



California Regional Water Quality Control Board Los Angeles Region



Linda S. Adams
Acting Secretary for
Environmental Protection

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<http://www.waterboards.ca.gov/losangeles>

Edmund G. Brown Jr.
Governor

April 19, 2011

Mr. Jeffrey Baker
Tesoro Corporation
3450 S. 344th Way, Suite 100
Auburn, WA 98001

**MODIFICATION OF GENERAL WASTE DISCHARGE REQUIREMENTS FOR
GROUNDWATER CLEANUP AT PETROLEUM HYDROCARBON FUEL AND/OR VOLATILE
ORGANIC COMPOUND AND/OR HEXAVALENT CHROMIUM IMPACTED SITES
FORMER FAST GAS #538, TARGET STORE T-290
2029 REDONDO BEACH BOULEVARD, GARDENA
(ORDER NO. R4-2007-0019, SERIES NO. 158; CI NO. 8940) (UST FILE NO. R-23243)**

Dear Mr. Baker:

On August 16, 2005, the Executive Officer of this Regional Board enrolled a Waste Discharge Requirement (WDR) under Order No. R4-2005-0030 to Tesoro Petroleum Companies, Inc. (hereinafter Discharger) to inject hydrogen peroxide, oxygen and ozone to remediate groundwater contamination beneath the Site.

On your behalf, Orion Environmental (Orion) submitted a Workplan (Remedial Workplan) for Chemical Injection System Expansion and Request to Modify Waste Discharge Requirements. Orion proposed to expand the existing chemical oxidation system to remediate a localized area of impacted groundwater beneath the Site. Seven additional dual-nested peroxide/ozone injection points (IP-49 through IP-55) will be installed in the vicinity of well MW-P in the former source area in the southern portion of the Site. Existing injection points (IP-25 through IP-27) will be abandoned and reinstalled as the points are damaged and/or degraded. The new injection points will be connected to the existing remediation system.

In addition, Orion further requests to modify the existing WDR and the Monitoring and Reporting Program (M&RP) requirements (Order No. R4-2005-0030). Orion proposed to operate ten injection points (IP-25 through IP-27; and IP-49 through IP-55). The injection points located in the central and northern portion of the Site have been offline since 2010, and are not scheduled to be restarted. Orion requests that the WDR monitoring frequency be converted from quarterly to semi-annually.

On March 1, 2007, the Los Angeles Regional Water Quality Control Board revised and replaced Order No. R4-2005-0030 with the new Order No. R4-2007-0019. The enrollment under the General WDR Order No. R4-2005-0030 is therefore terminated, except for enforcement purposes. This letter is to enroll you a new WDR under the Order No. R4-2007-0019.

We have revised the groundwater monitoring program CI-8940 to reflect the full scale in-situ remediation and reduction of groundwater sampling frequency. Groundwater monitoring will be performed in wells MW-A, MW-C, MW-H, MW-O, MW-P, EW-1, EW-2 and EW-4.

Mr. Jeffrey Baker
Tesoro Corporation

- 2 -

April 19, 2011

The Monitoring and Reporting Program required you to implement the monitoring program 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 reference Compliance File No. CI-8940 to 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.

To avoid paying future annual fees, please submit a written request for termination of your enrollment under the general permit in a separate letter, when your project has been completed and the permit 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.

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 Ms. Rebecca Chou at (213) 576-6618. Questions regarding the underground storage tank issues should be forwarded to Ms. Chandra Cansler-Tyler at (213) 576-6782 or email her at ccansler@waterboards.ca.gov.

Sincerely,


Samuel Unger, P.E.
Executive Officer

Enclosures: Amended Monitoring and Reporting Program No. CI-8940

Cc: Kathy Jundt, State Water Resources Control Board, Underground Storage Tank
Cleanup Fund
Nancy Matsumoto, Water Replenishment District of Southern California
Tim Smith, Los Angeles County Department of Public Works
Richard Lavin, Los Angeles County Department of Public Health, Envr. Programs
Matthew Carfagno, Orion Environmental, Inc.
David Luick, Property Owner, Dayton Hudson Corporation
Brad Ullery, Target Corporation

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
REVISED MONITORING AND REPORTING PROGRAM NO. CI-8940
FOR
FORMER FAST GAS #538, TARGET STORE T-290

2029 REDONDO BEACH BOULEVARD, GARDENA, CA
ENROLLMENT UNDER REGIONAL BOARD
ORDER NO. R4-2007-0019
SERIES NO. 158

I. REPORTING REQUIREMENTS

- A. Tesoro Petroleum Companies, Inc. (hereinafter Discharger) shall implement this monitoring program on the effective date of the enrollment under Regional Board Order No. R4-2007-0019. The first monitoring report under this program, for January - 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>Reporting Period</u> | <u>Sampling Period</u> | <u>Report Due Date</u> |
|-------------------------|------------------------|--------------------------|
| January - June | April - June | July 15 th |
| July - December | October - December | January 15 th |

- B. 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.
- C. 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 explain 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 (WDR).
- D. 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.
- E. 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.

- F. 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.
- G. 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.
- H. 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.
- I. 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.
- J. 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.
- K. 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.
- L. The Discharger should not implement any changes to the Monitoring and Reporting Program prior to receiving Executive Officer's written approval.
- M. The Discharger shall submit all reports required under this MRP, including groundwater monitoring data, to the State Water Resources Control Board GeoTracker database, in addition to submitting hard copies to the Regional Board office. Once the Discharger demonstrate mastery of electronic submittal of reports to GeoTracker for the Site, it may request that the Regional Board waive the requirement of submitting hard copies of reports.

II. DISCHARGE MONITORING REQUIREMENTS

The semi-annual reports shall contain the following information regarding the injection activities.

1. Location map showing injection points used for the ozone/oxygen/hydrogen peroxide injection.
2. Written and tabular summary defining:
 - Depth of injection points;
 - Quantity of ozone/oxygen/hydrogen peroxide injected at each injection point per month to the groundwater;
 - Days on which the injection system was in operation; and
 - Total amount of ozone/oxygen/hydrogen peroxide injected at the site.
3. Semi-annual visual inspection at each injection well shall be conducted to evaluate the well casing integrity after each injection. The semi-annual report shall include a summary of the visual inspection.
4. To avoid groundwater monitoring network reduction, data bias, and well screen clogging or alteration, no groundwater monitoring wells shall be used as injection points during the proposed injection. Separate injection points/wells must be installed at the Site for the proposed injection.

III. GROUNDWATER MONITORING PROGRAM

A groundwater-monitoring program shall be designed to detect and evaluate impacts associated with the injection activities. The monitoring well network must include MW-C as upgradient well; MW-P, as source well; EW-1 as downgradient well; and MW-A and EW-4 as cross-gradient wells (refer to attached Figure 4B). A baseline monitoring and sampling shall be conducted prior to the proposed injections. Baseline monitoring will establish the initial conditions with respect to the contaminant levels. These sampling stations shall not be changed and any proposed change of monitoring locations shall be identified and approved by the Executive Officer. The Discharger shall conduct a baseline sampling from all wells onsite one or two weeks prior to the proposed injection and regular sampling with the required frequencies from all the monitoring wells in the monitoring network for the following constituents:

| <u>CONSTITUENT</u> | <u>UNITS</u> ¹ | <u>TYPE OF SAMPLE</u> | <u>MINIMUM FREQUENCY OF ANALYSIS</u> |
|--|---------------------------|-----------------------|--------------------------------------|
| pH ² | pH units | grab | Semi-annually |
| Temperature ² | °F | grab | Semi-annually |
| Oxidation-reduction potential ² | Milivolts | grab | Semi-annually |

| | | | |
|---|----------|------|---------------|
| Specific conductivity ² | µmhos/cm | grab | Semi-annually |
| Ferrous iron | µg/L | grab | Semi-annually |
| Dissolved Oxygen ² | µg/L | grab | Semi-annually |
| Total Petroleum Hydrocarbons (as gasoline) | µg/L | grab | Semi-annually |
| Benzene | µg/L | grab | Semi-annually |
| Ethylbenzene | µg/L | grab | Semi-annually |
| Toluene | µg/L | grab | Semi-annually |
| Total xylenes | µg/L | grab | Semi-annually |
| MTBE | µg/L | grab | Semi-annually |
| TBA | µg/L | grab | Semi-annually |
| TAME | µg/L | grab | Semi-annually |
| DIPE | µg/L | grab | Semi-annually |
| ETBE | µg/L | grab | Semi-annually |
| Ethanol | µg/L | grab | Semi-annually |
| Methane | µg/L | grab | Semi-annually |
| Formaldehyde | µg/L | grab | Semi-annually |
| Acetates | µg/L | grab | Semi-annually |
| Total organic carbon | µg/L | grab | Semi-annually |
| Total dissolved solids | mg/l | grab | Semi-annually |
| Arsenic | mg/L | grab | Semi-annually |
| Bromide | mg/L | grab | Semi-annually |
| Sulfate | mg/L | grab | Semi-annually |
| Chloride | mg/L | grab | Semi-annually |
| Boron | mg/L | grab | Semi-annually |
| Sodium | mg/L | grab | Semi-annually |
| Carbon dioxide | mg/L | grab | Semi-annually |
| Manganese | µg/L | grab | Semi-annually |
| Total iron | µg/L | grab | Semi-annually |

| | | | |
|-----------------------------|------|------|---------------|
| Alkalinity | µg/L | grab | Semi-annually |
| Total chromium ³ | µg/L | grab | Semi-annually |
| Chromium six ³ | µg/L | grab | Semi-annually |

¹ mg/L: milligrams per liter; µg/L: micrograms per liter; µmhos/cm: microohms per centimeter; °F: degree Fahrenheit.
² Field instrument may be used to measure this parameter.
³ The Discharger is required to monitor for total chromium and chromium six in the baseline, second and fourth semi-annual 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-annual 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)"

Former Fast Gas #538, Target Store T-290
Monitoring and Reporting Program No. CI-8940

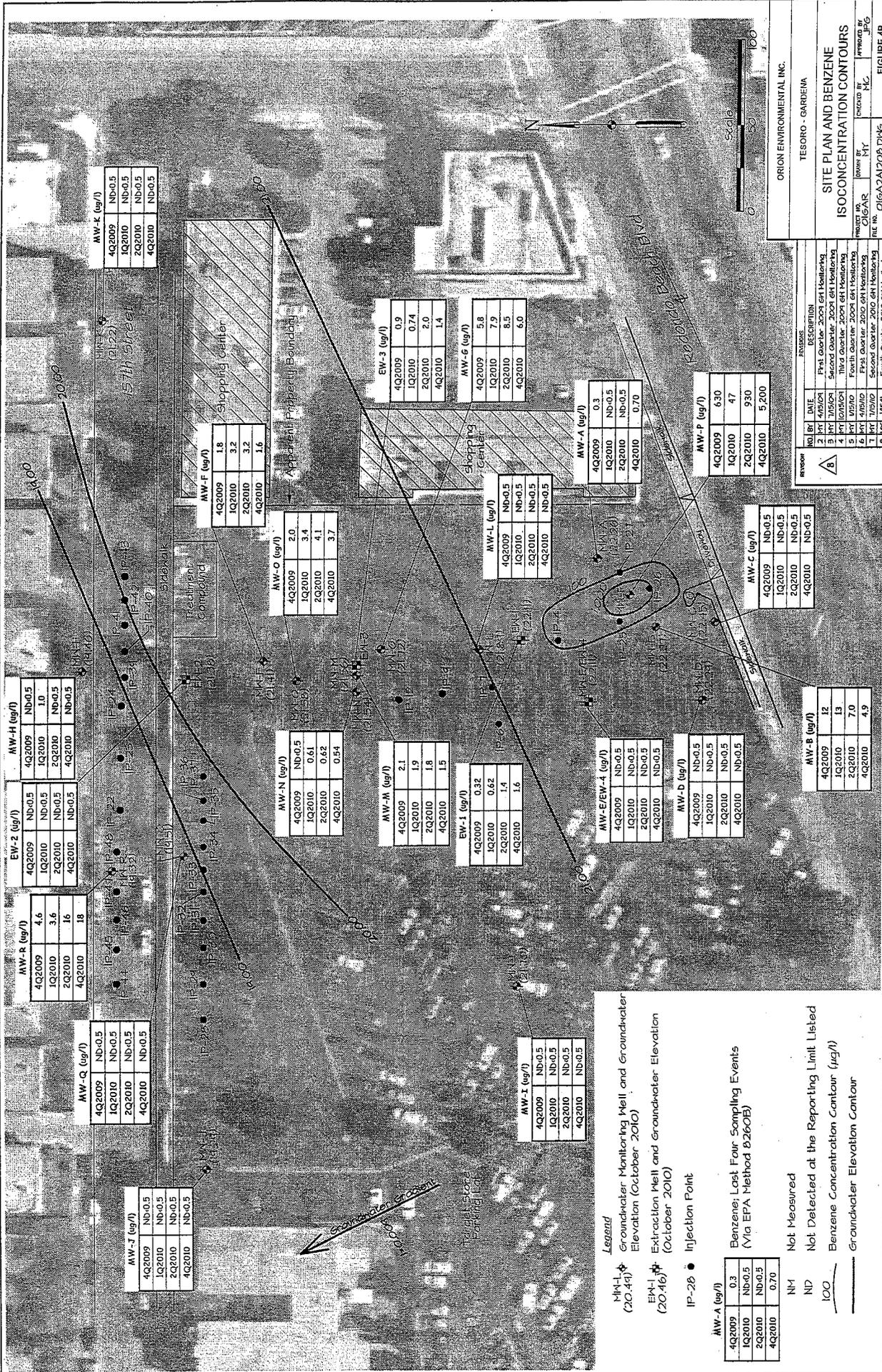
UST File No. R-23243
Order No. R4-2007-0019

VI. PUBLIC DOCUMENTS

These records and reports are public documents and shall 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.

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

Date: April 19, 2011



MW-L (µg/l)

| | |
|--------|--------|
| 4Q2009 | Nd:0.5 |
| 1Q2010 | Nd:0.5 |
| 2Q2010 | Nd:0.5 |
| 4Q2010 | Nd:0.5 |

MW-F (µg/l)

| | |
|--------|-----|
| 4Q2009 | 1.8 |
| 1Q2010 | 3.2 |
| 2Q2010 | 3.2 |
| 4Q2010 | 1.6 |

MW-O (µg/l)

| | |
|--------|-----|
| 4Q2009 | 2.0 |
| 1Q2010 | 3.4 |
| 2Q2010 | 4.1 |
| 4Q2010 | 3.7 |

MW-N (µg/l)

| | |
|--------|--------|
| 4Q2009 | Nd:0.5 |
| 1Q2010 | 0.61 |
| 2Q2010 | 0.62 |
| 4Q2010 | 0.54 |

MW-M (µg/l)

| | |
|--------|-----|
| 4Q2009 | 2.1 |
| 1Q2010 | 1.9 |
| 2Q2010 | 1.8 |
| 4Q2010 | 1.5 |

EW-1 (µg/l)

| | |
|--------|------|
| 4Q2009 | 0.32 |
| 1Q2010 | 0.62 |
| 2Q2010 | 1.4 |
| 4Q2010 | 1.6 |

MW-I (µg/l)

| | |
|--------|--------|
| 4Q2009 | Nd:0.5 |
| 1Q2010 | Nd:0.5 |
| 2Q2010 | Nd:0.5 |
| 4Q2010 | Nd:0.5 |

MW-J (µg/l)

| | |
|--------|--------|
| 4Q2009 | Nd:0.5 |
| 1Q2010 | Nd:0.5 |
| 2Q2010 | Nd:0.5 |
| 4Q2010 | Nd:0.5 |

MW-H (µg/l)

| | |
|--------|--------|
| 4Q2009 | Nd:0.5 |
| 1Q2010 | 1.0 |
| 2Q2010 | Nd:0.5 |
| 4Q2010 | Nd:0.5 |

EW-2 (µg/l)

| | |
|--------|--------|
| 4Q2009 | Nd:0.5 |
| 1Q2010 | Nd:0.5 |
| 2Q2010 | Nd:0.5 |
| 4Q2010 | Nd:0.5 |

MW-R (µg/l)

| | |
|--------|-----|
| 4Q2009 | 4.6 |
| 1Q2010 | 3.6 |
| 2Q2010 | 1.6 |
| 4Q2010 | 1.8 |

MW-Q (µg/l)

| | |
|--------|--------|
| 4Q2009 | Nd:0.5 |
| 1Q2010 | Nd:0.5 |
| 2Q2010 | Nd:0.5 |
| 4Q2010 | Nd:0.5 |

MW-P (µg/l)

| | |
|--------|-------|
| 4Q2009 | 6.30 |
| 1Q2010 | 47 |
| 2Q2010 | 930 |
| 4Q2010 | 5,200 |

MW-C (µg/l)

| | |
|--------|--------|
| 4Q2009 | Nd:0.5 |
| 1Q2010 | Nd:0.5 |
| 2Q2010 | Nd:0.5 |
| 4Q2010 | Nd:0.5 |

MW-B (µg/l)

| | |
|--------|-----|
| 4Q2009 | 12 |
| 1Q2010 | 13 |
| 2Q2010 | 7.0 |
| 4Q2010 | 4.9 |

MW-A (µg/l)

| | |
|--------|--------|
| 4Q2009 | 0.3 |
| 1Q2010 | Nd:0.5 |
| 2Q2010 | Nd:0.5 |
| 4Q2010 | 0.70 |

EW-3 (µg/l)

| | |
|--------|------|
| 4Q2009 | 0.9 |
| 1Q2010 | 0.74 |
| 2Q2010 | 2.0 |
| 4Q2010 | 1.4 |

MW-E (µg/l)

| | |
|--------|-----|
| 4Q2009 | 5.8 |
| 1Q2010 | 7.9 |
| 2Q2010 | 8.5 |
| 4Q2010 | 6.0 |

MW-L (µg/l)

| | |
|--------|--------|
| 4Q2009 | Nd:0.5 |
| 1Q2010 | Nd:0.5 |
| 2Q2010 | Nd:0.5 |
| 4Q2010 | Nd:0.5 |

MW-A (µg/l)

| | |
|--------|--------|
| 4Q2009 | 0.3 |
| 1Q2010 | Nd:0.5 |
| 2Q2010 | Nd:0.5 |
| 4Q2010 | 0.70 |

MW-EW-4 (µg/l)

| | |
|--------|--------|
| 4Q2009 | Nd:0.5 |
| 1Q2010 | Nd:0.5 |
| 2Q2010 | Nd:0.5 |
| 4Q2010 | Nd:0.5 |

MW-D (µg/l)

| | |
|--------|--------|
| 4Q2009 | Nd:0.5 |
| 1Q2010 | Nd:0.5 |
| 2Q2010 | Nd:0.5 |
| 4Q2010 | Nd:0.5 |

MW-B (µg/l)

| | |
|--------|-----|
| 4Q2009 | 12 |
| 1Q2010 | 13 |
| 2Q2010 | 7.0 |
| 4Q2010 | 4.9 |

MW-A (µg/l)

| | |
|--------|--------|
| 4Q2009 | 0.3 |
| 1Q2010 | Nd:0.5 |
| 2Q2010 | Nd:0.5 |
| 4Q2010 | 0.70 |

Legend

- MW-I (20.4ft) Groundwater Monitoring Well and Groundwater Elevation (October 2010)
- EM-I (20.4ft) Extraction Well and Groundwater Elevation (October 2010)
- IP-20 Injection Point

MW-A (µg/l)

| | |
|--------|--------|
| 4Q2009 | 0.3 |
| 1Q2010 | Nd:0.5 |
| 2Q2010 | Nd:0.5 |
| 4Q2010 | 0.70 |

Benzene: Last Four Sampling Events (Via EPA Method 8260E)

Not Measured
 ND Not Detected at the Reporting Limit Listed
 100 Benzene Concentration Contour (µg/l)
 Groundwater Elevation Contour

ORION ENVIRONMENTAL INC.
 TESORO - GARDEMA
 SITE PLAN AND BENZENE
 ISOCONCENTRATION CONTOURS
 DRAWN BY: CHGAR
 CHECKED BY: MC
 APPROVED BY: JFC
 FILE NO: 016A2A120B.DWG
 FIGURE 4B

REVISION

| NO. | BY | DATE | DESCRIPTION |
|-----|-----|----------|-------------|
| 1 | JFC | 10/20/11 | Final |
| 2 | JFC | 10/20/11 | Final |
| 3 | JFC | 10/20/11 | Final |
| 4 | JFC | 10/20/11 | Final |
| 5 | JFC | 10/20/11 | Final |
| 6 | JFC | 10/20/11 | Final |
| 7 | JFC | 10/20/11 | Final |
| 8 | JFC | 10/20/11 | Final |

