

Los Angeles Regional Water Quality Control Board

January 5, 2016

Ms. Jo-Anne Alvarez
Retail Environmental Remediation Administrator
Tesoro Refining and Marketing Company LLC
400 Ocean Gate, Suite #600
Long Beach, CA 90802-4692

Certified Mail
Return Receipt Requested
Claim No. 7014 2120 0004 7561 9522

**GENERAL WASTE DISCHARGE REQUIREMENTS AND REVISED MONITORING AND REPORTING PROGRAM NO. CI-9615
ARCO STATION NO. 5093 (B-1 SITE)
21943 WILMINGTON AVENUE, CARSON, CALIFORNIA
(CASE NO. I-10154, ORDER NO. R4-2014-0187, SERIES NO. 051; CI NO. 9615, GLOBAL ID NO. WDR100000256)**

Dear Ms. Alvarez:

On January 28, 2013, the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) revised your General Waste Discharge Requirements (General WDRs) (Order No. R4-2007-0019) with revised Monitoring and Reporting Program (MRP) No. CI-9615 for injection of hydrogen peroxide with Fenton's Reagent for groundwater remediation of petroleum hydrocarbons at the subject site.

On behalf of Tesoro Refining and Marketing Company LLC (the Discharger), your consultant Stantec submitted a "Revised Remedial Action Plan" (the Revised RAP) dated July 2, 2015, and proposed to discontinue injection of hydrogen peroxide with Fenton's Reagent and instead inject activated sodium persulfate into the groundwater at the southern portion of the site to remediate the contaminated groundwater. The August 2015 groundwater monitoring results detected total petroleum hydrocarbon as gasoline (TPHg) up to 65,000 micrograms per liter ($\mu\text{g/L}$), benzene up to 12,000 $\mu\text{g/L}$, methyl tertiary butyl ether (MTBE) up to 100 $\mu\text{g/L}$, and tertiary butyl alcohol (TBA) up to 11,000 $\mu\text{g/L}$. On September 24, 2015, the Los Angeles Regional Water Quality Control Board (Regional Board) approved the Revised RAP.

Regional Board staff has determined that the proposed discharge meets the conditions specified in General WDRs Order No. R4-2014-0187, *General Waste Discharge Requirements for In-Situ Groundwater Remediation and Groundwater Re-Injection*, adopted by this Regional Board on September 11, 2014. Your October 22, 2015 request for modification of waste discharge requirements is approved and you are hereby enrolled under the General WDRs Order No. R4-2014-0187 and your previous enrollment under General WDRs Order No. R4-2007-0019 is hereby terminated with the exception of enforcement under the terms of the permit.

Enclosed are your General WDRs, consisting of Regional Board Order No. R4-2014-0187 (Series No. 051) and Standard Provisions Applicable to Waste Discharge Requirements, and Revised Monitoring and Report Program (MRP) No. CI-9615. The proposed discharge shall not cause the mineral constituents of the receiving groundwater at the compliance point, downgradient outside the application area, to exceed applicable limits (West Coast Basin of the Los Angeles Coastal Plain Groundwater Basin) given in Attachment B of General WDRs Order No. R4-2014-0187.

The revised MRP No. CI-9615 requires you to implement the monitoring program on the effective date of this enrollment under Regional Board Order No. R4-2014-0187. When submitting monitoring or technical reports to the Regional Board per these requirements, please do not combine other reports with your monitoring reports. Submit each type of report as a separate document.

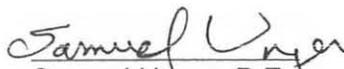
In accordance with regulations adopted by the State Water Resources Control Board (State Board) in September 2004 regarding electronic submittal of information, the Discharger has been electronically submitting monitoring reports to the State Board GeoTracker system under UST Global ID T0603703585. To comply with the MRP under this WDR, the Discharger shall upload the WDR monitoring reports to Geotracker under the two Global ID T0603703585 (continuing) and Global ID WDR100000256. For more information regarding the new Global ID under WDR, please see the ESI training video 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 GeoTracker, the Regional Board will no longer accept documents (submitted by either hard copy or email) that already have been 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%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 (ann.chang@waterboards.ca.gov), or the Chief of Groundwater Permitting Unit, Dr. Eric Wu at (213) 576-6683 (eric.wu@waterboards.ca.gov). Questions regarding underground storage tank issues should be forwarded to Mr. Jimmie Woo at (213) 576-6698 (jwoo@waterboards.ca.gov).

Sincerely,


Samuel Unger, P.E.
Executive Officer

Enclosures: General Waste Discharge Requirements Order No. R4-2014-0187
Standard Provisions, Applicable to Waste Discharge Requirements
Monitoring and Reporting Program No CI-9615
dated January 5, 2016

cc: Micah Reich, State Water Resources Control Board, Underground Storage Tank
Cleanup Fund
Jeff O'Keefe, State Water Resources Control Board, Division of Drinking Water
Brian Partington, Water Replenishment District of Southern California
Lusi Mkhitarian, County of Los Angeles, Department of Public Health Services, Drinking
Water Program
Gareth Roberts, Stantec Consulting Services, Inc.
Kristy Edblad, Stantec Consulting Services, Inc.
Brian Goss, Stantec Consulting Services, Inc.

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

REVISED MONITORING AND REPORTING PROGRAM NO. CI-9615
FOR
ARCO STATION NO. 5093
21943 WILMINGTON AVENUE, CARSON, CA
(ACTIVATED SODIUM PERSULFATE FOR GROUNDWATER CLEANUP)

ENROLLMENT UNDER REGIONAL BOARD
(ORDER NO. R4-2014-0187, SERIES NO. 051)

I. REPORTING REQUIREMENTS

- A. Tesoro Refining and Marketing Company LLC (hereinafter Discharger) shall implement this monitoring program on the effective date of this revised Monitoring and Reporting Program (MRP). The first monitoring report under this program shall be received at the Regional Board by **July 15, 2016**. Subsequent monitoring reports shall be received at the Regional Board according to the following schedule:

<u>Monitoring Period</u>	<u>Report Due</u>
January – June	July 15 th
July – December	January 15 th

The Discharger shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all reports required under the MRP to the State Water Resources Control Board (SWRCB) GeoTracker database, Attention: Information Technology Unit.

If there is no discharge or injection during any reporting period, the report shall so state.

- B. Laboratory analyses – all chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by the State Water Resources Control Board (the State Board) Division of Drinking Water - Environmental Laboratory Accreditation Program (ELAP). A copy of the laboratory certification shall be provided each time a new and/or renewal certification is obtained from ELAP.

The method limits (MLs) employed for effluent 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 Regional Board Executive Officer (Executive Officer). 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 upon request by the Regional Board.

- C. Groundwater samples must be analyzed within allowable holding time limits as specified in 40 CFR Part 136. All QA/QC samples must be run on the same dates when samples were actually analyzed. The Discharger shall make available for inspection and/or submit the QA/QC documentation upon request by Regional Board staff.

January 5, 2016

- D. Each monitoring report must affirm in writing that "All analyses were conducted at a laboratory certified for such analyses by the State Board ELAP and in accordance with current United States Environmental Protection Agency 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.
- E. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and the corrective actions taken or planned that may be needed to bring the discharge into full compliance with WDRs. This section shall be located at the front of the report and shall clearly list all non-compliance with WDRs, as well as all excursions of effluent limitations.
- F. The Discharger shall maintain all sampling and analytical results: date, exact place, and time of sampling; dates analyses were performed; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.
- G. If the Discharger performs analyses on any groundwater samples more frequently than required by this MRP using approved analytical methods, the results of those analyses shall be included in the report.
- H. 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.
- I. The Discharger should not implement any changes to the Monitoring and Reporting Program prior to receiving the Executive Officer's written approval.
- J. In accordance with regulations adopted by the SWRCB regarding ESI, Underground Storage Tank Program monitoring reports have been electronically submitted to the State Board GeoTracker system under UST Global ID T0603703585. To comply with the MRP under this WDR, the Discharger shall upload the WDR monitoring reports to the Geotracker under both Global ID T0603703585 (continuing) and Global ID WDR100000256.

II. DISCHARGE MONITORING REQUIREMENTS

The reports shall contain the following information regarding injection activities:

1. Location map showing application area.
2. Written summary defining:

- Depth of insertion and depth to groundwater;
 - Quantity of activated sodium persulfate per area; and
 - Total amount of activated sodium persulfate applied at site.
3. Groundwater monitoring wells shall not be used as injection points to avoid reduction of groundwater monitoring network, data bias, well screen clogging, and alteration.

III. GROUNDWATER MONITORING PROGRAM

The Discharger shall conduct groundwater monitoring at the site to monitor the effectiveness and ensure no adverse impacts associated with the activated sodium persulfate application at treatment area. Groundwater samples shall be collected from the upgradient well GW-3, source well GW-14, and surrounding wells GW-5, GW-9, GW-11, and GW-15 (See Figure 1). A baseline monitoring and sampling shall be conducted prior to the proposed activated sodium persulfate application. Baseline monitoring will establish the initial conditions with respect to the contaminant levels. The Discharger shall conduct baseline sampling one or two weeks prior to activated sodium persulfate application and regular sampling with the required frequencies from the monitoring wells for the following constituents:

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS ¹
Total petroleum hydrocarbons as gasoline (TPHg) and as diesel (TPHd)	µg/L ³	Grab	Semi-Annually
Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)	µg/L	Grab	Semi-Annually
MTBE, TBA, TAME, DIPE, ETBE, Naphthalene	µg/L	Grab	Semi-Annually
Ethanol Formaldehyde Acetone	µg/L	Grab	Semi-Annually
Total dissolved solids, Arsenic, Boron, Chloride, Bromide, Sulfate, Lead, Nickel, Cadmium, Manganese	mg/L ⁴	Grab	Semi-Annually
Oxidation-reduction potential	millivolts	Grab	Semi-Annually
Dissolved Oxygen	µg/L	Grab	Semi-Annually
Dissolved ferrous iron	µg/L	Grab	Semi-Annually
Total Chromium and hexavalent chromium ²	µg/L	Grab	Semi-Annually

pH	pH units	Grab	Semi-Annually
Temperature	⁰ F/ ⁰ C	Grab	Semi-Annually
Groundwater Elevation	Feet, mean sea level, and below ground surface	In situ	Semi-Annually

- ¹ One week before injection and semi-annually thereafter.
- ² The Discharger is required to monitor for total chromium and hexavalent chromium in the baseline, second and fourth semi-annually sampling. If detected at any of these sampling events, the total chromium and chromium six must be monitored semi-annually thereafter.
- ³ µg/L = microgram per liter.
- ⁴ mg/L = milligram per liter.

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. Semi-annual observation of groundwater levels, recorded to 0.01 feet mean sea level, and groundwater flow direction.

IV. MONITORING FREQUENCIES

Specifications in the MRP are subject to periodic revisions. 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. CERTIFICATION STATEMENT

Each report shall contain the following declaration:

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

Executed on the _____ day of _____ at _____.

_____(Signature)

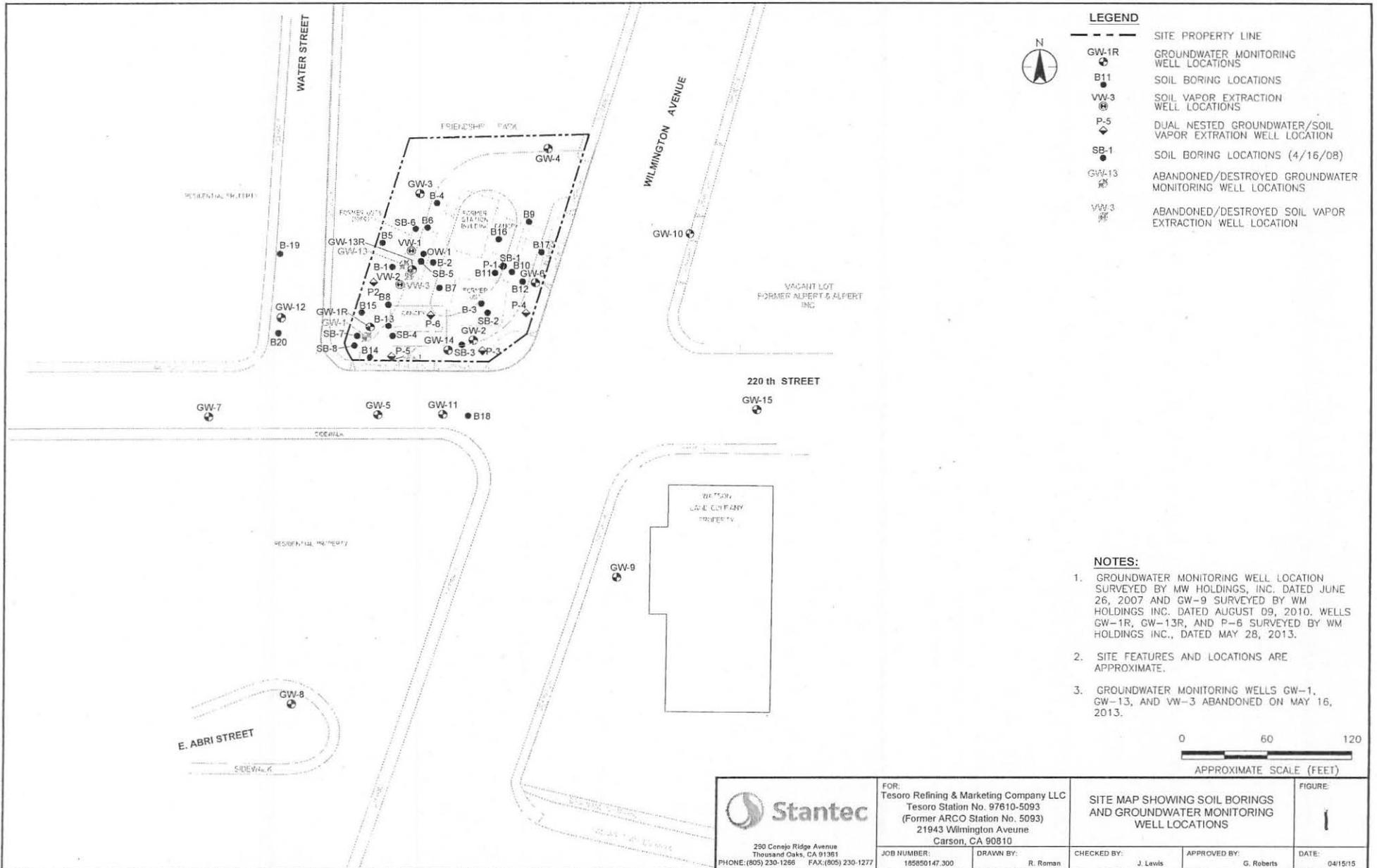
_____(Title)"

VI. PUBLIC DOCUMENTS

These records and reports are public documents and shall be made available for inspection during normal business hours at the office of the Regional Board, upon request by interested parties.

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

Date: January 5, 2016



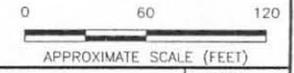
LEGEND



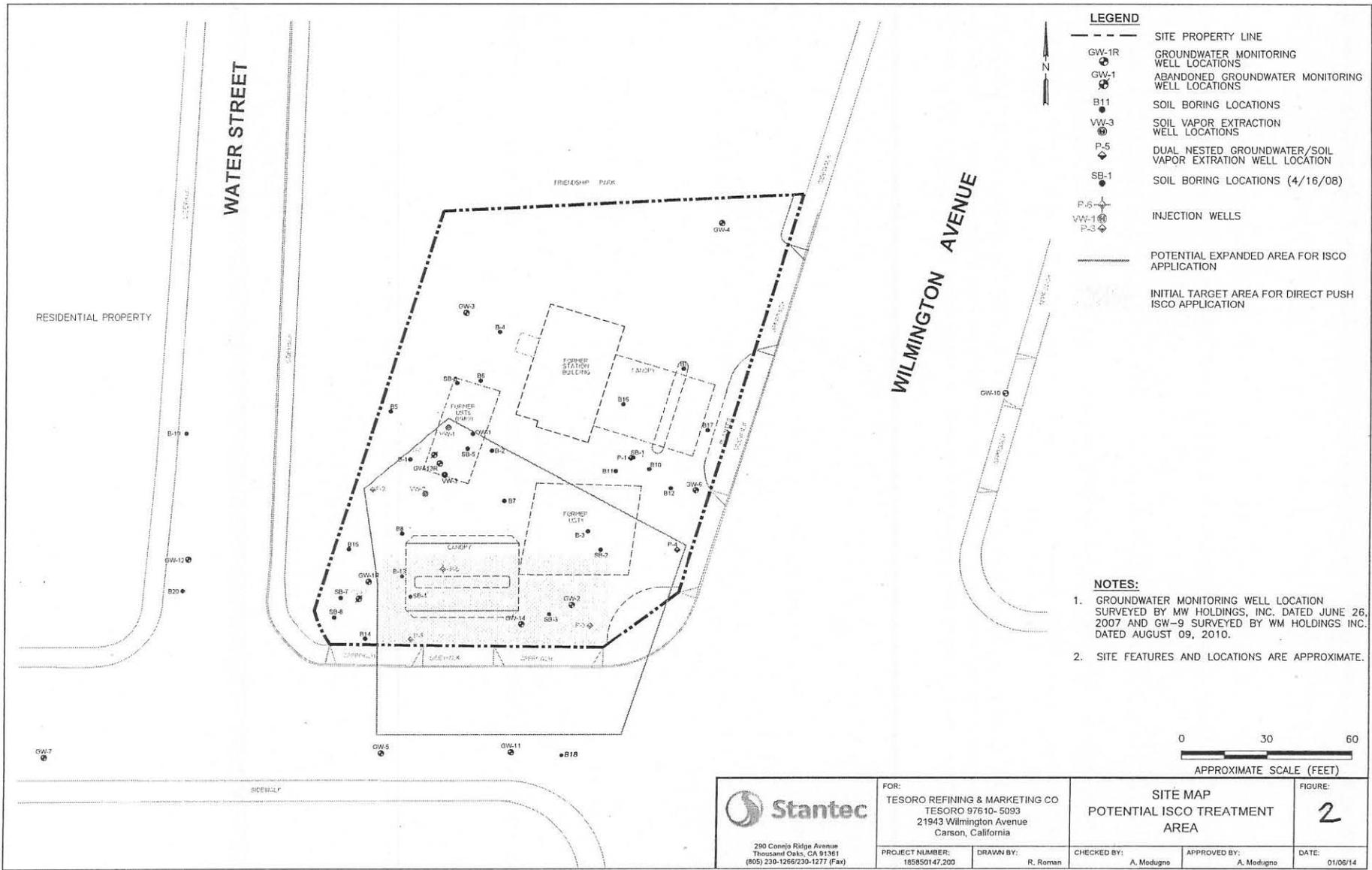
- SITE PROPERTY LINE
- GW-1R GROUNDWATER MONITORING WELL LOCATIONS
- B11 SOIL BORING LOCATIONS
- VW-3 SOIL VAPOR EXTRACTION WELL LOCATIONS
- P-5 DUAL NESTED GROUNDWATER/SOIL VAPOR EXTRACTION WELL LOCATION
- SB-1 SOIL BORING LOCATIONS (4/16/08)
- GW-13 ABANDONED/DESTROYED GROUNDWATER MONITORING WELL LOCATIONS
- VW-3 ABANDONED/DESTROYED SOIL VAPOR EXTRACTION WELL LOCATION

NOTES:

1. GROUNDWATER MONITORING WELL LOCATION SURVEYED BY MW HOLDINGS, INC. DATED JUNE 26, 2007 AND GW-9 SURVEYED BY WM HOLDINGS INC. DATED AUGUST 09, 2010. WELLS GW-1R, GW-13R, AND P-6 SURVEYED BY WM HOLDINGS INC., DATED MAY 28, 2013.
2. SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
3. GROUNDWATER MONITORING WELLS GW-1, GW-13, AND VW-3 ABANDONED ON MAY 16, 2013.

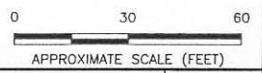


<p>Stantec</p> <p>290 Conejo Ridge Avenue Thousand Oaks, CA 91381 PHONE: (805) 230-1266 FAX: (805) 230-1277</p>	FOR: Tesoro Refining & Marketing Company LLC Tesoro Station No. 97610-5093 (Former ARCO Station No. 5093) 21943 Wilmington Avenue Carson, CA 90810		SITE MAP SHOWING SOIL BORINGS AND GROUNDWATER MONITORING WELL LOCATIONS		FIGURE: <div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div>
	JOB NUMBER: 165850147.300	DRAWN BY: R. Roman	CHECKED BY: J. Lewis	APPROVED BY: G. Roberts	DATE: 04/15/15



- LEGEND**
- SITE PROPERTY LINE
 - GW-1R ● GROUNDWATER MONITORING WELL LOCATIONS
 - GW-1 ● ABANDONED GROUNDWATER MONITORING WELL LOCATIONS
 - B11 ● SOIL BORING LOCATIONS
 - VW-3 ● SOIL VAPOR EXTRACTION WELL LOCATIONS
 - P-5 ● DUAL NESTED GROUNDWATER/SOIL VAPOR EXTRACTION WELL LOCATION
 - SB-1 ● SOIL BORING LOCATIONS (4/16/08)
 - P-6 ● INJECTION WELLS
 - VW-1 ● INJECTION WELLS
 - P-3 ● INJECTION WELLS
 - POTENTIAL EXPANDED AREA FOR ISCO APPLICATION
 - INITIAL TARGET AREA FOR DIRECT PUSH ISCO APPLICATION

- NOTES:**
1. GROUNDWATER MONITORING WELL LOCATION SURVEYED BY MW HOLDINGS, INC. DATED JUNE 26, 2007 AND GW-9 SURVEYED BY WM HOLDINGS INC. DATED AUGUST 09, 2010.
 2. SITE FEATURES AND LOCATIONS ARE APPROXIMATE.



<p>290 Conajo Ridge Avenue Thousand Oaks, CA 91320 (805) 238-1269/238-1277 (Fax)</p>	<p>FOR: TESORO REFINING & MARKETING CO TESORO 97610-5093 21943 Wilmington Avenue Carson, California</p>	<p>SITE MAP POTENTIAL ISCO TREATMENT AREA</p>		<p>FIGURE: 2</p>
	<p>PROJECT NUMBER: 185850147.200</p>	<p>DRAWN BY: R. Roman</p>	<p>CHECKED BY: A. Modugno</p>	<p>APPROVED BY: A. Modugno</p>