CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114
Phone (916) 464-3291 • FAX (916) 464-4645
http://www.waterboards.ca.gov/centralvalley

ORDER NO. R5-2007-0168
NPDES NO. CA0081191

WASTE DISCHARGE REQUIREMENTS FOR LEHIGH SOUTHWEST CEMENT COMPANY

SHASTA COUNTY

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

Table 1. Discharger Information

Discharger	Lehigh Southwest Cement Company
Name of Facility	Lehigh Southwest Cement Company
Facility Address	15390 Wonderland Blvd.
	Redding, CA 96003
	Shasta County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified	

The discharge by Lehigh Southwest Cement Company from the discharge points identified below are 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
EFF-00X	Storm Water	40º 44' 09" N	122º 19' 05" W	West Fork of Stillwater Creek
001A	Storm Water	40° 44' 19" N	122° 18' 43" W	West Fork of Stillwater Creek
001B	Storm Water			West Fork of Stillwater Creek
002A	Storm Water	40° 43' 32" N	122° 19' 54" W	West Fork of Stillwater Creek
002B	Storm Water	40° 43' 35" N	122° 19' 55" W	West Fork of Stillwater Creek
003A (Outfall #1)	Storm Water	40° 43' 12" N	122° 20' 20" W	Spring Branch Creek, tributary to the West Fork of Stillwater Creek
003B (Outfall #2)	Storm Water	40° 43' 04" N	122° 20' 20" W	Spring Branch Creek, tributary to the West Fork of Stillwater Creek

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**6 December 2007**
This Order shall become effective on:	**25 January 2008**
This Order shall expire on:	**1 December 2012**
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	**180 days prior to the Order expiration date**

IT IS HEREBY ORDERED, that Order No. **R5-2002-0057** is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code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, PAMELA C. CREEDON, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 6 December 2007.

PAMELA C. CREEDON, Executive Officer

Table of Contents

I. FACILITY INFORMATION 4
II. FINDINGS 4
III. DISCHARGE PROHIBITIONS 11
IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS 12
A. Effluent Limitations – Discharge Point 00X 12
1. Final Effluent Limitations – Discharge Point 00X 12
2. Interim Effluent Limitations – Not Applicable 12
B. Effluent Limitations – Discharge Points 001A and 001B 12
1. Final Effluent Limitations – Discharge Points 001A and 001B 12
C. Effluent Limitations – Discharge Points 002A, 002B, 003A, and 003B 13
1. Final Effluent Limitations – Discharge Points 002A, 002B, 003A, 003B. 13
D. Land Discharge Specifications – Not Applicable 13
E. Reclamation Specifications – Not Applicable 13
V. RECEIVING WATER LIMITATIONS 13
A. Surface Water Limitations Applicable to EFF-OOX 13
B. Surface Water Limitations Applicable to 001A, 001B, 002A, 002B, 003A, and 003B. 17
C. Groundwater Limitations 20
VI. PROVISIONS 20
A. Standard Provisions 20
B. Monitoring and Reporting Program (MRP) Requirements 24
C. Special Provisions 24
1. Reopener Provisions 24
2. Special Studies, Technical Reports and Additional Monitoring Requirements 25
3. Best Management Practices and Pollution Prevention 28
4. Construction, Operation and Maintenance Specifications 28
5. Special Provisions for Municipal Facilities (POTWs Only) - Not Applicable 29
6. Other Special Provisions 29
7. Process Water Discharges 30
VII. COMPLIANCE DETERMINATION 30
1. COMPLIANCE DETERMINATION LOGIC 30
2. COMPLIANCE WITH A SECONDARY MCL 30
3. COMPLIANCE WITH CHRONIC CRITERIA AND OBJECTIVES 31

LIST OF TABLES

Table 1. Discharger Information ..... Cover
Table 2. Discharge Location ..... Cover
Table 3. Administrative Information ..... Cover
Table 4. Facility Information 4
Table 5. Basin Plan Beneficial Uses 8
Table 6. Final Effluent Limitations Discharge Point 00X. 12
Table 7. Final Effluent Limitations – Discharge Points 001A and 001B. 12
Table 8. Final Effluent Limitations – Discharge Points 002A, 002B, 003A, and 003B. 13

LIST OF ATTACHMENTS

ATTACHMENT A – DEFINITIONS A-1
ATTACHMENT B – MAP B-1
ATTACHMENT C – FLOW SCHEMATIC C-1
ATTACHMENT D – STANDARD PROVISIONS D-1
ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP) E-1
ATTACHMENT F – FACT SHEET F-1
ATTACHMENT G – ASSESSORS PARCEL NUMBERS G-1

I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	Lehigh Southwest Cement Company
Name of Facility	Lehigh Southwest Cement Company
Facility Address	15390 Wonderland Blvd.
	Redding, CA 96003
	Shasta County
Facility Contact, Title, and Phone	James E. Ellison, Plant Manager (530) 275-1581 Michael Meinen, Environmental Manager (530) 275-1581
Mailing Address	15390 Wonderland Blvd.
	Redding, CA 96003
Type of Facility	3241 – Hydraulic Cement 1422 – Crushed and Broken Limestone 3295 – Minerals and Earth, Ground or Otherwise Treated
Facility Design Flow	Not Applicable

II. FINDINGS

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

A. Background. Lehigh Southwest Cement Company (hereinafter Discharger) is currently discharging pursuant to Order No. R5-2002-0057 and National Pollutant Discharge Elimination System (NPDED) Permit No. CA0081191. The Discharger submitted a Report of Waste Discharge (RWD), dated 2 October 2006 and applied for a NPDES permit renewal to discharge an unspecified volume of storm water from the Facility. The application was deemed complete on 16 October 2006.

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 owns and operates a cement manufacturing plant, limestone quarry, and shale quarry, approximately one mile north of the community of Mountain Gate in portions of Sections 2, 3, 4, 8, 9, 10, 11, 14, 15, 16, and 17, T33N, R4W, MDB&M, as shown on Attachment B.

The Facility consists of three distinct areas: the Gray Rocks limestone quarry, the Falkenbury shale quarry, and cement manufacturing plant. Surface water drainage from the property is to the West Fork of Stillwater Creek, a water of the United States. The property is located in the Shasta Lake Drainage Hydrologic Area (506.20) and the Enterprise Flat Hydrologic Area (508.10) of the Redding Hydrologic Unit as defined by the interagency hydrologic map for the Sacramento Hydrologic Basin prepared by the Department of Water Resources (1986). Attachment B provides topographic maps of

the Facility and surrounding area along with aerial photographs of the Facility.

1. **Gray Rocks Limestone Quarry.** The Discharger quarries limestone on property northeast of the cement manufacturing plant, as shown on Attachment B. The Gray Rocks limestone quarry consists of: unpaved roadways, a crusher/conveyor system, mine shop, employee break room, water storage tanks, and aboveground petroleum storage. Wastes generated at the limestone quarry include: waste rock, domestic wastewater, and waste petroleum products. Other wastes include: dust control wastewater, groundwater interflow, and storm water runoff. Access to the limestone quarry is through a gated unpaved road. Storm water runoff from the access road discharges to several unnamed intermittent tributaries of the West Fork of Stillwater Creek.

2. **Falkenbury Shale Quarry.** The Discharger quarries shale in an area southwest of the cement plant, as shown on Attachment B. The Falkenbury shale quarry consists of two separate quarry areas, the Northwest Shale Deposit which has been in operation since the early 1960's and the Arsenault Shale Deposit which has began operation in October 2006. No mining has occurred at Shale Pit No. 1. Potential wastes from the Shale Quarry include storm water runoff and dust control wastewater. Access to the Northwest Shale Deposit and the Arsenault Deposit is through a gated private unpaved roadway west of the Discharger's cement manufacturing plant. Storm water runoff, from the lower part of the access roadway, discharges to several unnamed intermittent tributaries of the West Fork of Stillwater Creek.

3. **Cement Manufacturing Plant**. The Discharger's cement manufacturing plant is on the west side of Wonderland Boulevard, as shown on Attachment B. The cement plant consists of equipment utilized in the manufacture of Portland Cement, such as: conveyor belt systems, diatomaceous earth storage building, raw material storage areas, fuel storage area, a radial arm stacker and reclaimer dome building, roller mill, preheat tower, kiln, clinker storage, finish mills, cement silo storage, operations building, laboratory, pack house, bag house, rail car loading and unloading areas, shop building, administration building, training center, warehouse, Shasta House, three residences, septic tank leachfield systems, water storage tank, sedimentation basins, paved and unpaved roadways, aboveground petroleum storage, underground petroleum storage, and aboveground chemical storage areas. Wastes generated at the cement plant include: non-contact cooling water, wheel wash wastewater, truck and equipment wash wastewater, sand filter backwash water, domestic wastewater, and waste petroleum products. Potential wastes include: dust control wastewater, storm water runoff from raw material and fuel storage piles, storm water runoff from paved and unpaved roadways, and groundwater from under drain systems.

C. Legal Authorities. This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as 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 Water Code (commencing with section 13260).

D. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and 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 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 Regulations (CFR)[1] 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.

40 CFR Part 411, contains effluent limitation guidelines for the cement manufacturing point source category that are divided into three subcategories: Subpart A-Nonleaching, Subpart B-Leaching, and Subpart C-Material Storage Piles Runoff. Kiln dust is not contacted with water as an integral part of the cement manufacturing process and water is not used in wet scrubbers to control kiln stack emissions; therefore, the provisions in Subpart A-Nonleaching Subcategory are applicable. Raw materials, intermediate products, finished products, and waste products used in or derived from the manufacture of cement are stored; therefore, the provisions in subpart C-Material Storage Piles Runoff Subcategory are applicable. Subpart A includes a limitation on temperature increase of $3^{o}C$. Subpart C includes a limitation for total suspended solids (TSS) of 50 mg/L and pH between 6.0 and 9.0. Overflow associated with a 10-year, 24-hour rainfall event is not subject to the TSS and pH limitations.

40 CFR Part 436, contains effluent limitation guidelines for the mining and processing point source category that are divided into thirty-eight subcategories. Subpart B-Crushed Stone Subcategory generally includes all types of rock and stone and specifically applies to the processing of calcite in conjunction with the processing of crushed and broken limestone. Subpart B includes a limitation for pH between 6.0 and 9.0. Overflow associated with a 10-year, 24-hour rainfall event is not subject to the pH limitation.

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

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) EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed State criterion or policy interpreting the State's narrative criterion, supplemented with other relevant information, as provided in 40 CFR section 122.44(d)(1)(vi).

Also as specified in Section 122.44(K), best management practices (BMPs) may be used in lieu of numeric effluent limitations when:

1. authorized under section 304(e) of the CWA for control of toxic pollutants and hazardous substances from ancillary industrial activities;

2. authorized under section 402(p) of the CWA for the control of storm water discharges;

3. numeric effluent limitations are infeasible; or

4. the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purpose and intent of the CWA.

Section 402(p) authorizes regulation of storm water discharges associated with industrial activities. A combination of BMPs, numeric effluent limitations, and receiving water limitations are utilized in this Order to regulate the discharge of pollutants from the Discharger's Facility.

H. Water Quality Control Plans. The Regional Water Board adopted a *Water Quality Control Plan, Fourth Edition (revised February 2007), for the Sacramento and San Joaquin River Basins* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan at page II-2.00 states that the "…*beneficial uses of any specifically identified water body generally apply to its tributary streams*." The Basin Plan does not specifically identify beneficial uses for the West Fork of Stillwater Creek, but does identify present and potential uses for the Sacramento River, to which the West Fork of Stillwater Creek, via Stillwater Creek, is tributary. These beneficial uses are as follows: Municipal and

domestic supply (MUN); Agricultural supply, including stock watering (AGR); hydropower generation (POW); water contact recreation, including canoeing and rafting (REC-1); non-contact water recreation, including aesthetic enjoyment; commercial and sport fishing (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); warm spawning, reproduction, and/or early development (SPWN); cold spawning, reproduction, and /or early development (SPWN); and wildlife habitat (WILD).

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, as discussed in detail in the Fact Sheet, beneficial uses applicable to the unnamed tributaries, Spring Branch Creek, and the West Fork of Stillwater Creek are as summarized in Table 5, below.

Table 5. Basin Plan Beneficial Uses

Discharge Points	Receiving Water Name	Beneficial Use(s)
00X 001A 001B 002A 002B 003A (Outfall #1) 003B (Outfall #2)	West Fork of Stillwater Creek Spring Branch Creek Spring Branch Creek	<u>Existing:</u> Municipal and domestic water supply (MUN). Agricultural supply, including stock watering (AGR); Industry Service Supply (IND) and Power Generation (POW); Contact (REC-1) and non-contact (REC-2) water recreation; Cold Freshwater Habitat (COLD); Warm spawning, reproduction, and/or early development, cold spawning, reproduction, and /or early development (SPWN); and Wildlife habitat (WILD).

The Basin Plan includes a list of Water Quality Limited Segments (WQLSs), which are defined as "…*those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 CFR 130, et seq.)*." The Basin Plan also states, "*Additional treatment beyond minimum federal standards will be imposed on dischargers to WQLSs. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment.*" The West Fork of Stillwater Creek is not listed as WQLS in the 303(d) list of impaired water bodies.

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.

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. – Not Applicable

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

M. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based and water quality-based limitations for individual pollutants. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains limitations more stringent than the minimum, federal technology-based requirements that are necessary to meet water quality standards. These limitations are more stringent than required by the CWA. The rationale for including these limitations is explained in the Fact Sheet. In addition, the Regional Water Board has considered the factors in Water Code section 13241 in establishing these requirements.

Water quality-based limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR section 131.38. 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 [Clean Water] Act*" pursuant to 40 CFR section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

N. 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 is consistent with the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet the permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16. This Order specifically prohibits the discharge from causing the water quality in the receiving water to be degraded so as to cause a designated beneficial use or water quality standard to be violated.

O. Anti-Backsliding Requirements. Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order. Previously applicable effluent limitations remain applicable. BMPs and receiving water limitations have been added.

All receiving water beneficial uses will be protected and all water quality standards will be met in the receiving water.

P. 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 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

Q. 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 discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.

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

S. 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 of this Order.

T. 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 wastewater, including industrial storm water at location or in a manner different from that described in the Findings, is prohibited.

B. The by-pass or overflow (except by design) of wastewater, including industrial storm water to surface waters is prohibited, except as allowed by Federal Standard Provisions I.G. and I.H. (Attachment D). This prohibition applies to treatment units required for control of pollutant discharges.

C. The by-pass of sediment-laden storm water around the sedimentation basins is prohibited.

D. The direct discharge of raw or finished material and liquid or solid wastes from cement manufacturing to surface waters and surface water drainage courses is prohibited.

E. The direct discharge of domestic wastewater to the underdrain system is prohibited.

F. Neither the discharge nor its treatment shall create a nuisance as defined in Section 13050 of the California Water Code.

G. The direct discharge of hazardous or toxic substances, including grinding aids, solvents, or petroleum products (i.e. oil, grease, gasoline, and diesel) to surface waters or groundwater is prohibited. This prohibition includes storm water treatment chemicals except as utilized in treatment systems.

H. Discharge of waste classified as “hazardous” as defined in Section 2521(a) of Title 23, California Code of Regulations (CCR), Section 2510, et seq., or “designated”, as defined in Section 13173 of the California Water Code, is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 00X

1. Final Effluent Limitations – Discharge Point 00X

a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 00X, with compliance measured at Monitoring Location EFF-00X as described in the attached MRP:

Table 6. Final Effluent Limitations Discharge Point 00X.

Parameter	Units	Effluent Limitations			
		Average Monthly[2]	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Settleable Solids	mL/L	0.1	0.2		
Total Suspended Solids	mL/L		50[1]		
pH[1]	Units			6.0[1]	9.0[1]

(1) Except for discharges associated with a 10-year 24-hour rainfall event, or greater.
(2) For calculating Monthly Averages, use Zero for Non-Detects (<0.1).

b. Acute Whole Effluent Toxicity. Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

i. 70%, minimum for any one bioassay; and
ii. 90%, median for any three or more consecutive bioassays.

2. Interim Effluent Limitations – Not Applicable

B. Effluent Limitations – Discharge Points 001A and 001B

1. Final Effluent Limitations – Discharge Points 001A and 001B

a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001A and 001B, with compliance measured at Monitoring Locations SW-001A and SW-001B respectively as described in the attached MRP:

Table 7. Final Effluent Limitations – Discharge Points 001A and 001B.

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Settleable Solids	mL/L		0.2		
pH[1]	Units			6.0[1]	9.0[1]

(1) Except for discharges associated with a 10-year 24-hour rainfall event, or greater.

C. Effluent Limitations – Discharge Points 002A, 002B, 003A, and 003B

1. Final Effluent Limitations – Discharge Points 002A, 002B, 003A, 003B.

a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Points 002A, 002B, 003A, and 003B, with compliance measured at Monitoring Locations SW-002A, SW-002B, SW-003A, and SW-003B respectively as described in the attached MRP:

Table 8. Final Effluent Limitations – Discharge Points 002A, 002B, 003A, and 003B.

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Settleable Solids	mL/L		0.2		

D. Land Discharge Specifications – Not Applicable

E. Reclamation Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations Applicable to EFF-OOX

Receiving water limitations are based on the Basin Plan numerical and narrative water quality objectives and California/National Toxics Rule criteria for aluminum, arsenic, biostimulatory substances, cadmium, chemical constituents, chromium VI, color, copper, color, dissolved oxygen, floating material, iron, lead, manganese, mercury, oil and grease, pH, pesticides, radioactivity, salinity and electrical conductivity, suspended sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, turbidity, and zinc are a required part of this Order. For pollutants that do not have effluent limitations, receiving water limitations are used in this permit to ensure that the regulated storm water discharge does not cause the water quality of the receiving water to exceed an applicable standard. The discharge shall not cause the following in the West Fork of Stillwater Creek at RSW-003B as compared to RSW-003A:

1. **Aluminum**. Aluminum to exceed the U.S. Environmental Protection Agency (USEPA) Secondary Maximum Contaminant Level (MCL) of 200 ug/L. A limitation of 200 ug/L for aluminum is included in this Order based on the Basin Plan's narrative chemical constituents objective.

2. **Arsenic.** Arsenic to exceed the USEPA Primary MCL of 10 ug/L. A limitation of 10 ug/L for arsenic is included in this Order based on the Basin Plan's narrative chemical constituents objective.

3. **Biostimulatory Substances**. Water to contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.

4. **Cadmium.** The California Toxics Rule (CTR) and Basin Plan include hardness-dependent water quality criteria and objectives for the protection of freshwater aquatic life for cadmium as follows:

   a. CTR Criteria Continuous Concentration (4-day Average, dissolved) = (exp{0.7852[ln(hardness)] – 2.715}) x (1.101672 - {[ln(hardness)] x [0.041838]});

   b. CTR Criteria Maximum Concentration (1-hour Average, dissolved = (exp{1.128[ln(hardness)] – 3.6867}) x (1.136672 - {[ln(hardness)] x [0.041838]}); and

   c. Basin Plan Objective (instantaneous maximum, dissolved) = (exp{1.160[ln(hardness)] – 5.777}).

   The discharge shall not cause the water quality in the West Fork of Stillwater Creek to exceed any of the above criteria or objectives

5. **Chemical Constituents**. Chemical constituents to be present in concentrations that adversely affect beneficial uses.

6. **Chromium VI.** Chromium VI to exceed the CTR freshwater aquatic life, continuous concentration of 11.0 ug/L and maximum concentration of 16.0 ug/L. Limitations of 11.0 ug/L (continuous concentration) and 16.0 ug/L (maximum concentration) for dissolved chromium VI is included in this Order based on protection of freshwater aquatic life.

7. **Color**. Discoloration that causes nuisance or adversely affects beneficial uses.

8. **Copper**. The CTR and Basin Plan include hardness-dependent water quality criteria and objectives for the protection of freshwater aquatic life for copper as follows:

   a. CTR Criteria Continuous Concentration (4-day Average, dissolved) = (exp{0.8545[ln(hardness)] – 1.702}) x(0.960);

   b. CTR Criteria Maximum Concentration (1-hour Average, dissolved) = (exp{0.9422[ln(hardness)] – 1.700}) x (0.960); and

   c. Basin Plan Objective (instantaneous maximum, dissolved) = (exp{0.905[ln(hardness)] – 1.612}).

   The discharge shall not cause the water quality in the West Fork of Stillwater Creek to exceed any of the above criteria or objectives.

9. **Dissolved Oxygen**:

   a. The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass;

b. The 95 percentile dissolved oxygen concentration to fall below 75 percent of saturation; nor
c. The dissolved oxygen concentration to be reduced below 7.0 mg/L at any time.

10. **Floating Material**. Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.

11. **Iron.** Iron to exceed the (USEPA) Secondary (MCL) of 300 ug/L. A limitation of 300 ug/L for iron is included in this Order based on the Basin Plan's narrative chemical constituents objective.

12. **Lead.** The CTR and Basin Plan include hardness-dependent water quality criteria and objectives for the protection of freshwater aquatic life for lead as follows:

    a. CTR Criteria Continuous Concentration (4-day Average, dissolved) = (exp{1.273[ln(hardness)] – 4.705}) x (1.46203 - {[ln(hardness)] x [0.145712]}); and

    b. CTR Criteria Maximum Concentration (1-hour Average, dissolved = (exp{1.273[ln(hardness)] – 1.460}) x (1.46203 - {[ln(hardness)] x [0.145712]}).

    The discharge shall not cause the water quality in West Fork of Stillwater Creek to exceed any of the above criteria or objectives

13. **Manganese**. Manganese to exceed the USEPA Secondary MCL of 50 ug/L. A limitation of 50 ug/L for manganese is included in this Order based on the Basin Plan's narrative chemical constituents objective.

14. **Mercury.** Mercury to exceed the CTR Human Health (30-day average), Drinking water sources = 0.050 ug/L. A limitation of 0.050 ug/L for total mercury is included in this Order based on protection of Human Health (30-day average).

15. **Oil and Grease**. Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.

16. **pH**. The pH to be depressed below 6.5, raised above 8.5, nor changed by more than 0.5 units. An averaging period may be applied when determining compliance with the pH limitation.

17. **Pesticides**:

    a. Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses;
    b. Pesticides to be present in bottom sediments or aquatic life in concentrations that adversely affect beneficial uses;
    c. Total identifiable persistent chlorinated hydrocarbon pesticides to be present in the water column at concentrations detectable within the accuracy of analytical methods prescribed in *Standard Methods for the Examination of Water and Wastewater, 18th Edition*, or other equivalent methods approved by the Executive Officer.
    d. Pesticide concentrations to exceed those allowable by applicable antidegradation policies (see State Water Board Resolution No. 68-16 and 40 CFR §131.12.).
    e. Pesticide concentrations to exceed the lowest levels technically and economically achievable.
    f. Pesticides to be present in concentration in excess of the maximum contaminant levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.
    g. Thiobencarb to be present in excess of 1.0 µg/L.

18. **Radioactivity**:

    a. Radionuclides to be present in concentrations that are harmful/deleterious to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.
    b. Radionuclides to be present in excess of the maximum contaminant levels specified in Table 4 (MCL Radioactivity) of Section 64443 of Title 22 of the California Code of Regulations.

19. **Salinity and Electrical Conductivity (EC)**. The electrical conductivity to exceed 900 umhos/cm. An averaging period may be applied when determining compliance with the EC limitation. An EC between 700 and 900 umhos/cm may be set by the Regional Water Board if necessary to protect an agricultural beneficial use of the receiving water.

20. **Suspended Sediments**. The suspended sediment load and suspended sediment discharge rate of surface waters to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

21. **Settleable Substances**. Substances to be present in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.

22. **Suspended Material**. Suspended material to be present in concentrations that cause nuisance or adversely affect beneficial uses.

23. **Taste and Odors**. Taste- or odor-producing substances to be present in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses/or to domestic or municipal water supplies.

24. **Temperature**. The natural temperature to be increased by more than 5°F (3C).

25. **Toxicity**. Toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.

26. **Turbidity**. The turbidity to increase as follows:

    a. More than 1 Nephelometric Turbidity Unit (NTU) where natural turbidity is between 0 and 5 NTUs.
    b. More than 20 percent where natural turbidity is between 5 and 50 NTUs.
    c. More than 10 NTU where natural turbidity is between 50 and 100 NTUs.
    d. More than 10 percent where natural turbidity is greater than 100 NTUs.

    Turbidity (NTU) shall be determined by (1) individual samples or (2) by samples taken over an appropriate averaging period.

27. **Zinc**. The CTR and Basin Plan include hardness-dependent water quality criteria and objectives for the protection of freshwater aquatic life for zinc as follows:

    a. CTR Criteria Continuous Concentration (4-day Average, dissolved) = (exp{0.8473[ln(hardness)] + 0.884}) x (0.986);

    b. CTR Criteria Maximum Concentration (1-hour Average, dissolved = (exp{0.8473[ln(hardness)] + 0.884}) x (0.978); and

    c. Basin Plan Objective (instantaneous maximum, dissolved) = (exp{0.830[ln(hardness)] – 0.289}).

    The discharge shall not cause the water quality in West Fork of Stillwater Creek to exceed any of the above criteria or objectives.

B. Surface Water Limitations Applicable to 001A, 001B, 002A, 002B, 003A, and 003B.

Receiving water limitations are based on the Basin Plan numerical and narrative water quality objectives and California/National Toxics Rule criteria for biostimulatory substances, chemical constituents, color, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, salinity and electrical conductivity, suspended sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, and turbidity are a required part of this Order. For pollutants that do not have effluent limitations, receiving water limitations are used in this permit to ensure that the regulated storm water discharge does not cause the water quality of the receiving water to exceed an applicable standard. The discharge shall not cause the following in the West Fork of Stillwater Creek at RSW-002 as compared to RSW-001, RSW-005 as compared

to RSW-004, and Spring Branch Creek at RSW-007 as compared to RSW-006:

1. **Biostimulatory Substances**. Water to contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.

2. **Chemical Constituents**. Chemical constituents to be present in concentrations that adversely affect beneficial uses.

3. **Color**. Discoloration that causes nuisance or adversely affects beneficial uses.

4. **Dissolved Oxygen**:

   a. The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass;
   b. The 95 percentile dissolved oxygen concentration to fall below 75 percent of saturation; nor
   c. The dissolved oxygen concentration to be reduced below 7.0 mg/L at any time.

5. **Floating Material**. Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.

6. **Oil and Grease**. Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.

7. **pH**. The pH to be depressed below 6.5, raised above 8.5, nor changed by more than 0.5 units. An averaging period may be applied when determining compliance with the pH limitation.

8. **Pesticides**:

   a. Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses;
   b. Pesticides to be present in bottom sediments or aquatic life in concentrations that adversely affect beneficial uses;
   c. Total identifiable persistent chlorinated hydrocarbon pesticides to be present in the water column at concentrations detectable within the accuracy of analytical methods prescribed in *Standard Methods for the Examination of Water and Wastewater, 18th Edition*, or other equivalent methods approved by the Executive Officer.
   d. Pesticide concentrations to exceed those allowable by applicable antidegradation policies (see State Water Board Resolution No. 68-16 and 40 CFR §131.12.).
   e. Pesticide concentrations to exceed the lowest levels technically and economically achievable.
   f. Pesticides to be present in concentration in excess of the maximum contaminant levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.
   g. Thiobencarb to be present in excess of 1.0 µg/L.

9. **Radioactivity**:

   c. Radionuclides to be present in concentrations that are harmful/deleterious to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.
   d. Radionuclides to be present in excess of the maximum contaminant levels specified in Table 4 (MCL Radioactivity) of Section 64443 of Title 22 of the California Code of Regulations.

10. **Salinity and Electrical Conductivity (EC)**. The electrical conductivity to exceed 900 umhos/cm. An averaging period may be applied when determining compliance with the EC limitation. An EC between 700 and 900 umhos/cm may be set by the Regional Water Board if necessary to protect an agricultural beneficial use of the receiving water.

11. **Suspended Sediments**. The suspended sediment load and suspended sediment discharge rate of surface waters to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

12. **Settleable Substances**. Substances to be present in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.

13. **Sulfate.** Sulfate to exceed the USEPA Secondary MCL of 250 mg/L. A limitation of 250 mg/L for sulfate is included in this Order based on the Basin Plan's narrative chemical constituents objective. (Only applies to 003A and 003B)

14. **Suspended Material**. Suspended material to be present in concentrations that cause nuisance or adversely affect beneficial uses.

15. **Taste and Odors**. Taste- or odor-producing substances to be present in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses/or to domestic or municipal water supplies.

16. **Temperature**. The natural temperature to be increased by more than 5°F.

17. **Toxicity**. Toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.

18. **Turbidity**. The turbidity to increase as follows:

   a. More than 1 Nephelometric Turbidity Unit (NTU) where natural turbidity is between 0 and 5 NTUs.
   b. More than 20 percent where natural turbidity is between 5 and 50 NTUs.
   c. More than 10 NTU where natural turbidity is between 50 and 100 NTUs.
   d. More than 10 percent where natural turbidity is greater than 100 NTUs.

Turbidity (NTU) shall be determined by (1) individual samples or (2) by samples taken over an appropriate averaging period.

C. Groundwater Limitations

The discharge as permitted herein is consistent with the provisions of Resolution No. 68-16. Groundwater monitoring is not required.

VI. PROVISIONS

A. Standard Provisions

1. The Discharger shall comply with all Standard Provisions included in Attachment D of this Order. Many of these Standard Provisions are not applicable to Quarries and Cement Plants.

2. The Discharger shall comply with the following provisions:

   a. If the Discharger's wastewater treatment plant is publicly owned or subject to regulation by California Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to Title 23, CCR, Division 3, Chapter 26.
   b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

      i. violation of any term or condition contained in this Order;

      ii. obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;

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

      iv. a material change in the character, location, or volume of discharge.

      The causes for modification include:

      - *New regulations.* New regulations have been promulgated under Section 405(d) of the Clean Water Act, or the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued.

      - *Land application plans.* When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.

      - *Change in sludge use or disposal practice.* Under 40 Code of Federal Regulations (CFR) 122.62(a)(1), a change in the Discharger's sludge use or

disposal practice is a cause for modification of the permit. It is cause for revocation and reissuance if the Discharger requests or agrees.

The Regional Water Board may review and revise this Order at any time upon application of any affected person or the Regional Water Board's own motion.

c. If a toxic effluent standard or prohibition (including any scheduled compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the CWA, or amendments thereto, for a toxic pollutant that is present in the discharge authorized herein, and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the Regional Water Board will revise or modify this Order in accordance with such toxic effluent standard or prohibition.

   The Discharger shall comply with effluent standards and prohibitions within the time provided in the regulations that establish those standards or prohibitions, even if this Order has not yet been modified.

d. This Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:

   i. contains different conditions or is otherwise more stringent than any effluent limitation in the Order; or

   ii. controls any pollutant limited in the Order.

   The Order, as modified or reissued under this paragraph, shall also contain any other requirements of the CWA then applicable.

e. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

f. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.

g. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by USEPA under Section 307 of the CWA, or amendment thereto, for any discharge to the municipal system.

h. The discharge of any radiological, chemical or biological warfare agent or high-level, radiological waste is prohibited.

i. A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.

j. Safeguard to electric power failure:

i. The Discharger shall provide safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharge shall comply with the terms and conditions of this Order.

ii. Upon written request by the Regional Water Board the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past five years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Regional Water Board.

iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Regional Water Board not approve the existing safeguards, the Discharger shall, within ninety days of having been advised in writing by the Regional Water Board that the existing safeguards are inadequate, provide to the Regional Water Board and USEPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. The schedule of compliance shall, upon approval of the Regional Water Board, become a condition of this Order.

k. The Discharger, upon written request of the Regional Water Board, shall file with the Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. This report may be combined with that required under Regional Water Board Standard Provision VI.A.2.m.

The technical report shall:

i. Identify the possible sources of spills, leaks, untreated waste by-pass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.

ii. Evaluate the effectiveness of present facilities and procedures and state when they became operational.

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

The Regional Water Board, after review of the technical report, may establish conditions which it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions shall be incorporated as part of this Order, upon notice to the Discharger.

l. A publicly owned treatment works (POTW) whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the Discharger shall notify the Regional Water Board by 31 January. A copy of the notification shall be sent to appropriate local elected officials, local permitting agencies and the press. Within 120 days of the notification, the Discharger shall submit a technical report showing how it will prevent flow volumes from exceeding capacity or how it will increase capacity to handle the larger flows. The Regional Water Board may extend the time for submitting the report.

m. The Discharger shall submit technical reports as directed by the Executive Officer. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

n. Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Regional Water Board and USEPA.

o. The Discharger shall conduct analysis on any sample provided by USEPA as part of the Discharge Monitoring Quality Assurance (DMQA) program. The results of any such analysis shall be submitted to USEPA's DMQA manager.

p. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.

q. All monitoring and analysis instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their continued accuracy.

r. The Discharger shall file with the Regional Water Board technical reports on self-monitoring performed according to the detailed specifications contained in the Monitoring and Reporting Program attached to this Order.

s. The results of all monitoring required by this Order shall be reported to the Regional Water Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. Unless otherwise

specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.

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

u. Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (CWC section 1211)

v. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, maximum daily effluent limitation, 1-hour average effluent limitation, or receiving water limitation contained in this Order, the Discharger shall notify the Regional Water Board by telephone (916) 464-3291 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall include the information required by Attachment D, Section V.E.1 [40 CFR section 122.41(l)(6)(i)].

B. Monitoring and Reporting Program (MRP) Requirements

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

C. Special Provisions

1. Reopener Provisions

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

b. Conditions that necessitate a major modification of a permit are described in 40 CFR section 122.62, including:

i. If new or amended applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA, or amendments thereto, this permit may be reopened and modified in accordance with the new or amended standards.

ii. When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.

c. **Electrical Conductivity.** If the Regional Board determines that a receiving water quality objective for electrical conductivity of less than 900 umhos/cm is required to protect an agricultural beneficial use of the receiving water, then this Order may be reopened and limitations added or modified to provide such protection.

d. **Mixing Zone and Dilution Studies.** Section 1.4 of the SIP established procedures for calculating effluent limitations. Included in the procedures is determination of a dilution credit, which the Regional Water Board may approve or disapprove at its discretion. However, the Discharger has not developed the information needed to determine a dilution credit. Consequently, this Order establishes final effluent limitations based on zero dilution. This Order also has a reopener that allows new effluent limitations to be adopted if a mixing zone and dilution study demonstrates that dilution credits are appropriate.

e. **Water Effects Ratios (WER) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for arsenic, cadmium, chrome (VI), copper, lead, and zinc. If the Discharger performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

f. **Whole Effluent Toxicity.** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if the State Water Board revises the SIP's toxicity control provisions that would require the establishment of numeric chronic toxicity effluent limitations, this Order may be reopened to include a numeric chronic toxicity effluent limitation based on the new provisions.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. **Salinity Evaluation and Minimization Plan**. The Discharger shall prepare a salinity evaluation and minimization plan to address sources of salinity from the Facility. The plan shall be completed and submitted to the Regional Water Board within 1 year of the effective date of this Order for the approval by the Executive Officer.

b. **Chronic Whole Effluent Toxicity.** For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct chronic whole effluent toxicity testing, as specified in the Monitoring and Reporting Program (Attachment E, Section V.). Furthermore, this Provision requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge exceeds the toxicity numeric monitoring trigger established in this Provision, the Discharger is required to initiate a Toxicity Reduction Evaluation (TRE), in accordance with an approved

TRE Work Plan, and take actions to mitigate the impact of the discharge and prevent reoccurrence of toxicity. A TRE is a site-specific study conducted in a stepwise process to identify the source(s) of toxicity and the effective control measures for effluent toxicity. TREs are designed to identify the causative agents and sources of whole effluent toxicity, evaluate the effectiveness of the toxicity control options, and confirm the reduction in effluent toxicity. This Provision includes requirements for the Discharger to develop and submit a TRE Work Plan and includes procedures for accelerated chronic toxicity monitoring and TRE initiation.

i. **Initial Investigative Toxicity Reduction Evaluation (TRE) Work Plan. Within 90 days of the effective date of this Order,** the Discharger shall submit to the Regional Water Board an Initial Investigative TRE Work Plan for approval by the Executive Officer. This should be a one to two page document including, at minimum:

a) A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of effluent toxicity, effluent variability, and treatment system efficiency;

b) A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility; and

c) A discussion of who will conduct the Toxicity Identification Evaluation, if necessary (i.e. an in-house expert or outside contractor).

ii. **Accelerated Monitoring and TRE Initiation.** When the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity monitoring, and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring as required in the Accelerated Monitoring Specifications. WET testing results exceeding the monitoring trigger during accelerated monitoring demonstrates a pattern of toxicity and requires the Discharger to initiate a TRE to address the effluent toxicity.

iii. **Numeric Monitoring Trigger.** The numeric toxicity monitoring trigger is > **1 TUc** (where TUc = 100/NOEC). The monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to begin accelerated monitoring and initiate a TRE.

iv. **Accelerated Monitoring Specifications.** If the monitoring trigger is exceeded during regular chronic toxicity testing, within 14-days of notification by the laboratory of the test results, the Discharger shall initiate accelerated monitoring. Accelerated monitoring shall consist of four (4) chronic toxicity tests every two weeks using the species that exhibited toxicity. The following protocol shall be used for accelerated monitoring and TRE initiation:

a) If the results of four (4) consecutive accelerated monitoring tests do not exceed the monitoring trigger, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring. However,

notwithstanding the accelerated monitoring results, if there is adequate evidence of a pattern of effluent toxicity, the Executive Officer may require that the Discharger initiate a TRE.

b) If the source(s) of the toxicity is easily identified (i.e. temporary plant upset), the Discharger shall make necessary corrections to the facility and shall continue accelerated monitoring until four (4) consecutive accelerated tests do not exceed the monitoring trigger. Upon confirmation that the effluent toxicity has been removed, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring.

c) If the result of any accelerated toxicity test exceeds the monitoring trigger, the Discharger shall cease accelerated monitoring and initiate a TRE to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity. Within thirty (30) days of notification by the laboratory of the test results exceeding the monitoring trigger during accelerated monitoring, the Discharger shall submit a TRE Action Plan to the Regional Water Board including, at minimum:

1) Specific actions the Discharger will take to investigate and identify the cause(s) of toxicity, including TRE WET monitoring schedule;
2) Specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and
3) A schedule for these actions.

c. **Storm Water Pollution Controls.**

i. Prior to **15 October** of each year, the Discharger shall implement necessary erosion control measures and any necessary construction, maintenance, or repairs of drainage and erosion control facilities.

ii. The Discharger has prepared a Storm Water Pollution Prevention Plan (SWPPP) containing best management practices to reduce pollutants in the storm water discharges. The Discharger shall review and amend as appropriate the SWPPP whenever there are changes that may affect the discharge of significant quantities of pollutants to surface water, if there are violations of this permit, or if the general objective of controlling pollutants in the storm water discharges has not been achieved. The amended SWPPP shall be submitted prior to **15 October** in the year in which it was prepared.

iii. By **1 July** of each year, the Discharger shall submit a Storm Water Annual Report for the previous fiscal year (1 July to 30 June). The report shall be signed in accordance with Standard Provisions V.B and may be submitted using the General Industrial Storm Water Annual Report Form, provided by the State Water Resources Control Board, or in a format that contains equivalent information.

d. **Groundwater Monitoring.** - Not Applicable

3. Best Management Practices and Pollution Prevention

This permit is for the discharge of storm water only. The SIP states in footnote number 1 of the introduction, "This Policy does not apply to regulation of storm water discharges. The SWRCB has adopted precedential decisions addressing regulation of municipal storm water discharges in Orders WQ 91-03, 91-04, 96-13, 98-01, and 99-05. The SWRCB has also adopted two statewide general permits regulating the discharge of pollutants contained in storm water from industrial and construction activities." Therefore the SIP provisions for establishment of effluent limitations are not applicable. Effluent limitations for priority pollutants have not been established, however receiving water limitations and BMPs ensure that beneficial uses of the receiving water are protected and water quality standards are not exceeded. Storm water discharges could be regulated under the existing State Water Board general industrial storm water permit (Order No. 97-03-DWQ, NPDES No. CAS000001). However, due to the complexity of the Facility, the Regional Water Board has elected to regulate this Facility with an individual NPDES permit.

Applicable water quality objectives and criteria have been used as receiving water limitations, and are also utilized as benchmark values to evaluate BMPs. Direct comparison of pollutant concentrations in the West Fork of Stillwater Creek at RSW-001, RSW-002, RSW-003A, RSW-003B, RSW-004, RSW-005, and in Spring Branch Creek at RSW-006, RSW-007, and the undiluted discharge from EFF-00X, SW-001A, SW-001B, SW-002A, SW-002B, SW-003A, and SW-003B will be used to ensure that water quality standards are not exceeded.

If any receiving water limitations are exceeded, the Discharger must conduct a BMPs Improvement Evaluation and implement BMP improvements to eliminate the receiving water violations.

The BMPs improvement evaluation and proposed BMPs improvements must be submitted to the Regional Water Board for comment **within 60 days** of the violation date. The BMPs improvements must be implemented as soon as practicable thereafter.

4. Construction, Operation and Maintenance Specifications

a. **Storm Water Pond Operating Requirements.**

i. The treatment facility shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

ii. Ponds shall be managed to prevent breeding of mosquitoes. In particular,

a) An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.
b) Weeds shall be minimized.

c) Dead algae, vegetation, and debris shall not accumulate on the water surface.

iii. Freeboard shall never be less than two feet (measured vertically to the lowest point of overflow), except if lesser freeboard does not threaten the integrity of the pond, no overflow of the pond occurs, and lesser freeboard is due to direct precipitation or storm water runoff occurring as a result of annual precipitation with greater than a 100-year recurrence interval, or a storm event with an intensity greater than a 25-year, 24-hour storm event..

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

6. Other Special Provisions

a. Sludge, Topsoil, and Overburden Management

i. Collected screenings, sludge and other solids removed from liquid wastes, including pond sediments, shall be disposed of in a proper manner approved by the Executive officer and consistent with the Consolidated Regulations for treatment, storage, Processing, or Disposal of Solid Waste, as set forth in Title 27, California Code of Regulations (CCR), Division 2, Subdivision 1, Section 20005, et seq.

ii. The storage of topsoil and overburden from the limestone and shale quarries shall be done in a manner to prevent nuisance, pollution or impairment of beneficial uses of Still Water Creek.

iii. Any proposed change in sludge disposal or topsoil and overburden storage practices shall be reported to the Executive Officer at least 90 days in advance of the change.

b. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Regional Water Board.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory and certification requirements in the Federal Standard Provisions (Attachment D, Section V.B.) and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

7. Process Water Discharges

a. **Within 6 months of the effective date of this Order**, the Discharger shall submit a workplan and time schedule to eliminate the offsite surface water discharge of process water from the equipment wash.

b. **Within 12 months of the effective date of this Order** the Discharger shall eliminate the offsite surface water discharge of process water from the equipment wash.

VII. COMPLIANCE DETERMINATION

1. COMPLIANCE DETERMINATION LOGIC
The receiving water limitations contained in this Order require that the regulated storm water discharges not cause the receiving water to exceed applicable water quality criteria or objectives. If background receiving water quality already exceeds applicable criteria or objectives, the regulated storm water discharges may not cause the receiving water quality to worsen. This Order does not, however, require the Discharger to improve the receiving water quality. It is recognized that a regulated storm water discharge is most appropriately compared to background water quality, not an absolute water quality criterion or objective. Therefore, compliance is determined by comparing the concentration of a particular pollutant at the upstream receiving water monitoring location, the downstream monitoring location, and in the regulated discharge. If the concentration of the downstream sample is greater than the receiving water limit, and the concentration of the downstream sample is greater than the concentration of the upstream sample, and the concentration of the effluent sample is greater than the concentration of the upstream sample, then the regulated effluent discharge is in violation.

2. COMPLIANCE WITH A SECONDARY MCL
This Order contains receiving water limitation for some of the following pollutants, based on the indicated standards:

Pollutant	Water Quality Standard
aluminum	MCL (secondary)
arsenic	MCL (primary)
cadmium	Basin Plan max, CTR acute, CTR chronic
copper	Basin Plan max, CTR acute, CTR chronic
chromium (VI)	CTR acute, CTR chronic
iron	MCL (secondary)
lead	CTR acute, CTR chronic
manganese	MCL (secondary)
mercury	CTR human health
selenium	CTR acute, CTR chronic
sulfate	MCL (secondary)
zinc	Basin Plan max, CTR acute, CTR chronic

Some of the standards are the secondary MCLs. Discussions with the California Department of Public Health, Drinking Water Field Operations Division (formerly the Department of Health Services) have indicated that it is appropriate to apply the secondary MCLs for the pollutants listed above as an annual average. Therefore, compliance with the receiving water limitations for aluminum, iron, manganese, and sulfate, is determined by comparison of annual average concentrations against the secondary MCL numeric value.

3. COMPLIANCE WITH CHRONIC CRITERIA AND OBJECTIVES
The monitoring frequencies required by the monitoring and reporting program contained in this Order consider the feasibility, expense, and need for information. It is recognized that the required monitoring frequencies for the pollutants listed above will not provide enough data for a direct determination of whether or not a chronic water quality criterion or objective (generally 4-day averages) is being attained. Basin Plan maximum concentrations and CTR acute (generally 1-hour averages) concentrations can be directly compared against grab samples of the effluent and receiving water. Nonetheless, chronic water quality criteria and objectives are applicable, must be met, and are implemented by this Order. The Regional Water Board may conduct monitoring to determine if chronic water quality criteria and objectives are being met in the receiving water, but this Order does not require the Discharger to conduct such monitoring. The intermittent nature of storm water discharges makes violations of chronic criteria and objectives unlikely.

ATTACHMENT A – DEFINITIONS

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

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

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

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

Averaging Period: a minimum of four samples per day from each upstream and downstream station for a period of up to 4 days during discharge. Samples collected for averaging must be spaced at least 3 hours apart.

Best Practicable Treatment or Control (BPTC): BPTC is a requirement of State Water Resources Control Board Resolution 68-16 – "Statement of Policy with Respect to Maintaining High Quality of Waters in California" (referred to as the "Antidegradation Policy"). BPTC is the treatment or control of a discharge necessary to assure that, *"(a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained."* Pollution is defined in CWC Section 13050(l). In general, an exceedance of a water quality objective in the Basin Plan constitutes "pollution".

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

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

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

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

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

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

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

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

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

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

Inland Surface Waters are all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

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

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

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

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

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

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

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

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

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

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

Pollutant Minimization Program (PMP) means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as

appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in 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) is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Satellite Collection System is 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 is any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

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

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

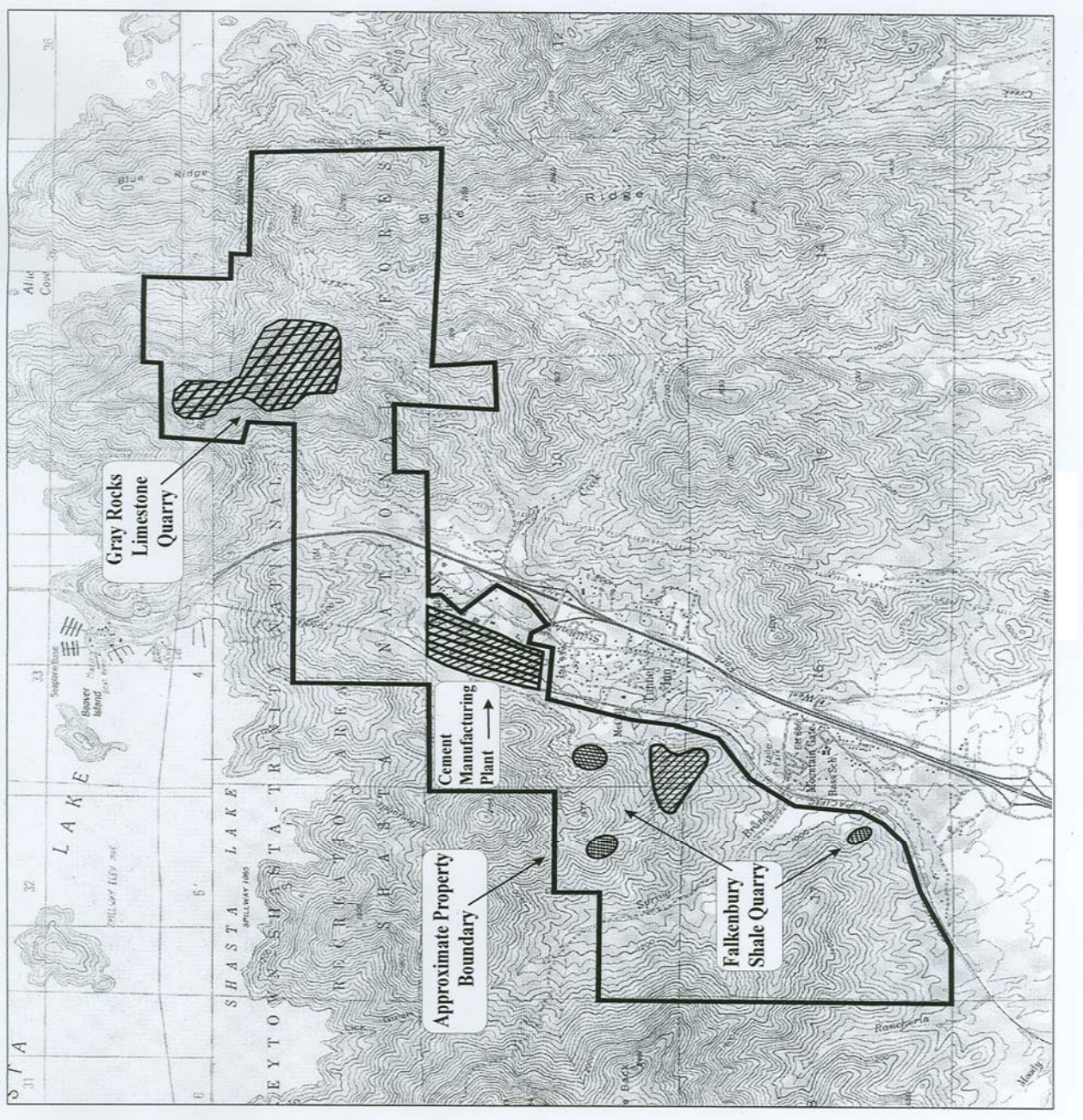
where:

x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

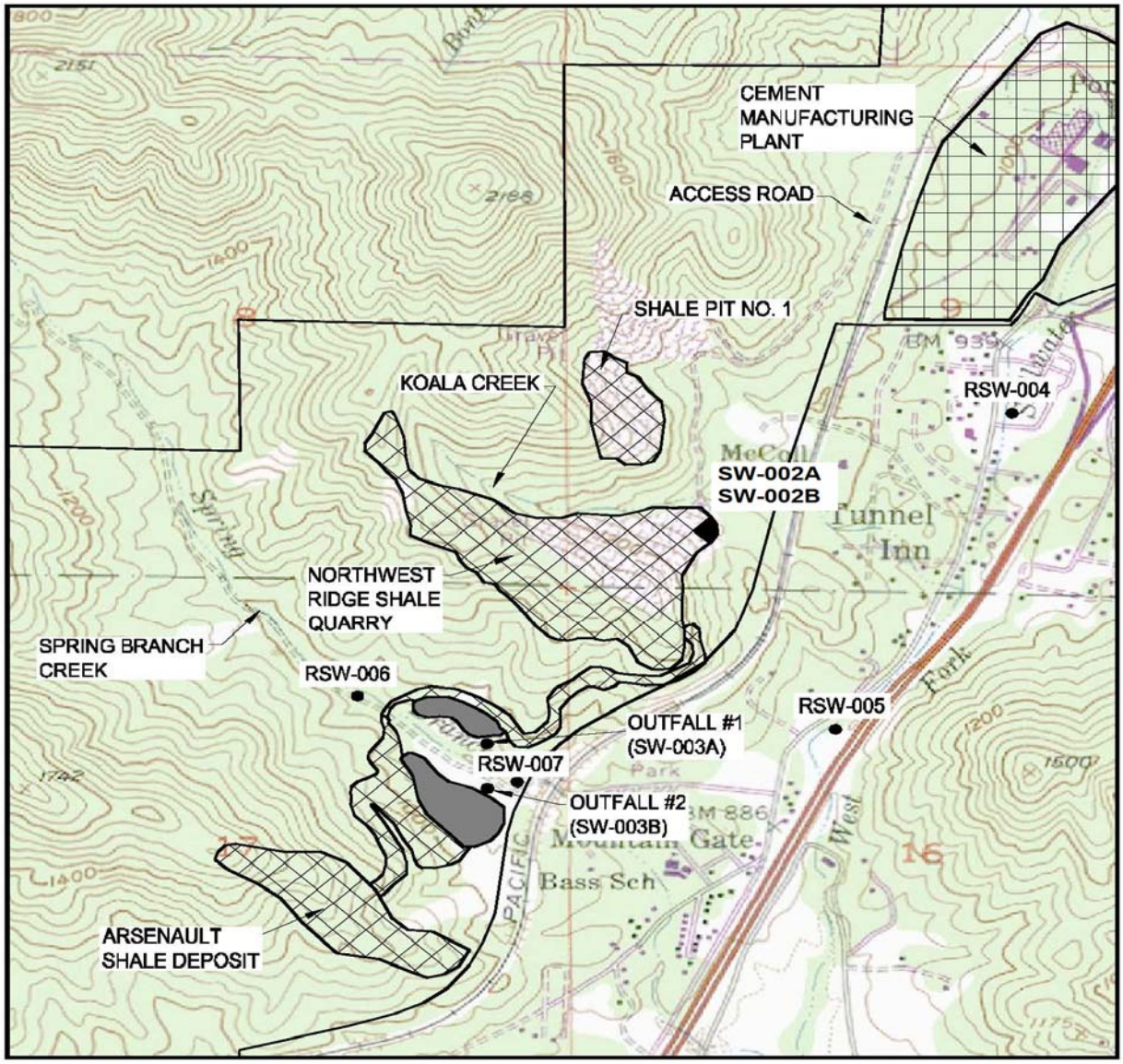
Toxicity Reduction Evaluation (TRE) is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices,

and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

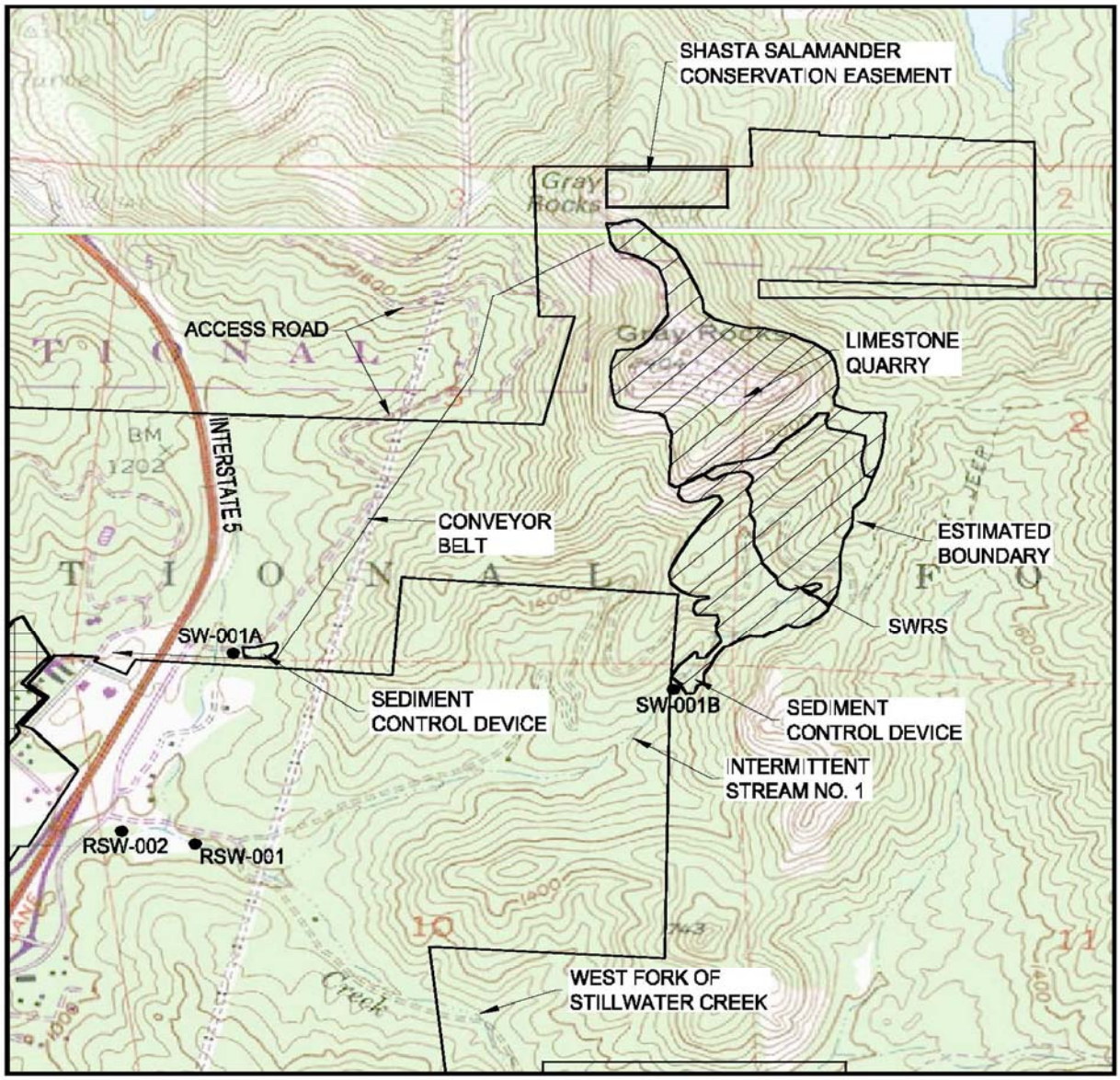
ATTACHMENT B – TOPOGRAPHIC MAPS



PROJECT CITY U.S.G.S TOPOGRAPHIC MAP 7.5 MINUTE QUADRANGLE *Photorevised 19* *Not to scale*	SECTIONS 2, 3,4, 8, 9, 10, 16, and 17, T33N, R4W, MDB&M LEHIGH SOUTHWEST CEMENT COMPANY	N W E S

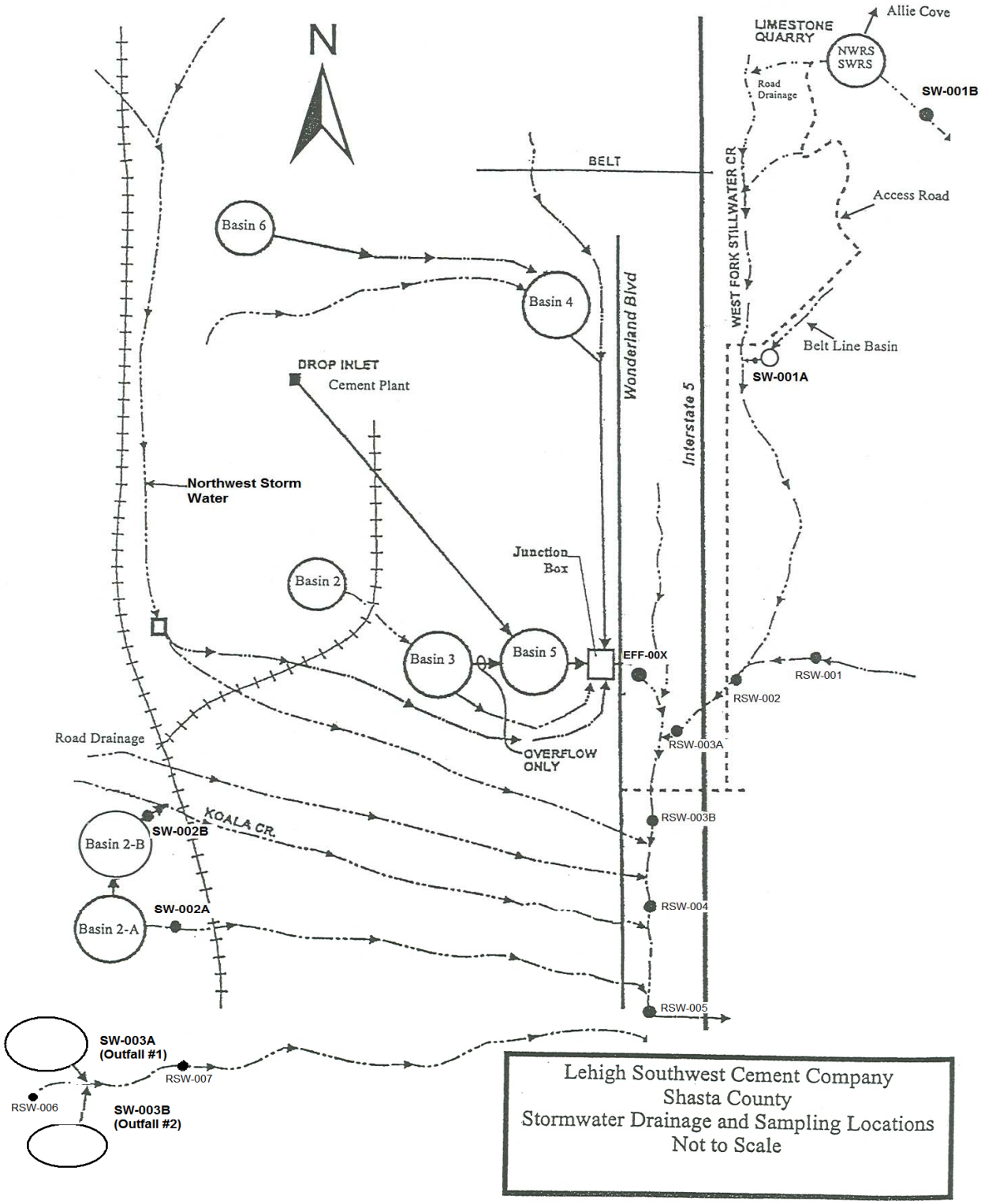


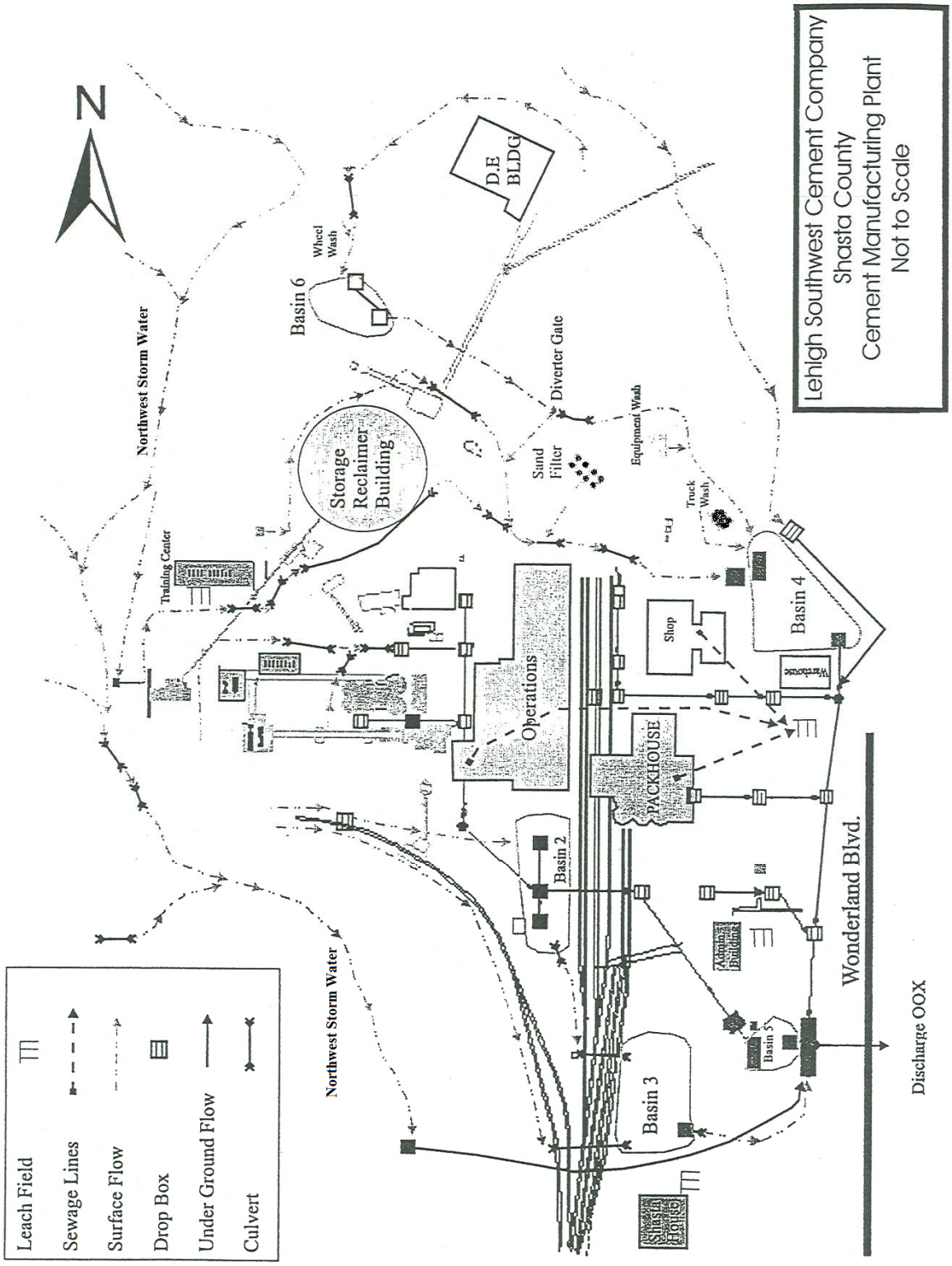
PROJECT CITY U.S.G.S TOPOGRAPHIC MAP 7.5 MINUTE QUADRANGLE *Photorevised 19* *Not to scale*	SECTIONS 2, 3,4, 8, 9, 10, 16, and 17, T33N, R4W, MDB&M LEHIGH SOUTHWEST CEMENT COMPANY CEMENT PLANT AND SHALE QUARRY	N W E S



PROJECT CITY U.S.G.S TOPOGRAPHIC MAP 7.5 MINUTE QUADRANGLE *Photorevised 19* *Not to scale*	SECTIONS 2, 3, 10, 11, 14 &15 T33N, R4W, MDB&M LEHIGH SOUTHWEST CEMENT COMPANY LIMESTONE QUARY	N W E S

ATTACHMENT C – FLOW SCHEMATICS




Lehigh Southwest Cement Company
Shasta County
Cement Manufacturing Plant
Not to Scale
N
Leach Field
Sewage Lines
Surface Flow
Drop Box
Under Ground Flow
Culvert
Northwest Storm Water
Training Center
Storage Reclaimer Building
Basin 6
Wheel Wash
D.E BLDG
Diverter Gate
Sand Filter
Equipment Wash
Truck Wash
Operations
Shop
Basin 4
Warehouse
PACKHOUSE
Basin 2
Basin 3
Basin 5
Admin Building
Shasta House
Wonderland Blvd.
Discharge OOX

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 C.F.R. § 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 C.F.R. § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

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

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

F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, 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 C.F.R. § 122.41(i); Wat. Code, § 13383):

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

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

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

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

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

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

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

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

5. Notice

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

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

H. Upset

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

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

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

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

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

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

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

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

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

B. Monitoring results must be conducted according to test procedures 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 C.F.R. § 122.41(j)(4); § 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

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

B. Records of monitoring information shall include:

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

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

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

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

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

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

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

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.22(b)(1));

    b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative

may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and

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

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

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

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

C. Monitoring Reports

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

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

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 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 C.F.R. § 122.41(l)(4)(ii).)

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

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

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

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

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

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

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

F. Planned Changes

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

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

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (40 C.F.R. § 122.41(l)(1)(ii).)

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

G. Anticipated Noncompliance

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

H. Other Noncompliance

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

I. Other Information

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

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Regional Water Board is authorized to enforce the terms of this 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 C.F.R. § 122.42(a)):

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(1)):

    a. 100 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(1)(i));

b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(1)(ii));

c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or

d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels" (40 C.F.R. § 122.42(a)(2)):

a. 500 micrograms per liter (µg/L) (40 C.F.R. § 122.42(a)(2)(i));

b. 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(2)(ii));

c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or

d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Table of Contents

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP) E-1
I. GENERAL MONITORING PROVISIONS E-1
II. MONITORING LOCATIONS E-2
III. INFLUENT MONITORING REQUIREMENTS - NOT APPLICABLE E-2
A. Monitoring Location - Not Applicable E-2
IV. EFFLUENT MONITORING REQUIREMENTS E-2
A. Monitoring Location EFF-00X E-2
B. Monitoring Location SW-001A, SW-001B, SW-002A, SW-002B E-4
C. Monitoring Location SW-003A, SW-003B E-5
V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS E-5
VI. LAND DISCHARGE MONITORING REQUIREMENTS - NOT APPLICABLE E-8
VII. RECLAMATION MONITORING REQUIREMENTS - NOT APPLICABLE E-8
VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER E-8
IX. OTHER MONITORING REQUIREMENTS E-11
A. Precipitation Monitoring E-11
X. REPORTING REQUIREMENTS E-12
A. General Monitoring and Reporting Requirements E-12
B. Self Monitoring Reports (SMRs) E-13
C. Discharge Monitoring Reports (DMRs) - Not Applicable E-15
D. Other Reports E-16

List of Tables

Table E-1. Monitoring Station Locations E-2
Table E-2A. Effluent Monitoring Location EFF-00X E-3
Table E-2B. Effluent Monitoring SW-001A, SW-001B, SW-002A, SW-002B E-4
Table E-2C. Effluent Monitoring SW-003A and SW-003B E-5
Table E-3. Chronic Toxicity Testing Dilution Series E-7
c. Discoloration f. Source of any pollutants E-8
Table E-4. Receiving Water Monitoring Requirements (RSW-003A and RSW-003B) E-9
Table E-5. Receiving Water Monitoring Requirements (RSW-001, RSW-002, RSW-004, and RSW-005) E-10
Table E-6. Receiving Water Monitoring Requirements (RSW-006 and RSW-007) E-11
Table E-7. Monitoring Periods and Reporting Schedule E-15

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

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

I. GENERAL MONITORING PROVISIONS

A. 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 the approval of this Regional Water Board.

B. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the Discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Regional Water Board staff. The Quality Assurance-Quality Control Program must conform to USEPA guidelines or to procedures approved by the Regional Water Board.

C. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services. Laboratories that perform sample analyses shall be identified in all monitoring reports.

D. 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. 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 Monitoring and Reporting Program.

F. Receiving water sampling is only required when upstream receiving water flow is present.

G. The sampling frequency trigger of “½-inch or more precipitation” contained in this monitoring program may be adjusted up to “1-inch or more precipitation” after 12 months of sampling, at the discretion of the Executive Officer.

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude when available)
00X	EFF-00X	Outfall from the Junction Box (includes northwest storm water) Latitude 40° 44' 09" N, Longitude 122° 19' 05" W.
001A	SW-001A	Belt Line Basin Discharge 40° 44' 19" N and longitude 122° 18' 43" W
001B	SW-001B	NWRS/SWRS Discharge
002A	SW-002A	Outfall from Storm Water Sedimentation Basin #2A 40° 43' 32" N and longitude 122° 19' 54" W.
002B	SW-002B	Outfall from Storm Water Basin #2B to Koala Creek east of Railroad Tracks. 40° 43' 35" N and longitude 122° 19' 55" W.
003A (Outfall #1)	SW-003A	Outfall from Storm Water Basin #3A to Spring Branch Creek
003B (Outfall #2)	SW-003B	Outfall from Storm Water Basin #3B to Spring Branch Creek
	RSW-001	West Fork of Stillwater Creek, above confluence of unnamed tributary (receiving Discharge from 001A).
	RSW-002	West Fork of Stillwater Creek, approximately 100 feet downstream of confluence of unnamed tributary (receiving Discharge from 001A) and the West Fork of Stillwater Creek.
	RSW-003A	West Fork of Stillwater Creek, immediately above confluence of unnamed tributary (receiving Discharge from 00X).
	RSW-003B	West Fork of Stillwater Creek, approximately 100 feet below Discharge from 00X.
	RSW-004	West Fork of Stillwater Creek, above Koala Creek.
	RSW-005	West Fork of Stillwater Creek, below confluence of Koala Creek and the West Fork of Stillwater Creek.
	RSW-006	Spring Branch Creek a tributary to the West Fork of Stillwater Creek, immediately west of the Falkenbury Quarry bridge.
	RSW-007	Spring Branch Creek a tributary to the West Fork of Stillwater Creek, immediately east of Discharge from 003B.

III. INFLUENT MONITORING REQUIREMENTS - NOT APPLICABLE

A. Monitoring Location - Not Applicable

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-00X

1. The Discharger shall monitor the outfall from Basin #5, Latitude 40° 44' 09", Longitude 122° 19' 05", at Monitoring Location EFF-00X as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

Table E-2A. Effluent Monitoring Location EFF-00X

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Estimated Flow	gal/min	Visual	Weekly during discharge[1, 7, 8]	
Turbidity	NTU	Grab	Weekly during discharge[1, 7, 8]	
pH	units	Grab	Weekly during discharge[1, 7, 8]	
Settleable Solids	mL/L	Grab	Weekly during discharge[1, 7, 8]	
Total Suspended Solids	mg/L	Grab	Weekly during discharge[1, 8]	
Arsenic, dissolved	ug/L	Grab	Monthly during discharge[1, 6, 8]	
Cadmium, dissolved	ug/L	Grab	Monthly during discharge[1, 6, 8]	
Chromium (VI), dissolved	ug/L	Grab	Monthly during discharge[1, 6, 8]	
Copper, dissolved	ug/L	Grab	Monthly during discharge[1, 6, 8]	
Lead, dissolved	ug/L	Grab	Monthly during discharge[1, 6, 8]	
Zinc, dissolved	ug/L	Grab	Monthly during discharge[1, 6, 8]	
Hardness	mg/L	Grab	Monthly during discharge[1, 6, 8]	
Alkalinity	mg/L	Grab	Monthly during discharge[1, 6, 8]	
Electrical Conductivity @ 25°C	umhos/cm	Grab	Annually	
Aluminum	ug/L	Grab	Annually	
Iron	ug/L	Grab	Annually	
Manganese	ug/L	Grab	Annually	
Total Dissolved Solids	mg/L	Grab	Annually	
Oil & Grease	mg/L	Grab	Annually	
Acute Toxicity	% Survival	Grab	Annually	
Priority Pollutant Metals [2, 3]	ug/L	Grab	Annually	
Chronic Toxicity	% Survival	Grab	Bi-annually	
Priority Pollutants [2,4,5]	ug/L	Grab	Bi-annually	

(1) Initial samples shall be collected during daylight hours during the first discharge after the dry season.
(2) Detection limits shall be at or below the lowest minimum level (ML) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP).
(3) Antimony, arsenic, beryllium, cadmium, chromium III, chromium IV, copper, lead, mercury (EPA Method 1669/1631), nickel, selenium, silver, thallium, zinc, and cyanide.
(4) Priority Pollutants – one set during 1st 2-years of the permit, and one set during the 2nd 2-years of the permit.
(5) 126 Priority Pollutants except asbestos, and dioxins/furans.
(6) Samples shall be collected during the first rainfall event that produces ½-inch or greater precipitation per day (if one occurs during the month).
(7) Daily when rainfall events produce a ½-inch or greater precipitation per day, up to a total of four samples per calendar week.
(8) Sampling (routine sampling) other than when a ½-inch or greater precipitation per day occurs is only required during 15 October through 15 May.

B. Monitoring Location SW-001A, SW-001B, SW-002A, SW-002B

1. The Discharger shall monitor the outfall from 001A, 001B, 002A, 002B, at Monitoring Locations SW-001A, SW-001B, SW-002A, and SW-002B as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

Table E-2B. Effluent Monitoring SW-001A, SW-001B, SW-002A, SW-002B

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Estimated Flow	gal/min	Visual	Weekly during discharge[1, 5, 6]	
Turbidity	NTU	Grab	Weekly during discharge[1, 5, 6]	
pH	units	Grab	Weekly during discharge[1, 5, 6]	
Total Suspended Solids	mg/L	Grab	Monthly during discharge[1, 4, 6]	
Settleable Solids	mL/L	Grab	Monthly during discharge[1, 4, 6]	
Hardness	mg/L	Grab	Monthly during discharge[1, 4, 6]	
Alkalinity	mg/L	Grab	Monthly during discharge[1, 4, 6]	
Electrical Conductivity @ 25°C	umhos/cm	Grab	Annually	
Total Dissolved Solids	mg/L	Grab	Annually	
Oil & Grease	mg/L	Grab	Annually	
Priority Pollutant Metals [2, 3]	ug/L	Grab	Annually	

(1) Initial samples shall be collected during daylight hours during the first discharge after the dry season.
(2) Detection limits shall be at or below the lowest minimum level (ML) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP).
(3) Antimony, arsenic, beryllium, cadmium, chromium III, chromium IV, copper, lead, mercury (EPA Method 1669/1631), nickel, selenium, silver, thallium, zinc, and cyanide.
(4) Samples shall be collected during the first rainfall event that produces ½-inch or greater precipitation per day (if one occurs during the month).
(5) Daily when rainfall events produce a ½-inch or greater precipitation per day, up to a total of four samples per calendar week.
(6) Sampling (routine sampling) other than when a1/2-inch or greater precipitation per day occurs is only required during 15 October through 15 May.

C. Monitoring Location SW-003A, SW-003B

2. The Discharger shall monitor the outfall from 003A and 003B, at Monitoring Locations SW-003A and SW-003B as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

Table E-2C. Effluent Monitoring SW-003A and SW-003B

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Estimated Flow	gal/min	Visual	Weekly during discharge[1, 5, 6]	
Turbidity	NTU	Grab	Weekly during discharge[1, 5, 6]	
pH	units	Grab	Weekly during discharge[1, 5, 6]	
Settleable Solids	mL/L	Grab	Weekly during discharge[1, 5, 6]	
Total Suspended Solids	mg/L	Grab	Monthly during discharge[1, 4, 6]	
Electrical Conductivity @ 25°C	umhos/cm	Grab	Annually	
Hardness	mg/L	Grab	Monthly during discharge[1, 4, 6]	
Alkalinity	mg/L	Grab	Monthly during discharge[1, 4, 6]	
Total Dissolved Solids	mg/L	Grab	Annually	
Oil & Grease	mg/L	Grab	Annually	
Sulfate	mg/L	Grab	Annually	
Priority Pollutant Metals [2, 3]	ug/L	Grab	Annually	

(1) Initial samples shall be collected during daylight hours during the first discharge after the dry season.
(2) Detection limits shall be at or below the lowest minimum level (ML) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP).
(3) Antimony, arsenic, beryllium, cadmium, chromium III, chromium IV, copper, lead, mercury (EPA Method 1669/1631), nickel, selenium, silver, thallium, zinc, and cyanide.
(4) Samples shall be collected during the first rainfall event that produces ½-inch or greater precipitation per day (if one occurs during the month).
(5) Daily when rainfall events produce a ½-inch or greater precipitation per day, up to a total of four samples per calendar week.
(6) Sampling (routine sampling) other than when a1/2-inch or greater precipitation per day occurs is only required during 15 October through 15 May.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. **Acute Toxicity Testing.** The Discharger shall conduct acute toxicity testing to determine whether the effluent is contributing acute toxicity to the receiving water. The Discharger shall meet the following acute toxicity testing requirements:

1. *Monitoring Frequency* – the Discharger shall perform **annual** acute toxicity testing.

2. *Sample Types* – For static non-renewal and static renewal testing, the samples shall be grab samples and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location EFF-00X.

3. *Test Species* – Test species shall be fathead minnows (*Pimephales promelas*).

4. *Methods* – The acute toxicity testing samples shall be analyzed using EPA-821-R-02-012, Fifth Edition. Temperature, total residual chlorine, and pH shall be recorded at the time of sample collection. No pH adjustment may be made unless approved by the Executive Officer.

5. *Test Failure* – If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.

B. **Chronic Toxicity Testing**. The Discharger shall conduct three species chronic toxicity testing to determine whether the effluent is contributing chronic toxicity to the receiving water. The Discharger shall meet the following chronic toxicity testing requirements:

1. *Monitoring Frequency* – the Discharger shall perform **bi-annual** three species chronic toxicity testing.

2. *Sample Types* – Effluent samples shall be grab samples and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at effluent monitoring location EFF-00X as specified in the Monitoring and Reporting Program. The receiving water control shall be a grab sample obtained from the RSW-003A sampling location, as identified in the Monitoring and Reporting Program.

3. *Sample Volumes* – Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.

4. *Test Species* – Chronic toxicity testing measures sublethal (e.g. reduced growth, reproduction) and/or lethal effects to test organisms exposed to an effluent compared to that of the control organisms. The Discharger shall conduct chronic toxicity tests with:

   - The cladoceran, water flea, *Ceriodaphnia dubia* (survival and reproduction test);
   - The fathead minnow, *Pimephales promelas* (larval survival and growth test); and
   - The green alga, *Selenastrum capricornutum* (growth test).

5. *Methods* – The presence of chronic toxicity shall be estimated as specified in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition,* EPA/821-R-02-013, October 2002.

6. *Reference Toxicant* – As required by the SIP, all chronic toxicity tests shall be conducted with concurrent testing with a reference toxicant and shall be reported with the chronic toxicity test results.

7. *Dilutions* – The chronic toxicity testing shall be performed using 100% effluent and two controls. If toxicity is found in any effluent test, the Discharger must immediately

retest using the dilution series identified in Table E-3, below. The receiving water control shall be used as the diluent (unless the receiving water is toxic).

8. *Test Failure* –The Discharger must re-sample and re-test as soon as possible, but no later than fourteen (14) days after receiving notification of a test failure. A test failure is defined as follows:

   a. The reference toxicant test or the effluent test does not meet all test acceptability criteria as specified in the *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition*, EPA/821-R-02-013, October 2002 (Method Manual), and its subsequent amendments or revisions; or

   b. The percent minimum significant difference (PMSD) measured for the test exceeds the upper PMSD bound variability criterion in Table 6 on page 52 of the Method Manual. (A retest is only required in this case if the test results do not exceed the monitoring trigger specified in Provisions VI.C.2.c.iii)

Table E-3. Chronic Toxicity Testing Dilution Series

Sample	Dilutions (%)					Controls	
	100	75	50	25	12.5	Receiving Water	Laboratory Water
% Effluent	100	75	50	25	12.5	0	0
% Receiving Water	0	25	50	75	87.5	100	0
% Laboratory Water	0	0	0	0	0	0	100

C. **WET Testing Notification Requirements**. The Discharger shall notify the Regional Water Board within 24-hrs after the receipt of test results exceeding the monitoring trigger during regular or accelerated monitoring, or an exceedance of the acute toxicity effluent limitation.

D. **WET Testing Reporting Requirements**. All toxicity test reports shall include the contracting laboratory's complete report provided to the Discharger and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals. At a minimum, whole effluent toxicity monitoring shall be reported as follows:

   1. **Chronic WET Reporting.** Regular chronic toxicity monitoring results shall be reported to the Regional Water Board within 30 days following completion of the test, and shall contain, at minimum:

      a. The results expressed in TUc, measured as 100/NOEC, and also measured as $100/LC_{50}$, $100/EC_{25}$, $100/IC_{25}$, and $100/IC_{50}$, as appropriate.

      b. The statistical methods used to calculate endpoints;

      c. The statistical output page, which includes the calculation of the percent minimum significant difference (PMSD);

      d. The dates of sample collection and initiation of each toxicity test; and

e. The results compared to the numeric toxicity monitoring trigger.

Additionally, the monthly discharger self-monitoring reports shall contain an updated chronology of chronic toxicity test results expressed in TUc, and organized by test species, type of test (survival, growth or reproduction), and monitoring frequency, i.e., either quarterly, monthly, accelerated, or TRE. (Note: items a through c, above, are only required when testing is performed using the full dilution series.)

2. **Acute WET Reporting.** Acute toxicity test results shall be submitted with the monthly discharger self-monitoring reports and reported as percent survival.

3. **TRE Reporting.** Reports for Toxicity Reduction Evaluations shall be submitted in accordance with the schedule contained in the Discharger's approved TRE Work Plan.

4. **Quality Assurance (QA).** The Discharger must provide the following information for QA purposes (If applicable):

   a. Results of the applicable reference toxicant data with the statistical output page giving the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD, and dates tested.

   b. The reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory.

   c. Any information on deviations or problems encountered and how they were dealt with.

VI. LAND DISCHARGE MONITORING REQUIREMENTS - NOT APPLICABLE

VII. RECLAMATION MONITORING REQUIREMENTS - NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER

A. The Discharger shall monitor the West Fork of Stillwater Creek at monitoring locations RSW-001A, RSW-001B, RSW-002A, RSW-002A, RSW-003A, RSW-003B, RSW-004, and RSW-005, and Spring Branch Creek at RSW-006 and RSW-007 during discharge from 00X, 001A, 001B, 002A, 002B, 003A, and 003B, attention shall be given to the visual appearance of the wastewater. Visual observations shall document the presence or absence of:

   a. Floating or suspended matter
   b. Oil sheen or slick
   c. Discoloration
   d. Turbidity
   e. Odor
   f. Source of any pollutants

B. Monitoring Locations RSW-003A and RSW-003B.

1. The Discharger shall monitor the West Fork of Stillwater Creek at RSW-003A and RSW-003B as follows:

Table E-4. Receiving Water Monitoring Requirements (RSW-003A and RSW-003B)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Estimated Flow	gal/min	Visual	Weekly during discharge[1, 7, 8]	
Turbidity	NTU	Grab	Weekly during discharge[1, 7, 8]	
pH	units	Grab	Weekly during discharge[1, 7, 8]	
Total Suspended Solids	mg/L	Grab	Weekly during discharge[1, 8]	
Arsenic, dissolved	ug/L	Grab	Monthly during discharge[1, 6, 8]	
Cadmium, dissolved	ug/L	Grab	Monthly during discharge[1, 6, 8]	
Chromium (VI), dissolved	ug/L	Grab	Monthly during discharge[1, 6, 8]	
Copper, dissolved	ug/L	Grab	Monthly during discharge[1, 6, 8]	
Lead, dissolved	ug/L	Grab	Monthly during discharge[1, 6, 8]	
Zinc, dissolved	ug/L	Grab	Monthly during discharge[1, 6, 8]	
Hardness	mg/L	Grab	Monthly during discharge[1, 6, 8]	
Electrical Conductivity @ 25°C	umhos/cm	Grab	Annually	
Aluminum	ug/L	Grab	Annually	
Iron	ug/L	Grab	Annually	
Manganese	ug/L	Grab	Annually	
Total Dissolved Solids	mg/L	Grab	Annually	
Priority Pollutant Metals [2, 3]	ug/L	Grab	Annually	
Priority Pollutants [2,4,5]	ug/L	Grab	Bi-annually	

(1) Initial samples shall be collected during daylight hours during the first discharge after the dry season.
(2) Detection limits shall be at or below the lowest minimum level (ML) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP).
(3) Antimony, arsenic, beryllium, cadmium, chromium III, chromium IV, copper, lead, mercury (EPA Method 1669/1631), nickel, selenium, silver, thallium, zinc, and cyanide.
(4) Priority Pollutants – one set during 1st 2-years of the permit, and one set during the 2nd 2-years of the permit.
(5) 126 Priority Pollutants except asbestos, and dioxins/furans.
(6) Samples shall be collected during the first rainfall event that produces ½-inch or greater precipitation per day (if one occurs during the month).
(7) Daily when rainfall events produce a ½-inch or greater precipitation per day, up to a total of four samples per calendar week.
(8) Sampling (routine sampling) other than when a ½-inch or greater precipitation per day occurs is only required during 15 October through 15 May.

C. Monitoring Locations RSW-001, RSW-002, RSW-004, and RSW-005.

1. The Discharger shall monitor the West Fork of Stillwater Creek at RSW-001, RSW-002, RSW-004, and RSW-005 as follows:

Table E-5. Receiving Water Monitoring Requirements (RSW-001, RSW-002, RSW-004, and RSW-005)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Estimated Flow	cfs	Visual	Weekly during discharge[1, 5, 6]	
Turbidity	NTU	Grab	Weekly during discharge[1, 5,6]	
pH	Standard Units	Grab	Weekly during discharge[1, 5, 6]	
Total Suspended Solids	mg/L	Grab	Monthly during discharge[1, 4, 6]	
Hardness	mg/L	Grab	Annually	
Electrical Conductivity @ 25°C	µmhos/cm	Grab	Annually	
Total Dissolved Solids	mg/L	Grab	Annually	
Priority Pollutant Metals [2,3]	ug/L	Grab	Annually	

(1) Initial samples shall be collected during daylight hours during the first discharge after the dry season.
(2) Detection limits shall be at or below the lowest minimum level (ML) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP).
(3) Antimony, arsenic, beryllium, cadmium, chromium III, chromium IV, copper, lead, mercury (EPA Method 1669/1631), nickel, selenium, silver, thallium, zinc, and cyanide.
(4) Samples shall be collected during the first rainfall event that produces ½-inch or greater precipitation per day (if one occurs during the month).
(5) Daily when rainfall events produce a ½-inch or greater precipitation per day, up to a total of four samples per calendar week.
(6) Sampling (routine sampling) other than when a1/2-inch or greater precipitation per day occurs is only required during 15 October through 15 May.

D. Monitoring Locations RSW-006 and RSW-007

1. The Discharger shall monitor the Spring Branch Creek, a tributary to the West Fork of Stillwater Creek at RSW-006 and RSW-007 as follows:

Table E-6. Receiving Water Monitoring Requirements (RSW-006 and RSW-007)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Estimated Flow	cfs	Visual	Weekly during discharge[1, 5, 6]	
Turbidity	NTU	Grab	Weekly during discharge[1, 5, 6]	
pH	Standard Units	Grab	Weekly during discharge[1, 5, 6]	
Total Suspended Solids	mg/L	Grab	Monthly during discharge[1, 4, 6]	
Sulfate	ug/L	Grab	Annually	
Hardness	mg/L	Grab	Annually	
Electrical Conductivity @ 25°C	umhos/cm	Grab	Annually	
Total Dissolved Solids	mg/L	Grab	Annually	
Priority Pollutant Metals[2,3]	ug/L	Grab	Annually	

(1) Initial samples shall be collected during daylight hours during the first discharge after the dry season.
(2) Detection limits shall be at or below the lowest minimum level (ML) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP).
(3) Antimony, arsenic, beryllium, cadmium, chromium III, chromium IV, copper, lead, mercury (EPA Method 1669/1631), nickel, selenium, silver, thallium, zinc, and cyanide.
(4) Samples shall be collected during the first rainfall event that produces ½-inch or greater precipitation per day (if one occurs during the month).
(5) Daily when rainfall events produce a ½-inch or greater precipitation per day, up to a total of four samples per calendar week.
(6) Sampling (routine sampling) other than when a1/2-inch or greater precipitation per day occurs is only required during 15 October through 15 May.

IX. OTHER MONITORING REQUIREMENTS

A. Precipitation Monitoring

The daily precipitation at the Lehigh Southwest Cement Company facility shall be recorded on weekdays and weekends. The reading shall be taken at the same time each day and submitted as follows:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Precipitation	Inches	Visual	Daily	Monthly

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.

2. Upon written request of the Regional Water Board, the Discharger shall submit a summary monitoring report. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).

3. **Compliance Time Schedules.** For compliance time schedules included in the Order, the Discharger shall submit to the Regional Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the compliance time schedule.

4. The Discharger shall report to the Regional Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986.

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

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

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

   b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

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

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

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

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.

B. Self Monitoring Reports (SMRs)

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

2. Monitoring results shall be submitted to the Regional Water Board by the **first day** of the second month following sample collection. Quarterly and annual monitoring results shall be submitted by the **first day of the second month following each calendar quarter, semi-annual period, and year**, respectively.

3. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly whether the discharge complies with waste discharge requirements. The highest daily maximum for the month, monthly and weekly averages, and medians shall be determined and recorded as needed to demonstrate compliance.

4. With the exception of flow, all constituents monitored on a continuous basis (metered), shall be reported as daily maximums, daily minimums, and daily averages; flow shall be reported as the total volume discharged per day for each day of discharge.

5. If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the calculation and reporting of the values required in the discharge monitoring report form. Such increased frequency shall be indicated on the discharge monitoring report form.

6. A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions.

7. 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:

   Regional Water Quality Control Board
   Central Valley Region
   415 Knollcrest Drive, Suite 100
   Redding, CA 96002

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

Table E-7. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	**Permit effective date**	**All**	**Submit with monthly SMR**
Hourly	**Permit effective date**	**Hourly**	**Submit with monthly SMR**
Daily	**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**
Weekly	**Sunday following permit effective date or on permit effective date if on a Sunday**	**Sunday through Saturday**	**Submit with monthly SMR**
Monthly	**First day of calendar month following permit effective date or on permit effective date if that date is first day of the month**	**1st day of calendar month through last day of calendar month**	**First day of the second month following month of sampling**
Quarterly	**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**	**May 1 August 1 November 1 February 1**
Semi-annually	**Closest of January 1 or July 1 following (or on) permit effective date**	**January 1 through June 30 July 1 through December 31**	**August 1 February 1**
Annually	**January 1 following (or on) permit effective date**	**January 1 through December 31**	**February 1**
Bi-annually	**January 1 following (or on) permit effective date**	**1st two years of permit, and 2nd two years of permit**	**February 1**

C. Discharge Monitoring Reports (DMRs) - Not Applicable

1. As described in Section X.B.1 above, at any time during the term of this permit, the State or regional Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge monitoring Reports (DMRs). Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharger shall submit the original DMR and one copy of the DMR to the address listed below:

   State Water Resources Control Board
   Discharge Monitoring Report Processing Center
   Post Office Box 671
   Sacramento, CA 95812

3. All discharge monitoring results must be reported on official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated or modified cannot be accepted.

D. Other Reports

1. **Progress Reports.** As specified in the compliance time schedules required in Special Provisions VI, progress reports shall be submitted in accordance with the following reporting requirements. At minimum, the progress reports shall include a discussion of the status of final compliance, whether the Discharger is on schedule to meet the final compliance date, and the remaining tasks to meet the final compliance date.

2. Within **60 days** of permit adoption, the Discharger shall submit a report outlining minimum levels, method detection limits, and analytical methods for approval, with a goal to achieve detection levels below applicable water quality criteria. At a minimum, the Discharger shall comply with the monitoring requirements for CTR constituents as outlined in Section 2.3 and 2.4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, adopted 2 March 2000 by the State Water Resources Control Board. All peaks identified by analytical methods shall be reported.

3. **Annual Operations Report**. By **1 July** of each year, the Discharger shall submit a written report to the Executive Officer containing the following:

   a. The names and telephone numbers of persons to contact regarding the facility for emergency and routine situations.

   b. The Discharger may also be requested to submit an annual report to the Regional Water Board with both tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.

ATTACHMENT F – FACT SHEET

Table of Contents

ATTACHMENT F – FACT SHEET F-3
I. PERMIT INFORMATION F-3
II. FACILITY DESCRIPTION F-4
A. Gray Rocks Limestone Quarry Description F-4
B. Falkenbury Shale Quarry Description F-7
C. Cement Manufacturing Plant F-9
D. Description of Wastewater Treatment or Controls F-16
E. Discharge Points and Receiving Waters F-17
F. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data F-17
D. Compliance Summary F-18
E. Planned Changes F-18
III. APPLICABLE PLANS, POLICIES, AND REGULATIONS F-19
A. Legal Authority F-19
B. California Environmental Quality Act (CEQA) F-19
C. State and Federal Regulations, Policies, and Plans F-19
D. Impaired Water Bodies on CWA 303(d) List F-21
E. Other Plans, Polices and Regulations F-21
IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS F-21
A. Discharge Prohibitions F-22
B. Technology-Based Effluent Limitations F-23
1. Scope and Authority F-23
2. Applicable Technology-Based Effluent Limitations F-24
C. Water Quality-Based Effluent Limitations (WQBELs) F-25
1. Scope and Authority F-25
2. Applicable Beneficial Uses and Water Quality Criteria and Objectives F-26
3. Determining the Need for WQBELs F-27
4. WQBEL Calculations – Not Applicable F-27
5. Whole Effluent Toxicity (WET) F-28
D. Final Effluent Limitations F-30
1. Mass-based Effluent Limitations. F-30
2. Averaging Periods for Effluent Limitations. F-30
3. Satisfaction of Anti-Backsliding Requirements. F-30
4. Satisfaction of Antidegradation Policy F-30
E. Interim Effluent Limitations. Not Applicable F-31
F. Land Discharge Specifications. Not Applicable F-31
G. Reclamation Specifications. Not Applicable F-31
H. Best Management Practices. See Fact Sheet, Section VII.B.3 ..... F-31
V. RATIONALE FOR RECEIVING WATER LIMITATIONS F-31
A. Surface Water F-32
B. Groundwater. F-41
VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS F-42
A. Influent Monitoring. Not Applicable F-42
B. Effluent Monitoring F-42
C. Whole Effluent Toxicity Testing Requirements F-42

D. Receiving Water Monitoring F-43
1. Surface Water F-43
2. Groundwater. Not Applicable F-43
E. Other Monitoring Requirements F-43
1. Storm Water monitoring F-43
2. Priority Pollutants F-43
VII. RATIONALE FOR PROVISIONS F-43
A. Standard Provisions F-43
B. Special Provisions F-44
1. Reopener Provisions F-44
2. Special Studies and Additional Monitoring Requirements F-45
3. Best Management Practices and Pollution Prevention F-49
4. Construction, Operation, and Maintenance Specifications F-50
5. Special Provisions for Municipal Facilities (POTWs Only). - Not Applicable F-50
6. Other Special Provisions F-50
7. Process Water Discharges F-51
VIII. PUBLIC PARTICIPATION F-51
A. Notification of Interested Parties F-51
B. Written Comments F-52
C. Public Hearing F-52
D. Waste Discharge Requirements Petitions F-52
E. Information and Copying F-53
F. Register of Interested Persons F-53
G. Additional Information F-53

List of Tables

Table F-1. Facility Information F-3
Table F-2. Historic Effluent Limitations and Monitoring Data F-18
Table F-3A. Summary of Technology-based Effluent Limitations – 00X F-25
Table F-3B. Summary of Technology-based Effluent Limitations – 001A, 001B, 002A, 002B, 003A, 003B F-25
Table F-4. Translators at 93 mg/L hardness as $CaCO_3$. F-27
Table F-5A. Summary of Water Quality-based Effluent Limitations – 00X F-28
Table F-5B. Summary of Water Quality-based Effluent Limitations – 001A, 001B, 002A, 002B, 003A, 003B F-28
Table F-6A. Summary of Final Effluent Limitations – 00X F-31
Table F-6B. Summary of Final Effluent Limitations – 001A, 001B, 002A, 002B, 003A, and 003B F-31
Table F-7. Summary of Receiving Water Limitations (partial list). F-41

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	5A452008001
Discharger	Lehigh Southwest Cement Company
Name of Facility	Lehigh Southwest Cement Company
Facility Address	15390 Wonderland Blvd. Redding, CA 96003 Shasta County
Facility Contact, Title and Phone	James E. Ellison, Plant Manager (530) 275-1581 Michael Meinen, Environmental Manager (530) 275-1581
Authorized Person to Sign and Submit Reports	Michael Meinen (530) 275-1581
Mailing Address	15390 Wonderland Blvd., Redding, 96003
Billing Address	15390 Wonderland Blvd., Redding, 96003
Type of Facility	3241 – Hydraulic Cement 1422 – Crushed and Broken Limestone 3295 – Minerals and Earth, Ground or Otherwise Treated
Major or Minor Facility	Minor
Threat to Water Quality	1
Complexity	B
Pretreatment Program	Not Applicable
Reclamation Requirements	Not Applicable
Facility Permitted Flow	Not Applicable
Facility Design Flow	Not Applicable
Watershed	Shasta Dam Hydraulic Unit (506.00), Shasta Lake Drainage Hydraulic Area (506.20); and Redding Hydrologic Unit (508.00), Enterprise Flat Hydrologic Area (508.10)
Receiving Water	West Fork Stillwater Creek
Receiving Water Type	Inland Surface Water

A. Lehigh Southwest Cement Company, (hereinafter Discharger) is the owner and operator of Lehigh Southwest Cement Company, which consists of the Gray Rocks limestone quarry, the Falkenbury shale quarry, and a cement manufacturing plant (hereinafter Facility), approximately one mile north of the community of Mountain Gate in portions of Sections 2, 3, 4, 8, 9, 10, 11, 14, 15, 16, and 17, T33N, R4W, MDB&M, as shown on Attachment B.

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 storm water to Koala Creek, Spring Branch Creek, and other unnamed intermittent tributaries of the West Fork of Stillwater Creek, a water of the United States, and is currently regulated by Order No. R5-2002-0057 and National Pollutant Discharge Elimination System (NPDES) permit No. CA0081191, which was adopted on 26 April 2002 and expired on 1 April 2007. The Falkenbury Shale Quarry sections relevant to the newly constructed Outfall #1 and Outfall #2 is currently being regulated by a General Construction Permit. The terms and conditions of the current NPDES permit and General Construction Permit have been automatically continued and remain in effect until new Waste Discharge Requirements and NPDES permit are adopted pursuant to this Order.

C. The Discharger filed a Report of Waste Discharge (RWD) and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and NPDES permit on 2 October 2006. A site visit was conducted on 5 September 2007, to observe operations and collect additional data to develop permit limitations and conditions. The application was deemed complete on 16 January 2007.

II. FACILITY DESCRIPTION

The Facility consists of three distinct areas: The Gray Rocks limestone quarry, the Falkenbury shale quarry, and the cement manufacturing plant. Surface water drainage from the property is to the West Fork of Stillwater Creek, a water of the United States. The property is located in the Shasta Lake Drainage Hydrologic Area (506.20) and the Enterprise Flat Hydrologic Area (508.10) of the Redding Hydrologic Unit as defined by the interagency hydrologic map for the Sacramento Hydrologic Basin prepared by the Department of Water Resources (1986). Attachment B provides a topographic map of the Facility and surrounding area along with aerial photographs of the Facility.

A. Gray Rocks Limestone Quarry Description

Gray Rocks limestone quarry is approximately ½ mile east of Interstate 5, one and ½ miles northeast of the interchange of Interstate 5 and Fawndale Road. Access to the quarry is through a gated unpaved road at the north end of Fawndale Road. Storm water runoff from the access road discharges to several unnamed intermittent tributaries of the West Fork of Stillwater Creek and Shasta Lake. The water quality in these individual drainages has not been determined.

The limestone quarry property, approximately 760-acres, lies within portions of the southeast quarter of the north half of Section 3, east half of the south half of Section 3, the west half of Section 2, and the northwest quarter of Section 10, T33N, R4W, MDB&M. Approximately 11 acres of public land, administered by the U.S. Department of Agriculture, Forest Service, extends from the east and is surrounded by lands owned and operated by the Discharger. At the northern limits of the quarry, a 7.3-acre and 6.6-acre conservation easement provides permanent protection for Gray Rocks Peak and the Shasta Salamander, a California threatened species. The quarry has been in operation for more than 40 years.

Approximately thirteen employees operate mining equipment at the limestone quarry. Mining operations occur during daylight hours. The limestone quarry consists of: unpaved roadways, a crusher/conveyor system, mine shop, water storage tank, septic tank leachfield system, and aboveground petroleum storage. Wastes generated at the limestone quarry include: waste rock, domestic wastewater, and waste petroleum products. Potential wastes include: dust control wastewater, groundwater interflow, and storm water runoff.

Limestone is present at the quarry in metasedimentary and metavolcanic rock units subdivided into formational designations. The source of limestone is the McCloud Formation of Permian age; it forms the massive gray cliffs at the Mountain Gate deposit. Within the McCloud Formation are some rock types (i.e. dolomite, dolomitic limestone and chert) that are not useful in the manufacture of cement. When and where feasible, these rock types are mixed with pure limestone and used; otherwise, they are separated and placed in designated waste rock sites. A mafic intrusive, high in iron and magnesium silicates (diorite), transects the south-central area of the limestone deposit in a generally west-to-east direction. This material is not useful in cement manufacturing and is either avoided or placed in designated waste rock sites.

Limestone is mined in benched sections using conventional techniques including: drilling, blasting, loading, and hauling. Prior to mining, topsoil is removed and stored on-site for future reclamation purposes. To fracture the quarry face rows of blast holes are drilled, loaded with explosives, and detonated. The Discharger has submitted Material Safety Data Sheets for explosives used at the quarry. Dry blasting agents contain ammonium nitrate, fuel oil, aluminum, and guar.

Following detonation, the broken limestone is loaded in trucks and hauled to the primary crusher or the waste rock pile, depending on whether the rock is product-grade limestone, low-grade limestone, or sub-grade waste rock. The primary crusher can reduce a 42” diameter boulder to 6” rocks. After passing through a 487-foot vertical raise, the crushed limestone is transported 7260 feet on a conveyor belt to the cement plant for processing. Throughout the length of the conveyor belt system fine material builds up and, during storm events, these sediments can be carried with storm water runoff in surface drainages to an unlined sedimentation basin. When the basin fills, an undetermined quantity of storm water discharges through a pipe (Discharge 001A) to an unnamed intermittent tributary of the West Fork of Stillwater Creek at latitude 40°44’19” and longitude 122°18’43”. The Discharger’s December 2002 through December 2006 monitoring reports, and data submitted in the Report of Waste Discharge, characterize Discharge from SW-001A as follows:

CONSTITUENT	Units	Range	Average
pH	units	7.3 to 8.3	7.9
Total Suspended Solids	mg/L	12 to 1,500	160
Turbidity	NTU	40 to 4,040	264

The Discharger's December 2002 through December 2006 monitoring reports characterize the receiving water upstream (RSW-001) and downstream (RSW-002) of Discharge SW-001A as follows:

Constituent	Units	Range		Average	
		RSW-001	RSW-002	RSW-001	RSW-002
pH	units	7.0 to 8.0	7.0 to 8.0	7.7	7.6
Total Suspended Solids	mg/L	<0.1 to 362	<0.1 to 400	25.4	23.3
Turbidity	NTU	0.23 to 390	0.25 to 400	35.3	32.7

On 13 December 2001, the Shasta County Planning Commission approved Reclamation Plan Number 00-003 which includes the existing quarry (approximately 60 acres) and quarry expansion to approximately 220 acres. The Reclamation Plan describes the realigned roadway system, new South Waste Rock Site (SWRS), new primary crusher, mine shop relocation, and how the limestone quarry will be reclaimed in 2050 if mining operations are completed at that time. Condition No. 13 in the Reclamation Plan requires the Discharger to meet water quality standards, established by the Regional Board, at the time of reclamation and mitigate any problems. The Reclamation Plan does not address the affects of the operation of the quarry, which was originally permitted by Shasta County in 1960 (Use Permit Number 63).

Since 1996, waste rock has been stockpiled in a contained area within the limestone quarry. The Discharger has constructed the SWRS where waste rock will be deposited on engineered benches. The Discharger has obtained for a California Department of Fish and Game Streambed Alteration Permit and a U.S. Army Corps of Engineers Fill Permit as specified in Section 404 of the Clean Water Act. The SWRS was constructed over a period of three years (2005 through 2007). The SWRS includes: diversion channels to direct surface runoff from the north of the site, internal drains, and a sediment control device to the southwest. During the rainy season, storm water runoff from the SWRS and groundwater from its internal drains will discharge through the sediment control device (Discharge 001B) and enter an intermittent tributary of the West Fork of Stillwater Creek at latitude 40° 44' 6" N and longitude 122° 18' 26" W. Discharge 001B is above JF Shea Company, Inc. dba Fawndale Rock and Asphalt, which is regulated under Waste Discharge Requirements (NPDES No. CA 0083097). There is a large natural spring between the SWRS and the Sedimentation Control Device which triggers continuous flow through Discharge Point 001B.

Domestic wastewater from the mine shop's restroom facility is disposed in a holding tank, which is located on the northeast side of the building. The new mine shop and its wastewater disposal system may be installed in the future.

Various petroleum products are used at the limestone quarry to maintain the Discharger's equipment. The aboveground storage tanks have secondary containment. The Discharger has submitted a Spill Prevention Control and Countermeasure Plan for the aboveground petroleum storage at the limestone quarry. The SPCC plan lists all petroleum storage containers greater than 200-gallons and drum storage as follows:

PETROLEUM CONTAINER	LOCATION
4,300-gallon Diesel #2	Secondary Containment Area SE of Mine Shop
350-gallon Gasoline	Secondary Containment Area SE of Mine Shop
300-gallon Motor Oil	Secondary Containment Area SE of Mine Shop
240-gallon Motor Oil	Secondary Containment Area SE of Mine Shop
240-gallon Waste Oil	Secondary Containment Area SE of Mine Shop
240-gallon Hydraulic Oil	Secondary Containment Area SE of Mine Shop
10-15 drums @ 55 gallons each of Grease, Lube Oil and Drill Oil	Secondary Containment Area SE of Mine Shop

B. Falkenbury Shale Quarry Description

The Falkenbury Shale Quarry is approximately 1/2 mile west of Interstate 5, one and 1/2 miles northwest of the interchange of Interstate 5 and Fawndale Road. Access to the quarry is through a gated private road at the Discharger's cement manufacturing plant. Storm water runoff, from the lower part of the access roadway, discharges to several unnamed intermittent tributaries of the West Fork of Stillwater Creek. The water quality in these individual drainages has not been determined.

The shale quarry property, approximately 1059-acres, lies within the southwest quarter of Section 8, west half of Section 9, northwest quarter of Section 16, and west portion of Section 17, T33N, R4W, MDB&M. On November 13, 2003 the Shasta County Planning Commission approved revisions to Reclamation Plan 03-001. This revision updated mining practices and reclamation criteria for the Falkenbury Shale Quarry. The shale quarry consists of two separate quarry areas, the Northwest Shale Deposit which has been in operation since the early 1960's and the Arsenault Shale Deposit which began operations in October 2006. No mining has occurred in Pit No. 1

The Discharger obtained a General Construction Permit in 2004, for the construction of roadways, sediment basins, and storm water drainage culverts and ditches to access the Arsenault Deposit. Construction of Outfall #1 occurred in 2004, the bridge over Spring Branch Creek in 2005, and Outfall #2 in 2006. The storm water culvert and ditch system collects all runoff from haul roads and quarry areas and diverts storm water into Outfall #1 and Outfall #2. Areas that have no quarry activity have storm water diverted around the Sediment Basins. In the future when quarry activities occur in these areas, the bypasses will be closed, and all water from those areas will enter the basins. In addition, once reclamation is completed, and water meets effluent standards, the bypasses can be reopened with Board approval.

The shale deposits are situated in metamorphosed Paleozoic rocks of the Balklava, Copley, Kennett and Bragdon formations and the Pit River granodiorite, in the eastern

edge of the West Shasta Copper-Zinc district. These rocks are often hydrothermally altered and contain metallic sulfide minerals. The shale deposits consist of four types: altered rhyolitic flows and dikes of Balaklava rhyolite, intruded in the Copley and Bragdon formations; thin-bedded and altered siliceous rocks of the Kennett and Bragdon formations; weathered Copley greenstone; and weathered Pit River grandiorite.

Shale is mined using heavy equipment in selected side hills, resulting in multiple benches separated by steep slopes denuded of vegetation. In mined areas, the Discharger has removed the vegetation and surface soil and then stockpiled this overburden material for future reclamation activities. After overburden removal the shale is excavated, loaded into trucks, and hauled to the cement plant for processing. All mined shale is used for cement manufacturing. Potential wastes generated at the shale quarry include: storm water runoff and dust control wastewater.

A portion of the Northwest Shale Deposit is used to dispose of material removed from the Discharger's sedimentation basins. Storm water from the shale quarries enters two sedimentation basins (Basins 2-A and 2-B), operated in series, along the eastern boundary. The Discharger has bermed an area at the west end of the Northwest Ridge Shale Deposit and the upper access road to direct drainage from these areas through a shallow settling area which then drains to Basin 2-A. During heavy rainfall events, Basin 2-A can discharge through a pipe (Discharge 002A) to an unnamed intermittent tributary, south of Koala Creek, at latitude 40° 43' 32" N and longitude 122° 19' 54" W. Since issuance of Order No. R5-2002-0057, Basin 2A has discharged twice.

Basin 2-A overflows to Basin 2-B. When Basin 2-B fills, it discharges through a pipe to Koala Creek (Discharge 002B), an intermittent tributary of the West Fork of Stillwater Creek at latitude 40° 43' 35" N and longitude 122° 19' 55" W. The Discharger's December 2002 through December 2006 monitoring reports, and data submitted in the RWD, characterize Discharge SW-002B as follows:

CCONSTITUENT	UNITS	RANGE	AVERAGE
pH	units	4.8 to 7.9	7.06
Total Suspended Solids	mg/L	2 to 182	33.6
Turbidity	NTU	0.75 to 260	52.5

As a result of acidic soil conditions, the pH at Discharge SW-002B is occasionally below 6.0 units. The Discharger has requested the pH compliance point for Discharge SW-002A and SW-002B be changed to a receiving water limit consistent with the receiving water quality objectives in the Basin Plan. Monitoring data indicates consistent compliance with receiving water objectives of 6.5 to 8.5 pH units and changes in normal ambient pH levels have not exceeded 0.5 pH units. The request has been granted as there are no pH technology-based effluent limitations for the discharge, and the receiving water objective is met. The Discharger's December 2002 through December 2006 reports characterize the receiving water upstream (RSW-004) and downstream (RSW-005) of Discharges 002A and 002B as follows:

CONSTITUENT	UNITS	RANGE		AVERAGE	
		RSW-004	RSW-005	RSW-004	RSW-005
pH	Units	7.4 to 8.2	7.4 to 8.1	7.7	7.7
Total Suspended Solids	mg/L	1 to 310	1 to 380	21.8	24.8
Turbidity	NTU	1 to 300	2 to 320	29.7	29.6

Outfall #1 is located on the North side of Spring Branch Creek and the discharge is monitored by RSW-003A. Monitoring data indicates compliance with receiving water objectives. Outfall #2 is located on the South side of Spring Branch Creek and the discharge is monitored by RSW-003B.

Receiving waters are monitored upsteam of the discharges at RSW-006 and downstream of discharges at RSW-007.

C. Cement Manufacturing Plant

The Discharger's cement manufacturing plant is on the west side of Wonderland Boulevard. The cement plant consists of equipment utilized in the manufacture of Portland Cement, such as: conveyor belt systems, diatomaceous earth storage building, raw material storage areas, fuel storage area, a radial arm stacker and reclaimer dome building, roller mill, preheat tower, kiln, clinker storage, finish mills, cement silo storage, operations building, laboratory, pack house, bag house, rail car loading and unloading areas, shop building, administration building, training center, warehouse, Shasta House, four residences, septic tank leachfield systems, water storage tank, sedimentation basins, paved and unpaved roadways, aboveground petroleum storage, underground petroleum storage, and aboveground chemical storage areas. Wastes generated at the cement plant include: non-contact cooling water, wheel wash wastewater, truck and equipment wash wastewater, sand filter backwash water, domestic wastewater, and waste petroleum products. Other wastes include: dust control wastewater, storm water runoff from raw material and fuel storage piles, storm water runoff from paved and unpaved roadways, and groundwater from under drain systems.

1. Plant Operation

   The cement manufacturing plant was constructed in the 1960s. Initially, the plant produced 280,000 tons of cement annually. In the 1980s, the plant was expanded and modernized, increasing the production capacity to approximately 650,000 tons annually. The Discharger employs approximately 120 people; the cement plant operates 24 hours per day, 7 days per week.

   Cement uses minerals contained in four essential elements for its creation: calcium, silica, aluminum, and iron. The Discharger uses a combination of limestone (a source of calcium), shale (a source of silica, aluminum, and iron), diatomaceous earth (a source of silica), and gypsum (hydrated calcium sulfate) for raw materials. As previously discussed, limestone and shale are mined from adjacent quarries. Diatomaceous earth is imported from the Discharger's mining operation in eastern Shasta County and other outside sources. Gypsum, aluminum and iron sources (i.e. hematite, bauxite, and clay) may also be imported for use in the process. Each year, the Discharger mines and processes approximately one million tons of raw materials to manufacture their cement.

A radial arm stacker blends and stacks raw materials in the dome storage reclaimer building. Cables rake the pile across and, as the cables cross the pile, they pull down a small cross-section. Blades at the base of the reclaimer drag the raw materials to the center of the dome where they are dropped on a conveyor and transported to storage tanks. Feeders at the bottom of the storage tanks send the pre-blended material to the roller mill where two grinding wheels reduce the 2-inch material to a powder-like consistency called "kiln feed." Kiln feed is conveyed to homogenizing silos where the powder is analyzed for chemical composition and, if necessary, further mixed before entering the preheat tower.

The preheat tower supports a series of four vertical cyclone chambers and an inline calcinating furnace through which the raw materials pass on their way to the kiln. The Discharger feeds used tires into the preheat tower, just below the calcinating furnace. Heat released from the burning tires and hot exit gases from the kiln, take the raw kiln feed from approximately 120°F (50°C) to over 1520°F (830°C) in less than 1 minute, as it swirls through the cyclones. In this process, the kiln gases are cooled from approximately 1920°F (1050°C) to 720°F (380°C). From the preheat tower, the kiln feed enters the upper end of a rotating furnace or kiln - a horizontally sloped steel cylinder, lined with firebrick, which turns approximately one to three revolutions per minute. The preheated kiln feed slides and tumbles down the kiln through progressively hotter zones towards the flame. Dust generated during the process is returned to the kiln for reuse.

At the lower end of the kiln, the Discharger uses coal, coke, sawdust, and natural gas to feed the flame that can reach temperatures up to 3400°F (1870°C). Here, in the hottest part of the kiln, the raw materials reach about 2700°F (1480°C) and become partially molten. This intense heat triggers a series of chemical reactions that convert the kiln feed emerging from the lower end of the kiln into a new substance: red hot particles of tri-calcium silicate or clinker. The clinker is then cooled by forced air. Once cooled, the clinker is either stored or ready to be ground. During the grinding process the Discharger adds a cement grinding aid (currently, MTDA-B CT93™), which acts as a flow enhancement product consisting of diethylene glycol and water. Gypsum, a mineral which slows down the reaction time between cement compounds and water, is mixed with the clinker at a ratio of approximately 5% gypsum to 95% clinker, before being fed into the three finish mills. Each mill contains approximately 105 tons of steel grinding balls. As the horizontal steel tube rotates, the balls tumble and pulverize the clinker into a fine powder that is called "Portland Cement."

From the finishing mills, the cement is conveyed to silos where it awaits shipment. The Discharger's cement is shipped in bulk by trucks and rail or packaged in 94-lb bags and trucked to offsite commercial markets. The Discharger produces a variety of cement products, such as Type V, Type III, Certianteed Specialty Grind and Plastic Cement (Stucco Cement).

The Shasta County Department of Resource Management Air Quality Management District (SCAQMD) Permit specifies natural gas, coal, coke, and sawdust as the only

fuels authorized for use in the main kiln burner. Rubber tires are authorized as an auxiliary fuel in the feed end of the kiln.

Process wastewater is not generated during cement manufacturing. However, during the cement manufacturing process, water is used to cool various pieces of equipment (i.e. bearings, gears, and compressors) in the mill building and other parts of the plant. Wastewater generated from this equipment (non-contact cooling water) is pumped back to the cooling water pond for reuse. In addition, cooling pond water is piped to the wheel wash, truck wash, equipment wash, a series of sand filters, or to a stand pipe and used as dust control on the Discharger's roadways. A majority of the non-contact cooling water is returned to the cooling water pond. Chemicals are not used in the cooling water pond. The Discharger estimates approximately 500 gallons per day of non-contact cooling water is used at the wheel wash, truck wash, equipment wash, sand filters, and dust control water stand pipe. The wheel wash and truck wash are used for storm water BMPs to reduce concentration of suspended solids in storm water discharged from the site. The equipment wash is similarly used to control sediment, however a general-purpose alkaline-based steam cleaner product, is used in the steam cleaner and pollutants such as petroleum hydrocarbons are present in the equipment wash waste water. Therefore, the Discharger has agreed and this Order requires that within 12 months of the effective date of this Order, the equipment wash wastewater will no longer mix with storm water discharges and will be contained onsite or recycled.

2. Raw Material and Fuel Storage Areas
On the northwest side of the plant site, the Discharger stores several thousand cubic yards of raw materials used in cement manufacturing including: limestone, shale, diatomaceous earth, hematite, and other imported materials. With the exception of the limestone stockpile, all raw materials are stored directly on the ground either: in covered buildings (i.e., diatomaceous earth and shale) or covered with waterproof fabric (i.e., hematite and gypsum).

Coal and coke are delivered by rail and stockpiled outdoors on the southeast side of the plant. Rubber tires are delivered by truck and stored in trailers south of the preheat tower.

3. Chemicals
   Throughout the facility, various chemicals are stored in secondary containment. The Discharger has submitted a list and Material Safety Data Sheets (MSDS) for products used in the storm water treatment system, in cement manufacturing, and vehicle washing which include:

PRODUCT	USAGE/PURPOSE
Chargepac 55®	Flocculant: Storm water treatment system
Sulfuric Acid	Neutralization: Storm water treatment system
MTDA-B CT93™	Grinding aid for cement manufacturing
Rapid Wash I™	Truck Wash Cleaning Agent

According to the MSDS, Chargepac 55® contains 45 to 55% of inorganic salt and has a pH=3.5 to 4.5. The 96-hour, LC 50 for Chargepac 55® is 707 mg/L. During heavy rain events, the Discharger uses 20 to 80 mg/L to treat storm water in Basins 4 and 5.

MTDA-B CT93™ is a solution of amine/amine acetates and glycols. It contains a minimum of 98.7% diethylene glycol, a maximum of 0.4% monoethtylene glycol, and a maximum of 0.2% water.

Rapid Wash I™ contains one to six percent of monoethanolamine and ethylenediamine tetraacetic acid sodium salt, respectively. This general-purpose alkaline-based steam cleaner product is used at the equipment wash.

4. Cement Plant Drainage
   Approximately 90% of the cement plant area is impervious to water; the remaining 10% is unpaved roadways. Storm water runoff is carried through surface ditches and/or under drain systems to a concrete junction box installed on the east side of Wonderland Boulevard. Currently, five basins are installed to collect sediments carried in the storm water. A drainage plan of the facility shows the current sedimentation basins, junction box, discharge points, and receiving water stations.

   Formerly, storm water runoff from an access roadway near the southwest section of the property discharged to Basin 1. The runoff contained very little sediment and, when Basin 1 overflowed, it entered a surface drainage that delivered the water to Basin 3. The Discharger has eliminated Basin 1, and currently storm water runoff from this area infiltrates or discharges to Basin 3.

   Storm water runoff from the coal storage area passes through two sedimentation basins in-series (Basins 2 and 3) and is conveyed by a rock-lined ditch to the junction box.

   Storm water runoff from the northwestern section of the plant site is channeled along the northern boundary to a concrete splitter box approximately 100 yards west of

Basin 3. During most rainfall events the entire flow is conveyed by underground culvert to the junction box. During very high rainfall, a portion can overflow to a natural stream channel to the south.

Storm water runoff from the west side of the plant and overflow from the process water wet well during plant upset enter an under drain system which discharges to Basin 5. When capacity is reached, Basin 5 discharges to the junction box. The Discharger has installed a pH control system and a storm water treatment system in Basin 5 to maintain compliance with effluent limitations. Sulfuric acid is metered into Basin 5 for pH control and Chargepac 55® flocculant is mixed to precipitate the Basin 5 sediment and reduce suspended solids in the discharge.

On the north side of the plant wastewater from the wheel wash combines with storm water from the diatomaceous earth, shale, hematite storage piles, and limestone delivery conveyor prior to entering Basin 6. When capacity is reached, Basin 6 discharges through a surface ditch to Basin 4 where it combines with natural spring water, storm water runoff from the unpaved roadways, diatomaceous earth/shale barn, blending hall, portable crusher, and petroleum storage secondary containment area, and wastewater from the sand filters, truck wash, and equipment wash. The equipment wash includes a steam-cleaning bay for trucks, vehicles, and equipment. Rapid Wash I™, a general-purpose alkaline-based steam cleaner product, is used in the steam cleaner. The equipment wash wastewater discharges to an oil/water separator that drains to Basin 4. As explained elsewhere in this Order, this Order requires removal of the equipment wash wastewater from the storm water discharges. To maintain compliance with effluent limitations in the existing Order, the Discharger has installed a storm water treatment system in Basin 4. Chargepac 55® is used to precipitate the Basin 4 sediment and reduce suspended solids in the discharge. Basin 4 discharges to an under drain system where it combines with storm water runoff from the pack house, shop, administration building, and off-site properties to the north of the Discharger prior to entering the junction box.

In summary, surface drainage from the cement plant is collected in a network of surface ditches, five sedimentation basins, and an under drain system which converge at a concrete junction box. A subsurface culvert delivers the combined surface drainage beneath Wonderland Boulevard, where it is sampled (Discharge 00X), prior to continuing along an unnamed intermittent tributary that discharges to the West Fork of Stillwater Creek at latitude 40° 44’ 02” N and longitude 122° 19’ 15” W. The Discharger’s December 2002 through December 2006 monitoring reports, and data submitted with the RWD, characterize Discharge 00X as follows:

CONSTITUENT	UNITS	RANGE	AVERAGE
pH	units	7.1 to 8.8	7.7
Settleable Solids	ml/L	0.0 to <0.1	<0.1
Total Suspended Solids	mg/L	1 to 170	14.8
Turbidity	NTU	2.4 to 90	14.8

The Discharger's December 2002 through December 2006 monitoring reports characterize the receiving water upstream (RSW-003A) and downstream (RSW-003B) of Discharge 00X as follows:

CONSTITUENT	UNITS	RANGE		AVERAGE	
		RSW-003A	RSW-003B	RSW-003A	RSW-003B
pH	Units	7.0 to 8.1	7.0 to 8.4	7.7	7.8
Total Suspended Solids	mg/L	1 to 450	1 to 280	24.5	20.2
Turbidity	NTU	1.7 to 400	1.6 to 270	31.7	27.6

5. Leachfields
The Discharger discharges domestic wastewater from the administration building, training building, Shasta House, three single-family residences, and operations, shop, and pack house buildings to eight separate septic tank leachfield systems. Surface water discharges from the residential properties enter an unnamed intermittent tributary of the West Fork of Stillwater Creek, downstream of Discharge 00X. The Shasta County Department of Resource Management, Environmental Health Division, regulates wastewater discharges to septic tank leachfields from the single-family residences.

Restroom facilities in the shop building, restroom facilities and laboratory sink drains in the operations building, and restroom facilities in the pack house discharge into an 8,000-gallon septic tank and 6,000 square foot leachfield system in a paved area on the south side of the warehouse building. Wastewater from the administration building discharges to an 1100-gallon septic tank and 2250 square foot leachfield system installed in a grass area east of the building. Wastewater from the Shasta House discharges to a septic tank leachfield system installed north of the building. Wastewater from training center discharges to a septic tank leachfield system installed south of the building. The administration building, Shasta House, and warehouse leachfields are at least 50-feet away from the cement plant's storm water under drain system that enters Discharge EFF-00X.

6. Analytical Services
Samples collected under the existing Order are analyzed for pH, total suspended solids, settleable solids, and turbidity at the Discharger's laboratory. The California Department of Health Services certifies the laboratory for Inorganic Chemistry of Wastewater (Certificate No. 2288, Field of Testing No. 108). The list of approved analytical methods is shown below:

Parameter	Method
pH	SM 4500 H + B
Turbidity	SM 2130 B
Settleable Solids	SM 2540 F
Suspended Solids	SM 2540 D

The Discharger's certification expires on 31 March 2008. Analytical services beyond the laboratory's capability are contracted out.

7. Petroleum Storage
   Various petroleum products are used to maintain and operate the shale quarry and cement plant equipment. The aboveground storage tanks have secondary containment. The underground storage tank, regulated by Shasta County Department of Resource Management, Environmental Health Division, has been upgraded to regulatory standards.

   The Discharger has submitted a Spill Prevention Control and Countermeasure Plan for the facility's aboveground petroleum storage. A Registered Civil Engineer reviewed and certified the SPCC Plan on 30 June 2000. The SPCC plan lists all petroleum storage containers greater than 200-gallons, and drum storage, as follows:

PETROLEUM CONTAINER	LOCATION
10,000-gallon Diesel #2	Generator building (underground tank)
350-gallon Diesel #2	Generator building
1,000-gallon Waste Oil	Clinker building: northwest corner
200-gallon Diesel #2	F Area generator: north side of burner building
550-gallon Waste Oil	Oil House
500-gallon Waste Oil	Oil station: northwest side of clinker building
480-gallon Gear Oil	Oil station: northwest side of clinker building
360-gallon Gear Oil	Oil station: northwest side of clinker building
Two: 240-gallon Gear Oil	Oil station: northwest side of clinker building
360-gallon Hydraulic Oil	Oil station: northwest side of clinker building
120-gallon Gear Oil	Oil station: northwest side of clinker building
5-10 drums @ 55 gallons each: Lube Oil and Hydraulic Oil	Oil station
Six: 120-gallon Gear Oil	Oil station, mobile tanks: kiln and finish mill
10,000-gallon Diesel #2	Plant vehicle fuel
Two: 1,000-gallon Gasoline	Plant vehicle fuel
500-gallon Gasoline	Plant vehicle fuel
350-gallon Waste Oil	Truck shop
240-gallon Gear Oil	Truck shop
240-gallon Motor Oil	Truck shop
240-gallon Hydraulic Oil	Truck shop
4-6 drums @ 55 gallons each: Gear, Transmission & Hydraulic Oil	Truck shop
25-50 drums @ 55 gallons each: Waste Oil, Anti-freeze & Hydraulic Oil	Upper containment area
25 drums @ 55 gallons each: waste oil	Various locations throughout the plant for maintenance and draining waste oil from plant equipment
4,300-gallon Diesel #2	Secondary Containment Area SE of Mine Shop
350-gallon Gasoline	Secondary Containment Area SE of Mine Shop
300-gallon Motor Oil	Secondary Containment Area SE of Mine Shop
240-gallon Motor Oil	Secondary Containment Area SE of Mine Shop
240-gallon Waste Oil	Secondary Containment Area SE of Mine Shop
240-gallon Hydraulic Oil	Secondary Containment Area SE of Mine Shop
10-15 drums @ 55 gallons each of Grease, Lube Oil and Drill Oil	Secondary Containment Area SE of Mine Shop

D. Description of Wastewater Treatment or Controls

1. See Section II, C, 4. Cement Plant Drainage. A storm water flow diagram is provided in Attachment C of this Order.

E. Discharge Points and Receiving Waters

1. The Facility (Assessor's Parcel Nos. shown in Attachment G) is located one mile north of the community of Mountain Gate in portions of Sections 2, 3, 4, 8, 9, 10, 11, 14, 15, 16, and 17, T33N, R4W, MDB&M, as shown on Attachment B, a part of this Order.

2. Settled storm water is discharged from the junction box located west of Basin #5 at discharge point EFF-00X to an unnamed tributary of the West Fork of Stillwater Creek, a water of the United States, at a point latitude 40°, 44', 06" N and longitude 122°, 18', 26" W. Additional storm water discharge points include: 001A and 001B located at the limestone quarry, and 002A, 002B, 003A, and 003B from the shale quarry to Spring Branch Creek and unnamed tributaries of the West Fork of Stillwater Creek.

3. Discharge Point 00X, 001A, 001B, 002A, 002B, 003A, and 003B are all located within the Enterprise Flat Hydrologic Area (508.10) of the Redding Hydrologic Unit as defined by the interagency hydrologic map for the Sacramento Hydrologic Basin prepared by the Department of Water Resources (1986).

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

Effluent Limitations and Discharge Specifications contained in the existing Order for discharges from storm water discharge point 00X (Monitoring Location EFF-00X) 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 (12/2002 – 12/2006)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Settleable Solids	mL/L			0.2			<0.1
Total Suspended Solids	mg/L			50			170
Turbidity	NTU						90
Electrical Conductivity @ 25°C	umhos/ cm						290
Aluminum	ug/L						1,620
Arsenic, total	ug/L						1.4
Cadmium, total	ug/L						3.5
Chromium VI, total	ug/L						16
Copper, total	ug/L						5.1
Iron	ug/L						2,740
Lead, total	ug/L						9.6
Manganese	ug/L						213
Zinc, total	ug/L						23.8
Hardness	mg/L						229
pH	pH units	pH shall remain within the range of 6.0 and 9.0 at all times					(8.8, 7.1)(1)

(1) Instantaneous Maximum and Instantaneous Minimum.

D. Compliance Summary

Based on the monitoring data submitted by the Discharger from December 2002 through December 2006, the Dischargerappears to have been in compliance with the permit with the exeption of several alleged TSS effluent limit violations. The Discharger submitted supplemental information to show that they were not responsible for the exceedances. The alleged violations were subsequently dismissed by the Regional Board. No other effluent or receiving water violations set by Order No. R5-2002-0057 have been documented.

E. Planned Changes

The Facility does not anticipate any planned changes within the next five years that would affect surface water quality. This Order requires changes so that certain process waters will no longer discharge to offsite surface waters.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the applicable plans, policies, and regulations identified in section II of the Limitations and Discharge Requirements (Findings). This section provides supplemental information, where appropriate, for the plans, policies, and regulations relevant to the discharge.

A. Legal Authority

See Limitations and Discharge Requirements - Findings, Section II.C.

B. California Environmental Quality Act (CEQA)

See Limitations and Discharge Requirements - Findings, Section II.E.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans**. As explained in Findings, Section II. H, the Regional Water Board adopted a *Water Quality Control Plan, Fourth Edition (Revised February 2007), for the Sacramento and San Joaquin River Basins* (Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan at page II-2.00 states that the "…*beneficial uses of any specifically identified water body generally apply to its tributary streams*." The Basin Plan does not specifically identify beneficial uses for the unnamed tributary or the West Fork of Stillwater Creek, but does identify present and potential uses for the Sacramento River, to which the West Fork of Stillwater Creek, via Stillwater Creek, is tributary. In addition, State Water Board Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. The beneficial uses of the unnamed tributary and the West Fork of Stillwater Creek downstream of the discharge are municipal and domestic supply, agricultural irrigation, agricultural stock watering, industrial power water supply, water contact recreation including canoeing and rafting, other non-contact water recreation, warm freshwater aquatic habitat, cold freshwater aquatic habitat, warm spawning habitat, cold spawning habitat, and wildlife habitat.

   The Basin Plan on page II-1.00 states: "*Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning…*" and with respect to disposal of wastewaters states that "...*disposal of wastewaters is [not] a prohibited use of waters of the State; it is merely a use which cannot be satisfied to the detriment of beneficial uses.*"

   The federal CWA section 101(a)(2), states: "*it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983.*" Federal Regulations, developed to implement the requirements of the CWA, create a rebuttable presumption that all waters be designated as fishable and swimmable. Federal Regulations, 40 CFR sections 131.2 and 131.10, require that all waters of the State regulated to protect the

beneficial uses of public water supply, protection and propagation of fish, shell fish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. Section 131.3(e), 40 CFR, defines existing beneficial uses as those uses actually attained after November 28, 1975, whether or not they are included in the water quality standards. Federal Regulation, 40 CFR section 131.10 requires that uses be obtained by implementing effluent limitations, requires that all downstream uses be protected and states that in no case shall a state adopt waste transport or waste assimilation as a beneficial use for any waters of the United States.

2. **Thermal Plan. Not Applicable.**

3. **Bay-Delta Plan. Not Applicable.**

4. **Antidegradation Policy.** Section 131.12, 40 CFR, 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. As discussed in detail in the Fact Sheet (Attachment F, Section IV.D.4.) the discharge is consistent with the antidegradation provisions of 40 CFR section 131.12 and State Water Board Resolution 68-16. This Order specifically prohibits the discharge from causing the water quality in the receiving water to be degraded so as to cause a designated beneficial use or water quality standard to be violated.

5. **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. Compliance with the Anti-Backsliding requirements is discussed in Section IV.D.3. Previously applicable effluent limitations remain applicable. BMPs and receiving water limitations have been added.

   All receiving water beneficial uses will be protected and all water quality standards will be met in the receiving water.

6. **Emergency Planning and Community Right to Know Act. Not Applicable**. Facility is not a POTW, and does not discharge wastes, other than domestic wastes, into a POTW collection system.

7. **Storm Water Requirements.** USEPA promulgated Federal Regulations for storm water on 16 November 1990 in 40 CFR Parts 122, 123, and 124. The NPDES Industrial Storm Water Program regulates storm water discharges from industrial

facilities. This site-specific, individual Order implements the requirements of the Industrial Storm Water Program.

8. **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.

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

1. Under Section 303(d) of the 1972 Clean Water Act, states, territories and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. On July 25, 2003 USEPA gave final approval to California's 2002 Section 303(d) List of Water Quality Limited Segments. The Basin Plan references this list of Water Quality Limited Segments (WQLSs), which are defined as "…*those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 CFR 130, et seq.)*." The Basin Plan also states, "*Additional treatment beyond minimum federal standards will be imposed on dischargers to [WQLSs]. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment.*" The receiving water has not been 303d-listed.

2. **Total Maximum Daily Loads.** No TMDL has been adopted for the receiving water.

E. Other Plans, Polices and Regulations

1. The State Water Board adopted the *Water Quality Control Policy for the Enclosed Bays and Estuaries of California*. The requirements within this Order are consistent with the Policy.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Effluent limitations and toxic and pretreatment effluent standards established pursuant to Sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 304 (Information and Guidelines), and 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act (CWA) and amendments thereto are applicable to the discharge.

The Federal CWA mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state or federal law [33 U.S.C., § 1311(b)(1)(C); 40 CFR, § 122.44(d)(1)]. NPDES permits must incorporate discharge limits necessary to ensure that water quality standards are met. This

requirement applies to narrative criteria as well as to criteria specifying maximum amounts of particular pollutants. Pursuant to Federal Regulations, 40 CFR Section 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that "*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, including state narrative criteria for water quality*." Federal Regulations, 40 CFR, §122.44(d)(1)(vi), further provide that "[w]*here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits.*"

The CWA requires point source discharges 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: 40 CFR §122.44(a) requires that permits include applicable technology-based limitations and standards, and 40 CFR §122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water where numeric water quality objectives have not been established. The Regional Water Board's Basin Plan, page IV-17.00, contains an implementation policy ("Policy for Application of Water Quality Objectives") that specifies that the Regional Water Board "*will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives*." This Policy complies with 40 CFR §122.44(d)(1). With respect to narrative objectives, the Regional Water Board must establish effluent limitations using one or more of three specified sources, including (1) EPA's published water quality criteria, (2) a proposed state criterion (*i.e*., water quality objective) or an explicit state policy interpreting its narrative water quality criteria (*i.e*., the Regional Water Board's "Policy for Application of Water Quality Objectives")(40 CFR 122.44(d)(1) (vi) (A), (B) or (C)), or (3) an indicator parameter. The Basin Plan contains a narrative objective requiring that: "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life*" (narrative toxicity objective). The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, discoloration, toxic substances, radionuclides, or taste and odor producing substances that adversely affect beneficial uses. The Basin Plan states that material and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The Basin Plan also limits chemical constituents in concentrations that adversely affect surface water beneficial uses. For waters designated as municipal, the Basin Plan specifies that, at a minimum, waters shall not contain concentrations of constituents that exceed Maximum Contaminant Levels (MCL) of CCR Title 22. The Basin Plan further states that, to protect all beneficial uses, the Regional Water Board may apply limits more stringent than MCLs.

A. Discharge Prohibitions

As stated in section I.G of Attachment D, Standard Provisions, this Order prohibits bypass from any portion of the treatment facility. Federal Regulations, 40 CFR 122.41 (m), define "bypass" as the intentional diversion of waste streams from any portion of a treatment

facility. This section of the Federal Regulations, 40 CFR 122.41 (m)(4), prohibits bypass unless it is unavoidable to prevent loss of life, personal injury, or severe property damage. In considering the Regional Water Board's prohibition of bypasses, the State Water Board adopted a precedential decision, Order No. WQO 2002-0015, which cites the Federal Regulations, 40 CFR 122.41(m), as allowing bypass only for essential maintenance to assure efficient operation.

1. Discharge of wastewater, including industrial storm water at a location or in a manner different from that described in the Findings, is prohibited.

2. The by-pass or overflow (except by design) of wastewater, including industrial storm water to surface waters is prohibited, except as allowed by Federal Standard Provisions I.G. and I.H. (Attachment D). This prohibition applies to treatment units required for control of pollutant discharges.

3. The by-pass of sediment-laden storm water around the sedimentation basins is prohibited.

4. The direct discharge of raw or finished material and liquid or solid wastes from cement manufacturing to surface waters and surface water drainage courses is prohibited.

5. The direct discharge of domestic waste to the underdrain system is prohibited.

6. Neither the discharge nor its treatment shall create a nuisance as defined in Section 13050 of the California Water Code.

7. The discharge of hazardous or toxic substances, including storm water treatment chemicals, grinding aid, solvents or petroleum products (i.e. oil, grease, gasoline, and diesel) to surface waters or groundwater is prohibited.

8. Discharge of wastes classified as "hazardous"as defined in Section 2521(a) of Title 23, California Code of Regulations (CCR), Section 2510, et seq., or "designated", as defined in Section 13173 of the California Water Code is prohibited.

B. Technology-Based Effluent Limitations

1. Scope and Authority

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

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

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 non-conventional pollutants.

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

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

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 best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the permit writer must consider specific factors outlined in section 125.3.

2. Applicable Technology-Based Effluent Limitations

The Discharger owns and operates a "cement manufacturing" plant, a "limestone quarry", and a "shale quarry." Therefore, effluent limitations established in Cement Manufacturing Point Source Category (40 CFR Part 411) are applicable to this discharge. Specifically, Subpart A-Nonleaching, and Subpart C-Material Storage Piles Runoff. In addition, Mineral Mining and Processing Point Source Category (40 CFR Part 436) are applicable to this discharge. Specifically, Subpart B-Crushed Stone.

Except as provided in 40 CFR §125.30 through §125.32, and subject to the procisions of paragraphs (b) and (c) of this section, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of best practicable control technology currently available (BPT).

The following effluent limitations apply to Discharge Point 00X:

- Nonleaching – Temperature shall not increase by more than 5°F (3°C).

- Material Storage Piles – The Total Suspended Solids maximum daily total suspended solids shall be less than 50 mL/L.
  The pH shall be within the range of 6.0 to 9.0 at all times.

Overflow associated with a 10-year, 24-hour rainfall event is not subject to the TSS and pH limitation.

In addition, the Code of Federal Regulations, 40 CFR Part 436, contains effluent limitation guidelines for crushed stone. Subpart B-Crushed Stone Subcategory is applicable to discharges resulting from production of crushed and broken limestone. The following effluent limitations apply to Discharge Points 001A, 001B, 002A, 002B, 003A, and 003B:

- Crushed Stone – The pH shall be within the range of 6.0 to 9.0 at all times.

Overflow associated with a 10-year, 24-hour rainfall event is not subject to the TSS and pH limitation.

Table F-3A. Summary of Technology-based Effluent Limitations – 00X

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Total Suspended Solids	mg/L		50[1]			
pH	pH units				6.0[1]	9.0[1]

(1) Overflow associated with a 10-year, 24-hour rainfall event is not subject to the TSS and pH limitation.

Table F-3B. Summary of Technology-based Effluent Limitations – 001A, 001B, 002A, 002B, 003A, 003B

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	pH units				6.0[1]	9.0[1]

(1) Overflow associated with a 10-year, 24-hour rainfall event is not subject to the TSS and pH limitation.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

Also as specified in Section 122.44(K), best management practices (BMPs) may be used in lieu of numeric effluent limitations when:

a. authorized under section 304(e) of the CWA for control of toxic pollutants and hazardous substances from ancillary industrial activities;

b. authorized under section 402(p) of the CWA for the control of storm water discharges;

c. numeric effluent limitations are infeasible; or

d. the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purpose and intent of the CWA.

Section 402(p) authorizes regulation of storm water discharges associated with industrial activities. A combination of BMPs, numeric effluent limitations, and receiving water limitations are utilized in this Order to regulate the discharge of pollutants from the Discharger's Facility.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

a. **Receiving Water.** The beneficial uses of the West Fork of Stillwater Creek and its tributaries downstream of the discharge are municipal and domestic supply, agricultural irrigation, agricultural stock watering, industrial service supply, power generation, water contact recreation, including canoeing and rafting, other non-contact water recreation, including aesthetic enjoyment, warm freshwater aquatic habitat, cold freshwater aquatic habitat, warm spawning habitat, reproduction and/or early development, cold spawning, reproduction and/or early development, and wildlife habitat.

b. **Hardness.** While no effluent limitation for hardness is necessary in this Order, hardness is critical to the assessment of the need for, and the development of, limitations for certain metals. The *California Toxics Rule*, at (c)(4), states the following:

"Application of metals criteria. (i) *For purposes of calculating freshwater aquatic life criteria for metals from the equations in paragraph (b)(2) of this section, for waters with a hardness of 400 mg/L or less as calcium carbonate, the actual ambient hardness of the surface water* <u>*shall*</u> *be used in those equations*."

The State Water Board, in footnote 19 to Water Quality Order No. 2004-0013, stated: "*We note that…the Regional Water Board…applied a variable hardness value whereby effluent limitations will vary depending on the actual, current hardness values in the receiving water. We recommend that the Regional Water Board establish either fixed or seasonal effluent limitations for metals, as provided in the SIP, rather than 'floating' effluent limitations*."

Limitations for the discharge must be set to protect the beneficial uses of the receiving water for all discharge conditions. In the absence of the option of including condition-dependent, "floating" limitations that are reflective of actual conditions at the time of discharge, limitations must be set using the worst-case condition (*e.g.*, lowest ambient hardness) in order to protect beneficial uses for all discharge conditions. For purposes of establishing water quality-based limitations, a reported hardness value of 93 mg/L (lowest upstream receiving water hardness) as $CaCO_3$ was used.

c. **Assimilative Capacity/Mixing Zone.**
Based on the available information, the worst-case dilution is assumed to be zero to provide protection for the receiving water beneficial uses. The impact of assuming zero dilution/assimilative capacity within the receiving water is that the discharge limitations are end-of-pipe limits with no allowance for dilution within the receiving water.

d. **Translators.**
USEPA regulations at 40 CFR 122.45(c) require effluent limitations for metals to be expressed as total recoverable metal, and therefore, attention must be given to ensure that analytical data and water quality standards for metals are expressed accordingly. Appendix 3 of the SIP provides Conversion Factors (CFs) or translators, for certain metals including copper to convert total recoverable concentrations to dissolved concentrations and vice versa. Since the Discharger has not provided translators specific to the receiving water, this Order used CFs from the SIP summarized in Table F-4 below:

Table F-4. Translators at 93 mg/L hardness as $CaCO_3$.

Parameter	Conversion Factor Freshwater Acute Criteria	Conversion Factors Freshwater Chronic Criteria
Arsenic[1]	1.00	1.00
Cadmium	0.947	0.912
Chromium (VI)	0.982	0.962
Copper	0.960	0.960
Lead	0.802	0.802
Zinc	0.978	0.986

(1) Bioaccumulative compound and inappropriate to adjust to percent dissolved.

3. Determining the Need for WQBELs

a. **pH.** The Basin Plan includes a water quality objective for surface waters (except for Goose Lake) that the "…*pH shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters with designated COLD or WARM beneficial uses.*" Effluent Limitations for pH are included in this Order based on the Basin Plan objectives for pH. A range of 6.0 to 9.0 is allowed in the effluent, recognizing the mixing potential in the receiving water, and the protective receiving water limitation.

b. **Settleable Solids.** For inland surface waters, the Basin Plan states that "[w]ater shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses."

4. WQBEL Calculations – Not Applicable

Summary of Water Quality-based Effluent Limitations

Table F-5A. Summary of Water Quality-based Effluent Limitations – 00X

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Settleable Solids	**mL/L**	0.1		0.2		
pH	**pH units**				6.0	9.0

Table F-5B. Summary of Water Quality-based Effluent Limitations – 001A, 001B, 002A, 002B, 003A, 003B

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Settleable Solids	**mL/L**			0.2		
pH	**pH units**				6.0	9.0

5. Whole Effluent Toxicity (WET)

For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct whole effluent toxicity testing for acute and chronic toxicity, as specified in the Monitoring and Reporting Program (Attachment E, Section V.). This Order also contains effluent limitations for acute toxicity and requires the Discharger to implement best management practices to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity.

a. **Acute Aquatic Toxicity.** The Basin Plan contains a narrative toxicity objective that states, "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*" (Basin Plan at III-8.00. The Basin Plan also states that, "…*effluent limits based upon acute biotoxicity tests of effluents will be prescribed where appropriate*…". USEPA Region 9 provided guidance for the development of acute toxicity effluent limitations in the absence of numeric water quality objectives for toxicity in its document titled "Guidance for NPDES Permit Issuance", dated February 1994. In section B.2. "Toxicity Requirements" (pgs. 14-15) it states that, "*In the absence of specific numeric water quality objectives for acute and chronic toxicity, the narrative criterion 'no toxics in toxic amounts' applies. Achievement of the narrative criterion, as applied herein, means that ambient waters shall not demonstrate for acute toxicity: 1) less than 90% survival, 50% of the time, based on the monthly median, or 2) less than 70% survival, 10% of the time, based on any monthly median. For chronic toxicity, ambient waters shall not demonstrate a test result of greater than 1 TUc."* Accordingly, effluent limitations for acute toxicity have been included in this Order as follows:

Acute Toxicity. Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

Minimum for any one bioassays ----------	70%
Median for any three or more consecutive bioassays ---------	90%

b. **Chronic Aquatic Toxicity.** The Basin Plan contains a narrative toxicity objective that states, "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*" (Basin Plan at III-8.00). Based on annual whole effluent chronic toxicity testing performed by the Discharger from 1 March 2004 through 10 February 2007, the discharge has reasonable potential to cause or contribute to an to an in-stream excursion above of the Basin Plan's narrative toxicity objective.

No dilution has been granted for the chronic condition. Therefore, chronic toxicity testing results exceeding 1 chronic toxicity unit (TUc) demonstrates the discharge has a reasonable potential to cause or contribute to an exceedance of the Basin Plan's narrative toxicity objective. Numeric chronic WET effluent limitations have not been included in this order.

The SIP contains implementation gaps regarding the appropriate form and implementation of chronic toxicity limits. This has resulted in the petitioning of a NPDES permit in the Los Angeles Region[1] that contained numeric chronic toxicity effluent limitations. To address the petition, the State Water Board adopted WQO 2003-012 directing its staff to revise the toxicity control provisions in the SIP. The State Water Board states the following in WQO 2003-012*, "In reviewing this petition and receiving comments from numerous interested persons on the propriety of including numeric effluent limitations for chronic toxicity in NPDES permits for publicly-owned treatment works that discharge to inland waters, we have determined that this issue should be considered in a regulatory setting, in order to allow for full public discussion and deliberation. We intend to modify the SIP to specifically address the issue. We anticipate that review will occur within the next year. We therefore decline to make a determination here regarding the propriety of the final numeric effluent limitations for chronic toxicity contained in these permits."* The process to revise the SIP is currently underway. Proposed changes include clarifying the appropriate form of effluent toxicity limits in NPDES permits and general expansion and standardization of toxicity control implementation related to the NPDES permitting process. Since the toxicity control provisions in the SIP are under revision it is infeasible to develop numeric effluent limitations for chronic toxicity. Therefore, this Order requires that the Discharger meet best management

[1] In the Matter of the Review of Own Motion of Waste Discharge Requirements Order Nos. R4-2002-0121 [NPDES No. CA0054011] and R4-2002-0123 [NPDES NO. CA0055119] and Time Schedule Order Nos. R4-2002-0122 and R4-2002-0124 for Los Coyotes and Long Beach Wastewater Reclamation Plants Issued by the California Regional Water Quality Control Board, Los Angeles Region SWRCB/OCC FILES A-1496 AND 1496(a)

practices for compliance with the Basin Plan's narrative toxicity objective, as allowed under 40 CFR 122.44(k).

To ensure compliance with the Basin Plan's narrative toxicity objective, the Discharger is required to conduct chronic whole effluent toxicity testing, as specified in the Monitoring and Reporting Program (Attachment E, Section V.). Furthermore, Special Provisions VI.C.2.a. of this Order requires the Discharger to investigate the causes of, and identify and implement corrective actions to reduce or eliminate effluent toxicity. If the discharge demonstrates a pattern of toxicity exceeding the numeric toxicity monitoring trigger, the Discharger is required to initiate a Toxicity Reduction Evaluation (TRE), in accordance with an approved TRE work plan. The numeric toxicity monitoring trigger is not an effluent limitation, it is the toxicity threshold at which the Discharger is required to perform accelerated chronic toxicity monitoring, as well as, the threshold to initiate a TRE if a pattern of effluent toxicity has been demonstrated.

D. Final Effluent Limitations

1. Mass-based Effluent Limitations.

Title 40 CFR 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 CFR 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass limitations provided in 40 CFR 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g. CTR criteria and MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

2. Averaging Periods for Effluent Limitations.

An Averaging period for compliance with the pH limitation may be used upon approval by the Executive Officer.

3. Satisfaction of Anti-Backsliding Requirements.

Previously applicable effluent limitations remain applicable. BMPs and receiving water limitations have been added.

All receiving water beneficial uses are protected and all water quality standards will be met in the receiving water.

4. Satisfaction of Antidegradation Policy

The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. Unlined basins are used for sediments which are retained by the soil and do not pass to groundwater. There are no operational changes proposed. The

impact on existing water quality will be insignificant. This Order specifically prohibits the discharge from causing the water quality in the receiving water to be degraded so as to cause a designated beneficial use or water quality standard to be violated.

Table F-6A. Summary of Final Effluent Limitations – 00X

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Settleable Solids	**mL/L**	0.1		0.2			
Total Suspended Solids	**mL/L**			50[1]			
pH[1]	**pH units**				6.0	9.0	

(1) Except for discharges associated with a 10-year 24-hour rainfall event, or greater.

- Acute Whole Effluent Toxicity. Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

  i. 70%, minimum for any one bioassay; and
  ii. 90%, median for any three consecutive bioassays.

Table F-6B. Summary of Final Effluent Limitations – 001A, 001B, 002A, 002B, 003A, and 003B

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Settleable Solids	**mL/L**			0.2			
pH[1]	**pH units**				6.0	9.0	

(1) Except for discharges associated with a 10-year 24-hour rainfall event, or greater.

E. Interim Effluent Limitations. Not Applicable

F. Land Discharge Specifications. Not Applicable

G. Reclamation Specifications. Not Applicable

H. Best Management Practices. See Fact Sheet, Section VII.B.3

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Basin Plan water quality objectives to protect the beneficial uses of surface water and groundwater include numeric objectives and narrative objectives, including objectives for chemical constituents, toxicity, and tastes and odors. The toxicity objective requires that surface water and groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective requires that surface water and groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use

or that exceed the maximum contaminant levels (MCLs) in Title 22, CCR. The tastes and odors objective states that surface water and groundwater shall not contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances in concentrations that adversely affect domestic drinking water supply, agricultural supply, or any other beneficial use.

Receiving water limitations are also used in this permit to ensure that the regulated storm water discharge does not cause the water quality of the receiving water to exceed an applicable standard.

A. Surface Water

1. CWA section 303(a-c), requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The Regional Water Board adopted water quality criteria as water quality objectives in the Basin Plan. The Basin Plan states that "*[t]he numerical and narrative water quality objectives define the least stringent standards that the Regional Board will apply to regional waters in order to protect the beneficial uses*." The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This Order contains Receiving Surface Water Limitations based on the Basin Plan numerical and narrative water quality objectives and California/National Toxics Rule criteria for aluminum, arsenic, biostimulatory substances, cadmium, chromium VI (Hexavalent Chromium), copper, chemical constituents, color, dissolved oxygen, floating material, iron, lead, mercury, oil and grease, pH, pesticides, radioactivity, salinity and electrical conductivity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, turbidity, and zinc.

   a. **Aluminum**. The U.S. Environmental Protection Agency (USEPA) Secondary Maximum Contaminant Limit (MCL) for aluminum is a range from 50 to 200 ug/L The observed MEC for aluminum was 1,620 µg/L, based on four samples collected between December 2002 and December 2006, while the maximum observed upstream receiving water aluminum concentration was 4,080, based on four samples collected between December 2002 and December 2005. A receiving water limitation of 200 ug/L for aluminum is included in this Order based on the Basin Plan's narrative chemical constituents objective.

   b. **Arsenic.** The USEPA Primary Maximum Contaminant Level (MCL) is 10 µg/L for arsenic. Pursuant to the Safe Drinking Water Act, DHS must revise the arsenic MCL in Title 22 CCR to be as low or lower than the USEPA MCL. Applying the Basin Plan's "Policy for Application of Water Quality Objectives", to protect future municipal and domestic water use, it is reasonable to apply the USEPA MCL for arsenic to the receiving stream

      The MEC for dissolved arsenic was 1.4 µg/L from Discharge 00X, based on five samples collected between December 2002 and November 2006, while the maximum observed upstream receiving water arsenic concentration was 11 ug/L,

based on five samples collected between December 2002 and November 2006. Therefore, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the USEPA Primary MCL. A receiving water limit of 10 µg/L for arsenic is included in this Order based on the Basin Plan's narrative chemical constituents objective. Based on the sample results in the effluent, it appears the Discharger can meet this new limitation.

c. **Biostimulatory Substances**. The Basin Plan includes a water quality objective that "*[W]ater shall not contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses."* Receiving Water Limitations for biostimulatory substances are included in this Order and are based on the Basin Plan objective.

d. **Cadmium.** The California Toxics Rule (CTR) and Basin Plan include hardness-dependent water quality criteria and objectives for the protection of freshwater aquatic life for cadmium as follows:

- CTR Criteria Continuous Concentration (4-day Average, dissolved) = (exp{0.7852[ln(hardness)] – 2.715}) x (1.101672 - {[ln(hardness)] x [0.041838]})

- CTR Criteria Maximum Concentration (1-hour Average, dissolved) = (exp{1.128[ln(hardness)] – 3.6867}) x (1.136672 - {[ln(hardness)] x [0.041838]})

- Basin Plan Objective (instantaneous maximum, dissolved) = (exp{1.160[ln(hardness)] – 5.777})

  The discharge shall not cause the water quality in the West Fork of Stillwater Creek to exceed any of the above criteria or objectives

For example, using the lowest (worst-case) measured hardness from the receiving water (93 mg/L as CaCO3), the calculated criterion and objectives from the equations would be:

- CTR Criteria Chronic Concentration = 2.121 ug/L (dissolved);

- CTR Criteria Maximum Concentration = 3.942 ug/L (dissolved);

- Basin Plan Objective = 0.595 ug/L (dissolved).

The criteria for cadmium are presented in dissolved concentrations. The USEPA default conversion factors for cadmium in freshwater are 0.944 for the acute and 0.909 for the chronic criteria.

The observed MEC for dissolved cadmium from Discharge 00X (using the USEPA default conversion factors for cadmium in freshwater) is 0.30 µg/L for the acute and 0.29 ug/L for the chronic criteria, based on five samples collected between December 2002 and November 2006, while the maximum observed upstream receiving water dissolved copper concentration is 3.30 ug/L for the

e. **Chemical Constituents**. The Basin Plan includes a water quality objective that *"[W]aters shall not contain chemical constituents in concentrations that adversely affect beneficial uses."* Receiving Water Limitations for chemical constituents are included in this Order and are based on the Basin Plan objective.

f. **Chromium VI (Hexavalent Chromium).** The CTR includes maximum 1-hour average and 4-day average total recoverable chromium VI concentrations of 16 µg/L and 11 µg/L, respectively, for the protection of freshwater aquatic life. The observed MEC for chromium VI from Discharge 00X was 16 µg/L, based on five samples collected between December 2002 and November 2006, while the maximum observed upstream receiving water chromium VI concentration was <2.0 µg/L, based on five samples collected between December 2002 and November 2006. Therefore, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria.

   This Order contains a receiving water limitation of 11.0 ug/L for the continuous concentration and 16.0 ug/L for the maximum concentration for dissolved chromium VI based on the CTR criteria for the protection of freshwater aquatic life.

g. **Color**. The Basin Plan includes a water quality objective that "*[W]ater shall be free of discoloration that causes nuisance or adversely affects beneficial uses."* Receiving Water Limitations for color are included in this Order and are based on the Basin Plan objective.

h. **Copper***.* The CTR and Basin Plan include hardness-dependent water quality criteria and objectives for the protection of freshwater aquatic life for copper as follows:

   - CTR Criteria Continuous Concentration (4-day Average, dissolved) = (exp{0.8545[ln(hardness)] – 1.702}) x(0.960);

   - CTR Criteria Maximum Concentration (1-hour Average, dissolved) = (exp{0.9422[ln(hardness)] – 1.700}) x (0.960);

   - Basin Plan Objective (instantaneous maximum, dissolved) = (exp{0.905[ln(hardness)] – 1.612}).

   The discharge shall not cause the water quality in the West Fork of Stillwater Creek to exceed any of the above criteria or objectives.

   For example, using the lowest (worst-case) measured hardness from the receiving water (93 mg/L as $CaCO_3$), the calculated criterion and objectives from the equations above would be:

- CTR Criteria Chronic Concentration = 8.417 ug/L (dissolved);
- CTR Criteria Maximum Concentration = 12.551 ug/L (dissolved);
- Basin Plan Objective = 12.061 ug/L (dissolved).

The criteria for copper are presented in dissolved concentrations. The USEPA default conversion factors for copper in freshwater are 0.96 for both the acute and the chronic criteria.

The observed MEC for dissolved copper from Discharge 00X (using the USEPA default conversion factors for copper in freshwater) is 4.9 µg/L for both the acute and chronic criteria, based on five samples collected between December 2002 and November 2006, while the maximum observed upstream receiving water dissolved copper concentration is 28.5 µg/L, based on five samples collected between December 2002 and November 2006. Therefore, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria for copper.

i. **Cyanide**: Cyanide was reported in EFF-00X and the receiving water at concentrations of 14 ug/L and 24 ug/L, respectively on 13 November 2001. Order No. R5-2002-0056 required annual sampling for cyanide based on the 13 November 2001 analytical results. On 6 January 2004, the Regional Water Board received a letter from Basic Laboratory stating that they had reported low level cyanide results incorrectly. Included in the incorrectly reported cyanide results were the 13 November 2001 analytical results for the Discharger. The corrected concentrations were below the reporting limit of 5 ug/L. The Discharger has sampled discharge point EFF—00X five additional times during the life of the previous permit. All five samples were below the reporting limit of 5 ug/L for cyanide. For freshwater aquatic life protection, the CTR 4-day average continuous cyanide concentration criterion is 5.2 ug/L. Therefore, receiving water limitations for cyanide are not included in this Order.

j. **Dissolved Oxygen.** The West Fork of Stillwater Creek has been designated as having the beneficial use of cold freshwater aquatic habitat (COLD). For water bodies designated as having COLD as a beneficial use, the Basin Plan includes a water quality objective of maintaining a minimum of 7.0 mg/L of dissolved oxygen. Since the beneficial use of COLD does apply to the West Fork of Stillwater Creek, a receiving water limitation of 7.0 mg/L for dissolved oxygen was included in this Order.

k. **Floating Material**. The Basin Plan includes a water quality objective that *"[W]ater shall not contain floating material in amounts that cause nuisance or adversely affect beneficial uses."* Receiving Water Limitations for floating material are included in this Order and are based on the Basin Plan objective.

l. **Iron.** The Secondary MCL - Consumer Acceptance Limit for iron is 300 µg/L. The MEC for iron from Discharge 00X was 2,740 µg/L, based on 4 samples collected between December 2002 and November 2006, while the maximum observed upstream receiving water iron concentration was 6,190 µg/L, based on

4 samples collected between December 2002 and November 2006. Therefore, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the Secondary MCL for iron. The receiving water has exceeded the Secondary MCL for iron. Therefore, assimilative capacity may not be available in the receiving water for iron. A receiving water limitation of 300 µg/L for iron is included in this Order based on the Basin Plan's narrative chemical constituents objective.

m. **Lead.** The CTR includes hardness-dependent standards for the protection of freshwater aquatic life for lead. The standards for metals are presented in dissolved concentrations as follows:

- CTR Criteria Continuous Concentration (4-day Average, dissolved) = (exp{1.273[ln(hardness)] – 4.705}) x (1.46203 - {[ln(hardness)] x [0.145712]}); and

- CTR Criteria Maximum Concentration (1-hour Average, dissolved = (exp{1.273[ln(hardness)] – 1.460}) x (1.46203 - {[ln(hardness)] x [0.145712]}).

The discharge shall not cause the water quality in the West Fork of Stillwater Creek to exceed any of the above criteria or objectives.

For example, using the lowest (worst-case) measured hardness from the receiving water (93 mg/L as $CaCO_3$), the calculated criterion and objectives from the equations above would be:

- CTR Criteria Chronic Concentration = 2.32 ug/L (dissolved);

- CTR Criteria Maximum Concentration = 59.67 ug/L (dissolved);

The criteria for Lead are presented in dissolved concentrations. The USEPA default conversion factors for lead in freshwater are 0.791 for both the acute and the chronic criteria.

The observed MEC for dissolved lead from Discharge 00X (using the USEPA default conversion factors for copper in freshwater) is 7.60 ug/L for both the acute and the chronic criteria, based on four samples collected between 15 December 2002 and 11 December 2006. The maximum observed upstream receiving water concentration for dissolved lead is 18.2 ug/L for both the acute and the chronic criteria, based on five samples collected between 11 December 2002 and 11 December 2006.

n. **Manganese**. The Secondary MCL - Consumer Acceptance Limit for manganese is 50 µg/L. The MEC for manganese from Discharge 00X was 213 µg/L, based on 4 samples collected between December 2002 and November 2006, while the maximum observed upstream receiving water manganese concentration was 1,750 µg/L, based on 4 samples collected between December 2002 and November 2006. Therefore, the discharge has a reasonable potential to cause

or contribute to an in-stream excursion above the Secondary MCL for manganese. The receiving water has exceeded the Secondary MCL for manganese. Therefore, assimilative capacity may not be available in the receiving water for manganese. A receiving water limitation of 50 µg/L for manganese is included in this Order based on protection of the Basin Plan's narrative chemical constituents objective.

o. **Mercury.** The current USEPA Ambient Water Quality Criteria for Protection of Freshwater Aquatic Life, continuous concentration, for mercury is 0.77 µg/L (30-day average, chronic criteria). The CTR contains a human health criterion (based on a one-in-a-million cancer risk) of 0.050 µg/L for waters from which both water and aquatic organisms are consumed. Both values are controversial and subject to change. In 40 CFR Part 131, USEPA acknowledges that the human health criteria may not be protective of some aquatic or endangered species and that "…*more stringent mercury limits may be determined and implemented through use of the State's narrative criterion.*" In the CTR, USEPA reserved the mercury criteria for freshwater and aquatic life and may adopt new criteria at a later date. The maximum observed effluent mercury concentration was 0.121 µg/L.

This Order contains receiving water limitations for mercury based on the *CTR* human health criterion of 0.050 µg/L. If USEPA develops new water quality standards for mercury, this permit may be reopened and the Effluent Limitations adjusted.

p. **Oil and Grease**. The Basin Plan includes a water quality objective that *"[W]aters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses."* Receiving Water Limitations for oil and grease are included in this Order and are based on the Basin Plan objective.

q. **pH.** The Basin Plan includes water quality objective that *"[T]he pH shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters with designated COLD or WARM beneficial uses*" This Order includes receiving water limitations for both pH range and pH change.

The Basin Plan allows an appropriate averaging period for pH change in the receiving stream. Since there is no technical information available that indicates that aquatic organisms are adversely affected by shifts in pH within the 6.5 to 8.5 range, an averaging period is considered appropriate and a monthly averaging period for determining compliance with the 0.5 receiving water pH limitation is included in this Order.

r. **Pesticides.** The Basin Plan includes a water quality objective for pesticides beginning on page III-6.00. Receiving Water Limitations for pesticides are included in this Order and are based on the Basin Plan objective.

s. **Salinity and Electrical Conductivity (EC)**. The Regional Water Board, with cooperation of the State Water Board, has begun the process to develop a new policy for the regulation of salinity in the Central Valley. In a statement issued at the 16 March 2006, Regional Water Board meeting, Board Member Dr. Karl Longley recommended that the Regional Water Board continue to exercise its authority to regulate discharges of salt to minimize salinity increases within the Central Valley. Dr. Longley stated, "*The process of developing new salinity control policies does not, therefore, mean that we should stop regulating salt discharges until a salinity Policy is developed. In the meantime, the Board should consider all possible interim approaches to continue controlling and regulating salts in a reasonable manner, and encourage all stakeholder groups that may be affected by the Regional Board's policy to actively participate in policy development.*"

This Order requires the Discharger to implement measures to evaluate the sources of and reduce the salinity of the storm water discharge to the West Fork of Stillwater Creek. The Antidegradation Policy (Resolution No. 68-16) requires that the Discharger implement best practicable treatment or control (BPTC) of its discharge. Special Provision VII.B.2.b of this Order requires the Discharger to prepare a salinity evaluation and minimization plan. Implementation measures to reduce salt loading may include source control and best management practices modifications. Compliance with these requirements may result in a salinity reduction in the storm water discharged to the receiving water.

The secondary MCL for EC is 900 µmhos/cm as a recommended level, 1600 umhos/cm as an upper level, and 2200 umhos/cm as a short-term maximum. The agricultural water quality goal, that would apply the narrative chemical constituents objective, is 700 umhos/cm as a long-term average based on Water Quality for Agriculture, Food and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers and D.W. Westcot, Rome, 1985). The 700 umhos/cm agricultural water quality goal is intended to prevent reduction in crop yield, i.e., a restriction on use of water, for salt-sensitive crops, such as beans, carrots, turnips, and strawberries. Most other crops can tolerate higher EC concentrations without harm, however, as the salinity of the irrigation water increases, more crops are potentially harmed by the EC, or extra measures must be taken by the farmer to minimize or eliminate any harmful impacts.

A receiving water limitation of 900 umhos/cm as a monthly average for electrical conductivity is included in this Order based on Water Quality for Agriculture, Food, and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers and D.W. Westcot, Rome, 1985). If a lower concentration is required to protect salt sensitive crops, then this Order may be reopened and the EC limitation adjusted, as necessary.

A review of the Discharger's monitoring reports from December 2002 through December 2006 shows an average effluent EC concentration of 230 umhos/cm, with a range from 132 µmhos/cm to 290 umhos/cm for 5 samples. None of these results exceeded the most stringent objective of 700 umhos/cm. As a long-term

average condition, the storm water discharge meets the most limiting EC objective of 700 umhos/cm. Two background receiving water EC sample was collected by the Discharger between October 2004 and November 2005. The average background EC concentration was 203 umhos/cm. This EC characterization is for the storm water discharge only.

t. **Suspended Sediment.** The Basin Plan includes a water quality objective that *"[T]he suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses"* Receiving Water Limitations for suspended sediments are included in this Order and are based on the Basin Plan objective.

u. **Settleable Material.** The Basin Plan includes a water quality objective that *"[W]aters shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses."* Receiving Water Limitations for settleable material are included in this Order and are based on the Basin Plan objective.

v. **Sulfate**. The secondary MCL for sulfate is 250 mg/L as recommended level, 500 mg/L as an upper level, and 600 mg/L as a short-term maximum. Sulfate concentrations in the effluent from Discharge 00X ranged from 5.9 mg/L to 64.1 mg/L, with an average of 27.5 mg/L, for 26 samples collected by the Discharger from December 2002 through December 2006. No background samples from the receiving water were collected.

w. **Suspended Material.** The Basin Plan includes a water quality objective that *"[W]aters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses."* Receiving Water Limitations for suspended material are included in this Order and are based on the Basin Plan objective.

x. **Taste and Odors**. The Basin Plan includes a water quality objective that *"[W]ater shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses."* Receiving Water Limitations for taste- or odor-producing substances are included in this Order and are based on the Basin Plan objective.

y. **Temperature.** The West Fork of Stillwater Creek has the beneficial uses of both COLD and WARM. The Basin Plan includes the objective that "[a]*t no time or place shall the temperature of COLD or WARM intrastate waters be increased more than 5ºF above natural receiving water temperature*." This Order includes a receiving water limitation based on this objective.

z. **Toxicity**. The Basin Plan includes a water quality objective that *"[A]ll waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life."* Receiving Water Limitations for toxicity are included in this Order and are based on the Basin Plan objective.

aa. **Turbidity.** The Basin Plan includes a water quality objective that "*[I]ncreases in turbidity attributable to controllable water quality factors shall not exceed the following limits:*

i. *Where natural turbidity is between 0 and 5 Nephelometric Turbidity Units (NTUs), increases shall not exceed 1 NTU.*

ii. *Where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20 percent.*

iii. *Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs.*

iv. *Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent*."

A numeric Receiving Surface Water Limitation for turbidity is included in this Order and is based on the Basin Plan objective for turbidity.

bb. **Zinc.** The CTR and Basin Plan include hardness-dependent water quality criteria and objectives for the protection of freshwater aquatic life for zinc as follows:

- CTR Criteria Continuous Concentration (4-day Average, dissolved) = (exp{0.8473[ln(hardness)] + 0.884}) x (0.986);
- CTR Criteria Maximum Concentration (1-hour Average, dissolved = (exp{0.8473[ln(hardness)] + 0.884}) x (0.978);
- Basin Plan Objective (instantaneous maximum, dissolved) = (exp{0.830[ln(hardness)] – 0.289}).

The discharge shall not cause the water quality in West Fork of Stillwater Creek to exceed any of the above criteria or objectives.

For example, using the lowest (worst-case) measured hardness from the upstream receiving water, (93 mg/L as $CaCO_3$), the calculated criteria and objectives from the equations above would be:

- CTR Chronic Continuous Criterion = 111.09 ug/L (dissolved);
- CTR Criteria Maximum criterion = 110.19 ug/L (dissolved); and
- Basin Plan Objective = 32.235 ug/L (dissolved).

The criteria for zinc are presented in dissolved concentrations. The USEPA default conversion factors for zinc in freshwater are 0.978 for the acute and 0.986 for the chronic criteria.

The observed MEC for dissolved zinc from Discharge 00X (using the USEPA default conversion factors for zinc in freshwater of 0.986 for the chronic criteria

and 0.978 for the acute criteria) are 23.47 (23.8x0.986) ug/L and 23.3 (23.8x0.978) respectively, based on five samples collected between December 2002 and December 2006. The Maximum observed upstream receiving water concentration for dissolved zinc is 243.5 ug/L (247x0.986) and 241.6 ug/L (247x0.978), based on five samples collected between December 2002 and December 2006. Therefore, assimilative capacity may not be available in the receiving water for zinc.

Table F-7. Summary of Receiving Water Limitations (partial list).

Parameter	Units	Basin Plan	CTR Acute	CTR Chronic
pH	Standard Units	6.5-8.5	N/A	N/A
Electrical Conductivity @ 25°C	µmhos/cm	900	N/A	N/A
Turbidity	NTU	Variable	N/A	N/A
Aluminum	ug/L	200	N/A	N/A
Arsenic, dissolved	ug/L	10	N/A	N/A
Cadmium, dissolved	ug/L	Calculate	Calculate	Calculate
Chromium VI, dissolved	ug/L	N/A	11.0	16.0
Copper, dissolved	ug/L	Calculate	Calculate	Calculate
Iron	ug/L	300	N/A	N/A
Lead, dissolved	ug/L	Calculate	Calculate	Calculate
Magnesium	ug/L	50	N/A	N/A
Mercury, Total	ug/L	0.050	N/A	N/A
Zinc, dissolved	ug/L	Calculate	Calculate	Calculate

B. Groundwater.

1. The beneficial uses of the underlying ground water are municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply.

2. Basin Plan water quality objectives include narrative objectives for chemical constituents, tastes and odors, and toxicity of groundwater. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective states groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use. The tastes and odors objective prohibits taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan also establishes numerical water quality objectives for chemical constituents and radioactivity in groundwaters designated as municipal supply. These include, at a minimum, compliance with MCLs in Title 22 of the CCR. The bacteria objective prohibits coliform organisms at or above 2.2 MPN/100 ml. The Basin Plan requires the application of the most stringent objective necessary to ensure that waters do not contain chemical constituents, toxic substances, radionuclides, taste- or odor-producing substances, or bacteria in concentrations that adversely affect municipal or domestic supply, agricultural supply, industrial supply or some other beneficial use.

3. Groundwater limitations are not required for the storm water discharge regulated by this Order. The discharge as permited herein is consistant with the provisions of Resolution No. 68-16. Domestic wastewater is retained in portable toilets that are periodically pumped for off-site disposal. In addition, the unlined basins are used to settle out sediments which are retained by the soil and do not pass to groundwater.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

A. Influent Monitoring. Not Applicable

B. Effluent Monitoring

1. Pursuant to the requirements of 40 CFR §122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to assess the impacts of the discharge on the receiving stream.

C. Whole Effluent Toxicity Testing Requirements

The Basin Plan states that "[a]*ll waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This objective applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances*." The Basin Plan requires that "[a]*s a minimum, compliance with this objective…shall be evaluated with a 96-hour bioassay*." This Order requires both acute and chronic toxicity monitoring to evaluate compliance with this water quality objective.

The receiving surface water for the Facility is the Sacramento River, an inland surface water providing freshwater aquatic habitat. Beneficial uses of the Sacramento River include cold freshwater habitat (COLD); cold spawning, reproduction, and/or early development (SPWN); and wildlife habitat (WILD). Given that the receiving stream has beneficial uses of cold freshwater habitat, cold migration of aquatic organisms, and cold spawning, reproduction, and/or early development, it is appropriate to use a cold/warm-water species such as *Pimephales promelas* (fathead minnows) for aquatic toxicity bioassays.

USEPA has approved test methods for of *Pimephales promelas*, *Selenastrum capricornutum*, and *Ceriodaphnia dubia* for assessing chronic toxicity in freshwater organisms.

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

2. **Chronic Toxicity.** Annually chronic whole effluent toxicity testing is required in order to demonstrate compliance with the Basin Plan's narrative toxicity objective.

D. Receiving Water Monitoring

1. Surface Water

a. Receiving water monitoring is necessary to assess compliance with receiving water limitations and to assess the impacts of the discharge on the receiving stream.

2. Groundwater. Not Applicable

E. Other Monitoring Requirements

1. Storm Water monitoring

Federal Regulations for storm water discharges were promulgated by USEPA on 16 November 1990 (40 CFR Parts 122,123, and 124). The regulations require specific categories of facilities, which discharge storm water associated with industrial activity (storm water), to obtain NPDES permits and to implement Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology to reduce or eliminate industrial storm water pollution. This order implements the regulations, and relieves the Discharger from obtaining coverage under the general industrial storm water permit.

2. Priority Pollutants

The Discharger shall conduct monitoring as specified in Attachment E of this Order to determine if the discharge from 00X, 001A, 001B, 002A, 002B, 003A, and 003B contains priority pollutants identified in the California Toxics Rule and National Toxics Rule.

VII. RATIONALE FOR PROVISIONS

A. Standard 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 discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Section 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to

omit or modify conditions to impose more stringent requirements. In accordance with section 123.25, this Order omits federal conditions that address enforcement authority specified in sections 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. Special Provisions

1. Reopener Provisions

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

b. Conditions that necessitate a major modification of a permit are described in 40 CFR section 122.62, including:

   i. If new or amended applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA, or amendments thereto, this permit may be reopened and modified in accordance with the new or amended standards.

   ii. When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.

c. **Electrical Conductivity.** If the Regional Board determines that a receiving water quality objective for electrical conductivity of less than 900 umhos/cm is required to protect agricultural activities, then this Order may be reopened and limitations added or modified to provide such protection.

d. **Mixing Zone and Dilution Studies.** Section 1.4 of the SIP established procedures for calculating effluent limitations. Included in the procedures is determination of a dilution credit, which the Regional Water Board may approve or disapprove at its discretion. However, the Discharger has not developed the information needed to determine a dilution credit. Consequently, this Order establishes final effluent limitations based on zero dilution. This Order also has a reopener that allows new effluent limitations to be adopted if a mixing zone and dilution study demonstrates that dilution credits are appropriate.

e. **Water Effects Ratio (WER) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for cadmium, cooper, lead, silver, and zinc. If the Discharger performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

f. **Whole Effluent Toxicity.** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if the State Water Board revises the SIP's toxicity control provisions that would require the establishment of numeric chronic toxicity effluent limitations, this Order may be reopened to include a numeric chronic toxicity effluent limitation based on the new provisions.

2. Special Studies and Additional Monitoring Requirements

a. **Salinity Evaluation and Minimization Plan**. The Discharger shall prepare a salinity evaluation and minimization plan to address sources of salinity from the Facility. The plan shall be completed and submitted to the Regional Water Board within 1 year of the effective date of this Order for the approval by the Executive Officer.

b. Chronic Whole Effluent Toxicity Requirements. The Basin Plan contains a narrative toxicity objective that states, "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*" (Basin Plan at III-8.00.) Based on annual whole effluent chronic toxicity testing performed by the Discharger from October 2001 through November 2005, the discharge did not demonstrate a reasonable potential to cause or contribute to an to an in-stream excursion above of the Basin Plan's narrative toxicity objective.

This provision requires the Discharger to develop a Toxicity Reduction Evaluation (TRE) Work Plan in accordance with EPA guidance. In addition, the provision provides a numeric toxicity monitoring trigger and requirements for accelerated monitoring, as well as, requirements for TRE initiation if a pattern of toxicity has been demonstrated.

i. **Monitoring Trigger.** A numeric toxicity monitoring trigger of > 1 TUc (where TUc = 100/NOEC) is applied in the provision, because this Order does not allow any dilution for the chronic condition. Therefore, a TRE is triggered when the effluent exhibits a pattern of toxicity at 100% effluent.

ii. **Accelerated Monitoring.** The provision requires accelerated WET testing when a regular WET test result exceeds the monitoring trigger. The

purpose of accelerated monitoring is to determine, in an expedient manner, whether there is a pattern of toxicity before requiring the implementation of a TRE. Due to possible seasonality of the toxicity, the accelerated monitoring should be performed in a timely manner, preferably taking no more than 2 to 3 months to complete.

The provision requires accelerated monitoring consisting of four chronic toxicity tests every two weeks using the species that exhibited toxicity. Guidance regarding accelerated monitoring and TRE initiation is provided in the *Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001, March 1991* (TSD). The TSD at page 118 states, "EPA recommends if toxicity is repeatedly or periodically present at levels above effluent limits more than 20 percent of the time, a TRE should be required." Therefore, four accelerated monitoring tests are required in this provision. If no toxicity is demonstrated in the four accelerated tests, then it demonstrates that toxicity is not present at levels above the monitoring trigger more than 20 percent of the time (only 1 of 5 tests are toxic, including the initial test). However, notwithstanding the accelerated monitoring results, if there is adequate evidence of a pattern of effluent toxicity (i.e. toxicity present exceeding the monitoring trigger more than 20 percent of the time), the Executive Officer may require that the Discharger initiate a TRE.

See the WET Accelerated Monitoring Flow Chart (Figure F-1), below, for further clarification of the accelerated monitoring requirements and for the decision points for determining the need for TRE initiation.

iii. **TRE** Guidance**.** The Discharger is required to prepare a TRE Work Plan in accordance with USEPA guidance. Numerous guidance documents are available, as identified below:

- *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants,* (EPA/833B-99/002), August 1999.
- Generalized Methodology for Conducting Industrial TREs*, (EPA/600/2-88/070), April 1989.*
- *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures,* Second Edition, EPA 600/6-91/005F, February 1991.
- *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I*, EPA 600/6-91/005F, May 1992.
- *Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting acute and Chronic Toxicity,* Second Edition, EPA 600/R-92/080, September 1993.

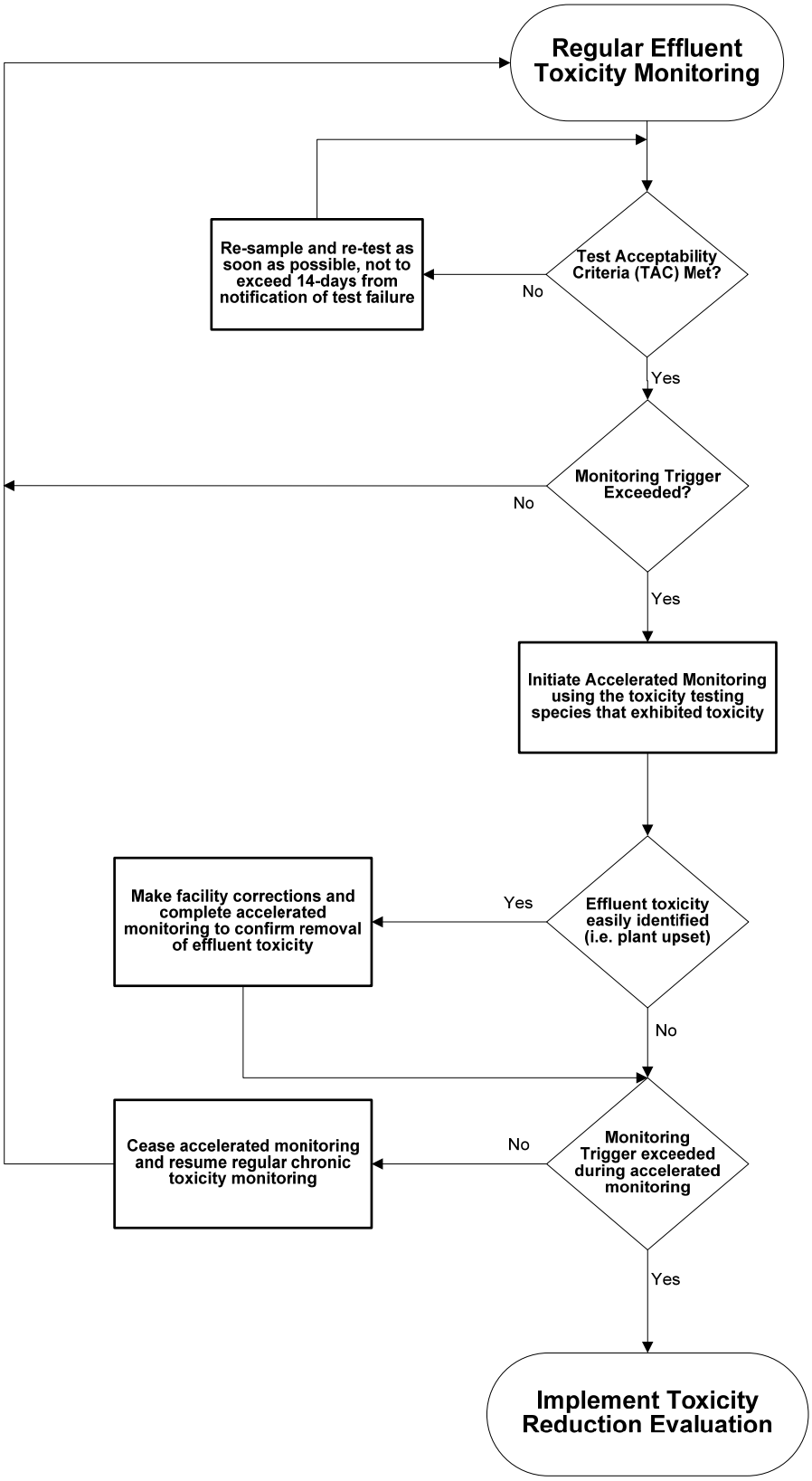
- *Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity*, Second Edition, EPA 600/R-92/081, September 1993.

- *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, EPA-821-R-02-012, October 2002.

- *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, EPA-821-R-02-013, October 2002.

- *Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001, March 1991*

Figure F-1
WET Accelerated Monitoring Flow Chart



c. **Storm Water Pollution Controls.**

i. Prior to **15 October** of each year, the Discharger shall implement necessary erosion control measures and any necessary construction, maintenance, or repairs of drainage and erosion control facilities.

ii. The Discharger has prepared a Storm Water Pollution Prevention Plan (SWPPP) containing best management practices to reduce pollutants in the storm water discharges. The Discharger shall review and amend as appropriate the SWPPP whenever there are changes that may affect the discharge of significant quantities of pollutants to surface water, if there are violations of this permit, or if the general objective of controlling pollutants in the storm water discharges has not been achieved. The amended SWPPP shall be submitted prior to **15 October** in the year in which it was prepared.

iii. By **1 July** of each year, the Discharger shall submit a Storm Water Annual Report for the previous fiscal year (1 July to 30 June). The report shall be signed in accordance with Standard Provisions V.B and may be submitted using the General Industrial Storm Water Annual Report Form, provided by the State Water Resources Control Board, or in a format that contains equivalent information.

3. Best Management Practices and Pollution Prevention

This permit is for the discharge of storm water only. The SIP states in footnote number 1 of the introduction, "This Policy does not apply to regulation of storm water discharges. The SWRCB has adopted precedential decisions addressing regulation of municipal storm water discharges in Orders WQ 91-03, 91-04, 96-13, 98-01, and 99-05. The SWRCB has also adopted two statewide general permits regulating the discharge of pollutants contained in storm water from industrial and construction activities." Therefore the SIP provisions for establishment of effluent limitations are not applicable. Effluent limitations for priority pollutants have not been established, however receiving water limitations and BMPs ensure that beneficial uses of the receiving water are protected and water quality standards are not exceeded. Storm water discharges could be regulated under the existing State Water Board general industrial storm water permit (Order No. 97-03-DWQ, NPDES No. CAS000001). However, due to the complexity of the Facility, the Regional Water Board has elected to regulate this Facility with an individual NPDES permit.

Applicable water quality objectives and criteria have been used as receiving water limitations, and are also utilized as benchmark values to evaluate BMPs. Direct comparison of pollutant concentrations in the West Fork of Stillwater Creek at RSW-001, RSW-002, RSW-003A, RSW-003B, RSW-004, and RSW-005, Spring Branch Creek at RSW-006 and RSW-007, and the discharges at 00X, 001A, 001B, 002A, 002B, 003A, and 003B will be used to ensure that water quality standards are not exceeded.

If any receiving water limitations are exceeded, the Discharger must conduct a BMPs Improvement Evaluation and implement BMP improvements to eliminate the receiving water violations.

The BMPs improvement evaluation and proposed BMPs improvements must be submitted to the Regional Water Board for comment within 60 days of the violation date. The BMPs improvements must be implemented as soon as practicable thereafter.

4. Construction, Operation, and Maintenance Specifications

a. Ponds shall be managed to prevent breeding of mosquitoes. In particular:

i. An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.

ii. Weeds shall be minimized.

iii. Dead algae, vegetation, and debris shall not accumulate on the water surface.

b. Freeboard shall never be less than two feet (measured vertically to the lowest point of overflow.

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

6. Other Special Provisions

a. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, Sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, Sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

b. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition or limitation contained in this Order, this Order requires the Discharger to notify the Regional Water Board by telephone (916) 464-3291 (or to the Regional Water Board staff engineer assigned to the facility) within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall include the information required by Federal Standard Provision [*40 CFR §122.41(l)(6)(i)*].

c. Prior to making any change in the discharge point, place of use, or purpose of use of the storm water, the Discharger must obtain approval of, or clearance from the State Water Resources Control Board (Division of Water Rights).

In the event of any change in control or ownership of land or facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory paragraph of Federal Standard Provision V.B.5 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

7. Process Water Discharges

a. **Within 6 months of the effective date of this Order**, the Discharger shall submit a workplan and time schedule to eliminate the offsite surface water discharge of process water from the equipment wash.

b. **Within 12 months of the effective date of this Order** the Discharger shall eliminate the offsite surface water discharge of process water from the equipment wash.

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Central Valley Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for Fawndale Rock and Asphalt. As a step in the WDR adoption process, the 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. Notification was provided through physical posting, mailing, and internet posting.

B. Written Comments

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

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices **by noon on 14 November 2007.**

C. Public Hearing

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

Date: 6/7 December 2007
Time: 8:30 am
Location: Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Dr., Suite #200
Rancho Cordova, CA 95670

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

Please be aware that dates and venues may change. Our Web address is http://www.waterboards.ca.gov/rwqcb5/ where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final 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 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (530) 224-4845.

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 Daniel Warner at (530) 224-4848.

ATTACHMENT G – ASSESSORS PARCEL NUMBERS

GRAY ROCKS LIMESTONE QUARRY

Assessors Parcel Number	Acreage	Property Features
307-360-002	337.50	Active Quarry, Northeast Waste Rock Site
		South Waste Rock Site: Discharge 001-B
307-360-003	76.80	Inactive area , Allie Cove Drainage
307-020-005	62.40	Access roadway
		Conveyor belt system
		Sedimentation Basin: Discharge 001-A
307-360-006	75.20	Active Quarry
307-360-007	81.10	Inactive area
307-360-008	253	Inactive area

FALKENBURY SHALE QUARRY

Assessors Parcel Number	Acreage	Property Features
307-030-001	4.2	Inactive area
307-100-003	39.5	Access roadway
307-100-002	198.20	Inactive area
		Quarry No. 1
307-100-004	20.00	Active area, Quarry No. 2
		Sedimentation Basin 2-A: Discharge 002-A
		Sedimentation Basin 2-B: Discharge 002-B
307-100-005	31.20	Active area, Quarry No. 2
307-200-003	538.30	Small part active, Quarry No. 2
		Inactive: Arsenault Quarry
307-010-004	227.70	Active area
		Quarry No. 2, Northwest Ridge Quarry

CEMENT MANUFACTURING PLANT

Assessors Parcel Number	Acreage	Property Features
307-020-003	41.70	Conveyor belt system
307-020-002	73.00	Conveyor belt system
		Raw material storage areas
307-020-001	63.70	Undeveloped
307-030-002	87.40	Plant Site
		Sedimentation Basins 2, 3, 4, 5, 6
307-040-006	1.00	Residential housing
307-040-005	1.67	Undeveloped
307-040-015	0.50	Residential housing
307-030-008	8.70	Residential housing
307-040-007	1.70	Residential housing
307-040-008	11.20	Undeveloped: East side of Wonderland Blvd
		Discharge 00X
307-040-010	1.50	Undeveloped: East side of Wonderland Blvd.