



Los Angeles Regional Water Quality Control Board

October 21, 2019

Mr. David Espy
AECOM
250 Apollo Drive
Chelmsford, Massachusetts 01824

Certified Mail
Return Receipt Required
Claim No. 7018 2290 0001 8905 2916

REVISED MONITORING AND REPORTING PROGRAM NO. CI-10357 – HITCO GARDENA FACILITY, 1600 WEST 135TH STREET, GARDENA, CALIFORNIA (FILE NO. 17-092, ORDER NO. R4-2014-0187, SERIES NO. 105, CI-10357, GLOBAL ID. WDR100039755)

Dear Mr. Espy:

On September 22, 2017, the Los Angeles Regional Water Quality Control Board (Regional Water Board) enrolled Gardena Holdings Inc. (Discharger) under General Waste Discharge Requirements (WDR) for In-Situ Groundwater Remediation and Groundwater Re-injection, Order No. R4-2014-0187, with a Monitoring and Reporting Program (MRP) No. CI-10357. The existing WDR coverage includes a pilot test of injection of ethanol, sodium lactate, and sodium bicarbonate for groundwater remediation of volatile organic compounds (VOCs) at the Hitco Gardena Facility and a pilot test of injection of potassium permanganate for treatment of VOCs downgradient of the Hitco Gardena Facility.

Based on the evaluation of both pilot test results, the Discharger submitted the *In Situ Anaerobic Bioremediation Pilot Test Report* (ISAB Report) dated June 10, 2019 to propose the full-scale implementation of ISAB treatment at on-site source area and the *Off-Site In Situ Chemical Oxidation Pilot Test Report* (ISCO Report) dated June 4, 2019 to propose the full-scale implementation of ISCO treatment at off-site leading edge of the VOCs plume. On July 11, 2019, the Regional Water Board Site Cleanup Unit staff approved the ISAB Report and ISCO Report.

It is estimated that 25,228,800 gallons of amendment solution containing 21,000 pounds of ethanol, 200 pounds of sodium bicarbonate, 200 pounds of cysteine, 169 gallons (640 liters) of bioaugmentation culture (*Dehalococcoides sp.*), and 20,000 gallons of anaerobic water will be injected into eight injection wells (SIW-01 through SIW-04 and DIW-01 through DIW-04) at depths from approximately 5 to 75 feet below ground surface (bgs).

IRMA MUÑOZ, CHAIR | RENEE PURDY, EXECUTIVE OFFICER

In addition, it is estimated that 140,000 gallons of 3% potassium permanganate solution will be injected into seven injection wells (IW-01 through IW-07) at depths from approximately 30 to 70 feet bgs.

The revised MRP, which incorporates the full-scale ISAB treatment and ISCO treatment, is enclosed. The Discharger shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all reports required under the revised MRP, including groundwater monitoring data, discharge location data, and pdf monitoring reports to the State Water Resources Control Board GeoTracker database under Global ID WDR100039755. Please do not combine other reports with your monitoring reports. Submit each type of report as a separate document.

For all parties who upload electronic documents to State Database GeoTracker, it is no longer necessary to email a copy of these documents to losangeles@waterboards.ca.gov or submit hard copies to our office. The Regional Board will no longer accept documents (submitted by either hard copy or email) already uploaded to GeoTracker. Please see Electronic Submittal to the Los Angeles Regional Board for GeoTracker Users dated December 12, 2011 at:

<http://www.waterboards.ca.gov/losangeles/resources/Paperless/Paperless%20Office%20for%20GT%20Users.pdf>

To avoid paying future annual fees, please submit a written request for termination of your enrollment under the general WDR in a separate letter when the project is completed and the WDR is no longer needed. Be aware that the annual fee covers the fiscal year billing period beginning July 1 and ending June 30, the following year. You will pay the full annual fee if your request for termination is made after the beginning of the new fiscal year beginning July 1.

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

Sincerely,



Renee Purdy
Executive Officer

Enclosures: Revised Monitoring and Reporting Program No. CI-10357 dated October 21, 2019

cc: Mr. Assaf Rees, AECOM

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

REVISED MONITORING AND REPORTING PROGRAM NO. CI-10357
FOR
HITCO GARDENA FACILITY
1600 WEST 135TH STREET, GARDENA, CALIFORNIA

ENROLLMENT UNDER REGIONAL WATER BOARD
ORDER NO. R4-2014-0187 (SERIES NO. 105)
FILE NO. 17-092

I. MONITORING AND REPORTING REQUIREMENTS

- A. Gardena Holdings, Inc. (hereinafter Discharger) shall implement this Monitoring and Reporting Program (MRP) on the effective date (October 21, 2019) under Regional Water Board Order No. R4-2014-0187. The next monitoring report shall be received at the Regional Water Board by **January 30, 2020**. Subsequent monitoring reports shall be received at the Regional Water Board according to the following schedule:

<u>Monitoring Period</u>	<u>Report Due</u>
January – March	April 30
April – June	July 30
July – September	October 30
October – December	January 30

- B. If there is no discharge or injection, during any reporting period, the report shall so state. By March 1 of each year, the Discharger shall submit an annual summary report to the Regional Water 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.
- C. The Discharger shall comply with requirements contained in Section G of Regional Water Board Order No. R4-2014-0187 “*Monitoring and Reporting Requirements*”.

II. IN SITU ANAEROBIC BIOREMEDIATION

A. DISCHARGE MONITORING PROGRAM

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

1. Location map showing injection points used for ethanol, sodium bicarbonate, cysteine, bioaugmentation culture, and anaerobic water.
2. Written and tabular summary defining date of injection, depth of injection points, quantity and concentration of ethanol, sodium bicarbonate, cysteine, bioaugmentation culture, and anaerobic water injected at each injection point, and total amount of ethanol, sodium bicarbonate, cysteine, bioaugmentation culture, and anaerobic water injected at the Site.
3. Visual inspection at each injection point shall be conducted and recorded during the injection.

B. 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 DPEW-1, GE-1, GE-2, OW-02A, OW-02B, OW-02C, PMW-1, PMW-2, PRB-4A, PRB-4B, PRB-4C, SMW-02A, SMW-02B, SMW-02C, SMW-03A, SMW-03B, SMW-03C, and WCC-8 (Figure 1). The Discharger shall conduct a baseline sampling prior to the proposed injection, followed by specified schedules from all 18 monitoring wells for the following groundwater parameters:

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Dissolved Oxygen	mg/L	grab	Baseline and quarterly after injection
Oxidation-Reduction Potential	millivolts	grab	Baseline and quarterly after injection
pH	pH units	grab	Baseline and quarterly after injection

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Specific Conductivity	mS/cm	grab	Baseline and quarterly after injection
Temperature	°C	grab	Baseline and quarterly after injection
Turbidity	NTU	grab	Baseline and quarterly after injection
Total Organic Carbon	mg/L	grab	Baseline and quarterly after injection
Total Dissolved Solids	mg/L	grab	Baseline and quarterly after injection
Sulfate	mg/L	grab	Baseline and quarterly after injection
Chloride	mg/L	grab	Baseline and quarterly after injection
Boron	mg/L	grab	Baseline and quarterly after injection
Nitrate and Nitrite	mg/L	grab	Baseline and quarterly after injection
Volatile Organic Compounds	µg/L	grab	Baseline and quarterly after injection
Dissolved Gases (methane, ethane, and ethene)	µg/L	grab	Baseline and quarterly after injection
<i>Dehalococcoides</i> species	cells/mL	grab	Baseline and quarterly after injection

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

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

III. IN SITU CHEMICAL OXIDATION

A. DISCHARGE MONITORING PROGRAM

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

1. Location map showing injection points used for potassium permanganate solution.
2. Written and tabular summary defining date of injection, depth of injection points, quantity and concentration of potassium permanganate solution injected at each injection point, and total amount of potassium permanganate solution injected at the Site.
3. Visual inspection at each injection point shall be conducted and recorded during the injection.

B. 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 MH-14A, MH-14B, MH-14C, MH-15A, MH-15B, PRB-4A, and PRB-4B (Figure 2). The Discharger shall conduct a baseline sampling prior to the proposed injection, followed by specified schedules from all seven monitoring wells for the following groundwater parameters:

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Dissolved Oxygen	mg/L	grab	Baseline and quarterly after injection
Oxidation-Reduction Potential	millivolts	grab	Baseline and quarterly after injection
pH	pH units	grab	Baseline and quarterly after injection
Specific Conductivity	mS/cm	grab	Baseline and quarterly after injection

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Temperature	°C	grab	Baseline and quarterly after injection
Turbidity	NTU	grab	Baseline and quarterly after injection
Total Organic Carbon	mg/L	grab	Baseline and quarterly after injection
Total Dissolved Solids	mg/L	grab	Baseline and quarterly after injection
Sulfate	mg/L	grab	Baseline and quarterly after injection
Chloride	mg/L	grab	Baseline and quarterly after injection
Boron	mg/L	grab	Baseline and quarterly after injection
Nitrate and Nitrite	mg/L	grab	Baseline and quarterly after injection
Volatile Organic Compounds	µg/L	grab	Baseline and quarterly after injection
Manganese	mg/L	grab	Baseline and quarterly after injection

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

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

IV. MONITORING FREQUENCIES

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

V. 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)"

VI. PUBLIC DOCUMENTS

All records and reports submitted in compliance with Regional Water Board Order No. R4-2014-0187 and Monitoring and Reporting Program No. CI-10357 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, upon request by interested parties. Only proprietary information, and only at the request of the Discharger will be treated as confidential.

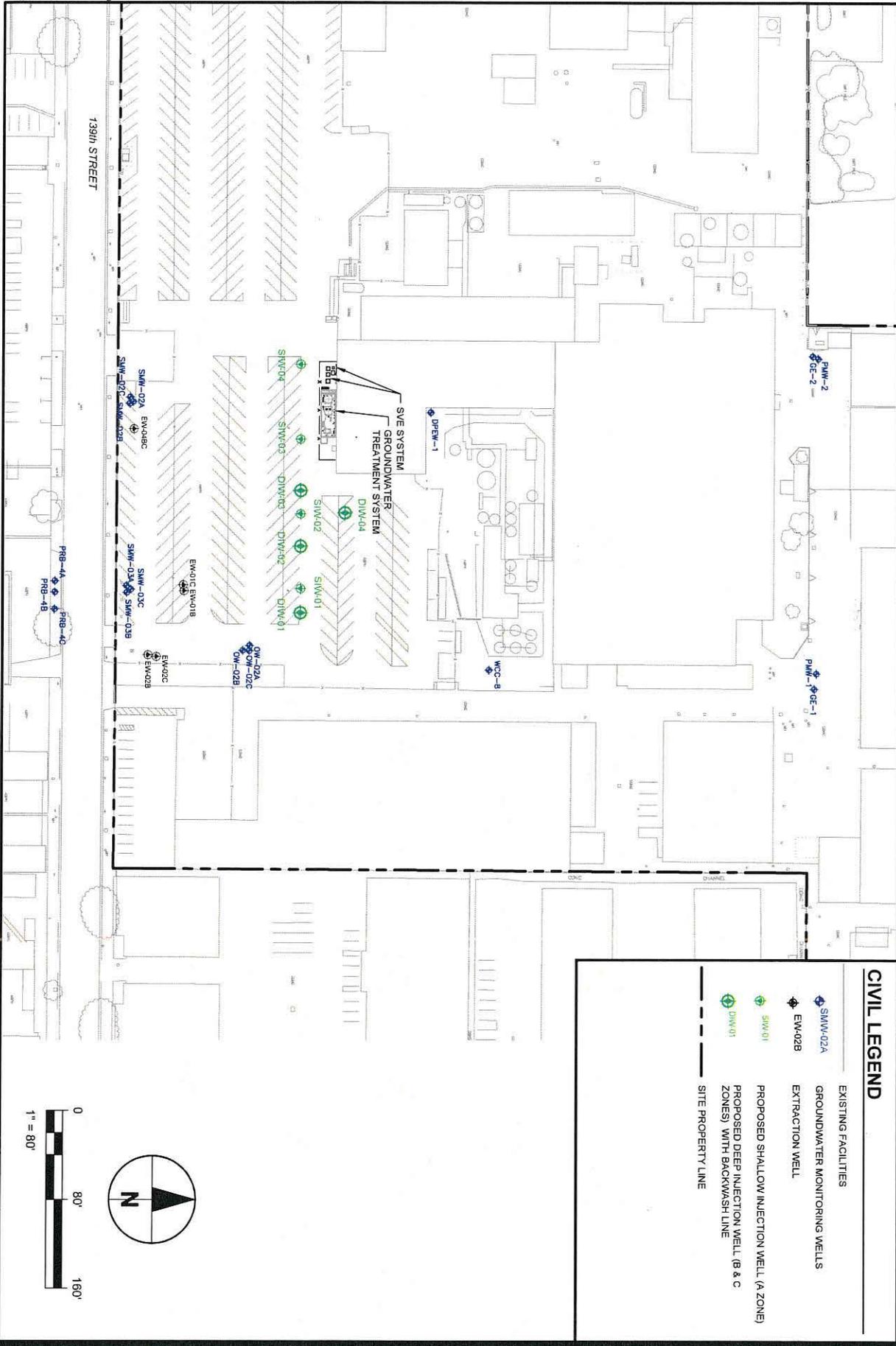
Hitco Gardena Facility
WDR Order No. R4-2014-0187
Revised Monitoring and Reporting Program No. CI-10357

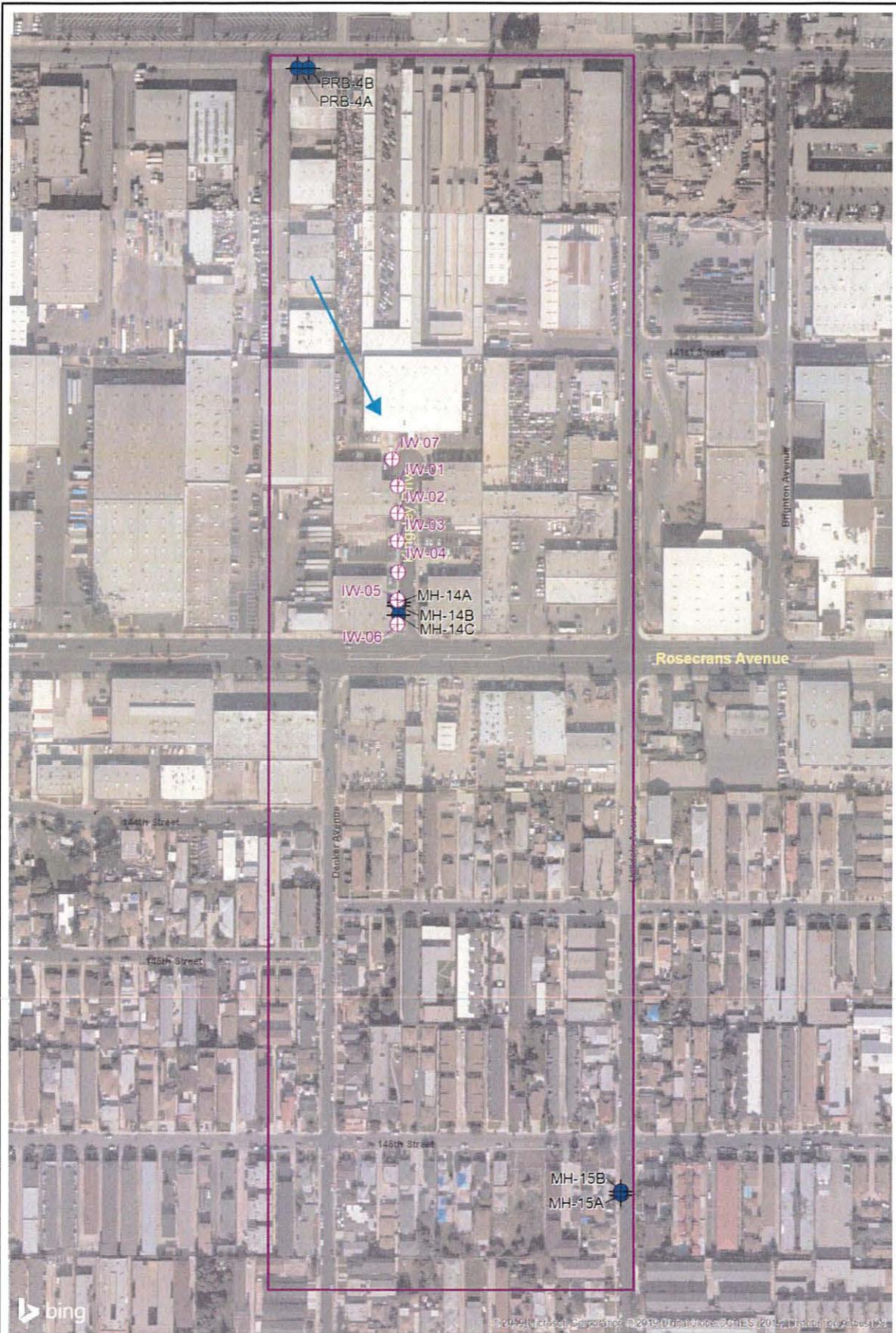
VII. ELECTRONIC SUBMITTAL OF INFORMATION

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 WDR100039755.

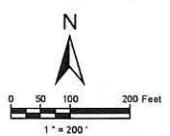
Ordered by: 
Renee Purdy
Executive Officer

Date: October 21, 2019





EXPLANATION	
	EXISTING MONITORING WELL LOCATION
	PROPOSED ISCO INJECTION WELL
	APPROXIMATE GROUNDWATER FLOW DIRECTION
ABBREVIATIONS	
µg/L	MICROGRAMS PER LITER
ISCO	IN SITU CHEMICAL OXIDATION



ISCO Remedy and Monitoring Grid		
Date 09-2019	HITCO Gardena	Figure
Project No. 60481767	AECOM	2