

Los Angeles Regional Water Quality Control Board

November 13, 2013

Mr. Eric Winquist
1800 Rosecrans Partners, LLC
321 12th Street, Suite 200
Manhattan Beach, California 90266

Certified Mail
Return Receipt Required
Claim No. 7010 3090 0002 1022 0601

REVISED MONITORING AND REPORTING PROGRAM NO. CI-9584 – FORMER FAIRCHILD CONTROLS FACILITY, 1800 ROSECRANS AVENUE, MANHATTAN BEACH, CALIFORNIA (FILE NO. 1840900, ORDER NO. R4-2007-0019, SERIES NO. 139, CI-9584, GLOBAL ID. WDR100000332)

Dear Mr. Winquist:

On March 11, 2010, the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) enrolled you under general Waste Discharge Requirements (WDR Order No. R4-2007-0019) with a Monitoring and Reporting Program (MRP) No. CI-9584 for injection of calcium polysulfide and emulsified oil for groundwater remediation of hexavalent chromium and volatile organic compounds (VOCs).

On behalf of 1800 Rosecrans Partners LLC, Bowyer Environmental Consulting, Inc. submitted the *Enhanced Reductive Dechlorination Pilot Study Workplan* (Work Plan), dated November 30, 2012, to evaluate the specific effectiveness of cheese whey for remediation of VOCs in groundwater. Approximately 840,000 gallons of 25% cheese whey solution will be injected into the subsurface at depths from 65 to 132 feet below ground surface at 2 injection locations (PT-1 and PT-2). It is anticipated that three injection events will occur over 1.5 years period. On March 4, 2013, the Regional Board staff approved the Work Plan.

The revised MRP, which incorporates cheese whey injection, is enclosed. The next monitoring report is due on **January 15, 2014** as required in the revised MRP. Please do not combine other reports with your monitoring reports. Submit each type of report as a separate document.

The Discharger shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all reports required under the MRP, including groundwater monitoring data, discharge location data, and pdf monitoring reports to the State Water Resources Control Board GeoTracker database under Global ID WDR100000332. ESI training video is available at: <https://waterboards.webex.com/waterboards/ldr.php?AT=pb&SP=MC&rID=44145287&rKey=7dad4352c990334b>

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 for further details at:

<http://www.waterboards.ca.gov/losangeles/resources/Paperless/Paperless%20Office%20for%20OGT%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 (achang@waterboards.ca.gov), or the Chief of Groundwater Permitting Unit, Dr. Eric Wu at (213) 576-6683 (ewu@waterboards.ca.gov).

Sincerely,


Samuel Unger, P.E.
Executive Officer

Enclosure: Revised Monitoring and Reporting Program No. CI-9584
dated November 13, 2013

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

REVISED MONITORING AND REPORTING PROGRAM NO. CI-9584
FOR
FORMER FAIRCHILD CONTROLS FACILITY
1800 ROSECRANS AVENUE, MANHATTAN BEACH, CALIFORNIA

ENROLLMENT UNDER REGIONAL BOARD
ORDER NO. R4-2007-0019 (SERIES NO. 139)
FILE NO. 1840900

I. MONITORING AND REPORTING REQUIREMENTS

- A. 1800 Rosecrans Partners, LLC (hereinafter Discharger) shall implement this Monitoring and Reporting Program (MRP) on the effective date (November 13, 2013) under Regional Board Order No. R4-2007-0019. The next monitoring report under this program, shall be received at the Regional Board by **January 15, 2014**. Subsequent monitoring reports shall be received at the Regional Board according to the following schedule:

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

- B. If there is no discharge or injection, during any reporting period, the report shall so state. By March 1 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.
- C. The Discharger shall comply with requirements contained in Section G of Order No. R4-2007-0019 "*Monitoring and Reporting Requirements*" in addition to the aforementioned requirements.

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 cheese whey solution.
2. Written and tabular summary defining depth of injection points, quantity of the cheese whey solution injected at each injection point, and total amount of the cheese whey solution injected at the Site.
3. Visual inspection at each injection point shall be conducted and recorded during the injection.

III. GROUNDWATER MONITORING PROGRAM

A. Cheesy Whey Injection

A groundwater monitoring program shall be implemented to evaluate impacts associated with the injection activity. Groundwater samples shall be collected from monitoring wells N-2, N-2D, OB-3S, OB-3D, OB-6S, OB-6D, OB-7S, OB-8S, OB-8D, OB-18S, OB-18D, and OB-29D (Figure 1). The Discharger shall conduct a baseline sampling prior to the proposed injection, followed by specified schedules from all 12 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
Temperature	°C	grab	Baseline and quarterly after injection
Turbidity	NTU	grab	Baseline and quarterly after injection

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
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
Total Chromium and Hexavalent Chromium	µg/L	grab	Baseline and quarterly after injection
Volatile Organic Compounds	µg/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. Quarterly observation of groundwater levels, recorded to 0.01 feet mean sea level and groundwater flow direction.

B. Calcium Polysulfide and Emulsified Oil Injection

The Discharger shall conduct on-site and off-site groundwater monitoring (Figure 2). Groundwater samples shall be collected and monitored in accordance with Table 1. In addition, the quarterly groundwater sampling shall include those constituents in Table 2.

Table 1: Groundwater Monitoring Wells and Their Revised Frequencies

WELL ID	Quarterly					Additional Semi-Annual Wells/Analyses					Additional Annual Wells/Analyses					
	Measure Water Level	VOCs, Freon 113, Oxygenates (EPA 8260B)	Hexavalent Cr (EPA Method 7199) and Total Cr (EPA 6010B)	General minerals, TOC, methane, arsenic, manganese, iron	1,4-Dioxane (GC/MS Isotope Dilution)	1,2,3-TCP (GC/MS low level 1,2,3-TCP)	VOCs, Freon 113, Oxygenates (EPA 8260B)	Hexavalent Cr (EPA Method 7199) and Total Cr (EPA 6010B)	General minerals, TOC, methane, arsenic, manganese, iron	1,4-Dioxane (GC/MS Isotope Dilution)	1,2,3-TCP (GC/MS low level 1,2,3-TCP)	VOCs, Freon 113, Oxygenates (EPA 8260B)	Hexavalent Cr (EPA Method 7199) and Total Cr (EPA 6010B)	General minerals, TOC, methane, arsenic, manganese, iron	1,4-Dioxane (GC/MS Isotope Dilution)	1,2,3-TCP (GC/MS low level 1,2,3-TCP)
Former Fairchild Wells																
EW-1S	1	1	1					1	1							
EW-2S	1						1	1								
MW-3S	1						1			1						
MW-4S	1															
MW-5S	1	1								1						
MW-5D	1															
EW-6S	1	1	1					1	1							
MW-6D	1	1						1		1						
TEMP-1	1										1			1		
TEMP-2	1						1							1		
TEMP-3	1	1	1						1							
EW-7S	1	1	1					1	1	1						
MW-8S	1	1	1						1							
OB-1	1						1									
OB-2	1															
OB-3S	1	1					1									
OB-3D	1	1														
OB-4S	1						1									
OB-5S	1										1					
OB-6S	1	1	1					1	1	1						

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WDR Order No. R4-2007-0019
Revised Monitoring and Reporting Program No. CI-9584

WELL ID	Quarterly						Additional Semi-Annual Wells/Analyses				Additional Annual Wells/Analyses				
	Measure Water Level	VOCs, Freon 113, Oxygenates (EPA 8260B)	Hexavalent Cr (EPA Method 7199) and Total Cr (EPA 6010B)	General minerals, TOC, methane, arsenic, manganese, iron	1,4-Dioxane (GC/MS Isotope Dilution)	1,2,3-TCP (GC/MS low level 1,2,3-TCP)	VOCs, Freon 113, Oxygenates (EPA 8260B)	Hexavalent Cr (EPA Method 7199) and Total Cr (EPA 6010B)	General minerals, TOC, methane, arsenic, manganese, iron	1,4-Dioxane (GC/MS Isotope Dilution)	1,2,3-TCP (GC/MS low level 1,2,3-TCP)	VOCs, Freon 113, Oxygenates (EPA 8260B)	Hexavalent Cr (EPA Method 7199) and Total Cr (EPA 6010B)	General minerals, TOC, methane, arsenic, manganese, iron	1,4-Dioxane (GC/MS Isotope Dilution)
OB-6D	1	1								1					
OB-7S	1	1	1						1						
OB-8S	1	1													
OB-8S (Dup)		1													
OB-8D	1										1				
OB-9S	1	1					1								
OB-10S	1					1									
OB-11S	1	1													
OB-11D	1										1				
OB-12S	1	1						1	1						
OB-13S	1	1										1			
OB-13D	1	1													
OB-14S	1	1													
OB-15S	1	1													
OB-15D	1	1													
OB-16D	1	1	1												
OB-17S	1	1					1								
OB-18S	1	1	1					1							
OB-18D	1					1		1							
OB-19D	1					1		1		1					
OB-20S	1														
Former Injection Wells															
O-1	1								1						
O-10	1								1						
O-13	1														
W-18	1	1													
W-2	1	1	1					1							

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WELL ID	Quarterly					Additional Semi-Annual Wells/Analyses				Additional Annual Wells/Analyses						
	Measure Water Level	VOCs, Freon 113, Oxygenates (EPA 8260B)	Hexavalent Cr (EPA Method 7199) and Total Cr (EPA 6010B)	General minerals, TOC, methane, arsenic, manganese, iron	1,4-Dioxane (GC/MS Isotope Dilution)	1,2,3-TCP (GC/MS low level 1,2,3-TCP)	VOCs, Freon 113, Oxygenates (EPA 8260B)	Hexavalent Cr (EPA Method 7199) and Total Cr (EPA 6010B)	General minerals, TOC, methane, arsenic, manganese, iron	1,4-Dioxane (GC/MS Isotope Dilution)	1,2,3-TCP (GC/MS low level 1,2,3-TCP)	VOCs, Freon 113, Oxygenates (EPA 8260B)	Hexavalent Cr (EPA Method 7199) and Total Cr (EPA 6010B)	General minerals, TOC, methane, arsenic, manganese, iron	1,4-Dioxane (GC/MS Isotope Dilution)	1,2,3-TCP (GC/MS low level 1,2,3-TCP)
W-19																
N-2	1	1														
S-10	1						1									
TRW Wells																
GW-4	1	1	1					1	1	1						
GW-4 (EB)		1	1													
GW-5	1						1									
GW-6A	1															
GW-7	1															
GW-11	1															
GW-14	1															
GW-15	1															
GW-16	1						1									
GW-21	1															
GW-22	1															
GW-25	1															
Fairchild Industries wells																
L-1	1															
L-2	1															
Union 76 Well																
MW-1	1															
Thrifty Wells																
MW-1	1															
MW-2	1															
TDD-9	1															

WELL ID	Quarterly						Additional Semi-Annual Wells/Analyses					Additional Annual Wells/Analyses				
	Measure Water Level	VOCs, Freon 113, Oxygenates (EPA 8260B)	Hexavalent Cr (EPA Method 7199) and Total Cr (EPA 6010B)	General minerals, TOC, methane, arsenic, manganese, iron	1,4-Dioxane (GC/MS Isotope Dilution)	1,2,3-TCP (GC/MS low level 1,2,3-TCP)	VOCs, Freon 113, Oxygenates (EPA 8260B)	Hexavalent Cr (EPA Method 7199) and Total Cr (EPA 6010B)	General minerals, TOC, methane, arsenic, manganese, iron	1,4-Dioxane (GC/MS Isotope Dilution)	1,2,3-TCP (GC/MS low level 1,2,3-TCP)	VOCs, Freon 113, Oxygenates (EPA 8260B)	Hexavalent Cr (EPA Method 7199) and Total Cr (EPA 6010B)	General minerals, TOC, methane, arsenic, manganese, iron	1,4-Dioxane (GC/MS Isotope Dilution)	1,2,3-TCP (GC/MS low level 1,2,3-TCP)
TDD-10	1															
ARCO Wells																
MW-6	1	1	1					1	1							
MW-7	1															
MW-8	1															
MW-9	1	1														
MW-10	1	1	1													
TOTAL	70	33	14	0	0	0	11	4	12	13	6	4	1	0	2	0

1,2,3-TCP= 1,2,3-trichloropropane
GC/MS = gas chromatograph/mass spectrometry, TOC = total organic carbon
General Mineral Monitoring Constituents: Total dissolved solids, Sulfate, Sulfide, Boron, Chloride, NO2, NO3

In addition, the quarterly groundwater monitoring program shall include the following constituents listed in Table 2:

Table 2: Analytical Parameters for Groundwater Monitoring

CONSTITUENT	UNITS ¹	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
pH ²	pH units	grab	Quarterly ³
Temperature ²	°F	grab	Quarterly ³
Oxidation-reduction potential ²	millivolts	grab	Quarterly ³
Specific conductivity ²	µmhos/cm	grab	Quarterly ³
Dissolved Oxygen ²	µg/L	grab	Quarterly ³

1. µg/L: micrograms per liter; °F: degree Fahrenheit.
2. Accurately calibrated field instrument will be used to test for this constituent.
3. Use groundwater monitoring frequencies as listed in Table 1.

These injection well and groundwater monitoring well sampling locations shall not be changed and any proposed change of monitoring locations shall be identified and approved by the Regional Board Executive Office (Executive Officer) prior to their use.

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

- a. Well identification, date and time of sampling;
- b. Sampler identification, and laboratory identification;
- c. Quarterly observation of groundwater levels, recorded to 0.01 feet mean sea level; and
- d. Analytical results of the groundwater samples collected along with the laboratory data reports; iso-concentration contour maps of primary contaminants in the groundwater plume; 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)"


1800 Rosecrans Partners, LLC
WDR Order No. R4-2007-0019
Revised Monitoring and Reporting Program No. CI-9584

VI. PUBLIC DOCUMENTS

All records and reports submitted in compliance with Order No.R4-2007-0019 and Monitoring and Reporting Program No. CI-9584 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.

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 WDR100000332.

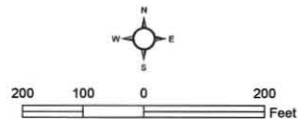
Ordered by: 
Samuel Unger, P.E.
Executive Officer

Date: November 13, 2013



EXPLANATION

- Planned Monitoring Well During Cheese Whey Injection
- Planned Cheese Whey Injection Wells



BEC
 BEC
 17011 Beach Boulevard, Suite 900
 Huntington Beach, CA 92647
 Tel. (877) 232-4620
 Fax (714) 840-4963

WDR MODIFICATION SAMPLING LOCATIONS
 FORMER FAIRCHILD CONTROLS FACILITY
 1800 Rosecrans Avenue, Manhattan Beach, California

PROJECT NUMBER:
 09004005

Figure 1

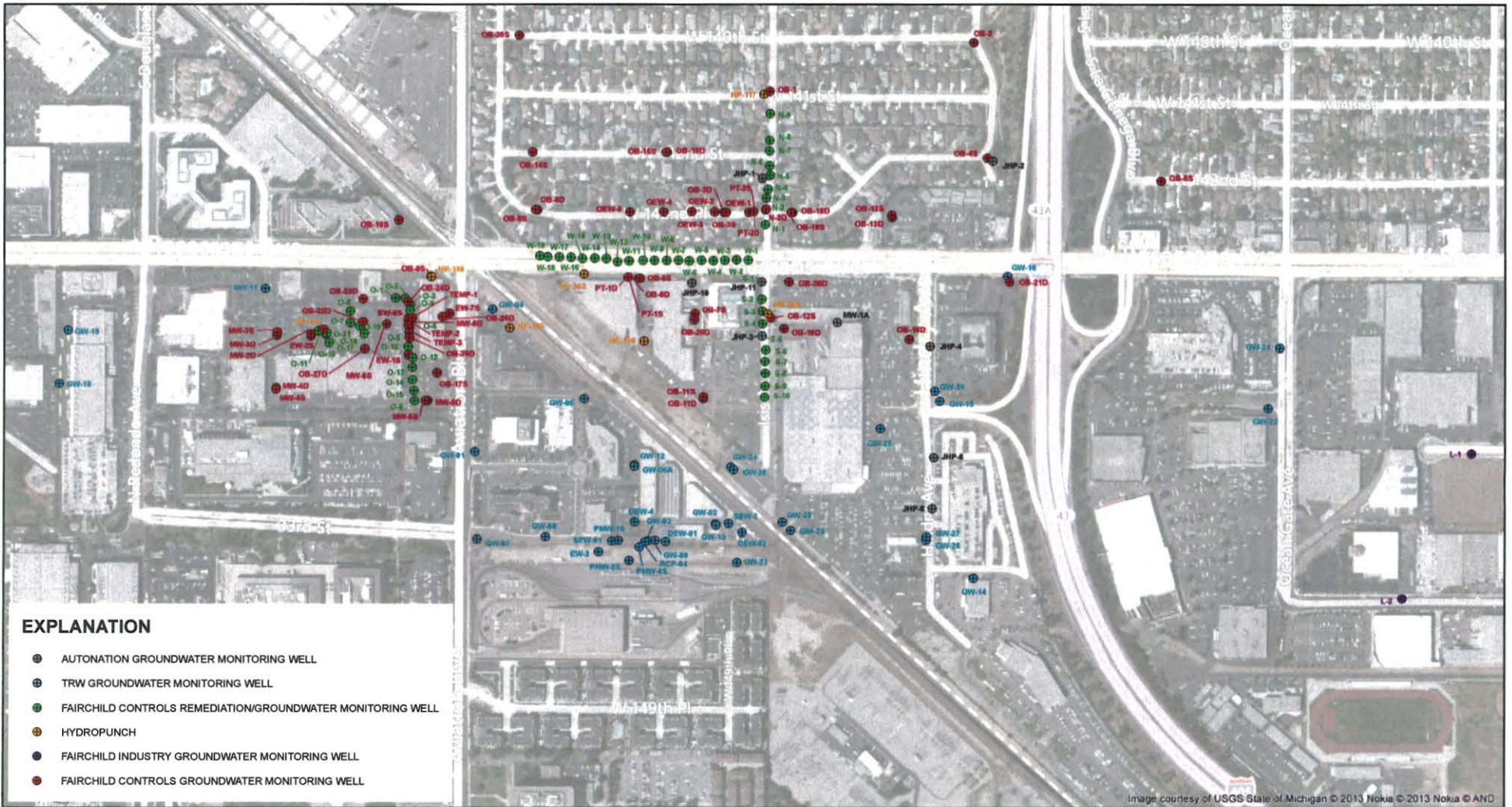
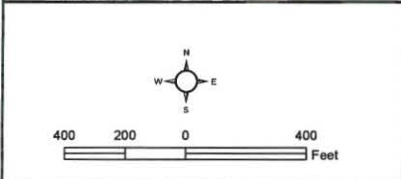


Image courtesy of USGS State of Michigan © 2013 Nokia © 2013 Nokia © AND



BEC

BEC
17011 Beach Boulevard, Suite 900
Huntington Beach, CA 92647
Tel. (877) 232-4620
Fax (714) 840-4963

SITE MAP WITH WELL LOCATIONS
3rd Quarter 2013

FORMER FAIRCHILD CONTROLS FACILITY
1800 Rosecrans Avenue, Manhattan Beach, California

PROJECT NUMBER:
09004005

Figure 2