



California Regional Water Quality Control Board

Los Angeles Region



Linda S. Adams
Cal/EPA Secretary

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Arnold Schwarzenegger
Governor

November 16, 2010

Mr. Kurt Fisher
ExxonMobil Oil Corporation
12851 East 166th Street
Cerritos, CA 90703

GENERAL WASTE DISCHARGE REQUIREMENTS FOR GROUNDWATER CLEANUP AT PETROLEUM HYDROCARBON FUEL, VOLATILE ORGANIC COMPOUND AND/OR HEXAVALENT CHROMIUM IMPACTED SITES—FORMER MOBIL BULK PLANT NO. 04-419, 16030 VALLEY BLVD, LA PUENTE (ORDER NO. R4-2007-0019, SERIES NO. 143; CI NO. 9639)

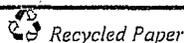
Dear Mr. Fisher:

We have completed our review of your application for coverage under the General Waste Discharge Requirements (WDRs) to inject Fenton's Reagent at the site referenced above in La Puente for groundwater cleanup and remediation.

Two buildings, five fuel USTs, and three used-oil USTs were removed in December 1986 and August 1987. Since 1987, environmental investigations, including various site assessment activities and groundwater monitoring events, have been conducted to assess and monitor petroleum hydrocarbon concentrations in soil and groundwater, which included 15 soil borings and 24 groundwater wells. Three groundwater-bearing zones were identified as GWBZ-1 through -3. Wells MW-8, MW-9, MW-15, MW-21, and OW-1 were screened across GWBZ-1 from 10 to 25 feet bgs. Wells MW-10, MW-11, MW-14, MW-16A, MW-18, MW-20, and OW-2 were screened across GWBZ-2 from 30 to 35 feet bgs. Wells MW-12, MW-13, MW-17A, and MW-19 were screened across GWBZ-3 from 40 to 60 feet bgs. GWBZ-2 is the principally affected groundwater-bearing zone at the site, and is currently monitored and sampled on a quarterly basis (refer to Plate 2 for groundwater elevation). Wells set within GWBZ-1 and GWBZ-3 have been abandoned and are no longer monitored.

During First Quarter 2010, groundwater samples collected from wells MW-7, MW-11, MW-14, and MW-20 were the only samples reported not to contain detectable concentrations of TPH-g or BTEX compounds at or above laboratory reporting limits. TPH-g was present above the laboratory reporting limit in samples collected from wells MW-6, MW-10, MW-22, and OW-2 at concentrations of 9,800 µg/L, 3,100 µg/L, 1,100 µg/L, and 3,700 µg/L, respectively. Benzene was present above the laboratory reporting limit in samples collected from wells MW-6, MW-10, and OW-2 at concentrations of 2,500 µg/L, 210 µg/L, and 370 µg/L, respectively. Toluene was present above the laboratory reporting limit in samples collected from well MW-6 at concentrations of 29 µg/L. Ethylbenzene was present above the laboratory reporting limit in samples collected from MW-6, MW-10, and OW-2 at concentrations of 960 µg/L, 200 µg/L, and 190 µg/L, respectively. Total xylenes were present at or above the laboratory reporting limit in samples collected from wells MW-6 and MW-10 at concentrations of 600 µg/L and 6.8 µg/L, respectively. Concentrations of TBA were present above the laboratory reporting limit in samples collected from wells MW-6, MW-10, and OW-2 at 220 µg/L, 51 µg/L, and 58 µg/L, respectively. Other fuel oxygenates, including MtBE, were not reported at concentrations above the laboratory reporting limits in groundwater samples collected from the site (Refer to Plates 3 and 5 for benzene and TPHg plumes).

California Environmental Protection Agency



Previous remedial activities included DPVES from October 2002 to 4th quarter 2005, resulted in the removal of 6,000 gallons of groundwater and 1,800 pounds of VOCs. To further remediate the residual contaminants plumes, the Discharge proposed in the "Remedial Action Plan for Chemical Oxidation" included in the Second Quarterly 2009 SCMU dated August 13, 2009, to inject Fenton's Reagent into groundwater in GWBZ-2 zone through 8 locations (11-1 to -4 and 21-1 to -4 as identified in Figure 2) within the hydrocarbon impacted area. We concur with your proposal provided the following requirements are met:

1. You are required to install down-gradient groundwater monitoring wells to the southwest of well OW-2 to fully define the groundwater plumes in GWBZ-2 zone.
2. All necessary permits must be obtained from the appropriate agencies prior to the start of work.
3. The construction, development, and abandonment of groundwater monitoring wells must comply with requirements prescribed in the California Well Standards (Bulletin 74-90), published by the California Department of Water Resources (can be seen at http://www.dpla2.water.ca.gov/publications/groundwater/CA_Well_Standards_Bulletin74-90_1991.pdf).
4. Pursuant to State Water Resources Control Board Resolution No. 92-49, under Water Code Section 13304, all fieldwork related to subsurface investigation including well installation must be conducted by, or under the direct responsible supervision of, a licensed California Professional Geologist (PG) or Civil Engineer (PE). All technical documents submitted to this Regional Board must be reviewed and signed and/or stamped by a licensed California PG or PE with at least five years subsurface hydrogeologic experience. A California-licensed land surveyor must survey all monitoring wells. The survey report, signed by the licensee, shall be included in the assessment report.
5. Notify the Regional Board at least seven days prior to commencing the field work so that our staff may be present.
6. The progress of the assessment and remedial activities should be reported in the semi-annual reports. The required technical report must conform to the "Guidelines for Report Submittals" published by the Los Angeles County Department of Public Works.

In addition, we have determined that the proposed discharge meets the conditions specified in Order No. R4-2007-0019, "Revised General Waste Discharge Requirements for Groundwater Remediation At Petroleum Hydrocarbon Fuel, Volatile Organic Compound and/or Hexavalent Chromium Impacted Sites (General WDRs)," adopted by the Los Angeles Regional Water quality Control Board on March 1, 2007.

Enclosed are your Waste Discharge Requirements, consisting of General WDRs Board Order No. 2007-0019 and Monitoring and Reporting Program No. CI-9639 and Standard Provisions. This Waste Discharge Requirements shall not be rescinded without the regulatory oversight agency's prior approval.

California Environmental Protection Agency

 Recycled Paper

Our mission is to preserve and enhance the quality of California's water resources for the benefit of present and future generations.

The Monitoring and Reporting Program requires you to implement the monitoring program on the effective date of this enrollment under Regional Board Order No. R4-2007-0019. All monitoring reports shall be sent to the Regional Board, ATTN: Information Technology Unit.

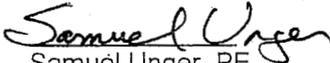
When submitting monitoring or technical reports to the Regional Board per these requirements, please include a reference to Compliance File No. CI-9639, which will assure that the reports are directed to the appropriate file and staff. Do not combine other reports with your monitoring reports. Submit each type of report as a separate document.

We are sending a copy of Order No. R4-2007-0019 only to the applicant. A copy of the Order will be furnished to anyone who requests it, or on line at:

http://www.waterboards.ca.gov/losangeles/board_decisions/adopted_orders/general_orders/r4-2007-0019/r4-2007-0019.pdf

If you have any questions, please contact Dr. Rebecca Chou at (213) 620-6156 or rchou@waterboards.ca.gov for WDRs administration matters, or Mr. Ahmad Lamaa at (213) 576-6716 or alamaa@waterboards.ca.gov or Mr. Gregg Kwey at (213) 576-6702 or gkwey@waterboards.ca.gov for technical matters.

Sincerely,


Samuel Unger, PE
Executive Officer

Enclosures: Monitoring and Reporting Program No. CI-9639

cc: Ms. Karen Gale, Kleinfelder

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

MONITORING AND REPORTING PROGRAM NO. CI-9639

FOR

EXXONMOBIL OIL CORPORATION
FORMER MOBIL BULK PLANT NO. 04-419
16030 VALLEY BLVD, LA PUENTE

(FENTON'S REAGENT INJECTION FOR GROUNDWATER CLEANUP)
(ORDER NO. R4-2007-0019, SERIES NO. 143)

I. REPORTING REQUIREMENTS

- A. ExxonMobil Oil Corporation (hereinafter Discharger) shall implement this monitoring program on the effective date of Regional Board Order No. R4-2007-0019. The first monitoring report under this program, for the period from effective date to June 2011, shall be received at the Regional Board by July 15, 2011. 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
July – December	January 15

If there is no discharge or injection during any reporting period, the report shall so state. Monitoring reports must be addressed to the Regional Board, Attention: Information Technology Unit.

- B. Laboratory analyses—all chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services 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.
- C. 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.

- D. 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.
- E. Each monitoring report must affirm in writing that "All analyses were conducted at a laboratory certified for such analyses by the California Department of Health Services, 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.
- F. 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.
- G. 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.
- H. If the Discharger performs analyses on any groundwater samples more frequently than required by this Order using approved analytical methods, the results of those analyses shall be included in the report.
- I. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized to demonstrate compliance with the requirements and, where applicable, shall include results of receiving water observations.
- J. The Discharger should not implement any changes to the Monitoring and Reporting Program prior to receiving Executive Officer's written approval.

II. FENTON'S REAGENT INJECTION MONITORING REQUIREMENTS

The Semi-Annually reports shall contain the following information regarding injection activities:

1. Location map showing locations used for the Fenton's Reagent injection. 8 locations (11-1 to -4 and 21-1 to -4 as identified in Figure 2) within the hydrocarbon impacted soil zone beneath the site are currently proposed to be used as direct-push injection points. Groundwater wells shall not be used as re-injection points to avoid reduction of groundwater monitoring network; data bias. Additional injection points should be reviewed and approved by the Regional Board prior to implementation.
2. Written and tabular summary defining the quantity of Fenton's Reagent injected and a summary describing the days on which the injection system was in operation.

III. GROUNDWATER MONITORING PROGRAM

Please refer to Plates 2, 3 and 5 for groundwater elevation, benzene and TPHg concentration distribution. Groundwater flow is generally to north-west and to south-west during raining season. The Discharger shall conduct groundwater monitoring at the site. Groundwater samples shall be collected from one up-gradient monitoring wells MW-22; three source area monitoring wells MW-6, MW-10 and OW-2; two cross-gradient monitoring wells MW-7 and MW-20; and the down-gradient monitoring wells to be installed, per Regional Board letter of November 16, 2010, on a semi-annual basis to monitor the effectiveness of the in-situ groundwater remediation. Additional monitoring wells for full scale implementation may be required if Regional Board deemed they are necessary. Groundwater shall be monitored for the duration of the remediation in accordance with the following discharge monitoring program:

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Total petroleum hydrocarbons as gasoline (TPHg) and as diesel (TPHd)	µg/L	Grab	• Semi-Annually ¹
Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)	µg/L	Grab	• Semi-Annually ¹
Methyl tertiary butyl ether (MTBE), Tertiary butyl alcohol (TBA), Tertiary amyl methyl ether (TAME), Di-isopropyl ether (DIPE), ether (ETBE)	µg/L	Grab	• Semi-Annually ¹
Ethanol Formaldehyde Acetone	µg/L	Grab	• Semi-Annually ¹

Total dissolved solids, Arsenic, Boron, Chloride, Bromide, Sulfate, Lead, Nickel, Cadmium, Manganese	mg/L	Grab	• Semi-Annually ¹
Oxidation-reduction potential	millivolts		• Semi-Annually ¹
Dissolved Oxygen	µg/L	Grab	• Semi-Annually ¹
Dissolved ferrous iron	µg/L	Grab	• Semi-Annually ¹
Total Chromium and chromium six ²	µg/L	Grab	• Semi-Annually ¹
PH	pH units	Grab	• Semi-Annually ¹
Temperature	°F/°C	Grab	• Semi-Annually ¹
Groundwater Elevation	Feet, mean sea level and below ground surface	In situ	• Semi-Annually ¹

¹ One week before injection and Semi-Annually thereafter

² The Discharger is required to monitor for total chromium and chromium six 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.

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

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

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. CERTIFICATION STATEMENT

Each report shall contain the following declaration:

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

Executed on the _____ day of _____ at _____.

(Signature)

(Title)"

VI. PUBLIC DOCUMENTS

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

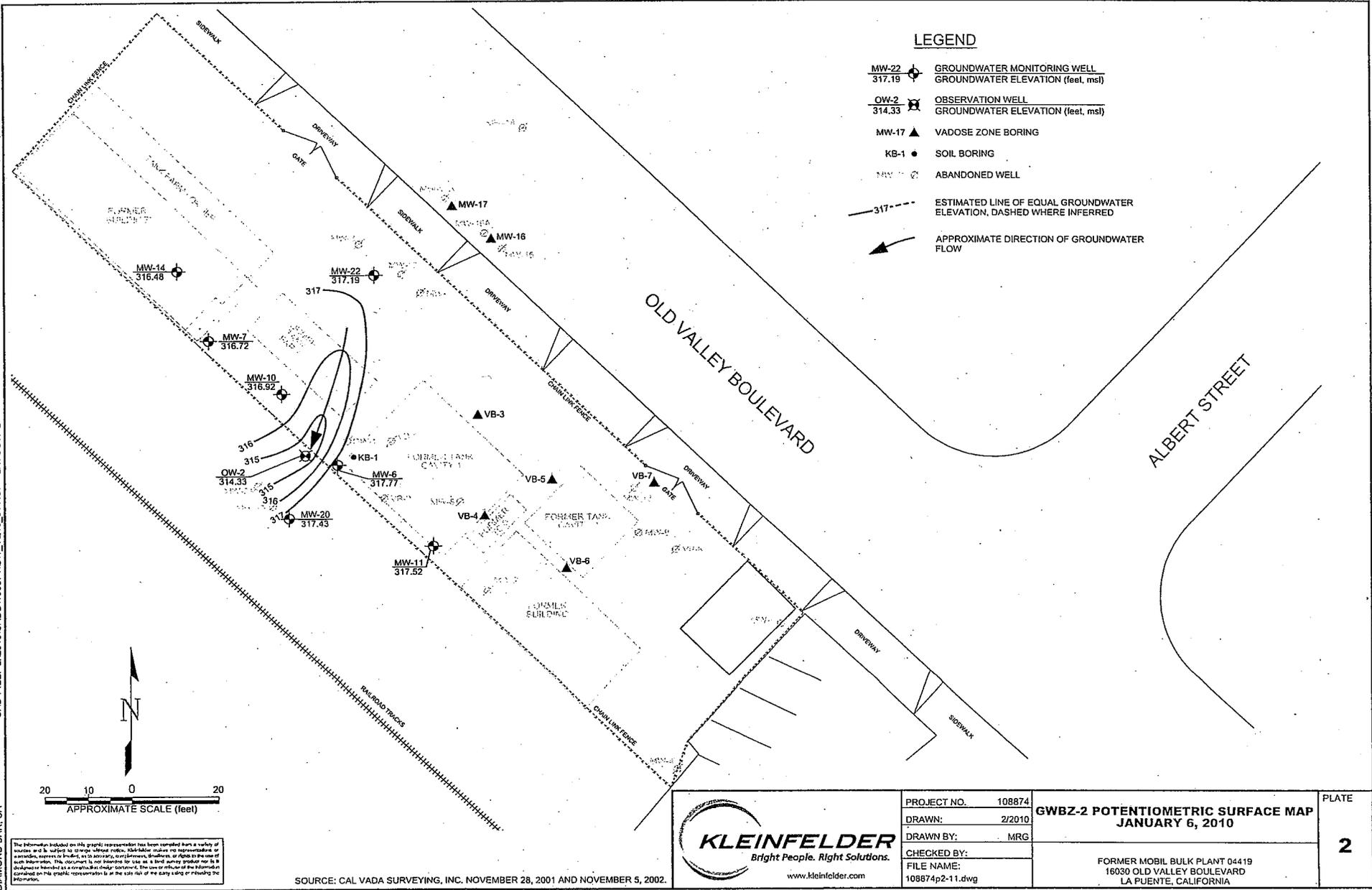
Ordered by: Samuel Unger
Samuel Unger, PE
Executive Officer

Date: November 16, 2010

PLOTTED: 04 Feb 2010, 1:41pm, MCG/llh

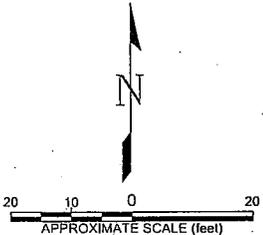
CAD FILE: L:\2010\CADD\108874\GW_L\10_0441B1_LAYOUT: 2

ATTACHED IMAGES:
ATTACHED XREFS:
DIAMOND BAR, CA



LEGEND

- MW-22 317.19 GROUNDWATER MONITORING WELL
GROUNDWATER ELEVATION (feet, msl)
- OW-2 314.33 OBSERVATION WELL
GROUNDWATER ELEVATION (feet, msl)
- MW-17 VADOSE ZONE BORING
- KB-1 SOIL BORING
- ABANDONED WELL
- 317 ESTIMATED LINE OF EQUAL GROUNDWATER
ELEVATION, DASHED WHERE INFERRED
- APPROXIMATE DIRECTION OF GROUNDWATER
FLOW



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PROJECT NO.	108874
DRAWN:	2/2010
DRAWN BY:	MRG
CHECKED BY:	
FILE NAME:	108874p2-11.dwg

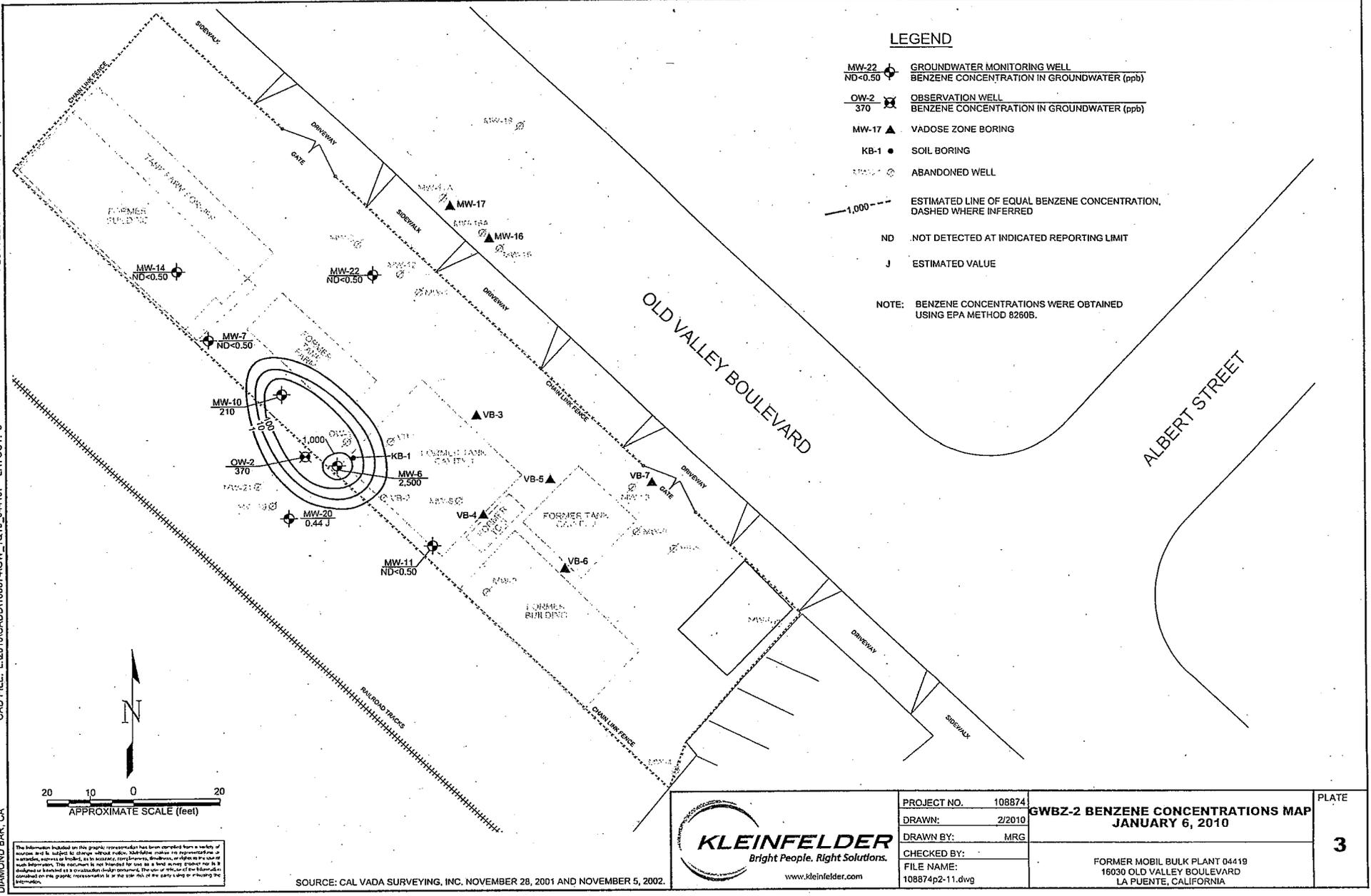
GWZ-2 POTENTIOMETRIC SURFACE MAP JANUARY 6, 2010
FORMER MOBIL BULK PLANT 04419 16030 OLD VALLEY BOULEVARD LA PUENTE, CALIFORNIA

PLATE	2
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SOURCE: CAL VADA SURVEYING, INC. NOVEMBER 28, 2001 AND NOVEMBER 5, 2002.

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ATTACHED IMAGES: DIAMOND BAR, CA
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LEGEND

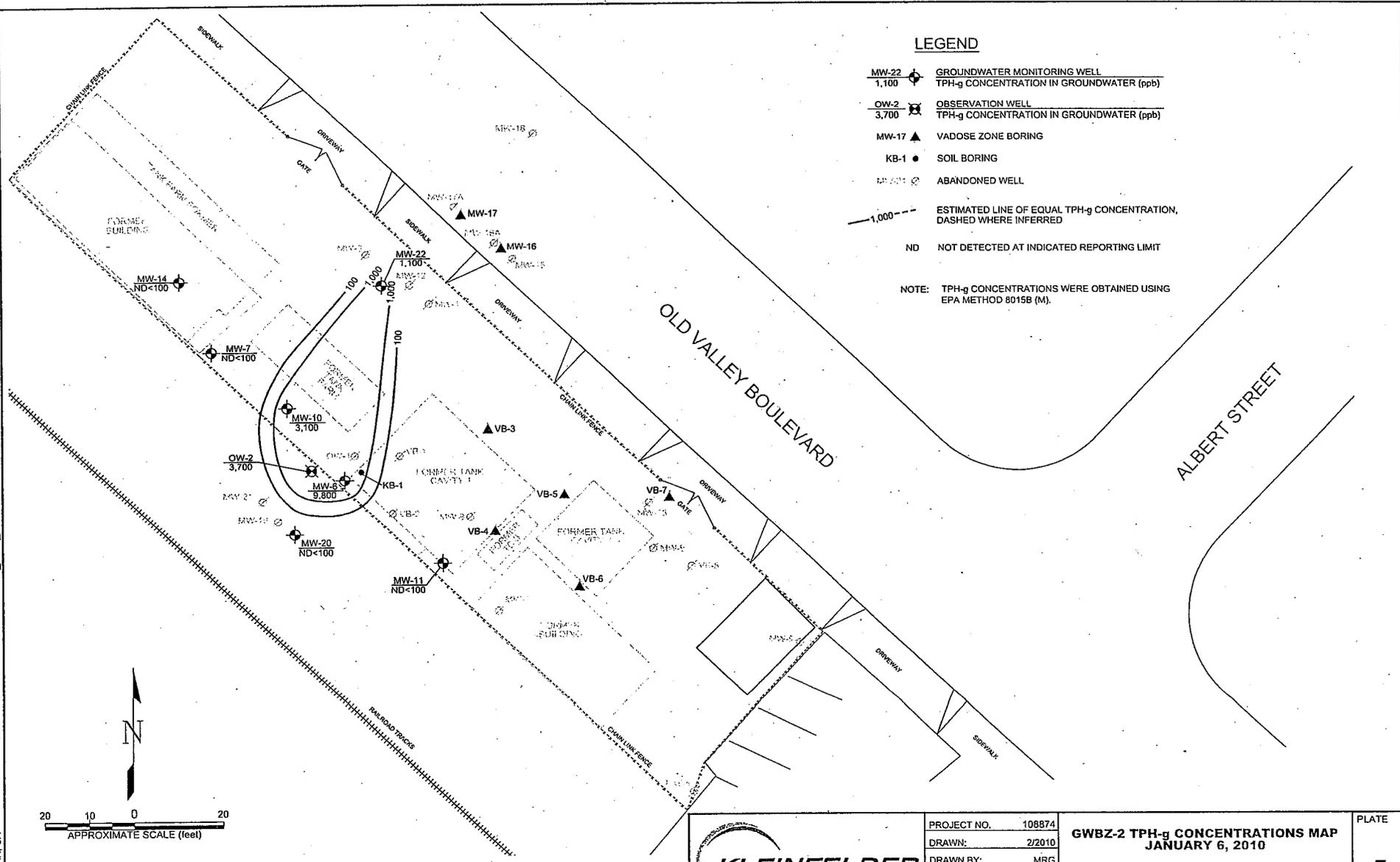
- MW-22 ND<0.50 GROUNDWATER MONITORING WELL
BENZENE CONCENTRATION IN GROUNDWATER (ppb)
 - OW-2 370 OBSERVATION WELL
BENZENE CONCENTRATION IN GROUNDWATER (ppb)
 - MW-17 VADOSE ZONE BORING
 - KB-1 SOIL BORING
 - ABANDONED WELL
 - ESTIMATED LINE OF EQUAL BENZENE CONCENTRATION,
DASHED WHERE INFERRED
 - ND NOT DETECTED AT INDICATED REPORTING LIMIT
 - J ESTIMATED VALUE
- NOTE: BENZENE CONCENTRATIONS WERE OBTAINED USING EPA METHOD 8260B.

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SOURCE: CAL VADA SURVEYING, INC. NOVEMBER 28, 2001 AND NOVEMBER 5, 2002.

 KLEINFELDER Bright People. Right Solutions. www.kleinfelder.com	PROJECT NO. 108874	GWBZ-2 BENZENE CONCENTRATIONS MAP JANUARY 6, 2010	PLATE 3
	DRAWN: 2/2010		
	DRAWN BY: MRG	FORMER MOBIL BULK PLANT 04419 16030 OLD VALLEY BOULEVARD LA PUENTE, CALIFORNIA	
	CHECKED BY:	FILE NAME: 108874p2-11.dwg	

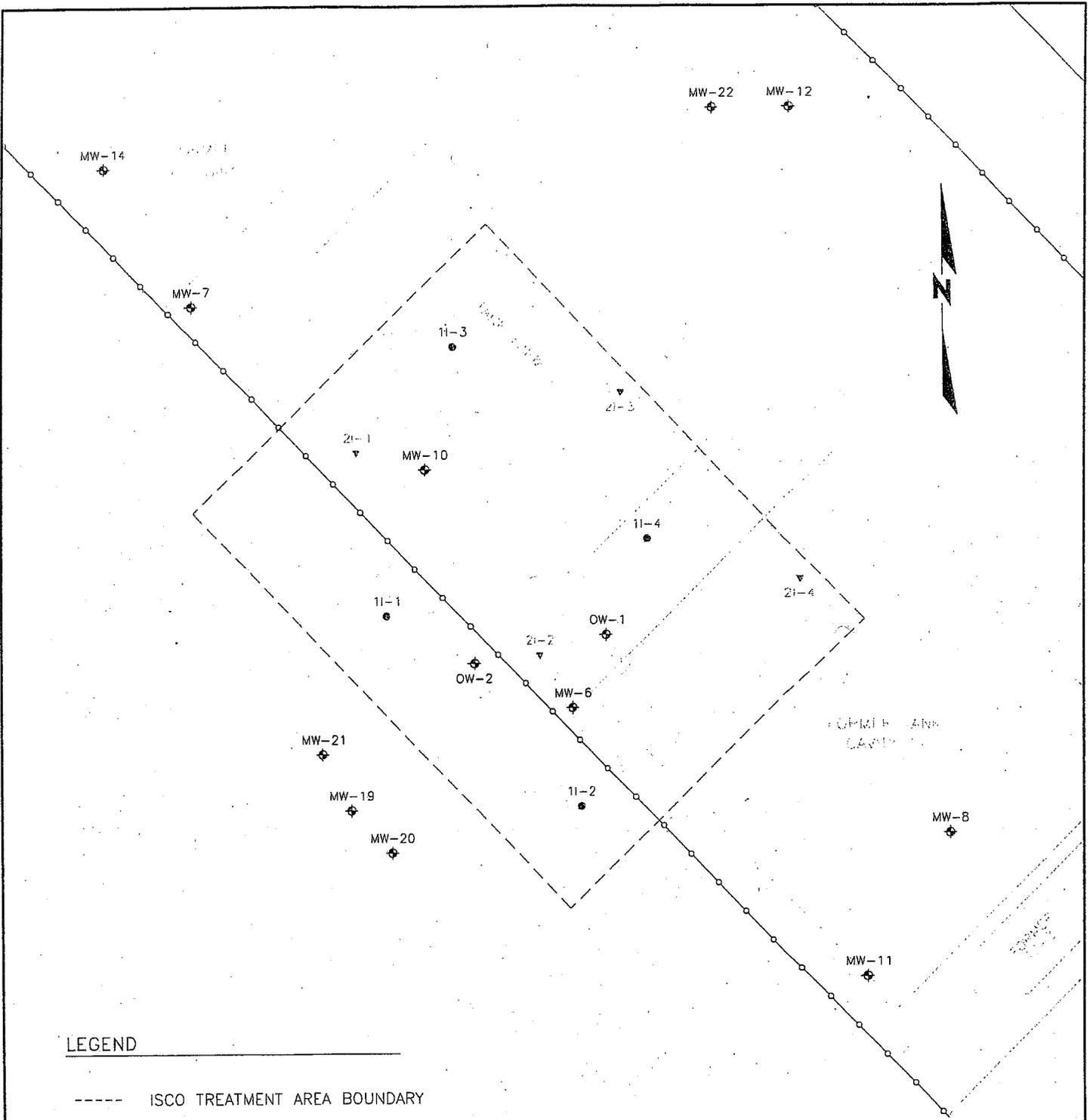
ATTACHED IMAGES:
 ATTACHED XREFS:
 DIAMOND BAR, CA
 CAD FILE: L:\2010\CADD\108874\GW_1010_04191.dwg LAYOUT: 5
 PLOTTED: 04 Feb 2010, 1:41pm, McGiffin



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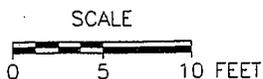
SOURCE: CAL VADA SURVEYING, INC. NOVEMBER 28, 2001 AND NOVEMBER 5, 2002.

<p>KLEINFELDER Bright People. Right Solutions. www.kleinfelder.com</p>	PROJECT NO. 108874 DRAWN: 2/2010 DRAWN BY: MRG	<p>GWBZ-2 TPH-g CONCENTRATIONS MAP JANUARY 6, 2010</p> <p>FORMER MOBIL BULK PLANT 04119 16030 OLD VALLEY BOULEVARD LA PUENTE, CALIFORNIA</p>	PLATE <p>5</p>
	CHECKED BY: FILE NAME: 108874p2-11.dwg		



LEGEND

- ISCO TREATMENT AREA BOUNDARY
- ◆ GROUNDWATER MONITORING WELL
- PROPOSED FIRST INJECTION EVENT LOCATION
- ▼ PROPOSED SECOND INJECTION EVENT LOCATION



<p>In-Situ Oxidative Technologies, Inc. ISOTEC 6452 Fig Street, Suite C Arvada, Colorado 80004 www.insituoxidation.com (303) 843-9079</p>		
<p>INJECTION LOCATION MAP ISCO TREATMENT PROGRAM Former Mobil Bulk Plant 04419 16030 Old Valley Boulevard La Puenta, California</p>		
DRAWN BY: TE	DATE: 3/2/09	FIGURE 2
CHECKED BY: SH	PROPOSAL NO: 900954	