



Regional Water Quality Control Board

Central Coast Region



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Arnold Schwarzenegger
Governor

ORDER NO. R3-2010-0025
NPDES NO. CA0005274

WASTE DISCHARGE REQUIREMENTS FOR THE GRANITE ROCK COMPANY, INC., ARTHUR R. WILSON QUARRY

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

Table 1. Discharger Information

Discharger	Granite Rock Company, Inc.
Name of Facility	Arthur R. Wilson Quarry
Facility Address	End of Quarry Road
	Aromas, California 95004
	San Benito County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge.	

The discharge by Granite Rock Company, Inc. from the Arthur R. Wilson Quarry from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

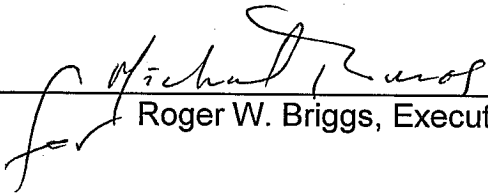
Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Treated wastewater and stormwater	36°, 55', 48" N	121°, 36', 58" W	Pajaro River

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	December 9, 2010
This Order shall become effective on:	January 28, 2011
This Order shall expire on:	January 28, 2016
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	July 28, 2015

IT IS HEREBY ORDERED, that Order No. R3-2005-0044 is rescinded upon the effective date of this Order except for enforcement purposes, and, to meet the provisions contained in division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, Roger W. Briggs, Executive Officer, do hereby certify that this Order, with all attachments, is a full, true, and correct copy of an Order adopted by the Regional Water Board on **December 9, 2010.**



Roger W. Briggs, Executive Officer

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I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	Granite Rock Company, Inc.
Name of Facility	Arthur R. Wilson Quarry
Facility Address	End of Quarry Road
	Aromas, California 95004
	San Benito County
Facility Contact, Title, and Phone	Aaron Johnston-Karas, Director of Sustainable Resource Development, (831) 768-2094
Mailing Address	P.O. Box 50001, Watsonville, CA 95077
Type of Facility	Granite Quarry and Processing, NAICS Code 212313/SIC Codes 1423, 2951 and 4212
Facility Design Flow	9.0 million gallons per day (MGD)

II. FINDINGS

The California Regional Water Quality Control Board, Central Coast Region (Regional Water Board), finds:

A. Background. The Granite Rock Company, Inc. (hereinafter the Discharger) is currently discharging under Order No. R3-2005-0044 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0005274. The Discharger submitted a Report of Waste Discharge, dated January 7, 2010, and applied for a NPDES permit renewal to discharge treated wastewater and stormwater runoff from the Arthur R. Wilson Quarry (hereinafter Facility). The application was deemed complete on **February 23, 2010**, by Regional Water Board staff.

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

B. Facility Description. The Discharger mines, processes, and stockpiles granite rock aggregates, which are used as basic construction materials and as feed materials in on-site and off-site asphalt and concrete manufacturing plants. Water flow through the Facility is designed to be a closed-loop system such that water recycling is maximized. Water intakes and inputs to the system include rainfall (including stormwater runoff), treated process water, and supplemental groundwater.

Stormwater is collected in the Facility's Quarry Storage Reservoir and in the Soda Lake (a man-made retention pond) for settling and re-use. Stormwater is also collected in the Facility's stormwater settling basin systems, one of which may also be used as supplemental water if needed. The Facility's water circuit uses well water as makeup

and recycles water between the wet processing plant and the Quarry Storage Reservoir. Wash water from the aggregate wash in the wet process plant is pumped to the Fines Treatment Plant for treatment. The treated process water then flows to the Quarry Storage Reservoir and is stored for later re-use. The treated process water may also be pumped to Soda Lake.

As a result of the Facility's ability to treat and store process water, and water losses due to evaporation, retention in product, and dust control application, there are infrequent discharges of process water from the Facility. Recycled water discharge from the Quarry Storage Reservoir to the Pajaro River through Discharge Point 001 occurs only after a rain event (or events) that occur at a rate and/or frequency that result in more rain than the storage capacity at the Facility. The last recorded discharge from the Facility occurred in January 2002. No discharges occurred during the term of the existing Order. Discharges to the Pajaro River occur at Discharge Point 001 (36° 55' 48"N Latitude; 121° 36' 58" W Longitude) from the Quarry Storage Reservoir, where water is pumped from the surface of the reservoir to a concrete reinforced bank that serves to dissipate energy and minimize erosion during discharge events. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

- C. Legal Authorities.** This Order is issued pursuant to section 402 of the Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). This Order shall serve as a NPDES permit for point source discharges from this Facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260).
- D. Background and Rationale for Requirements.** The Regional Water Board developed the requirements of this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information, including a site visit on March 11, 2010. The Fact Sheet (Attachment F), which contains background information and rationale for the Order's waste discharge requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E are also incorporated into this Order.
- E. California Environmental Quality Act (CEQA).** Under California Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.
- F. Technology-based Effluent Limitations.** Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations¹, require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements

¹ All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

based on Effluent Limitations Guidelines and Standards for the Mineral Mining and Processing Point Source Category in Part 436 and Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).

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

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

Water Quality Control Plans. The Regional Water Board has adopted a Water Quality Control Plan for the Central Coast Region (Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for receiving waters within the Region. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes state policy that all waters, with certain exceptions, are suitable or potentially suitable municipal or domestic drinking water supplies. Beneficial uses established by the Basin Plan for the Pajaro River are presented in Table 5, below.

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Pajaro River	MUN - Municipal and domestic supply AGR - Agricultural supply IND - Industrial service supply GWR - Groundwater recharge REC-1 - Water contact recreation REC-2 - Non-contact water recreation WILD - Wildlife habitat COLD - Cold fresh water habitat WARM - Warm fresh water habitat MIGR - Migration of aquatic organisms SPWN - Spawning, reproduction, and/or early development FRSH - Freshwater replenishment COMM - Commercial and sport fishing

To protect beneficial uses, the Basin Plan establishes water quality objectives and implementation programs. This Order's requirements implement the Basin Plan.

- H. Thermal Plan.** The State Water Board adopted a Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. The Thermal Plan contains temperature objectives for inland surface waters, which are applicable to the Discharger. The general objective for temperature from Section II.A.2.a. of the Basin Plan is more limiting, however, and is included as a receiving water limitation in the Order along with temperature limits developed and proposed by the California Department of Fish and Game and others for a previously permitted Pajaro River discharge (Order No. R3-2009-0044) that are protective of all life stages of steelhead.
- I. National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants that are applicable to discharges from the Facility.
- J. State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
- K. Compliance Schedules and Interim Requirements.** Section 2.1 of the SIP provides that, based on a Discharger's request and demonstration that it is infeasible for an existing Discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order does not include compliance schedules or interim effluent limitations.

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

M. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. As discussed in section IV.B of the Fact Sheet, the Order establishes technology-based effluent limitations for pH, turbidity and total suspended solids (TSS) for Discharge Point 001. These technology-based limitations implement the minimum applicable federal technology-based requirements. The Order also contains limitations necessary to meet applicable water quality standards. These limitations are not more stringent than required by the CWA.

WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to NPDES regulations at 40 CFR 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR and the SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless “applicable water quality standards for purposes of the CWA” pursuant to NPDES regulations at 40 CFR 131.21 (c)(1). Collectively, this Order’s restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

N. Antidegradation Policy. NPDES regulations at 40 CFR 131.12 require that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California’s antidegradation policy in State Water Board Resolution No. 68-16, which incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that the existing quality of waters be maintained unless degradation is justified based on specific findings. The Basin Plan implements and incorporates by reference both the state and federal antidegradation policies. As discussed in Section III.C.5 of the Fact Sheet, the permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

O. Anti-Backsliding Requirements. CWA sections 402 (o) (2) and 303 (d) (4) and NPDES regulations at 40 CFR 122.44 (l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may

be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

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

Q. Monitoring and Reporting. Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) (Attachment E) establishes monitoring and reporting requirements to implement federal and state requirements.

R. Standard and Special Provisions. Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.

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

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

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

III. DISCHARGE PROHIBITIONS

A. Discharge of treated wastewater at a location other than Discharge Point 001 (36°, 55', 48" N Latitude and 121°, 36', 58" W Longitude), as described by this Order, is prohibited, unless the discharge is regulated by General Permit No. CAS000001 or another discharge permit.

- B.** The discharge of any waste not specifically regulated by this Permit to a storm drain system or to waters of the United States, excluding stormwater regulated by General Permit No. CAS000001 (Waste Discharge Requirements for Discharges of Stormwater Associated with Industrial Activities), is prohibited.
- C.** The overflow or bypass of wastewater from the Discharger's collection, treatment, or disposal facilities and the subsequent discharge of untreated or partially treated wastewater, except as provided for in Attachment D, Standard Provision I.G (Bypass), is prohibited.
- D.** The discharge shall not cause or contribute to adverse impacts to beneficial uses of water or to threatened or endangered species and their habitat.
- E.** Creation of a condition of pollution, contamination, or nuisance, as defined by Section 13050 of the California Water Code, is prohibited.
- F.** The discharge shall not cause or contribute to downstream flooding within the Pajaro River.
- G.** The flow rate of the discharge of Facility process water from the Quarry Storage Reservoir to the Pajaro River shall not exceed 9.0 MGD.
- H.** The discharge of Facility process water from the Quarry Storage Reservoir to the Pajaro River shall not occur when Pajaro River flows are greater than 13,000 MGD (corresponding to a Pajaro River stage of approximately 31.3 feet) as measured at the Chittenden gauging station.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations – Discharge Point 001

a. **Conventional and Non-Conventional Pollutants.** The Discharger shall comply with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the attached Monitoring and Reporting Program (MRP).

Table 6. Effluent Limitations for Conventional and Nonconventional Pollutants

Constituent	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
pH	s.u.	7.0 - 8.3 at all times	
Total Suspended Solids (TSS)	mg/L	50	--
Total Dissolved Solids	mg/L	1,000	--
Turbidity	NTUs	--	50
Acute Toxicity	TU	--	1 ^{[1][2]}
Suspended Sediments	mg/L	<ul style="list-style-type: none"> For a discharge duration of 1 day (24 hours) or less, the suspended sediments concentration (SSC) cannot exceed 1,807 mg/L. For a discharge duration of 2 days (48 hours), the SSC cannot exceed 665 mg/L for both days. For a discharge duration of 2 to 14 days (48 to 336 hours), the SSC cannot exceed 244 mg/L for each day. For a discharge duration of 14 to 49 days (336 to 1,176 hours), the SSC cannot exceed 90 mg/L for each day. For a discharge duration of greater than 49 days (1,176 hours), the SSC cannot exceed 90 mg/L for each day. 	

^[1] Or the background toxicity of the receiving water as determined by concurrent toxicity testing using upstream receiving water samples; the greater of the two shall apply.

^[2] Survival of test organisms exposed to 100 percent effluent shall not be significantly reduced when compared to the survival of control organisms using a t-test.

b. **Toxic Pollutants.** The Discharger shall comply with the following effluent limitations for toxic pollutants at Discharge Point 001, with compliance measured at Monitoring Location EFF-001, as described in the attached MRP.

Table 7. Effluent Limitations for Toxic Pollutants

Constituent	Units	Effluent Limits	
		Average Monthly	Maximum Daily
Mercury, Total Recoverable	µg/L	0.050	0.10
Selenium, Total Recoverable	µg/L	10	20
Cyanide, Total (as CN)	µg/L	4.3	8.5
Aluminum, Total Recoverable	µg/L	1,000	5,000
Iron, Total Recoverable	µg/L	1,000	--
Molybdenum, Total Recoverable	µg/L	10	--

B. Land Discharge Specifications – Not Applicable

C. Reclamation Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitation

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. Discharges from the Facility shall not cause the following conditions in the Pajaro River.

1. Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses. Coloration attributable to materials of waste origin shall not be greater than 15 units or 10 percent above natural background color, whichever is greater.
2. Waters shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses.
3. Waters shall not contain floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.
4. Waters shall not contain suspended material in concentrations that causes nuisance or adversely affects beneficial uses.
5. Waters shall not contain settleable material in concentrations that result in deposition of material that causes nuisance or adversely affects beneficial uses.
6. Waters shall not contain oils, greases, waxes, or other similar materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses.
7. Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

- 8.** The suspended sediment load and suspended sediment discharge rate to surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
- 9.** Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increase in turbidity attributable to controllable water quality factors shall not exceed the following limits:
 - a.** Where natural turbidity is between 0 and 50 Nephelometer Turbidity Units (NTU), increases shall not exceed 20 percent.
 - b.** Where natural turbidity is between 50 and 100 NTU, increases shall not exceed 10 NTU.
 - c.** Where natural turbidity is greater than 100 NTU, increases shall not exceed 10 percent.
- 10.** To protect cold freshwater habitat, the pH value shall not be depressed below 7.0 nor raised above 8.3, nor shall changes in ambient pH levels exceed 0.5 pH units.
- 11.** To protect cold freshwater habitat, dissolved oxygen concentrations in receiving waters shall not be reduced below 7.0 mg/L at any time. If background concentration of dissolved oxygen in receiving waters is less than 7.0 mg/L, then discharges shall not reduce dissolved oxygen concentrations.
- 12.** To protect cold freshwater habitat, the discharge to the Pajaro River shall not increase the temperature of the Pajaro River by more than 5°F. At no time shall the discharge cause Pajaro River temperature to exceed 68°F in October or November and 57°F in December through April. If the background Pajaro River temperature exceeds 68°F in October or November and 57°F in December through April, then the discharge shall not cause any observable increase in background temperature.
- 13.** All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in human, plant, animal, or aquatic life. Survival of aquatic life in surface waters subjected to a waste discharge or other controllable water quality conditions shall not be less than that for the same water body in areas unaffected by the waste discharge.
- 14.** The discharge of wastes shall not cause concentrations of unionized ammonia (NH₃) to exceed 0.025 mg/L (as N) in the Pajaro River.
- 15.** No individual pesticide or combination of pesticides shall reach concentrations that adversely affect the beneficial uses of the receiving water. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life. For waters presently free of detectable pesticides or where beneficial uses would be impaired by detectable pesticide concentrations, the discharge shall not contain chlorinated hydrocarbon pesticides at concentrations detectable within the accuracy of analytical methods as prescribed in Standard Methods for the Examination of

Water and Wastewater, latest edition, or other equivalent methods approved by the Executive Officer.

16. Waters shall not contain organic substances in concentrations greater than the following:

Methylene Blue Activated Substances	0.2 mg/L
Phenols	0.1 mg/L
PCBs	0.3 µg/L
Phthalate Esters	0.002 µg/L

17. Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life; or result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal, or aquatic life. In no circumstance shall receiving waters contain concentrations of radionuclides in excess of the maximum contaminant levels (MCLs) for radioactivity presented in Table 4 of Title 22 California Code of Regulations, Division 4, Chapter 15, Article 5.

18. To protect the municipal and domestic supply beneficial use, receiving waters shall not contain concentrations of chemical constituents in excess of the primary maximum contaminant levels (MCLs) specified for drinking water in Table 64431-A (Primary MCLs for Inorganic Chemicals) and Table 64444-A (Primary MCLs for Organic Chemicals) of Title 22 California Code of Regulations, Division 4, Chapter 15.

19. To protect the water contact recreation beneficial use, fecal coliform concentration in the wastewater discharge, based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200 per 100 mL, nor shall more than 10 percent of samples collected during any 30-day period exceed 400 per 100 mL.

20. Receiving waters shall not contain concentrations of chemical constituents in amounts that adversely affect the agricultural beneficial use. (Interpretation of adverse effect shall be derived from guidelines of the University of California Agricultural Extension Service presented in Section III, Table 3-3 of the Basin Plan.

21. Waters used for irrigation and livestock watering shall not contain chemical constituents in excess of those levels specified for irrigation and livestock watering in Section III, Table 3-4 of the Basin Plan.

22. To protect cold and warm freshwater habitat beneficial uses, receiving waters shall not contain metals in excess of the following concentrations, established by Table 3-5 of the Basin Plan.

Metal	Receiving Water Hardness > 100 mg/L CaCO ₃	Receiving Water Hardness < 100 mg/L CaCO ₃
Cadmium ^[1]	0.03 mg/L	0.004 mg/L
Chromium	0.05 mg/L	0.05 mg/L
Copper	0.03 mg/L	0.01 mg/L
Lead	0.03 mg/L	0.03 mg/L
Mercury ^[2]	0.0002 mg/L	0.0002 mg/L
Nickel ^[3]	0.4 mg/L	0.1 mg/L
Zinc	0.2 mg/L	0.004 mg/L

^[1] Lower cadmium values not to be exceeded for crustaceans and waters designated SPWN are 0.003 mg/ in hard water and 0.0004 mg/L in soft water.

^[2] Total mercury values should not exceed 0.05 mg/L as an average value; maximum acceptable concentration of total mercury in any aquatic organism is a total biochemical oxygen demand burden of 0.5 mg/L wet weight.

^[3] Value cited as objective pertains to nickel salts (not pure metallic nickel).

23. The following surface water quality objectives for the Pajaro River at Chittenden, established by Table 3-7 of the Basin Plan, shall not be exceeded.

TDS	Chloride	Sulfate	Boron	Sodium
1,000 mg/L	250 mg/L Cl	250 mg/L SO ₄	1.0 mg/L B	200 mg/L Na

B. Groundwater Limitations – Not Applicable

VI. PROVISIONS

A. Standard Provisions

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

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order. All monitoring shall be conducted according to 40 CFR 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants*.

C. Special Provisions

1. Reopener Provisions

a. This permit may be reopened and modified in accordance with NPDES regulations at 40 CFR 122 and 124, as necessary, to include additional conditions or limitations based on newly available information or to implement any USEPA-approved, new state water quality objective.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Toxicity Reduction Requirements

If the discharge consistently exceeds an effluent limitation for toxicity specified by section IV.A.1.b of this Order, the Discharger shall conduct a Toxicity Reduction Evaluation (TRE) in accordance with the Discharger's TRE Workplan.

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

The Discharger shall maintain a TRE Workplan, which describes steps that the Discharger intends to follow if a toxicity effluent limitation in this Order is exceeded. The Workplan shall be prepared in accordance with current technical guidance and reference material, including EPA/600/2-88-062, and shall describe, at a minimum:

- i. Actions proposed to investigate/identify the causes/sources of toxicity;
- ii. Actions proposed to mitigate the discharge's adverse effects, to correct the non-compliance, and/or to prevent the recurrence of acute or chronic toxicity; and
- iii. A schedule to implement these actions.

When monitoring detects effluent toxicity greater than a limitation in this Order, the Discharger shall resample immediately, if the discharge is continuing, and retest for whole effluent toxicity. Results of an initial failed test and results of subsequent monitoring shall be reported to the Executive Officer (EO) as soon as possible after receiving monitoring results. The EO will determine whether to initiate enforcement action, whether to require the Discharger to implement a TRE, or to implement other measures. The Discharger shall conduct a TRE considering guidance provided by the USEPA's Toxicity Reduction Evaluation Procedures, Phases 1, 2, and 3 (EPA document Nos. EPA 600/3-88/034, 600/3-88/035, and 600/3-88/036, respectively). A TRE, if necessary, shall be conducted in accordance with the following schedule.

Table 8. Toxicity Reduction Evaluation Schedule

Action Step	When Required
Take all reasonable measures necessary to immediately reduce toxicity, where the source is known.	Within 24 hours of identification of noncompliance.
Initiate the TRE in accordance to the Workplan.	Within 7 days of notification by the EO.
Conduct the TRE following the procedures in the Workplan.	Within the period specified in the Workplan (not to exceed one year without an approved Workplan)
Submit the results of the TRE, including summary of findings, required corrective action, and all results and data.	Within 60 days of completion of the TRE.
Implement corrective actions to meet Permit limits and conditions.	To be determined by the EO.

3. Best Management Practices and Pollution Prevention – Not Applicable

4. Construction, Operation and Maintenance Specifications

- a. **Erosion and Sediment Control.** By October 1 of each year, the Discharger shall inspect, install, and have proper operational condition all erosion and sediment control systems necessary to ensure compliance with this Order.

5. Other Special Provisions

- a. **Discharges of Stormwater.** For the control of stormwater discharged from the site of the wastewater treatment and disposal facilities, if applicable, the Discharger shall seek authorization to discharge under and meet the requirements of the State Water Resources Control Board’s Water Quality Order 97-03-DWQ, NPDES General Permit No. CAS000001, *Waste Discharge Requirements for Discharges of Stormwater Associated with Industrial Activities Excluding Construction Activities*.

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

7. Compliance Schedules – Not Applicable

VII. COMPLIANCE DETERMINATION

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

A. General

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

B. Multiple Sample Data

When determining compliance with a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses and the data set contains one or more reported determinations of “Detected, but Not Quantified” (DNQ) or “Not Detected” (ND), the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

ATTACHMENT A – DEFINITIONS

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

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

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

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

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

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

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

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

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

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

Detected, but Not Quantified (DNQ): those sample results less than the reported Minimum Level, but greater than or equal to the laboratory's Minimum Detection Level (MDL).

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

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

Enclosed Bays: indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. This definition includes but is not limited to: Humboldt Bay, Bodega Harbor, Tomales Bay, Drakes Estero, San Francisco Bay, Morro Bay, Los Angeles Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay.

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

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

Maximum Daily Effluent Limitation (MDEL): the highest allowable daily discharge of a pollutant.

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

MDL (Method Detection Limit): the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, as defined in title 40 of the Code of Federal Regulations, PART 136, Appendix B.

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

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

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

Ocean Waters: the territorial marine waters of the state as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. If a discharge outside the territorial waters of the state could affect the quality of the waters of the state, the discharge may be regulated to assure no violation of the Ocean Plan will occur in ocean waters.

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

PCBs (polychlorinated biphenyls): the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

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

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

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

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

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

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

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

where:

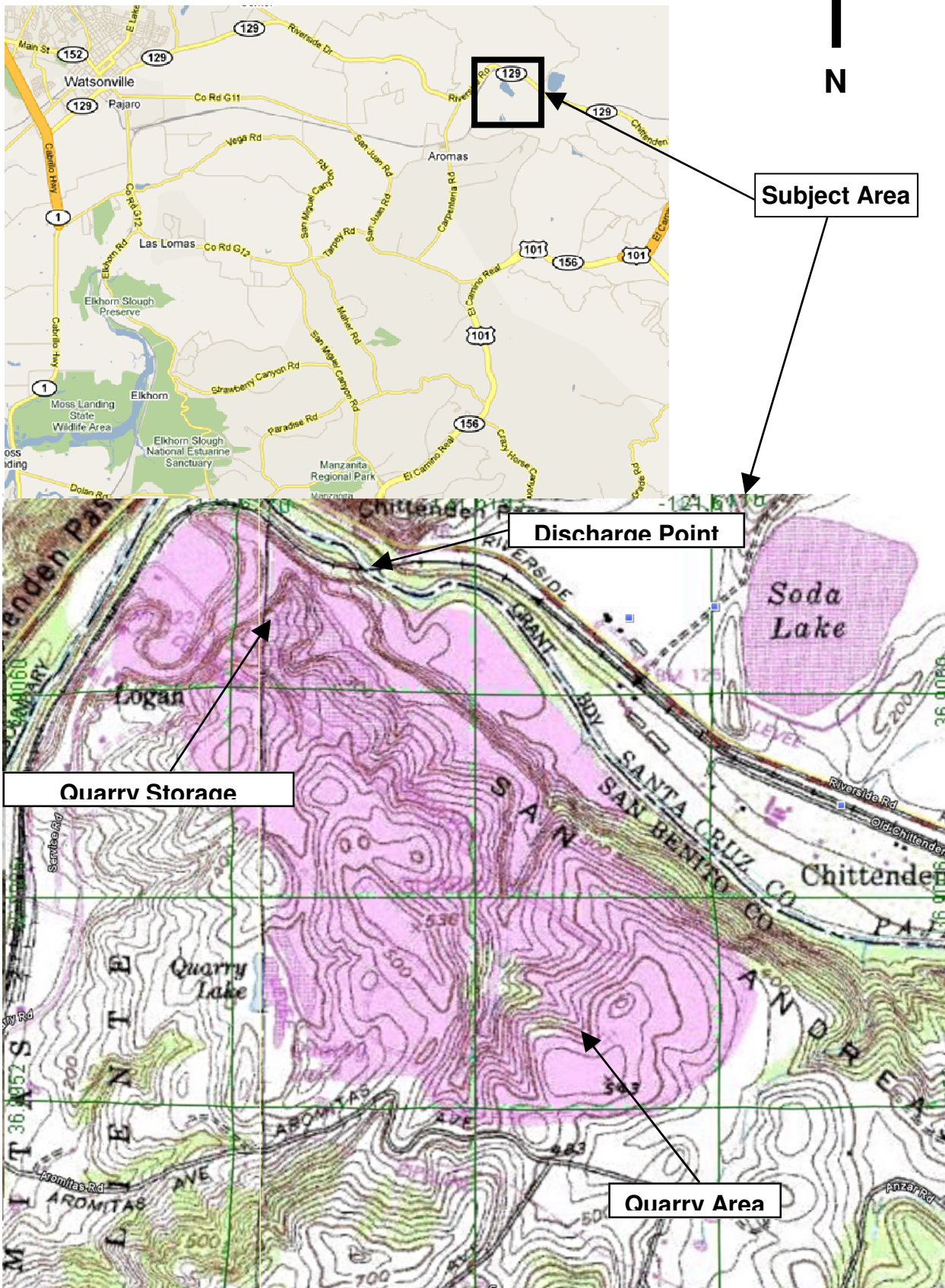
x is the observed value;

μ is the arithmetic mean of the observed values; and

n is the number of samples.

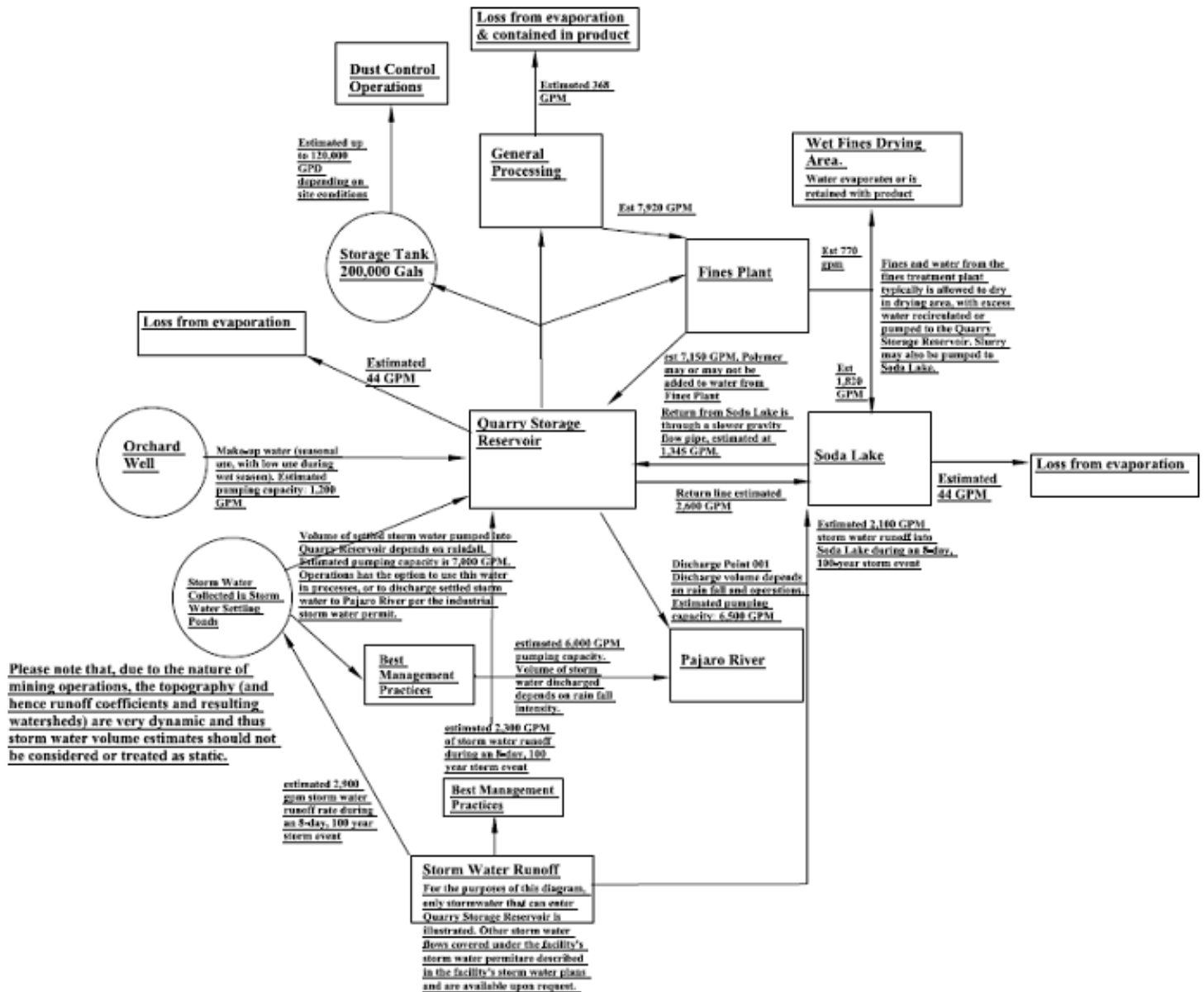
Toxicity Reduction Evaluation (TRE): a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps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

ATTACHMENT B – MAP



Attachment B –Map

ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D –STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 CFR § 122.41(a).)
2. The Discharger shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 CFR § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

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

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

F. Inspection and Entry

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

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 CFR § 122.41(i)(1));
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 CFR § 122.41(i)(2));
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 CFR § 122.41(i)(3)); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (40 CFR § 122.41(i)(4).)

G. Bypass

1. Definitions
 - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR § 122.41(m)(1)(i).)
 - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR § 122.41(m)(1)(ii).)
2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 CFR § 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR § 122.41(m)(4)(i)):
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR § 122.41(m)(4)(i)(A));
 - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR § 122.41(m)(4)(i)(B)); and
 - c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 CFR § 122.41(m)(4)(i)(C).)
4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 CFR § 122.41(m)(4)(ii).)
5. Notice
 - a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 CFR § 122.41(m)(3)(i).)
 - b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 CFR § 122.41(m)(3)(ii).)

H. Upset

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

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

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR § 122.41(n)(3)):
 - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR § 122.41(n)(3)(i));
 - b. The permitted facility was, at the time, being properly operated (40 CFR § 122.41(n)(3)(ii));
 - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 CFR § 122.41(n)(3)(iii)); and
 - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 CFR § 122.41(n)(3)(iv).)
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 CFR § 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

- A.** Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR § 122.41(j)(1).)
- B.** Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order. (40 CFR § 122.41(j)(4); § 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

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

B. Records of monitoring information shall include:

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

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

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

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 CFR § 122.41(k).)
2. All permit applications shall be signed by a responsible 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).)
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 CFR § 122.22(b)(1));
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative

- may thus be either a named individual or any individual occupying a named position.) (40 CFR § 122.22(b)(2)); and
- c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 CFR § 122.22(b)(3).)
 4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR § 122.22(c).)
 5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

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

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR § 122.41(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 CFR § 122.41(l)(4)(i).)
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 CFR § 122.41(l)(4)(ii).)
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR § 122.41(l)(4)(iii).)

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 CFR § 122.41(l)(6)(i).)
2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 CFR § 122.41(l)(6)(ii)):
 - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(A).)
 - b. Any upset that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(B).)
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR § 122.41(l)(6)(iii).)

F. Planned Changes

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

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 CFR § 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR § 122.41(l)(1)(ii).)
3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during

the permit application process or not reported pursuant to an approved land application plan. (40 CFR § 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

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

H. Other Noncompliance

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

I. Other Information

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

VI. STANDARD PROVISIONS – ENFORCEMENT

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

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

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

- 1.** That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 CFR §122.42(a)(1)):
 - a.** 100 micrograms per liter ($\mu\text{g/L}$) (40 CFR §122.42(a)(1)(i));
 - b.** 200 $\mu\text{g/L}$ for acrolein and acrylonitrile; 500 $\mu\text{g/L}$ for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 CFR § 122.42(a)(1)(ii));
 - c.** Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 CFR §122.42(a)(1)(iii)); or

ATTACHMENT D-1 - CENTRAL COAST REGIONAL WATER BOARD STANDARD PROVISIONS (JANUARY 1985)

I. CENTRAL COAST GENERAL PERMIT CONDITIONS

A. Central Coast Standard Provisions – Prohibitions

1. Introduction of "incompatible wastes" to the treatment system is prohibited.
2. Discharge of high-level radiological waste and of radiological, chemical, and biological warfare agents is prohibited.
3. Discharge of "toxic pollutants" in violation of effluent standards and prohibitions established under Section 307(a) of the Clean Water Act is prohibited.
4. Discharge of sludge, sludge digester or thickener supernatant, and sludge drying bed leachate to drainageways, surface waters, or the ocean is prohibited.
5. Introduction of pollutants into the collection, treatment, or disposal system by an "indirect discharger" that:
 - a. Inhibit or disrupt the treatment process, system operation, or the eventual use or disposal of sludge; or,
 - b. Flow through the system to the receiving water untreated; and,
 - c. Cause or "significantly contribute" to a violation of any requirement of this Order, is prohibited.
6. Introduction of "pollutant free" wastewater to the collection, treatment, and disposal system in amounts that threaten compliance with this order is prohibited.

B. Central Coast Standard Provisions – Provisions

1. Collection, treatment, and discharge of waste shall not create a nuisance or pollution, as defined by Section 13050 of the California Water Code.
2. All facilities used for transport or treatment of wastes shall be adequately protected from inundation and washout as the result of a 100-year frequency flood.
3. Operation of collection, treatment, and disposal systems shall be in a manner that precludes public contact with wastewater.
4. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed in a manner approved by the Executive Officer.
5. Publicly owned wastewater treatment plants shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Title 23 of the California Administrative Code.

6. After notice and opportunity for a hearing, this order may be terminated for cause, including, but not limited to:
 - a. violation of any term or condition contained in this order;
 - b. obtaining this order by misrepresentation, or by failure to disclose fully all relevant facts;
 - c. a change in any condition or endangerment to human health or environment that requires a temporary or permanent reduction or elimination of the authorized discharge; and,
 - d. a substantial change in character, location, or volume of the discharge.
7. Provisions of this permit are severable. If any provision of the permit is found invalid, the remainder of the permit shall not be affected.
8. After notice and opportunity for hearing, this order may be modified or revoked and reissued for cause, including:
 - a. Promulgation of a new or revised effluent standard or limitation;
 - b. A material change in character, location, or volume of the discharge;
 - c. Access to new information that affects the terms of the permit, including applicable schedules;
 - d. Correction of technical mistakes or mistaken interpretations of law; and,
 - e. Other causes set forth under Sub-part D of 40 CFR Part 122.
9. Safeguards shall be provided to assure maximal compliance with all terms and conditions of this permit. Safeguards shall include preventative and contingency plans and may also include alternative power sources, stand-by generators, retention capacity, operating procedures, or other precautions. Preventative and contingency plans for controlling and minimizing the affect of accidental discharges shall:
 - a. identify possible situations that could cause "upset", "overflow" or "bypass", or other noncompliance. (Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.)
 - b. evaluate the effectiveness of present facilities and procedures and describe procedures and steps to minimize or correct any adverse environmental impact resulting from noncompliance with the permit.
10. Physical Facilities shall be designed and constructed according to accepted engineering practice and shall be capable of full compliance with this order when properly operated and maintained. Proper operation and maintenance shall be

described in an Operation and Maintenance Manual. Facilities shall be accessible during the wet-weather season.

11. Production and use of reclaimed water is subject to the approval of the Board. Production and use of reclaimed water shall be in conformance with reclamation criteria established in Chapter 3, Title 22, of the California Administrative Code and Chapter 7, Division 7, of the California Water Code. An engineering report pursuant to section 60323, Title 22, of the California Administrative Code is required and a waiver or water reclamation requirements from the Board is required before reclaimed water is supplied for any use, or to any user, not specifically identified and approved either in this Order or another order issued by this Board.

C. Central Coast Standard Provisions – General Monitoring Requirements

1. If results of monitoring a pollutant appear to violate effluent limitations based on a weekly, monthly, 30-day, or six-month period, but compliance or non-compliance cannot be validated because sampling is too infrequent, the frequency of sampling shall be increased to validate the test within the next monitoring period. The increased frequency shall be maintained until the Executive Officer agrees the original monitoring frequency may be resumed.

For example, if arsenic is monitored annually and results exceed the six-month median numerical effluent limitation in the permit, monitoring of arsenic must be increased to a frequency of at least once every two months (Central Coast Standard Provisions – Definitions I.G.13.). If suspended solids are monitored weekly and results exceed the weekly average numerical limit in the permit, monitoring of suspended solids must be increased to at least four (4) samples every week (Central Coast Standard Provisions – Definitions I.G.14.).

2. Water quality analyses performed in order to monitor compliance with this permit shall be by a laboratory certified by the State Department of Health Services for the constituent(s) being analyzed. Bioassay(s) performed in order to monitor compliance with this permit shall be in accord with guidelines approved by the State Water Resources Control Board and the State Department of Fish and Game. If the laboratory used or proposed for use by the discharger is not certified by the California Department of Health Services or, where appropriate, the Department of Fish and Game due to restrictions in the state's laboratory certification program, the discharger shall be considered in compliance with this provision provided:
 - a. Data results remain consistent with results of samples analyzed by the Central Coast Water Board;
 - b. A quality assurance program is used at the laboratory, including a manual containing steps followed in this program that is available for inspections by the staff of the Central Coast Water Board; and,
 - c. Certification is pursued in good faith and obtained as soon as possible after the program is reinstated.

3. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Samples shall be taken during periods of peak loading conditions. Influent samples shall be samples collected from the combined flows of all incoming wastes, excluding recycled wastes. Effluent samples shall be samples collected downstream of the last treatment unit and tributary flow and upstream of any mixing with receiving waters.
4. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.

D. Central Coast Standard Provisions – General Reporting Requirements

1. Reports of marine monitoring surveys conducted to meet receiving water monitoring requirements of the Monitoring and Reporting Program shall include at least the following information:
 - a. A description of climatic and receiving water characteristics at the time of sampling (weather observations, floating debris, discoloration, wind speed and direction, swell or wave action, time of sampling, tide height, etc.).
 - b. A description of sampling stations, including differences unique to each station (e.g., station location, grain size, rocks, shell litter, calcareous worm tubes, evident life, etc.).
 - c. A description of the sampling procedures and preservation sequence used in the survey.
 - d. A description of the exact method used for laboratory analysis. In general, analysis shall be conducted according to Central Coast Standard Provisions – C.1 above, and Federal Standard Provision – Monitoring III.B. However, variations in procedure are acceptable to accommodate the special requirements of sediment analysis. All such variations must be reported with the test results.
 - e. A brief discussion of the results of the survey. The discussion shall compare data from the control station with data from the outfall stations. All tabulations and computations shall be explained.
2. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule shall be submitted within 14 days following each scheduled date unless otherwise specified within the permit. If reporting noncompliance, the report shall include a description of the reason, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance. A second report shall be submitted within 14 days of full compliance.
3. The “Discharger” shall file a report of waste discharge or secure a waiver from the Executive Officer at least 180 days before making any material change or proposed change in the character, location, or plume of the discharge.

4. Within 120 days after the discharger discovers, or is notified by the Central Coast Water Board, that monthly average daily flow will or may reach design capacity of waste treatment and/or disposal facilities within four (4) years, the discharger shall file a written report with the Central Coast Water Board. The report shall include:
 - a. the best estimate of when the monthly average daily dry weather flow rate will equal or exceed design capacity; and,
 - b. a schedule for studies, design, and other steps needed to provide additional capacity for waste treatment and/or disposal facilities before the waste flow rate equals the capacity of present units.

In addition to complying with Federal Standard Provision – Reporting V.B., the required technical report shall be prepared with public participation and reviewed, approved and jointly submitted by all planning and building departments having jurisdiction in the area served by the waste collection, treatment, or disposal facilities.

5. All “Dischargers” shall submit reports to the:

California Regional Water Quality Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906

In addition, "Dischargers" with designated major discharges shall submit a copy of each document to:

Regional Administrator
US Environmental Protection Agency, Region 9
Attention: CWA Standards and Permits Office (WTR-5)
75 Hawthorne Street
San Francisco, California 94105

6. Transfer of control or ownership of a waste discharge facility must be preceded by a notice to the Central Coast Water Board at least 30 days in advance of the proposed transfer date. The notice must include a written agreement between the existing “Discharger” and proposed “Discharger” containing specific date for transfer of responsibility, coverage, and liability between them. Whether a permit may be transferred without modification or revocation and reissuance is at the discretion of the Board. If permit modification or revocation and reissuance is necessary, transfer may be delayed 180 days after the Central Coast Water Board's receipt of a complete permit application. Please also see Federal Standard Provision – Permit Action II.C.
7. Except for data determined to be confidential under Section 308 of the Clean Water Act (excludes effluent data and permit applications), all reports prepared in accordance with this permit shall be available for public inspection at the office of the

Central Coast Water Board or Regional Administrator of EPA. Please also see Federal Standard Provision – Records IV.C.

8. By January 30th of each year, the discharger shall submit an annual report to the Central Coast Water Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. The discharger shall discuss the compliance record and corrective actions taken, or which may be needed, to bring the discharge into full compliance. The report shall address operator certification and provide a list of current operating personnel and their grade of certification. The report shall inform the Board of the date of the Facility's Operation and Maintenance Manual (including contingency plans as described Central Coast Standard Provision – Provision B.9., above), of the date the manual was last reviewed, and whether the manual is complete and valid for the current facility. The report shall restate, for the record, the laboratories used by the discharger to monitor compliance with effluent limits and provide a summary of performance relative to Section C above, General Monitoring Requirements.

If the facility treats industrial or domestic wastewater and there is no provision for periodic sludge monitoring in the Monitoring and Reporting Program, the report shall include a summary of sludge quantities, analyses of its chemical and moisture content, and its ultimate destination.

If applicable, the report shall also evaluate the effectiveness of the local source control or pretreatment program using the State Water Resources Control Board's "Guidelines for Determining the Effectiveness of Local Pretreatment Programs."

E. Central Coast Standard Provisions – General Pretreatment Provisions

1. Discharge of pollutants by "indirect dischargers" in specific industrial sub-categories (appendix C, 40 CFR Part 403), where categorical pretreatment standards have been established, or are to be established, (according to 40 CFR Chapter 1, Subchapter N), shall comply with the appropriate pretreatment standards:
 - a. By the date specified therein;
 - b. Within three (3) years of the effective date specified therein, but in no case later than July 1, 1984; or,
 - c. If a new indirect discharger, upon commencement of discharge.

F. Central Coast Standard Provisions – Enforcement

1. Any person failing to file a report of waste discharge or other report as required by this permit shall be subject to a civil penalty not to exceed \$5,000 per day.
2. Upon reduction, loss, or failure of the treatment facility, the "Discharger" shall, to the extent necessary to maintain compliance with this permit, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided.

G. Central Coast Standard Provisions – Definitions

(Not otherwise included in Attachment A to this Order)

1. A “composite sample” is a combination of no fewer than eight (8) individual samples obtained at equal time intervals (usually hourly) over the specified sampling (composite) period. The volume of each individual sample is proportional to the flow rate at the time of sampling. The period shall be specified in the Monitoring and Reporting Program ordered by the Executive Officer.
2. “Daily Maximum” limit means the maximum acceptable concentration or mass emission rate of a pollutant measured during a calendar day or during any 24-hour period reasonably representative of the calendar day for purposes of sampling. It is normally compared with results based on “composite samples” except for ammonia, total chlorine, phenolic compounds, and toxicity concentration. For all exceptions, comparisons will be made with results from a “grab sample”.
3. “Discharger”, as used herein, means, as appropriate: (1) the Discharger, (2) the local sewerage entity (when the collection system is not owned and operated by the Discharger), or (3) “indirect discharger” (where “Discharger” appears in the same paragraph as “indirect discharger”, it refers to the discharger.)
4. “Duly Authorized Representative” is one where:
 - a. the authorization is made in writing by a person described in the signatory paragraph of Federal Standard Provision V.B.;
 - b. the authorization specifies either an individual or the occupant of a position having either responsibility for the overall operation of the regulated facility, such as the plant manager, or overall responsibility for environmental matters of the company; and,
 - c. the written authorization was submitted to the Central Coast Water Board.
5. A “grab sample” is defined as any individual sample collected in less than 15 minutes. “Grab samples” shall be collected during peak loading conditions, which may or may not be during hydraulic peaks. It is used primarily in determining compliance with the daily maximum limits identified in Central Coast Standard Provision – Provision G.2. and instantaneous maximum limits.
6. “Hazardous substance” means any substance designated under 40 CFR Part 116 pursuant to Section 311 of the Clean Water Act.
7. “Incompatible wastes” are:
 - a. Wastes which create a fire or explosion hazard in the treatment works;

- b. Wastes which will cause corrosive structural damage to treatment works, but in no case wastes with a pH lower than 5.0 unless the works is specifically designed to accommodate such wastes;
 - c. Solid or viscous wastes in amounts which cause obstruction to flow in sewers, or which cause other interference with proper operation of treatment works;
 - d. Any waste, including oxygen demanding pollutants (BOD, etc), released in such volume or strength as to cause inhibition or disruption in the treatment works and subsequent treatment process upset and loss of treatment efficiency; and,
 - e. Heat in amounts that inhibit or disrupt biological activity in the treatment works or that raise influent temperatures above 40 °C (104 °F) unless the treatment works is designed to accommodate such heat.
8. "Indirect Discharger" means a non-domestic discharger introducing pollutants into a publicly owned treatment and disposal system.
9. "Log Mean" is the geometric mean. Used for determining compliance of fecal or total coliform populations, it is calculated with the following equation:

$$\text{Log Mean} = (C_1 \times C_2 \times \dots \times C_n)^{1/n},$$

in which "n" is the number of days samples were analyzed during the period and any "C" is the concentration of bacteria (MPN/100 ml) found on each day of sampling. "n" should be five or more.

10. "Mass emission rate" is a daily rate defined by the following equations:

$$\text{mass emission rate (lbs/day)} = 8.34 \times Q \times C; \text{ and,}$$

$$\text{mass emission rate (kg/day)} = 3.79 \times Q \times C,$$

where "C" (in mg/L) is the measured daily constituent concentration or the average of measured daily constituent concentrations and "Q" (in MGD) is the measured daily flow rate or the average of measured daily flow rates over the period of interest.

11. The "Maximum Allowable Mass Emission Rate," whether for a month, week, day, or six-month period, is a daily rate determined with the formulas in paragraph G.10, above, using the effluent concentration limit specified in the permit for the period and the average of measured daily flows (up to the allowable flow) over the period.
12. "Maximum Allowable Six-Month Median Mass Emission Rate" is a daily rate determined with the formulas in Central Coast Standard Provision – Provision G.10, above, using the "six-month Median" effluent limit specified in the permit, and the average of measured daily flows (up to the allowable flow) over a 180-day period.
13. "Median" is the value below which half the samples (ranked progressively by increasing value) fall. It may be considered the middle value, or the average of two middle values.

14. "Monthly Average" (or "Weekly Average", as the case may be) is the arithmetic mean of daily concentrations or of daily mass emission rates over the specified 30-day (or 7-day) period.

$$\text{Average} = (X1 + X2 + \dots + Xn) / n$$

in which "n" is the number of days samples were analyzed during the period and "X" is either the constituent concentration (mg/l) or mass emission rate (kg/day or lbs/day) for each sampled day. "n" should be four or greater.

15. "Municipality" means a city, town, borough, county, district, association, or other public body created by or under state law and having jurisdiction over disposal of sewage, industrial waste, or other waste.
16. "Overflow" means the intentional or unintentional diversion of flow from the collection and transport systems, including pumping facilities.
17. "Pollutant-free wastewater" means inflow and infiltration, stormwater, and cooling waters and condensates which are essentially free of pollutants.
18. "Primary Industry Category" means any industry category listed in 40 CFR Part 122, Appendix A.
19. "Removal Efficiency" is the ratio of pollutants removed by the treatment unit to pollutants entering the treatment unit. Removal efficiencies of a treatment plant shall be determined using "Monthly averages" of pollutant concentrations (C, in mg/l) of influent and effluent samples collected about the same time and the following equation (or its equivalent):

$$C_{\text{Effluent}} \text{ Removal Efficiency (\%)} = 100 \times (1 - C_{\text{effluent}} / C_{\text{influent}})$$

20. "Severe property damage" means substantial physical damage to property, damage to treatment facilities which causes them to become inoperable, or substantial and permanent loss to natural resources which can reasonably be expected to occur in the absence of a "bypass". It does not mean economic loss caused by delays in production.
21. "Sludge" means the solids, residues, and precipitates separated from, or created in, wastewater by the unit processes of a treatment system.
22. To "significantly contribute" to a permit violation means an "indirect discharger" must:
- Discharge a daily pollutant loading in excess of that allowed by contract with the "Discharger" or by Federal, State, or Local law;
 - Discharge wastewater which substantially differs in nature or constituents from its average discharge;

- c. Discharge pollutants, either alone or in conjunction with discharges from other sources, which results in a permit violation or prevents sewage sludge use or disposal; or
 - d. Discharge pollutants, either alone or in conjunction with pollutants from other sources that increase the magnitude or duration of permit violations.
23. "Toxic Pollutant" means any pollutant listed as toxic under Section 307 (a) (1) of the Clean Water Act or under 40 CFR Part 122, Appendix D. Violation of maximum daily discharge limitations are subject to 24-hour reporting (Federal Standard Provisions V.E.).
24. "Zone of Initial Dilution" means the region surrounding or adjacent to the end of an outfall pipe or diffuser ports whose boundaries are defined through calculation of a plume model verified by the State Water Resources Control Board

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

- A.** Laboratories analyzing monitoring samples shall be certified by the Department of Health Services (DHS), in accordance with Water Code section 13176, and must include quality assurance/quality control data with their reports.
- B.** Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and approval of the Regional Water Board.
- C.** Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ± 10 percent from true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration, and operation of acceptable flow measurement devices can be obtained from the following references.
 - 1.** *A Guide to Methods and Standards for the Measurement of Water Flow*, U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 96 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD Catalog No. C13.10:421.)
 - 2.** *Water Measurement Manual*, U.S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U.S. Government Printing Office, Washington D.C. 20402. Order by Catalog No. 172.19/2:W29/2, Stock No. S/N 24003-0027.)
 - 3.** *Flow Measurement in Open Channels and Closed Conduits*, U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy or microfiche from National Technical Information Services (NTIS) Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST.)

4. *NPDES Compliance Sampling Manual*, U.S. Environmental Protection Agency, Office of Water Enforcement, Publication MCD-51, 1977, 140 pp. (Available from the General Services Administration (8FFS), Centralized Mailing Lists Services, Building 41, Denver Federal Center, CO 80225.)
- D. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.
 - E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this MRP.
 - F. Unless otherwise specified by this MRP, all monitoring shall be conducted according to test procedures established at 40 CFR 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants*. All analyses shall be conducted using the lowest practical quantitation limit achievable using the specified methodology. Where effluent limitations are set below the lowest achievable quantitation limits, pollutants not detected at the lowest practical quantitation limits will be considered in compliance with effluent limitations. Analysis for toxics listed by the California Toxics Rule shall also adhere to guidance and requirements contained in the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (2005). Analyses for toxics listed in Table B of the California Ocean Plan (2005) shall adhere to guidance and requirements contained in that document.

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	EFF-001	Effluent discharged from Quarry Storage Reservoir before its contact with receiving water.
--	RSW-001	In the Pajaro River upstream of Discharge Point 001 where water samples reflect water quality before the addition of effluent to the receiving water.
--	RSW-002	Pajaro River approximately 100 to 200 feet downstream of Discharge Point 001, where a representative sample that indicates the impact of effluent on receiving water can be collected.

III. INFLUENT MONITORING REQUIREMENTS – NOT APPLICABLE

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor effluent discharged to the Pajaro River from Quarry Storage Reservoir and Lower Hole Stormwater Collection Pond at Monitoring Location EFF-001 as follows. All effluent monitoring is required only when effluent is being discharged to the Pajaro River.

Table E-2. Effluent Monitoring

Parameter	Units	Sample Type	Quarry Storage Reservoir Minimum Sampling Frequency	Lower Hole Stormwater Collection Pond Minimum Sampling Frequency
Flow	MGD	Measured	1/Day	1/Permit Term – Discharge Event
Suspended Sediment	mg/L	Grab	1/Week ^{[1][2]}	1/Permit Term – Discharge Event
Total Suspended Solids (TSS)	mg/L	Grab	1/Week ^[1]	1/Permit Term – Discharge Event
Turbidity	NTUs	Grab	1/Week ^[1]	1/Permit Term – Discharge Event
pH	s.u.	Grab	1/Week ^[1]	1/Permit Term – Discharge Event
Temperature	°F	Grab	1/Hour ^[3]	1/Permit Term – Discharge Event
Oil and Grease	mg/L	Grab	1/Week ^[1]	1/Permit Term – Discharge Event
TDS	mg/L	Grab	1/Week ^[1]	1/Permit Term – Discharge Event
Chloride	mg/L	Grab	1/Week ^[1]	1/Permit Term – Discharge Event
Sulfate	mg/L	Grab	1/Week ^[1]	1/Permit Term – Discharge Event
Boron	mg/L	Grab	1/Week ^[1]	1/Permit Term – Discharge Event
Sodium	mg/L	Grab	1/Week ^[1]	1/Permit Term – Discharge Event
Mercury (Total Recoverable)	µg/L	Grab	1/Week ^[1]	1/Permit Term – Discharge Event
Cyanide	µg/L	Grab	1/Week ^[1]	1/Permit Term – Discharge Event
Aluminum	mg/L	Grab	1/Week ^[1]	1/Permit Term – Discharge Event
Iron	mg/L	Grab	1/Week ^[1]	1/Permit Term – Discharge Event
Molybdenum	mg/L	Grab	1/Week ^[1]	1/Permit Term – Discharge Event
Acute Toxicity	TUa	Grab	1/Discharge Event ^[4]	1/Permit Term – Discharge Event
CTR Priority Pollutants ^[5]	µg/L	Grab	1/Permit Term	1/Permit Term – Discharge Event
Title 22 Pollutants ^[6]	µg/L	Grab	1/Permit Term	1/Permit Term – Discharge Event

^[1] Monitoring for these pollutants at weekly intervals is based on an assumption of one discharge event per year during the wet season (October 1 through May 31) that lasts for 3 to 4 days. If a single discharge event continues for more than 7 days, monitoring for this constituent will be required a second time following a weekly interval; however, monitoring is required at monthly intervals thereafter.

^[2] Analysis for suspended sediment concentration shall be performed in accordance with American Society for Testing and Materials (ASTM) Method D3977-97B [Standard test methods for determining sediment concentration in water samples (ASTM Designation: D-3977-97)].

^[3] Hourly during the discharge. Sampling may be reduced to one time sampling during discharges as supported by applicable data showing that the effluent temperature is consistently at or below the receiving water temperature and will not be likely to cause excursions above the prescribed limits.

^[4] Monitoring for acute toxicity during each discharge event is based on an assumption of one discharge event per year, or less. If there is more than one discharge event per wet season, monitoring for acute toxicity is required no more than two times per wet season.

^[5] The CTR priority pollutants are those listed by the California Toxics Rule at 40 CFR 131.38 (b)(1). These pollutants shall be monitored one time per permit term, if there is a discharge event.

^[6] The Title 22 pollutants are those for which primary Maximum Contaminant Levels have been established by the Department of Health Services and which are listed in Tables 64431-A and 64444-A of the California Code of

Regulations, Title 22, Division 4, Chapter 15. Where these pollutants are included in other groups of pollutants (CTR Priority Pollutants), monitoring does not need to be duplicated.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity

1. Acute Toxicity Monitoring Requirements - EFF-001

- a. Bioassays shall be performed to evaluate the toxicity of the discharge in accordance with the following procedures unless otherwise specified by the Water Board’s Executive Officer or designee.
- b. The test species given below shall be used to measure acute toxicity:

Table E-3. Approved Tests – Acute Toxicity

Species	Effect	Test Duration (hrs)	Reference
Fathead Minnow (<i>Pimephales promelas</i>)	Larval Survival and Growth	96	EPA/821-R-02-012 (Acute)

- c. The presence of acute toxicity shall be determined as significantly reduced survival of test organisms at 100 percent effluent compared to a control using a statistical t-test.

B. Quality Assurance

- 1. The use of a dilution series for this Discharger is not applicable, because there is no dilution in the receiving water.
- 2. For the acute toxicity testing using a t-test, two dilutions shall be used, i.e., 100 percent effluent and a control (when a t-test is used instead of an LC50).
- 3. If organisms are not cultured in-house, concurrent testing with a referenced toxicant shall be conducted. Where organisms are cultured in-house, monthly reference toxicant testing is sufficient. Reference toxicant tests also shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc.).
- 4. If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified in the toxicity test references, then the permittee must resample and retest within 15 working days or as soon as possible. The retesting period begins when the Discharger collects the first sample required to complete the retest.
- 5. The reference toxicant and effluent tests must meet the upper and lower bounds on test sensitivity as determined by calculating the percent minimum significant difference (PMSD) for each test result. The test sensitivity bound is specified for each test method in the respective methods manuals.

C. Accelerated Monitoring Requirements

1. When acute toxicity is detected in the effluent during regular toxicity monitoring, and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring to confirm the effluent toxicity.
2. The Discharger shall implement an accelerated monitoring frequency consisting of performing three toxicity tests in a six-week period following the first failed test results.
3. If implementation of the generic Toxicity Reduction Evaluation (TRE) work plan indicates the source of the exceedance of the toxicity trigger (for instance, a temporary plant upset), then only one additional test is necessary. If exceedance of the toxicity trigger is detected in this test, the Discharger will continue with accelerated monitoring requirements or implement the Toxicity Identification and Toxicity Reduction Evaluations.
4. If none of the three tests indicated exceedance of the toxicity trigger, then the Discharger may return to the normal bioassay testing frequency.

D. Conducting Toxicity Identification Evaluations and Toxicity Reduction Evaluations

1. A Toxicity Identification Evaluation (TIE) shall be triggered if testing from the accelerated monitoring frequency indicates any of the following:
 - a. Two of the three accelerated toxicity tests are reported as failed tests meeting any of the conditions specified in Attachment E, Section V.D.
 - b. The TIE shall be initiated within 15 days following failure of the second accelerated monitoring test.
 - c. If a TIE is triggered prior to the completion of the accelerated testing, the accelerated testing schedule may be terminated, or used as necessary in performing the TIE.
2. The TIE shall be conducted to identify and evaluate toxicity in accordance with procedures recommended by the United States Environmental Protection Agency (USEPA) which include the following:
 - a. Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I, (USEPA, 1992a);
 - b. Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures, Second Edition (USEPA, 1991a);

- c. Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Sampling Exhibiting Acute and Chronic Toxicity (USEPA, 1993a); and
 - d. Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity (USEPA, 1993b).
3. As part of the TIE investigation, the Discharger shall be required to implement its TRE work plan. The Discharger shall take all reasonable steps to control toxicity once the source of the toxicity is identified. A failure to conduct required toxicity tests or a TRE within a designated period shall result in the establishment of numerical effluent limitations for chronic toxicity in a permit or appropriate enforcement action. Recommended guidance in conducting a TRE include the following:
- a. Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, August 1999, EPA/833B-99/002; and
 - b. Clarifications Regarding Toxicity Reduction and Identification Evaluations in the National Pollutant Discharge Elimination System Program dated March 27, 2001, USEPA Office of Wastewater Management, Office of Regulatory Enforcement.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECLAMATION MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER

A. Receiving Water Monitoring

1. The Discharger shall monitor the Pajaro River at Monitoring Stations RSW-001 and RSW-002 as follows, except that the CTR Priority Pollutants and the Title 22 Pollutants shall be monitored only at Monitoring Station RSW-001:

Table E-4. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Dissolved Oxygen	mg/L	Field Measurement	1/Month ^[1]
Temperature	°F	Field Measurement	1/Hour ^[2]
pH	pH units	Field Measurement	1/Month ^[1]
Visual Observations	-	Field Observation	1/Month ^[1]
Flow	MGD or cfs	Measured	1/Hour ^[3]
Turbidity	NTU	Grab	1/Month ^[1]
TDS	mg/L	Grab	1/Month ^[1]
Chloride	mg/L	Grab	1/Month ^[1]
Sulfate	mg/L	Grab	1/Month ^[1]
Boron	mg/L	Grab	1/Month ^[1]
Sodium	mg/L	Grab	1/Month ^[1]
Nitrate (as N)	mg/L	Grab	1/Month ^[1]

Parameter	Units	Sample Type	Minimum Sampling Frequency
Acute Toxicity	TUa	Grab	1/Discharge Event ^[4]
CTR Priority Pollutants ^[5]	µg/L	Grab	1/Permit Term ^[6]
Title 22 Pollutants ^[7]	µg/L	Grab	1/Permit Term ^[6]
Hardness (as CaCO ₃)	mg/L	Grab	2/Permit Term ^[6]

^[1] These monthly monitoring requirements shall be conducted only during periods of discharge to the Pajaro River (i.e., in each calendar month that a discharge occurs, monthly monitoring requirements must be conducted).

^[2] Prior to each Pajaro River discharge, and hourly during the discharge. Sampling may be reduced to one time sampling during discharges as supported by applicable data showing that the effluent temperature is consistently at or below the receiving water temperature and will not be likely to cause excursions above the prescribed limits (see Receiving Water Limitation V.A.12). Alternate sampling locations may be established to account for safety considerations as long as alternate locations produce characteristic temperature data. Reductions in sampling frequency and the selection of alternate sampling locations are contingent upon Executive Officer approval.

^[3] Prior to each Pajaro River discharge, and hourly during the discharge, as measured at the Chittenden Gauging Station.

^[4] Receiving water monitoring for toxicity shall be conducted coincident with effluent toxicity monitoring.

^[5] The CTR priority pollutants are those listed by the California Toxics Rule at 40 CFR 131.38 (b) (1).

^[6] Monitoring shall occur during the wet season (October 1 through May 31) within the 18-month period before expiration of this Order. Sample collection shall be reported in the first quarterly report submitted following completion of the sampling event. Data shall be reported in the first quarterly report submitted following receipt of the data from the analytical laboratory.

^[7] The Title 22 pollutants are those for which primary Maximum Contaminant Levels have been established by the Department of Health Services and which are listed in Tables 64431-A and 64444-A of the California Code of Regulations, Title 22, Division 4, Chapter 15. Where these pollutants are also identified as CTR Priority Pollutants, monitoring does not need to be duplicated.

IX. OTHER MONITORING REQUIREMENTS

A. Process Water Supply Monitoring

1. The Discharger shall collect and analyze representative samples from the Facility process water supply well (currently the Orchard Well) as follows.

Table E-5. Process Water Supply Monitoring Requirements

Constituent	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Measured	1/Year
TDS	mg/L	Grab	1/Year
Chloride	mg/L	Grab	1/Year
Sulfate	mg/L	Grab	1/Year
Boron	mg/L	Grab	1/Year
Sodium	mg/L	Grab	1/Year
Nitrate (as N)	mg/L	Grab	1/Year
Hardness (as CaCO ₃)	Mg/L	Grab	1/Year
CTR Priority Pollutants ^[5]	µg/L	Grab	1/Permit Term
Title 22 Pollutants ^[7]	µg/L	Grab	1/Permit Term
Acute Toxicity	TUa	Grab	1/Permit Term

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

B. Self Monitoring Reports (SMRs)

1. The Discharger shall electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.
2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit monthly SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-6. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On ...	Monitoring Period	SMR Due Date
1/Hour	Permit effective date	Hourly	Submit with monthly SMR
1/Day	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with monthly SMR
1/Week	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	Submit with monthly SMR
1/Month	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1 st day of calendar month through last day of calendar month	Submit with monthly SMR
1/Quarter	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	Submit with next monthly SMR
1/Year	January 1 following (or on) permit effective date	January 1 through December 31	Submit with Annual Report
1/Discharge	Permit effective date	Sunday through Saturday	Submit with monthly

Sampling Frequency	Monitoring Period Begins On ...	Monitoring Period	SMR Due Date
Event			SMR
X/Permit Term	January 1 following (or on) permit effective date	Permit term	Submit with Annual Report

4. Reporting Protocols. The Discharger shall report with each sample result the applicable reported Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in Part 136.

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

- a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the reported ML, but greater than or equal to the laboratory’s MDL, shall be reported as “Detected, but Not Quantified,” or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words “Estimated Concentration” (may be shortened to “Est. Conc.”). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (\pm a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c. Sample results less than the laboratory’s MDL shall be reported as “Not Detected,” or ND.
 - d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.
5. Compliance Determination. Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).
 6. Multiple Sample Data. When determining compliance with an AMEL, AWEL, or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or

more reported determinations of “Detected, but Not Quantified” (DNQ) or “Not Detected” (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

- a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
- b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

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

- a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.
- b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.
- c. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

Central Coast Regional Water Quality Control Board
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401

- d. The Annual Report (I.E.8, Page D-15)) due on January 30th following each calendar year shall also include:
 - i. All data required by this MRP for the corresponding monitoring period, including appropriate calculations to verify compliance with effluent limitations.
 - ii. A discussion of any incident of non-compliance and corrective actions taken.

C. Discharge Monitoring Reports (DMRs) – Not Applicable

D. Other Reports

1. In accordance with Special Provision VI.C.4.a of the Order, the Discharger shall certify by October 1 of each year that necessary measures have been taken and pollution control equipment and systems are in proper condition to comply with the terms of the Order during the impending rainy season.
2. The Discharger shall report the results of any special monitoring, TREs, or other data or information that results from the Special Provisions, section VI.C, of the Order. The Discharger shall submit such reports with the first monthly SMR scheduled to be submitted on or immediately following the report due date.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

WDID	2352000001
Discharger	Granite Rock Company, Inc.
Name of Facility	Arthur R. Wilson Quarry
Facility Address	End of Quarry Road Aromas, California 95004 San Benito County
Facility Contact, Title and Phone	Aaron Johnston-Karas, Dir. of Sustainable Resource Dev. (831) 768-2094
Authorized Person to Sign and Submit Reports	Aaron Johnston-Karas, Dir. of Sustainable Resource Dev. (831) 768-2094
Mailing Address	P.O. Box 50001, Watsonville, CA 95077
Billing Address	P.O. Box 50001, Watsonville, CA 95077
Type of Facility	Granite Quarry and Processing, NAICS Code 212313/SIC Codes 1423, 2951 and 4212
Major or Minor Facility	Minor
Threat to Water Quality	3
Complexity	C
Pretreatment Program	Not Applicable
Reclamation Requirements	Not Applicable
Facility Permitted Flow	9.0 million gallons per day (MGD)
Facility Design Flow	9.0 MGD
Watershed	Pajaro River Watershed
Receiving Water	Pajaro River
Receiving Water Type	Inland Surface Water

- A.** Granite Rock Company, Inc. (hereinafter Discharger) is the owner and operator of the Arthur R. Wilson Quarry (hereinafter Facility), a granite quarry and processing facility.

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

- B.** The Facility discharges wastewater to the Pajaro River, a water of the United States, and is currently regulated by Order No. R3-2005-0044, which was adopted on May 13, 2005, and expires on July 2, 2010. The terms and conditions of the current Order have been automatically continued and remain in effect until new Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit are adopted pursuant to this Order.
- C.** The Discharger filed a Report of Waste Discharge and submitted an application for renewal of its WDRs and NPDES permit on January 7, 2010. Supplemental information was provided by the Discharger on December 16, 2009. A site visit was conducted on March 11, 2010 to observe operations and collect additional data to develop permit limitations and conditions.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment or Controls

The Discharger mines, processes, and stockpiles granite rock aggregates, which are used as basic construction materials and as feed materials in on-site and off-site asphalt and concrete manufacturing plants.

Water flow through the Facility is designed to be a closed-loop system such that water recycling is maximized. Water intakes and inputs to the system include rainfall (including stormwater runoff), treated process water, and supplemental groundwater.

Stormwater is collected in the Facility's Quarry Storage Reservoir and in the Soda Lake (a man-made retention pond) for settling and re-use. Stormwater is also collected in the Facility's stormwater settling basin systems, one (Lower Hole) of which may also be used as supplemental water if needed. The Facility's water circuit uses well water as makeup and recycles water between the wet processing plant and the Quarry Storage Reservoir. Although most stormwater from the Facility is covered under General NPDES Permit No. CAS000001 (Waste Discharge Requirements for Discharges of Stormwater Associated with Industrial Activities), some site stormwater enters the process water circuit (stormwater runoff from the processing area and stockpiles, and stormwater which falls on Quarry Storage Reservoir and Soda Lake). When necessary, excess stormwater is stored in Soda Lake and eventually returned to the recirculating system.

Wash water from the aggregate wash in the wet process plant is pumped to the Fines Treatment Plant for treatment. Larger materials, such as sand, are removed from the wash water and stockpiled for sale. Suspended solids in the wash water are settled out with gravity in a primary settling tank and by using an anionic acrylamide copolymer as a flocculent. Typically, four nuclear density meters are used to monitor the optimum ratio of polymer necessary to remove the suspended solids. Up to five meshed-belt presses are used to physically separate the underflow process water from the primary settling tank from settled solids. The treated process water then flows to the Quarry Storage Reservoir and is stored for later re-use. The treated process water may also be pumped to Soda Lake.

Currently, the source of the groundwater is a production well called the Orchard Well. Typically, well water use during the rainy season is minimal since settled stormwater is used to supplement recycled process water losses. During dry periods without available settled stormwater, the average daily usage of the Orchard Well is estimated at approximately 0.75 to 1 million gallons per day (assuming a 5 day work week).

Settled water from the Quarry Storage Reservoir is pumped for use in general plant processes (e.g., wash water, dust suppression) in the Facility. Assuming a 60-hour workweek pumping continuously at the maximum potential pumping rate, the maximum average flows out of the Quarry Storage Reservoir to plant processes are estimated to be around 6.1 million gallons a day; most of this water is returned to the Quarry Storage Reservoir for re-use. This is considered an upper-bound estimate, as water flows varies with operational need and market demand. In this 6.1 million gallons a day configuration, up to 1.76 million gallons a day may not be returned to the system due to losses attributed to evaporation, retention in products, and, during dry periods, use for dust suppression. The remaining 4.34 million gallons used in different plant processes re-circulates back into the Quarry Storage Reservoir.

As a result of the Facility's ability to treat and store process water, and water losses due to evaporation, retention in product, and dust control application, there are infrequent discharges of process water from the Facility. Recycled water discharge from the Quarry Storage Reservoir (Discharge Point 001) occurs only after a rain event (or events) that occur at a rate and/or frequency that result in more rain than the storage capacity at the Facility. The last recorded discharge from the Facility occurred in January 2002. No discharges occurred during the term of the existing Order.

Fine materials from the Fines Treatment Plant are pumped as a slurry to Soda Lake or are mixed with overburden to be used in reclamation activities. Although the purpose of Soda Lake is to provide storage for fines, it also provides water storage and additional settling/treatment capacity. Soda Lake is viewed by the Regional Board as a wide spot in the Facility's water circuit and not as a receiving water. Due to its isolation from groundwater, the Regional Board has also determined that there is no significant discharge to groundwater from Soda Lake. The Quarry Storage Reservoir is also considered a wide spot in the Facility's process water circuit that provides additional settling/treatment as well as water storage. Solids are periodically dredged from this reservoir to maintain its capacity.

A water flow diagram for the Facility is provided in Attachment C.

B. Discharge Points and Receiving Waters

Discharges to the Pajaro River occur at Discharge Point 001 (36° 55' 48"N Latitude; 121° 36' 58" W Longitude) from the Quarry Storage Reservoir, where water is pumped from the surface of the reservoir to a concrete reinforced bank that serves to dissipate energy and minimize erosion during discharge events. Discharges occur only after significant rain events, when water accumulation exceeds the storage capacity of the Facility. Based on experience of the past several years, the Discharger, in its Report of Waste Discharge, projects one discharge event per year lasting 4 to 5 days with a maximum daily discharge of approximately 7 to 8 million gallons.

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

Effluent limitations contained in the previous Order for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from the term of the previous Order are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation			Monitoring Data (From July 2005 – To February 2010)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
pH	pH Units	7.0 - 8.3			ND ^[1]		
Total Suspended Solids (TSS)	mg/L	50	--	--	ND	ND	ND
Turbidity	NTUs	--	--	50	ND	ND	ND
Mercury (Dissolved)	µg/L	0.050	--	0.10	ND	ND	ND
Acute Toxicity	TU	--	--	1 ^{[1],[2]}	ND	ND	ND

^[1] ND – No discharge during the permit term; no effluent data available.

^[2] Or the background toxicity of the receiving water as determined by concurrent toxicity testing using upstream receiving water samples; the greater of the two shall apply.

^[3] Survival of test organisms exposed to 100 percent effluent shall not be significantly reduced when compared to the survival of control organisms using a t-test.

D. Compliance Summary

The Facility has not discharged to the Pajaro River during the term of Order No. R3-2005-0044. The Discharger has been in compliance with all other requirements of Order No. R3-2005-0044.

E. Planned Changes – Not Applicable

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

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

B. California Environmental Quality Act (CEQA)

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

C. State and Federal Regulations, Policies, and Plans

1. Water Quality Control Plans. The Regional Water Board has adopted a Water Quality Control Plan for the Central Coast Region (the Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for receiving waters within the Region. In addition, the Basin Plan implements State Water Resources Control Board (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. Thus, beneficial uses applicable to the Pajaro River are presented below.

Table F-3. Basin Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Use(s)
001	Pajaro River	MUN - Municipal and domestic supply AGR - Agricultural supply IND- Industrial service supply GWR - Groundwater recharge REC-1 - Water contact recreation REC-2 - Non-contact water recreation WILD - Wildlife habitat COLD - Cold fresh water habitat WARM - Warm fresh water habitat MIGR - Migration of aquatic organisms SPWN - Spawning, reproduction, and/or early development FRSH - Freshwater replenishment COMM - Commercial and sport fishing

To protect beneficial uses, the Basin Plan establishes water quality objectives and implementation programs. This Order’s requirements implement the Basin Plan.

2. Thermal Plan. The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. The Thermal Plan contains temperature objectives for inland surface waters, which are applicable to the Discharger. The general objective for temperature from Section II.A.2.a. of the Basin Plan is more limiting, however, and is included as a receiving water limitation in the Order along with temperature limits developed and proposed by the California Department of Fish and Game and others for a previously permitted Pajaro River discharge (Order No. R3-2004-0099) that are protective of all life stages of steelhead.

- 3. National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants that are applicable to the receiving water for discharges from the Facility.
- 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 promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
- 5. Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 CFR 131.21, 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.
- 6. Antidegradation Policy.** Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.
- 7. Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

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

CWA section 303(d) requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For all 303(d) listed water bodies and pollutants, the Regional Water Board must develop and implement total maximum daily loads (TMDLs) that will specify waste load allocations (WLAs) for point sources and load allocations for non-point sources.

California's 2006 303 (d) list of impaired water bodies, which was approved by USEPA in June 2007, identifies the Pajaro River as being impaired for boron and fecal coliform.

A Total Maximum Daily Load (TMDL) for fecal coliform bacteria for the Pajaro River watershed, which includes the Pajaro River and Llagas Creek, has been adopted by the Regional Water Board (Water Board Order No. R3-2009-0008). TMDLs have also been adopted and approved by USEPA for sediment (Resolution No. R5-2005-0132) and nitrate (Resolution No. R5-2005-0131) for the Pajaro River watershed. The TMDL for fecal coliform prohibits all fecal coliform loading from human sources to the Pajaro River, which is not applicable to the Discharger. The TMDL for nitrate finds that current actions of the Regional Water Board adequately implement the TMDL and will be adequate to correct the impairment due to nitrate. The TMDL for sediment includes a wasteload allocation (WLA) applicable to discharges from the Facility. The TMDL for boron is anticipated to be developed by 2019. This Order includes requirements of all TMDLs that are applicable to the Facility.

E. Other Plans, Policies and Regulations

- 1. Discharges of Stormwater.** For the control of stormwater discharged from the quarry site, the Order requires the Discharger to seek authorization to discharge under and meet the requirements of the State Water Resources Control Board's Water Quality Order 97-03-DWQ, NPDES General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Stormwater Associated with Industrial Activities Excluding Construction Activities.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

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

A. Discharge Prohibitions

- 1. Discharge Prohibition III A** (No discharge to locations except as described in the Order). The Order authorizes a single, specific point of discharge to the Pajaro River; and this prohibition reflects CWA section 402's prohibition against discharges

of pollutants except in compliance with the Act's permit requirements, effluent limitations, and other enumerated provisions. This prohibition is also retained from the previous permit.

- 2. Discharge Prohibition III B** (No discharge of wastewaters, except as described in the Order). Because limitations and conditions of the Order have been prepared based on specific information provided by the Discharger and specific wastes described by the Discharger, the limitations and conditions of the Order do not adequately address waste streams not contemplated during drafting of the Order. To prevent the discharge of such waste streams that may be inadequately regulated, the Order prohibits the discharge of any waste that was not described by to the Regional Water Board during the process of permit reissuance.
- 3. Discharge Prohibition III C** (Overflows and bypasses prohibited). The discharge of untreated or partially treated wastewater from the Discharger's collection, treatment, or disposal facilities represents an unauthorized bypass pursuant to 40 CFR 122.41 (m) or an unauthorized discharge, which poses a threat to human health and/or aquatic life, and therefore, is explicitly prohibited by the Order.
- 4. Discharge Prohibition III D** (No adverse impacts to beneficial uses or threatened or endangered species). This prohibition is retained from the previous Order and is based on the Basin Plan, which, in accordance with CWC Section 13241, must include water quality objectives to ensure the reasonable protection of beneficial uses and the prevention of nuisance.
- 5. Discharge Prohibition III E** (Creation of a condition of pollution, contamination, or nuisance, as defined by Section 13050 of the CWC, is prohibited). This prohibition is retained from the previous permit.
- 6. Discharge Prohibitions III F, G, and H** (Flooding prohibition, discharge flow limitations, and discharge flow restrictions). These prohibitions were added to the previous Order to address potential concerns regarding downstream flooding, and are retained in this Order.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations, require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Effluent Limitations Guidelines and Standards for the Mineral Mining and Processing Category in 40 CFR Part 436 and Best Professional Judgment (BPJ) in accordance with 40 CFR Part 125, section 125.3

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

- a. Best practicable treatment control technology (BPT) is based on the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and nonconventional pollutants.
- b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and nonconventional pollutants.
- c. Best conventional pollutant control technology (BCT) is a standard for the control of conventional pollutants, including BOD, TSS, fecal coliform, pH, and oil and grease, from existing industrial point sources. The BCT standard is established after considering the “cost reasonableness” of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional treatment beyond BPT.
- d. New source performance standards (NSPS) reflect the best available demonstrated control technology; i.e., they require state-of-the-art treatment technology for new sources.

The CWA requires USEPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and section 125.3 of the Code of Federal Regulations authorize the use of BPJ to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the permit writer must consider specific factors outlined in section 125.3.

2. Applicable Technology-Based Effluent Limitations

Effluent limitations, guidelines and standards for discharges from this Facility are covered under the Mineral Mining and Processing Point Source Category, Subpart B - Crushed Stone Subcategory (40 CFR 436.22). The following effluent limitations, representing the degree of effluent reduction attainable by the application of BPT, for discharges from the Facility shall not exceed the following limitations:

Table F-4. Effluent Limitations Guidelines for Discharges of Process Generated Waste Water Pollutants from Facilities that Recycle Waste Water for Use in Processing

Effluent Characteristic	Effluent Limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days shall not exceed—
pH	[1]	[1]

[1] Within the range 6.0 to 9.0.

In addition, technology-based effluent limitations contained in this Order and previous orders have been established for other pollutants of concern using BPJ. The following technology-based limitations for turbidity and total suspended solids (TSS) are retained from Order No. R3-2005-0044.

Table F-5. Technology-Based Effluent Limitations Based on BPJ

Parameter	Units	Effluent Limitations	
		Maximum Daily	Average Monthly
Turbidity	NTUs	50	--
TSS	mg/L	--	50

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

NPDES regulations at 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards, including numeric and narrative objectives within a standard.

The process for determining “reasonable potential” and calculating WQBELs, when necessary, is intended to protect the designated uses of receiving waters as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in the Basin Plan and in other applicable State and federal rules, plans, and policies, including applicable water quality criteria from the CTR and the NTR.

Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established in accordance with the requirements of 40 CFR 122.44(d)(1)(vi), using (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed State criterion or policy interpreting the State’s narrative criterion, supplemented with other relevant information.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

Beneficial uses described by the Basin Plan for the Pajaro River are presented in section II.H of the Order. Water quality criteria applicable to this receiving water are established by the CTR, the NTR, and by the Basin Plan.

3. Determining the Need for WQBELs

NPDES regulations at 40 CFR 122.44(d) require effluent limitations to control all pollutants which are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard.

The SIP, statewide policy that became effective on May 22, 2000, establishes procedures to implement water quality criteria from the NTR and CTR and for priority, toxic pollutant objectives established in the Basin Plan. The implementation procedures of the SIP include methods to determine reasonable potential (for pollutants to cause or contribute to excursions above state water quality standards) and to establish numeric effluent limitations, if necessary, for those pollutants which show reasonable potential.

The SIP Section 1.3 requires the Regional Board to use all available valid, relevant, and representative receiving water and effluent data and information to conduct a reasonable potential analysis (RPA). Effluent data for the discharge at Discharge Point 001 was not available because there were no discharges at Discharge Point 001 during the previous permit term. However, the Discharger provided monitoring data from the Quarry Storage Reservoir in October 2004 (as reported in the Report of Waste Discharge). These data, though not considered by the Discharger to be representative of the actual condition of the discharged effluent, have been used to conduct the RPA for discharges to the Pajaro River at Discharge Point 001. In addition, monitoring data from the last recorded discharge in January 2002, as well as monitoring data from the Quarry Storage Reservoir provided by the Discharger in May 2002 (which is also not considered by the Discharger to be representative of the actual condition of the discharged effluent discharge) were used to evaluate reasonable potential. Although it is recognized that the data from May 2002 and October 2004 are not from actual discharges from the Facility, the data should provide an indication of which pollutants may be of concern when a discharge does occur from the Facility.

The Discharger also provided as part of the Report of Waste Discharge, ambient data from the Pajaro River upstream of the location of Discharge Point 001. Specifically, data for Pajaro River were provided for January 2005, April 2009, and May 2009.

Some freshwater water quality criteria for metals are hardness dependent; i.e., as hardness decreases, the toxicity of certain metals increases and the applicable water quality criteria become correspondingly more stringent. The RPA has been performed using a receiving water hardness value of 346 mg/L CaCO₃. In three samples of the Pajaro River, collected between January 2005 and August 2008, the receiving water hardness ranged from 346 mg/L to 457 mg/L, and averaged 408 mg/L.

To conduct the RPA, the Regional Board identified the maximum observed effluent (MEC) and background (B) concentrations for each priority toxic pollutant from receiving water and effluent data provided by the Discharger and compared these data to the most stringent applicable water quality criterion (C) for each pollutant from the NTR, CTR, and the Basin Plan. Section 1.3 of the SIP establishes three triggers for a finding of reasonable potential.

Trigger 1. If the MEC is greater than C, there is reasonable potential, and an effluent limitation is required.

Trigger 2. If B is greater than C, and the pollutant is detected in effluent (MEC > ND), there is reasonable potential, and an effluent limitation is required.

Trigger 3. After reviewing other available and relevant information, a permit writer may decide that a WQBEL is required. Such additional information may include, but is not limited to: the facility type, the discharge type, solids loading analyses, lack of dilution, history of compliance problems, potential toxic impact of the discharge, fish tissue residue data, water quality and beneficial uses of the receiving water, CWA 303(d) listing for the pollutant, and the presence of endangered or threatened species or their critical habitat.

The following table summarizes the RPA for each pollutant that was detected in effluent during the monitoring events on 2002 through 2009 (as reported in the Report of Waste Discharge and as provided by the Discharger). No other pollutants with applicable numeric water quality criteria from the NTR, CTR, and the Basin Plan (including the Title 22 pollutants) were measured above detectable concentrations during that monitoring period.

Table F-6. Reasonable Potential Analysis

Pollutant	Units	C (Basis)	MEC	B	RPA Result
Total Dissolved Solids	mg/L	1,000 (Basin Plan Table 3-7, specific water quality objectives for Pajaro River)	1,300	770	Yes
Chloride	mg/L	250 (Basin Plan Table 3-7, specific water quality objectives for Pajaro River)	--	96	No
Sulfate as SO ₄	mg/L	250 (Basin Plan Table 3-7, specific water quality objectives for Pajaro River)	565	160	Yes
Boron	mg/L	1.0 (Basin Plan Table 3-7, specific water quality objectives for Pajaro River)	0.49	0.61	No
Sodium	mg/L	200 (Basin Plan Table 3-7, specific water quality objectives for Pajaro River)	200	100	No
Antimony	µg/L	6.0 (Basin Plan [Title 22] human health)	0.4	0.6	No
Arsenic	µg/L	50 (Basin Plan Table 3-2 for human health)	2.5	4.1	No
Cadmium	µg/L	5.0 (Basin Plan [Title 22] human health)	1	0.06	No
Chromium (VI)	µg/L	11 (CTR freshwater chronic aquatic life)	0.7	Not Available	No
Copper	µg/L	27 (CTR freshwater chronic aquatic life)	6.6	13	No
Mercury	µg/L	0.05 (CTR human health)	160	0.34	Yes
Nickel	µg/L	100 (Basin Plan [Title 22] human health)	5.6	26	No
Selenium	µg/L	10 (Basin Plan Table 3-2 for human health)	28	2.5	Yes
Silver	µg/L	34 (CTR freshwater acute aquatic life)	1.2	Not Available	No

Pollutant	Units	C (Basis)	MEC	B	RPA Result
Zinc	µg/L	200 (Basin Plan Table 3-5 for chronic aquatic life)	5.9	39	No
Cyanide	µg/L	5.2 (CTR freshwater chronic aquatic life)	7	Not Available	Yes
Aluminum	µg/L	1,000 (Basin Plan Table 3-2 for human health)	1600	6960	Yes
Barium	µg/L	1,000 (Basin Plan Table 3-2 for human health)	29	130	No
Fluoride	µg/L	1,000 (Basin Plan Table 3-4 for human health)	450	Not Available	No
Cobalt	µg/L	50 (Basin Plan Table 3-4 for human health)	0.1	Not Available	No
Iron	µg/L	1,000 (National Ambient Water Quality Criteria)	160	10,100	Yes
Manganese	µg/L	200 (Basin Plan Table 3-4 for human health)	29	152	No
Molybdenum	µg/L	10 (Basin Plan Table 3-4 for human health)	17	Not Available	Yes

Based on analysis of effluent and receiving water data, it appears as if reasonable potential to cause or contribute to in-stream excursions above applicable water quality criteria may exist for total dissolved solids, sulfate, aluminum, cyanide, iron, mercury, molybdenum, and selenium. Therefore, this Order establishes WQBELs for those pollutants with applicable water quality criteria from CTR and NTR. For those pollutants that exceed Basin Plan objectives (including Title 22 criteria), more frequent monitoring will be required to collect the data necessary to perform a RPA in the future.

4. WQBEL Calculations

Final WQBELs for all priority pollutants have been determined using the methods described in Section 1.4 of the SIP.

Step 1: For each water quality criterion/objective, an effluent concentration allowance (ECA) is calculated from the following equation to account for dilution and background levels of each pollutant.

$$ECA = C + D (C - B), \text{ where}$$

C = the applicable water quality criterion (adjusted for receiving water hardness and expressed as the total recoverable metal, if necessary)

D = the dilution credit

B = the background concentration

In a letter dated December 16, 2009, and as part of its Report of Waste Discharge, the Discharger requested a mixing zone and dilution credits for its discharge to the Pajaro River. It should be noted that prior to adoption of Order No. R3-2005-0044, the Discharger had requested a mixing zone and dilution credits for discharges

during the wet season. That request was denied because a mixing zone “...provides relief to a discharger in that compliance with certain water quality criteria is not required within the zone. Because such relief is not automatic, the Regional Board takes the position that conditions must exist which warrant the special circumstance of a mixing zone. During the term of Order No. 00-007 (May 19, 2000 to the present) there was a single period of discharge from the facility. Due to the treatment and storage capability within the facility’s process water circuit, actual discharges will remain infrequent and will become even more infrequent over the term of Order No. R3-2005-0044, as the storage capacity of Soda Lake is increased. Effluent data from samples collected during that discharge event on December 1, 2001 showed that all parameters were in compliance with effluent limitations, except for mercury. As the Regional Board chooses to consider the relief provided by a mixing zone for demonstrable, not theoretical or potential need, there is insufficient present justification for consideration of a mixing zone for discharges from this facility.” The Regional Water Board is denying the new request for a mixing zone at this time in part because the infrequent discharge situation at the Facility has not changed. Although the Discharger, in its new request for dilution credits, demonstrates that complete mix likely occurs based on the relative high velocity of the discharge, as well as the relative small volume of effluent discharged in relation the flows expected in the Pajaro River when discharges do occur, additional or revised information and analyses should be provided to indicate that the mixing zone and associated dilution credit sufficiently meet the conditions set forth in section 1.4.2.2 of the SIP. For example:

- Toxicity tests of samples taken from the Facility under non-discharge conditions are used as the basis for indicating that the discharge would not cause acutely toxic conditions or compromise the integrity of the entire water body. First, dilution credits are granted on a pollutant-specific basis, thus a pollutant-specific analysis demonstrating the absence of acutely toxic conditions or no impacts to the integrity of the entire water body should be performed. Second, the results of the acute toxicity test were based on one sample taken in 2009; the chronic toxicity test results were from October 2004 and December 2001. Although the October 2004 chronic test results indicate there was a significant decrease in reproduction for *Ceriodaphnia dubia*, the Facility also noted in their application that the sample for these tests were “not composed of rainwater to the extent that it would be in the event of a discharge.” Prior to allowing a mixing zone, samples of actual effluent should be used to make the determination that no impact would result from the granting of a mixing zone. This would also hold true for the chemical-specific data.
- The Discharger proposes the use of the average Pajaro River flow during the wet season as the basis for calculating the dilution ratio. Additional analyses would be required to determine how this average flow relates to the critical flow period that would be necessary for protection of aquatic life and human health as identified in the SIP.

Step 2: For each ECA based on an aquatic life criterion (e.g., copper), the long-term average discharge condition (LTA) is determined by multiplying the ECA times a factor (multiplier), which adjusts the ECA to account for effluent

variability. The multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. When the data set contains less than 10 sample results, or 80 percent or more of the data are reported as non-detect (ND), the CV is set equal to 0.6. Derivation of the multipliers is presented in Section 1.4 of the SIP.

From Table 1 of the SIP, multipliers for calculating the LTAs at the 99th percentile occurrence probability are 0.32 (acute multiplier) and 0.53 (chronic multiplier). LTAs are determined as follows:

Table F-7. Calculation of Long-Term Averages

Pollutant	ECA		ECA Multiplier		LTA (µg/L)	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Copper	45	27	0.32	0.53	14.4	14.2

Step 3: WQBELs, including an average monthly effluent limitation (AMEL) and a maximum daily effluent limitation (MDEL) are calculated using the most limiting (the lowest) LTA. The LTA is multiplied times a factor that accounts for averaging periods and exceedance frequencies of the effluent limitations, and for the AMEL, the effluent monitoring frequency. Here, the CV is calculated from the effluent data set as 0.6, and the sampling frequency is set equal to 4 (n = 4). The 99th percentile occurrence probability was used to determine the MDEL multiplier and a 95th percentile occurrence probability was used to determine the AMEL multiplier. From Table 2 of the SIP, the MDEL multiplier is 3.11 and the AMEL multiplier is 1.55. Final WQBELs for copper are calculated as follows.

Table F-8. Calculation of Aquatic Life WQBELs

Pollutant	LTA	MDEL Multiplier	AMEL Multiplier	MDEL (µg/L)	AMEL (µg/L)
Copper	14.2	3.11	1.55	44	22

Step 4: When the most stringent water quality criterion is a human health criterion (e.g., chlorodibromomethane), the AMEL is set equal to the ECA, and the MDEL is calculated by multiplying the ECA times the ratio of the MDEL multiplier to the AMEL multiplier.

From Table 2 of the SIP, when CV = 0.6 and n = 4, the MDEL multiplier at the 99th percentile occurrence probability equals 3.11, and the AMEL multiplier at the 95th percentile occurrence probability equals 1.55. Final WQBELs for chlorodibromomethane are determined as follows.

Table F-9. Calculation of Human Health WQBELs

Pollutant	ECA	MDEL/AMEL Multiplier	MDEL (µg/L)	AMEL (µg/L)
Chlorodibromomethane	0.40	3.11/1.55 = 2.01	0.80	0.40

5. Whole Effluent Toxicity (WET)

Whole effluent toxicity (WET) limitations protect receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure

the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative “no toxics in toxic amounts” criterion while implementing numeric criteria for toxicity. There are two types of WET tests - acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are toxic to, or which produce detrimental physiological responses in human, plant, animal, or aquatic life. Survival of aquatic organisms in surface waters subjected to a waste discharge or other controllable water quality conditions shall not be less than that for the same water body in areas unaffected by the waste discharge or for another control water.

Section 4.0 of the Basin Plan requires a chronic toxicity limitation for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters. Because discharges from the Facility occur infrequently and only for short durations, Order No. R3-2005-0044 only included an acute limitation. A chronic limitation is not meaningful (i.e., the discharge will not cause, have the reasonable potential to cause, or contribute to chronic toxicity in the receiving waters) and is not practical in such circumstances. Section 8.3.2 of the chronic WET methods manual (*Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, October 2002, EPA-821-R-02-013) states that when “tests are conducted off-site, a minimum of three samples are collected. If these samples are collected on Test Days 1, 3, and 5, the first sample would be used for test initiation and for test solution renewal on Day 2. The second sample would be used for test solution renewal on Days 3 and 4. The third sample would be used for test solution renewal on Days 5, 6, and 7.” Here, because the Discharger is expected to discharge for periods of only a few days, the chronic WET test methods are generally inappropriate, and potential chronic effects are diminished due to the short expected duration of any discharges. The Discharger’s continuing efforts to re-use process water to the extent possible at the Facility have resulted in discharges that occur less frequently and for shorter durations – discharges too infrequent and too short to cause, have the potential to cause, or contribute to chronic toxicity in the receiving water. Therefore, consistent with Order No. R3-2005-0044, this Order does not contain chronic toxicity effluent limitations or monitoring requirements.

Consistent with Order No. R3-2005-0044, this Order includes an acute toxicity limitation that requires survival of test organisms exposed to 100 percent effluent to not be significantly reduced, as determined by a t-test, when compared to the survival of control organisms. The Discharger must maintain a Toxicity Reduction Evaluation (TRE) Workplan, which describes the steps that the Discharger intends to follow in the event that acute toxicity is detected in the discharge to the Pajaro River. When monitoring measures acute toxicity in the effluent above the limitation established by the Order, the Discharger must resample, if the discharge is continuing, and retest for acute toxicity. The Executive Officer will then determine whether to initiate enforcement action, whether to require the Discharger to implement a TRE, or to implement other measures.

6. pH

The Basin Plan requires that the pH shall not be depressed below 7.0 or raised above 8.5. Order No. R3-2005-0044 required a more stringent maximum pH limitation of 8.3 based on the requirements contained in the previous Order. Effluent limitations for pH are established in this Order for discharges at Discharge Point 001 consistent with Order No. R3-2005-0044, which are protective of the receiving water beneficial uses.

7. Suspended Sediment

In 2005, the Central Coast Regional Water Board adopted Resolution No. R5-2005-0132, establishing TMDLs and implementation plans for suspended solids in the Upper Pajaro River and Llagas Creek. Consistent with the TMDL, effluent limitations implementing the TMDL for the Facility have been established that reflect the maximum allowable suspended solids concentrations (SSC) over varying durations (exposure) periods.

It is important to note that SSC measurement used in the TMDL is not the same as TSS measurement typically regulated under the NPDES permit program. The EPA approved TSS analytical method fails to capture, and thus significantly under reports, larger diameter suspended solids (e.g., in the 100 to 1000 micron range).

8. Intake Credits

In a letter dated December 16, 2009 and as part of its Report of Waste Discharge, the Discharger requested consideration for intake credits for TDS, chloride, boron, sodium, mercury, and copper. The Regional Water Board will not provide intake credits at this time based on the following:

- Water in Quarry Storage Reservoir is used as the source of production water throughout the Facility. The Quarry Storage Reservoir is made up of recycled process water (treated water from the Fines Treatment Plant), and collected rainfall and stormwater runoff. As needed, the Quarry Storage Reservoir is supplemented by groundwater via the Orchard Well. The intake credit request is based on the fact that Orchard Well water is used as make-up water in the Quarry Storage Reservoir. However, according to the Report of Waste Discharge (top of page 2 in the Form 200 Appendix), “... *Intake from the Orchard Well rarely occurs during the wet season, as its use is inversely proportional to rainfall inputs.*” Therefore, intake credits are being requested during the season when Orchard Well water is not likely to be present in the discharge.
- Orchard Well water makes up only a portion of the discharge at any given time. Intake credits are not applicable for the other water in the Quarry Storage Reservoir (i.e., rainfall, recycled process water). Because any discharge from the Facility will be storm-event driven, the potential make-up of a discharge from the Facility (i.e., make-up in terms of the relative proportion of well water, recycled water, rainfall, and stormwater) will be dependent on the size and duration of a storm.

In addition, Section 1.4.4 of the SIP states:

“Where a facility discharges pollutants from multiple sources that originate from the receiving water body and from other water bodies, the RWQCB may derive an effluent limitation reflecting the flow-weighted amount of each source of the pollutant provided that adequate monitoring to determine compliance can be established and is included in the permit.”

Therefore, application of intake credits would require that each source be characterized prior to a discharge event so that the relative contribution from the Orchard Well could be quantified to allow for accurate flow-weighting.

These conclusions are also consistent with the discussion in the Fact Sheet for Order No. R3-2005-0044 which stated *“...In the circumstances of the Arthur R. Wilson Quarry, the Regional Board cannot consider granting intake credits as the hydrologic connection between the facility’s well water makeup source and the receiving water (the Pajaro River) is unclear, and intake water characteristics are significantly altered through recycling, reuse, treatment, and commingling with stormwater before discharge”* (emphasis added).

A summary of all WQBELs applicable at Discharge Point 001 are presented in the table below.

Table F-10. Summary of WQBELs – Discharge Point 001

Constituent	Units	Effluent Limits	
		Average Monthly	Maximum Daily
pH	s.u.	7.0 - 8.3 at all times	
Total Suspended Solids (TSS)	mg/L	50	--
Total Dissolved Solids (TDS)	mg/L	1,000	--
Turbidity	NTUs	--	50
Acute Toxicity	TU	--	1 ^{[1][2]}
Mercury, Total Recoverable	µg/L	0.050	0.10
Selenium, Total Recoverable	µg/L	10	20
Cyanide, Total (as CN)	µg/L	4.3	8.5
Aluminum, Total Recoverable	µg/L	1,000	5,000
Iron, Total Recoverable	µg/L	1,000	--
Suspended Sediments	mg/L	[3]	[3]

^[1] Or the background toxicity of the receiving water as determined by concurrent toxicity testing using upstream receiving water samples; the greater of the two shall apply.

^[2] Survival of test organisms exposed to 100 percent effluent shall not be significantly reduced when compared of control organisms using a t-test.

^[3] The discharge of suspended settlement shall not exceed the following limits:

- For a discharge duration of 1 day (24 hours) or less, the suspended sediments concentration (SSC) cannot exceed 1,807 mg/L.
- For a discharge duration of 2 days (48 hours), the SSC cannot exceed 665 mg/L for both days.
- For a discharge duration of 2 to 14 days (48 to 336 hours), the SSC cannot exceed 244 mg/L for each day.
- For a discharge duration of 14 to 49 days (336 to 1,176 hours), the SSC cannot exceed 90 mg/L for each day.
- For a discharge duration of greater than 49 days (1,176 hours), the SSC cannot exceed 90 mg/L for each day.

D. Final Effluent Limitations

Final, technology-based and water quality-based effluent limitations established by the Order are discussed in the preceding sections of the Fact Sheet.

1. Satisfaction of Anti-Backsliding Requirements

The Order satisfies applicable anti-backsliding provisions of the Clean Water Act, as all limitations and requirements of the Order are at least as stringent as those of the previous permit. The Order retains effluent limitations established by the previous permit for pH, TSS, turbidity, mercury (total), and acute toxicity.

2. Satisfaction of Antidegradation Policy

Provisions of the Order are consistent with applicable antidegradation policies expressed by NPDES regulations at 40 CFR 131.12 and by State Water Board Resolution No. 68-16. Limitations and conditions of the Order assure maintenance of the existing quality of receiving waters and do not authorize increased rates of discharge or increased pollutant loadings to the receiving water above that authorized by the previous Order.

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on pH, TSS and turbidity. Restrictions on these pollutants are discussed in section IV.B of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum, federal technology-based requirements that are necessary to meet water quality standards. These limitations are not more stringent than required by the CWA.

Final, technology and water quality based effluent limitations are summarized in sections IV.B and C of this Fact Sheet.

E. Interim Effluent Limitations – Not Applicable

F. Land Discharge Specifications – Not Applicable

G. Reclamation Specifications – Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

Receiving water quality is a result of many factors, some unrelated to the discharge. This Order considers these factors and is designed to minimize the influence of the discharge on the receiving water. Specific water quality objectives established by the Basin Plan to meet this goal for all inland surface waters are included as Receiving Water Limitations in Section V.A of this Order.

B. Groundwater – Not Applicable

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 also authorize the Regional Water Board to require technical and monitoring reports. Rationale for the monitoring and reporting requirements contained in the Monitoring and Reporting Program (MRP), which is presented as Attachment E of this Order, is presented below.

A. Influent Monitoring – Not Applicable

B. Effluent Monitoring

Effluent monitoring requirements of the previous permit for Discharge Point 001(at Monitoring Location EFF-001) are retained in this Order, with the following exceptions/changes:

1. For those pollutants that exhibited reasonable potential based on the limited effluent data, weekly grab samples are required when a discharge occurs. These pollutants include aluminum, cyanide, iron, molybdenum, and selenium.
2. Daily monitoring when a discharge occurs is required for SSC to determine compliance with the applicable TMDL WLAs.
3. Routine (grab samples once per year during discharge) monitoring has been included for all other pollutants for which new effluent limitations have been established in this Order.
4. Single permit term sampling of the Lower Hole stormwater catchment basin, which may become mixed in with the Quarry Storage Reservoir.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) limitations protect receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. Acute toxicity testing measures mortality in 100 percent effluent over a short test period and chronic toxicity testing is conducted over a longer period of time and may measure mortality, reproduction, and/or growth. This Order retains limitations and monitoring requirements for acute toxicity for Discharge Point 001 from the previous Order. Since discharges from this Facility occur infrequently and for short duration, only acute WET limitations and monitoring requirements are set forth in this Order.

D. Receiving Water Monitoring

1. Surface Water

Most receiving water and surface water monitoring requirements are unchanged and are retained from the previous Order. The MRP establishes monitoring requirements for the CTR and Title 22 pollutants (including total trihalomethanes) to generate background data for use in future reasonable potential analyses for these pollutants.

2. Groundwater – Not Applicable

E. Process Water Supply Monitoring

Due to the potential contribution of pollutants from the Orchard Well to the quality of effluent from the Quarry Lake Reservoir, annual process water supply monitoring requirements have been carried over from Order R3-2005-0044 for flow, TDS, chloride, sodium, sulfate, boron, nitrate and hardness.

F. Other Monitoring Requirements – Not Applicable

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D to the Order.

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

B. Monitoring and Reporting Program (MRP) Requirements

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

C. Special Provisions

1. Reopener Provisions

The Order may be modified in accordance with the requirements set forth at 40 CFR 122 and 124, to include appropriate conditions or limits based on newly available information, or to implement any, new State water quality objectives that are approved by the USEPA. As effluent is further characterized through additional monitoring, and if a need for additional effluent limitations becomes apparent after additional effluent characterization, the Order will be reopened to incorporate such limitations.

2. Special Studies and Additional Monitoring Requirements

a. Toxicity Reduction Requirements

The requirement to maintain a Toxicity Reduction Work Plan is retained from Order No. R3-2005-0044. When toxicity monitoring measures acute toxicity in the effluent above the limitation established by the Order, the Discharger is required to resample and retest, if the discharge is continuing. When all monitoring results are available, the Executive Officer can determine whether to initiate enforcement action, whether to require the Discharger to implement toxicity reduction evaluation (TRE) requirements, or whether other measures are warranted.

3. Best Management Practices and Pollution Prevention – Not Applicable

4. Construction, Operation, and Maintenance Specifications

a. Erosion and Sediment Control

The requirement to inspect, install, and have in proper operational condition all erosion and sediment control systems necessary to assure compliance with this Order is retained from Order No. R3-2005-0044.

5. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable

6. Other Special Provisions

a. Discharges of Stormwater

Order No. R3-2010-0025 applies to discharges of treated wastewater from Discharge Point 001. This wastewater consists of process water plus stormwater runoff from the processing area and stock piles, as well as stormwater that falls on the Quarry Storage Reservoir and Soda Lake. All other stormwater runoff from the Arthur R. Wilson Quarry can be discharged only in accordance with the requirements of General Permit No. CAS000001 - *Waste Discharge Requirements for Discharges of Stormwater Associated with Industrial Activities*.

7. Compliance Schedules – Not Applicable

VIII. PUBLIC PARTICIPATION

The Central Coast Regional Water Quality Control Board is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for Granite Rock's Arthur R. Wilson Quarry. As a step in the WDR adoption process, Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has

provided them with an opportunity to submit their written comments and recommendations. The Discharger provided notification in a local newspaper or in a daily newspaper of general circulation by April 13, 2010, for the first draft of the proposed Order. Draft waste discharge requirements were mailed to interested parties on March 29, 2010. The Water Board received substantial comments, including an email from Granite Rock on April 26, 2010, which staff responded to on May 12, 2010. In response, Water Board staff modified the draft Order. The Water Board then provided a second public comment period to review these modifications. The Discharger provided notification in the Watsonville Register Pajaronian on **September 30, 2010**. The new draft waste discharge requirements were mailed to interested parties on **August 31, 2010**.

B. Written Comments

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

To be considered and receive a full response from Regional Board staff, written comments were required to be received at the Regional Board offices by 5:00 p.m. on **October 28, 2010**. Regional Board staff or the Chair of the Regional Board may accept later comments upon request, in appropriate circumstances. Address any requests to submit late comments to the contact person on the cover page. After the comment period closes, the Regional Board may limit written comments on the order to any changes that Regional Board staff recommends after reviewing the public comments.

As of October 28, 2010, comments were received from the Discharger in the form of an email dated October 14, 2010, and a letter dated October 28, 2010. Two additional letters were received from the County of Santa Cruz Department of Public Works and the, Monterey County Water Resources Agency on May 11 and May 13, 2010, respectively via facsimile and email. The letters are provided as Attachment G – Comments for the record and reference. The following discussion provides staff's responses to comments and action taken. The Discharger's and interested parties' comments are not repeated here for brevity and are referenced by number and section of the Order they pertain to. Portions of the Discharger's and interested parties' comments may be paraphrased or quoted in staff responses for clarification as necessary.

Granite Rock May 13, 2010 letter:

1. WQBELs are not needed for the majority of pollutants to protect the beneficial uses of the Pajaro River

Staff Response: Initially, Water Board staff included effluent limits for CTR and NTR priority pollutants because sufficient monitoring data that are representative of the effluent discharged to the Pajaro River were not available. Regional Water Board staff determined that there is a reasonable potential for the discharge to cause or contribute to exceedances of water quality criteria for all pollutants with applicable water quality criteria from the CTR and NTR. The Discharger challenged Water Board staff's determination on the basis that the SIP states in Section 1.3 – Step 8:

"If data are unavailable or insufficient, as described in section 1.2, to conduct the above analysis for the pollutant, or if all reported detection limits of the pollutant in the effluent are greater than or equal to the C value, the RWQCB may require periodic monitoring of the pollutant."

In response to the comment, Water Board staff considered the available data and other information provided by the Discharger to assist in determining what pollutants would have a reasonable potential to be present in a discharge. Additional monitoring of the stormwater effluent will help to characterize the potential constituents present in the effluent.

Staff Action: Water Board staff eliminated effluent limits for constituents not detected in the provided wastewater analysis (Section IV.A Tables 6 and 7). Additional monitoring of the stormwater was added into the MRP (Attachment E, Section IV.A.1) in order to assess stormwater runoff characteristics from the Lower Hole, which has not been previously monitored and is occasionally mixed in with the Quarry Storage Reservoir water.

2. The Draft Order's denial of dilution credits criteria is not compatible with SIP Section 1.4.2.1

Staff Response: Section 1.4.2 of the SIP states that the allowance of mixing zones is discretionary and shall be determined on a discharge-by-discharge basis. Further, the SIP states that a Regional Water Board may consider allowing mixing zones and dilution credits only for discharges with a physically identifiable point of discharge that is regulated through an NPDES permit. However, Section 1.4.2.1 does not require that the Regional Water Board establish a mixing zone. The remaining portion of Section 1.4.2 of the SIP identifies minimum requirements the Regional Water Board must consider when it determines a mixing zone or dilution credits are necessary or applicable.

Because the allowance of mixing zones and dilution credits allows for the exceedance of water quality criteria/objectives within the immediate vicinity of the discharge and the potential for increased loading of pollutants into the receiving water, this Regional Water Board allows dilution credits only when necessary for compliance once all other options for meeting water quality criteria/objectives have been exhausted and adequate data are available to determine that the requirements of Section 1.4.2.2 of the SIP are met. The Regional Water Board only considers the relief provided by a mixing zone for demonstrable, not theoretical or potential, need, and other than the stated need by the Discharger, there are insufficient data and justification for consideration of a mixing zone for discharges from this Facility.

Section 1.4.2.2 of the SIP establishes minimum requirements for mixing zones, including prohibiting mixing zones from causing acutely toxic conditions to aquatic life passing through the mixing zone. Acutely toxic conditions may be present when applicable criteria, such as CTR criteria, are exceeded. In response to a statement in the Fact Sheet, "First, dilution credits are granted on a pollutant-specific basis, thus a pollutant-specific analysis demonstrating the absence of acutely toxic conditions or no impacts to the integrity of the entire water body should be performed," the Discharger argues that additional tests to determine if acutely toxic conditions will be present at the

discharge location are not necessary. The Discharger agrees that dilution credits are assessed on a pollutant-by-pollutant basis, but argues that a pollutant specific toxicity test is not necessary given the testing already completed. The Discharger has submitted results for a single representative chronic toxicity test from December 2001 and averaged Pajaro River concentrations for various pollutants from 2001 to present.

To determine the available dilution in the receiving water on a pollutant-by-pollutant basis, sufficient data for the receiving water are necessary. Because the Regional Water Board must consider dilution under all reasonable worst-case scenarios, censored or averaged data are not sufficient to use in the analysis. The censored or averaged data provided by the Discharger are not representative of reasonable worst-case scenarios, or even the worst-case scenario during which the Discharger sampled. In the consideration of dilution credits, sufficient data, with applicable maximum receiving water concentrations, must be used to determine assimilative capacity in the receiving water. These values may then be used, in concert with critical low flows in the receiving water and a maximum effluent flow to determine assimilative capacity in the receiving water and to ensure acutely toxic conditions are not created in the mixing zone.

Demonstrating that average receiving water concentrations are less than applicable water quality criteria for various pollutants does not demonstrate dilution credits are applicable and does not demonstrate the available assimilative capacity in the receiving water so that appropriate dilution may be determined. Without an appropriate analysis of the available assimilative capacity, and thus available dilution, dilution credits cannot be granted.

The Discharger argues that the results of whole effluent toxicity tests are sufficient to determine that dilution is available, stating, "If no toxicity is observed in the whole effluent testing, then it is highly unlikely toxicity would be observed in a pollutant specific testing." Whole effluent toxicity testing does not provide the necessary data to determine assimilative capacity on a pollutant-by-pollutant basis (as discussed above). Thus, as discussed above, the application of dilution credits based on chronic toxicity data is not possible.

Further, if the effluent is highly unlikely to have pollutants greater than toxic levels, then the Discharger's effluent is unlikely to result an exceedance of water-quality based effluent limitations, and as previously discussed, the need for dilution is not justified.

Further, as stated in the Fact Sheet, sufficient representative data are not available to determine compliance with the minimum requirements established in section 1.4.2.2 of the SIP. Specifically, the Fact Sheet states (Section C.4):

"Toxicity tests of samples taken from the Facility under non-discharge conditions are used as the basis for indicating that the discharge would not cause acutely toxic conditions or compromise the integrity of the entire water body. First, dilution credits are granted on a pollutant-specific basis, thus a pollutant-specific analysis demonstrating the absence of acutely toxic conditions or no impacts to the integrity of the entire water body should be performed. Second, the results of the acute toxicity test were based on one sample taken in 2009; the chronic toxicity test results were from October 2004 and December 2001. Although the

October 2004 chronic test results indicate there was a significant decrease in reproduction for *Ceriodaphnia dubia*, the Discharger also noted in their application that the sample for these tests were “not composed of rainwater to the extent that it would be in the event of a discharge.” Prior to allowing a mixing zone, samples of actual effluent should be used to make the determination that no impact would result from the granting of a mixing zone. This would also hold true for the chemical-specific data”.

The Discharger comments that the use of critical flows identified in Table 3 of the SIP are for year-round dilution credit models, which are not applicable to the Facility because the Facility’s discharges are most likely to occur during the rainy season, and that a rainy season flow would be the best in modeling mixing zones for this facility. However, the Discharger did not request, and the permit does not limit the Facility to discharging only during the rainy season. Thus, the Regional Water Board must consider discharges during all time frames when a discharge may occur. The use of the average wet season flow for the calculation of dilution credits must be further evaluated in regards to the critical low flows likely to occur during all periods of potential discharge.

Staff Action: No Action

3. The Orchard Well has been shown to not comply with past limits, specifically mercury, Total Dissolved Solids (TDS), chloride, sulfate, boron, and sodium

Staff Response: It is acknowledged that the facility continually recycles water for use in its processing operations, and that a fraction of the re-used water contains Orchard Well water. It is also acknowledged that the processing operations themselves (e.g., aggregate wash in the wet processing plant) may not chemically or physically alter the pollutants in the Orchard Well water. However, it is uncertain if the closed-loop system used to manage water at the facility (i.e., collected rainfall and Orchard Well water are periodically used to supplement re-used water, which is constantly recycled through the facility) physically or chemically alters the pollutants in a manner that adversely affects water quality and beneficial uses. The Discharger suggests that some chemical reactions may improve re-used water quality; however, no data are provided to support this assertion. As described further in the fact sheet, limited data are available that characterize the potential discharge from the facility, and the data that do exist are not considered by the Discharger as being representative of the potential discharge. Therefore, it is uncertain whether the discharge, which always includes some fraction of Orchard Well water, would adversely affect the water quality and beneficial uses of the Pajaro River.

Denial of intake credits at this time is also based on the uncertainty related to application of the intake credit. According to the SIP:

“Where the above conditions are met, the RWQCB may establish effluent limitations allowing the facility to discharge a mass and concentration of the intake water pollutant that is no greater than the mass and concentration found in the facility’s intake water. A discharger may add mass of the pollutant to its waste stream if an equal or greater mass is removed prior to discharge, so there is no net addition of the pollutant in the discharge compared to the intake water.”

and,

“The permit shall specify how compliance with mass- and concentration-based limitations for the intake water pollutant will be assessed. This may be done by basing the effluent limitation on ambient background concentration data. Alternatively, the RWQCB may determine compliance by simultaneously monitoring the pollutant concentrations in the intake water and in the effluent.”

The Discharger in its Report of Waste Discharge suggests that the effluent limitations be set equal to the concentration of the intake waters in accordance with the SIP. This suggested approach is not appropriate, as it would not ensure there is no net addition of a pollutant in the discharge as it doesn't account for the pollutant contributions from other sources (e.g., stormwater). Due to the fact that water is constantly recycled and Orchard Well water is only periodically used to supplement re-used water, use of simultaneous monitoring in the intake and effluent to ensure no net addition is also not an option.

Staff Action: No Action

4. The CTR and NPDES regulations support use of dissolved metals to assess impact and compliance.

Staff Response: As explained in USEPA's October 1, 1993 memorandum titled *Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria*, EPA recommends that water quality standards be based on dissolved metal concentrations because dissolved metal more closely approximates the bioavailable fraction of metal in the water column than does total recoverable metal. However, 40 CFR 122.45(c) specifies that effluent limitations for metals must be expressed in terms of total recoverable metal, except when an effluent guideline specifies the limitation in another form of the metal, the approved analytical methods measure only dissolved metal, or the permit writer expresses a metals limit in another form when required to carry out provisions of the Clean Water Act. As also explained in USEPA's October 1, 1993 memorandum titled *Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria*, total recoverable metal is used because the chemical conditions in ambient waters frequently differ substantially from those in the effluent, and there is no assurance that effluent particulate metal would not dissolve after discharge. The NPDES regulations do not require that state water quality standards be expressed as total recoverable; rather, the NPDES regulations require permit writers to translate between different metal forms in the calculation of the permit limit so that a total recoverable limit can be established. Attachment 3 to the 1993 USEPA memorandum suggests approaches for translation for instances where the water quality criterion for a metal is expressed in the dissolved form in the water quality standards. These approaches include development of a site-specific translator and calculation of the total recoverable effluent limitation using a water effects ratio (WER) of 1 (unless a site-specific WER has been developed).

Further, Section 5.7.3 of USEPA's *Technical Support Document for Water Quality-based Toxics Control*, EPA/505/2-90-001, March 1991 (TSD) states that, where the water quality standards are expressed directly as dissolved, the permit writer will need to reconcile the different expressions of the metal, and suggests four permitting

approaches. These approaches include assuming no difference between the dissolved or total recoverable phases; developing a site-specific relationship between the phases of the metal; using a relationship developed by USEPA from national data, or using a geochemical model.

The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP) at Section 1.4.B, Step 2 states that water quality criteria for calculation of the effluent concentration allowance (ECA) shall be expressed as total recoverable, unless inappropriate. Section 1.4.1 of the SIP also states:

“To derive total recoverable effluent limitations for aquatic life metals and selenium criteria/objectives that are expressed in the dissolved form, a translator first must be applied to the criterion/objective to express it as total recoverable. The translator shall be the U.S. EPA conversion factor (see Appendix 3) that applies to the dissolved aquatic life metals criterion as specified in the CTR (i.e., the dissolved criterion/objective would be divided by the applicable U.S. EPA conversion factor to calculate a total recoverable criterion) unless:

A. the discharger, in the permit application, (1) commits to (a) completing a defensible site-specific translator study and (b) proposing a dissolved to total recoverable translator to the RWQCB, and (2) describes the method(s) to be used in developing the translator; and

B. the discharger, within a time period specified by the RWQCB not exceeding two years from the date of issuance/reissuance of the permit, submits to the RWQCB (1) the proposed translator, and (2) all data and calculations related to its derivation.”

Consistent with the federal regulations at 40 CFR 122.45(c), USEPA guidance, and the SIP, and in the absence of site-specific data, a default water effects ratio (WER) of 1 and the default metal translators specified in the SIP and CTR (except for mercury, as explained below) were used to determine the applicable total recoverable effluent limitations for metals in the proposed permit. If the Discharger were to perform studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators, the proposed Order could be reopened to modify the effluent limitations for the applicable metals, as allowed by the SIP and CTR.

Finally, the Discharger comments that the exception for situations where an effluent guideline requires the use of another form is applicable to the discharge because the CTR criteria are expressed in dissolved concentrations. However, the effluent guidelines referred to in the exception are the technology-based requirements established at 40 CFR Parts 405 through 499 for specific industries. The CTR criteria on which the effluent limitations in the proposed permit are based are not effluent limitation guidelines, but rather are water quality criteria included in the applicable water quality standard for the receiving water.

Staff Action: None.

Monterey County Water Resources Agency's (MCWRA) May 13, 2010 letter and Santa Cruz Department of Public Works' (SCPW) May 11, 2010 letter (responded to together due to similar nature of comments):

1. MCWRA and SCPW comment that issuing Order No. R3-2010-0025 would allow the Facility to discharge process water into the Pajaro River at river stage elevations above the flood warning level (monitoring stage). MCWRA and SCPW comment that the flood stage of the Pajaro River at Chittenden monitoring station is 32 feet and the monitoring stage is 25 ft. Both agencies recommend prohibiting the discharge at or above monitoring stage and that the Facility be required to notify downstream public agencies prior to proposed releases scheduled when Chittenden stage levels are within two feet of the monitoring stage level.

Staff Response: This same issue regarding flow contributions to the Pajaro River from the Facility during flooding was brought to the attention of the Central Coast Water Board prior to adoption of Order No. R3-2005-0044. In response, the Board included two specific prohibitions.

First, Prohibition III.F (kept in this Order) states that the discharge "shall not cause or contribute to downstream flooding." The Regional Water Board rationale in the response to comments contained in the Fact Sheet was that any discharge flow to the Pajaro River from the Facility during downstream flood conditions may be considered a contributing factor to flooding regardless of measurable effects. As such, it was the Regional Board's intent to limit the discharge to avoid and not contribute to downstream flooding.

Second, Prohibition III.H (kept in this Order) states that "the discharge of facility process water from the Quarry Storage Reservoir to the Pajaro River shall not occur when Pajaro River flows are greater than 13,000 MGD (corresponding to a Pajaro River stage of approximately 31.3 feet) as measured at the Chittenden gauging station." The Regional Water Board rationale in the response to comments contained in the Fact Sheet was that the Regional Water Board maintained this prohibition in order to limit flow discharges to the Pajaro River so as to avoid and not contribute to downstream flooding nor impact water quality beneficial uses. The Regional Water Board continues to regulate the Discharger's effluent flow volume by carrying over Order No. R3-2005-0044 prohibitions into the tentative Order.

The Monterey County Water Resources Agency and County of Santa Cruz (Petitioners) filed petitions for review of Order No. R3-2005-0044. This is documented in the administrative record for SWRCB/OCC FILE A-1702 'Petition of Monterey County Water Resources Agency and County of Santa Cruz.' The Water Board responded to the petition. At that time, Water Board staff determined that the administrative record supported the Central Coast Water Board's findings that the discharge will not contribute to flood stage water levels. The Order is sufficiently protective of water quality and will prevent the discharge from causing or contributing to flooding on downstream reaches of the Pajaro River. The issues were discussed in more detail in the response letter from the Water Board dated August 4, 2005. That response letter is included in Attachment G for further reference. The State Water Resources Control Board denied the stay request by both Petitioners on August 26, 2005, citing reasons of insufficient

proof of all three of the prerequisites for a stay as specified in California Code of Regulations, title 23, section 2053.

Staff Action: None.

Granite Rock October 14, 2010 email:

1. Comment regarding discrepancy between Water Board and Granite Rock calculated effluent limits for total cyanide.

Staff Response:

The following describes the methodology used to derive the effluent limitations for Cn:

Step 1: Identify the applicable water quality criteria or objective. According to the SIP Section 1.4, Step1 of the SIP, “for each criteria determine the effluent concentration allowance (ECA) using the following steady state equation:”

$$\begin{aligned} \text{ECA} &= C + D(C-B) \quad \text{when } C > B, \text{ and} \\ \text{ECA} &= C \quad \quad \quad \text{when } C \leq B, \end{aligned}$$

Where: C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators.

D = The dilution credit,

B = The ambient background concentration

For Granite Rock, D = 0, so :

$$\text{ECA}_{\text{acute}} = C_{\text{acute}}$$

$$\text{ECA}_{\text{chronic}} = C_{\text{chronic}}$$

For cyanide, the applicable water quality criteria are:

$$\text{ECA}_{\text{acute}} = 22 \mu\text{g/L}$$

$$\text{ECA}_{\text{chronic}} = 5.20 \mu\text{g/L}$$

Note: It seems that this is where our calculations differ. Granite Rock made ECA_{acute} and ECA_{chronic} both equal to the most stringent water quality objective; so :

$$\text{ECA}_{\text{acute}} = 5.20 \mu\text{g/L}$$

$$\text{ECA}_{\text{chronic}} = 5.20 \mu\text{g/L}$$

Step 2: According to Section 1.4, Step 2 of the SIP, “for each ECA based on aquatic life criterion/objective, determine the long-term average discharge condition (LTA) by multiplying the ECA by a factor (multiplier).”

$$\text{LTA}_{\text{acute}} = \text{ECA}_{\text{acute}} \times \text{Multiplier}_{\text{acute}} \quad 99$$

$$\text{LTA}_{\text{chronic}} = \text{ECA}_{\text{chronic}} \times \text{Multiplier}_{\text{chronic}} \quad 99$$

Where: CV = 0.6

Multiplieracute 99 = 0.321
Multiplierchronic 99 = 0.527

Setting CV = 0.6:

LTAacute = $22 \mu\text{g/L} \times 0.321 = 7.1 \mu\text{g/L}$
LTAchronic = $5.20 \mu\text{g/L} \times 0.527 = 2.74 \mu\text{g/L}$

Note: Granite Rock made both ECAacute and ECAchronic equal to the most stringent WQO, $5.20 \mu\text{g/L}$, so:

LTAacute = $5.20 \mu\text{g/L} \times 0.321 = 1.67 \mu\text{g/L}$
LTAchronic = $5.20 \mu\text{g/L} \times 0.527 = 2.74 \mu\text{g/L}$

Since they made ECAacute = ECAchronic, the most limiting LTA in their calculations is $1.67 \mu\text{g/L}$.

Step 3: Select the most limiting (lowest) of the LTA.

LTA = most limiting of LTAacute or LTAchronic
For cyanide, the most limiting LTA was the LTAchronic
LTA = $2.74 \mu\text{g/L}$

We calculated the most stringent LTA to be $2.74 \mu\text{g/L}$ based on the ECAacute being much larger than the ECAchronic. Granite Rock's calculations had both ECAacute and ECAchronic equal to the most stringent WQO, resulting in a different LTA. However, according to Section 1.4, Step 2 of the SIP, "for each ECA based on aquatic life criterion/objective, determine the long-term average discharge condition (LTA) by multiplying the ECA by a factor (multiplier)." Therefore, ECAacute should be used to calculate a different LTAacute, and ECAchronic should be used to calculate LTAchronic, with the most stringent LTA being used to calculate the final AMEL and MDEL.

Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier).

AMELaquatic life = $2.74 \mu\text{g/L} \times 1.55 = 4.26 \mu\text{g/L}$

MDELaquatic life = $2.74 \mu\text{g/L} \times 3.11 = 8.54 \mu\text{g/L}$

Staff Action: None.

2. Comment regarding ECA calculation using dissolved metal translators.

Staff Response:

For effluent limitations established based on CTR human health criteria (i.e., mercury), no conversion factors are used (the conversion factors in Appendix 3 of the SIP only apply to acute and chronic aquatic life criteria).

For aluminum, the effluent limitations are based on direct application of the Basin Plan criteria (1,000 µg/L for average monthly based on Table 3-2 value to protect MUN use, and 5,000 µg/L for maximum daily based on Table 3-4 value to protect AGR use).

For molybdenum, the effluent limitation was based on the Table 3-4 value to protect AGR use).

For selenium, the effluent limitations are based on direct application of the Basin Plan criteria (10 µg/L for average monthly based on Table 3-2 value to protect MUN use, and 20 µg/L for maximum daily based on Table 3-4 value to protect AGR use).

Staff Action: None.

3. Comment regarding translation factors for aluminum, molybdenum, and selenium.

Staff Response:

As described above, no conversion factors are included in the SIP and CTR for human health criteria (i.e., they only apply to aquatic life criteria), and therefore none were applied in deriving effluent limitations for non-aquatic life protection criteria.

Staff Action: None.

4. Comment regarding Graniterock takes the position that effluent limitations established for metals should be in the dissolved form, and not the total form.

Staff Response:

Water Board staff concur that EPA states that dissolved criteria are more appropriate when determining compliance with water quality standards in the water column, but this is different than determining compliance with effluent limitations end-of-pipe (i.e., EPA definitely recommends setting ambient water quality criteria based on the dissolved form). However, as EPA states in several of its policy guidance documents, application of effluent limitations in the total form is required "...because the chemical conditions in ambient waters frequently differ substantially from those in the effluent, and there is no assurance that effluent particulate metal would not dissolve after discharge." If there are concerns regarding the stringency of the criteria due to site-specific factors, then EPA (and the SIP at section 1.4.1) allow for the derivation and use of site-specific translators.

Staff Action: None.

Granite Rock October 28, 2010 letter:

1. Dissolved form of metals is scientifically defensible and recommended by the EPA and CTR/SIP

Staff Response:

USEPA strongly suggests that ambient water quality criteria be in the dissolved form, but the regulations require effluent limitations to be in the total form. Please see response to comment No. 4, Granite Rock October 14, 2010 email.

Effluent guidelines are technology-based effluent limitations established in 40 CFR Parts 400-471, which are not applicable in this instance. The EPA Metal's Translator Guidance's position is that "The rebuttable presumption is that the metal is dissolved to the same extent as it was during criteria development. The default translator value should be that the translator equals the conversion factor, this represents a worst case." Essentially, EPA recommends that the default translator be 1. The default in the Discharger's case makes sense because translators don't exist for mercury, aluminum, molybdenum, and selenium. In fact, the CTR specifically states that because selenium is a bioaccumulative compound in freshwater, it is inappropriate to adjust the criterion.

Staff Action: None.

2. If Board sets metal effluent limits in the total form, then proposed effluent limits in the dissolved form must be translated to total form.

Staff Response:

Water Board staff will follow 40 CFR 122.45(c), which requires effluent limitations for metals be expressed as total recoverable. The Discharger requests the use of metals translators in Appendix 3 of the SIP. The referenced table provides translators for two of the metals detected in the Discharger's effluent. The first one, selenium, has a conversion factor of 1 due to its toxic, bioaccumulative properties. The second metal, mercury, has a stated translator factor of 0.85, which is not supported by the final rule. The USEPA reserved the aquatic life criteria on May 18, 2000, for mercury for reasons as described in Section M in order to ensure the continued protection of federally listed threatened and endangered species and to protect their critical habitat (65 Federal Register page 31709). Table 2 to paragraph (b)(2) of 40 CFR Section 131.38 reserves the translator for mercury.

Section 1.4.1 of the SIP states that, "While a translator study is being conducted, a final effluent limitation based on the applicable US EPA conversion factor shall be included in the provisions of the permit and interim requirements shall be established (in accordance with section 2.2.2)." Water Board staff is using a conservative value of '1' as the current translator factor until the Discharger has collected data to show that different ratio should be used. A conservative value of '1' is the recommended translator factor as per Attachment 3 of the USEPA technical memorandum dated October 1, 1993, "Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria." Water Board staff agrees with the Discharger's developing site-specific translators for the metals detected in their effluent.

Staff Action: Water Board staff will work with the Discharger in creating an acceptable work plan that will detail steps taken to establish site specific metal translators.

3. If Board sets metal effluent limits in the total form, then a compliance schedule will be needed

Staff Response:

As stated in Staff Response No. 2, Section 1.4.1 of the SIP states that, "While a translator study is being conducted, a final effluent limitation based on the applicable US EPA conversion factor shall be included in the provisions of the permit and interim requirements shall be established (in accordance with section 2.2.2)." This requires the Discharger to collect more data. Additionally, State Water Board Resolution No. 2008-0025 prohibits compliance schedules in NPDES permits for permit limitations implementing criteria promulgated in the CTR, as amended (40 C.F.R. section 131.38, revised as of July 1, 2005).

Special Provision in Section VI.C.1 of this Order allows the Water Board to modify the Order in accordance with the requirements set forth at 40 CFR 122 and 124, to include appropriate conditions or limits based on newly available information. The Discharger may further characterize their effluent through additional monitoring, and if a need for additional or modified effluent limitations becomes apparent after additional effluent characterization, the Order will be reopened to incorporate such limitations.

Staff Action: Water Board staff will work with the Discharger in creating an acceptable work plan that will detail steps taken to establish site specific metal translators.

4. SIP Allows for Intake Credits for the Orchard Well Intake Water

Staff Response:

See Staff Response No. 3 of Granite Rock's May 13, 2010 letter.

Staff Action: No action.

C. Public Hearing

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

Date: **December 9, 2010**
Time: **8:30 AM**
Location: **Watsonville City Council Chambers**

Interested persons were invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit.

D. Waste Discharge Requirements Petitions

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

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

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:00 a.m. and 5:00 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (805) 549-3147.

F. Register of Interested Persons

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

G. Additional Information

Requests for additional information or questions regarding this Order should be directed to Cecile DeMartini at (805) 542-4782.

ATTACHMENT G – PUBLIC COMMENT CORRESPONDENCE

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ATTACHMENT G – PUBLIC COMMENT CORRESPONDENCE

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II. GRANITE ROCK ARTHUR WILSON –COMMENT LETTER MAY 13, 2010

III. SANTA CRUZ COUNTY – COMMENT LETTER MAY 11, 2010

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V. CENTRAL COAST WATER BOARD PETITION RESPONSE LETTER AUGUST 4, 2005

VI. GRANITE ROCK ARTHUR WILSON – EMAIL COMMENTS OCTOBER 14, 2010

VII. GRANITE ROCK ARTHUR WILSON –COMMENT LETTER OCTOBER 28, 2010