



Matthew Rodriguez
Secretary for
Environmental Protection

California Regional Water Quality Control Board Los Angeles Region

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Edmund G. Brown Jr.
Governor

September 12, 2011

Mr. Steve Sacco
Robertshaw Controls Company
33 Commercial Street, B51-2Z
Foxboro, MA 02035

WASTE DISCHARGE REQUIREMENTS AND MONITORING AND REPORTING REQUIREMENTS FOR ROBERTSHAW CONTROLS COMPANY, 33 COMMERCIAL STREET, B51-2Z, FOXBORO, MA (FILE NO. 10-068, ORDER NO. R4-2011-0150, CI-9687)

Dear Mr. Sacco:

Our letter of July 8, 2011, transmitted tentative Waste Discharge Requirements (WDRs) and a Monitoring and Reporting Program (MRP) for Robertshaw Controls Company.

Pursuant to Division 7 of the California Water Code, this Regional Board at a public meeting held on September 1, 2011, reviewed the revised tentative WDRs and MRP, considered all factors in the case, and adopted WDRs Order No. R4-2011-0150 and MRP No. CI-9687 (copies enclosed) relative to this discharge. Standard Provisions, which are a part of the WDRs, are also enclosed.

You are required to implement the new Monitoring and Reporting Program No. CI-9687 on the effective date of Order No. R4-2010-0150. Your first monitoring report under these Requirements is due to this Regional Board by October 15, 2011. All monitoring reports should be sent to the Regional Board, Attn: Information Technology Unit, and referenced to our Compliance File No. CI-9687.

We are sending the WDRs and MRP to the discharger (Robertshaw Controls Company) only. For recipients on the mailing list, an electronic copy will be available at:

http://www.waterboards.ca.gov/losangeles/board_decisions/adopted_orders/.

Hard copies of the WDRs and MRP will also be furnished upon request.

California Environmental Protection Agency

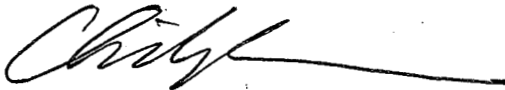
Mr. Steve Sacco
Robertshaw Controls Company

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September 12, 2011

If you have any questions concerning this letter, please contact Mr. David Koo at (213) 620-6155 or me at (213) 576-6683.

Sincerely,



Eric Wu, Ph.D., P.E.
Chief of Groundwater Permitting Unit

Enclosures:

1. Waste Discharge Requirements Order No. R4-2011-0150
2. Monitoring and Reporting Program No. CI-9687
3. Standard Provisions

cc: Mr. Jose Diaz, Department of Toxic Substances Control
Mr. Donald Chae, 3000 East Imperial LLC
Mr. Roger Haley, City Manager, City of Lynwood
Mr. G. Daniel Ojeda, Director of Public Works, City of Lynwood
Mr. Chi Diep, California Department of Public Health, Drinking Water Program
Mr. Mark Pesterella, County of Los Angeles, Department of Public Works
Mr. Chad Bird, Geosyntec consultants
Mr. Christopher Gale, Geosyntec consultants

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
ORDER NO. R4-2011-0150
WASTE DISCHARGE REQUIREMENTS
FOR
ROBERTSHAW CONTROLS COMPANY
3000 EAST IMPERIAL HIGHWAY
(ENHANCED IN-SITU BIOREMEDIATION AND ZERO VALENT IRON INJECTION
FOR GROUNDWATER CLEANUP)
(FILE NO. 10-068)**

The California Regional Water Quality Control Board, Los Angeles Region, (hereafter Regional Board) finds that:

PURPOSE OF ORDER

1. Robertshaw Controls Company (RCC, Discharger), is performing a site characterization and remediation (on behalf of 3000 East Imperial LLC who owns the former Regent Officeworks, Inc. manufacturing facility) at 3000 East Imperial Highway, Lynwood, California (site). On May 28, 2010, the Discharger filed with the Regional Board a Report of Waste Discharge for a groundwater remediation by Enhanced In Situ Bioremediation (EISB) and In Situ Chemical Reduction (ISCR) program. The groundwater remediation program will consist of the injection of i) emulsified vegetable oil (EVO); ii) the injection of a bioaugmentation culture (a non-pathogenic, naturally-derived microbial culture e.g., KB-1™ or SDC-9™); and iii) emulsified zero valent iron (ZVI).¹

FACILITY DESCRIPTION

2. The 4.2 acre rectangular site was first developed in the 1930s by Grayson Heat Controls and was used for the manufacture of heating control devices.
3. Grayson was acquired by RCC during the late 1930s and continued operations until 1955 when Whittaker Corporation acquired the site.
4. Whittaker reportedly manufactured aircraft parts at the site until approximately 1963, when the site was sold to the Kanowsky family.
5. Allied Industrial Components and Allied Upholstery reportedly operated at the site when the Kanowsky family owned the site from 1963 to 1970. In 1970 the property was sold to Gold Realty Company who owned the property until 2004 when it was sold to Lynwood Imperial, LLC. The current property owner, 3000 East Imperial LLC purchased the property in 2006.
6. Allied Upholstery operated at the site from approximately 1964 until 1981. K&K Office Furniture was the primary operator of the site from 1985 through 2000. Regent Officeworks, Inc. purchased K&K in 2004 and continued to operate the site as a furniture manufacturing facility until March 2007.

¹ The emulsified vegetable oil and zero valent iron are approved for injection under General WDR R4-2005-0030.

September 1, 2011

7. From the early 1980s until the site was demolished in 2007, approximately 90% of the site was covered by buildings. The site was most recently occupied in 2006 by a furniture manufacturing facility operated by Regent Officeworks and consisted of a manufacturing building which was approximately 116,000 square feet (SF), a maintenance shed comprised of approximately 600 SF, and a lumber storage and hazardous materials storage shed comprised of approximately 1,600 SF. The site is currently used for temporary surface parking and a water tower remains in the southeastern corner.
8. Numerous site characterization investigations were performed at the site between 1996 and 2010. The soil, soil vapor and groundwater investigations indicate that the nine (9) former underground storage tanks (USTs) which were removed in 2009, were the primary source of environmental impacts at the site.
9. The nine (9) USTs were installed in the western portion of the site. The tops of the USTs were approximately 3 feet below ground surface (bgs). The three 1,000-gallon, two 750-gallon, and four 550-gallon USTs were removed from the site in 2009.
10. The following constituents of concern (COCs) have been identified in groundwater: tetrachloroethene (PCE, up to 0.170 mg/L), trichloroethene (TCE up to 410 mg/L), cis-1,2-dichloroethene (c-DCE, up to 46 mg/L), trans-1,2-dichloroethene (trans-DCE, up to 3.3 mg/L), 1,1,2-trichloroethane (1,1,2-TCA, up to 0.0025 mg/L), 1,2-dichloroethane (1,2-DCA, up to 0.37 mg/L), 1,2,4-trimethylbenzene (1,2,4-TMB, up to 0.46 mg/L), naphthalene (up to 0.001 mg/L), benzene (up to 7.1 mg/L), toluene (up to 28 mg/L), xylenes (up to 2.1 mg/L), and lead (up to 0.12 mg/L).
11. TCE is the most prevalent and most highly concentrated COC at the site. TCE and its degradation products are therefore the primary focus of the remedial activities proposed, as approved by the Department of Toxic Substances Control (DTSC).
12. Two separate plumes are evident at the site, one from the western portion of the site and one from the central/eastern portion of the site. The western plume has significantly higher concentrations of COCs and extends further off-site towards the south than the eastern plume. While groundwater data indicate non-aqueous phase liquids (NAPL) may be present in the western plume near the former USTs, only low concentrations of COCs were detected in the eastern plume.
13. Vertically, impacted groundwater extends from approximately 35 feet bgs to approximately 60 feet bgs in the western plume and from approximately 30 feet bgs to approximately 55 feet bgs in the eastern plume.
14. A bench scale treatability test conducted using site soil and groundwater indicates that EISB is feasible at the site, but only if a microbial culture is added (bioaugmented). In the treatability test, TCE and daughter products were effectively and completely degraded to ethene in the presence of an added electron donor, EVO, and a microbial culture containing *Dehalococcoides ethenogenes* (DHE).

SITE HYDROGEOLOGY

15. Depth to first groundwater at the site ranges from approximately 25 to 35 feet bgs. Groundwater flow direction is to the west-southwest in the eastern portion of the site and transitions to the south-southwest in the western portions of the site and south of the site.
16. The site is situated at an elevation of approximately 90 feet above mean sea level within the Los Angeles Coastal Plain Central Basin. The Bellflower Aquiclude, the first water bearing unit contains limited perched groundwater supplies and is composed of relatively fine-grained deposits that restrict the vertical movement of groundwater. Beneath the Bellflower lies the Holocene Age Gaspur Aquifer, the shallowest regional aquifer and first encountered at approximately 60 feet bgs in the project area. The Exposition and Gardena Aquifers (Lakewood Formation) are reportedly encountered at approximately 130 and 330 feet bgs, respectively, in the project area followed by the Hollydale, Jefferson, Lynwood, Silverado, and Sunnyside Aquifers (San Pedro Formation). The Jefferson aquifer is reported to be absent in the project area. The aquifers are generally separated by fine-grained aquitard units.

REMEDIATION DESCRIPTION

17. The Discharger intends to conduct a one to two years groundwater remediation program utilizing EISB to promote reductive dechlorination of TCE and the daughter products while ISCR, utilizing ZVI, will be used in addition to EISB to treat higher concentration areas to aggressively reduce volatile organic compounds (VOCs) mass.
18. Up to 400 injection points will be advanced for the groundwater remediation program. Injections will be performed using direct push technologies to treat from first groundwater to approximately 60 feet bgs.
19. For EISB remediation, a solution containing a carbon source and bioaugmentation culture will be added to groundwater to create a reducing environment (i.e., anaerobic) in which specific microorganisms, notably bacteria of the genus *Dehalococcoides*, can grow and biodegrade the chlorinated VOCs. The activity of these microorganisms will be used to remediate the designated treatment areas (as specified in the Response Plan approved by DTSC). The proposed carbon source is on the list of approved electron donors. The EVO contains soybean oil, sodium lactate and food grade emulsifiers. The addition of the amendment solution (electron donor and bioaugmentation culture along with potable water) to the subsurface soil and/or Bellflower aquiclude groundwater will be performed in a manner to target the treatment zones designated for remediation. Potable water will be used to dilute and inject the EVO to achieve up to 1% oil concentration of the soil's estimated pore volume.
20. The electron donors will be consumed by a wide variety of microorganisms and their persistence in the subsurface varies depending on the initial concentration injected. The bioaugmentation culture is an anaerobic consortium that requires a constant food source (electron donor) and chlorinated ethenes (e.g., TCE) to survive. Once the electron donor or chlorinated ethenes are consumed, the

population of the bioaugmentation culture will diminish substantially. Neither the electron donor nor the bioaugmentation culture is able to move faster than the ambient groundwater velocity. The nature of the subsurface materials at the site, mostly silty sands and clays, will allow groundwater to flow at a very slow speed of less than 6 feet/year. This low groundwater flow rate also helps to limit the distribution of the amendments in the subsurface. If non-aqueous phase liquid (NAPL) is present, ISCR will be implemented by injecting emulsified ZVI to chemically reduce chlorinated VOCs to ethene.

21. The Discharger states that the rate and extent of intrinsic degradation of TCE and c-DCE in site groundwater is limited by the lack of nutrients (e.g. electron donors) and the absence of suitable strains of bacteria capable of promoting complete reductive dechlorination of chlorinated ethene compounds to ethene at the site. Indigenous bacteria present at the site appear to be capable of partial dechlorination of TCE to c-DCE with the addition of EVO as the electron donor. Complete dechlorination of TCE and c-DCE through vinyl chloride (VC) to ethene was achieved with the addition of EVO as the electron donor and the bioaugmentation culture.
22. The Discharger proposes to monitor downgradient groundwater quality to assess the migration of the amendment solution as shown in Figure 1. If the bioaugmentation culture migrates beyond the targeted treatment area, it will continue to remediate chlorinated solvents in downgradient groundwater. The EVO will degrade over time in the subsurface as it is used by the native microbial population. The EVO is anticipated to be entirely consumed within approximately 2 years after the injection event. Based on average groundwater flow velocities of less than 6 feet per year, the EVO is not anticipated to migrate significantly from the target treatment area. The bioaugmentation culture is naturally occurring in the subsurface. The augmentation process serves to boost the concentration of microbes in the subsurface to increase VOC degradation rates. Microbial populations will decline to background concentrations in areas without sufficient EVO to support the augmented microbial population. Any injection of an amendment solution into the groundwater is a discharge of waste as defined by the California Water Code. However, the discharge of the amendment solution and ZVI (if necessary) is intended to improve groundwater quality and provide more effective remediation of chlorinated VOC-impacted groundwater and is expected to significantly reduce the site cleanup time as compared to pump-and-treat technology or EISB without addition of a bioaugmentation culture.
23. The application of electron donor, bioaugmentation culture and ZVI to groundwater may result in temporary adverse impacts to groundwater quality, but these adverse impacts that may result will be localized, transient, and will not impair any existing or prospective uses of groundwater. The localized and transient adverse impacts include a short term increase in VC concentrations as TCE is reductively dechlorinated through c-DCE and VC to ethene. However, the bioaugmentation culture will continue to dechlorinate the VC to ethene.
24. Prior to initiating the EISB and ISCR technologies, groundwater samples will be collected from monitoring wells MW-3, MW-4, MW-5, MW-15, MW-19A, MW-19B, MW-20A, MW-20B, MW-21A, and MW-21B for baseline measurements of depth to groundwater, VOCs, total dissolved solids (TDS), calcium, magnesium,

potassium, sodium, chloride, nitrate (as N), sulfate, bicarbonate, dissolved oxygen, oxidation reduction potential, specific conductance, pH, and temperature. These monitoring wells also will be sampled once every two months for the first six months after donor and culture injection, quarterly for the next six months, and semi-annually for the next year.

APPLICABLE LAWS, PLANS, POLICIES AND REGULATIONS

25. The Regional Board adopted a revised Water Quality Control Plan (*Basin Plan*) for the Los Angeles Region on June 13, 1994. The Plan contains beneficial uses and water quality objectives for the Los Angeles Coastal Plain Central Basin. The requirements contained in this Order, as they are met, will be in conformance with the goals of the Plan.
26. The Los Angeles Coastal Plain Central Basin is designated for beneficial uses including municipal and domestic water supply (MUN), industrial service supply (IND), industrial process supply (PROC), and agricultural supply (AGR).
27. The water quality objectives in the Los Angeles Coastal Plain Central Basin are 700 mg/L for TDS, 250 mg/L for sulfate, 150 mg/L for chloride, and 1.0 mg/L for boron.
28. The permitted discharge is consistent with the anti-degradation provisions of State Water Resources Control Board Resolution No. 68-16 (Anti-degradation Policy). The discharge may result in some localized temporary exceedances of background concentrations of total organic carbon, iron, and total dissolved solids. However, after the injection of amendment solution, these parameters are not anticipated to exceed the primary or secondary standards. Moreover, any parameter change resulting from the discharge:
 - a. will be consistent with maximum benefit to the people of the State,
 - b. will not unreasonably affect present and anticipated beneficial uses of such waters, and
 - c. will not result in water quality less than that prescribed in the Water Quality Control Plan for the Los Angeles Groundwater Basin.
29. The DTSC has assumed lead-agency role for this project under the California Land Reuse and Revitalization Act (CLRRRA) of 2004 and has conducted an Initial Study in accordance with section 15063 of the "State CEQA Guidelines" at California Code of Regulations, title 14, section 15000 et seq. Based upon the Initial Study, the DTSC staff prepared a Negative Declaration dated June 9, 2011 that the project will not have a significant adverse effect on the environment.
30. The Regional Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for this discharge and has provided them with an opportunity to submit their written views and recommendations. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge and to the tentative requirements.

IT IS HEREBY ORDERED that the Discharger, Robertshaw Controls Company, in order to meet the provisions contained in Division 7 of the California Water Code and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Specifications

1. The discharge (injection) of electron donor/carbon source, bioaugmentation cultures, and ZVI into the groundwater shall be only performed according to the methods specified in the Report of Waste Discharge package submitted to the Regional Board on May 28, 2010.
2. During this remediation the injection volume for the application of EISB, consisting of potable water, electron donor and bioaugmentation culture shall not exceed 1.7 million gallons.
3. The amendment solution shall be limited to potable water, electron donor, and bioaugmentation cultures. The amendments will consist of a mixture of water with one or more of the following: emulsified oil which contains soybean oil, sodium lactate and food grade emulsifiers (maximum concentration of up to 1% oil). In addition, bioaugmentation cultures (e.g., KB-1™ or SDC-9™) will be introduced into the groundwater shortly after the addition of electron donor (approximately 1.5 liters per injection point).
4. In the event that additional injections (in excess of the 1.7 million gallons specified herein) are needed, written notice shall be provided by the Discharger for the Executive Officer's approval before additional injections are carried out.

B. Discharge Prohibitions

1. The discharge of the amendment solution or any by-products into any surface water or surface water drainage course is prohibited.
2. The Discharger shall not cause the groundwater to contain taste, color, or odor producing substances in concentrations that cause nuisance or adversely affect beneficial uses outside the treatment area.
3. The Discharger shall not cause the groundwater to contain concentrations of chemical constituents, including electron donor, bioaugmentation culture, and ZVI in amounts that may adversely affect MUN, IND, PROC or AGR beneficial uses.

C. Provisions

1. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports as specified in the attached Monitoring and Reporting Program No. CI-9687. Violations of any conditions may result in enforcement action, including Regional Board or Court Order requiring corrective action, imposition of civil monetary liability, or revision or termination of the Order.
2. A copy of this Order shall be available at all times to operating personnel.

3. In the event of any change in name, ownership, or control of this site, the Discharger shall notify the Regional Board in writing and shall notify any succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Regional Board.
4. The Discharger shall file with the Regional Board technical reports on self-monitoring work performed according to the detailed specifications contained in Monitoring and Reporting Program No. CI-9687 as directed by the Executive Officer.
5. In accordance with section 13260(c) of the California Water Code, the Discharger shall file a report of any material change or proposed change in the character, location, or volume of the discharge.
6. Discharge of wastes to any point other than specifically described in this Order is prohibited and constitutes a violation thereof.
7. This Order includes the attached *Standard Provisions Applicable to Waste Discharge Requirements* which are incorporated herein by reference. If there is any conflict between provisions stated herein and the *Standard Provisions Applicable to Waste Discharge Requirements*, the provisions stated herein will prevail.
8. The Discharger shall notify Regional Board staff by telephone within 24 hours, followed by written notification within one week, in the event it is unable to comply with any of the conditions of this Order due to:
 - a) Breakdown of equipment;
 - b) Accident caused by human error or negligence, or other causes such as acts of nature; and
 - c) Site construction or development operations.
9. The Regional Board considers the Discharger to have continuing responsibility for correcting any problem that may arise in the future as a result of this discharge.
10. All work must be performed by or under the direction of a California registered civil engineer, registered geologist, or certified engineering geologist, as provided in sections 6762, 7850, and 7842, respectively, of the California Business and Professional Code. A statement is required in all technical submittals that the registered professional in direct responsible charge actually supervised or personally conducted all the work associated with the project.
11. The Discharger shall cleanup and abate the effects of injecting, EVO, ZVI and/or the bioaugmentation culture, including extraction of any by-products which adversely affect beneficial uses.
12. These requirements do not exempt the Discharger from compliance with any other laws, regulations, or ordinances, which may be applicable. They do not legalize the waste treatment facility, and they leave unaffected any further restraints on the site that may be contained in other statutes and/or required by other agencies.

13. This Order does not relieve the Discharger from responsibility to obtain other necessary local, state, and federal permits to construct facilities necessary for compliance with this Order; nor does this Order prevent imposition of additional standards, requirements, or conditions by any other regulatory agency.
14. The Discharger shall furnish, within a reasonable time, any information the Regional Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The Discharger shall also furnish to the Regional Board, upon request, copies of records required to be kept by this Order.
15. After notice and opportunity for a hearing, this Order may be terminated or modified for cause including, but not limited to:
 - a) Violation of any term or condition contained in this Order;
 - b) Obtaining this Order by intentional misrepresentation, or failure to disclose all relevant facts;
 - c) A change in any condition that requires either a temporary or permanent reduction or elimination of authorized discharge.
16. This Order may be terminated by the Regional Board upon written request by the Discharger.
17. In accordance with California Water Code section 13263(g), these requirements shall not create a vested right to continue to discharge and are subject to rescission or modification. All discharges of waste into the waters of the State are privileges, not rights.
18. The discharger shall allow the Regional Board, or an authorized representative upon the presentation of credentials and other documents as may be required by law, to:
 - (a) Enter upon the discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
 - (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
 - (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
 - (d) Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order, or as otherwise authorized by the California Water Code, any substances or parameters at any location. [CWC Section 13267]

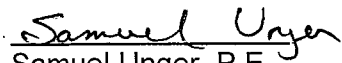
D. WDR Review Date:

This Order is scheduled for review on September 1, 2016.

The Discharger must file a Report of Waste Discharge in accordance with sections 13263(e) of the California Water Code not later than 120 days in

advance of such date as application for renewal of new waste discharge requirements.

I, Samuel Unger, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on September 1, 2011.


Samuel Unger, P.E.
Executive Officer

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

MONITORING AND REPORTING PROGRAM NO. CI-9687
FOR
ROBERTSHAW CONTROLS COMPANY
3000 EAST IMPERIAL HIGHWAY
(ENHANCED IN SITU BIOREMEDIATION AND IN SITU CHEMICAL REDUCTION FOR
GROUNDWATER CLEANUP)
(FILE NO. 10-068)

This Monitoring and Reporting Program (MRP) presents the monitoring and reporting requirements associated with only the Enhanced In-Situ Bioremediation (EISB) and In-Situ Chemical Reduction (ISCR) pilot study activities to be performed to treat groundwater impacts associated with the property located at 3000 East Imperial Highway, Lynwood, California in accordance with Regional Board Order No. R4-2011-0150.

I. REPORTING REQUIREMENTS

- A. The Robertshaw Controls Company (hereinafter Discharger) shall implement this monitoring program on the effective date (September 1, 2011) of Regional Board Order No. R4-2011-0150. The first quarterly monitoring report under this Program, for October – December 2011, shall be received at the Regional Board by January 15, 2012. Subsequent monitoring reports shall be received by the Regional Board on a quarterly basis by dates in the following schedule:

<u>Reporting Period</u>	<u>Report Due</u>
January – March	April 15
April – June	July 15
July – September	October 15
October – December	January 15

- B. If there is no discharge or injection during any reporting period, the report shall so state. Monitoring reports must be addressed to the Regional Board, Attention: Information Technology Unit.
- C. By March 1st of each year, the Discharger shall submit an annual summary report to the Regional Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous semi-annual monitoring period. In addition, the Discharger shall explain the compliance record and the corrective actions taken, or planned, which may be needed to bring the discharge into full compliance with the waste discharge requirements (WDRs).

September 1, 2011

- D. Laboratory analyses – all chemical and toxicity analyses shall be conducted at a laboratory certified for such analyses by the California Department of Public Health Environmental Laboratory Accreditation Program (ELAP). A copy of the laboratory certification shall be provided each time a new and/or renewal certification is obtained from ELAP.
 - E. Groundwater samples must be analyzed within allowable holding time limits as specified in 40 CFR Part 136. All QA/QC samples must be run on the same dates when samples were actually analyzed. The Discharger shall make available for inspection and/or submit the QA/QC documentation upon request by Regional Board staff.
 - F. Each monitoring report must affirm in writing that “All chemical analyses were conducted at a laboratory certified for such analyses by the California Department of Public Health, and in accordance with current United States Environmental Protection Agency (USEPA) guideline procedures or as specified in this Monitoring Program.” Proper chain of custody procedures must be followed and a copy of the completed chain of custody form shall be submitted with the report.
 - G. Each monitoring report shall contain a separate section titled “Summary of Non-Compliance” which discusses the compliance record and the corrective actions taken or planned that may be needed to bring the discharge into full compliance with WDRs. This section shall be located at the front of the report and shall clearly list all non-compliance with WDRs, as well as all excursions of effluent limitations.
 - H. The Discharger shall maintain all sampling and analytical results: date, exact place, and time of sampling; dates analyses were performed; analyst’s name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.
 - I. 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 to demonstrate compliance with the requirements and, where applicable, shall include results of receiving water observations.
- II. ENHANCED IN SITU BIOREMEDIATION (EISB) AND IN SITU CHEMICAL REDUCTION (ISCR) INJECTION REPORTING REQUIREMENTS

The Discharger is required to submit a report within 60 days following the end of injections,

which shall include baseline laboratory data, as wells as the EISB and ISCR injection data and shall include the following information regarding injection activities:

1. Location map showing injection points;
2. Depths of Injection points; and
3. Total amount of electron donor, microbial culture (KB-1™), and ZVI and dates injected.

III. GROUNDWATER MONITORING PROGRAM

The Discharger shall sample from monitoring wells MW-3, MW-4, MW-5, MW-15, MW-19A, MW-19B, MW-20A, MW-20B, MW-21A, MW-21B, to provide baseline water quality information prior to the electron donor, KB-1™, and ZVI injections. Groundwater from the wells noted above shall be monitored for the duration of the remediation in accordance with the following monitoring program:

Constituent	Units	Sampling Frequency
Volatile Organic Compounds	Micrograms per liter (µg/L)	Baseline, Bi-Monthly for 6 Months, Quarterly for 6 Months, Semi-Annually for 1 year
pH	pH Units	Baseline, Bi-Monthly for 6 Months, Quarterly for 6 Months, Semi-Annually for 1 year
Dissolved Oxygen	Milligrams per liter (mg/L)	Baseline, Bi-Monthly for 6 Months, Quarterly for 6 Months, Semi-Annually for 1 year
Oxidation Reduction Potential	Millivolts (mV)	Baseline, Bi-Monthly for 6 Months, Quarterly for 6 Months, Semi-Annually for 1 year
Specific Conductance	microSiemens per centimeter (µS/cm)	Baseline, Bi-Monthly for 6 Months, Quarterly for 6 Months, Semi-Annually for 1 year
Temperature	Degrees Celsius (°C)	Baseline, Bi-Monthly for 6 Months, Quarterly for 6 Months, Semi-Annually for 1 year

In addition to the above monitoring parameters, the Discharger shall monitor monitoring wells MW-3, MW-5, MW-19A, MW-19B, MW-20A, MW-20B, MW-21A, and MW-21B, which are within the proposed treatment area, for the following:

Constituent	Units	Sampling Frequency
Dissolved Hydrogen Gases	Milligrams per liter (mg/L)	Baseline, Semi-Annually for 2 years
Total Organic Carbon	Milligrams per liter (mg/L)	Baseline, Semi-Annually for 2 years
Anions (chloride, sulfate, nitrate, nitrite)	Milligrams per liter (mg/L)	Baseline, Semi-Annually for 2 years
Total Dissolved Solids (TDS)	Milligrams per liter (mg/L)	Baseline, Semi-Annually for 2 years
Boron	Milligrams per liter (mg/L)	Baseline, Semi-Annually for 2 years
Volatile Fatty Acids	Micrograms per liter (µg/L)	Semi-Annually for 2 years
<i>Dehalococcoides</i> or Vinyl Chloride Reductase	Presence/Absence	Semi-Annually for 1 year Annually for 1 year

All groundwater monitoring reports must include, at a minimum, the following:

- a. Well identification, date and time of sampling;
- b. Sampler identification, and laboratory identification;
- c. Semi-annual observation of groundwater levels, recorded to 0.01 feet mean sea level and groundwater flow direction.

IV. MONITORING FREQUENCY

Specifications in this monitoring program are subject to periodic revisions. Monitoring requirements may be modified or revised by the Executive Officer based on review of monitoring data submitted pursuant to this Order. Monitoring frequencies may be adjusted to a less frequent basis or parameters and locations removed by the Executive Officer if the Discharger makes a request and the request is supported by statistical trends of monitoring data submitted.

V. CERTIFICATION STATEMENT

Each report shall contain the following declaration:

"I certify under penalty of law that this document, including all attachments and supplemental information, was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and

imprisonment.

Executed on the _____ day of _____ at _____.

_____ (Signature)

_____ (Title)"

VI. PUBLIC DOCUMENTS

These records and reports are public documents and shall be made available for inspection during normal business hours at the office of the California Regional Water Quality Control Board, Los Angeles Region.

VII. ELECTRONIC SUBMITTAL OF INFORMATION (ESI) TO GEOTRACKER

The Discharger shall submit all reports required under this MRP, including groundwater monitoring data and discharge location data (latitude and longitude), to the State Water Resources Control Board GeoTracker database, in addition to submitting hard copies to the Regional Board office, Information Technology Unit. Once the Discharger demonstrates mastery of electronic submittal of reports to GeoTracker for the Site, it may request that the Regional Board waive the requirement of submitting hard copies of reports.

Ordered by: Samuel Unger
Samuel Unger, P.E.
Executive Officer

Date: September 1, 2011

STANDARD PROVISIONS
APPLICABLE TO WASTE DISCHARGE REQUIREMENTS

1. DUTY TO COMPLY

The discharger must comply with all conditions of these waste discharge requirements. A responsible party has been designated in the Order for this project, and is legally bound to maintain the monitoring program and permit. Violations may result in enforcement actions, including Regional Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Regional Board. [CWC Section 13261, 13263, 13265, 13268, 13300, 13301, 13304, 13340, 13350]

2. GENERAL PROHIBITION

Neither the treatment nor the discharge of waste shall create a pollution, contamination or nuisance, as defined by Section 13050 of the California Water Code (CWC). [H&SC Section 5411, CWC Section 13263]

3. AVAILABILITY

A copy of these waste discharge requirements shall be maintained at the discharge facility and be available at all times to operating personnel. [CWC Section 13263]

4. CHANGE IN OWNERSHIP

The discharger must notify the Executive Officer, in writing at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new discharger containing a specific date for the transfer of this Order's responsibility and coverage between the current discharger and the new discharger. This agreement shall include an acknowledgement that the existing discharger is liable for violations up to the transfer date and that the new discharger is liable from the transfer date on. [CWC Sections 13267 and 13263]

5. CHANGE IN DISCHARGE

In the event of a material change in the character, location, or volume of a discharge, the discharger shall file with this Regional Board a new Report of Waste Discharge. [CWC Section 13260(c)]. A material change includes, but is not limited to, the following:

- (a) Addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the Waste.

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WDR

Standard Provisions Applicable to
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- (b) Significant change in disposal method, e.g., change from a land disposal to a direct discharge to water, or change in the method of treatment which would significantly alter the characteristics of the waste.
- (c) Significant change in the disposal area, e.g., moving the discharge to another drainage area, to a different water body, or to a disposal area significantly removed from the original area potentially causing different water quality or nuisance problems.
- (d) Increase in flow beyond that specified in the waste discharge requirements.
- (e) Increase in the area or depth to be used for solid waste disposal beyond that specified in the waste discharge requirements. [CCR Title 23 Section 2210]

6. REVISION

These waste discharge requirements are subject to review and revision by the Regional Board. [CCR Section 13263]

7. TERMINATION

Where the discharger becomes aware that it failed to submit any relevant facts in a Report of Waste Discharge or submitted incorrect information in a Report of Waste Discharge or in any report to the Regional Board, it shall promptly submit such facts or information. [CWC Sections 13260 and 13267]

8. VESTED RIGHTS

This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, do not protect the discharger from his liability under Federal, State or local laws, nor do they create a vested right for the discharger to continue the waste discharge. [CWC Section 13263(g)]

9. SEVERABILITY

Provisions of these waste discharge requirements are severable. If any provision of these requirements are found invalid, the remainder of the requirements shall not be affected. [CWC Section 921]

Standard Provisions Applicable to
Waste Discharge Requirements

10. 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 conditions of this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Order. [CWC Section 13263(f)]

11. HAZARDOUS RELEASES

Except for a discharge which is in compliance with these waste discharge requirements, any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) that person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan adopted pursuant to Article 3.7 (commencing with Section 8574.7) of Chapter 7 of Division 1 of Title 2 of the Government Code, and immediately notify the State Board or the appropriate Regional Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of Section 13271 of the Water Code unless the discharger is in violation of a prohibition in the applicable Water Quality Control plan. [CWC Section 1327(a)]

12. PETROLEUM RELEASES

Except for a discharge which is in compliance with these waste discharge requirements, any person who without regard to intent or negligence, causes or permits any oil or petroleum product to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) such person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State oil spill contingency plan adopted pursuant to Article 3.5 (commencing with Section 8574.1) of Chapter 7 of Division 1 of Title 2 of the Government Code. This provision does not require reporting of any discharge of less than 42 gallons unless the discharge is also required to be reported pursuant to Section 311 of the Clean Water Act or the discharge is in violation of a prohibition in the applicable Water Quality Control Plan. [CWC Section 13272]

Standard Provisions Applicable to
Waste Discharge Requirements

13. ENTRY AND INSPECTION

The discharger shall allow the Regional Board, or an authorized representative upon the presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
- (b) Have access to and copy, at reasonable times; any records that must be kept under the conditions of this Order;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
- (d) Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order, or as otherwise authorized by the California Water Code, any substances or parameters at any location. [CWC Section 13267]

14. MONITORING PROGRAM AND DEVICES

The discharger shall furnish, under penalty of perjury, technical monitoring program reports; such reports shall be submitted in accordance with specifications prepared by the Executive Officer, which specifications are subject to periodic revisions as may be warranted. [CWC Section 13267]

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, or more frequently, to ensure continued accuracy of the devices. Annually, the discharger shall submit to the Executive Office a written statement, signed by a registered professional engineer, certifying that all flow measurement devices have been calibrated and will reliably achieve the accuracy required.

Unless otherwise permitted by the Regional Board Executive officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. The Regional Board Executive Officer may allow use of an uncertified laboratory under exceptional circumstances, such as when the closest laboratory to the monitoring location is outside the State boundaries and therefore not subject to certification. All analyses shall be required to be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants" [40CFR Part 136] promulgated by the U.S. Environmental Protection Agency. [CCR Title 23, Section 2230]

Standard Provisions Applicable to
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15. TREATMENT FAILURE

In an enforcement action, it shall not be a defense for the discharger that it would have been necessary to halt or to reduce the permitted activity in order to maintain compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the discharger shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies, for example, when the primary source of power of the treatment facility fails, is reduced, or is lost. [CWC Section 13263(f)]

16. DISCHARGE TO NAVIGABLE WATERS

Any person discharging or proposing to discharge to navigable waters from a point source (except for discharge of dredged or fill material subject to Section 404 of the Clean Water Act and discharge subject to a general NPDES permit) must file an NPDES permit application with the Regional Board. [CCR Title 2 Section 22357]

17. ENDANGERMENT TO HEALTH AND ENVIRONMENT

The discharger shall report any noncompliance which may endanger health or the environment. Any such information shall be provided verbally to the Executive Officer within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within five 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 recurrence of the noncompliance. The Executive officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. The following occurrence(s) must be reported to the Executive Office within 24 hours:

- (a) Any bypass from any portion of the treatment facility.
- (b) Any discharge of treated or untreated wastewater resulting from sewer line breaks, obstruction, surcharge or any other circumstances.
- (c) Any treatment plan upset which causes the effluent limitation of this Order to be exceeded. [CWC Sections 13263 and 13267]

18. MAINTENANCE OF RECORDS

The discharger shall retain records of all monitoring information including all calibration and maintenance records, all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and record of all data used

Standard Provisions Applicable to
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to complete the application for this Order. Records shall be maintained for a minimum of three years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

Records of monitoring information shall include:

- (a) The date, exact place, and time of sampling or measurement;
 - (b) The individual(s) who performed the sampling or measurement;
 - (c) The date(s) analyses were performed;
 - (d) The individual(s) who performed the analyses;
 - (e) The analytical techniques or method used; and
 - (f) The results of such analyses.
19. (a) All application reports or information to be submitted to the Executive Office shall be signed and certified as follows:
- (1) For a corporation – by a principal executive officer or at least the level of vice president.
 - (2) For a partnership or sole proprietorship – by a general partner or the proprietor, respectively.
 - (3) For a municipality, state, federal, or other public agency – by either a principal executive officer or ranking elected official.
- (b) A duly authorized representative of a person designated in paragraph (a) of this provision may sign documents if:
- (1) The authorization is made in writing by a person described in paragraph (a) of this provision.
 - (2) The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity; and
 - (3) The written authorization is submitted to the Executive Officer.

Any person signing a document under this Section shall make the following certification:

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"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. [CWC Sections 13263, 13267, and 13268]"

20. OPERATOR CERTIFICATION

Supervisors and operators of municipal wastewater treatment plants and privately owned facilities regulated by the PUC, used in the treatment or reclamation of sewage and industrial waste shall possess a certificate of appropriate grade in accordance with Title 23, California Code of Regulations Section 3680. State Boards may accept experience in lieu of qualification training. In lieu of a properly certified wastewater treatment plant operator, the State Board may approve use of a water treatment plant operator of appropriate grade certified by the State Department of Health Services where reclamation is involved.

Each plan shall be operated and maintained in accordance with the operation and maintenance manual prepared by the municipality through the Clean Water Grant Program [CWC Title 23, Section 2233(d)]

ADDITIONAL PROVISIONS APPLICABLE TO
PUBLICLY OWNED TREATMENT WORKS' ADEQUATE CAPACITY

21. Whenever a publicly owned wastewater treatment plant will reach capacity within four years the discharger shall notify the Regional Board. A copy of such notification shall be sent to appropriate local elected officials, local permitting agencies and the press. The discharger must demonstrate that adequate steps are being taken to address the capacity problem. The discharger shall submit a technical report to the Regional Board showing flow volumes will be prevented from exceeding capacity, or how capacity will be increased, within 120 days after providing notification to the Regional Board, or within 120 days after receipt of notification from the Regional Board, of a finding that the treatment plant will reach capacity within four years. The time for filing the required technical report may be extended by the Regional Board. An extension of 30 days may be granted by the Executive Officer, and longer extensions may be granted by the Regional Board itself. [CCR Title 23, Section 2232]