

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

TENTATIVE CEASE AND DESIST ORDER No. R2-2014-XXXX

**LEHIGH SOUTHWEST CEMENT COMPANY AND
HANSON PERMANENTE CEMENT, INC., PERMANENTE PLANT**

WHEREAS the California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter “Regional Water Board”), finds the following:

Background

1. The Lehigh Southwest Cement Company and Hanson Permanente Cement, Inc., (hereinafter “Discharger”) together own and operate the Permanente Plant (hereinafter “Facility”), located at 24001 Stevens Creek Blvd., Cupertino, Santa Clara County. The Facility is a limestone quarry and cement production facility that also produces construction aggregate. Hanson Permanente Cement, Inc., owns the property on which the Facility is located.
2. The Facility’s discharges to surface waters had been regulated by waste discharge requirements in *General Waste Discharge Requirements for Discharges of Process Wastewaters from Aggregate Mining, Sand Washing, and Sand Offloading Facilities to Surface Waters*, NPDES Permit No. CAG982001, and *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities*, NPDES General Permit No. CAS000001.
3. The Regional Water Board adopted Order No. R2-2014-XXXX (hereinafter “Permit”) on [DATE], issuing new waste discharge requirements as NPDES Permit No. CAXXXXXXXX. This Permit contains prohibitions, limitations, and provisions regulating the same discharges as those covered under NPDES Permit Nos. CAG982001 and CAS000001.
4. The Facility discharges process wastewater from cement manufacturing, quarry dewatering, aggregate materials processing, truck washing, and dust control. The Facility also discharges industrial stormwater. These discharges occur at nine discharge points as described in Table 2 and the Permit (Fact Sheet section II, Facility Description). The discharge points and their locations are shown in Attachment A (Attachment B, page B-2, of the Permit). The existing wastewater flow configuration is shown in Attachment B, page B-1 (Attachment C, page C-1, of the Permit).
5. The Facility’s discharges currently exceed Permit discharge prohibitions and effluent limitations as described in findings 6 through 11 below; therefore, the Discharger will construct and operate an interim treatment system, followed by a final treatment system. The interim treatment system will be operated to select and refine a treatment technology to be used in the final treatment system. The interim treatment system will treat up to 400 gallons of wastewater per minute. The final treatment system will be constructed and operational by

September 30, 2017, and will treat all process wastewater from the Facility prior to discharge at Discharge Point No. 001. The Facility will be re-plumbed to direct all process wastewater to the final treatment system. Discharges from other points will be precipitation-driven and will consist mainly of stormwater. The final wastewater flow configuration is shown in Attachment B, page B-3 (Attachment C, page C-3, of the Permit).

Discharge Prohibition Violations

6. Discharge Prohibition III.A of the Permit prohibits discharges other than those shown in Attachment B, page B-3 (Attachment C, page C-3, of the Permit), which shows the Facility's final flow configuration after installation of the final treatment system and re-plumbing to direct all process wastewater to the final treatment system for treatment. Specifically, Discharge Prohibition III.A states:

Discharge of treated or untreated wastewater at a location or in a manner different from that described in this Order for the final treatment and controls configuration shown in Attachment C, Schematic C-3, is prohibited.

7. The Discharger threatens to violate Discharge Prohibition III.A by discharging according to the existing flow configuration shown in Attachment B, page B-1 (Attachment C, page C-1, of the Permit) and the interim flow configuration shown in Attachment B, page B-2 (Attachment C, page C-2, of the Permit). These flow configurations differ from the final flow configuration shown in Attachment B, page B-3 (Attachment C, page C-3, of the Permit), which is the only flow configuration the Permit authorizes.

Effluent Limitation Violations

8. The Permit contains effluent limitations, including among others those listed in Table 1 below (see Permit Tables 4 and 5).

Table 1: Permit Effluent Limits

Parameter	Average Monthly Effluent Limit	Maximum Daily Effluent Limit
<i>Discharge Point No. 001</i>		
Chromium (VI)	8.0 µg/L	16 µg/L
Mercury	0.020 µg/L	0.041 µg/L
Nickel	82 µg/L	160 µg/L
Selenium	4.1 µg/L	8.2 µg/L
Total Dissolved Solids	1,000 mg/L	2,000 mg/L
Total Suspended Solids	---	58 lbs/d
Settleable Matter	0.1 mL/L-hr	0.2 mL/L-hr
Turbidity	5.0 NTU	10 NTU
<i>Discharge Point Nos. 002 and 004 through 008</i>		
Turbidity	--	40 NTU
Total Suspended Solids	--	50 mg/L
Settleable Matter	0.1 mL/L-hr	0.2 mL/L-hr
pH	6.5 – 8.5 s.u. ^[1]	

Parameter	Average Monthly Effluent Limit	Maximum Daily Effluent Limit
<i>Discharge Point No. 009</i>		
Total Suspended Solids	--	50 mg/L

Unit Abbreviations:

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

Footnote:

^[1] Instantaneous, within the range from 6.5 through 8.5.

9. The Discharger threatens to violate some Permit effluent limitations in Table 1 at Discharge Point No. 001. This finding is based on a statistical analysis of data collected at Discharge Point Nos. 001 (Pond 4A), 002 (Pond 13B), and 003 (Pond 9) from July 2011 through March 2013. Data from Discharge Point Nos. 002 and 003 are included in this analysis because they represent non-stormwater discharges at those points that the Permit requires to be redirected for treatment before discharge at Discharge Point No. 001. (Process wastewater has since been directed away from Discharge Point No. 002, which now discharges only stormwater.) When the 95th percentile of the data exceeds the Average Monthly Effluent Limitation (AMEL) or the 99th percentile of the data exceeds the Maximum Daily Effluent Limitation (MDEL), consistent compliance is considered unlikely. The results of this analysis conclude that consistent compliance with the mercury, nickel, selenium, total suspended solids, settleable matter, and turbidity AMELs and MDELs, and the chromium (VI) and total dissolved solids AMELs is unlikely, as explained below:
 - a. **Chromium (VI):** The 95th percentile of the data (12 µg/L) is greater than the AMEL (8.0 µg/L). However, the 99th percentile of the data set (12 µg/L) less than the MDEL (16 µg/L). Therefore, consistent compliance with the AMEL is unlikely; compliance with the MDEL is likely.
 - b. **Mercury:** The 95th percentile of the data (0.026 µg/L) is greater than the AMEL (0.020 µg/L), and the 99th percentile (0.051 µg/L) is greater than the MDEL (0.041 µg/L). Therefore, consistent compliance with the AMEL and MDEL is unlikely.
 - c. **Nickel:** The 95th percentile of the data (330 µg/L) is greater than the AMEL (82 µg/L), and the 99th percentile (350 µg/L) is greater than the MDEL (160 µg/L). Therefore, consistent compliance with the AMEL and MDEL is unlikely.
 - d. **Selenium:** The 95th percentile of the data (75 µg/L) is greater than the AMEL (4.1 µg/L), and the 99th percentile (75 µg/L) is greater than the MDEL (8.2 µg/L). Therefore, consistent compliance with the AMEL and MDEL is unlikely.
 - e. **Total Suspended Solids (TSS):** The potential mass discharge calculated from the flow the Permit authorizes (167,000 gallons per hour) and the 99th percentile of the total suspended solids concentration data (230 mg/L) is 7,700 lbs/d, which is greater than the MDEL (58 lbs/day). Therefore, consistent compliance with the MDEL is unlikely.

- f. Settleable Matter:** The 95th percentile of the data (0.5 mL/L-hr) is greater than the AMEL (0.1 mL/L-hr), and the 99th percentile (0.5 mL/L-hr) is greater than the MDEL (0.2 mL/L-hr). Therefore, consistent compliance with the AMEL and MDEL is unlikely.
 - g. Total Dissolved Solids (TDS):** The 95th percentile of the data (1,200 mg/L) is greater than the AMEL (1,000 mg/L). However, the 99th percentile of the data set (1,334 mg/L) is less than the MDEL (2,000 µg/L). Therefore, consistent compliance with the AMEL is unlikely; compliance with the MDEL is likely.
 - h. Turbidity:** The 95th percentile of the data (270 NTU) is greater than the AMEL (5.0 NTU), and the 99th percentile (600 NTU) is greater than the MDEL (10 NTU). Therefore, consistent compliance with the AMEL and MDEL is unlikely.
- 10.** The Discharger threatens to violate the Permit effluent limitations for turbidity, total suspended solids, settleable matter, and pH in Table 1 at Discharge Point Nos. 002 and 004 through 008. This finding is based on the maximum concentration of each pollutant observed among data collected from November 2011 through March 2013 at Discharge Point Nos. 002, 004, 005, and 008. These data adequately represent discharges from Discharge Point Nos. 002 and 004 through 008 because these discharges are similar in nature and composition. A statistical analysis could not be performed because there were insufficient data for a meaningful analysis. Data collected at Discharge Point No. 003 from April 2013 through June 2013, after the Discharger eliminated discharges of cement plant reclaim system wastewater through Discharge Point No. 003, indicate that discharges from Discharge Point No. 003 can comply with the effluent limitations in Table 1.
- 11.** The Discharger threatens to violate the Permit effluent limitation for total suspended solids in Table 1 at Discharge Point No. 009. This conclusion is based on the maximum concentration of total suspended solids observed among data collected from November 2011 through March 2013 at Discharge Point No. 009. A statistical analysis could not be performed because there were insufficient data for a meaningful analysis.

Cease and Desist Order Authority

- 12.** Water Code section 13301 authorizes the Regional Water Board to issue a Cease and Desist Order when it finds that a waste discharge is taking place, or threatening to take place, in violation of Regional Water Board requirements.
- 13.** Pursuant to Water Code section 13385(j)(3), mandatory minimum penalties required by Water Code sections 13385(h) and (i) do not apply when a discharger complies with a cease and desist order issued pursuant to Water Code section 13301 if the following conditions are met:
- a.** The cease and desist order specifies actions the discharger must take to correct the violations that would otherwise be subject to mandatory minimum penalties;

- b. The discharger is unable to consistently comply with effluent limitations because the effluent limitations are new, more stringent, or modified regulatory requirements; new or modified control measures are necessary to comply with the effluent limitations; and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days;
 - c. The Regional Water Board establishes a time schedule of no more than five years for bringing the discharge into compliance (The time schedule must be as short as possible, taking into account the technological, operational, and economic factors that affect the design, development, and implementation of the control measures necessary to comply with the effluent limitations. If the time schedule exceeds one year, it must include interim requirements and the dates for their achievement. The interim requirements must include effluent limitations for the pollutants of concern, and actions and milestones leading to compliance with the limitations.); and
 - d. The discharger has prepared and is implementing in a timely and proper manner a pollution prevention plan pursuant to Water Code section 13263.3.
14. Because the Discharger will violate or threatens to violate new and more stringent Permit requirements, including Prohibition III.A and certain effluent limits shown in Table 1, this Cease and Desist Order is necessary to ensure that the Discharger achieves compliance. This Order establishes time schedules of no more than five years for the Discharger to complete necessary actions to address its imminent and threatened violations.
15. The time schedules are as short as possible, accounting for the uncertainty in determining effective treatment measures necessary to achieve compliance. Selenium treatment, in particular, to the levels the Permit requires is complex and will require a treatment system specifically tailored to this discharge. The time schedule for Discharge Point No. 001 is based on reasonably expected times needed to test and select from among alternatives, and to construct and start up treatment. The Regional Water Board may revisit these assumptions as more information becomes available.
16. This Cease and Desist Order requires the Discharger to comply with interim effluent limits for the pollutants listed in Table 1. The interim limits consist of numeric limits for total suspended solids, settleable matter, and turbidity, and narrative effluent limits for all pollutants listed in Table 1 expressed as prescribed actions and deadlines. Total suspended solids, settleable matter, and turbidity are controllable with current best management practices. These numeric effluent limits also serve as proxies for the metals in Table 1 because metals often adhere to solids. The numeric interim effluent limits are intended to ensure that the Discharger maintains at least its existing performance for currently controllable parameters while completing all tasks required during the time schedule.
17. The numeric effluent limits for total suspended solids, settleable matter, and turbidity are based on past performance. For total suspended solids at Discharge Point Nos. 001, 002, and 003 through 008, and turbidity at Discharge Point No. 001, they are the 99th percentile of the available data. In all other cases, because the available data sets are small (less than 10 data points or less than 10 detections), they are based on the statistical approach described in

Technical Support Document for Water Quality-Based Toxics Control, EPA 505-2-90-001 (U.S. EPA, March 1991, section 3.3.2). Using this method, the maximum observed effluent concentration was multiplied by a reasonable potential multiplying factor for the 95 percent confidence level and 95 percent probability basis based on the number of data available.

18. This Cease and Desist Order requires the Discharger to prepare and implement a pollution prevention plan in accordance with Water Code section 13263.3 because the Discharger is likely to violate its Permit effluent limitations and pollution prevention could facilitate compliance.
19. This Cease and Desist Order is an enforcement action and, as such, is exempt from the provisions of the California Environmental Quality Act (Public Resources Code § 21000 et seq.) in accordance with Title 14 of the California Code of Regulations, section 15321. Construction of the interim and final treatment systems are actions to prevent, minimize, stabilize, mitigate, and eliminate the release, and threat of release, of hazardous substances, an activity exempt from CEQA pursuant to Title 14 of the California Code of Regulations, section 15330.
20. The Regional Water Board notified the Discharger and interested persons of its intent to consider adoption of this Cease and Desist Order, and provided an opportunity to submit written comments and appear at a public hearing. The Regional Water Board, in a public hearing, heard and considered all comments.

IT IS HEREBY ORDERED, in accordance with Water Code section 13301, that the Discharger shall cease and desist from discharging and threatening to discharge wastes in violation of the Permit by complying with the following provisions:

1. Interim Effluent Limitations and Requirements

- a. Immediately upon the effective date of this Cease and Desist Order, the Discharger shall comply with the numeric interim effluent limitations in Table 2 at the discharge points specified therein.

Table 2: Numeric Interim Effluent Limitations

Parameter	Maximum Daily Effluent Limit
<i>Discharge Point No. 001</i>	
Settleable Matter	1.3 mL/L-hr
Total Suspended Solids	230 mg/L
Turbidity	600 NTU
<i>Discharge Point Nos. 002 and 004 through 008</i>	
Settleable Matter	2.6 mL/L-hr
Total Suspended Solids	340 mg/L
Turbidity	920 NTU
<i>Discharge Point No. 009</i>	
Total Suspended Solids	240 mg/L

Unit Abbreviations:

mg/L = milligrams per liter
mL/L-hr = milliliters per liter - hour
NTU = nephelometric turbidity units

- b. The Discharger shall complete the actions listed in Tables 3 and 4 in accordance with the time schedules provided therein to comply with all Permit requirements. The Discharger shall implement all actions set forth for each deliverable. The Discharger shall revise deliverables to incorporate comments the Executive Officer may make to ensure that deliverables are adequate and acceptably comply with Table 3 and 4 requirements.

Table 3: Time Schedule and Prescribed Actions for Discharge Point No. 001

Task	Deadline
a. Begin constructing an interim wastewater treatment system to treat at least 400 gallons per minute of quarry pit and primary crusher washdown wastewater prior to discharge at Discharge Point No. 001. Report in January 2014 self-monitoring report.	April 15, 2014
b. Prepare, submit, and begin implementing a pollution prevention plan that includes the following elements consistent with Water Code section 13263.3: i. Analysis of the pollutants listed in Table 1, including their sources and the processes that result in their generation and discharge; ii. Analysis of the potential for pollution prevention to reduce the generation of these pollutants, including the application of innovative and alternative technologies and any adverse environmental impacts resulting from such methods; iii. Description of the tasks and time schedules needed to investigate and implement planned pollution prevention techniques; iv. Statement of pollution prevention goals and strategies, including priorities for short-term and long-term actions; v. Description of intended activities for the immediate future; vi. Description of existing pollution prevention methods; vii. Statement that existing and planned pollution prevention strategies do not constitute cross-media pollution transfers, and information that supports the statement; and viii. Analysis of the relative costs and benefits of possible pollution prevention activities.	May 1, 2014
c. Commence discharge according to interim flow configuration shown in Attachment B, page B-2 (Attachment C, page C-2, of the Permit), and operation of the interim wastewater treatment system described in Task a. Direct up to 400 gallons per minute of quarry water currently discharged at Discharge Point No. 001 to the interim wastewater treatment system (flows above 400 gallons per minute may not necessarily flow through the interim treatment system). Report in October 2014 self-monitoring report.	October 1, 2014
d. For all pollutants listed in Table 1 for Discharge Point No. 001, begin at least weekly monitoring at the inlet to the interim treatment system (at a point at which all wastewater to be treated is tributary) and at the outlet of the interim treatment system (before commingling with any untreated wastewater). Report results in routine monthly self-monitoring reports, starting with the October 2014 report.	October 1, 2014

Task	Deadline
e. Reduce selenium concentrations discharged from the interim treatment system by at least 50 percent from influent concentrations, or to less than or equal to 10 µg/L when the influent selenium concentration is 20 µg/L or less. Determine selenium reduction by comparing samples collected at the inlet to the interim treatment system to samples collected roughly simultaneously at the outlet of the interim treatment system. Report selenium removal effectiveness in routine monthly self-monitoring reports, starting with the December 2014 report.	December 1, 2014
f. Provide a report evaluating and describing the effectiveness of the interim treatment system at reducing effluent concentrations of the pollutants listed in Table 1 for Discharge Point No. 001. In the evaluation of treatment effectiveness, compare pollutant concentrations in the interim treatment system effluent to those in the influent and to Permit effluent limitations.	March 31, 2015
g. If the conclusion from Task f indicates that additional treatment or operational changes are needed to comply with the effluent limitations in Table 1, provide a report describing the additional treatment or operational changes. If the discharge from the interim treatment system consistently complies with the effluent limitations in Table 1, maintain compliance with those effluent limitations. Report results in routine monthly self-monitoring reports.	June 30, 2015
h. Complete installation and commence additional treatment and operations changes determined to be necessary through Task g, if any. Report in December 2015 self-monitoring report.	December 31, 2015
i. Fully comply with the effluent limits in Table 1 at the outlet of the interim treatment system before mixing with untreated wastewater. Report results in routine monthly self-monitoring reports.	March 31, 2016
j. Commence construction of final treatment system designed to treat all Facility process wastewater and non-stormwater prior to discharge to surface water to comply with all Permit effluent limitations. Process wastewater and non-stormwater to be treated include quarry pit and primary crusher wastewater currently discharged at Discharge Point No. 001; cement plant process wastewater currently discharged at Discharge Point No. 003; truck wash wastewater currently discharged at Discharge Point No. 005; and, if necessary, any non-stormwater discharged at Discharge Point No. 002. Discharge final treatment system effluent at Discharge Point No. 001. Report in February 2017 self-monitoring report.	February 1, 2017
k. Concurrent with Task j, commence re-plumbing Facility non-stormwater flows to comply with Permit Discharge Prohibition III.A. Report in February 2017 self-monitoring report.	February 1, 2017
l. Commence discharge according to final flow configuration shown in Attachment B, page B-3 (Attachment C, page C-3, of the Permit), and operation of final treatment system described in Task j. Fully comply with all Permit requirements.	October 1, 2017

Table 4: Time Schedule and Prescribed Actions for Discharge Point Nos. 002 and 004 through 009

Task	Deadline
a. Identify measures to ensure compliance with Permit effluent limitations applicable to Discharge Point Nos. 002 and 004 through 009. Report these measures with updated Stormwater Pollution Prevention Plan required by Permit Provision VI.C.6.a.ii.	May 16, 2014
b. Begin implementing measures identified in Task a. Report progress in Annual Stormwater Report required by Permit Provision VI.C.6.a.iii.	July 1, 2014

Task	Deadline
c. Commence discharge according to interim flow configuration shown in Attachment B, page B-2 (Attachment C, page C-2, of the Permit). Report in October 2014 self-monitoring report.	October 1, 2014
d. Provide annual status reports evaluating and describing effectiveness of measures identified in Task a in terms of reducing effluent concentrations of pollutants in Table 1 for Discharge Point Nos. 002 and 004 through 009.	With Annual Stormwater Report due July 1 each year
e. Commence discharge according to final flow configuration shown in Attachment B, page B-3 (Attachment C, page C-3, of the Permit), and fully comply with all Permit requirements.	October 1, 2017

2. **Accelerated Monitoring.** If any numeric interim effluent limit listed in Table 2 is exceeded, the Discharger shall increase its sampling frequency for that pollutant to daily within 24 hours of receiving the results indicating the violation of this Cease and Desist Order. The Discharger shall continue accelerated monitoring until two samples collected on consecutive days indicate compliance with the numeric interim effluent limit.
3. **Consequences of Non-Compliance.** If the Discharger fails to comply with the provisions of this Cease and Desist Order, the Executive Officer is hereby authorized to take enforcement action or to request the Attorney General to take appropriate actions against the Discharger in accordance with Water Code sections 13331, 13350, 13385, and 13386. Such actions may include injunctive and civil remedies, if appropriate, or the issuance of an Administrative Civil Liability Complaint for Regional Water Board consideration.
4. **Force Majeure.*** If the Discharger is delayed, interrupted, or prevented from meeting the provisions and time schedules of this Cease and Desist Order due to a force majeure, the Discharger shall notify the Executive Officer in writing within five days of the date the Discharger first knows of the force majeure. The Discharger shall demonstrate that timely compliance with the Cease and Desist Order or any affected deadlines will be actually and necessarily delayed, and that it has taken measures to avoid or mitigate the delay by exercising all reasonable precautions and efforts, whether before or after the occurrence of the force majeure.
5. **Mandatory Minimum Penalties.** Permit effluent limitation violations shall not be subject to the mandatory minimum penalties required by Water Code sections 13385(h) and (i) as long as the Discharger complies with this Cease and Desist Order. If the Discharger fails to comply with this Cease and Desist Order, including but not limited to any numeric interim effluent limitation in Table 2 or any requirement of Tables 3 or 4, the Discharger shall be

* A "force majeure" is an event that could not have been anticipated by and is beyond the control of the Discharger, including an act of God; earthquake, flood, or other natural disaster; civil disturbance or strike; fire or explosion; declared war within the United States; embargo; or other event of similar import and character. "Force majeure" does not include delays caused by funding, contractor performance, equipment delivery and quality, weather, permitting, other construction-related issues, CEQA challenges, initiative litigation, adverse legislation, or legal matters (with the exception of an injunction issued by a court of law specifically preventing construction from occurring).

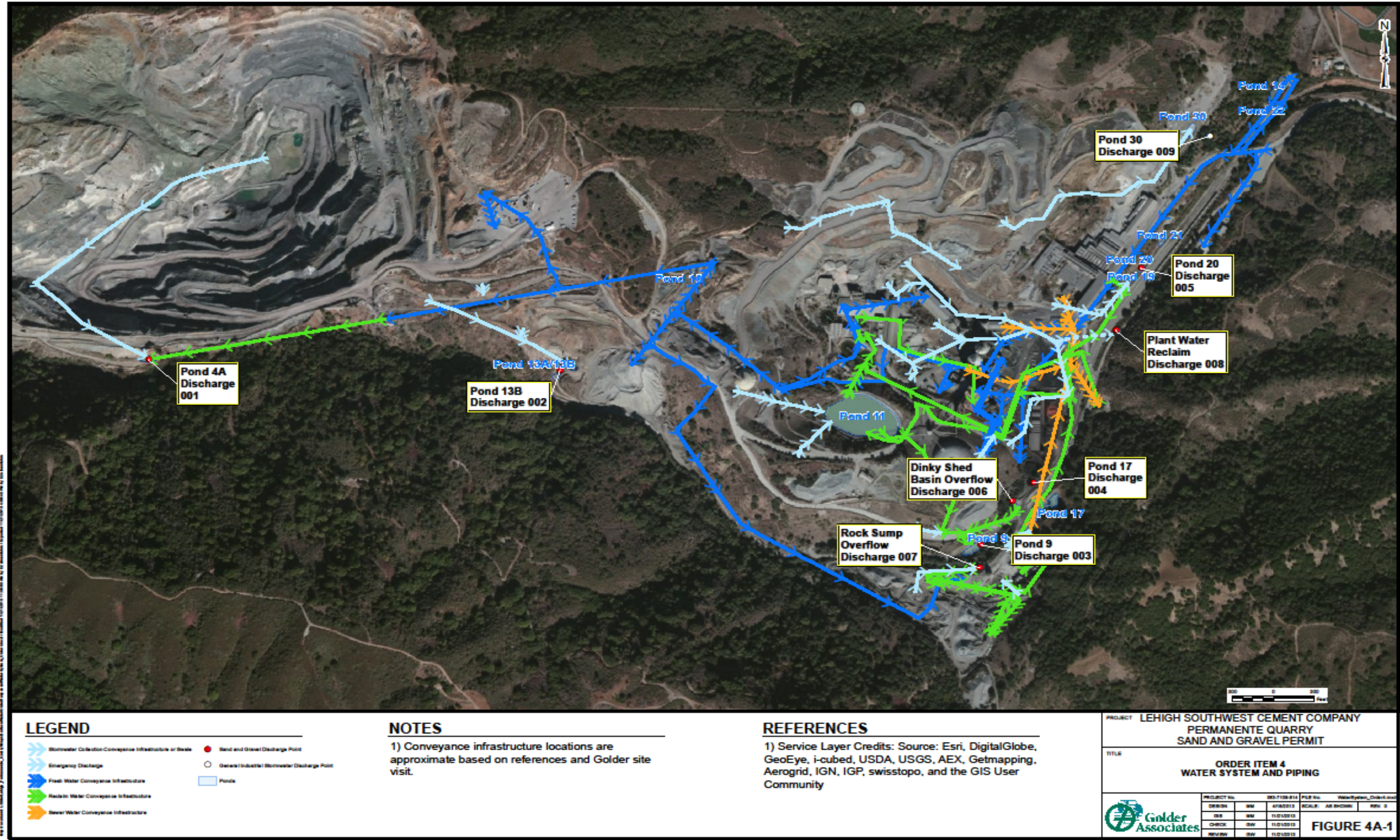
subject to mandatory minimum penalties for Permit violations for the entire calendar month during which the non-compliance occurs. If the Discharger returns to compliance, Permit violations shall again not be subject to mandatory minimum penalties as of the first day of the month following the return to full compliance.

6. **Effective Date.** This Cease and Desist Order shall be effective on [effective date of Permit].

I, Bruce H. Wolfe, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Cease and Desist Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on _____, 2014.

BRUCE H. WOLFE
Executive Officer

ATTACHMENT A – FACILITY MAP



ATTACHMENT B – FLOW SCHEMATICS

