discharge Monitoring Reports (DMRs)

1. At any time during the term of this Order, the State Water Board or Regional Water Board may notify the Discharger to submit DMRs.

2. Once notified by the State Water Board or Regional Water Board, the Discharger shall submit DMRs as required.

D. Violations and Unauthorized Discharges

1. Within 24 hours of becoming aware of a violation of this Order, the Discharger shall report by telephone to the Regional Water Board staff who oversees implementation of this Order (see Attachment B, NOI Form section XIII).

2. The Discharger shall report spills to the California Office of Emergency Services (telephone 800-852-7550) only when spills are in accordance with applicable reportable quantities for hazardous materials.

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

a. Date and time of violation or spill, and duration if known;

b. Location of violation or spill (street address or description of location);

c. Nature of violation or material spilled;

d. Quantity of any material involved;

e. Receiving water body affected, if any;

f. Cause of violation or spill;

g. Estimated size of affected area;

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

i. Corrective actions taken to correct violation or to contain, minimize, or clean up spill;

j. Future corrective actions planned to prevent recurrence and implementation schedule; and

k. Persons or agencies notified.

ATTACHMENT F - FACT SHEET

Contents

Tables

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. As described in section II.B of the Order, the Regional Water Board incorporates this Fact Sheet as its findings supporting the issuance of the Order.

I. PERMIT INFORMATION

A. This Order regulates discharges from aggregate mining, marine sand washing, and sand offloading facilities. It reissues NPDES General Permit No. CAG982001, which the Regional Water Board issued through Order No. R2-2008-0011 (previous order) on February 13, 2008. The previous order was effective from May 1, 2008, until the effective date of this Order.

B. Site owners and operators that complete a Notice of Intent (NOI) and apply for an Authorization to Discharge under this Order, and that are granted such authorization, are hereinafter called "Dischargers." For purposes of this Order, references to "discharger" or "permittee" in applicable federal and State laws, regulations, plans, and policies are held to be equivalent to references to Discharger herein.

II. FACILITY DESCRIPTIONS

A. Aggregate Mining Facilities

1. **Description.** Aggregate mining facilities produce various grades of aggregates for construction. Some aggregate mining facilities may also involve other types of industrial activities, such as ready-mix concrete plants or asphalt plants, on the same property. Most store oil, grease, fuel, and other chemicals onsite to maintain equipment.

   Aggregate mining results in a pit in the ground. Inactive mining pits serve as water detention ponds. Groundwater that seeps into the active mining pit is pumped through a series of detention ponds. Water from the last detention pond is used for aggregate screening and washing and dust control. Some facilities have onsite wells to supply additional water. Others may use potable water to wash or screen aggregate. Wash water is sent to the detention ponds for treatment and reuse before discharge.

   The previous order covered four facilities of this type.

2. **Discharges.** Aggregate mining facility wastewater, such as groundwater seepage diverted from active mining pits, stormwater runoff from facility yards, wash water, and runoff from dust control, flow through a series of detention ponds. Pollutants of concern in these discharges consist mainly of solids that do not settle out in the detention ponds and dissolved solids. Other pollutants of concern potentially include toxic pollutants if nearby groundwater is polluted, or if runoff occurs from inadequately contained hazardous materials storage areas, and chlorine residual if municipal water is used to wash aggregate.

B. Marine Sand Washing Facilities

1. **Description.** Marine sand washing facilities mainly process sand dredged from San Francisco Bay. Sand or aggregate may also be transported from surface mines. The sand or aggregate is transported by barge, offloaded by conveyor belt, and stockpiled on the ground or in settling

ponds. Most of the sand or aggregate is screened and sold for construction uses. Some sand is washed (to remove salt) for use in making concrete. Potable water may be used to wash or screen sand or aggregate, or for dust control. Most marine sand washing facilities store oil, grease, fuel, and other chemicals onsite to maintain equipment.

The previous order covered two facilities of this type.

2. **Discharges.** Marine sand washing facility discharges consist of San Francisco Bay water drained from sand piles; water that overflows settling ponds when hydraulic dredging is used; water used to wash and screen sand or aggregate, or for dust control; and stormwater runoff from facility yards. Pollutants of concern in the discharge consist mainly of solids not settled out in the detention ponds. Other pollutants of concern potentially include chlorine residual for facilities that use municipal water to wash or screen the sand or aggregate, to increase its moisture content, or for dust control; copper, such as from municipal water if the water purveyor used copper to control algae; metals in general from Bay water and sediment entrained with the sand; and toxic pollutants if runoff occurs from inadequately contained hazardous materials storage areas.

C. Sand Offloading Facilities

1. **Description.** Sand dredged from various locations in San Francisco Bay is transported by barge and offloaded by hydraulic slurry. Wet sand is stockpiled on the ground or stored in settling ponds. The reclaimed sand is screened and sold for construction uses. Sand offloading facilities do not use potable water for screening.

   The previous order covered one facility of this type, which ceased operation during the term of the previous order.

2. **Discharges.** Sand offloading facility discharges consist of San Francisco Bay water drained from sand piles, water that overflows settling ponds when hydraulic dredging is used, and stormwater runoff from facility yards. Pollutants of concern in the discharge consist mainly of solids not settled out in the detention ponds. Other pollutants of concern potentially include toxic pollutants if runoff occurs from inadequately contained hazardous materials storage areas, and pollutants entrained with San Francisco Bay water and sediment.

D. Discharge Points and Receiving Waters

Dischargers may discharge to any receiving waters in the San Francisco Bay Region, including inland surface waters and enclosed bays. Aggregate mining facilities typically discharge to inland surface waters (e.g., freshwater creeks). Marine sand washing and sand offloading facilities typically discharge to enclosed bays (e.g., San Francisco Bay). The NOI Form in Attachment B requires each Discharger to specify its discharge locations and to provide a map or diagram indicating the discharge path to surface waters.

E. Existing Requirements

The previous order included the following effluent limitations:

Table F-1. Previous Aggregate Mining Facility Effluent Limitations

Pollutant	Units	Daily Maximum	Weekly Average	Monthly Average	Instantaneous Minimum	Instantaneous Maximum
Total Suspended Solids	mg/L	---	45	30	---	---
Turbidity	NTU	40	---	--	---	---
Settleable Matter	mL/L-hr	0.2	---	0.1	---	---
pH [1]	s.u.	---	---	---	6.5	8.5
Total Dissolved Solids [2]	mg/L	500	---	---	---	---
Chloride [2]	mg/L	250	---	---	---	---
Total Residual Chlorine [3]	mg/L	---	---	---	0.0	---
Acute Toxicity [4]	%	---	---	---	70	---

Abbreviations:

mg/L = milligrams per liter
NTU = nephelometric turbidity units
mL/L-hr = milliliters per liter-hour
s.u. = standard units
% = percent

Footnotes:

[1] Exceedance of the pH limit did not constitute a violation of the previous order if a Discharger could demonstrate that the discharge did not cause natural background pH to be depressed below 6.5 nor raised above 8.5, or, if outside this range, if the receiving water had not been altered from normal ambient pH by more than 0.5 standard units. In no case was the effluent pH to be below 6.0 or above 9.0.

[2] The total dissolved solids and chloride limits applied to discharges into fresh waters supporting municipal water supply or groundwater recharge uses, including Alameda Creek above Niles.

[3] The total chlorine residual limit applied only to facilities that use municipal water supply as wash water.

[4] A bioassay test showing survival of less than 70% represented a violation of this effluent limit.

Table F-2. Previous Marine Sand Washing Facility Effluent Limitations

Pollutant	Units	Daily Maximum	Monthly Average	Instantaneous Minimum	Instantaneous Maximum
Turbidity	NTU	50	--	---	---
Settleable Matter	mL/L-hr	0.2	0.1	---	---
pH [1]	s.u.	---	---	6.5	8.5
Total Residual Chlorine [2]	mg/L	---	---	0.0	---
Copper	µg/L	13	6.5	---	---
Acute Toxicity [3]	%	---	---	70	---

Abbreviations:

NTU = nephelometric turbidity units
mL/L-hr = milliliters per liter-hour
s.u. = standard units
mg/L = milligrams per liter
µg/L = micrograms per liter
% = percent

Footnotes:

[1] Exceedance of the pH limit did not constitute a violation of the previous order if a Discharger could demonstrate that the discharge did not cause natural background pH to be depressed below 6.5 nor raised above 8.5, or, if outside this range, if the receiving water had not been altered from normal ambient pH by more than 0.5 standard units. In no case was the effluent pH to be below 6.0 or above 9.0.

[2] The total chlorine residual limit applied only to sand washing facilities that use municipal water supply as wash water.

[3] A bioassay test showing survival of less than 70% represented a violation of this effluent limit.

Table F-3. Previous Sand Offloading Facility Effluent Limitations

Pollutant	Units	Daily Maximum	Instantaneous Minimum	Instantaneous Maximum
Settleable Matter	mL/1-hr	1.0	---	---
pH [1]	s.u.	---	6.5	8.5

Abbreviations:

mL/L-hr = milliliters per liter-hour
s.u. = standard units

Footnote:

[1] Exceedance of the pH limit did not constitute a violation of the previous order if a Discharger could demonstrate that the discharge did not cause natural background pH to be depressed below 6.5 nor raised above 8.5, or, if outside this range, if the receiving water had not been altered from normal ambient pH by more than 0.5 standard units. In no case was the effluent pH to be below 6.0 or above 9.0.

F. Compliance Summary

1. **Aggregate Mining Facilities.** Since adoption of the previous order, the four aggregate mining facilities enrolled had in total violated the previous order's effluent limitations 29 times and provided late reports 4 times. Of the 29 effluent limit violations, 3 involved turbidity, 2 involved settleable matter, 3 involved total suspended solids, 11 involved total dissolved solids, and 10 involved pH. The Regional Water Board issued mandatory minimum penalties for 24 effluent limit violations. The other violations are pending review and resolution.

2. **Marine Sand Washing Facilities.** Since adoption of the previous order, the two marine sand washing facilities enrolled had in total violated the previous order's effluent limitations 34 times. Of these, 18 involved turbidity, 7 involved settleable matter, 5 involved total residual chlorine, and 4 involved pH. All these violations could have been prevented through proper operation and maintenance. The Regional Water Board issued mandatory minimum penalties for 28 effluent limit violations. The other violations are pending review and resolution.

3. **Sand Offloading Facilities.** One sand offloading facility was enrolled under the previous order; no effluent limitation violation was reported.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

A. Legal Authorities

This Order serves as Waste Discharge Requirements (WDRs) pursuant to California Water Code article 4, chapter 4, division 7 (commencing with § 13260). This Order is also issued pursuant to Clean Water Act (CWA) section 402 and implementing regulations adopted by U.S. EPA and Water Code chapter 5.5, division 7 (commencing with § 13370). It shall serve as an NPDES permit for point source discharges to surface waters from enrolled facilities.

B. California Environmental Quality Act

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act, Public Resources Code division 13, chapter 3 (commencing with § 21100).

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plan.** The Regional Water Board adopted the *Water Quality Control Plan for the San Francisco Bay Basin* (Basin Plan), which designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan. In addition, this Order 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. Receiving water beneficial uses include the following:

   - 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

2. **Sediment Quality.** The State Water Board adopted the *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality* on September 16, 2008, and it became effective on August 25, 2009. This plan supersedes other narrative sediment quality objectives and establishes new sediment quality objectives and related implementation provisions for specifically defined sediments in most bays and estuaries. This Order implements the sediment quality objectives of this plan.

3. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on December 22, 1992, and amended it on May 4, 1995 and November 9, 1999. About 40 criteria in the NTR apply in California. On May 18, 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and incorporated the previously adopted NTR criteria that applied in the State. U.S. EPA amended the CTR on February 13, 2001. These rules contain water quality criteria for priority pollutants.

4. **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 U.S. EPA promulgated for California through the NTR and the priority pollutant objectives the Regional Water Board established in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria U.S. EPA promulgated through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives, and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

5. **Safe Clean Water.** In compliance with Water Code section 106.3, it is State of California policy that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring dischargers to meet applicable water quality objectives, including maximum contaminant levels designed to protect human health, and to ensure that water is safe for domestic use. As explained in Fact Sheet section IV.C.3.d, the reasonable potential analysis for aggregate mining considered maximum contaminant levels.

6. **Antidegradation Policy.** Federal regulations at 40 C.F.R. section 131.12 requires that state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy through State Water Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," which is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. Permitted discharges must be consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16.

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

8. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the State, including protecting rare, threatened, or endangered species. The Discharger is responsible for meeting all applicable Endangered Species Act requirements.

D. Impaired Waters on CWA 303(d) List

In October 2011, U.S. EPA approved a revised list of impaired waters prepared pursuant to CWA section 303(d), which requires identification of specific waters where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. Where it has not done so already, the Regional Water Board plans to adopt total maximum daily loads (TMDLs) for pollutants on the 303(d) list. TMDLs establish wasteload allocations for point sources and load allocations for non-point sources and are established to achieve the water quality standards for the impaired waters. Effluent limitations for impairing pollutants for the discharges covered by this Order are based on TMDL wasteload allocations when applicable. The mercury and PCBs TMDLs found in Basin Plan sections 7.2.2 and 7.2.3 contain specific wasteload allocations for two marine sand washing facilities: the Hanson Aggregates facilities on Amador Street in San Francisco and Tidewater Avenue in Oakland.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants discharged into waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of receiving waters.

A. Discharge Prohibitions

1. Prohibitions in this Order

a. Discharge Prohibition III.A. (No discharge other than as described in NOI and Authorization to Discharge): This prohibition is based on 40 C.F.R. section 122.21(a), duty to apply, and Water Code section 13260, which requires filing an application and Report of Waste Discharge before discharge can occur. Discharges not described in an NOI and Authorization to Discharge are prohibited.

b. Discharge Prohibition III.B. (No discharge of earthen materials): This prohibition is based on Basin Plan Table 4-1, Discharge Prohibition 9, which prohibits discharges of silt, sand, clay, or other earthen materials in quantities sufficient to cause deleterious bottom deposits, turbidity, or discoloration in surface waters, or to unreasonably affect or threaten to affect beneficial uses.

c. Discharge Prohibition III.C. (No discharge of floating materials): This prohibition is based on Basin Plan Table 4-1, Discharge Prohibitions 8 and 13, which prohibit the discharge of oil or other petroleum products, or other floating materials, to protect birds and other wildlife from possible toxic effects.

d. Discharge Prohibition III.D. (No bypass of retention ponds): This prohibition requires that discharges not bypass retention ponds because the ponds are the primary form of treatment at the facilities this Order covers. Bypassing ponds could greatly reduce effluent quality. This prohibition is based on 40 C.F.R. section 122.41(m), which generally prohibits bypasses (see Attachment D, section I.G).

2. Exception to Shallow Water and Dead-End Slough Discharge Prohibition

Basin Plan Discharge Prohibition 1 prohibits discharge of "any wastewater which has particular characteristics of concern to beneficial uses at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1...." This prohibition is intended to provide an added degree of protection from the continuous effect of discharges and provide a buffer against the effects of abnormal discharges caused by temporary upsets or malfunctions. As explained in Basin Plan section 4.2, the Regional Water Board reviews requests for exceptions to this prohibition based in part on the reliability of a discharger's system in preventing inadequately treated wastewater from being discharged to the receiving water. Basin Plan section 4.2 allows exceptions when an inordinate burden would be placed

on a discharger relative to the beneficial uses protected and an equivalent level of environmental protection can be achieved by alternate means.

Water discharged from aggregate mining, marine sand washing, and sand offloading facilities are not continuous and not subject to upset. The 10:1 dilution requirement was intended to accommodate treatment plant upsets. In any case, providing an initial dilution of at least 10:1 would be impracticable for this type of discharge and thus would constitute an inordinate burden for the Dischargers. Moreover, Provision VI.C.4.a of the Order requiring development and implementation of best management practices to control all potential pollutants provides an equivalent level of water quality protection.

B. Technology-Based Effluent Limitations

1. Scope and Authority

CWA section 301(b) and 40 C.F.R. section 122.44 require that permits include conditions meeting technology-based requirements at a minimum and any more stringent effluent limitations necessary to meet water quality standards. The CWA requires that technology-based effluent limitations be established based on several levels of control:

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

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

c. Best conventional pollutant control technology (BCT). BCT represents the control from existing industrial point sources of conventional pollutants, including biochemical oxygen demand, total suspended solids, fecal coliform, pH, and oil and grease. BCT standards are established after considering a two-part reasonableness test. The first test compares the relationship between the costs of attaining a reduction in effluent discharge and the resulting benefits. The second test examines the cost and level of reduction of pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources. Effluent limitations must be reasonable under both tests.

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

The CWA requires U.S. EPA to develop effluent limitations, guidelines, and standards representing application of BPT, BAT, BCT, and NSPS. CWA section 402(a)(1) and 40 C.F.R. section 125.3 authorize the use of best professional judgment to derive technology-based effluent limitations on a case-by-case basis when U.S. EPA has not promulgated

effluent limitations, guidelines, and standards. When best professional judgment is used, the Regional Water Board must consider specific factors outlined in 40 C.F.R. section 125.3.

U.S. EPA established effluent limitations, guidelines, and standards for mineral mining and processing, including construction sand and gravel mining (i.e., aggregate mining) at 40 C.F.R. section 436 subpart C. These regulations specify that the pH of aggregate mining discharges must be within 6.0 and 9.0. The other technology-based requirements of this Order are based on the Basin Plan and best professional judgment.

2. Applicable Limitations

a. Aggregate Mining Facilities

i. Total Suspended Solids. The suspended solids limitations are based on Basin Plan Table 4-2.

ii. Settleable Matter. The settleable matter limitations are based on Basin Plan Table 4-2.

iii. Chlorine Residual. The chlorine residual limitation is based on Basin Plan Table 4-2 and applies only to those facilities that use municipal water in their processes.

iv. pH. The pH limitations are based on Basin Plan Table 4-2 and are more stringent than those required by the effluent limitations, guidelines, and standards at 40 C.F.R. section 436, subpart C. The additional requirements in Table 2 footnote 1 of the Order reflect Basin Plan section 3.3.9 and the effluent limitations, guidelines, and standards at 40 C.F.R. section 436, subpart C. They are necessary because the pH of some upstream receiving waters (e.g., Alameda Creek and Arroyo Mocho) exceeds 8.5.

v. Turbidity. The turbidity limitation is based on best professional judgment (see section IV.B.3, below). Toxic pollutants can attach to solids (suspended, settable, etc.); therefore, improving solids removal will help remove potential toxic pollutants in the discharge. The limitation in this Order is based on the historical ability of some Dischargers to comply with the limitation. The previous order and individual NPDES permits adopted prior to this general permit (i.e., Order Nos. R2-1996-0045 and R2-1997-0037, which have since been rescinded) contained the same limit. Although there have been occasional exceedances, Dischargers are generally able to manage their settling ponds to comply with the turbidity limitation; some Dischargers have never violated the limitation.

vi. Total Dissolved Solids. The dissolved solids limitation is based on Basin Plan Table 3-5 and applies only to discharges into freshwater supporting municipal supply or groundwater recharge uses, including, but not limited to, Alameda Creek above Niles.

vii. Chloride. The chloride limitation is based on Basin Plan Tables 3-5 and 3-7 and applies only to discharges to Alameda Creek and its tributaries above Niles.

b. Marine Sand Washing Facilities

i. Settleable Matter. The settleable matter limitations are based on Basin Plan Table 4-2.

ii. Chlorine Residual. The chlorine residual limitation is based on Basin Plan Table 4-2 and applies only to those facilities that use municipal water in their processes.

iii. pH. The pH limitations are based on Basin Plan Table 4-2. The additional requirements in Table 3 footnote 1 of the Order reflect Basin Plan section 3.3.9. They are necessary because the pH of San Francisco Bay waters sometimes exceeds 8.5.

iv. Turbidity. The turbidity limitation is based on best professional judgment (see section IV.B.3, below). Toxic pollutants can attach to solids (suspended, settable, etc.); therefore, improving solids removal will help remove potential toxic pollutants in the discharge. The limitation was derived during the 2008 reissuance of this general permit (see Order No. R2-2008-0011) by calculating the 95th percentile of three facilities' monitoring data collected from 2003 through 2007.

The turbidity limit serves, in part, as a proxy for total suspended sediment (TSS). Basin Plan Table 4-2 calls for a 7-day average TSS effluent limitation of 45 mg/L for sewage treatment facilities and some non-sewage discharges. A Discharger that owns both marine sand washing facilities reported difficulties in accurately and reliably quantifying TSS in salty discharge samples (*Evaluation of the accuracy and reliability of EPA test method 160.2 to measure total suspended solids [TSS] in effluent from marine sand processing facilities* [2005]; *Total Suspended Solids [TSS] Special Study for Marine Sand Washing and Offloading Facilities, Annual Progress Reports* [2006, 2009, 2011, 2013]). Based on *Summary of Suspended-Sediment Concentration Data, San Francisco Bay, California, Water Year 2010* (U.S. Geological Survey, 2014, http://pubs.usgs.gov/ds/808/pdf/ds808.pdf), the maximum daily turbidity limit in this Order is roughly equivalent to 40 milligrams per liter of TSS.

c. Sand Offloading Facilities

i. Settleable Matter. The settleable matter limitation is consistent with Basin Plan Table 4-2, footnote e, and is based on best professional judgment (see section IV.B.3, below). The limitation accounts for natural matter that may be entrained with San Francisco Bay sand (as opposed to solids introduced during the more aggressive processing operations that occur at marine sand washing facilities). The limit is appropriately protective because sand offloading facilities generally discharge into marshes or wetlands, which remove some of the settleable solids before the discharges reach the deeper waters of San Francisco Bay. If a new sand offloading facility were to discharge directly into open water, more stringent effluent limits may be necessary. The Regional Water Board could consider incorporating new limits when reissuing this permit or by amending this Order.

ii. pH. The pH limitations are based on Basin Plan Table 4-2. The additional requirements in Table 4 footnote 2 of the Order reflect Basin Plan section 3.3.9. They are necessary because the pH of San Francisco Bay waters sometimes exceeds 8.5.

3. Best Professional Judgment

The turbidity effluent limitation for aggregate mining and marine sand washing, and the settleable matter limitation for sand offloading, are based on past performance and best professional judgment. Discharger data demonstrate that compliance with these limitations is feasible because Dischargers have been able to comply with the them with a few exceptions in the past (see section II.F, above). In establishing these limitations, the Regional Water Board considered the factors specified in 40 C.F.R. section 125.3(d), as indicated in the table below:

Table F-4. Factors Considered Pursuant to 40 C.F.R. section 125.3(d)(1)

Factors	Considerations
Cost relative to benefits	The cost of imposing these limits is reasonable given that existing Dischargers can comply without modifying their existing processes.
Comparison of cost and pollutant reductions from publicly owned treatment works to cost and pollutant reductions from facilities subject to this permit	The facilities subject to this Order provide primary treatment of process wastewater (sedimentation); therefore, the cost of continuing such operations is considerably less than the cost of operating publicly owned treatment works, which must comply with the secondary treatment standards of 40 C.F.R. section 133.
Age of equipment and facilities involved	These limits can be met with existing equipment and facilities.
Process employed	These limits can be met with existing processes.
Engineering aspects of application of control techniques	The existing controls are practicable and capable of meeting these limits.
Process changes	No process changes are necessary to meet these limits.
Non-water-quality environmental impact (including energy requirements)	Because no process changes are necessary, no non-water-quality impacts are foreseeable.

C. Water Quality-Based Effluent Limitations

1. Scope and Authority

This Order contains water quality-based effluent limitations (WQBELs) that implement water quality objectives that protect beneficial uses. CWA section 301(b) and 40 C.F.R. section 122.44(d) require that permits include limitations more stringent than federal technology-based requirements where necessary to achieve applicable water quality standards. According to 40 C.F.R. section 122.44(d)(1)(i), permits must include effluent limitations for all pollutants that are or may be discharged at levels that have a reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective, WQBELs must be established using (1) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting a narrative criterion, supplemented with relevant information

(40 C.F.R. § 122.44[d][1][vi]). The process for determining reasonable potential and calculating WQBELs is intended to achieve applicable water quality objectives and criteria and to protect designated uses of receiving waters as specified in the Basin Plan. This Order imposes WQBELs for pollutants with reasonable potential to cause or contribute to exceedances of water quality standards.

2. Beneficial Uses and Water Quality Criteria and Objectives

Fact Sheet section III.C.1 identifies the potential beneficial uses of the receiving waters for discharges subject to this Order. Water quality criteria and objectives to protect these beneficial uses are described below.

a. Basin Plan. The Basin Plan specifies numeric water quality objectives for many pollutants to protect aquatic life and municipal drinking water supplies (see Basin Plan sections 3.3.21 and 3.3.22). It also specifies narrative water quality objectives, such as the narrative toxicity objective: "All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms."

b. CTR. The CTR specifies numeric aquatic life and human health criteria for numerous priority pollutants. These criteria apply to inland surface waters and enclosed bays and estuaries. Some human health criteria are for consumption of "water and organisms" and others are for consumption of "organisms only." Waters with the municipal or domestic supply beneficial use designation are subject to the "water and organisms" criteria.

c. NTR. The NTR establishes numeric aquatic life criteria for a number of pollutants for San Francisco Bay waters upstream to and including Suisun Bay and the San Joaquin-Sacramento River Delta.

d. Sediment Quality Objectives. The *Water Quality Control Plan for Enclosed Bays and Estuaries—Part 1, Sediment Quality* contains a narrative water quality objective: "Pollutants in sediments shall not be present in quantities that, alone or in combination, are toxic to benthic communities in bays and estuaries of California." This objective is to be implemented by integrating three lines of evidence: sediment toxicity, benthic community condition, and sediment chemistry. The policy requires that if the Regional Water Board determines that a discharge has reasonable potential to cause or contribute to an exceedance of this objective, it is to impose the objective as a receiving water limit.

e. Receiving Water Salinity. Basin Plan section 4.6.2 (like the CTR and the NTR) states that the salinity characteristics (i.e., freshwater versus saltwater) of the receiving water are to be considered in determining the applicable water quality objectives. Freshwater criteria apply to discharges to waters with salinities equal to or less than one part per thousand (ppt) at least 95 percent of the time. Saltwater criteria apply to discharges to waters with salinities equal to or greater than 10 ppt at least 95 percent of the time in a normal water year.

For discharges to waters with salinities between these two categories, or tidally-influenced freshwaters that support estuarine beneficial uses, the applicable water quality

objectives are the lower of the salt or freshwater objectives (the latter calculated based on ambient hardness) for each substance.

Receiving waters for the discharges this Order covers include San Francisco Bay, other estuarine and tidally-influenced waters, and inland freshwaters. For all but the aggregate mining facilities, the reasonable potential analyses and WQBELs are based on the more stringent of the fresh and salt water criteria to fully protect all receiving waters. Because the aggregate mining facilities in this region exist only in areas where their discharges would be to creeks at locations with no tidal effects, the reasonable potential analysis for aggregate mining facilities is based only on the freshwater criteria. The analysis could be revisited if any new aggregate mining facility were to discharge to estuarine waters.

f. Receiving Water Hardness. Some freshwater objectives for metals are hardness dependent (as hardness increases, the toxicity of certain metals decreases). For the estuarine discharges (i.e., marine sand washing and sand offloading facilities), few hardness data are available. Data from Hanson Oakland Sand Yard receiving water were collected on June 24, 2002, September 18, 2002, and December 30, 2002; and all were above 400 mg/L. Therefore, 400 mg/L was used to calculate the estuarine water quality objectives.

For the freshwater discharges (i.e., aggregate mining facilities), hardness data the Alameda County Water District collected in 2003 and 2007 were used. These data reflect two receiving water monitoring locations: AC_AADLL (Alameda Creek above Arroyo de la Laguna), the closest station to the Hanson Mission Valley Rock and CEMEX Sunol aggregate mining facility outfalls; and AM_AALP (Arroyo Mocho above Arroyo las Positas), the closest station to the Vulcan Materials Company and CEMEX Eliot Pleasanton aggregate mining facility outfalls. A total of 244 samples contained hardness no greater than 400 mg/L as $CaCO_3$. The adjusted geometric mean of these data, 164 mg/L as $CaCO_3$, was used to calculate the freshwater objectives.

g. Site Specific Translators. NPDES regulations at 40 C.F.R. 122.45(c) require that effluent limitations for metals be expressed as total recoverable metal. Since water quality objectives for metals are typically expressed as dissolved metal, translators must be used to convert metals concentrations from dissolved to total recoverable and vice versa. The CTR includes default translators; however, site-specific conditions, such as water temperature, pH, suspended solids, and organic carbon affect the form of metal (dissolved, non-filterable, or otherwise) present in the water and therefore available to cause toxicity. In general, the dissolved form of the metal is more available and more toxic to aquatic life than non-filterable forms. Site-specific translators can be developed to account for site-specific conditions, thereby preventing exceedingly stringent or under protective water quality objectives.

This Order covers discharges to various receiving waters; therefore, site-specific conditions vary. CTR default translators were used for all metals, except for copper in some circumstances. For discharges to San Francisco Bay, the San Francisco Bay site-specific copper water quality objectives listed in Basin Plan Table 3-3A were used. The Central San Francisco Bay site-specific copper translators of 0.73 (average monthly) and 0.87 (maximum daily) as listed in Basin Plan Table 7.2.1-2 were used because existing marine sand washing facilities discharge to Central San Francisco Bay.

3. Need for WQBELs

Assessing whether a pollutant has reasonable potential to exceed a water quality objective is the fundamental step in determining whether a WQBEL is required.

a. Methodology. SIP section 1.3 sets forth the methodology used for priority pollutants to assess whether they have reasonable potential to exceed water quality objectives. In this Order, this methodology is also applied to non-priority pollutants as guidance in determining reasonable potential. The analysis begins with identifying the maximum effluent concentration (MEC) observed for each pollutant based on available effluent concentration data and the ambient background concentration (B). SIP section 1.4.3 states that ambient background concentrations are either the maximum ambient concentration observed or, for water quality objectives intended to protect human health, the arithmetic mean of observed concentrations. There are three triggers in determining reasonable potential:

i. Trigger 1 is activated if the maximum effluent concentration is greater than or equal to the lowest applicable water quality objective (MEC $\geq$ water quality objective).

ii. Trigger 2 is activated if the ambient background concentration observed in the receiving water is greater than the water quality objective (B > water quality objective) *and* the pollutant is detected in any effluent sample.

iii. Trigger 3 is activated if a review of other information indicates that a WQBEL is needed to protect beneficial uses.

b. Effluent Data. Three aggregate mining facilities, one in Sunol and two in Pleasanton, and one marine sand washing facility in Oakland submitted effluent monitoring data with their NOIs. Most data were obtained during 2012. A few Dischargers collected more monitoring data for copper, mercury, and cyanide from 2008 through 2012. These data were also used for the reasonable potential analysis.

c. Ambient Background Data. The SIP states that, when calculating WQBELs, ambient background concentrations are to be either the observed maximum ambient water column concentrations or, for water quality objectives intended to protect human health from carcinogenic effects, the arithmetic mean of observed ambient water concentrations.

Monitoring data collected from Arroyo Del Valle creek in 2015 were used to represent background conditions for aggregate mining facility discharges to freshwater receiving waters.

Background data for marine sand washing facility discharges to estuarine receiving waters are based on Regional Monitoring Program (RMP) data collected at the Yerba Buena Island station (BC10) from 1993 through 2013, and additional Bay Area Clean Water Agencies data from *San Francisco Bay Ambient Water Monitoring Interim Report* (2003) and *Ambient Water Monitoring: Final CTR Sampling Update* (2004). These reports contain monitoring results from 2002 and 2003 for priority pollutants the RMP did not monitor at the time. The Yerba Buena Island station best represents background conditions because the existing marine sand washing facilities are located in San Francisco and Oakland.

d. Reasonable Potential Analyses. Quantitative reasonable potential analyses were conducted for aggregate mining and marine sand washing facilities. The MECs and most stringent applicable water quality criteria are presented in the following tables, along with the analysis results (yes or no) for each pollutant. Reasonable potential was not determined for all pollutants because there are not applicable criteria for all pollutants, and monitoring data are unavailable for others. When additional data become available, further analysis will be conducted to determine whether WQBELs are necessary.

For aggregate mining, Basin Plan Table 4-3 requires whole effluent acute toxicity limit.

For marine sand washing, copper demonstrates reasonable potential, and Basin Plan Table 4-3 also requires whole effluent acute toxicity limit. The mercury and PCBs TMDLs found in Basin Plan sections 7.2.2 and 7.2.3 contain specific wasteload allocations for two marine sand washing facilities (the Hanson Aggregates facilities on Amador Street in San Francisco and Tidewater Avenue in Oakland); thus, these facilities require effluent limitations based on the TMDL allocations.

For sand offloading, no pollutants demonstrate reasonable potential since no pollutants are added to the discharge that are not already present in San Francisco Bay water.

Table F-5. Reasonable Potential Analysis – Aggregate Mining

CTR No.	Pollutant [1]	Unit	Governing Criteria	MEC or Minimum DL [1,2]	Background	Result [3]
1	Antimony	µg/L	6	< 0.5	<0.5	No
2	Arsenic	µg/L	10	2.2	1.1	No
3	Beryllium	µg/L	4	< 0.5	<0.5	No
4	Cadmium	µg/L	1.67	<0.25	<0.25	No
5a	Chromium (III)	µg/L	50	2.3	0.53	No
5b	Chromium (VI)	µg/L	10	0.98	<0.2	No
6	Copper	µg/L	14.2	8.3	2.7	No
7	Lead	µg/L	6	< 0.5	<0.5	No
8	Mercury	µg/L	0.025	0.00051	0.0016	No
9	Nickel	µg/L	79.3	2.6	3.2	No
10	Selenium	µg/L	5	0.52	<0.5	No
11	Silver	µg/L	9.5	< 0.19	<0.19	No
12	Thallium	µg/L	1.7	< 0.5	<0.50	No
13	Zinc	µg/L	182	4	15	No
14	Cyanide	µg/L	5.2	2.4	2.7	No
15	Asbestos	Fibers/L	7000000	<0.39	<0.38	No
16	2,3,7,8-TCDD	µg/L	$1.3x10^{-8}$	$3.12x10^{-9}$	$<5.29x10^{-12}$	No
17	Acrolein	µg/L	320	< 5	<5.0	No
18	Acrylonitrile	µg/L	0.059	< 0.25	<2.0	No
19	Benzene	µg/L	1.0	< 0.5	<0.50	No
20	Bromoform	µg/L	4.3	< 0.5	<0.5	No
21	Carbon Tetrachloride	µg/L	0.25	< 0.5	<0.5	No
22	Chlorobenzene	µg/L	70	< 0.5	<0.5	No

CTR No.	Pollutant [1]	Unit	Governing Criteria	MEC or Minimum DL [1,2]	Background	Result [3]
23	Chlorodibromomethane	µg/L	0.401	< 0.5	<0.5	No
24	Chloroethane	µg/L	No Criteria	< 0.5	<0.5	U
25	2-Chloroethylvinyl Ether	µg/L	No Criteria	< 1.0	<0.5	U
26	Chloroform	µg/L	No Criteria	< 0.5	<0.5	U
27	Dichlorobromomethane	µg/L	0.56	< 0.5	<0.5	No
28	1,1-Dichloroethane	µg/L	5	< 0.5	<0.5	No
29	1,2-Dichloroethane	µg/L	0.38	< 0.5	<0.5	No
30	1,1-Dichloroethylene	µg/L	0.057	< 0.5	<0.5	No
31	1,2-Dichloropropane	µg/L	0.52	< 0.5	<0.5	No
32	1,3-Dichloropropylene	µg/L	0.5	< 0.5	<0.5	No
33	Ethylbenzene	µg/L	300	< 0.5	<0.5	No
34	Methyl Bromide	µg/L	48	< 0.5	<0.5	No
35	Methyl Chloride	µg/L	No Criteria	< 0.5	<0.5	U
36	Methylene Chloride	µg/L	4.7	< 1.0	<0.5	No
37	1,1,2,2-Tetrachloroethane	µg/L	0.17	< 0.5	<0.5	No
38	Tetrachloroethylene	µg/L	0.8	< 0.5	<0.5	No
39	Toluene	µg/L	150	< 0.5	<0.5	No
40	1,2-Trans-Dichloroethylene	µg/L	10	< 0.5	<0.5	No
41	1,1,1-Trichloroethane	µg/L	200	< 0.5	<0.5	No
42	1,1,2-Trichloroethane	µg/L	0.6	< 0.5	<0.5	No
43	Trichloroethylene	µg/L	2.7	< 0.5	<0.5	No
44	Vinyl Chloride	µg/L	0.5	< 0.5	<0.5	No
45	2-Chlorophenol	µg/L	120	< 1	<1.1	No
46	2,4-Dichlorophenol	µg/L	93	< 1	<1.1	No
47	2,4-Dimethylphenol	µg/L	540	< 1	<1.1	No
48	2-Methyl-4,6-Dinitrophenol	µg/L	13.4	< 5.6	Unavailable	No
49	2,4-Dinitrophenol	µg/L	70	< 5.6	<5.5	No
50	2-Nitrophenol	µg/L	No Criteria	< 11	<5.5	U
51	4-Nitrophenol	µg/L	No Criteria	< 5.6	<5.5	U
52	3-Methyl-4-Chlorophenol	µg/L	No Criteria	< 1.1	Unavailable	U
53	Pentachlorophenol	µg/L	0.28	< 5.6	<5.5	No
54	Phenol	µg/L	21000	< 1.1	<1.1	No
55	2,4,6-Trichlorophenol	µg/L	2.1	< 1.1	<1.1	No
56	Acenaphthene	µg/L	1200	< 1	<1.1	No
57	Acenaphthylene	µg/L	No Criteria	< 1	0.0074	U
58	Anthracene	µg/L	9600	< 1	<0.0045	No
59	Benzidine	µg/L	0.00012	< 5.6	<5.5	No
60	Benzo(a)Anthracene	µg/L	0.0044	< 0.11	<0.0045	No
61	Benzo(a)Pyrene	µg/L	0.0044	< 0.11	<0.0045	No
62	Benzo(b)Fluoranthene	µg/L	0.0044	< 0.11	<0.0045	No
63	Benzo(ghi)Perylene	µg/L	No Criteria	< 1	<0.0045	U
64	Benzo(k)Fluoranthene	µg/L	0.0044	< 1	<0.0045	No

CTR No.	Pollutant [1]	Unit	Governing Criteria	MEC or Minimum DL [1,2]	Background	Result [3]
65	Bis(2-Chloroethoxy)Methane	µg/L	No Criteria	< 1	<1.1	U
66	Bis(2-Chloroethyl)Ether	µg/L	0.031	< 1	<1.1	No
67	Bis(2-Chloroisopropyl)Ether	µg/L	1400	< 1	<1.1	No
68	Bis(2-Ethylhexyl)Phthalate	µg/L	1.8	< 2	<1.1	No
69	4-Bromophenyl Phenyl Ether	µg/L	No Criteria	< 5	Unavailable	U
70	Butylbenzyl Phthalate	µg/L	3000	< 1	<1.1	No
71	2-Chloronaphthalene	µg/L	1700	< 1	<1.1	No
72	4-Chlorophenyl Phenyl Ether	µg/L	No Criteria	< 1	<1.1	U
73	Chrysene	µg/L	0.0044	< 0.11	<1.1	No
74	Dibenzo(a,h)Anthracene	µg/L	0.0044	< 0.004	<1.1	No
75	1,2-Dichlorobenzene	µg/L	600	< 2	<1.1	No
76	1,3-Dichlorobenzene	µg/L	400	< 1	<1.1	No
77	1,4-Dichlorobenzene	µg/L	5	< 1	<1.1	No
78	3,3-Dichlorobenzidine	µg/L	0.04	< 2	<2.2	No
79	Diethyl Phthalate	µg/L	23000	< 1	<1.1	No
80	Dimethyl Phthalate	µg/L	313000	< 1	<1.1	No
81	Di-n-Butyl Phthalate	µg/L	2700	< 1	<1.1	No
82	2,4-Dinitrotoluene	µg/L	0.11	< 1	<1.1	No
83	2,6-Dinitrotoluene	µg/L	No Criteria	< 1	<1.1	U
84	Di-n-Octyl Phthalate	µg/L	No Criteria	< 1	<1.1	U
85	1,2-Diphenylhydrazine	µg/L	0.04	< 1	<1.1	No
86	Fluoranthene	µg/L	300	< 1	<1.1	No
87	Fluorene	µg/L	1300	< 1	<1.1	No
88	Hexachlorobenzene	µg/L	0.00075	< 1	<1.1	No
89	Hexachlorobutadiene	µg/L	0.44	< 1	<1.1	No
90	Hexachlorocyclopentadiene	µg/L	50	< 5	<5.5	No
91	Hexachloroethane	µg/L	1.9	< 1	<1.1	No
92	Indeno(1,2,3-cd) Pyrene	µg/L	0.0044	< 1	<1.1	No
93	Isophorone	µg/L	8.4	< 1	<1.1	No
94	Naphthalene	µg/L	No Criteria	< 1	0.0088	U
95	Nitrobenzene	µg/L	17	< 1	<1.1	No
96	N-Nitrosodimethylamine	µg/L	0.00069	< 1	<5.5	No
97	N-Nitrosodi-n-Propylamine	µg/L	0.005	< 1	Unavailable	No
98	N-Nitrosodiphenylamine	µg/L	5	< 1	<1.1	No
99	Phenanthrene	µg/L	No Criteria	< 1	<1.1	U
100	Pyrene	µg/L	960	< 1	<1.1	No
101	1,2,4-Trichlorobenzene	µg/L	5	< 1	<1.1	No
102	Aldrin	µg/L	0.00013	< 0.015	<0.001	No
103	alpha-BHC	µg/L	0.0039	< 0.026	<0.001	No
104	beta-BHC	µg/L	0.014	< 0.041	<0.001	No
105	gamma-BHC (Lindane)	µg/L	0.019	< 0.31	<0.001	No
106	delta-BHC	µg/L	No Criteria	<0.036	<0.001	U

CTR No.	Pollutant [1]	Unit	Governing Criteria	MEC or Minimum DL [1,2]	Background	Result [3]
107	Chlordane	µg/L	0.00057	< 0.82	<0.02	No
108	4,4-DDT	µg/L	0.00059	< 0.041	<0.001	No
109	4,4-DDE	µg/L	0.00059	< 0.031	<0.001	No
110	4,4-DDD	µg/L	0.00083	< 0.041	<0.001	No
111	Dieldrin	µg/L	0.00014	< 0.021	<0.001	No
112	alpha-Endosulfan	µg/L	0.056	< 0.031	<0.001	No
113	beta-Endosulfan	µg/L	0.056	< 0.021	<0.001	No
114	Endosulfan Sulfate	µg/L	110	< 0.031	<0.002	No
115	Endrin	µg/L	0.036	< 0.021	<0.001	No
116	Endrin Aldehyde	µg/L	0.76	< 0.021	<0.001	No
117	Heptachlor	µg/L	0.00021	< 0.031	<0.001	No
118	Heptachlor Epoxide	µg/L	0.0001	< 0.026	<0.001	No
119-125	PCBs sum	µg/L	0.00017	< 0.065	<0.001	No
126	Toxaphene	µg/L	0.0002	< 2.6	<0.02	No
	Tributyltin	µg/L	0.072	< 0.06	<0.060	No
	Total PAHs	µg/L	15	< 0.11	0.0162	No
	Odor	odor number	3	2	1	No
	Sulfate	mg/L	250	120	73	No
	Foaming Agents	mg/L	500	<0.1	<0.1	No
	Color	color units	15	5	10	No
	Electric conductivity	mmhos/cm	900	660	690	No
	Aluminum	mg/L	1	0.086	<0.1	No
	Barium	mg/L	1	0.070	0.089	No
	Fluoride	mg/L	2	0.2	0.66	No
	Iron	mg/L	0.3	0.046	0.13	No
	Manganese	mg/L	0.05	0.023	<0.02	No
	Nitrate (as N)	mg/L	10	<0.23	1.2	No
	Nitrate + Nitrite (as N)	mg/L	10	<0.23	1.2	No
	Nitrite (as N)	mg/L	1	<0.3	<0.4	No
	Combined Radium-226 and Radium-228	pCi/L	5	2.43	Unavailable	No
	Gross Alpha Particle Activity (includes Radium-226 but not Radon and Uranium)	pCi/L	15	4.06	Unavailable	No
	Tritium	pCi/L	20,000	658	Unavailable	No
	Strontium-90	pCi/L	8	0.5	Unavailable	No
	Gross Beta Particle Activity	millirems per year	4	2.07	Unavailable	No
	Uranium	pCi/L	20	1.34	Unavailable	No

Footnotes:

[1] This list contains the CTR priority pollutants and, when data are available, some other pollutants for which water quality objectives exist to protect municipal supply, groundwater recharge, and agricultural supply beneficial uses.

[2] The Maximum Effluent Concentration (MEC) is the actual detected concentration unless preceded by a "<" sign, in which case the value shown is the minimum detection level (DL).

[3] Results = Yes, if MEC ≥ WQC, B > WQC and MEC is detected, or Trigger 3;

= No, if MEC and B are < WQC or all effluent data are undetected;
= Unknown (U), if no criteria have been promulgated or there are insufficient data.

Table F-6. Reasonable Potential Analysis – Marine Sand Washing

CTR No.	Pollutant	Unit	Governing Criteria	MEC or Minimum DL [1]	Background	Result [2]
1	Antimony	µg/L	4,300	< 5	1.8	No
2	Arsenic	µg/L	36	7.6	2.8	No
3	Beryllium	µg/L	No Criteria	< 5	0.22	U
4	Cadmium	µg/L	9.36	< 2.5	0.13	No
5a	Chromium (III)	µg/L	No Criteria	< 2.5	4.4	U
5b	Chromium (VI)	µg/L	50.4	< 20	4.4	No
6	**Copper**	**µg/L**	**8.2**	**9.7**	**2.5**	**Yes**
7	Lead	µg/L	8.5	< 5	0.8	No
8	Mercury	µg/L	[3]	0.0099	---	No [4]
9	Nickel	µg/L	13	< 5	3.7	No
10	Selenium	µg/L	5.0	< 5	0.39	No
11	Silver	µg/L	2.2	< 1.9	0.052	No
12	Thallium	µg/L	6.3	< 5	0.21	No
13	Zinc	µg/L	85.6	11	5.1	No
14	Cyanide	µg/L	2.9	1.9	<0.4	No
15	Asbestos	Fibers/L	No Criteria	---	Unavailable	U
16	2,3,7,8-TCDD	µg/L	$1.4x10^{-8}$	$< 0.08x10^{-8}$	0.82×10^{-8}	No
17	Acrolein	µg/L	780	< 5	5.3×10^{-8}	No
18	Acrylonitrile	µg/L	0.66	< 0.05	<0.5	No
19	Benzene	µg/L	71	< 0.5	0.03	No
20	Bromoform	µg/L	360	< 0.5	<0.05	No
21	Carbon Tetrachloride	µg/L	4.4	< 0.5	<0.5	No
22	Chlorobenzene	µg/L	21,000	< 0.5	0.06	No
23	Chlorodibromomethane	µg/L	34	< 0.5	<0.5	No
24	Chloroethane	µg/L	No Criteria	< 0.5	<0.5	U
25	2-Chloroethylvinyl Ether	µg/L	No Criteria	< 1	<0.5	U
26	Chloroform	µg/L	No Criteria	< 0.5	<0.5	U
27	Dichlorobromomethane	µg/L	46	< 0.5	<0.05	No
28	1,1-Dichloroethane	µg/L	No Criteria	< 0.5	<0.05	U
29	1,2-Dichloroethane	µg/L	99	< 0.5	0.04	No
30	1,1-Dichloroethylene	µg/L	3.2	< 0.05	<0.5	No
31	1,2-Dichloropropane	µg/L	39	< 0.5	<0.05	No
32	1,3-Dichloropropylene	µg/L	1,700	< 0.5	<0.5	No
33	Ethylbenzene	µg/L	29,000	< 0.5	<0.5	No
34	Methyl Bromide	µg/L	4,000	< 0.5	<0.5	No
35	Methyl Chloride	µg/L	No Criteria	< 0.5	<0.5	U
36	Methylene Chloride	µg/L	1,600	< 0.5	22	No
37	1,1,2,2-Tetrachloroethane	µg/L	11	< 0.5	<0.05	No
38	Tetrachloroethylene	µg/L	8.85	< 0.05	<0.05	No

CTR No.	Pollutant	Unit	Governing Criteria	MEC or Minimum DL [1]	Background	Result [2]
39	Toluene	µg/L	200,000	< 0.5	<0.3	No
40	1,2-Trans-Dichloroethylene	µg/L	140,000	< 0.5	<0.5	No
41	1,1,1-Trichloroethane	µg/L	No Criteria	< 0.5	<0.5	U
42	1,1,2-Trichloroethane	µg/L	42	< 0.5	<0.05	No
43	Trichloroethylene	µg/L	81	< 0.5	<0.5	No
44	Vinyl Chloride	µg/L	525	< 0.5	<0.5	No
45	2-Chlorophenol	µg/L	400	< 1	<1.2	No
46	2,4-Dichlorophenol	µg/L	790	< 1	<1.3	No
47	2,4-Dimethylphenol	µg/L	2,300	< 1	<1.3	No
48	2-Methyl-4,6-Dinitrophenol	µg/L	765	< 1	<1.2	No
49	2,4-Dinitrophenol	µg/L	14,000	< 1	<0.7	No
50	2-Nitrophenol	µg/L	No Criteria	< 1	<1.3	U
51	4-Nitrophenol	µg/L	No Criteria	< 1	<1.6	U
52	3-Methyl-4-Chlorophenol	µg/L	No Criteria	< 1	<1.1	U
53	Pentachlorophenol	µg/L	7.9	< 1	<1	No
54	Phenol	µg/L	4,600,000	< 1	<1.3	No
55	2,4,6-Trichlorophenol	µg/L	6.5	< 1	<1.3	No
56	Acenaphthene	µg/L	2,700	< 1	0.0019	No
57	Acenaphthylene	µg/L	No Criteria	< 1	0.0013	U
58	Anthracene	µg/L	110,000	< 1	0.0006	No
59	Benzidine	µg/L	0.00054	< 1	<0.0015	No
60	Benzo(a)Anthracene	µg/L	0.049	< 0.004	0.0053	No
61	Benzo(a)Pyrene	µg/L	0.049	< 0.004	0.0033	No
62	Benzo(b)Fluoranthene	µg/L	0.049	< 0.004	0.0046	No
63	Benzo(ghi)Perylene	µg/L	No Criteria	< 1	0.0045	U
64	Benzo(k)Fluoranthene	µg/L	0.049	< 0.004	0.0018	No
65	Bis(2-Chloroethoxy)Methane	µg/L	No Criteria	< 1	<0.3	U
66	Bis(2-Chloroethyl)Ether	µg/L	1.4	< 1	<0.00015	No
67	Bis(2-Chloroisopropyl)Ether	µg/L	170,000	< 1	Unavailable	No
68	Bis(2-Ethylhexyl)Phthalate	µg/L	5.9	< 1	< 0.7	No
69	4-Bromophenyl Phenyl Ether	µg/L	No Criteria	< 5	<0.23	U
70	Butylbenzyl Phthalate	µg/L	5,200	< 1	0.0056	No
71	2-Chloronaphthalene	µg/L	4,300	< 1	<0.3	No
72	4-Chlorophenyl Phenyl Ether	µg/L	No Criteria	< 1	<0.3	U
73	Chrysene	µg/L	0.049	< 0.004	0.0028	No
74	Dibenzo(a,h)Anthracene	µg/L	0.049	< 0.004	0.00064	No
75	1,2-Dichlorobenzene	µg/L	17,000	< 2	<0.3	No
76	1,3-Dichlorobenzene	µg/L	2,600	< 1	<0.3	No
77	1,4-Dichlorobenzene	µg/L	2,600	< 1	<0.3	No
78	3,3-Dichlorobenzidine	µg/L	0.077	< 2	<0.001	No
79	Diethyl Phthalate	µg/L	120,000	< 1	<0.21	No
80	Dimethyl Phthalate	µg/L	2,900,000	< 1	<0.21	No

CTR No.	Pollutant	Unit	Governing Criteria	MEC or Minimum DL [1]	Background	Result [2]
81	Di-n-Butyl Phthalate	µg/L	12,000	< 1	0.016	No
82	2,4-Dinitrotoluene	µg/L	9.1	< 1	<0.27	No
83	2,6-Dinitrotoluene	µg/L	No Criteria	< 1	<0.29	U
84	Di-n-Octyl Phthalate	µg/L	No Criteria	< 1	<0.38	U
85	1,2-Diphenylhydrazine	µg/L	0.54	< 1	0.0037	No
86	Fluoranthene	µg/L	370	< 1	0.011	No
87	Fluorene	µg/L	14,000	< 1	0.0021	No
88	Hexachlorobenzene	µg/L	0.00077	< 1	0.000022	No
89	Hexachlorobutadiene	µg/L	50	< 1	<0.3	No
90	Hexachlorocyclopentadiene	µg/L	17,000	< 5	<0.31	No
91	Hexachloroethane	µg/L	8.9	< 1	<0.2	No
92	Indeno(1,2,3-cd) Pyrene	µg/L	0.49	< 1	0.004	No
93	Isophorone	µg/L	600	< 1	<0.3	No
94	Naphthalene	µg/L	No Criteria	< 1	0.013	U
95	Nitrobenzene	µg/L	1,900	< 1	<0.25	No
96	N-Nitrosodimethylamine	µg/L	8.1	< 1	<0.3	No
97	N-Nitrosodi-n-Propylamine	µg/L	1.4	< 1	<0.001	No
98	N-Nitrosodiphenylamine	µg/L	16	< 1	<0.001	No
99	Phenanthrene	µg/L	No Criteria	< 1	0.0095	U
100	Pyrene	µg/L	11,000	< 1	0.019	No
101	1,2,4-Trichlorobenzene	µg/L	No Criteria	< 1	<0.3	U
102	Aldrin	µg/L	0.00014	< 0.001	0.0000028	No
103	alpha-BHC	µg/L	0.013	< 0.001	0.0005	No
104	beta-BHC	µg/L	0.046	< 0.001	0.00041	No
105	gamma-BHC (Lindane)	µg/L	0.063	< 0.001	0.0007	No
106	delta-BHC	µg/L	No Criteria	---	0.000053	U
107	Chlordane	µg/L	0.00059	< 0.02	0.00018	No
108	4,4-DDT	µg/L	0.00059	< 0.001	0.00017	No
109	4,4-DDE	µg/L	0.00059	< 0.001	0.00069	No
110	4,4-DDD	µg/L	0.00084	< 0.001	0.00031	No
111	Dieldrin	µg/L	0.00014	< 0.001	0.00026	No
112	alpha-Endosulfan	µg/L	0.0087	< 0.001	0.000031	No
113	beta-Endosulfan	µg/L	0.0087	< 0.001	0.000069	No
114	Endosulfan Sulfate	µg/L	240	< 0.002	0.000082	No
115	Endrin	µg/L	0.0023	< 0.001	0.00004	No
116	Endrin Aldehyde	µg/L	0.81	< 0.001	Unavailable	No
117	Heptachlor	µg/L	0.00021	< 0.001	0.000019	No
118	Heptachlor Epoxide	µg/L	0.00011	< 0.001	0.000094	No
119-125	PCBs sum	µg/L	0.00017	< 0.02	---	No [4]
126	Toxaphene	µg/L	0.0002	< 0.02	Unavailable	No
	Tributyltin	µg/L	No Criteria	< 0.06		U
	Total PAHs	µg/L	15	< 0.004		No

Footnotes:

[1] The Maximum Effluent Concentration (MEC) and ambient background concentration are the actual detected concentration unless preceded by a "<" sign, in which case the value shown is the minimum detection level (DL). The maximum effluent concentration or ambient background concentration is "Unavailable" when there are no monitoring data for the constituent.

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

[3] The applicable mercury objective applies to fish tissue, not water column mercury concentrations.

[4] The mercury and PCBs TMDLs found in Basin Plan sections 7.2.2 and 7.2.3 contain specific wasteload allocations for two marine sand washing facilities: the Hanson Aggregates facilities on Amador Street in San Francisco and Tidewater Avenue in Oakland. This Order must contain effluent limitations consistent with those wasteload allocations.

e. Reasonable Potential Analysis for Sediment Quality Objectives. Pollutants in some receiving water sediments may be present in quantities that alone or in combination are toxic to benthic communities. Efforts are underway to identify stressors causing such conditions. However, to date there is no evidence directly linking compromised sediment conditions to the discharges subject to this Order; therefore the Regional Water Board cannot draw a conclusion about Reasonable Potential for the discharges to cause or contribute to exceedances of the sediment quality objectives. Nevertheless, the region's RMP continues to monitor San Francisco Bay sediment and seeks to identify stressors responsible for degraded sediment quality. Thus far, the monitoring has provided only limited information about potential stressors and sediment transport. The Regional Water Board is exploring appropriate requirements to impose on dischargers in the region, to obtain additional information that may inform future reasonable potential analyses.

4. WQBELs Calculations

The following table shows the WQBEL calculations for copper from marine sand washing discharges. These WQBELs were developed in accordance with the procedures specified in SIP section 1.4. This Order assumes minimal dilution is available for discharges; therefore, no dilution credit is granted in calculating these WQBELs.

Table F-7. WQBEL Calculations

Pollutant	Copper (Marine Sand Washing)
Units	µg/L
Basis and criteria type	Basin Plan Marine Objective Central San Francisco Bay
Criteria –Acute	-----
Criteria –Chronic	-----
SSO Criteria -Acute	3.9
SSO Criteria -Chronic	2.5
Water effects ratio (WER)	2.4
Lowest WQO	3.4
Site specific translator - MDEL	0.87
Site specific translator - AMEL	0.73
Dilution factor (D) (if applicable)	0
No. of samples per month	4
Aquatic life criteria analysis required? (Y/N)	Y

Pollutant	Copper (Marine Sand Washing)
Units	µg/L
HH criteria analysis required? (Y/N)	Y
Applicable Acute WQO	11
Applicable Chronic WQO	8.2
HH criteria	1300
Background (Maximum concentration for aquatic life calculation)	0
Background (Average concentration for human health calculation)	0
Is the pollutant on the 303(d) list and bioaccumulative (Y/N)?	N
ECA acute	11
ECA chronic	8.2
ECA human health	1300
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	Y
Average of effluent data points	-----
Standard deviation of effluent data points	-----
CV (calculated)	N/A
CV (selected)	0.6
ECA acute mult99	0.32
ECA chronic mult99	0.53
LTA acute	3.45
LTA chronic	4.34
minimum of LTAs	3.45
AMEL mult95	1.6
MDEL mult99	3.1
AMEL (aq life)	5.4
MDEL(aq life)	11
MDEL/AMEL Multiplier	2.0
AMEL (human hlth)	1300
MDEL (human hlth)	-----
minimum of AMEL for Aq. life vs HH	5.4
minimum of MDEL for Aq. Life vs HH	11
Previous order AMEL	6.5
Previous order MDEL	13
Final limit - AMEL	5.4
Final limit - MDEL	11

The whole effluent acute toxicity effluent limit for aggregate mining and marine sand washing discharges is based on the Basin Plan Table 4-3 (intermittent discharges).

The mercury and PCBs effluent limits for marine sand washing discharges are based on the TMDL wasteload allocations set forth in Basin Plan sections 7.2.2 and 7.2.3. If in the future a watershed permit (e.g., NPDES Permit No. CA0038849) covers mercury and PCBs discharges from marine sand washing facilities, the limits in this Order would be unnecessary.

D. Effluent Limitation Considerations

1. **Anti-backsliding**. The effluent limitations in this Order comply with anti-backsliding requirements because they are at least as stringent as those in the previous order.

2. **Antidegradation**. This Order is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16. It continues the status quo with respect to the discharges authorized in the previous order. It does not allow for a reduced level of treatment or increase effluent limitations. It holds Dischargers to the same performance. Therefore, there will be no change in water quality beyond the level authorized in the previous order, which is the baseline by which to measure whether degradation will occur. Therefore, further analysis and findings authorizing degradation are unnecessary.

3. **Stringency of Requirements for Individual Pollutants**. This Order contains both technology-based and WQBELs for individual pollutants. This Order's technology-based requirements implement minimum applicable federal technology-based requirements. In addition, this Order contains more stringent effluent limitations as necessary to meet water quality standards. Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement CWA requirements.

   This Order's WQBELs have been derived to implement water quality objectives that protect beneficial uses. The beneficial uses and water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 C.F.R. section 131.38. The procedures for calculating these WQBELs are based on the CTR, as implemented in accordance with the SIP, which U.S. EPA approved on May 18, 2000. U.S. EPA approved most Basin Plan beneficial uses and water quality objectives prior to May 30, 2000. Beneficial uses and water quality objectives submitted to U.S. EPA prior to May 30, 2000, but not approved by U.S. EPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 C.F.R. section 131.21(c)(1). U.S. EPA approved the remaining beneficial uses and water quality objectives so they are applicable water quality standards pursuant to 40 C.F.R. section 131.21(c)(2).

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

The receiving water limits are based on the water quality objectives listed in Basin Plan chapter 3 and are intended to ensure that receiving waters meet water quality standards in accordance with the CWA and regulations adopted thereunder.

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

Attachment D contains standard provisions that apply to all NPDES permits in accordance with 40 C.F.R. section 122.41 and additional conditions applicable to specific categories of permits in accordance with 40 C.F.R. section 122.42. Dischargers must comply with these provisions. The conditions set forth in 40 C.F.R. sections 122.41(a)(1) and (b) through (n) apply to all state-

issued NPDES permits and must be incorporated into the permits either expressly or by reference.

In accordance with 40 C.F.R. section 123.25(a)(12), states may omit or modify conditions to impose more stringent requirements. This Order contains provisions that supplement the federal standard provisions in Attachment D. This Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the State's enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates Water Code section 13387(e) by reference.

B. Monitoring and Reporting Provisions

CWA section 308 and 40 C.F.R. sections 122.41(h), 122.41(j)-(l), 122.44(i), and 122.48 require that NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The Monitoring and Reporting Program (MRP) in Attachment E establishes monitoring, reporting, and recordkeeping requirements that implement federal and State requirements. For more information regarding these requirements, see Fact Sheet section VII.

C. Special Provisions

1. Reopener Provisions

These provisions are based on 40 C.F.R. sections 122.62 and 122.63 and allow modification of this Order and its effluent limitations as necessary in response to updated water quality objectives, regulations, or other new and relevant information that may become available in the future, and other circumstances as allowed by law.

2. Application for General Permit Coverage and Authorization to Discharge

The provisions requiring submittal of an NOI form and compliance with this Order upon receipt of an Authorization to Discharge are based on 40 C.F.R. section 122.28(b). Likewise, the provision allowing the Executive Officer to terminate an Authorization to Discharge is also based on 40 C.F.R. section 122.28(b). The provision allowing the Executive Officer to require an individual permit is based on 40 C.F.R. section 122.28(b)(3).

3. Basis for Construction, Operation, and Maintenance Specifications

a. Wastewater Facilities Review and Evaluation, and Status Reports. The purpose of this provision is to ensure adequate and reliable treatment and disposal of all wastewater and is based on 40 C.F.R. section 122.41(e).

b. Operations and Maintenance Manual Review and Status Reports. The purpose of this provision is to ensure that operations and maintenance procedures are in place that are useful and relevant to current equipment and operational practices. It is based on 40 C.F.R. section 122.41(e).

4. Basis for Best Management Practices, Special Studies, and Additional Monitoring Requirements

a. Best Management Practices Plans. This provision requires Dischargers to develop, update annually, and implement Best Management Practices (BMPs) plans. The purpose of the BMPs plan is to control and abate pollutant discharges to surface waters. The basis for this provision is 40 C.F.R. section 122.41 and as a means to provide equivalent protection to justify exception to the Basin Plan prohibition 1 on discharges without 10:1 initial dilution.

b. No Net TDS and Chloride Load *(optional)*. This optional provision allows Dischargers discharging to Alameda Creek and its tributaries above Niles to perform studies demonstrating that their operations and discharges result in no net TDS and chloride load to the groundwater basin. If the Executive Officer concurs with the study conclusions, the Discharger will not be subject to the chloride effluent limitation in section IV.A, and the TDS and chloride receiving water limitations in section V.B.4, of the Order.

The chloride effluent limitation and TDS and chloride receiving water limitations are intended to minimize salt build-up within the Livermore-Amador groundwater basin. Basin Plan section 4.11.4.1 states:

> The Livermore-Amador Valley groundwater basin is located in the middle of the Livermore-Amador Valley in eastern Alameda County and is primarily a closed groundwater basin within the Alameda Creek Watershed with multiple groundwater sub-basins of variable water quality. The Main Basin (that portion underlying the Cities of Livermore and Pleasanton) has the highest water quality, supplies most of the municipal wells in the area, and is used to store and distribute high quality imported water.
>
> Alameda Creek and its tributaries recharge the Valley's groundwater basin and serve as channels to convey water released from the South Bay Aqueduct (SBA) to the main basin and the Niles Cone groundwater basin for artificial recharge. ...
>
> The current surface water quality objectives for the Alameda Creek Watershed above Niles (Basin Plan Table 3-7) were adopted in 1975. They were based on historic SBA water quality primarily to prevent degradation by wastewater discharges of imported SBA water being conveyed and used for groundwater recharge during dry weather periods. Wastewater discharges were terminated in 1980.

Dischargers could have difficulty complying with the chloride effluent limit and TDS and chloride receiving water limits based on the water quality objectives in Basin Plan Table 3-7. This provision allows them to demonstrate that their operations and discharges result in no net TDS and chloride load to the groundwater basin. Under such conditions, exceptions to the limits are consistent with the intent of the Basin Plan to protect ground water quality from TDS and chloride build-up.

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

The MRP is a standard requirement in all NPDES permits issued by the Regional Water Board, including this Order. It specifies sampling stations, pollutants to be monitored (including parameters for which effluent limitations are specified), monitoring frequencies, and additional reporting requirements. The principal purposes of a monitoring program are to document compliance with WDRs and prohibitions established by the Regional Water Board; to facilitate self-policing by dischargers in the prevention and abatement of pollution arising from waste discharges; to develop or assist in the development of limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards; and to prepare water and wastewater quality inventories.

A. Effluent Monitoring. Effluent monitoring is necessary to evaluate compliance with the Order's prohibitions and effluent limitations, and to understand Facility operations.

B. Whole Effluent Acute Toxicity Testing. Acute toxicity tests are necessary to evaluate compliance with the Order's acute toxicity effluent limitations. Toxicity testing is not required for sand offloading facilities because any pollutants would be originally from San Francisco Bay.

C. Receiving Water Monitoring. Receiving water monitoring is necessary to characterize the effects discharges could have on receiving waters and, in some cases, to evaluate compliance with receiving water limits. Freshwater monitoring is also necessary to calculate some water quality objectives.

VIII. PUBLIC PARTICIPATION

The Regional Water Board considered the issuance of WDRs that will serve as an NPDES permit for aggregate mining, marine sand washing, and sand offloading facilities in the San Francisco Bay Region. As a step in the WDRs adoption process, the Regional Water Board developed tentative WDRs and encouraged public participation in the WDRs adoption process.

A. Notification of Interested Parties. The Regional Water Board notified Dischargers and interested agencies and persons of its intent to prescribe WDRs and provided an opportunity to submit written comments and recommendations. Notification was provided through *The Recorder* in San Francisco. The public had access to the agenda and any changes in dates and locations through the Regional Water Board website at www.waterboards.ca.gov/sanfranciscobay.

B. Written Comments. Interested persons were invited to submit written comments concerning the tentative WDRs as explained through the notification process. Comments were due either in person or by mail at the Regional Water Board office at 1515 Clay Street, Suite 1400, Oakland, California 94612, to the attention of Farhad Azimzadeh.

For full staff response and Regional Water Board consideration, the written comments were due at the Regional Water Board office by 5:00 p.m. on April 1, 2015.

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

Date: Wednesday, July 8, 2015
Time: 9:00 a.m.
Location: Elihu Harris State Office Building
1515 Clay Street, 1st Floor Auditorium
Oakland, CA 94612

Contact: Farhad Azimzadeh, (510) 622-2310,
Farhad.Azimzadeh@waterboards.ca.gov

Interested persons were invited to attend. At the public hearing, the Regional Water Board heard testimony pertinent to the discharges, WDRs, and permit. For accuracy of the record, important testimony was requested to be in writing.

Dates and venues change. The Regional Water Board web address is www.waterboards.ca.gov/sanfranciscobay, where one could access the current agenda for changes in dates and locations.

D. Reconsideration of Waste Discharge Requirements. Any aggrieved person may petition the State Water Board to review the Regional Water Board decision regarding the final WDRs. The State Water Board must receive the petition at the following address within 30 calendar days of the Regional Water Board action:

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

For instructions on how to file a petition for review, see www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml.

E. Information and Copying. Supporting documents and comments received are on file and may be inspected at the address above at any time between 9:00 a.m. and 5:00 p.m., Monday through Friday. Copying of documents may be arranged by calling (510) 622-2300.

F. Register of Interested Persons. Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference the general permit, 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 Farhad.Azimzadeh@waterboards.ca.gov.