
Los Angeles Regional Water Quality Control Board

September 12, 2013

Mr. Benny DeHghi
Manager, Remediation & Evaluation Services
Honeywell International, Inc.
2525 West 190th Street
Torrance, California 90504

BOARD RESOLUTION, TENTATIVE WASTE DISCHARGE REQUIREMENTS, AND MONITORING AND REPORTING PROGRAM FOR SOUTHWEST CORNER LOT OF FORMER HONEYWELL EL SEGUNDO FACILITY, 850 SOUTH SEPULVEDA BOULEVARD, EL SEGUNDO, CALIFORNIA (FILE NO. 11-190, ORDER NO. R4-2013-XXXX, CI NO. 9796, GLOBAL ID. WDR100001867)

Dear Mr. DeHghi:

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board), is the state agency with primary responsibility for the protection of ground and surface water quality for all beneficial uses within major portions of Los Angeles and Ventura Counties, including the referenced property above.

The Regional Board staff have completed the review of your application for Waste Discharge Requirements (WDRs) for injections of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water into the subsurface for remediation of volatile organic compounds impacted groundwater beneath the Southwest Corner Lot of the former Honeywell El Segundo facility. Pursuant to the California Water Code, the tentative Waste Discharge Requirements have been prepared.

Enclosed are copies of tentative WDRs consisting of:

- a. Tentative Regional Board Resolution No. R13-XXX,
- b. California Environmental Quality Act Documents,
- c. Tentative Regional Board Order No. R4-2013-XXXX,
- d. Tentative Standard Provisions Applicable to WDRs, and
- e. Tentative Monitoring and Reporting Program CI No. 9796.

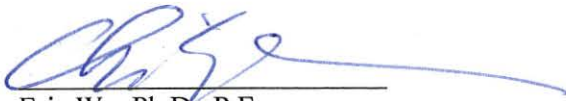
The tentative WDRs are also available at the Regional Water Board's website at:
http://www.waterboards.ca.gov/losangeles/board_decisions/tentative_orders/

In accordance with administrative procedures, the Regional Board will consider the enclosed tentative WDRs, written comments timely submitted, and oral comments at a public meeting to be held at 9:00 AM on November 7, 2013 at the Metropolitan Water District of Southern California, 700 North Alameda Street, Los Angeles, California. The Regional Board will hear any testimony pertinent to this discharge and the tentative requirements. It is expected that the Regional Board will take action at the meeting. However, as testimony indicates, the Regional Board at its discretion may postpone action on the WDRs.

You are invited to submit written comments on the tentative Board Resolution, the tentative WDRs, and the tentative Monitoring and Reporting Program. In order to be fully evaluated by the Regional Board staff and included in the Regional Board's agenda packet, written comments must be received at the Regional Board's office by 5:00 p.m. on **October 14, 2013**. The Regional Board may exclude comments from the record if they are received after this date and time and will exclude any comments if they will be prejudicial to any party or the Regional Board. Timely submittal of written comments is encouraged to ensure that all comments are accurately and fully included in the administrative record, that Regional Board staff is able to provide timely review, and that Regional Board Members have sufficient time to give full consideration to the issues raised in the comments.

If you have any questions, please contact the Project Manager, Dr. Ann Chang at (213) 620-6122 (achang@waterboards.ca.gov), or the Chief of Groundwater Permitting Unit, Dr. Eric Wu at (213) 576-6683 (ewu@waterboards.ca.gov).

Sincerely,



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

Enclosures:

1. Tentative Resolution Approving Environmental Checklist and Adopting a Negative Declaration
2. Cover Letter Transmitting to State Clearinghouse
3. Notice of Completion & Environmental Document Transmittal
4. Notice of Intent to Adopt a Negative Declaration
5. Initial Study, Part 1 and Part 2
6. Tentative Waste Discharge Requirements
7. Tentative Standard Provisions Applicable to Waste Discharge Requirements
8. Tentative Monitoring and Reporting Program

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

320 West 4th Street, Suite 200, Los Angeles, California 90013
(213) 576-6660 • Fax (213) 576-6640
<http://www.waterboards.ca.gov/losangeles/>

RESOLUTION NO. R13-XXX

**APPROVING THE ENVIRONMENTAL CHECKLIST AND
ADOPTING A NEGATIVE DECLARATION FOR
ENHANCED REDUCTIVE DECHLORINATION OF
VOLATILE ORGANIC COMPOUNDS IMPACTED GROUNDWATER AT
SOUTHWEST CORNER LOT OF FORMER HONEYWELL EL SEGUNDO FACILITY
(FILE NO. 11-190)**

WHEREAS, the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) finds that:

1. California Water Code (CWC) section 13260(a)(1) requires that any person discharging wastes, or proposing to discharge wastes other than into a community wastewater collection system, which could affect the quality of the waters of the State, shall file a report of waste discharge (ROWD) with the Regional Board exercising jurisdiction in the area, and that Regional Board shall then prescribe requirements for the discharge or proposed discharge of wastes.
2. The former Honeywell El Segundo facility (Site) is located at 850 South Sepulveda Boulevard in the City of El Segundo, California. It is bounded by Sepulveda Boulevard to the west, Hughes Way to the north, Nash Street to the east, and Rosecrans Avenue to the south. The Site was divided into three parcels: the 37.3-acre former Refrigerant Plant parcel, which includes unlined natural depression (UND) areas 1 through 3; the 12.9-acre UND-4 and UND-5 parcels; and the 4.7-acre Southwest Corner Lot (SWCL) parcel.
3. The Site is situated in the West Coast Basin of the Coastal Plain of the Los Angeles Groundwater Basin. Groundwater beneath the Site is encountered at depths ranging from approximately 80 to 130 feet below ground surface (bgs) and the flow direction varies across the Site but is generally toward the east/southeast.
4. Industrial operations started at the Site in the 1920s and included the production of refrigerant products, sulfuric and hydrochloric acids, sodium salts, calcium/ammonium polysulfide, aluminum chloride, aluminum sulfate, and phthalic anhydride, as well as packaging and distribution of pesticides and the blending, packaging, distribution and storage of solvents. Honeywell International, Inc. (hereinafter Discharger) discontinued operations at the Site in February 2003 and decommissioned facilities and structures to facilitate property redevelopment.

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5. The Discharger has conducted environmental investigations at the Site since the mid-1990s under the regulatory oversight of the Regional Board. The results indicated soil and groundwater beneath the Site have been contaminated with volatile organic compounds (VOCs). The VOCs groundwater plume that originates at the SWCL area consists primarily of trichloroethene (TCE), and cis-1,2-dichloroethene (cDCE). The May 2013 groundwater monitoring results indicated that TCE and cDCE were detected at concentrations up to 26,000 micrograms per liter ($\mu\text{g/L}$) and 25,000 $\mu\text{g/L}$, respectively in the vicinity of the SWCL area.
6. The Discharger submitted the *Southwest Corner Lot Enhanced Reductive Dechlorination Implementation Work Plan* (Work Plan), dated March 30, 2012, to describe a phased approach for the treatment of the chlorinated ethene groundwater plume that originates at the SWCL area. The initial phase involves a small-scale implementation of enhanced reductive dechlorination (ERD) system to obtain information necessary for optimization of the full-scale ERD system design.
7. The Work Plan proposes to initiate the ERD process by delivery of appropriate reagents, including pH buffer (sodium hydroxide, sodium carbonate, and magnesium oxide), organic substrates (emulsified oil and cheese whey), tracer (Rhodamine WT), bioaugmentation culture (Terra Systems *Dehalococcoides ethenogenes* Bioaugmentation Culture®), and anaerobic chase water, into the subsurface for creating a reducing condition in groundwater to facilitate reductive dechlorination of chlorinated VOCs. On September 20, 2012, the Regional Board approved the Work Plan.
8. During the implementation of the proposed discharges, a total of 100,000 gallons of pH buffer solution, 160,000 gallons of 3% organic substrate solution, 12 gallons of tracer solution, 12 liters of bioaugmentation culture, and 8,000 gallons of anaerobic chase water will be injected into four injection wells (SIW-01 through SIW-04) at depths approximately from 100 to 130 feet bgs. Depending on monitoring results, the injection activities will take place intermittently over 12-month period.
9. The Discharger proposed to conduct a groundwater sampling and analysis program prior to, during, and after implementation of the proposed discharges to closely monitor groundwater conditions. The Discharger will monitor presence and concentration of injection solution, evaluate flow conditions, and implement mitigation measures if necessary to prevent further migration of waste constituents outside the application area or treatment zone at compliance point(s).
10. The application of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water to groundwater may result in unintended adverse impacts to groundwater quality, but impacts that may result will be localized, of short-term duration, and will not impact any existing or prospective beneficial uses of groundwater. The addition of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water will improve groundwater conditions by promoting complete degradation of chlorinated VOCs.
11. On January 14, 2013, the Regional Board enrolled the Discharger under the general WDRs (WDR Order No. R4-2007-0019) with a Monitoring and Reporting Program (MRP) No. CI-9796 for the injection of pH buffer, organic substrates, and tracer for groundwater remediation of chlorinated VOCs at the SWCL of the Site.

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12. The WDR Order No. R4-2007-0019 does not cover the use of bioaugmentation culture and anaerobic chase water. Therefore, these site-specific waste discharge requirements will cover the addition of bioaugmentation culture and anaerobic chase water for groundwater remediation at the SWCL of the Site. The site-specific WDRs will also cover the use of pH buffer, organic substrates, and tracer. Consequently, the general WDRs coverage will be terminated once the site-specific WDRs are adopted.
13. The injection of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water to the groundwater is a discharge of waste pursuant to section 13050 of the CWC. However, the discharge of the pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water is intended to provide more efficient remediation of VOC impacted groundwater and is anticipated to reduce cleanup time and costs.
14. The Regional Board adopted a revised Water Quality Control Plan for the Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan) on June 13, 1994. The Basin Plan designates the beneficial uses for the West Coast Basin including municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply.
15. State Water Resources Control Board (State Board) Resolution No. 68-16 (hereafter Resolution No. 68-16 or the "Antidegradation" Policy) requires the Regional Board in regulating the discharge of waste to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the Regional Board's policies (e.g., quality that exceeds water quality objectives). The permitted discharge is consistent with the antidegradation provisions of Resolution No. 68-16.

The Regional Board has assumed lead agency role for the WDRs under the California Environmental Quality Act (CEQA) [Public Resources Code section 21000 et seq.] and has conducted an Initial Study (in the format of an expanded Environmental Checklist) in accordance with Title 14, California Code of Regulations, Section 15063. Based on the Initial Study, the Regional Board prepared a Negative Declaration documenting that the project will not have a significant adverse effect on the environment.

Copies of a proposed Initial Study and Negative Declaration were transmitted to the State Clearinghouse, and were circulated among state agencies and interested persons for public comments. All comments received have been addressed by the Regional Board. The Regional Board considered all comments and evidence at a public meeting held on November 7, 2013, at the Metropolitan Water District of Southern California, Board Room, 700 North Alameda Street, Los Angeles, California, and good cause was found to approve the Environmental Checklist and adopt a Negative Declaration.

The Regional Board has notified the Discharger and interested agencies and persons of the intent to issue WDRs for this discharge, and has provided them with an opportunity to submit written comments. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge and to the tentative requirements.

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THEREFORE, BE IT RESOLVED that the Regional Board:

1. Adopts the Initial Study and Negative Declaration and directs the Executive Officer to file a Notice of Determination with the State Clearinghouse consistent with the CEQA Guidelines.
2. Directs that a copy of this Resolution shall be forwarded to the State Water Resources Control Board and all interested persons.
3. Directs that the application of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water to groundwater shall conform with all the requirements, conditions, provisions, limitations set forth in the Order No. R4-2013-XXXX.

CERTIFICATION

I, Samuel Unger, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Los Angeles Region on November 7, 2013.

Samuel Unger, P.E.
Executive Officer

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Los Angeles Regional Water Quality Control Board

September 12, 2013

State Clearinghouse
Governor's Office of Planning and Research
1400 Tenth Street
Sacramento, California 95814

EVALUATION OF ENHANCED REDUCTIVE DECHLORINATION OF VOLATILE ORGANIC COMPOUNDS IMPACTED GROUNDWATER – SOUTHWEST CORNER LOT OF FORMER HONEYWELL EL SEGUNDO FACILITY, 850 SOUTH SEPULVEDA BOULEVARD, EL SEGUNDO, CALIFORNIA (FILE NO. 11-190, GLOBAL ID. WDR100001867)

Dear Interested Parties:

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board), is the state agency with primary responsibility for the protection of ground and surface water quality for all beneficial uses within major portions of Los Angeles and Ventura Counties, including the referenced property above.

The former Honeywell El Segundo facility (Site) is located at 850 South Sepulveda Boulevard in the City of El Segundo, California. It is bounded by Sepulveda Boulevard to the west, Hughes Way to the north, Nash Street to the east, and Rosecrans Avenue to the south. The Site was divided into three parcels: the 37.3-acre former Refrigerant Plant parcel, which includes unlined natural depression (UND) areas 1 through 3; the 12.9-acre UND-4 and UND-5 parcels; and the 4.7-acre Southwest Corner Lot (SWCL) parcel.

Industrial operations started at the Site in the 1920s and included the production of refrigerant products, sulfuric and hydrochloric acids, sodium salts, calcium/ammonium polysulfide, aluminum chloride, aluminum sulfate, and phthalic anhydride, as well as packaging and distribution of pesticides and the blending, packaging, distribution and storage of solvents. Honeywell International, Inc. (hereinafter Discharger) discontinued operations at the Site in February 2003 and decommissioned facilities and structures to facilitate property redevelopment.

The Discharger has conducted environmental investigations at the Site since the mid-1990s under the regulatory oversight of the Regional Board. The results indicated soil and groundwater beneath the Site have been contaminated with volatile organic compounds (VOCs). The VOCs groundwater plume that originates at the SWCL area consists primarily of trichloroethene and cis-1,2-dichloroethene.

The Discharger submitted the *Southwest Corner Lot Enhanced Reductive Dechlorination Implementation Work Plan* (Work Plan), dated March 30, 2012, to describe a phased approach for the treatment of the chlorinated ethene groundwater plume that originates at the SWCL area. The initial phase involves a small-scale implementation of enhanced reductive dechlorination (ERD) system to obtain information necessary for optimization of the full-scale ERD system design.

The Work Plan proposes to initiate the ERD process by delivery of appropriate reagents, including pH buffer (sodium hydroxide, sodium carbonate, and magnesium oxide), organic substrates (emulsified oil and cheese whey), tracer (Rhodamine WT), bioaugmentation culture (Terra Systems *Dehalococcoides ethenogenes* Bioaugmentation Culture®), and anaerobic chase water, into the subsurface for creating a reducing condition in groundwater to facilitate reductive dechlorination of chlorinated VOCs. On September 20, 2012, the Regional Board approved the Work Plan.

The site-specific waste discharge requirements are prepared for the proposed remediation activities at the SWCL of the Site that covers the use of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water for stimulating biodegradation.

In accordance with the California Environmental Quality Act, the Regional Board has prepared an Initial Study for the proposed groundwater remediation activities. The Regional Board has determined that the proposed remediation using pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water will not have a significant adverse effect on the environment, and therefore, has prepared a Negative Declaration. The Regional Board has also prepared Tentative Waste Discharge Requirements to regulate the use of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water and to monitor groundwater quality and groundwater flow conditions during remediation.

The enclosed 15 copies of the Notice of Completion & Environmental Document Transmittal, Notice of Intent to Adopt a Negative Declaration, Initial Study, Tentative Resolution Approving Environmental Checklist and Adopting a Negative Declaration, and Tentative Waste Discharge Requirements describe the location and nature of the project. The Regional Board hereby submits the Notice of Completion & Environmental Document Transmittal, Notice of Intent to Adopt a Negative Declaration, Initial Study, Tentative Resolution Approving Environmental Checklist and Adopting a Negative Declaration, and Tentative Waste Discharge Requirements to the State Clearinghouse for review and distribution. This Regional Board will accept comments from any interested parties until **October 14, 2013**.

If you have any questions, please contact the Project Manager, Dr. Ann Chang at (213) 620-6122 (achang@waterboards.ca.gov), or the Chief of Groundwater Permitting Unit, Dr. Eric Wu at (213) 576-6683 (ewu@waterboards.ca.gov).

Sincerely,



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

Enclosures:

1. Notice of Completion & Environmental Document Transmittal
2. Notice of Intent to Adopt a Negative Declaration
3. Initial Study, Part 1 and Part 2
4. Cover Letter Transmitting Tentative Waste Discharge Requirements
5. Tentative Resolution Approving Environmental Checklist and Adopting a Negative Declaration
6. Tentative Waste Discharge Requirements
7. Tentative Standard Provisions Applicable to Waste Discharge Requirements
8. Tentative Monitoring and Reporting Program

cc: Chi Diep, California Department of Public Health
Benny Dehghi, Honeywell International, Inc.
Terry Feng, CH2M Hill Inc.

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613

For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #**Project Title:** Enhanced Reductive Dechlorination of Volatile Organic Compounds Impacted Groundwater

Lead Agency: Regional Water Quality Control Board, Los Angeles Region

Contact Person: Ann Chang

Mailing Address: 320 West 4th Street, Suite 200

Phone: (213) 620-6122

City: Los Angeles

Zip: 90013

County: Los Angeles

Project Location: County: Los Angeles

City/Nearest Community: El Segundo

Cross Streets: Sepulveda Boulevard and Rosecrans Avenue

Zip Code: 90245

Longitude/Latitude (degrees, minutes and seconds): 33 ° 54 ' 11.5 " N / 118 ° 23 ' 43.6 " W Total Acres: 4.7

Assessor's Parcel No.: 4138-015-061

Section: _____

Twp.: _____

Range: _____

Base: _____

Within 2 Miles: State Hwy #: 405

Waterways: NA

Airports: LAX International

Railways: NA

Schools: Vistimar School, more

Document Type:

CEQA:

☐ NOP☐ Draft EIR

NEPA:

☐ NOI

Other:

☐ Joint Document☐ Early Cons☐ Supplement/Subsequent EIR☐ EA☐ Final Document☒ Neg Dec

(Prior SCH No.) _____

☐ Draft EIS☐ Other: _____☐ Mit Neg Dec

Other: _____

☐ FONSI**Local Action Type:**☐ General Plan Update☐ Specific Plan☐ Rezone☐ Annexation☐ General Plan Amendment☐ Master Plan☐ Prezone☐ Redevelopment☐ General Plan Element☐ Planned Unit Development☐ Use Permit☐ Coastal Permit☐ Community Plan☐ Site Plan☐ Land Division (Subdivision, etc.)☒ Other: WDR Permit**Development Type:**☐ Residential: Units _____

Acres _____

☐ Office: Sq.ft. _____

Acres _____

Employees _____

☐ Transportation: Type _____☐ Commercial: Sq.ft. _____

Acres _____

Employees _____

☐ Mining: Mineral _____☐ Industrial: Sq.ft. _____

Acres _____

Employees _____

☐ Power: Type _____

MW _____

☐ Educational: _____☐ Waste Treatment: Type _____

MGD _____

☐ Recreational: _____☐ Hazardous Waste: Type _____☐ Water Facilities: Type _____

MGD _____

☒ Other: In situ groundwater bioremediation**Project Issues Discussed in Document:**☐ Aesthetic/Visual☐ Fiscal☐ Recreation/Parks☐ Vegetation☐ Agricultural Land☐ Flood Plain/Flooding☐ Schools/Universities☐ Water Quality☐ Air Quality☐ Forest Land/Fire Hazard☐ Septic Systems☒ Water Supply/Groundwater☐ Archeological/Historical☐ Geologic/Seismic☐ Sewer Capacity☐ Wetland/Riparian☐ Biological Resources☐ Minerals☐ Soil Erosion/Compaction/Grading☐ Growth Inducement☐ Coastal Zone☐ Noise☐ Solid Waste☐ Land Use☐ Drainage/Absorption☐ Population/Housing Balance☐ Toxic/Hazardous☐ Cumulative Effects☐ Economic/Jobs☐ Public Services/Facilities☐ Traffic/Circulation☐ Other: _____**Present Land Use/Zoning/General Plan Designation:**

Commercial

Project Description: (please use a separate page if necessary)

A separate sheet is attached.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with an "X".
If you have already sent your document to the agency please denote that with an "S".

<input type="checkbox"/> Air Resources Board	<input type="checkbox"/> Office of Historic Preservation
<input type="checkbox"/> Boating & Waterways, Department of	<input type="checkbox"/> Office of Public School Construction
<input type="checkbox"/> California Emergency Management Agency	<input type="checkbox"/> Parks & Recreation, Department of
<input type="checkbox"/> California Highway Patrol	<input type="checkbox"/> Pesticide Regulation, Department of
<input type="checkbox"/> Caltrans District # _____	<input type="checkbox"/> Public Utilities Commission
<input type="checkbox"/> Caltrans Division of Aeronautics	<input type="checkbox"/> Regional WQCB # _____
<input type="checkbox"/> Caltrans Planning	<input type="checkbox"/> Resources Agency
<input type="checkbox"/> Central Valley Flood Protection Board	<input type="checkbox"/> Resources Recycling and Recovery, Department of
<input type="checkbox"/> Coachella Valley Mtns. Conservancy	<input type="checkbox"/> S.F. Bay Conservation & Development Comm.
<input type="checkbox"/> Coastal Commission	<input type="checkbox"/> San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
<input type="checkbox"/> Colorado River Board	<input type="checkbox"/> San Joaquin River Conservancy
<input type="checkbox"/> Conservation, Department of	<input type="checkbox"/> Santa Monica Mtns. Conservancy
<input type="checkbox"/> Corrections, Department of	<input type="checkbox"/> State Lands Commission
<input type="checkbox"/> Delta Protection Commission	<input type="checkbox"/> SWRCB: Clean Water Grants
<input type="checkbox"/> Education, Department of	<input checked="" type="checkbox"/> SWRCB: Water Quality
<input type="checkbox"/> Energy Commission	<input type="checkbox"/> SWRCB: Water Rights
<input checked="" type="checkbox"/> Fish & Game Region # <u>5</u>	<input type="checkbox"/> Tahoe Regional Planning Agency
<input type="checkbox"/> Food & Agriculture, Department of	<input type="checkbox"/> Toxic Substances Control, Department of
<input type="checkbox"/> Forestry and Fire Protection, Department of	<input checked="" type="checkbox"/> Water Resources, Department of
<input type="checkbox"/> General Services, Department of	<input type="checkbox"/> Other: _____
<input checked="" type="checkbox"/> Health Services, Department of	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Housing & Community Development	
<input type="checkbox"/> Native American Heritage Commission	

Local Public Review Period (to be filled in by lead agency)

Starting Date September 12, 2013 Ending Date October 14, 2013

Lead Agency (Complete if applicable):

Consulting Firm: <u>CH2M Hill, Inc</u>	Applicant: <u>Honeywell International Inc.</u>
Address: <u>155 Grand Avenue, Suite 800</u>	Address: <u>2525 West 190th Street</u>
City/State/Zip: <u>Oakland/CA/94612</u>	City/State/Zip: <u>Torrance/CA/90504</u>
Contact: <u>Terry Feng</u>	Phone: <u>(310) 512-2296</u>
Phone: <u>(925) 964-1658</u>	

Signature of Lead Agency Representative:  Date: 9/12/13

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

Project Description

Under the oversight of the Regional Board, Honeywell International, Inc. proposes to implement periodic injections of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water into the subsurface for remediation of volatile organic compounds (VOCs) impacted groundwater beneath the Southwest Corner Lot of the former Honeywell El Segundo facility. The bioaugmentation culture is an enriched natural bacteria culture that contains *Dehalococcoides* species which can promote complete degradation of chlorinated VOCs.

During the implementation of the proposed discharges, a total of 100,000 gallons of pH buffer (sodium hydroxide, sodium carbonate, and magnesium oxide) solution, 160,000 gallons of 3% organic substrate (emulsified oil and cheese whey) solution, 12 gallons of tracer (Rhodamine WT) solution, 12 liters of bioaugmentation culture (Terra Systems *Dehalococcoides ethenogenes* Bioaugmentation Culture®) and 8,000 gallons of anaerobic chase water will be injected into four injection wells (SIW-01 through SIW-04) at depths approximately from 100 to 130 feet below ground surface. Depending on monitoring results, the injection activities will take place intermittently over 12-month period.

Any injection of chemicals and/or materials into groundwater is a discharge of waste as defined in the California Water Code. However, the proposed discharge of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water is intended to improve water quality by providing more efficient remediation of VOCs impacted groundwater and is expected to significantly reduce groundwater cleanup time and costs. The site-specific waste discharge requirements will cover the use of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water.

Los Angeles Regional Water Quality Control Board

NOTICE OF INTENT TO ADOPT A NEGATIVE DECLARATION CALIFORNIA ENVIRONMENTAL QUALITY ACT

TO ALL INTERESTED AGENCIES, GROUPS AND PERSONS:

This will serve as notice that the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) has prepared a Negative Declaration on the following project in accordance with the provisions of the California Environmental Quality Act (CEQA).

Project Title:

Enhanced Reductive Dechlorination of Volatile Organic Compounds Impacted Groundwater

Project Location (within Los Angeles County):

850 South Sepulveda Boulevard, El Segundo, California

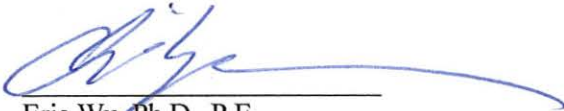
Project Description:

Under the oversight of the Regional Board, Honeywell International, Inc. proposes to implement periodic injections of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water into the subsurface for remediation of volatile organic compounds (VOCs) impacted groundwater beneath the Southwest Corner Lot of the former Honeywell El Segundo facility. The bioaugmentation culture is an enriched natural bacteria culture that contains *Dehalococcoides* species which can promote complete degradation of chlorinated VOCs.

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Any injection of chemicals and/or materials into groundwater is a discharge of waste as defined in the California Water Code. However, the proposed discharge of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water is intended to improve water quality by providing more efficient remediation of VOCs impacted groundwater and is expected to significantly reduce groundwater cleanup time and costs. The site-specific waste discharge requirements will cover the use of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water.

In accordance with the California Environmental Quality Act, the Regional Board has prepared an Initial Study and a Negative Declaration. The Initial Study documents the reasons to support the finding of the Negative Declaration that the project will not have a significant adverse effect on the environment. The Initial Study and the Negative Declaration are on file at the address above and are available for public examination at the Regional Board, Monday through Friday between the hours of 8:00 a.m. to 5:00 p.m. All interested agencies, groups, and persons wishing to respond to the finding of the Negative Declaration are invited to submit written comments for consideration by the Regional Board on or before **November 7, 2013**.



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

ENVIRONMENTAL INFORMATION FORM

Initial Study – Part 1

Date Filed September 12, 2013

General Information

1. Name and address of developer or project sponsor:
Benny DeHghi
Manager, Remediation & Evaluation Services
Honeywell International Inc.
2525 West 190th Street
Torrance, California 90504
2. Address of project:
850 South Sepulveda Boulevard
El Segundo, California 90245
3. Name, address, and telephone number of person to be contacted concerning this project:
Terry Feng
CH2M Hill
155 Grand Avenue, Suite 800
Oakland, California 94612
(925) 964-1658
4. Indicate number of the permit application for the project to which this form pertains:
Waste Discharge Requirements, Order No. R4-2013-XXXX,
Monitoring and Reporting Program No. CI-9796
5. List and describe any other related permits and other public approvals required for this project, including those required by city, regional, state, and federal agencies:
On September 20, 2012, the California Regional Water Quality Control Board, Los Angeles Region approved the *Southwest Corner Lot Enhanced Reductive Dechlorination Implementation Work Plan*, dated March 30, 2012.
6. Existing zoning district:
Commercial
7. Proposed use of site (Project for which this form is filed):
Honeywell El Segundo Works (Site) was originally an industrial facility that was sold and redeveloped into a commercial shopping mall. Soil and groundwater beneath the Site is impacted with volatile organic compounds (VOCs). Honeywell International Inc. proposes to initiate the enhanced reductive dechlorination (ERD) process by delivery of appropriate reagents, including pH buffer (sodium hydroxide, sodium carbonate, and magnesium oxide), organic substrates (emulsified oil and cheese whey), tracer (Rhodamine WT), bioaugmentation culture (Terra Systems *Dehalococcoides ethenogenes* Bioaugmentation Culture®), and anaerobic chase water into the subsurface for creating a reducing condition in groundwater to facilitate reductive dechlorination of chlorinated VOCs.

Project Description

8. Site size:
The area of the Southwest Corner Lot is approximately 4.7 acres.
9. Square footage:
The injection and monitoring well boxes and concrete collars will have a total area of approximately 30 square feet. The mobile injection system will occupy an area of approximately 300 square feet when it is onsite.
10. Number of floors of construction: N/A.
11. Amount of off-street parking provided: N/A.
12. Attach plans:
See the *Southwest Corner Lot Enhanced Reductive Dechlorination Implementation Work Plan*, Former Honeywell El Segundo Site, 850 South Sepulveda Boulevard, El Segundo, California dated March 30, 2012.
13. Proposed scheduling:
Injection activities are expected to take approximately 1 year.
14. Associated projects: N/A.
15. Anticipated incremental development:
Land use will remain the same.
16. If residential, include the number of units, schedule of unit sizes, range of sale prices or rents, and type of household size expected: N/A
17. If commercial, indicate the type, whether neighborhood, city, or regionally oriented, square footage of sales area, and loading facilities:
The Southwest Corner Lot is 4.7 acres that is in the process of being redeveloped.
18. If industrial, indicate type, estimated employment per shift, and loading facilities: N/A.
19. If institutional, indicate the major function, estimated employment per shift, estimated occupancy, loading facilities, and community benefits to be derived from the project: N/A.
20. If the project involves a variance, conditional use, or zoning application, state this and indicate clearly why the application is required: N/A.

Are the following items applicable to the project or its effects? (Discuss below all items checked "Yes")

- | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------|
| 21. Change in existing features of any bays, tidelands, beaches, lakes, or hills, or substantial alteration of ground contours. | [] Yes | [X] No |
| 22. Change in scenic views or vistas from existing residential areas or public lands or roads. | [] Yes | [X] No |
| 23. Change in pattern, scale, or character of general area of project. | [] Yes | [X] No |
| 24. Significant amounts of solid waste or litter. | [] Yes | [X] No |
| 25. Change in dust, ash, smoke, fumes, or odors in vicinity. | [] Yes | [X] No |
| 26. Change in ocean, bay, lake, stream, or groundwater quality or quantity, or alteration of existing drainage patterns.
The application of in situ bioremediation with bioaugmentation culture will improve groundwater quality by enhancing the growth of bacteria that degrade chlorinated ethene contamination in groundwater. No depletion of groundwater supplies will occur as part of the proposed project. | [X] Yes | [] No |
| 27. Substantial change in existing noise or vibration levels in the vicinity. | [] Yes | [X] No |
| 28. Site on filled land or on slope of 10 percent or more. | [] Yes | [X] No |
| 29. Use or disposal of potentially hazardous materials, such as toxic substances, flammables, or explosives. | [] Yes | [X] No |
| 30. Substantial change in demand for municipal services (police, fire, water, sewage, etc.). | [] Yes | [X] No |
| 31. Substantially increase fossil fuel consumption (electricity, oil, natural gas, etc.). | [] Yes | [X] No |
| 32. Relationship to a larger project or series of projects. | [] Yes | [X] No |

Environmental Setting

33. Describe the project as it exists before the project, including information on topography, soil stability, plants and animals, and any cultural, historical, or scenic aspects. Describe any existing structures on the site and the use of the structures. Attach photographs of the site. Snapshots or Polaroid photos will be accepted.

No change in the site topography, soil stability, plants and animals, and any cultural, historical or scenic aspects will occur during this project.

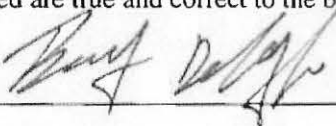
34. Describe the surrounding properties, including information on plants and animals and any cultural, historical, or scenic aspects. Indicate the type of land use (residential, commercial, etc.), intensity of land use (one-family, apartment houses, shops, department stores, etc.), and scale of development (height, frontage, set-back, rear yard, etc.). Attach photographs of the vicinity. Snapshots or Polaroid photos will be accepted.

The surrounding properties consist of commercial and residential facilities that are covered in pavement. There is a commercial shopping center (Plaza El Segundo) north of the Site and a commercial shopping center (Manhattan Village Center) to the south of the Site. Residential apartments and houses are west of the Site. East of the Site are residential houses.

Certification

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best of my ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Signature



Date September 12, 2013

Print Name

Benny Dehghi

For

Honeywell International Inc.

ENVIRONMENTAL CHECKLIST FORM

Initial Study – Part 2

1. Project title:
Enhanced Reductive Dechlorination of Volatile Organic Compounds Impacted Groundwater
2. Lead agency name and address:
California Regional Water Quality Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, California 90013
3. Contact person and phone number:
Ann Chang
213-620-6122
4. Project location:
850 South Sepulveda Boulevard
El Segundo, California 90245
5. Project sponsor's name and address:
Benny DeHghi
Manager, Remediation & Evaluation Services
Honeywell International Inc.
2525 West 190th Street
Torrance, California 90504
6. General plan designation:
CH2M Hill Inc., *Southwest Corner Lot Enhanced Reductive Dechlorination Implementation Work Plan*, dated March 30, 2012
7. Zoning:
Commercial

8. Description of project:

Under the oversight of the California Regional Water Quality Control Board, Los Angeles Region (Regional Board), Honeywell International, Inc. proposes to implement periodic injections of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water into the subsurface for remediation of volatile organic compounds (VOCs) impacted groundwater beneath the Southwest Corner Lot (SWCL) of the former Honeywell El Segundo facility (Site). The bioaugmentation culture is an enriched natural bacteria culture that contains *Dehalococcoides* species which can promote complete degradation of chlorinated VOCs.

Any injection of chemicals and/or materials into groundwater is a discharge of waste as defined in the California Water Code. However, the proposed discharge of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water is intended to improve water quality by providing more efficient remediation of VOCs impacted groundwater and is expected to significantly reduce groundwater cleanup time and costs. The site-specific waste discharge requirements will cover the use of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water.

In accordance with the California Environmental Quality Act (CEQA), the Regional Board has prepared an Initial Study and Negative Declaration. The Initial Study documents the reasons to support the finding of the Negative Declaration that the project will not have a significant adverse effect on the environment.

9. Surrounding land uses and setting: Briefly describe the project's surroundings:

The estimated 4.7 acre SWCL is located 0.5 miles south of Plaza El Segundo and in predominately commercial area of El Segundo, California. The site vicinity is developed and is relatively void of natural, open, or unimproved land area.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

Los Angeles County Department of Public Health Well Permits

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, as indicated by the checklist on the following pages.

- | | | |
|---------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards & Hazardous Materials | <input checked="" type="checkbox"/> Hydrology/Water Quality |
| <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation/Traffic | <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- ☒ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Samuel Unger, P.E.
Executive Officer
Los Angeles Regional Water Quality Control Board

Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

Potential environmental impacts associated with the proposed project are provided below in a checklist format developed pursuant to the California Environmental Quality Act (CEQA) Guidelines. The checklist has been used to assess the significance or insignificance of each potential impact. A brief explanation of each conclusion is provided after the checklists. Mitigation measures, as required, are discussed below each checklist.

Impact classifications used in the checklist are defined as follows:

"Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an Environmental Impact Report (EIR) is required.

"Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from **"Potentially Significant Impact"** to a **"Less Than Significant Impact."** The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.

"Less Than Significant Impact" applies to an effect that would not be significantly adverse.

"No Impact" applies where the effect occurs without impact.

I. AESTHETICS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?				X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X

The proposed project is located at a heavy commercial area. The proposed injection and monitoring wells will be located below grade in an area of existing paving and will not be visible to adjacent streets or businesses.

Mitigation Measures

The proposed project would not result in any impacts to aesthetics. Therefore, no mitigation is required.

II. AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

The proposed project location is not within existing zoning for agricultural use and forest land use.

Mitigation Measures

The proposed project would not result in any impacts to agriculture and forestry resources. Therefore, no mitigation is required.

III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?				X
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				X
d) Expose sensitive receptors to substantial pollutant concentrations?				X
e) Create objectionable odors affecting a substantial number of people?				X

The proposed project is not anticipated to impact air quality because there will be no emissions to air.

Mitigation Measures

The proposed project would not result in any impacts to air quality. Therefore, no mitigation is required.

IV. BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?				X
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

The proposed project is located at a heavy commercial area. There are no known species identified as a candidate, sensitive, or special status species on the Site. The Site does not contain riparian habitat, a sensitive natural community, federally protected wetlands, migratory wildlife corridors, or native wildlife nursery sites.

Mitigation Measures

The proposed project would not result in any impact to biological resources. Therefore, no mitigation is required.

V. CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?				X
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
d) Disturb any human remains, including those interred outside of formal cemeteries?				X

The proposed project is located at a heavy commercial area. There are no known historic, archaeological, paleontological or unique geologic resources that exist at the Site.

Mitigation Measures

The proposed project would not result in any impacts to cultural resources. Therefore, no mitigation is required.

VI. GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				X
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
ii) Strong seismic ground shaking?				X
iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?				X
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X

There will be no potential for project-related landslide, lateral spreading, subsidence, liquefaction or collapse.

Mitigation Measures

The proposed project would not result in any impacts to geology and soils. Therefore, no mitigation is required.

VII. GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?				X
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X

The proposed project is not anticipated to impact greenhouse gas emissions because there will be no emissions to air.

Mitigation Measures

The proposed project would not result in any impacts to greenhouse gas emissions. Therefore, no mitigation is required.

VIII. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

The personnel who will implement the proposed project will be trained regarding potential safety and health risks associated with the activities as described in the site-specific and contractor specific Health and Safety Plans. The health and safety training and monitoring plans will limit hazardous material or waste discharged to the public and the environment. A contingency plan will be developed and maintained on site. The contingency plan shall detail appropriate actions to be taken in order to protect human health and the environment in case of any spill or failure related to the operation or mis-operation of the treatment system.

Mitigation Measures

The proposed project includes mitigation measures and would not result in any significant impacts to hazards and hazardous materials. Therefore, no additional mitigation is required.

IX. HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?			X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				X
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				X
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				X
f) Otherwise substantially degrade water quality?				X
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j) Inundation by seiche, tsunami, or mudflow?				X

The application of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water to groundwater may result in unintended adverse impacts to groundwater quality, but impacts that may result will be localized, of short-term duration, and will not impact any existing or prospective beneficial uses of groundwater. The addition of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water will improve groundwater conditions by promoting complete degradation of chlorinated volatile organic compounds.

A groundwater sampling and analysis program will be conducted prior to, during, and after implementation of the proposed discharges to closely monitor groundwater conditions. Honeywell International Inc. will monitor presence and concentration of injection solution, evaluate flow conditions, and implement mitigation measures if necessary to prevent further migration of waste constituents outside the application area or treatment zone at compliance point(s).

Mitigation Measures

The proposed project includes mitigation measures and would not result in any significant impacts to hydrology and water quality. Therefore, no additional mitigation is required.

X. LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

The proposed project will not result in any land use and planning impacts.

Mitigation Measures

The proposed project would not result in any impacts to land use and planning. Therefore, no mitigation is required.

XI. MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

The project site has no known mineral resources.

Mitigation Measures

The proposed project would not result in any impacts to mineral resources. Therefore, no mitigation is required.

XII. NOISE

Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				X
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

Noise levels will be similar to those of the existing and nearby operations.

Mitigation Measures

The proposed project would not result in any impacts to noise. Therefore, no mitigation is required.

XIII. POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

Population growth will not be affected and displacement of housing or people will not occur.

Mitigation Measures

The proposed project would not result in any impacts to population and housing. Therefore, no mitigation is required.

XIV. PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?				X
Police protection?				X
Schools?				X
Parks?				X
Other public facilities?				X

The proposed project will not generate an increase in the demand for public services.

Mitigation Measures

The proposed project would not result in any impacts to public services. Therefore, no mitigation is required.

XV. RECREATION

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

The proposed project will not result in any recreation impacts.

Mitigation Measures

The proposed project would not result in any impacts to recreation. Therefore, no mitigation is required.

XVI. TRANSPORTATION AND TRAFFIC

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?				X
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?				X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?				X
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				X

The proposed project is not expected to create a significant load to the existing surface street.

Mitigation Measures

The proposed project would not result in any impacts to transportation and traffic. Therefore, no mitigation is required.

XVII. UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				X
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X

The proposed project will not result in any utility and service system impacts.

Mitigation Measures

The proposed project would not result in any impacts to utilities and service systems. Therefore, no mitigation is required.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				X
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?				X
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				X

The proposed project would not have any of the described impacts. The proposed project is expected to result in positive benefits of improving groundwater quality.

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

320 West 4th Street, Suite 200, Los Angeles, California 90013
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<http://www.waterboards.ca.gov/losangeles/>

**ORDER NO. R4-2013- XXXX
MONITORING AND REPORTING PROGRAM NO. CI-9796**

**WASTE DISCHARGE REQUIREMENTS
FOR
HONEYWELL INTERNATIONAL, INC.
ENHANCED REDUCTIVE DECHLORINATION OF
VOLATILE ORGANIC COMPOUNDS IMPACTED GROUNDWATER AT
SOUTHWEST CORNER LOT OF FORMER HONEYWELL EL SEGUNDO FACILITY
(FILE NO. 11-190)**

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

1. Honeywell International, Inc. (hereinafter Discharger) has filed a Report of Waste Discharge and applied for Waste Discharge Requirements (WDRs) to use appropriate reagents (pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water) for remediation of volatile organic compounds (VOCs) impacted groundwater beneath the Southwest Corner Lot (SWCL) of the former Honeywell El Segundo facility (Site).
2. The Site is located at 850 South Sepulveda Boulevard in the City of El Segundo, California. It is bounded by Sepulveda Boulevard to the west, Hughes Way to the north, Nash Street to the east, and Rosecrans Avenue to the south (Figure 1). The Site was divided into three parcels: the 37.3-acre former Refrigerant Plant parcel, which includes unlined natural depression (UND) areas 1 through 3; the 12.9-acre UND-4 and UND-5 parcels; and the 4.7-acre SWCL parcel.
3. The Site is situated in the West Coast Basin of the Coastal Plain of the Los Angeles Groundwater Basin. Groundwater beneath the Site is encountered at depths ranging from approximately 80 to 130 feet below ground surface (bgs) and the flow direction varies across the Site but is generally toward the east/southeast.
4. Industrial operations started at the Site in the 1920s and included the production of refrigerant products, sulfuric and hydrochloric acids, sodium salts, calcium/ammonium polysulfide, aluminum chloride, aluminum sulfate, and phthalic anhydride, as well as packaging and distribution of pesticides and the blending, packaging, distribution and storage of solvents. Honeywell International, Inc. discontinued operations at the Site in February 2003 and decommissioned facilities and structures to facilitate property redevelopment.

5. The Discharger has conducted environmental investigations at the Site since the mid-1990s under the regulatory oversight of the Regional Board. The results indicated soil and groundwater beneath the Site have been contaminated with VOCs. The VOCs groundwater plume that originates at the SWCL area consists primarily of trichloroethene (TCE) and cis-1,2-dichloroethene (cDCE). The May 2013 groundwater monitoring results indicated that TCE and cDCE were detected at concentrations up to 26,000 micrograms per liter ($\mu\text{g/L}$) and 25,000 $\mu\text{g/L}$, respectively in the vicinity of the SWCL area.
6. A soil vapor extraction (SVE) system was constructed in the SWCL area and operated between 2007 and 2011 for soil remediation. During the approximately 42-month operating period, the SVE system recovered and treated approximately 9,675 pounds of total VOCs, which included 3,552 pounds of TCE and 6,085 pounds of cDCE.
7. The air sparging pilot test system was operated in the SWCL area between 2010 and 2011 for groundwater remediation. The pilot test activities were implemented to assess the feasibility of air sparging technology for remediating VOCs in groundwater beneath the SWCL area. The pilot test results indicated that air sparging has limited effectiveness as a remedial technology for the treatment of VOCs impacted groundwater at the SWCL area.
8. The Discharger submitted the *Southwest Corner Lot Enhanced Reductive Dechlorination Implementation Work Plan* (Work Plan), dated March 30, 2012, to describe a phased approach for the treatment of the chlorinated ethene groundwater plume that originates at the SWCL area. The initial phase involves a small-scale implementation of enhanced reductive dechlorination (ERD) system to obtain information necessary for optimization of the full-scale ERD system design.
9. The Work Plan proposes to initiate the ERD process by delivery of appropriate reagents, including pH buffer (sodium hydroxide, sodium carbonate, and magnesium oxide), organic substrates (emulsified oil and cheese whey), tracer (Rhodamine WT), bioaugmentation culture (Terra Systems *Dehalococcoides ethenogenes* Bioaugmentation Culture®), and anaerobic chase water, into the subsurface for creating a reducing condition in groundwater to facilitate reductive dechlorination of chlorinated VOCs. On September 20, 2012, the Regional Board approved the Work Plan.
10. The SWCL at the Site encompasses approximately 4.7 acres (Latitude 33°54'11.5" North, Longitude 118°23'43.6" West) and is an unpaved lot that is awaiting construction for commercial use. The SWCL treatment zone covers two locations, near monitoring wells AS-MW-19 and AS-MW-28 which are located within the VOCs groundwater plume that contains TCE and cDCE at a combined concentration greater than 5,000 $\mu\text{g/L}$ (Figure 2).
11. During the implementation of the proposed discharges, a total of 100,000 gallons of pH buffer solution, 160,000 gallons of 3% organic substrate solution, 12 gallons of tracer solution, 12 liters of bioaugmentation culture, and 8,000 gallons of anaerobic chase water will be injected into four injection wells (SIW-01 through SIW-04) at depths approximately from 100 to 130 feet bgs. Depending on monitoring results, the injection activities will take place intermittently over 12-month period.
12. Amendment solution will be injected into the subsurface using a mobile injection system with an injection rate up to 10 gallons per minute. Bioaugmentation must be conducted after sufficiently reducing conditions and neutral pH have been established in groundwater. Bioaugmentation

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culture will be injected into the injection wells under pressurized nitrogen gas and flushed with anaerobic chase water.

13. The use of bioaugmentation culture will promote complete degradation of chlorinated VOCs. The bioaugmentation culture is an enriched natural bacteria culture that contains *Dehalococcoides* species for bioaugmentation. It can be used at sites where bacteria capable of complete reductive dechlorination are not present, are present but at low numbers, or there is a need to decrease the remediation time frame. The bioaugmentation culture is certified to be free of known human pathogens and is not genetically modified or engineered.
14. Anaerobic chase water will be used to improve the distribution of bioaugmentation culture in groundwater around the injection wells. Anaerobic chase water will be prepared by adding EHC® ISCR Amendment (FMC Corporation) to the water, approximately 1 pound per 100 gallons, mixing and allowing approximately 24 hours for the water to become anaerobic. The water will be tested for dissolved oxygen concentration to ensure that the chase water is anaerobic before being pumped into the injection wells.
15. The Discharger proposed to conduct a groundwater sampling and analysis program prior to, during, and after implementation of the proposed discharges to closely monitor groundwater conditions. The Discharger will monitor presence and concentration of injection solution, evaluate flow conditions, and implement mitigation measures if necessary to prevent further migration of waste constituents outside the application area or treatment zone at compliance point(s).
16. The Discharger proposed to implement control measure if *Dehalococcoides ethenogenes* are detected in the monitoring point outside the treatment zone (monitoring well AS-MW-60). The control measure will involve stopping further addition of organic substrates to the groundwater. After the control measure has been implemented, it is expected that the remaining organic substrates in the groundwater will naturally break down and allowing the groundwater system to return to aerobic conditions. The bioaugmentation culture requires organic substrates (food sources), VOCs, and anaerobic conditions to survive. Given these growth requirements, the bioaugmentation culture will not survive due to the loss of the food sources and anaerobic conditions.
17. The application of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water to groundwater may result in unintended adverse impacts to groundwater quality, but impacts that may result will be localized, of short-term duration, and will not impact any existing or prospective beneficial uses of groundwater. The addition of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water will improve groundwater conditions by promoting complete degradation of chlorinated VOCs.
18. On January 14, 2013, the Regional Board enrolled the Discharger under the general WDRs (WDR Order No. R4-2007-0019) with a Monitoring and Reporting Program (MRP) No. CI-9796 for the injection of pH buffer, organic substrates, and tracer for groundwater remediation of chlorinated VOCs at the SWCL of the Site.
19. The WDR Order No. R4-2007-0019 does not cover the use of bioaugmentation culture and anaerobic chase water. Therefore, these site-specific waste discharge requirements will cover the addition of bioaugmentation culture and anaerobic chase water for groundwater remediation at

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the SWCL of the Site. The site-specific WDRs will also cover the use of pH buffer, organic substrates, and tracer. Consequently, the general WDRs coverage will be terminated once the site-specific WDRs are adopted.

20. California Water Code (CWC) section 13260 requires any person who discharges waste or proposes to discharge waste that could affect the quality of the waters of the state is required to submit a report of waste discharge. CWC section 13263 authorizes the Regional Board to issue waste discharge requirements that implement the water quality control plan (Basin Plan). The injection of chemicals and/or materials into groundwater is a discharge of waste as defined in section 13050 of the CWC and is subject to CWC sections 13260 and 13263. In this case, the discharge of pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water is intended to improve water quality by providing more efficient remediation of VOCs impacted groundwater and is expected to significantly reduce groundwater cleanup time and costs.

APPLICABLE PLANS, POLICIES AND REGULATIONS

21. The Regional Board adopted a revised Water Quality Control Plan for the Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan) on June 13, 1994, which has been amended by various Regional Board resolutions. The Basin Plan (i) designates beneficial uses for surface and groundwater, (ii) establishes narrative and numerical water quality objectives that must be attained or maintained to protect the designated (existing and potential) beneficial uses and conform to the State's antidegradation policy, and (iii) includes implementation provisions, programs, and policies to protect all waters in the Region. In addition, the Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. The requirements contained in this Order, as they are met, will be in conformance with the Basin Plan.
22. The former Honeywell El Segundo facility is located in the Coastal Plain hydrologic area and overlies the West Coast Basin of the Coastal Plain of the Los Angeles Groundwater Basin. The Basin Plan designates beneficial uses for the West Coast Basin as follow:
- Existing: municipal and domestic supply, industrial service supply,
 industrial process supply, and agricultural supply.
23. State Water Resources Control Board (State Board) Resolution No. 68-16 (hereafter Resolution No. 68-16 or the "Antidegradation" Policy) requires the Regional Board in regulating the discharge of waste to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the Regional Board's policies (e.g., quality that exceeds water quality objectives). Resolution No. 68-16 requires that any discharge that could degrade the waters of the State be regulated to assure use of best practicable treatment or control (BPTC) of the discharge to assure that pollution or nuisance will not occur, and the highest water quality consistent with maximum benefit to the people of the State will be maintained.
24. Section 13267(d) of the CWC states, in part, that "a regional board may require any person, including a person subject to a waste discharge requirements under Section 13263, who is

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discharging, or who proposes to discharge, wastes or fluid into an injection well, to furnish the state board or regional board with a complete report on the condition and operation of the facility or injection well, or any other information that may be reasonably required to determine whether the injection well could affect the quality of the waters of the state.”

CALIFORNIA ENVIRONMENTAL QUALITY ACT AND NOTIFICATION

25. The Regional Board is the lead agency for this project under the California Environmental Quality Act (CEQA) [Public Resources Code section 21000 et seq.] and has conducted an Initial Study in accordance with section 15063 of the “State CEQA Guidelines” at California Code of Regulations (CCR), title 14, section 15000 et seq.
26. Based upon the Initial Study and the associated Negative Declaration, the project will not have a significant adverse effect on the environment in Resolution No. R13-XXX.

The Regional Board has notified the Discharger and interested agencies and persons of the intent to issue WDRs for this discharge, and has provided them with an opportunity to submit written and oral comments. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge and to the tentative requirements.

Any person aggrieved by this action of the Regional Board may petition the State Water Board to review the action in accordance with the CWC section 13320 and CCR, title 23, sections 2050 and following. The State Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Board by 5:00 p.m. on the next business day at P.O. Box 100, Sacramento, California, 95812, within 30 days of the date this Order is adopted. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality
or will be provided upon request.

IT IS HEREBY ORDERED that the Discharger, Honeywell International, Inc., shall be responsible for and shall comply with the following requirements in all operations and activities at the former Honeywell El Segundo facility:

A. DISCHARGE LIMITATIONS AND SPECIFICATIONS

1. During the implementation of the proposed discharges, a total of 100,000 gallons of pH buffer solution, 160,000 gallons of 3% organic substrate solution, 12 gallons of tracer solution, 12 liters of bioaugmentation culture, and 8,000 gallons of anaerobic chase water will be injected into four injection wells (SIW-01 through SIW-04) at depths approximately from 100 to 130 feet bgs. The injection volumes shall not exceed the aforementioned volumes.
2. The proposed discharge shall not cause the pH of the receiving groundwater at the compliance point, downgradient outside the treatment zone, beyond the range of 6.5 and 8.5.

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3. The proposed discharge shall not cause the receiving groundwater at the compliance point, downgradient outside the treatment zone, in excess of 800 milligrams per liter (mg/L) of total dissolved solid, 250 mg/L of sulfate, 250 mg/L of chloride, and 1.5 mg/L of boron or background concentrations established prior to start of injection activities.
4. Discharge duration for the proposed injection shall not exceed 12 months.

B. DISCHARGE PROHIBITIONS

1. The Discharger shall not cause the amendments and any by-products of the remediation process to migrate outside of the treatment zone. The Discharger shall stop further addition of amendments to the groundwater if amendments are observed to be migrating beyond the treatment zone.
2. The discharges of the amendments and any by-products of the remediation process into any surface water or surface water drainage course are prohibited.
3. The proposed discharge shall not create pollution, contamination, or nuisance as defined by the CWC, section 13050.
4. The proposed discharge shall not cause the receiving groundwater to contain concentrations of chemical substances or their by-products in amounts that adversely affect any designated beneficial use outside the application area or treatment zone at the compliance point(s). If adverse impact occur outside the application area or treatment zone, mitigation measures shall be implemented if necessary. A contingency plan including design, installation, and implementation of mitigation measures shall be submitted to the Regional Board for Executive Officer approval by **February 7, 2014**.
5. The proposed discharge shall not cause the receiving groundwater to contain taste or odor in concentrations that cause nuisance or adversely affect any designated beneficial uses, outside the application area or treatment zone at the compliance point(s).

C. PROVISIONS

1. 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.
2. Discharge of wastes to any point other than specifically described in this Order is prohibited.
3. In the event of any change in name, ownership, or control of the site, the Discharger shall notify this Regional Board in writing and shall notify any succeeding owner or operator of the existence of this Order by a letter, a copy of which shall be forwarded to the Regional Board.

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4. A copy of this Order shall be maintained at an on-site office and be available at all times to operating personnel.
5. The Discharger shall file a report of any material change or proposed change in the character, location or volume of discharge.
6. The Discharger shall notify the Regional Board within 24 hours by telephone of any adverse condition resulting from this discharge or from operations producing this waste discharge, such notifications shall be affirmed in writing within one week from the date of such occurrence.
7. The Regional Board considers the Discharger to have continuing responsibility of correcting any problem that may arise in the future as a result of the proposed discharge.
8. All work must be performed by or under the direction of a professional civil engineer or professional geologist registered in the State of California. A statement is required in all technical reports that the qualified professional in direct responsible charge actually supervised or personally conducted all the work associated with the project.
9. 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-9796. Violation of any conditions may result in enforcement action, including Regional Board or Court Order requiring corrective action or imposition of civil monetary liability, or revision, or rescission of the Order.
10. This Order does not alleviate the responsibility of discharger 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.
11. The Discharger shall develop a contingency plan and maintain it on site. The contingency plan shall detail appropriate actions to be taken in order to protect human health and the environment in case of any spill or failure related to the operation or misoperation of the treatment system.
12. The Discharger shall cleanup and abate the effects of injecting amendment solution as specified in this Order, including extraction of any by-products which adversely affect beneficial uses, and shall provide an alternate water supply source for municipal, domestic or other water use wells that become polluted in exceedance of water quality objectives as a result of the proposed discharge.
13. The WDRs contained in this Order will remain in effect and will be reviewed after five (5) years. Should the Discharger wish to continue discharging to groundwater for a period of time in excess of 5 years, the Discharger must file an updated Report of Waste Discharge with the Regional Board no later than 120 days in advance of the fifth-year anniversary date of the Order for consideration of issuance of new or revised waste discharge requirements.

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14. In accordance with CWC 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 waters of the state are privileges, not rights.
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 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. The Regional Board, through its Executive Officer, will modify the Monitoring and Reporting Program, as necessary. The CEQA Initial Study and associated public comment were conducted once as part of the WDR permit application process and will not be required for the expansion or modification of this remediation program.

D. ELECTRONIC SUBMITTAL OF INFORMATION

The Discharger shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all reports required under the WDRs, including groundwater monitoring data in Electronic Data Format, discharge location data, and searchable Portable Document Format of reports and correspondence, to the State Water Resources Control Board GeoTracker database under Global ID WDR100008212.

E. REOPENER

1. The Regional Board may modify, or revoke and reissue this Order if present or future investigations demonstrate that the discharge(s) governed by this Order will cause, have the potential to cause, or will contribute to adverse impacts on water quality and/or beneficial uses of the receiving waters.
2. This Order may be reopened to include additional or modified requirements to address Discharger's expansion or mitigation plans, Basin Plan mandates, or groundwater limitation compliance with Resolution No. 68-16.

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 November 7, 2013.

Samuel Unger, P. E.
Executive Officer

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LEGEND

 Honeywell Site Boundary

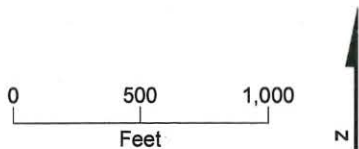


FIGURE 1
Site Location

Former Honeywell El Segundo Facility, El Segundo California



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○ Old Dune Sand (ODS) Aquifer Monitoring Well

● Injection Well

--- Honeywell Site Boundary

→ Apparent Direction of Groundwater Flow, May 2013

AS-MW-60 WDR Monitoring Well

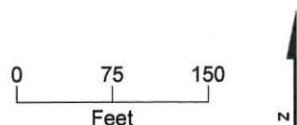


FIGURE 2
Proposed Injection Area

Former Honeywell El Segundo Facility, El Segundo California

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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Standard Provisions Applicable to
Waste Discharge Requirements

- (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]

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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]

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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]

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Standard Provisions Applicable to
Waste Discharge Requirements

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

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Standard Provisions Applicable to
Waste Discharge Requirements

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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Standard Provisions Applicable to
Waste Discharge Requirements

"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 plan 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]

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**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

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(213) 576-6660 • Fax (213) 576-6640
<http://www.waterboards.ca.gov/losangeles/>

**MONITORING AND REPORTING PROGRAM NO. CI-9796
FOR
HONEYWELL INTERNATIONAL, INC.
ENHANCED REDUCTIVE DECHLORINATION OF
VOLATILE ORGANIC COMPOUNDS IMPACTED GROUNDWATER AT
SOUTHWEST CORNER LOT OF HONEYWELL EL SEGUNDO FACILITY
(FILE NO. 11-190)**

This Monitoring and Reporting Program (MRP) No. CI 9796 is issued pursuant to California Water Code section 13267, which authorizes the Regional Water Quality Control Board, Los Angeles Region (Regional Board) to require Honeywell International, Inc. (hereinafter Discharger) to submit technical and monitoring reports. The reports required herein are necessary to assure compliance with Waste Discharge Requirements (WDRs) Order No. R4-2013-XXXX and to protect the waters of the state and their beneficial uses. The evidence that supports the need for the reports is set forth in the WDRs and the Regional Water Board record.

I. REPORTING REQUIREMENTS

1. The Discharger shall implement this monitoring program on the effective date (November 7, 2013) of WDR Order No. R4-2013-XXXX. The next monitoring report under this Program is due by **January 15, 2014**. Subsequent monitoring reports shall be received by the Regional Board by the 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

2. If there is no discharge or injection, during any reporting period, the report shall so state. 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 calendar year. In addition, the Discharger shall discuss 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.
3. Laboratory analyses – all chemical, bacteriological, 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 is obtained from ELAP.

4. The method limits (MLs) employed for analyses shall be lower than the permit limits established for a given parameter, unless the Discharger can demonstrate that a particular ML is not attainable and obtains approval for a higher ML from the Executive Officer. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test and the associated laboratory quality assurance/quality control (QA/QC) procedures.
5. 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. Proper chain of custody procedures must be followed and a copy of the chain of custody documentation shall be submitted with the report.
6. Each monitoring report must affirm in writing that "All 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.
7. For every item where the requirements are not met, the Discharger shall submit a statement of the cause(s), and actions undertaken or proposed which will bring the discharge into full compliance with waste discharge requirements at the earliest possible time, including a timetable for implementation of those actions.
8. The Discharger shall maintain all sampling and analytical results, including strip charts, 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.
9. 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.
10. Any mitigation/remedial activity including any pre- or post-discharge treatment conducted at the Site must be reported in the monitoring report.
11. 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 discharge requirements, as well as all excursions of effluent limitations.

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II. DISCHARGE MONITORING PROGRAM

The monitoring reports shall contain the following information regarding the injection activities:

1. Location map showing injection points used for the pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water.
2. Written and tabular summary defining depth of injection points, quantity of the pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water injected at each injection point, and total amount of the pH buffer, organic substrates, tracer, bioaugmentation culture, and anaerobic chase water injected at the Site.
3. Visual inspection at each injection point shall be conducted and recorded during the injection.

III. GROUNDWATER MONITORING PROGRAM

A groundwater monitoring program shall be implemented to evaluate impacts associated with the injection activity. Groundwater samples shall be collected from monitoring wells AS-MW-19, AS-MW-21, AS-MW-28, AS-MW-60, PMW-01, and PMW-02 (Figure 2). The Discharger shall conduct a baseline sampling prior to the proposed injection, followed by specified schedules from all 6 monitoring wells for the following groundwater parameters:

Constituent	Units	Type of Sample	Minimum Frequency of Analysis
Dissolved Oxygen	mg/L	grab	Baseline, months 1, 2, and 3 after injection, and quarterly thereafter
Oxidation-Reduction Potential	millivolts	grab	Baseline, months 1, 2, and 3 after injection, and quarterly thereafter
pH	pH units	grab	Baseline, months 1, 2, and 3 after injection, and quarterly thereafter
Specific Conductivity	mS/cm	grab	Baseline, months 1, 2, and 3 after injection, and quarterly thereafter
Temperature	°C	grab	Baseline, months 1, 2, and 3 after injection, and quarterly thereafter
Turbidity	NTU	grab	Baseline, months 1, 2, and 3 after injection, and quarterly thereafter

Constituent	Units	Type of Sample	Minimum Frequency of Analysis
Total Organic Carbon	mg/L	grab	Baseline, months 1, 2, and 3 after injection, and quarterly thereafter
Total Dissolved Solids	mg/L	grab	Baseline, months 1, 2, and 3 after injection, and quarterly thereafter
Sulfate	mg/L	grab	Baseline, months 1, 2, and 3 after injection, and quarterly thereafter
Chloride	mg/L	grab	Baseline, months 1, 2, and 3 after injection, and quarterly thereafter
Boron	mg/L	grab	Baseline, months 1, 2, and 3 after injection, and quarterly thereafter
Nitrate and Nitrite	mg/L	grab	Baseline, months 1, 2, and 3 after injection, and quarterly thereafter
Title 22 Metals	mg/L	grab	Baseline, months 1, 2, and 3 after injection, and quarterly thereafter
Volatile Organic Compounds	µg/L	grab	Baseline, months 1, 2, and 3 after injection, and quarterly thereafter
Dissolved Gases (methane, ethane, and ethene)	µg/L	grab	Baseline, months 1, 2, and 3 after injection, and quarterly thereafter
<i>Dehalococcoides</i> species	cells/mL	grab	Baseline, months 1, 2, and 3 after injection, and quarterly thereafter
Rhodamine WT	µg/L	grab	Baseline, months 1, 2, and 3 after injection, and quarterly thereafter

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

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

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IV. MONITORING FREQUENCIES

Monitoring frequencies may be adjusted to a less frequent basis or parameters dropped by the Executive Officer if the Discharger makes a request and the Executive Officer determines that the request is adequately supported by statistical trends of monitoring data submitted.

V. ELECTRONIC SUBMITTAL OF INFORMATION

The Discharger shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all reports required under the MRP, including groundwater monitoring data in Electronic Deliverable Format, discharge location data, and searchable Portable Document Format of monitoring reports to the State Water Resources Control Board GeoTracker database under Global ID WDR100008212.

VI. CERTIFICATION STATEMENT

Each report shall contain the following completed 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)"

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

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

Date: November 7, 2013

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