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Alameda County
Environmental Health

September 15, 2010

Alameda County Department of
Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

Attention: Paresh Khatri

Subject: Feasibility Study/Corrective Action Plan
Dublin Toyota UST Site, 6450 Dublin Court, Dublin, California
Alameda County Fuel Leak Case No. RO000333

Ladies and Gentlemen:

Attached please find a copy of the *Feasibility Study/Corrective Action Plan, Dublin Toyota UST Site, 6450 Dublin Court, Dublin, California*, prepared by Gribi Associates. I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Very truly yours,

Scott F. Anderson
Chief Financial Officer
Dublin Toyota

FEASIBILITY STUDY/
CORRECTIVE ACTION PLAN

Dublin Toyota UST Site
6450 Dublin Court
Dublin, California

ACEH RO# 0000333

Prepared for:

Mr. Scott Anderson
Dublin Toyota
4321 Toyota Drive
Dublin, CA 94568

September 15, 2010

GRIBI ASSOCIATES

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GRIBI
ASSOCIATES

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Ladies and Gentlemen:

Gribi Associates is pleased to submit this *Feasibility Study/Corrective Action Plan* on behalf of Dublin Toyota for the underground storage tank (UST) site located at 6450 Dublin Court in Dublin, California (Site). In accordance with the August 12, 2010 letter from your office, this report provides a detailed Site background, proposes Site cleanup goals, and evaluates four viable remedial options to achieve proposed cleanup goals. Based on this evaluation, the report includes a detailed workplan to implement the preferred remedial alternative.

We appreciate the opportunity to present this report for your review. Please call if you have any questions or require additional information.

Very truly yours,

James E. Gribi
Professional Geologist
California No. 5843

REGISTERED GEOLOGIST
JAMES E. GRIBI
No. 5843
STATE OF CALIFORNIA

JEG/ct

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

EXECUTIVE SUMMARY

Gribi Associates is pleased to submit this *Feasibility Study/Corrective Action Plan* on behalf of Dublin Toyota for the underground storage tank (UST) site located at 6450 Dublin Court in Dublin, California (Site). In accordance with the August 12, 2010 letter from your office, this report provides a detailed Site background, proposes Site cleanup goals, and evaluates four viable remedial options to achieve proposed cleanup goals. Based on this evaluation, the report includes a detailed workplan to implement the preferred remedial alternative.

The contaminants of concern (COCs) at the Site consist of gasoline constituents. Specific COCs include TPH-G; Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX); Methyl tert-Butyl Ether (MTBE); and tert-Butyl Alcohol (TBA).

The source of identified contaminant impacts on the Site is the former fuel UST system, which was removed in June 1998. Secondary sources would include heavily-impacted soil and groundwater in the immediate UST area. These secondary source soil and groundwater hydrocarbon impacts in the former UST source area do not extend a significant distance away from the former UST area. Also, it is possible that significant natural attenuation of source area hydrocarbons has occurred, as evidenced by the relatively low hydrocarbon impacts in recent source area borings.

Soil and groundwater hydrocarbon impacts (primarily MTBE) appear to have originated at the former USTs and migrated laterally in groundwater approximately 150 to 200 feet in a southwest direction in the upper "A" Zone. MTBE then migrated vertically downward to the deeper "B" Zone and then laterally southwest in "B" Zone. MTBE has migrated in a southerly direction in the "B" Zone approximately 300 feet below Interstate 580, resulting in a concentration of 1,200 ug/L at MW-16 in Johnson Drive.

MTBE migration in the upper "A" Zone seems to have been relatively rapid, with significant downgradient migration from the UST source area in the last 12 years. MTBE and TBA concentration trends in "B" zone plume wells MW-5D, MW-8, and MW-9 seem to fluctuate significantly but do not seem to show as marked an upward or downward concentration trend as is seen in most "A" Zone wells. These results would seem to indicate that the groundwater MTBE/TBA plumes in the "A" and "B" Zones are relatively unstable and are migrating in a general southerly direction.

Relative to potential contaminant exposure risks, complete exposure pathways exist relative to potential air exposure, soil exposure, groundwater exposure and surface water exposure pathways. While these exposure pathways are complete, it is clear that the only realistic potential exposures that could result in risks above acceptable risk levels would be from: (1) Air hydrocarbon exposure in the former car wash/detail shop, immediately overlying the former Site USTs; and (2) Groundwater MTBE/TBA exposure in some distant, unidentified water supply well to the south-southwest.

Given that the primary exposure pathways are potential vapor inhalation of gasoline vapors and potential groundwater ingestion at some remote downgradient location, we propose to adopt San Francisco Bay Regional Water Quality Control Board, Drinking Water Source, Commercial Land Use, Vapor Intrusion and groundwater ingestion Environmental Screening Levels (ESLs) for shallow soil (less than 9 feet in depth), deep soil (greater than 9 feet in depth), and groundwater beneath the Site. Note that these proposed ESLs for the Site are guidelines only, and, ultimately, regulatory closure could be granted base on the State's generally accepted closure guidelines (source removal, adequate site characterization, plume attenuation to meet water quality goals, no sensitive receptor impacts, and no risk). Vapor intrusion, soil, and groundwater ESLs, as well as maximum Site contamination values, are summarized in the following table. Note that for groundwater, we have included both the vapor intrusion ESLs and the drinking water ESLs.

There are specific Site constraints which would tend to disallow strict adherence to numeric cleanup goals. In particular, there would be significant difficulty associated with investigating and remediating groundwater hydrocarbon impacts beneath US Interstate 580, which extends approximately 300 feet south in a downgradient direction from the Site. Thus, the application of nonnumeric risk-based remediation goals, represents the most feasible option to achieve regulatory closure within a reasonable time frame and cost (pursuant to State Water Board Resolutions 92-49 and 2009-0042).

In order to satisfy nonnumeric, risk-based cleanup goals for the Site, additional secondary source remediation will be required in the former UST source area, and downgradient groundwater MTBE/TBA remediation will be conducted on the Site. We believe that if Site hydrocarbon impacts can be adequately remediated, then residual "B" Zone groundwater MTBE/TBA impacts beneath US Interstate 580 and further downgradient will sufficiently attenuate to nonnumeric, risk-based cleanup goals over a reasonable time period.

The primary remediation goals for this Site will be to mitigate both shallow soil and groundwater hydrocarbon impacts in the former UST area and more diffuse groundwater MTBE/TBA impacts downgradient from the UST source area. The CAP evaluates the following possible remedial options to achieve these goals: (1) Natural attenuation (do nothing); (2) Pump from wells, followed by above-ground treatment of groundwater ("pump and treat"); (3) Air sparging to volatilize hydrocarbon, followed by soil vapor extraction and treatment; and (4) Ozone injection. These remedial options, as well as their advantages and disadvantages, are summarized in the following table.

Based on our assessment of remediation options for the Site, we recommend the implementation of ozone injection at the Site. The three other alternatives (natural attenuation, groundwater pump and treat, and air sparge/soil vapor extraction) have various uncertainties and would not, we believe, result in adequate secondary source and downgradient groundwater remediation in a reasonable time period and at a reasonable cost. Ozone injection, on the other hand, has been shown to be very effective on MTBE-only sites and on sites with primarily groundwater contamination only. Ozone injection would, we believe, result in relatively fast and straightforward remediation of source area soil and groundwater impacts at a reasonable cost. Thus, this CAP proposes to, first, implement an ozone injection pilot test at the Site, and then, if successful, expand the pilot test system to conduct full-scale remediation. Periodic groundwater monitoring will be conducted to assess remediation effectiveness. When groundwater

hydrocarbon concentrations decrease to relatively low levels (i.e. in the 100-ug/l range or lower), and with agreement from ACEH, the ozone injection system will be turned off and groundwater will subsequently be monitored for possible hydrocarbon rebound.

The CAP includes a workplan to conduct an ozone injection pilot test at the Site. The ozone injection pilot test will involve (1) The installation of approximately five small-diameter injection wells at variable depths to test remediation of both "A" Zone and "B" Zone impacts; (2) The installation of approximately three shallow vapor monitoring wells in the former UST source area to assess health and safety concerns; (3) The installation of above/below ground small-diameter delivery tubing; (4) The operation of a mobile ozone generation unit on the Site for approximately three months; and (5) Periodic monitoring of a wide range of parameters to measure remediation effectiveness and health and safety concerns.

1.0 INTRODUCTION

Gribi Associates is pleased to submit this *Feasibility Study/Corrective Action Plan* on behalf of Dublin Toyota for the underground storage tank (UST) site located at 6450 Dublin Court in Dublin, California (Site). In accordance with the August 12, 2010 letter from your office, this report provides a detailed Site background, proposes Site cleanup goals, and evaluates four viable remedial options to achieve proposed cleanup goals. Based on this evaluation, the report includes a detailed workplan to implement the preferred remedial alternative.

1.1 General Site Description

The Site is located in a primarily commercial area of Dublin, California and is formerly the location of the Dublin Toyota/Scion automobile dealership (see Figures 1 and 2). The Site comprises an irregularly shaped land parcel of nearly 3.5 acres. An irregularly shaped building is located in the center of the Site parcel that formerly housed the business activities of the dealership. The west portion of the Site building was primarily a show room and sales area, and the east portion of the Site building was primarily used as an automotive service area. The outside areas of the Site are entirely asphalt-paved.

The Site is bounded to the south by US Interstate 580 freeway, to the west by Dublin Sports Grounds Park, to the north by Dublin Court followed by a retail plaza, and to the east by an office-supply warehouse store.

1.2 Geologic and Hydrologic Setting

The Site is located in the northwestern end of the Livermore Valley, within the Coast Ranges Geomorphic Province of Northern California. The Livermore Valley is approximately 14 miles long oriented in an east-west direction, approximately 3 miles wide, and is surrounded by hills of the Diablo Range. In the vicinity of the Site, the valley floor slopes gently to the south-southeast. The Livermore Valley is a structural valley that formed between the Calaveras Fault on the west and the Greenville Fault on the east[1].

Soils in the Livermore Valley consist of Holocene valley fill deposits, which range in thickness from tens of feet to 400 feet and are underlain by sands, gravels, and clays of the Plie-Pleistocene Livermore Formation, which is up to 4,000 feet thick[2]. The Livermore Formation is underlain by sandstone, siltstone, shale, and conglomerate of the Tassajara Formation.

The Livermore Valley groundwater basin generally comprises multiple aquifers that are thicker and more laterally continuous in the south and west portions of the basin. The eastern and northern areas (the Site is located near the north edge of the basin) consist of alternating layers of gravel, sand, silt, and clay that are thinner and are laterally discontinuous. The Site is located in the Dublin subbasin which, together with the Camp subbasin to the east, are areas of

[1] Zone 7 Water Agency *Groundwater Management Plan for Livermore-Amador Valley Groundwater Basin*, September 2005.

[2] California Department of Water Resources, *Evaluation of Groundwater Resources, South San Francisco, Volume III, Northern Santa Clara County Area: Bulletin 118-1*, December 1975.

groundwater recharge, where inflowing surface water flows in a southerly direction towards the Main Basin to the south. Groundwater within the Livermore Valley is used for municipal use, agricultural use, and extraction and evaporation associated with gravel mining operations.

2.0 PREVIOUS ENVIRONMENTAL WORK

The following is a brief chronological narrative of previous environmental investigation and remediation activities and results. This summary is based on our review of available Site documents. In preparing this summary, we have tried to be complete and succinct.

2.1 Past Environmental Investigation and Remediation Activities

The Dublin Toyota UST site consisted of three USTs located in a common UST tank farm located adjacent to the northeast corner of the maintenance garage (see Figures 3 and 4, and Tables 1 and 2). The tank farm was composed of two 2,000-gallon steel gasoline USTs and one 1,000-gallon steel waste oil UST. The three USTs were removed from a common excavation by Scott Company on June 10, 1998. Based on soil and grab groundwater sampling results, which showed elevated levels of gasoline- and diesel-range hydrocarbons, the UST excavation cavity was over-excavated, and approximately 500 gallons of groundwater was pumped from the excavation cavity. Approximately 92 tons of hydrocarbon-impacted soil were disposed of offsite.

In December 1998, Gribi Associates drilled and sampled four investigative soil borings (IB-1 through IB-4), and drilled, installed, and sampled two groundwater monitoring wells (MW-1 and MW-2) at the Site (see Figures 3, 4, and 5, and Tables 1, 2, and 3). Soil and groundwater samples collected from the borings and wells contained no significant levels of hydrocarbons, except for the groundwater sample from well MW-1, located about 15 feet southwest from the former UST cavity. Groundwater samples from this well contained elevated levels of methyl tert-butyl ether (MTBE).

In August 2000, Gribi Associates drilled and sampled one soil boring (IB-5) inside the Dublin Toyota service building west from the former USTs, and drilled, installed, and sampled one groundwater monitoring well (MW-3) south-southwest from the former USTs (see Figures 3 and 4, and Tables 1, 2, and 3). Soil analytical results from these borings showed no detectable concentrations of gasoline-range hydrocarbons. Groundwater samples from these borings showed concentrations of MTBE that were significantly lower than MTBE concentrations in MW-1, indicating lateral attenuation of MTBE impacts in groundwater southwest from the former USTs. Subsequent groundwater monitoring of the three Site groundwater monitoring wells in May 2002, November 2002, and April 2003 showed decreasing concentrations of MTBE in MW-1.

In May 2005, a soil and water investigation (SWI) was conducted that consisted of drilling and sampling twelve soil boring (B-1 through B-12) at the Site (see Figure 3, and Tables 1 and 2). Results of the investigation indicated groundwater MTBE impacts in a shallow “A” Zone immediately downgradient from the source (former location of Site USTs) and in a deeper “B” Zone further downgradient from the source. The SWI summary report included a brief workplan proposing the installation of ten groundwater monitoring wells, to include four shallow “A” Zone wells and six deeper “B” Zone wells.

In July 2005, one angle boring (AB-1) was drilled south of the former UST location, and two 2-inch diameter extraction wells (EW-1 and EW-2) were installed in the former car wash/detail shop, which directly overlies for former UST excavation cavity (see Figure 4, and Tables 1, 2, and 3). The extraction wells were constructed within the gravel backfill of the former UST excavation.

Between February and April 2006, Gribi Associates conducted seven aggressive fluid vapor recovery (AFVR) events (*Report or Interim Remedial Measures*, Gribi Associates, April 2006) (see Tables 4, 5, and 6). Each event consisted of approximately four hours of extraction of soil vapor and groundwater at wells EW-1 and EW-2 using a vacuum truck. During the AFVR events, groundwater and vapor samples were collected to monitor remedial progress. The combined total estimated volume of removed groundwater (approximately 3,200 gallons) and the combined total estimated mass of removed gasoline-range hydrocarbons (four pounds) during the seven AFVR events were relatively small. These results indicated that AFVR had only limited applicability as a source area remedial option for the Site. Given the results and conclusions, implementation of additional AFVR activities at the Site was not recommended.

In April 2006, Gribi Associates drilled and installed ten 3/4-inch diameter groundwater monitoring wells (MW-4S, MW-4D, MW-5S, MW-5D, MW-6S, MW-6D, MW-7, MW-8, MW-9, and MW-10) at the Site (see Figure 3 and Table 3). The locations of the monitoring wells closely mirrored the locations of the soil borings conducted during the 2005 investigation. Results of groundwater monitoring and sampling were very similar to results from the soil and water investigation conducted in May 2005. Groundwater results show elevated MTBE concentrations in the "A" Zone (shallow aquifer, above 20 feet in depth) immediately downgradient from the former UST excavation and elevated MTBE levels in the "B" Zone (deeper aquifer, between 30 and 40 feet bgs) further downgradient from the former UST excavation.

2.2 Recent Environmental Investigation Activities

Recent Site investigations included: (1) A downgradient CPT investigation, described and reported in *Report of CPT Groundwater Investigation, Dublin Toyota UST Site, 6450 Dublin Court, Dublin, California*, (Gribi Associates, June 19, 2009); (2) A source area direct-push soil boring investigation, described and reported in *Source Area Soil Boring Investigation Report, Dublin Toyota UST Site, 6450 Dublin Court, Dublin, California*, (Gribi Associates, October 6, 2009); (3) The installation of seven groundwater monitoring wells, reported in *Report of Well Installation Activities, Dublin Toyota UST Site, 6450 Dublin Court, Dublin, California*, (Gribi Associates, May 14, 2010); and (4) A soil gas investigation in the former UST source area, described and reported in *Report of Soil Gas Sampling Activities, Dublin Toyota UST Site, 6450 Dublin Court, Dublin, California*, (Gribi Associates, August 4, 2010).

In April 2009, Gribi Associates conducted a cone penetrometer (CPT) investigation that included the drilling of four onsite borings (CPT-1 through CPT-4) and three offsite borings (CPT-5, CPT-6, and CPT-7) (see Figures 6 and 7, and Table 2). Results of this investigation showed a fairly pervasive permeable thin sand zone, previously identified as the "B" Zone, between approximately 30 and 35 feet bgs. This zone was present in all borings except downgradient borings CPT-6 and CPT-7, the respective middle and westerly CPT borings on Johnson Drive. Groundwater analytical results from this investigation and from onsite "B" Zone wells MW-4D,

MW-5D, MW-6D, MW-8, MW-9, and MW-10 define a groundwater MTBE plume in the "B" Zone that appears to extend southwest from the UST source area and then, apparently due to lithologic variability, turns to the south beneath US Interstate 580. This "B" Zone MTBE plume appears to extend at least as far south as CPT-5, in Johnson Drive approximately 500 feet south from the Dublin Toyota UST source area.

The CPT investigation identified two deeper unnamed sand zones, one between 50 and 60 feet bgs and the other between 70 and 80 feet bgs. Grab groundwater samples from these deeper water-bearing zones showed no detectable groundwater MTBE impacts. Thus, it appears that MTBE from the Site has migrated laterally in the "B" Zone, but has not migrated vertically deeper than the "B" Zone in significant quantities.

In order to further define and characterize residual source area hydrocarbon impacts, six soil borings (GB-1 through GB-6), were drilled and sampled on July 13, 2009 and July 31, 2009 (see Figure 5, and Tables 1 and 2). Soil laboratory analytical results showed no significant TPH-G or BTEX concentration in any of the soil samples. Low concentrations of TBA and MTBE, ranging from nondetect to 3.5 mg/kg for TBA and nondetect to 0.30 mg/kg for MTBE, were reported in soil samples at varying depths in the six borings. Groundwater analytical results showed very low to nondetectable concentrations of TPH-G and BTEX constituents in both shallow and deep groundwater samples from the six borings. Oxygenate concentrations in groundwater were more persistent in shallow samples, with TBA concentrations ranging from nondetect in GB-4 to 6,000 ug/l in GB-6, and MTBE concentrations ranging from 17 ug/l in GB-6 to 240 ug/l in GB-2. Deeper groundwater samples showed TBA concentrations ranging from nondetect in GB-2, GB-3, GB–4, and GB-6 to 11 ug/l in GB-5, and MTBE concentrations ranging from nondetect in GB-3 to 3.9 ug/l in GB-6.

On December 3, 2009, ACEH issued a letter requesting: (1) Justification that the oxygenate contaminates in the former UST source area do not pose a significant risk to human health or the environment or a scope of work to address the apparent risk posed by these contaminants; and (2) A workplan for additional wells to monitor downgradient "B" Zone groundwater oxygenate impacts. On January 5, 2010, Gribi Associates submitted the *Soil and Water Investigation Workplan* on January 5, 2010. This workplan proposed: (1) The installation and sampling of three shallow source area groundwater monitoring wells (MW-11, MW-12, and MW-13) and four downgradient "B" Zone groundwater monitoring wells (MW-14 through MW-17); and (2) The collection and analysis of four shallow soil gas samples (SG-1 through SG-4) in the former UST source area. The workplan was approved by ACEH in a letter dated February 10, 2010.

Seven groundwater monitoring wells, MW-11 through MW-17, were drilled and installed between April 13 and April 15, 2010 (see Figures 8 and 9, and Tables 1 and 3). In order to further define and characterize MTBE impacts in groundwater, three shallow source area groundwater monitoring wells, MW-11, MW-12, and MW-13, were drilled and installed on the Site. Additionally, four deeper downgradient "B" Zone groundwater monitoring wells, MW-14 through MW-17, were drilled and installed along Johnson Drive, approximately 320 feet south of the subject property and over 500 feet south from the former Site USTs, on the opposite side of US Interstate 580, in an expected downgradient groundwater flow direction from the former Site USTs. As with results from recent source area borings GB-1 through GB-6, low to nondetectable concentrations of TPH-G and BTEX were encountered in soil samples from the shallow source-area well borings (MW-11, MW-12, and MW-13). These results indicate that

significant amounts of soil contamination are not present in the former UST source area. Soil laboratory analytical results from the three shallow source area well borings did show concentrations of TBA and MTBE that are above Environmental Screening Levels. These results are similar to previous soil and groundwater results, and clearly demonstrate that the contaminants of concern for the Site are oxygenates only.

Groundwater monitoring results from newly-installed and existing groundwater monitoring wells indicate that releases from the former USTs migrated laterally approximately 150 to 200 feet in a southwest direction in the upper "A" Zone. MTBE then migrated vertically to, and then laterally southwest in, the deeper "B" Zone. Impacts have migrated in a southerly direction, below US Interstate 580, and have resulted resulting in a concentration of 1,200 ug/L at MW-16. Downgradient monitoring wells MW-15 and MW-17, located in a west from MW-16 and east from MW-16, respectively, showed MTBE to be below laboratory detection levels.

Four soil gas samples, SG-1 through SG-4, were collected and analyzed on July 14, 2010 (see Figure 4 and Table 7). Soil gas sampling results indicate a possible risk relative to indoor air exposure in the former car wash/detail shop, which directly overlies the former Site UST excavation cavity. Soil gas hydrocarbon concentrations were highest in sample SG-1, collected in the former Site UST excavation cavity area. TPH-G and Benzene concentrations in the SG-1 sample were 1,400,000 micrograms per cubic meter (ug/m^3) and 810 ug/m^3, respectively. These TPH-G and Benzene concentrations are significantly higher than their respective residential land use environmental screening levels (ESLs) of 10,000 ug/m^3 and 84 ug/m^3, and are also elevated relative to the respective commercial land use TPH-G and Benzene ESLs of 29,000 ug/m^3 and 290 ug/m^3. The soil gas TPH-G concentration in SG-2, also located within the former UST excavation cavity, was also elevated relative to both residential and commercial land use ESLs; however, the Benzene concentration at SG-2 was at or below both residential and commercial land use ESLs.

Soil gas hydrocarbon concentrations at sample locations SG-3 and SG-4, located downgradient from the former UST cavity within the adjoining main vehicle maintenance building, exceeded residential land use ESLs, but did not exceed commercial land use ESLs. Thus, these sampling results do not indicate significant risk relative to occupational (commercial land use) indoor air exposure.

Based on the results of this and previous investigations which have generally shown elevated hydrocarbon impacts in the former UST source area and in downgradient shallow groundwater, the soil gas investigation included a recommendation to prepare a Corrective Action Plan (CAP) for the Site to address mitigation of these impacts. On August 12, 2010, ACEH directed the preparation of a Feasibility Study/Corrective Action Plan (FS/CAP) for the Site. The FS/CAP is to include a concise Site background, a description of Site geology and hydrology, a discussion of Site cleanup levels and goals, an evaluation of at least three viable remediation alternatives for the Site, and a workplan to implement the proposed remedial alternative.

3.0 CONTAMINANT EXTENT AND STABILITY

Native soils beneath the Site generally consist of fill material to approximately 5 feet below grade, followed by clays with discontinuous interbedded sand and gravel layers ("A" Zone) to approximately 25 feet below surface grade. A deeper apparently continuous sand and gravel

layer ("B" Zone) is present from about 30 feet to 35 feet in depth. According to driller-generated CPT boring logs, soils beneath the Site generally consist of silts and clays to 90 feet total boring depth, with occasional generally discontinuous thin sand and silty sand layers. Three thin sand zones, each generally less than five feet in thickness, were encountered, with the first between 30 and 40 feet bgs, the second between 50 and 60 feet bgs, and the third between 70 and 80 feet bgs. The first sand zone, between 30 and 40 feet bgs, corresponds to the previously identified "B" Zone. Groundwater is present beneath the Site at approximately seven feet in depth and generally flows in a southerly direction.

Source area soil and groundwater hydrocarbon impacts for the Site are shown on Figure 4. Soil and groundwater hydrocarbon impacts (primarily MTBE) appear to have originated at the former USTs and migrated laterally in groundwater approximately 150 to 200 feet in a southwest direction in the upper, near-surface "A" Zone. MTBE then migrated vertically downward to the deeper "B" Zone (30 to 35 feet bgs) and then laterally southwest in the "B" Zone. MTBE has migrated in a southerly direction in the "B" Zone approximately 300 feet below Interstate 580, resulting in a concentration of 1,200 ug/L at MW-16 in Johnson Drive.

MTBE migration in the upper "A" Zone seems to have been relatively rapid, with significant downgradient migration from the UST source area in the last 12 years. MTBE/TBA trend graphs for selected Site wells are included in Appendix A. Groundwater MTBE levels in source area shallow well MW-1 have decreased from somewhere in the 70,000- to 100,000-ug/l range in 1998 to around 50 ug/l during recent monitoring events. MTBE concentrations have also decreased significantly in near-source shallow wells MW-3 and MW-5S, but have increased significantly in further downgradient shallow wells MW-4S and MW-7. Groundwater TBA levels in shallow wells seem to have increased in well MW-1 and have shown wide fluctuations in all other shallow wells. MTBE and TBA concentration trends in "B" zone plume wells MW-5D, MW-8, and MW-9 seem to fluctuate significantly but do not seem to show as marked an upward or downward concentration trend as is seen in most "A" Zone wells. These results would seem to indicate that the groundwater MTBE/TBA plumes in the "A" and "B" Zones are relatively unstable and are migrating in a general southerly direction.

4.0 CONTAMINANT SOURCE, TRANSPORT, AND EXPOSURE

4.1 Contaminant Sources

The contaminants of concern (COCs) at the Site consist of gasoline constituents. Specific COCs include TPH-G; Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX); Methyl tert-Butyl Ether (MTBE); and tert-Butyl Alcohol (TBA).

The source of identified contaminant impacts on the Site is the former fuel UST system, which was removed in June 1998. Secondary sources would include heavily-impacted soil and groundwater in the immediate UST area. These secondary source soil and groundwater hydrocarbon impacts in the former UST source area do not extend a significant distance away from the former UST area. Also, it is possible that significant natural attenuation of source area hydrocarbons has occurred, as evidenced by the relatively low hydrocarbon impacts in recent source area borings.

4.2 Contaminant Transport

As stated above, soil and groundwater hydrocarbon impacts (primarily MTBE) appear to have originated at the former USTs and migrated laterally in groundwater approximately 150 to 200 feet in a southwest direction in the upper "A" Zone. MTBE then migrated vertically downward to the deeper "B" Zone and then laterally southwest in "B" Zone. MTBE has migrated in a southerly direction in the "B" Zone approximately 300 feet below Interstate 580, resulting in a concentration of 1,200 ug/L at MW-16 in Johnson Drive.

MTBE migration in the upper "A" Zone seems to have been relatively rapid, with significant downgradient migration from the UST source area in the last 12 years. MTBE and TBA concentration trends in "B" zone plume wells MW-5D, MW-8, and MW-9 seem to fluctuate significantly but do not seem to show as marked an upward or downward concentration trend as is seen in most "A" Zone wells. These results would seem to indicate that the groundwater MTBE/TBA plumes in the "A" and "B" Zones are relatively unstable and are migrating in a general southerly direction.

4.3 Potential Environmental Receptors

This section presents a qualitative evaluation of the potential for the surrounding human and/or environmental receptors to be exposed to the petroleum derived chemicals found at the Site. The controlling factors in this exposure assessment include the following:

Transport Medium - Air, soil, ground water, and surface water.

Point of Exposure - Water wells, rivers and streams, surface water runoff, surface soils, ambient air, and confined airspaces.

Route of Exposure - Ingestion, inhalation, and dermal contact.

Potential Receptors - Human and biota (plant and animal life).

These factors are evaluated in the following table.

PRELIMINARY EXPOSURE PATHWAY SCREENING Dublin Toyota Fuel UST Site			
Exposure Pathway	**Complete?**	**Potential Risk**	**Discussion**
Air Exposure Pathway			
Surface soil volatilization to ambient air	Yes	Low	Low TPH-G/BTEX soil impacts in near-surface soils. Site is covered with asphalt and concrete. Dissolved MTBE has low volatility.[3]
Subsurface soil volatilization to ambient air	Yes	Low	Low TPH-G/BTEX soil impacts in subsurface soils. Site is covered with asphalt and concrete. Dissolved MTBE has low volatility.
Surface soil volatilization to enclosed space	Yes	Low to Moderate	Low TPH-G/BTEX soil impacts in subsurface soils. Moderate risk only in detail shop area, directly overlying former USTs. MTBE has low volatility.
Subsurface soil volatilization to enclosed space	Yes	Low to Moderate	Low TPH-G/BTEX soil impacts in subsurface soils. Moderate risk only in detail shop area, directly overlying former USTs. MTBE has low volatility.
Groundwater volatilization to ambient air	Yes	Low	MTBE is the primary groundwater impact; Dissolved MTBE has low volatility.
Groundwater volatilization to enclosed space	Yes	Low	MTBE is the primary groundwater impact; Dissolved MTBE has low volatility.
Soil Exposure Pathway			
Dermal contact/ingestion of surface soils	Yes	Low	No significant hydrocarbon impacts in near-surface soils.
Dermal contact/ingestion of subsurface soils	Yes	Low	No significant hydrocarbon impacts in subsurface soils.
Groundwater Exposure Pathway			
Soil leaching to groundwater, ingestion	Yes	Low	No significant soil hydrocarbon impacts; No nearby downgradient (S-SW) water supply wells.
Dissolved/free phase groundwater ingestion	Yes	Low to Moderate	No nearby downgradient (S-SW) water supply wells.
Surface Water Exposure Pathway			
Soil leaching to surface water	Yes	Lowe	Low shallow hydrocarbon impacts. No nearby downgradient surface water bodies.
Groundwater plume discharge to surface water	Yes	Low	Low shallow hydrocarbon impacts. No nearby downgradient surface water bodies.

As summarized above, complete exposure pathways exist relative to potential air exposure, soil exposure, groundwater exposure and surface water exposure pathways. While these exposure pathways are complete, it is clear that the only realistic potential exposures that could result in risks above acceptable risk levels would be from: (1) Air hydrocarbon exposure in the former car wash/detail shop, immediately overlying the former Site USTs; and (2) Groundwater MTBE/TBA exposure in some distant, unidentified water supply well to the south-southwest.

[3] According to *MTBE Fact Sheet #2, Remediation of MTBE Contaminated Soil And Groundwater*, "When moving from dissolved phase (in water) to the vapor phase, MTBE is about ten times less volatile than benzene (i.e., its Henry's law constant is 1/10th benzene)." (USEPA Office of Underground Storage Tanks, EPA 510-F-97-015, January 1998).

5.0 CLEANUP GOALS AND TARGET TREATMENT ZONE

In order to determine remediation options for this Site, it is necessary to define remediation goals for the Site. Two approaches to defining remediation goals include: (1) Adopting specific numeric cleanup levels, to include either regulatory cleanup levels or site-specific risk-based cleanup levels; and (2) Adopting qualitative (non-numeric) risk-based remediation goals that allow for regulatory closure as a "low risk" site.

5.1 Possible Numeric Cleanup Levels

Given that the primary exposure pathways are potential vapor inhalation of gasoline vapors and potential groundwater ingestion at some remote downgradient location, we propose to adopt San Francisco Bay Regional Water Quality Control Board, Drinking Water Source, Commercial Land Use, Vapor Intrusion and groundwater ingestion Environmental Screening Levels (ESLs) for shallow soil (less than 9 feet in depth), deep soil (greater than 9 feet in depth), and groundwater beneath the Site. Note that these proposed ESLs for the Site are guidelines only, and, ultimately, regulatory closure could be granted base on the State's generally accepted closure guidelines (source removal, adequate site characterization, plume attenuation to meet water quality goals, no sensitive receptor impacts, and no risk). Vapor intrusion, soil, and groundwater ESLs, as well as maximum Site contamination values, are summarized in the following table. Note that for groundwater, we have included both the vapor intrusion ESLs and the drinking water ESLs.

SOIL AND GROUNDWATER ENVIRONMENTAL SCREENING LEVELS
Dublin Toyota UST Site

Chemical Parameter	SG, VI ESL, ug/m^3	Shallow Soil GW ESL, mg/kg	Deep Soil, GW ESL, mg/kg	GW, DW ESL, ug/l	GW, VI ESL, ug/l	SG Max Value, mg/kg	Soil Max Value, mg/kg	GW Max Value, ug/l
TPH-G	29,000	83	180	100	--	**1,400,000** (SG-1)	ND	**850** (MW-9)
TPH-D	29,000	83	180	100	--	--	--	--
TPH-MO	--	2,500	2,500	100	--	--	--	--
B	280	0.044	0.27	1.0	1,800	**810** (SG-1)	ND	**15** (EW-1)
T	180,000	2.9	9.3	40	530,000	420 (SG-2 & 3)	0.020 (5.5", MW-1)	1.0 (EW-2)
E	3,300	3.3	4.7	30	170,000	<100	0.0097 (7.5', GB-1)	4.4 (EW-1)
X	58,000	2.3	11	20	160,000	530 (SG-2)	ND	3.3 (EW-2)
MTBE	31,000	0.023	8.4	5	80,000	4,100 (SG-1)	2.1 (5.5', MW-1)	**3,800** (MW-9)
TBA	--	0.075	110	12	--	2.1 (9.0', B-18)	3.5 (7.5', GB-4)	**870** (MW-12)

ESL = Environmental Screening Level
SG = Soil Gas
GW = Groundwater
VI = Vapor intrusion
DW = Drinking water
mg/kg = Milligrams per kilogram
ug/l = Micrograms per liter
TPH-G = Total Petroleum Hydrocarbons as Gasoline
TPH-D = Total Petroleum Hydrocarbons as Diesel
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl-tert-Butyl Ether
TBA= Tert-butyl Alcohol
1 = Groundwater protection (soil leaching) ESL
Bold = Concentration exceeds respective ESL.

As the above table shows, the primary remediation goals for this Site will be: (1) The reduction of soil vapor TPH-G and benzene concentrations in the former UST source area; and (2) The reduction of groundwater MTBE, TBA, and, to a lesser extent, TPH-G and Benzene

concentrations in both the "A" Zone and "B" Zone. Remediation will be limited to the Site itself, since investigation and remediation beneath US Interstate 580 is not feasible. Also, remediation along Johnson Drive near newly-installed wells MW-15, MW-16, and MW-17 will not be conducted, rather these wells will be used to assess downgradient effects following remediation on the Site itself.

5.2 Possible Qualitative (Non-Numeric) Cleanup Goals

Within the State of California, regulatory closure as a "low risk" site is generally attainable for groundwater-impacted sites if the following qualitative criteria are met: (1) The contaminant source, or sources, have been removed; (2) The site has been adequately characterized; (3) The contaminant plume is not migrating, and chemical concentrations in groundwater are expected to meet water quality objectives in the future; (4) No other waters of the State, water supply wells, or other sensitive receptors are likely to be impacted; and (5) The site does not pose a significant risk to human health or safety. These criteria are evaluated for the Site in the following table.

EVALUATION OF QUALITATIVE SITE CLEANUP CRITERIA
Dublin Toyota UST Site

Criteria	Criteria Met?	Discussion
1. The contaminant sources have been removed	Yes	• Primary sources (USTs, lines, dispensers, vents) fully removed. • Secondary source (hydrocarbon-impacted soil and groundwater in former UST source area) not significant.
2. The Site has been adequately characterized	No	• Soil hydrocarbon impacts fully defined to nondetect. • Groundwater hydrocarbon impacts not defined to the south; however, further downgradient investigations would be difficult due to resistence from downgradient property owners.
3. The contaminant plume is not migrating and groundwater COC concentrations expected to meet water quality goals.	No	• Elevated groundwater hydrocarbon (primarily MTBE and TBA) concentrations are migrating in "B" Zone, making prediction of meeting water quality goals difficult.
4. No waters, water wells, or sensitive receptors likely to be impacted.	Yes	• Previous receptor survey activities have clearly demonstrated that no nearby downgradient surface waters or water supply wells exist, and that no sensitive receptors are likely to be impacted.
5. Site does not pose a significant risk to human health or safety.	No	• Possible risk associated with indoor air exposure in former car wash/detail shop and groundwater ingestion at some unidentified downgradient receptor.

As summarized above, three of the qualitative "low risk" criteria (adequate site characterization, stable COC plume, and no significant risk posed by COCs) have not been met. At least two of these criteria could be met by additional Site remediation.

5.3 Proposed Site Cleanup Goals

There are specific Site constraints which would tend to disallow strict adherence to numeric cleanup goals. In particular, there would be significant difficulty associated with investigating and remediating groundwater hydrocarbon impacts beneath US Interstate 580, which extends approximately 300 feet south in a downgradient direction from the Site. Thus, the application of

nonnumeric risk-based remediation goals, as summarized above in Section 5.2, represents the most feasible option to achieve regulatory closure within a reasonable time frame and cost (pursuant to State Water Board Resolutions 92-49 and 2009-0042).

In order to satisfy nonnumeric, risk-based cleanup goals for the Site, additional secondary source remediation will be required in the former UST source area, and downgradient groundwater MTBE/TBA remediation will be conducted on the Site. We believe that if Site hydrocarbon impacts can be adequately remediated, then residual "B" Zone groundwater MTBE/TBA impacts beneath US Interstate 580 and further downgradient will sufficiently attenuate to nonnumeric, risk-based cleanup goals over a reasonable time period.

6.0 EVALUATION OF REMEDIAL ALTERNATIVES

The primary remediation goals for this Site will be to mitigate both shallow soil and groundwater hydrocarbon impacts in the former UST area and more diffuse groundwater MTBE/TBA impacts downgradient from the UST source area. Possible remedial options to be considered include: (1) Natural attenuation (do nothing); (2) Pump from wells, followed by above-ground treatment of groundwater ("pump and treat"); (3) Air sparging to volatilize hydrocarbon, followed by soil vapor extraction and treatment; and (4) Ozone injection. These remedial options, as well as their advantages and disadvantages, are summarized in the following table.

COMPARISON OF REMEDIATION OPTIONS
Dublin Toyota UST Site

Option/Cost	*Components*	*Advantages*	*Disadvantages*
1. Monitored Natural Attenuation (Do Nothing): $15,000 per year ($150,000 for ten years)			
	• Leave contamination in place • Natural biodegradation of soil and groundwater hydrocarbon impacts. • Conduct semi-annual groundwater monitoring for years or decades.	• Easy to implement • Does not disrupt site • Low cost • Reduces concentrations in soil and groundwater over time	• Not pro-active • Does not rapidly eliminate source of contamination • Requires decades for natural attenuation of contaminants.
2. Groundwater Pump and Treat: $500,000-$700,000			
	• Installation of 6-8 groundwater extraction wells • Installation of well pumps, below ground piping, and groundwater treatment equipment. • Discharge to sanitary sewer or storm drain (permit required). • Operation and maintenance for 1 to 5 years.	• Helps to inhibit hydrocarbon plume migration.	• High installation costs; high O&M costs. • Remediation time difficult to predict. • Hydrocarbon concentrations may rebound after cessation of remediation. • Does not remediate soil impacts.
3. Air Sparge/Soil Vapor Extraction: $400,000-$600,000			
	• Install 4-6 GW extraction wells and 6-8 air sparge wells. • Installation of additional below ground piping and above ground equipment. • Air sparge groundwater in sparge wells • Vacuum extraction of resulting hydrocarbons vapors from shallower (vadose) soils). • Onsite abatement of vapors using granular activated carbon (GAC).	• Aggressively removes volatile hydrocarbons from groundwater.	• High installation costs; high O&M costs. • Remediation time difficult to predict. • Can result in indoor air hydrocarbon impacts if soil vapor extraction not correctly implemented. • Not as effective for less-volatile diesel or MTBE hydrocarbons • Disruptive to site. • Noise pollution is significant.

COMPARISON OF REMEDIATION OPTIONS
Dublin Toyota UST Site

Option/Cost	*Components*	*Advantages*	*Disadvantages*
4. Ozone Injection: $300,000-$400,000			
	• Installation of 12-15 small-diameter injection wells. • Installation of above/below ground piping and equipment • Cycled injection of ozone in wells via small ozone generation unit.	• Relatively fast (months, instead of years) • Completely destroys hydrocarbons. • Cost is relatively low, and, once installed, O&M costs are very low. • Is very effective on sites with groundwater-only impacts. • Once installed, minimal impacts to site. • Low noise.	• Not effective on sites with free product or significant soil impacts • Ozone is destructive, and can adversely impact below-ground metal pipes or rise to the surface if applied too aggressively. • Injected air (with ozone) can volatilize hydrocarbons • Oxidation can result in formation of hexavalent chromium or bromate (rare).

A summary of estimated costs to implement the proposed alternatives is presented in the following table.

COMPARISON OF REMEDIATION ESTIMATED COSTS Dublin Toyota UST Site				
Specific Activity/Expense	**Estimated Remediation Costs**			
	Alternative 1 MNA for 10 Years	**Alternative 2 GW Pump and Treat**	**Alternative 3 AS/SVE**	**Alternative 4 Ozone Injection**
Direct Capital Costs				
Equipment Costs	0	$200,000	$120,000	$60,000
Material Costs	0	$50,000	$50,000	$20,000
Subcontractor Costs	0	$100,000	$100,000	$80,000
Soil & GW Disposal Costs	0	$50,000	$20,000	$20,000
Laboratory Costs	0	$20,000	$20,000	$20,000
Misc. Costs (contingency)	0	$50,000	$50,000	$25,000
Indirect Capital Costs				
Engineering, Design, Reporting Costs	0	$100,000	$100,000	$60,000
License & Permit Costs	0	$5,000	$5,000	$5,000
Misc. Costs (contingency)	0	$10,000	$10,000	$8,000
Post-Remediation Monitoring Costs				
Groundwater Monitoring Costs	$100,000	$20,000	$20,000	$20,000
Maintenance Costs	0	$0	$0	$0
Reporting Costs	$50,000	$15,000	$15,000	$15,000
Misc. Costs (contingency)	0	$5,000	$5,000	$5,000
TOTAL	**$150,000**	**$625,000**	**$515,000**	**$338,000**

As shown in the table above, costs for Alternative 4 (ozone injection) are significantly less than for Alternatives 2 and 3 (groundwater pump and treat and air sparge/soil vapor extraction. Alternative 1 (monitored natural attenuation), while the least costly, is not proactive enough and could extend the time for Site closure to ten years or more.

7.0 RECOMMENDED CORRECTIVE ACTION

Based on our assessment of remediation options for the Site, as summarized in the previous section, we recommend the implementation of ozone injection at the Site. The three other alternatives (natural attenuation, groundwater pump and treat, and air sparge/soil vapor extraction) have various uncertainties and would not, we believe, result in adequate secondary source and downgradient groundwater remediation in a reasonable time period and at a reasonable cost. Ozone injection, on the other hand, has been shown to be very effective on MTBE-only sites and on sites with primarily groundwater contamination only. Ozone injection would, we believe, result in relatively fast and straightforward remediation of source area soil and groundwater impacts at a reasonable cost. Thus, this CAP proposes to, first, implement an ozone injection pilot test at the Site, and then, if successful, expand the pilot test system to conduct full-scale remediation. Periodic groundwater monitoring will be conducted to assess remediation effectiveness. When groundwater hydrocarbon concentrations decrease to relatively low levels (i.e. in the 100-ug/l range or lower), and with agreement from ACEH, the ozone injection system will be turned off and groundwater will subsequently be monitored for possible hydrocarbon rebound.

8.0 WORKPLAN TO CONDUCT OZONE INJECTION PILOT TEST

The ozone injection pilot test will involve (1) The installation of approximately five small-diameter injection wells at variable depths to test remediation of both "A" Zone and "B" Zone impacts; (2) The installation of approximately three shallow vapor monitoring wells in the former UST source area to assess health and safety concerns; (3) The installation of above/below ground small-diameter delivery tubing; (4) The operation of a mobile ozone generation unit on the Site for approximately three months; and (5) Periodic monitoring of a wide range of parameters to measure remediation effectiveness and health and safety concerns.

The advantages of this remediation include (1) The ozone generation equipment is small (contained within a 4' by 8' trailer), such that, once installed, the system would have minimal impact on Site uses, (2) The system operates on 110 volts, and uses minimal amounts of electricity, (3) Ozone breaks down the gasoline-range hydrocarbons in soil and groundwater, thus requiring no SVE in vadose zone soils and no air discharge permitting, and (4) Ozone injection is generally more rapid in remediating groundwater hydrocarbon impacts than groundwater pump and treat.

Ozone (O_3) is a strong oxidant that can be used to destroy petroleum contamination *in-situ*. Because it is a highly reactive gas and decomposes fairly rapidly, it is typically generated in close proximity to the treatment area and delivered to the subsurface through closely-spaced injection points/wells. Delivery concentrations and rates vary, however, because of the high reactivity of ozone and associated free radicals. In typical applications, air containing up to five percent ozone is injected into the groundwater where it dissolves in the water and reacts with subsurface organics, and ultimately decomposes to oxygen. Ozone can oxidize Site contaminants directly or through formation of hydroxyl radicals (OH), strong nonspecific oxidants with an oxidation potential that is about 1.4 times that of ozone.

Once introduced into subsurface groundwater, ozone reacts with natural organic materials, natural inorganic materials (primarily oxidizable metals), and residual hydrocarbons. That portion of the ozone which reacts with natural organic and inorganic materials is unavailable for hydrocarbon oxidation. Given the inherent variability in subsurface regimes, the hydrocarbon chemical oxygen demand can vary significantly, and can be affected by such factors as groundwater pH, metals and organic content, and porosity/permeability. The complete oxidation reaction for Benzene is as follows (EPA, May 2004):

$$C_6H_6O + 7O_2 \rightarrow 6CO_2 + 3H_2O$$

In theory, the amount of oxygen required per gram of contaminant for benzene and most other gasoline constituents is 3.0 to 3.5 grams. For example, for 4,000 grams of benzene, approximately 12,000 grams of ozone would be required for full oxidation; for 30,000 grams of gasoline, approximately 90,000 grams of ozone would be required for full oxidation.

Because ozone decomposes into oxygen, ozone is also effective in delivering dissolved oxygen to enhance subsurface bioremediation of petroleum-impacted areas. Ozone is ten times more soluble in water than is pure oxygen. Consequently groundwater becomes increasingly saturated with dissolved oxygen as the unstable ozone molecules decomposes into oxygen molecules. About one-half of dissolved ozone introduced into subsurface degrades to oxygen within approximately 20 minutes. The dissolved oxygen can then be used by indigenous aerobic hydrocarbon-degrading bacteria[4].

8.1 Ozone Injection System Design Considerations

The ozone injection pilot test will be designed to assess not only remediation effectiveness, but also injection radius of influence, optimum ozone injection depth, concentration, and flow rate, as well as optimum system operation to minimize potential health and safety concerns. Five ozone injection wells, IW-1 through IW-5, will be sited at varying distances from existing and proposed groundwater monitoring wells in order to assess ozone radius of influence. Also, the injection diffusers will be installed at sufficient depth below the groundwater table to allow for adequate widening of the dissolved ozone cone as it slowly rises in groundwater. For this pilot test, we propose to install the diffusers for all five wells in the high-permeability "B" Zone, from approximately 30 feet to 35 feet in depth. This will allow ozone to flow a greater distance laterally in the "B" Zone before migrating upwards, creating a wider radius of influence.

8.2 Ozone Injection Health and Safety Considerations

Ozone is one of the strongest known oxidants and is highly reactive in the subsurface environment (EPA, 2004). Possible undesired effects of ozone injection can include: (1) Degradation of underground metal objects (such as nearby metal utilities or tanks); (2) Oxidation of naturally occurring chromium (primarily chromate) to form hexavalent chromium, a known carcinogen; (3) Oxidation of naturally occurring bromide to form bromate, a known carcinogen;

[4] United State Environmental Protection Agency. *How to Evaluate Alternative Cleanup Technologies for Underground Storage Tank Sites*", EPA 510-R-04-002, May 2004.

(4) Volatilization and upward migration of VOCs (i.e. air sparging); and (5) "Short circuiting" of ozone to the surface.

There are no known USTs systems within the Site vicinity. During previous investigation for the Site, Gribi Associates conducted a underground utilities survey using Foresite, a private utility locator. The only identified buried utility in close proximity to the proposed ozone injection area is shallow buried electric lines for the surrounding parking lot lighting. Prior to installing the proposed injection and monitoring wells, USA notification will be given, and, once again, a private utility survey will be conducted.

Both hexavalent chromium and bromate can be oxidized in the presence of chromate and bromide, respectively. Bromate forms in a sequence of reactions whereby bromide ions react with dissolved ozone to form the intermediate product hypobromide, which then reacts with ozone to form bromate [5]. Limiting dissolved ozone by periodic injections (as is the case with the proposed injection pilot test), rather than continuous injections, can limit bromate formation by limiting the formation of hypobromide and subsequent oxidation. Groundwater samples will be analyzed for bromate and hexavalent chromium as part of the pilot test monitoring requirements.

The contaminants of concern in the pilot test area are MTBE and TBA, which have relatively low volatility and would not be expected to cause a significant surface vapor concern. Other factors which would tend to minimize the possibility, or mitigate the effects, of VOC vapor generation include: (1) Injecting an ozone/air mixture with a relatively high ozone concentration (low air concentration); (2) Conducting ozone injection at relatively low flow rates (less than 2 scfm); (3) Conducting ozone injection intermittently for short durations, rather than continuously; (4) The ground surface overlying the pilot test area is completely concrete and asphalt paved, thus acting as a vapor barrier; and (5) There are no buildings directly overlying the injection area to trap possible relict VOCs. To monitor for possible VOC vapor generation, we will conduct field monitoring of well boxes and inside all monitoring well casings (both groundwater monitoring wells and ozone injection wells) immediately after uncapping for all nearby wells using a field organic vapor monitor (OVM).

Factors which would tend to minimize the possibility, or mitigate the effects, of ozone "short circuiting" include: (1) Proper well installation to insure tight well seal; (2) Conducting ozone injection at relatively low flow rates (less than 2 scfm); (3) Conducting ozone injection intermittently for short durations, rather than continuously; (4) The ground surface overlying the pilot test area is completely concrete and asphalt paved, thus acting as a vapor barrier; (5) There are no buildings overlying the injection area to trap possible relict ozone vapors; and (6) Ozone is relatively unstable in air, and would tend to alter to oxygen in a relatively short time period. To monitor for ozone leakage or short circuiting, we will utilize a field ozone detector, and will check: (1) Inside the injection well and all monitoring well boxes; (2) Inside adjacent groundwater monitoring wells immediately after uncapping; (3) At all piping connections; and (4) At the ozone generator.

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[5] Bowman, Reid H., Ph.D., *HiPOx Ozone-Peroxide Advanced Oxidation System for Treatment of Trichloroethlene and Perchloroethylene Without Forming Bromate*, International Ozone Association Converence "2003 IOA World Conference", Las Vegas, Nevada, July 2003.

8.3 Description of Field Activities

8.3.1 Prefield Activities

Prior to beginning field activities, well permits for the five ozone injection wells will be obtained from Alameda County Zone 7 Water Agency. In addition, proposed well locations will be marked with white paint, and Underground Services Alert (USA) will be notified at least 48 hours prior to drilling. Also, a private underground utility locator will clear proposed well locations. Prior to drilling, a Site Safety Plan will be prepared, and a tailgate safety meeting will be conducted with all site workers.

8.3.2 Location of Ozone Injection Wells

Proposed locations for the five injection wells (IW-1 through IW-5) are shown on Figure 10. In order to assess ozone injection varying radii of influence and overall effectiveness, the five injection wells will be spaced in a semi-grid pattern within the outside groundwater MTBE/TBA plume area, adjacent to existing outside wells (MW-3, MW-4S, MW-4D, MW-5S, MW-5D, MW-6S, MW-6D, MW-7, MW-8, and MW-9).

8.3.3 Drilling and Sampling of Well Borings

Injection wells will be installed using hollow stem auger equipment. Subsurface soils will be logged and sampled at five-foot intervals down to 30 feet in depth, and continuously from 30 feet to 35 feet in depth in order to delineate the exact depth of the "B" Zone. Undisturbed soils will be sampled in advance of the auger as follows: (1) A two-inch inside diameter California-style split spoon sampler will be driven into undisturbed soil ahead of the drill bit; (2) The sampler will be raised quickly to the surface and the brass liners exposed; (3) The brass liner containing the most undisturbed soil will be quickly sealed with aluminum foil and plastic end caps, labeled, and wrapped tightly with tape; and (4) The sealed soil sample will be placed immediately in a cooler with crushed ice for transport to the analytical laboratory under formal chain-of-custody. All sampling equipment will be thoroughly cleaned and decontaminated between each sample collection by triple rinsing first with water, then with dilute tri-sodium phosphate solution, and finally with distilled water. All downhole drilling equipment, including auger and drill bit, will be steam cleaned before and after drilling the well boring. Drilling cuttings and steam cleaning rinseate will be contained in sealed drums pending laboratory results.

8.3.4 Installation of Ozone Injection Wells

The five injection wells, IW-1 through IW-5, will be installed using hollow stem auger equipment and will be constructed using 3/4-inch diameter Schedule 80 threaded PVC casing. The wells will be screened in high permeability "B" Zone sands, if present, based on logging and sampling results. In general, the ozone injection wells will be installed according to the following specifications: (1) The well boring will be drilled to the desired depth (approximately 35 feet in depth; (2) A two-foot long microporous silica-bonded diffuser will be placed at the base of the well boring; (3) As the hollow stem augers are removed slowly, filter sand will be

placed around the well casing to approximately two feet above the diffuser (approximately 32 feet in depth); (4) A two-foot bentonite seal will be placed above the filter sand, to approximately 30 feet in depth, using time release bentonite pellets; and (5) The remaining annulus will be grouted using a cement/sand slurry (bentonite less than 5 percent) to approximate surface grade. The top of the well will be enclosed in a traffic-rated locking box set in concrete slightly above grade.

8.3.5 Installation of Delivery Piping

The approximate ozone system and piping layout is shown on Figure 10. Ozone injection delivery tubing, consisting of 3/8-inch synthetic flexible tubing, will be installed in trenching approximately one foot below surface grade. The tubing will be housed within one inch diameter Schedule 40 PVC pipe bedded in sand; trenches will be resurfaced to match existing surface conditions.

8.3.6 Installation of Injection Equipment

The ozone generation equipment will consist of a 110-volt ozone injection unit assembled by Piper Environmental Group located in Castroville, California. The unit includes an oxygen concentrator, ozone generator, compressors, programmable logic controller (PLC), and valves. This unit will be contained in a trailer and located near the existing remediation compound. This unit will supply an ozone/air mixture under pressure to the three individual injection wells according to a set timed sequence. This unit will include an ozone detector with automatic shut down in the event of an ozone leak. Emergency phone numbers will be posted prominently in the remediation area.

8.3.7 Operation of Remediation System

The ozone injection remediation system will be operated continuously for approximately three months. During operation, the remediation system will be maintained and monitored regularly, beginning with bi-weekly visits for the first month, followed by weekly and semi-weekly visits as needed for the additional two-month duration. The remediation pilot test monitoring and maintenance schedule is included in the following table. During monitoring, possible VOC generation and ozone leakage will be monitored to maintain appropriate health and safety during the pilot test. Any ozone or VOC detections will result in immediate system shut down and notification of ACEH staff, followed by problem assessment and careful “recalibration” to insure cessation of the particular detection.

REMEDIATION PILOT TEST MAINTENANCE AND MONITORING SCHEDULE
Dublin Toyota UST Site

Time Period	Frequency	Required Monitoring	Required Maintenance
Initial System Startup	● Every 3-4 days for first 2-4 weeks	● Record system parameters ● Field monitor for ozone, dissolved oxygen, and VOCs in surrounding groundwater and vapor wells	● Check system operation ● Check for ozone leaks at injection well heads and manifold.
Thereafter	● Weekly	● Field monitoring as above ● Monthly groundwater TPH-G/BTEX/Oxygenates/Hex Chromium/Bromate monitoring in surrounding wells	● As above

8.3.8 Remediation Effectiveness and Compliance Monitoring

In order to assess remediation effectiveness, existing Site wells MW-3, MW-4S, MW-4D, MW-5S, MW-5D, MW-6S, MW-6D, MW-7, MW-8, MW-9, and MW-10 will be monitored monthly for the duration of the pilot test. Groundwater monitoring will be conducted in accordance with applicable sampling protocols, and will include recording groundwater depths, purging at least three well volumes, and sampling of groundwater for Dissolved Oxygen (field parameter), TPH-G, BTEX, and Oxygenates analysis. In addition, monthly groundwater samples will be analyzed for hexavalent chromium and bromate.

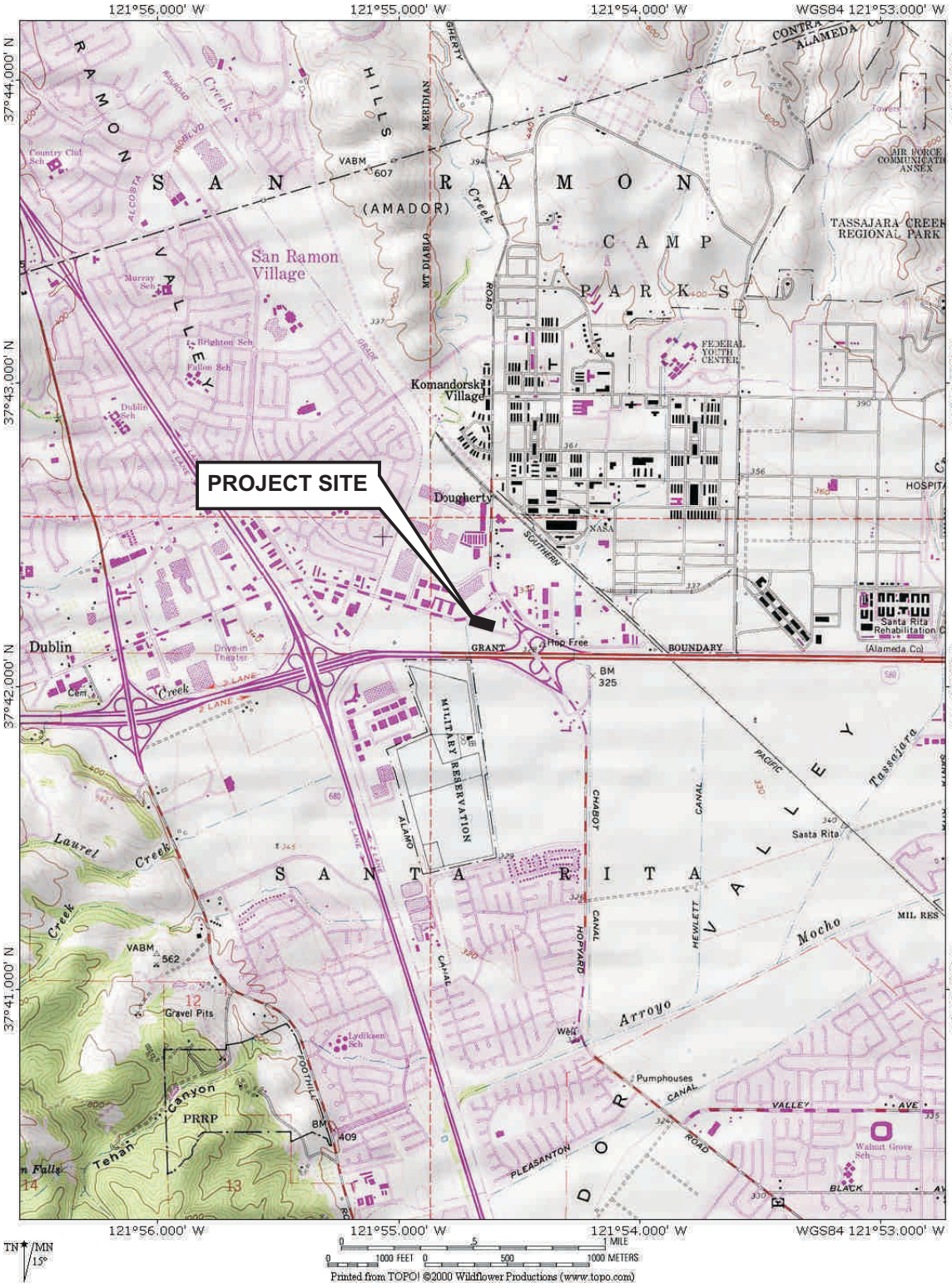
8.4 Report Preparation

Reports to be submitted to the ACEH and to Geotracker will include: (1) A report documenting well installation activities and ozone injection system installation and startup, to be completed approximately one month after beginning the ozone injection pilot test; and (2) A report documenting the completed ozone injection pilot test and including a workplan for additional activities, to be submitted within one month following completion of the pilot test. These reports will describe and document all activities and results, and will include laboratory analytical reports.

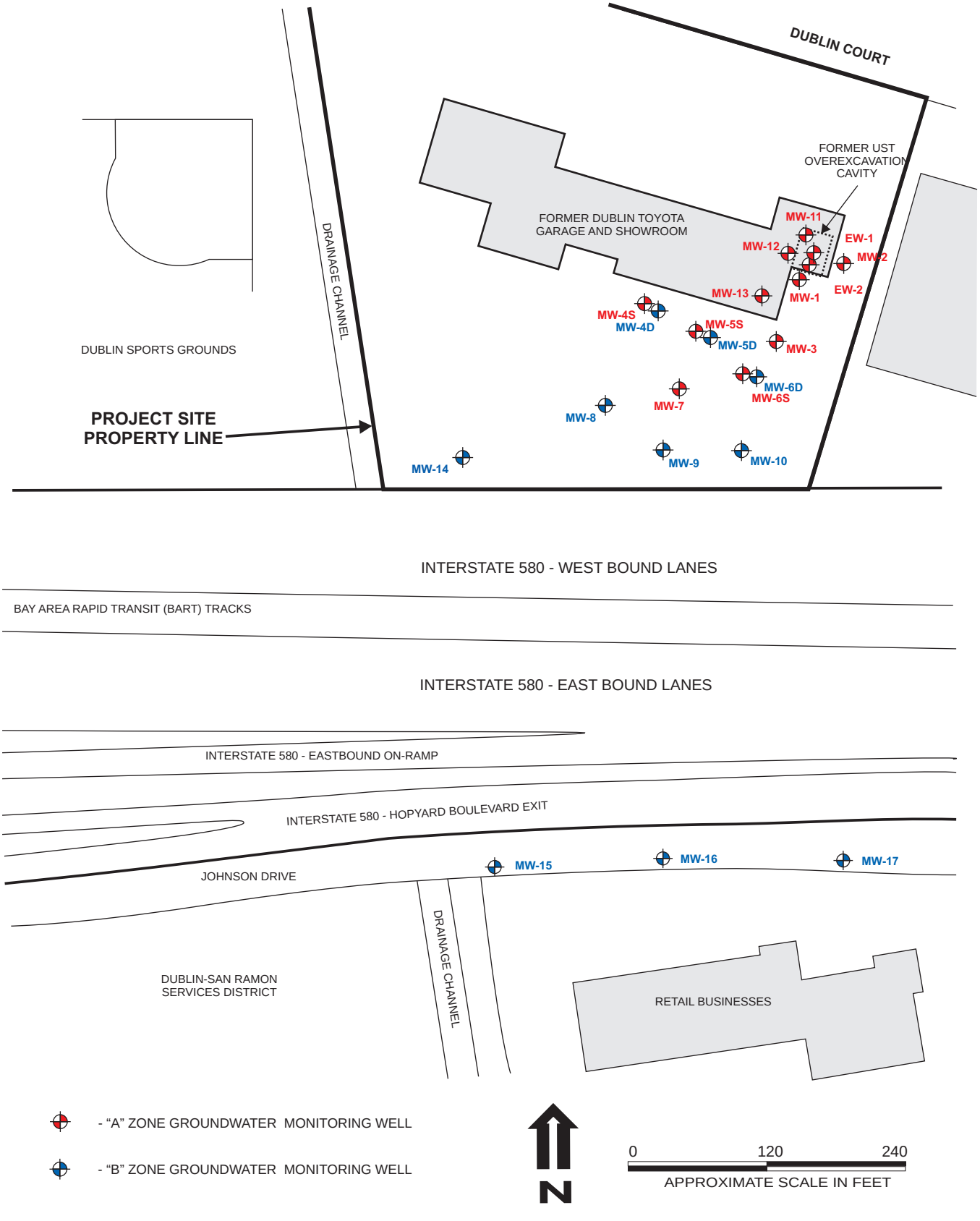
8.5 Project Schedule

Subject to ACEH approval, the remediation pilot test system installation and startup activities can be completed in approximately six to eight weeks.

FIGURES



DESIGNED BY:	CHECKED BY: JEG	**SITE VICINITY MAP**	DATE: 09/15/2010	FIGURE: **1**
DRAWN BY: MAR	SCALE:	DUBLIN TOYOTA UST SITE 6450 DUBLIN COURT DUBLIN, CALIFORNIA	GRIBI	
PROJECT NO:				



DESIGNED BY:	CHECKED BY: JEG	**SITE AREA PLAN**	DATE: 09/15/2010
DRAWN BY: MAR	SCALE:	DUBLIN TOYOTA UST SITE 6450 DUBLIN COURT DUBLIN, CALIFORNIA	FIGURE: **2**
PROJECT NO:			GRIBI

DESIGNED BY:	CHECKED BY: JEG	**SITE PLAN**	DATE: 09/15/2010	FIGURE: 3
DRAWN BY: MAR	SCALE:	DUBLIN TOYOTA UST SITE 6450 DUBLIN COURT DUBLIN, CALIFORNIA	GRIBI	
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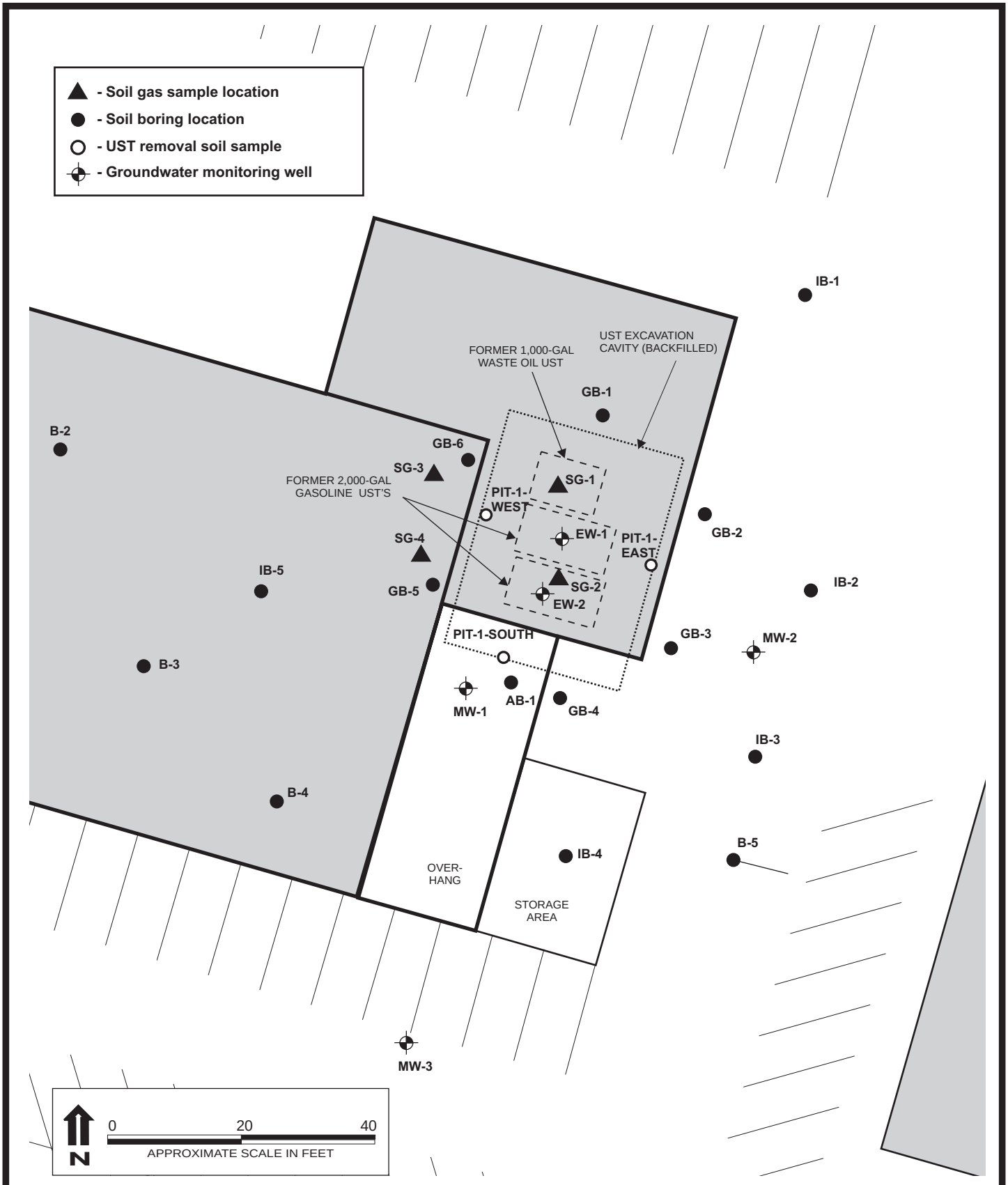
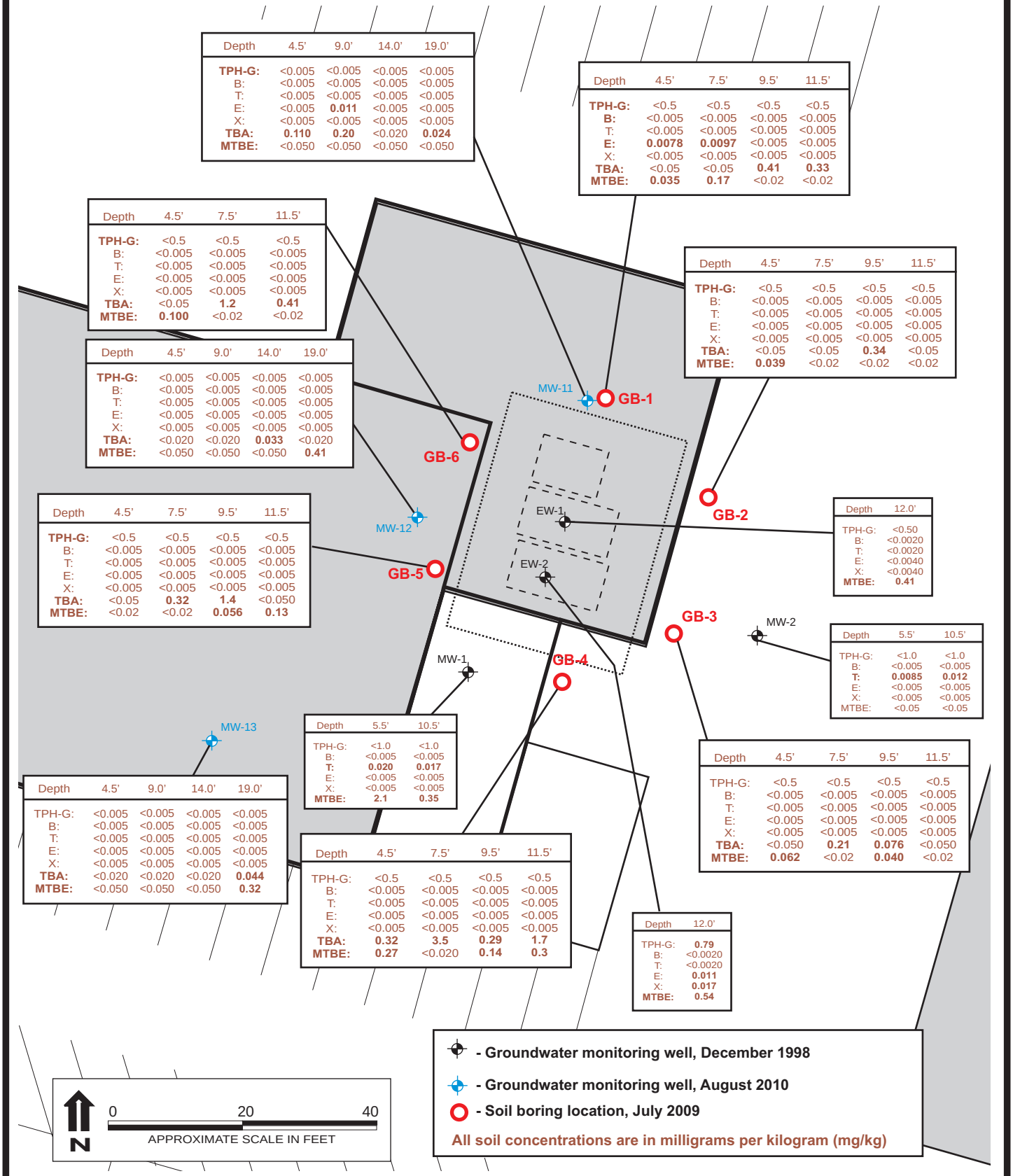
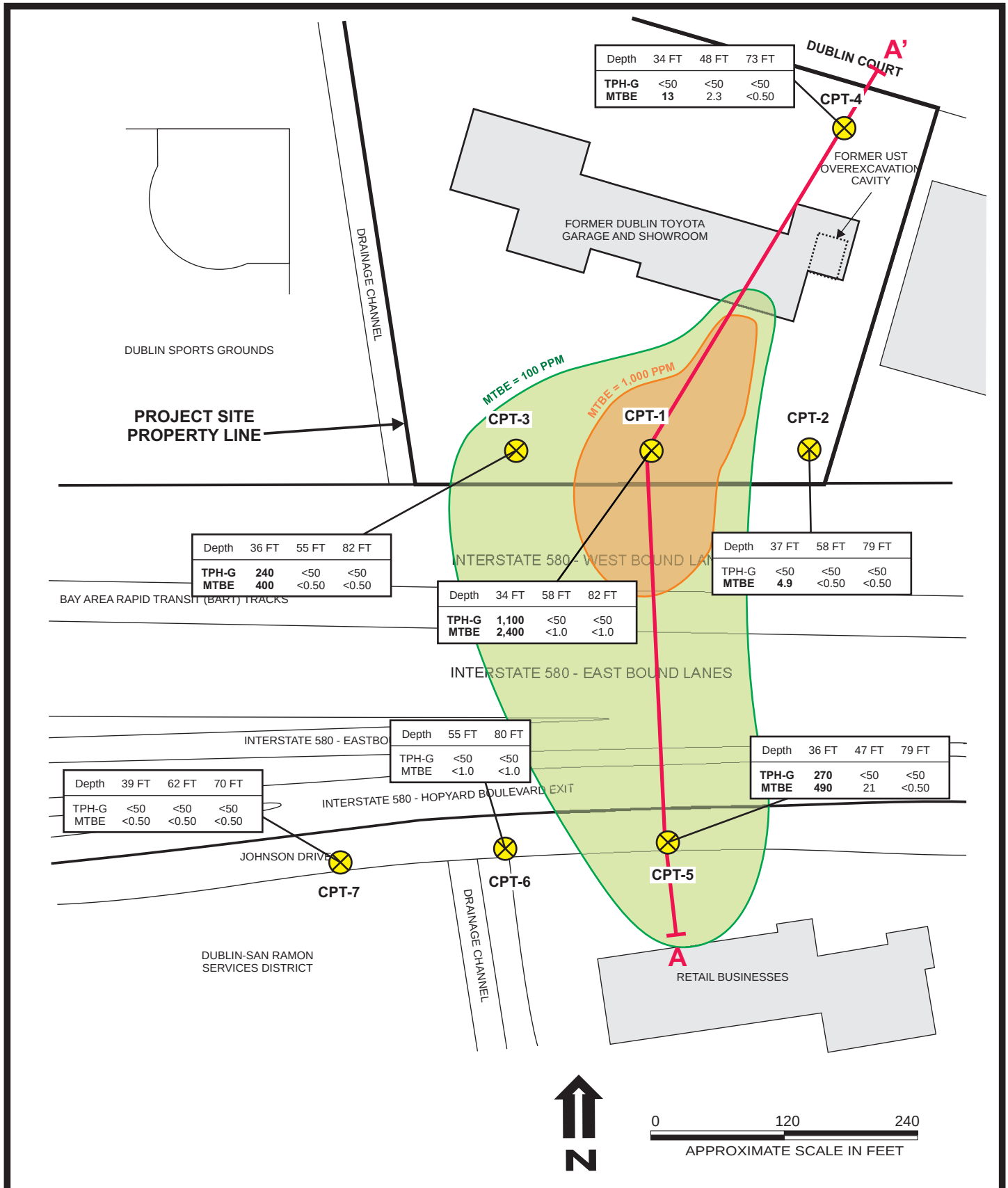


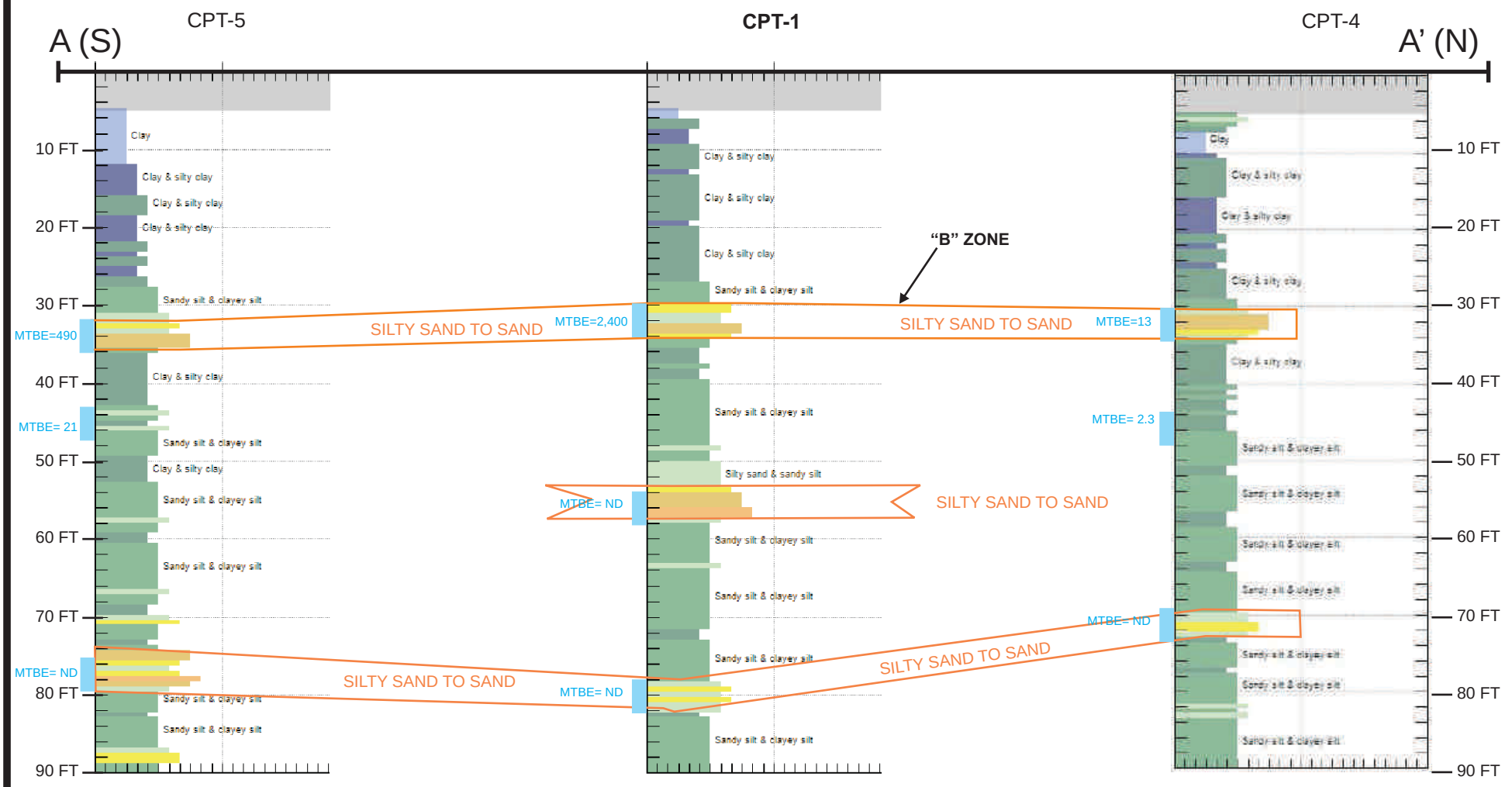
DESIGNED BY:	CHECKED BY: JEG	**SOURCE AREA SAMPLE LOCATIONS**	DATE: 09/15/2010 / FIGURE: **4**
DRAWN BY: MAR	SCALE:	DUBLIN TOYOTA UST SITE 6450 DUBLIN COURT DUBLIN, CALIFORNIA	GRIBI
PROJECT NO:			



DESIGNED BY:	CHECKED BY: JEG	**POST-TANK REMOVAL SOURCE AREA SOIL HYDROCARBON RESULTS**	DATE: 09/15/2010 / FIGURE: **5**
DRAWN BY: MAR	SCALE:	DUBLIN TOYOTA UST SITE 6450 DUBLIN COURT DUBLIN, CALIFORNIA	GRIBI
PROJECT NO:			



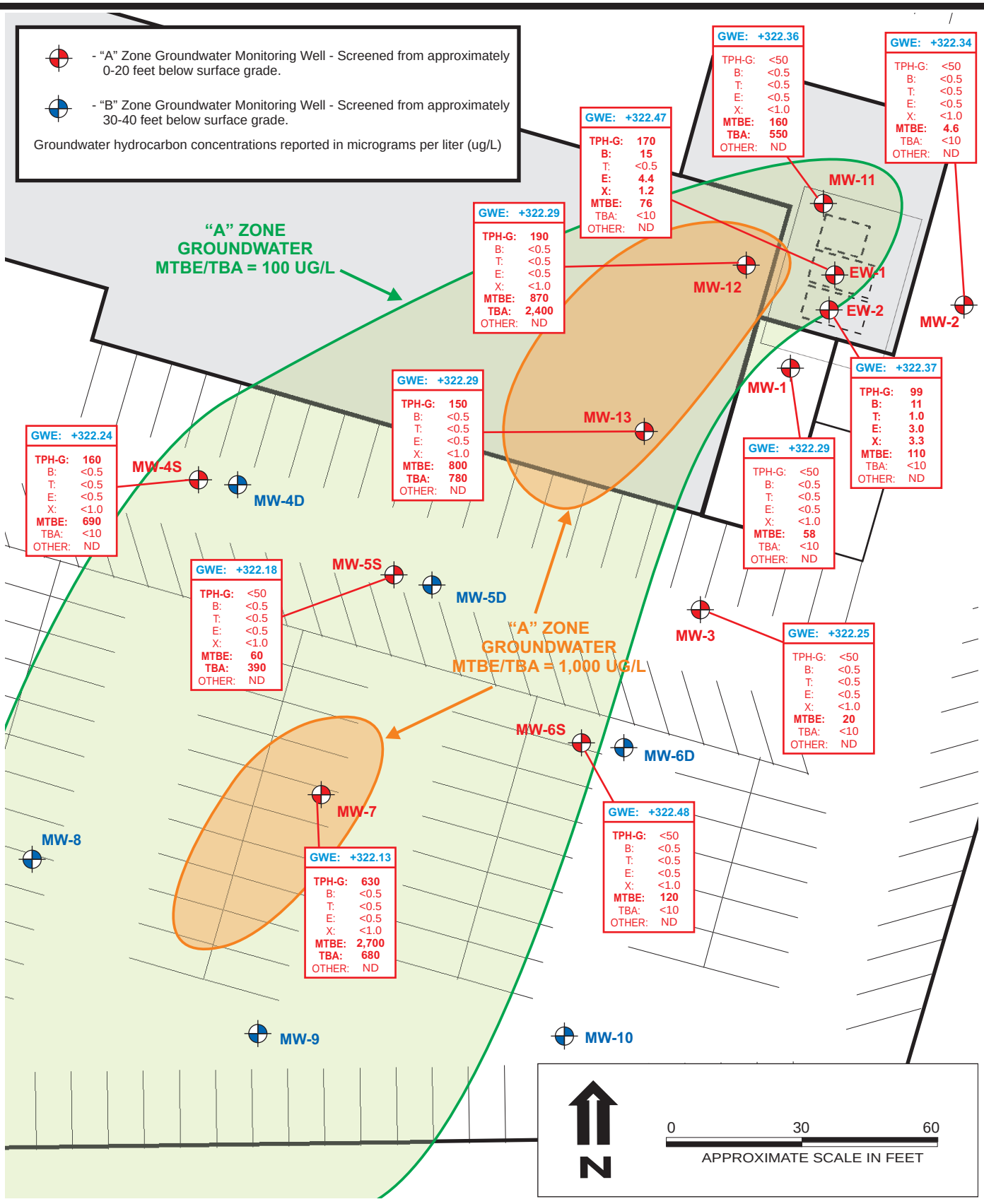
DESIGNED BY:	CHECKED BY: JEG	**CPT GROUNDWATER HYDROCARBON RESULTS, APRIL 2009** DUBLIN TOYOTA UST SITE 6450 DUBLIN COURT DUBLIN, CALIFORNIA	DATE: 09/15/2010 FIGURE: **6**
DRAWN BY: MAR	SCALE:		GRIBI
PROJECT NO:			



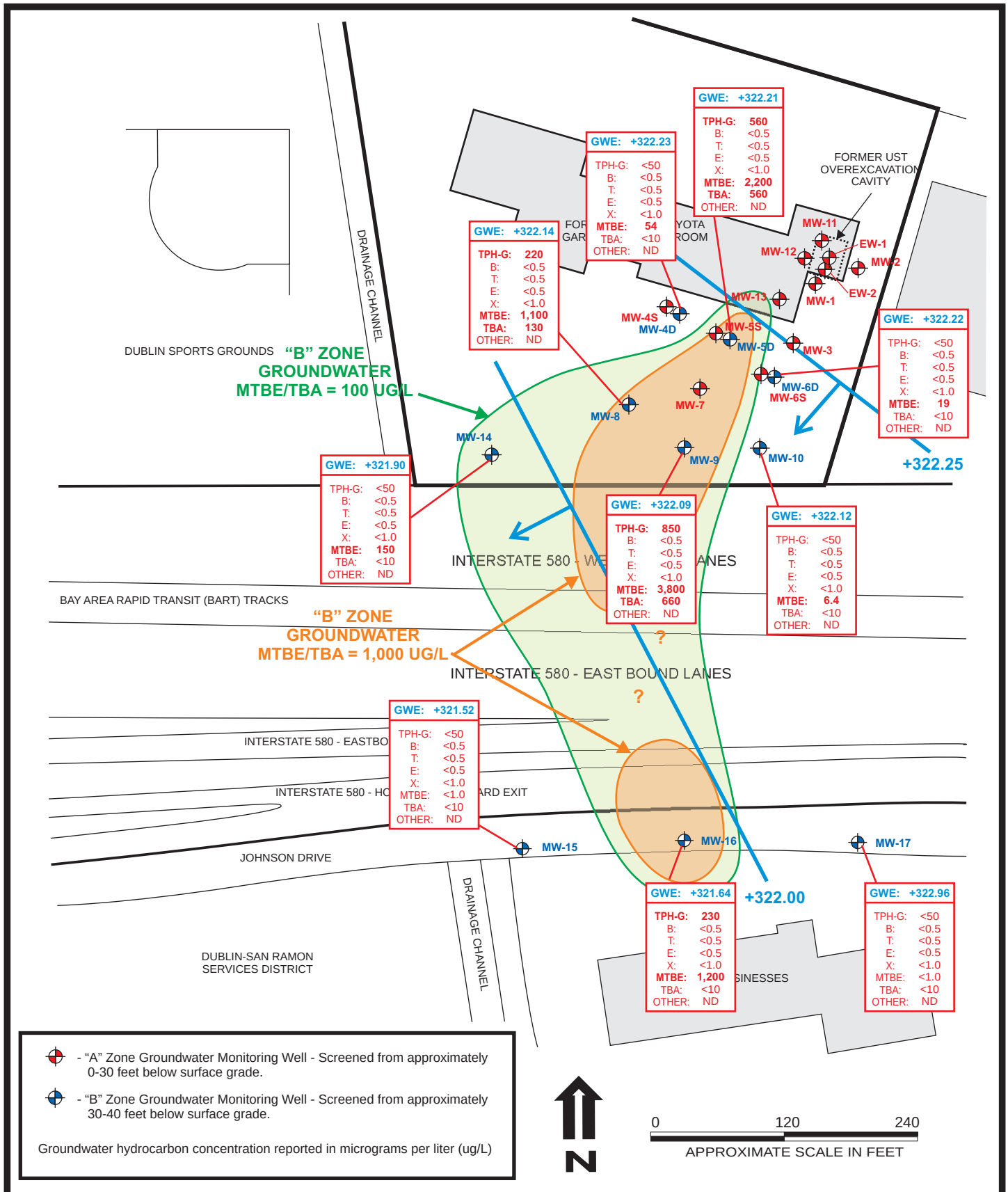
0 90 180

APPROXIMATE HORIZONTAL SCALE IN FEET

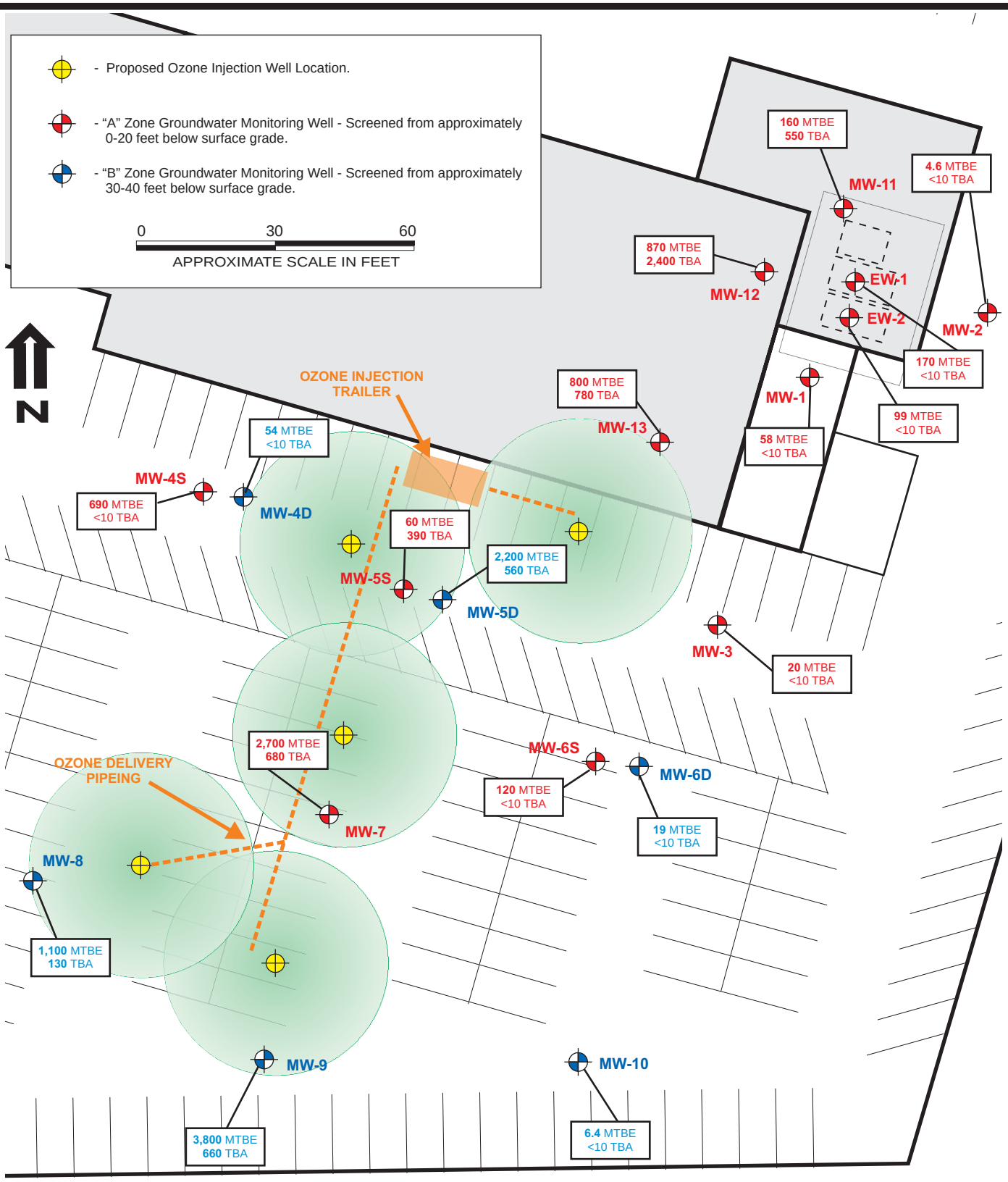
DESIGNED BY:	CHECKED BY: JG	**NORTH-SOUTH CROSS SECTION**	DATE: 09/10/2010 FIGURE: 7
DRAWN BY: MR	SCALE:	DUBLIN TOYOTA UST SITE 6450 DUBLIN COURT DUBLIN, CALIFORNIA	GRIBI
PROJECT NO:			



DESIGNED BY:	CHECKED BY: JEG	**"A" ZONE GROUNDWATER ELEVATIONS AND HYDROCARBON RESULTS, 06/2010** DUBLIN TOYOTA UST SITE 6450 DUBLIN COURT DUBLIN, CALIFORNIA	DATE: 09/15/2010	FIGURE: **8**
DRAWN BY: MAR	SCALE:			GRIBI
PROJECT NO:				



DESIGNED BY:	CHECKED BY: JEG	**"B" ZONE GROUNDWATER ELEVATIONS AND HYDROCARBON RESULTS, 06/2010**	DATE: 09/15/2010	FIGURE: **9**
DRAWN BY: MAR	SCALE:	DUBLIN TOYOTA UST SITE 6450 DUBLIN COURT DUBLIN, CALIFORNIA	GRIBI	
PROJECT NO:				



DESIGNED BY:	CHECKED BY: JEG	**PROPOSED OZONE INJECTION SYSTEM LAYOUT**	DATE: 09/15/2010	FIGURE: **10**
DRAWN BY: MAR	SCALE:	DUBLIN TOYOTA UST SITE 6450 DUBLIN COURT DUBLIN, CALIFORNIA	GRIBI	
PROJECT NO:				

TABLES

Table 1
CUMULATIVE SOIL LABORATORY ANALYTICAL RESULTS
Dublin Toyota UST Site

Sample ID	*Sample Depth*	*Concentration (Milligrams per kilogram, mg/kg, or ppm)*								
		TPH-D	*TPH-MO*	*TPH-G*	*B*	*T*	*E*	*X*	*MTBE*	*Other Oxy*
June 1998: UST Removal & Overexcavation										
Pit-1-East	12.0 ft	**720**	--	**2,000**	**5.5**	**69**	**28**	**180**	**30**	--
Pit-1-West	12.0 ft	**32**	--	**83**	<0.020	**0.58**	**1.4**	**9.4**	**1.4**	--
Pit-1-South	12.0 ft	**690**	--	**1,500**	**1.7**	**58**	**25**	**140**	**6.8**	--
December 1998: Four Borings, Two Wells										
IB-1.1	3.5 ft	<2.0[1]	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--
IB-1.2	7.5 ft	**2.1**	**12**	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--
IB-1.3	11.5 ft	**5.5**	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--
IB-2.1	7.5 ft	**3.1**	**13**	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--
IB-3.1	11.5 ft	**4.6**	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--
IB-4.1	7.5 ft	**1.2**	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--
IB-4.2	11.5 ft	<1.0	<10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--
MW-1.1	5.5 ft	<1.0	<10	<2.0	<0.010	**0.020**	<0.010	<0.010	**2.1**	--
MW-1.2	10.5 ft	<1.0	<10	<1.0	<0.0050	**0.017**	<0.0050	<0.0050	**0.35**	--
MW-2.1	5.5 ft	**1.5**	**19**	<1.0	<0.0050	**0.0085**	<0.0050	<0.0050	<0.050	--
MW-2.2	10.5 ft	**2.3**	<10	<1.0	<0.0050	**0.012**	<0.0050	<0.0050	<0.050	--
August 2000: One Boring, One Well										
IB-5.1	7.0 ft.	<1.0	_	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--
IB-5.2	11.0 ft.	<1.0	--	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--
MW-3.2	10.5 ft.	<1.0	--	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--
MW-3.3	16.5ft.	<1.0	--	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	--
May 2005: One Angle Boring, Two Extraction Wells										
AB-1-3.5	1.75 ft	--	--	<0.50	**0.018**	**0.017**	**0.007**	**0.014**	**0.430**	**0.320** TBA
AB-A-10.5	5.25 ft	--	--	<0.50	**0.0078**	<0.0020	<0.0020	<0.0040	**1.1**	**0.110** TAME
AB-1-17.5	8.75 ft	--	--	<0.50	**0.0055**	<0.0020	**0.0026**	<0.0040	**1.3**	**0.230** TBA
AB-1-24.0	12.0 ft	--	--	<0.50	<0.0020	**0.0051**	<0.0020	<0.0040	<0.0050	**1.1** DIPE
AB-1-27.5	13.75 ft	--	--	<0.50	<0.0020	**0.004.7**	<0.0020	<0.0040	**1.4**	All ND
EW-1	12 ft	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	**0.410**	All ND
EW-2	12 ft	--	--	**790**	<0.0020	<0.0020	**0.011**	**0.017**	**0.540**	**0.190** TBA
May 2005: Twelve Borings										
B-1-7.5	7.5	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	**0.700**	**0.300** TBA
B-1-10.5	10.5	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	**0.790**	All ND

Table 1
CUMULATIVE SOIL LABORATORY ANALYTICAL RESULTS
Dublin Toyota UST Site

Sample ID	*Sample Depth*	*Concentration (Milligrams per kilogram, mg/kg, or ppm)*								
		TPH-D	*TPH-MO*	*TPH-G*	*B*	*T*	*E*	*X*	*MTBE*	*Other Oxy*
B-1-34.5	34.5	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	All ND
B-2-8	8.0	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	All ND
B-2-35	35.0	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	All ND
B-3-7.5	7.5	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	All ND
B-3-8.0	8.0	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	All ND
B-3-13.0	13.0	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	All ND
B-3-35.5	35.5	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	All ND
B-4-7.0	7.0	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	**0.026**	All ND
B-4-10.5	10.5	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	**0.470**	All ND
B-4-35	35.0	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	**0.0094**	All ND
B-5-5	5.0	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	All ND
B-5-38	38.0	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	**0.0057**	All ND
B-6-7.5	7.5	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	All ND
B-6-20	20.0	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	All ND
B-6-36	36.0	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	All ND
B-7-18	18.0	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	**0.065**	All ND
B-8-10	10.0	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	**0.0080**	All ND
B-8-33	33.0	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	All ND
B-9-6	6.0	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	All ND
B-9-32	32.0	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	All ND
B-10-7.0	7.0	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	All ND
B-10-33	33.0	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	All ND
B-11-10	10.0	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	All ND
B-11-35	35.0	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	**0.0096**	All ND
B-12-11.0	11.0	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	All ND
B-12-35.5	35.5	--	--	<0.50	<0.0020	<0.0020	<0.0020	<0.0040	<0.0050	All ND
July 2009: Six Soil Borings										
GB-1-4.5	4.5 feet	--	--	<0.5	<0.005	<0.005	**0.0078**	<0.01	**0.035**	All ND
GB-1-7..5	7.5 feet	--	--	<0.5	<0.005	<0.005	**0.0097**	<0.01	**0.17**	All ND
GB-1-9..5	9.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	<0.02	**0.41** TBA
GB-1-11.5	11.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	<0.02	**0.33** TBA
GB-2-4.5	4.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	**0.039**	All ND
GB-2-7.5	7.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	<0.02	All ND
GB-2-9.5	9.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	<0.02	**0.34** TBA
GB-2-11.5	11.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	<0.02	All ND

Table 1
CUMULATIVE SOIL LABORATORY ANALYTICAL RESULTS
Dublin Toyota UST Site

Sample ID	*Sample Depth*	*Concentration (Milligrams per kilogram, mg/kg, or ppm)*								
		TPH-D	*TPH-MO*	*TPH-G*	*B*	*T*	*E*	*X*	*MTBE*	*Other Oxy*
GB-3-4.5	4.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	**0.062**	All ND
GB-3-7.5	7.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	<0.02	**0.21** TBA
GB-3-9.5	9.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	**0.040**	**0.076** TBA
GB-3-11.5	11.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	<0.02	All ND
GB-4-4.5	4.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	**0.27**	**0.32** TBA
GB-4-7.5	7.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	<0.02	**3.5** TBA
GB-4-9.5	9.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	**0.14**	**0.29** TBA
GB-4-11.5	11.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	**0.30**	**1.7** TBA
GB-5-4.5	4.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	<0.02	All ND
GB-5-7.5	7.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	<0.02	**0.32** TBA
GB-5-9.5	9.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	**0.056**	**1.4** TBA
GB-5-11.5	11.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	**0.130**	All ND
GB-6-4.5	4.0 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	**0.100**	All ND
GB-6-7.5	7.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	<0.02	**1.2** TBA
GB-6-11.5	11.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	<0.02	**0.41** TBA
April 2010: Eight Monitoring Wells										
MW-11-4.5	4.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	**0.11**	All ND
MW-11-9.0	9.0 feet	--	--	<0.5	<0.005	<0.005	**0.011**	<0.01	**0.20**	All ND
MW-11-14.0	14.0 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	<0.02	All ND
MW-11-19.0	19.0 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	**0.024**	All ND
MW-12-4.5	4.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	<0.02	All ND
MW-12-9.0	9.0 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	<0.02	All ND
MW-12-14.0	14.0 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	**0.033**	All ND
MW-12-19.0	19.0 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	<0.02	**0.41** TBA
MW-13-4.5	4.5 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	<0.02	All ND
MW-13-9.0	9.0 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	<0.02	All ND
MW-13-14.0	14.0 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	<0.02	All ND
MW-13-19.0	19.0 feet	--	--	<0.5	<0.005	<0.005	<0.005	<0.01	**0.044**	**0.32** TBA

TPH-D = Total Petroleum Hydrocarbons as Diesel
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil
TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl-t-Butyl Ether
TBA = tert-Butanol
TAME = Tert-amyl Methyl Ether
DIPE = Diisopropyle ether
– = Not analyzed for this analyte.

Table 2
CUMULATIVE GRAB GROUNDWATER LABORATORY ANALYTICAL RESULTS
Dublin Toyota UST Site

Sample ID	*Sample Depth*	*Concentration (Micrograms per liter, ug/l, or ppb)*								
		TPH-D	*TPH-MO*	*TPH-G*	*B*	*T*	*E*	*X*	*MTBE*	*Other Oxy*
June 1998: UST Removal & Overexcavation										
T-1-W	(12.0 ft)	--	--	**160,000**	**6,300**	**12,000**	**2,500**	**2,000**	**52,000**	--
Water-East	(12.0 ft)	--	--	**61,000**	**2,700**	**13,000**	**2,700**	**14,000**	**120,000**	--
Water-West	(12.0 ft)	--	--	**46,000**	**1,300**	**5,200**	**2,200**	**14,000**	**16,000**	--
Water-Center	(12.0 ft)	**48,000**	--	**90,000**	**4,100**	**9,900**	**2,300**	**16,000**	**39,000**	--
August 2000: One Boring, One Well										
IB-5-W		--	--	**590**	<0.0005	<0.0005	<0.0005	**1.0**	**4,200**	--
May 2005: One Angle Boring, Two Extraction Wells										
AB-1-W	- -			**74**	**19**	**0.80**	**2.2**	**<1.0**	**14,000**	**14 TAME** **470 TBA** **2.4 ETBE**
May 2005: Twelve Borings										
B-1-W-1	6-16 ft			<50	<0.50	<0.50	<0.50	<0.50	**20,000**	**12** TAME **240** TBA
B-1-W-2	35-39 ft			<50	<0.50	<0.50	<0.50	<0.50	**4.5**	All ND
B-2-W-1	6-16 ft			<50	<0.50	<0.50	<0.50	<0.50	<1.0	All ND
B-2-W-2	36-40 ft			<50	<0.50	<0.50	<0.50	<0.50	**8.7**	All ND
B-3-W-1	6-12 ft			<50	<0.50	**1.8**	<0.50	<0.50	**23**	All ND
B-3-W-2	6-24 ft			<50	<0.50	<0.50	<0.50	<0.50	**110**	All ND
B-3-W-3	36-40 ft			<50	<0.50	<0.50	<0.50	<0.50	**5.3**	All ND
B-4-W-1	6-12 ft			<50	<0.50	<0.50	<0.50	<0.50	**17,000**	**9.9** TAME **330** TBA
B-4-W-2	36-40 ft			<50	<0.50	<0.50	<0.50	<0.50	**8.4**	All ND
B-5-W-1	6-12 ft			<50	<0.50	<0.50	<0.50	<0.50	**66**	All ND
B-5-W-2	36-40 ft			<50	<0.50	<0.50	<0.50	<0.50	<1.0	All ND
B-6-W-1	6-12 ft			<50	<0.50	<0.50	<0.50	<0.50	<1.0	All ND
B-6-W-2	36-40 ft			<50	<0.50	<0.50	<0.50	<0.50	<1.0	All ND
B-7-W-1	6-20 ft			<50	<0.50	<0.50	<0.50	<0.50	**1,500**	All ND
B-7-W-2	35-39 ft			<50	<0.50	<0.50	<0.50	<0.50	**360**	All ND
B-8-W-1	6-16 ft			<50	<0.50	<0.50	<0.50	<0.50	**480**	All ND
B-8-W-2	32-35 ft			<50	<0.50	<0.50	<0.50	<0.50	**41**	All ND

Table 2
CUMULATIVE GRAB GROUNDWATER LABORATORY ANALYTICAL RESULTS
Dublin Toyota UST Site

Sample ID	*Sample Depth*	*Concentration (Micrograms per liter, ug/l, or ppb)*								
		TPH-D	*TPH-MO*	*TPH-G*	*B*	*T*	*E*	*X*	*MTBE*	*Other Oxy*
B-9-W-1	6-20 ft			<50	<0.50	<0.50	<0.50	<0.50	**2.9**	All ND
B-9-W-2	33-37 ft			<50	<0.50	<0.50	<0.50	<0.50	**18**	All ND
B-10-W-1	6-12 ft			<50	<0.50	<0.50	<0.50	<0.50	<1.0	All ND
B-10-W-2	33-35 ft			<50	<0.50	<0.50	<0.50	<0.50	**430**	All ND
B-11-W-1	6-16 ft			<50	<0.50	<0.50	<0.50	<0.50	<1.0	All ND
B-11-W-2	32-36 ft			<50	<0.50	<0.50	<0.50	<0.50	**2,300**	All ND
B-12-W-1	6-12 ft			<50	<0.50	<0.50	<0.50	<0.50	**4.5**	All ND
B-12-W-2	35-39 ft			<50	<0.50	<0.50	<0.50	<0.50	**13**	All ND
July 2009: Six Soil Borings										
GB-1-GWS	(0-16 ft)	--	--	**110**	**1.4**	<0.5	**1.4**	<1.0	**100**	**2,000**
GB-2-GWS	(0-12 ft)	--	--	**240**	<0..5	<0.5	<0.5	<1.0	**240**	**250**
GB-2-GWD	(35-40 ft)	--	--	<50	<0..5	<0.5	<0.5	<1.0	**3.4**	<10
GB-3-GWS	(0-16 ft)	--	--	<50	<0..5	<0.5	<0.5	<1.0	**33**	**620**
GB-3-GWD	(34-40 ft)	--	--	<50	<0..5	<0.5	<0.5	<1.0	<1.0	<10
GB-4-GWS	(0-20 ft)	--	--	<50	<0..5	<0.5	<0.5	<1.0	**42**	<10
GB-4-GWD	(32-40 ft)	--	--	<50	<0..5	<0.5	<0.5	<1.0	**2.5**	<10
GB-5-GWS	(0-16 ft)	--	--	**68**	<0..5	<0.5	<0.5	<1.0	**86**	**4,200**
GB-5-GWD	(35-40 ft)	--	--	<50	<0..5	<0.5	<0.5	<1.0	**2.8**	**11**
GB-6-GWS	(0-16 ft)	--	--	<50	**2.8**	<2.5	<2.5	<5.0	**17**	**6,000** TBA
GB-6-GWD	(35-40 ft)	--	--	<50	<0..5	<0.5	<0.5	<1.0	**3.9**	All ND
April 2009: Seven CPT Borings										
CPT-1-34	30-34 ft			**1,100**	<0.50	<0.50	<0.50	<1.0	**2,400**	All ND
CPT-1-58	54-58 ft			<50	<0.50	<0.50	<0.50	<1.0	<1.0	All ND
CPT-1-82	76-82 ft			<50	<0.50	<0.50	<0.50	<1.0	<1.0	All ND
CPT-2-37	33-37 ft			<50	<0.50	<0.50	<0.50	<1.0	**4.9**	All ND
CPT-2-58	54-58 ft			<50	<0.50	<0.50	<0.50	<1.0	<1.0	All ND
CPT-2-79	75-79 ft			<50	<0.50	<0.50	<0.50	<1.0	<1.0	All ND
CPT-3-36	32-36 ft			**240**	<0.50	<0.50	<0.50	<1.0	**400**	All ND
CPT-3-55	51-55 ft			<50	<0.50	<0.50	<0.50	<1.0	<1.0	All ND
CPT-3-82	78-82 ft			<50	<0.50	<0.50	<0.50	<1.0	<1.0	All ND
CPT-4-34	30-34 ft			<50	<0.50	<0.50	<0.50	<1.0	**13**	All ND
CPT-4-48	44-48 ft			<50	<0.50	<0.50	<0.50	<1.0	**2.3**	All ND

Table 2
CUMULATIVE GRAB GROUNDWATER LABORATORY ANALYTICAL RESULTS
Dublin Toyota UST Site

Sample ID	*Sample Depth*	*Concentration (Micrograms per liter, ug/l, or ppb)*								
		TPH-D	*TPH-MO*	*TPH-G*	*B*	*T*	*E*	*X*	*MTBE*	*Other Oxy*
CPT-4-73	69-73 ft			<50	<0.50	<0.50	<0.50	<1.0	<1.0	All ND
CPT-5-36	32-36 ft			**270**	<0.50	<0.50	<0.50	<1.0	**490**	All ND
CPT-5-47	43-47 ft			<50	<0.50	<0.50	<0.50	<1.0	**21**	All ND
CPT-5-79	75-79 ft			<50	<0.50	<0.50	<0.50	<1.0	<1.0	All ND
CPT-6-55	51-55 ft			<50	<0.50	<0.50	<0.50	<1.0	<1.0	All ND
CPT-6-80	76-80 ft			<50	<0.50	<0.50	<0.50	<1.0	<1.0	All ND
CPT-7-39	35-39 ft			<50	<0.50	<0.50	<0.50	<1.0	<1.0	All ND
CPT-7-62	58-62 ft			<50	<0.50	<0.50	<0.50	<1.0	<1.0	All ND
CPT-7-70	66-70 ft			<50	<0.50	<0.50	<0.50	<1.0	<1.0	All ND

TPH-D = Total Petroleum Hydrocarbons as Diesel
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil
TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl-t-Butyl Ether
TBA = tert-Butanol
TAME = Tert-amyl Methyl Ether
DIPE = Diisopropyle ether
– = Not analyzed for this analyte.

Table 3
CUMULATIVE MONITORING WELL GROUNDWATER LABORATORY ANALYTICAL RESULTS
Dublin Toyota UST Site

Sample ID	*Sample Date*	*GW Depth*	*GW Elevation*	*Concentrations, in micrograms per liter (ug/l)*									
				TPH-G	*B*	*T*	*E*	*X*	*TAME*	*TBA*	*DIPE*	*ETBE*	*MTBE*
MW-1	12/15/98	5.74	323.14	**46,000**	<100	<100	<100	<100	--	--	--	--	**62,000**
"A" Zone	04/06/99	5.09	323.79	**45,000**	<50	<50	<50	<50	--	--	--	--	**86,000**[1]
<328.88>	07/14/99	6.18	322.7	**2,800**	<100	<100	<100	<100	--	--	--	--	**65,000**[1]
	10/14/99	6.86	322.02	**11,000**	<17	<17	<17	<17	--	--	--	--	**98,000**[1]
	08/18/00	6.98	321.9	**36,000**	<50	<50	<50	<50	--	--	--	--	**66,000**[1]
	05/29/02	6.42	322.46	**29,100**	<15	<15	<15	<30	**841**	<500	<100	N50	**27,800**[1]
	11/20/02	6.65	322.23	**110**	<0.5	<0.5	<0.5	<1.0	<20	<50	<20	<20	**20,000**
	04/06/03	5.95	322.93	**1,300**	<1.0	<1.0	<1.0	<1.0	**10**	**360**	<2.0	**2.2**	**15,000**
	07/13/03	6.55	322.33	**74**	<0.50	<0.50	<0.50	<1.0	**10**	**42**	<5.0	<5.0	**15,000**
	02/11/04	5.74	323.14	<50	<0.50	<0.50	<0.50	<1.0	**10**	**420**	<2.0	**2.5**	**34,000**
	06/16/04	6.37	322.51	**180**	<0.50	<0.50	<0.50	<1.0	**6.8**	**290**	<2.0	<2.0	**7,600**
	10/16/04	7.29	321.59	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**6,720**
	12/30/04	5.84	323.04	**92**	<0.50	<0.50	<0.50	<1.0	**5.2**	<10	<2.0	<2.0	**2,600**
	03/22/05	5.22	323.66	<50	<0.50	<0.50	<0.50	<1.0	**7.3**	<10	<2.0	<2.0	**6,900**
	06/10/05	6.17	322.71	**100**	<0.50	<0.50	<0.50	<1.0	**9.8**	<10	<2.0	<2.0	**25,000**
	10/04/05	7.49	321.39	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**2,500**
	12/21/05	7.18	321.70	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**6,800**
	03/30/06	5.81	323.07	<50	<0.50	<0.50	**1.1**	**2.6**	<2.0	<10	<2.0	<2.0	**6,900**
	06/01/06	7.20	321.68	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**5,100**

Table 3
CUMULATIVE MONITORING WELL GROUNDWATER LABORATORY ANALYTICAL RESULTS
Dublin Toyota UST Site

Sample ID	*Sample Date*	*GW Depth*	*GW Elevation*	*Concentrations, in micrograms per liter (ug/l)*									
				TPH-G	*B*	*T*	*E*	*X*	*TAME*	*TBA*	*DIPE*	*ETBE*	*MTBE*
	09/12/06	6.39	322.49	<50	<0.50	<0.50	<0.50	<1.0	**2.2**	**960**	<2.0	<2.0	**2,400**
	11/21/06	7.68	321.2	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**1,200**	<2.0	<2.0	**930**
	02/27/07	5.06	323.82	NA	<0.50	<0.50	<0.50	<1.0	<2.0	**1,000**	<2.0	<2.0	**1,100**
	06/07/07	7.57	321.31	NA	<0.50	<0.50	<0.50	<1.0	<2.0	**1,500**	<2.0	<2.0	**1,100**
	09/14/07	7.52	321.36	NA	<0.50	<0.50	<0.50	<1.0	<20	**640**	<2.0	<2.0	**280**
	11/17/07	7.28	321.60	NA	<0.50	<0.50	<0.50	<1.0	<20	**1,400**	<2.0	<2.0	**260**
	02/28/08	5.56	323.32	NA	<0.50	<0.50	<0.50	<1.0	<20	**1,300**	<2.0	<2.0	**130**
	06/04/08	6.96	321.92	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**1,700**	<2.0	<2.0	**290**
	09/11/08	7.24	321.64	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**1,000**	<2.0	<2.0	**160**
	12/23/08	6.84	322.04	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**13**
	03/17/09	5.91	322.97	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**17**
	06/26/09	7.21	321.67	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**390**	<2.0	<2.0	**74**
	12/03/09	7.29	321.59	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**2,800**	<2.0	<2.0	**15**
	6/11/10	6.59	322.29	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**58**
MW-2	12/15/98	4.3	323.34	<50	<0.50	**0.90**	<0.50	**1.5**	--	--	--	--	<5.0
"A" Zone	04/06/99	3.42	324.22	<50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<5.0
<327.64>	07/14/99	4.76	322.88	<50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<5.0
	10/14/99	5.48	322.16	<50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	<5.0
	08/18/00	5.72	321.92	<50	<0.50	<0.50	<0.50	**1.1**	--	--	--	--	**16**

Table 3
CUMULATIVE MONITORING WELL GROUNDWATER LABORATORY ANALYTICAL RESULTS
Dublin Toyota UST Site

Sample ID	*Sample Date*	*GW Depth*	*GW Elevation*	*Concentrations, in micrograms per liter (ug/l)*									
				TPH-G	*B*	*T*	*E*	*X*	*TAME*	*TBA*	*DIPE*	*ETBE*	*MTBE*
	05/29/02	5.18	322.46	<50	<0.3	<0.3	<0.3	**3.9**	<2.0	<10	<2.0	<2.0	**2.6**
	11/20/02	5.52	322.12	**57**	<0.50	<0.50	<0.50	<1.0	<20	<50	<20	<20	**9.1**
	04/06/03	4.59	323.05	<50	<1.0	<1.0	<1.0	<1.0	<2.0	<10	<2.0	<2.0	**5.7**
	07/13/03	5.24	322.40	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<10	<5.0	<5.0	**6.5**
	02/11/04	4.45	323.19	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**8.5**
	06/16/04	4.93	322.71	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**120**
	10/16/04	5.97	321.67	**78**	<0.50	<0.50	<0.50	<1.0	**4.1**	<10	<2.0	<2.0	**43.2**
	12/30/04	4.74	322.9	<50	<0.50	<0.50	<0.50	<1.0	**4.1**	<10	<2.0	<2.0	**14**
	03/22/05	3.86	323.78	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**13**
	06/10/05	4.83	322.81	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**14**
	10/04/05	6.19	321.45	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**5.2**
	12/21/05	5.81	321.83	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
	03/30/06	4.55	323.09	<50	<0.50	<0.50	<0.50	**3.9**	<2.0	<10	<2.0	<2.0	**13**
	06/01/06	5.93	321.71	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**14**
	09/12/06	8.65	318.99	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**22**
	11/21/06	6.42	321.22	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**19**
	02/27/07	5.14	322.50	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**13**
	06/07/07	6.18	321.46	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**30**
	09/14/07	6.31	321.33	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**25**

Table 3
CUMULATIVE MONITORING WELL GROUNDWATER LABORATORY ANALYTICAL RESULTS
Dublin Toyota UST Site

Sample ID	*Sample Date*	*GW Depth*	*GW Elevation*	*Concentrations, in micrograms per liter (ug/l)*									
				TPH-G	*B*	*T*	*E*	*X*	*TAME*	*TBA*	*DIPE*	*ETBE*	*MTBE*
	11/17/07	5.90	321.74	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**13**
	02/28/08	4.19	323.45	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10.0	<2.0	<2.0	**14**
	06/04/08	5.58	322.06	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**18**
	09/11/08	5.92	321.72	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**38**
	12/23/08	5.56	322.08	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**39**
	03/17/09	4.64	323.00	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**36**
	06/26/09	5.90	321.74	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**18**
	12/03/09	5.98	321.66	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**11**
	6/11/10	5.30	322.34	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**4.6**
MW-3	08/18/00	5.67	321.77	**210**	<0.50	**0.58**	<0.50	**0.59**	--	--	--	--	**570**[1]
"A" Zone	05/29/02	5.1	322.34	<50	<0.3	<0.3	<0.3	**219**	<2.0	<10	<2.0	<2.0	**281**
<327.44>	11/20/02	5.56	321.88	**200**	<0.50	<0.50	<0.50	<1.0	<20	<50	<20	<20	**460**
	04/06/03	4.64	322.8	**270**	<1.0	<1.0	<1.0	<1.0	<2.0	<10	<2.0	<2.0	**340**
	07/13/03	5.48	321.96	<50	<0.50	<0.50	<0.50	<1.0	<5.0	<10	<5.0	<5.0	**460**
	02/11/04	4.47	322.97	<50	<0.50	<0.50	<0.50	<1.0	**2.2**	**1,000**	<2.0	<2.0	**4,000**
	06/16/04	5.23	322.21	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**240**
	10/16/04	5.92	321.52	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**210**
	12/30/04	4.54	322.9	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**120**	<2.0	<2.0	**190**
	03/22/05	3.9	323.54	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**210**

Table 3
CUMULATIVE MONITORING WELL GROUNDWATER LABORATORY ANALYTICAL RESULTS
Dublin Toyota UST Site

Sample ID	*Sample Date*	*GW Depth*	*GW Elevation*	*Concentrations, in micrograms per liter (ug/l)*									
				TPH-G	*B*	*T*	*E*	*X*	*TAME*	*TBA*	*DIPE*	*ETBE*	*MTBE*
	06/10/05	4.83	322.61	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**230**
	10/04/05	6.02	321.42	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**380**
	12/21/05	5.74	321.7	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**320**
	03/30/06	4.35	323.09	<50	<0.50	<0.50	**1.3**	**3.0**	<2.0	<10	<2.0	<2.0	**160**
	06/01/06	5.69	321.75	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**270**
	09/12/06	6.21	321.23	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**130**
	11/21/06	6.29	321.15	<50	<0.50	<0.50	<0.50	<0.50	<2.0	<10	<2.0	<2.0	**90**
	02/27/07	–	–	NA	<0.50	<0.50	<0.50	<0.50	<2.0	<10	<2.0	<2.0	**39**
	06/7/07	5.98	321.46	NA	<0.50	<0.50	<0.50	<0.50	<2.0	<10	<2.0	<2.0	**270**
	09/14/07	6.11	321.33	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**59**
	11/17/07	5.86	321.58	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**75**
	02/28/08	4.12	323.32	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**36**
	06/04/08	5.47	321.97	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**20**	<2.0	<2.0	**30**
	09/11/08	5.75	321.69	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**51**	<2.0	<2.0	**36**
	12/23/08	5.45	321.99	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**41**
	03/17/09	4.55	322.89	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**12**
	06/26/09	5.78	321.66	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**12**
	12/03/09	5.87	321.57	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**62**	<2.0	<2.0	**15**
	06/10/10	5.19	322.25	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**20**

Table 3
CUMULATIVE MONITORING WELL GROUNDWATER LABORATORY ANALYTICAL RESULTS
Dublin Toyota UST Site

Sample ID	*Sample Date*	*GW Depth*	*GW Elevation*	*Concentrations, in micrograms per liter (ug/l)*									
				TPH-G	*B*	*T*	*E*	*X*	*TAME*	*TBA*	*DIPE*	*ETBE*	*MTBE*
MW-4S	04/27/06	5.03	322.77	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
"A" Zone	06/01/06	3.72	324.08	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
<327.80>	9/12/06	6.01	321.79	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
	11/21/06	6.68	321.12	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**2.1**
	02/27/07	5.39	322.41	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**3.0**
	06/07/07	6.38	321.42	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**27**
	09/14/07	–	–	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**15**
	11/17/07	6.39	321.41	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**73**
	02/28/08	4.65	323.15	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**360**
	06/04/08	5.93	321.87	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**110**	<2.0	<2.0	**820**
	09/11/08	6.09	321.71	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**190**	<2.0	<2.0	**400**
	12/23/08	5.93	321.87	**86**	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**310**
	03/17/09	4.98	322.82	**540**	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**1,100**
	06/26/09	6.13	321.67	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**170**
	12/03/09	6.33	321.47	**280**	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**590**
	06/10/10	5.56	322.24	**160**	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**690**
MW-4D	04/27/06	5.00	322.67	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
"B" Zone	06/01/06	--	--	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
<327.67>	09/12/06	4.23	323.44	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
	11/21/06	6.51	321.16	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
	02/27/07	–	–	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0

Table 3
CUMULATIVE MONITORING WELL GROUNDWATER LABORATORY ANALYTICAL RESULTS
Dublin Toyota UST Site

Sample ID	*Sample Date*	*GW Depth*	*GW Elevation*	*Concentrations, in micrograms per liter (ug/l)*									
				TPH-G	*B*	*T*	*E*	*X*	*TAME*	*TBA*	*DIPE*	*ETBE*	*MTBE*
	06/07/07	7.51	320.16	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
	09/14/07	–	--	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
	11/17/07	6.43	321.24	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
	02/28/08	6.05	321.62	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
	06/04/08	6.49	321.18	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**1.2**
	09/11/08	7.06	320.61	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**3.0**
	12/23/08	6.60	321.07	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**5.0**
	03/17/09	5.05	322.62	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**6.9**
	06/26/09	5.93	321.74	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**3.9**
	12/03/09	6.21	321.46	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**56**
	06/10/10	5.44	322.23	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**54**
MW-5S	04/27/06	4.25	322.84	<50	<0.50	<0.50	<0.50	<1.0	**4.6**	<10	<2.0	<2.0	**10,000**
"A" Zone	06/01/06	5.41	321.68	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**8,300**
<327.09>	09/12/06	5.85	321.24	<50	<0.50	<0.50	<0.50	<1.0	**3.5**	**340**	<2.0	<2.0	**6,500**
	11/21/06	5.57	321.52	<50	<0.50	<0.50	<0.50	<1.0	**3.5**	**1,200**	<2.0	<2.0	**4,700**
	02/27/07	4.61	322.48	NA	<0.50	<0.50	<0.50	<1.0	**2.9**	**1,400**	<2.0	<2.0	**3,800**
	06/07/07	5.61	321.48	NA	<0.50	<0.50	<0.50	<1.0	**3.2**	<10	<2.0	<2.0	**7,800**
	09/14/07	5.83	321.26	NA	<0.50	<0.50	<0.50	<1.0	<2.0	**640**	<2.0	<2.0	**2,700**
	11/17/07	5.61	321.48	NA	<0.50	<0.50	<0.50	<1.0	<2.0	**47**	<2.0	<2.0	**4,700**
	02/28/08	3.86	323.23	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**2,700**
	06/04/08	5.21	321.88	<50	<0.50	<0.50	<0.50	<1.0	**2.7**	**1,500**	<2.0	<2.0	**7,300**

Table 3
CUMULATIVE MONITORING WELL GROUNDWATER LABORATORY ANALYTICAL RESULTS
Dublin Toyota UST Site

Sample ID	*Sample Date*	*GW Depth*	*GW Elevation*	*Concentrations, in micrograms per liter (ug/l)*									
				TPH-G	*B*	*T*	*E*	*X*	*TAME*	*TBA*	*DIPE*	*ETBE*	*MTBE*
	09/11/08	--	--	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**1,800**	<2.0	<2.0	**2,700**
	12/23/08	5.15	321.94	**600**	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**2,400**
	03/17/09	4.29	322.80	**830**	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**1,900**
	06/26/09	5.49	321.60	**150**	<0.50	<0.50	<0.50	<1.0	<2.0	**590**	<2.0	<2.0	**620**
	12/03/09	5.66	321.43	**160**	<0.50	<0.50	<0.50	<1.0	<2.0	**1,200**	<2.0	<2.0	**190**
	06/09/10	4.91	322.18	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**390**	<2.0	<2.0	**60**
MW-5D	04/27/06	4.01	323.29	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**<10**	<2.0	<2.0	**1,900**
"B" Zone	06/01/06	5.85	321.45	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**2,300**
<327.30>	09/12/06	6.50	320.80	<50	<0.50	<0.50	<0.50	<1.0	**2.6**	**150**	<2.0	<2.0	**3,900**
	11/21/06	6.11	321.19	<50	<0.50	<0.50	<0.50	<1.0	**4.0**	**1,300**	<2.0	<2.0	**2,600**
	02/27/07	5.51	321.79	NA	<0.50	<0.50	<0.50	<1.0	<2.0	**440**	<2.0	<2.0	**1,900**
	06/07/07	6.72	320.58	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**2,700**
	09/14/07	–	--	NA	<0.50	<0.50	<0.50	<1.0	<2.0	**170**	<2.0	<2.0	**1,600**
	11/17/07	5.55	321.75	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**3,000**
	02/28/08	5.22	322.08	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**890**
	06/04/08	6.11	321.19	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**160**	<2.0	<2.0	**1,500**
	09/11/08	--	--	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**1,000**	<2.0	<2.0	**2,500**
	12/23/08	7.57	319.73	**670**	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**2,800**
	03/17/09	5.35	321.95	**720**	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**1,100**
	06/26/09	6.54	320.76	**360**	<0.50	<0.50	<0.50	<1.0	<2.0	**1,000**	<2.0	<2.0	**1,600**
	12/03/09	5.81	321.49	**1,100**	<0.50	<0.50	<0.50	<1.0	<2.0	**120**	<2.0	<2.0	**1,500**

Table 3
CUMULATIVE MONITORING WELL GROUNDWATER LABORATORY ANALYTICAL RESULTS
Dublin Toyota UST Site

Sample ID	*Sample Date*	*GW Depth*	*GW Elevation*	*Concentrations, in micrograms per liter (ug/l)*									
				TPH-G	*B*	*T*	*E*	*X*	*TAME*	*TBA*	*DIPE*	*ETBE*	*MTBE*
	06/09/10	5.09	322.21	**560**	<0.50	<0.50	<0.50	<1.0	<2.0	**560**	<2.0	<2.0	**2,200**
MW-6S	04/27/06	12.32	314.21	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**<**10	<2.0	<2.0	**190**
"A" Zone	06/01/06	11.39	315.14	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**73**
<326.53>	09/12/06	16.49	310.04	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**130**
	11/21/06	7.93	318.60	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**140**
	02/27/07	–	–	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**87**
	06/07/07	6.08	320.45	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**83**
	09/14/07	6.32	320.21	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**72**
	11/17/07	7.69	318.84	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**72**
	02/28/08	5.03	321.50	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**68**
	06/04/08	5.34	321.19	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**65**
	09/11/08	5.74	320.79	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**130**
	12/23/08	5.86	320.67	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**83**
	03/17/09	4.80	321.73	**61**	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**160**
	06/26/09	5.44	321.09	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**81**
	12/03/09	5.03	321.50	**130**	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**220**
	06/11/10	4.05	322.48	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**120**
MW-6D	04/27/06	4.09	322.63	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**<**10	<2.0	<2.0	**22**
"B" Zone	06/01/06	4.85	321.87	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**11**
<326.72>	09/12/06	5.40	321.32	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**7.3**
	11/21/06	5.52	321.2	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**7.8**

Table 3
CUMULATIVE MONITORING WELL GROUNDWATER LABORATORY ANALYTICAL RESULTS
Dublin Toyota UST Site

Sample ID	*Sample Date*	*GW Depth*	*GW Elevation*	*Concentrations, in micrograms per liter (ug/l)*									
				TPH-G	*B*	*T*	*E*	*X*	*TAME*	*TBA*	*DIPE*	*ETBE*	*MTBE*
	02/27/07	4.09	322.63	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**4.6**
	06/07/07	5.14	321.58	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**8.5**
	09/14/07	5.42	321.3	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**15**
	11/17/07	5.20	321.52	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**26**
	02/28/08	3.41	323.31	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**9.3**
	06/04/08	4.78	321.94	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**18**
	09/11/08	5.10	321.62	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**64**
	12/23/08	4.67	322.05	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**3.8**
	03/17/09	3.88	322.84	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**26**
	06/26/09	5.06	321.66	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
	12/03/09	5.25	321.47	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**52**
	06/11/10	4.50	322.22	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**19**
MW-7	04/27/06	3.33	322.83	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**<10**	<2.0	<2.0	<1.0
"A" Zone	06/01/06	4.47	321.69	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**16**
<326.16>	09/12/06	4.92	321.24	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**81**
	11/21/06	5.02	321.14	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**180**
	02/27/07	3.46	322.70	NA	<0.50	<0.50	<0.50	<1.0	<2.0	**120**	<2.0	<2.0	**350**
	06/07/07	4.71	321.45	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**520**
	09/14/07	4.92	321.24	NA	<0.50	<0.50	<0.50	<1.0	<2.0	**13**	<2.0	<2.0	**270**
	11/17/07	4.69	321.47	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**710**
	02/28/08	3.07	323.09	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**1,800**

Table 3
CUMULATIVE MONITORING WELL GROUNDWATER LABORATORY ANALYTICAL RESULTS
Dublin Toyota UST Site

Sample ID	*Sample Date*	*GW Depth*	*GW Elevation*	*Concentrations, in micrograms per liter (ug/l)*									
				TPH-G	*B*	*T*	*E*	*X*	*TAME*	*TBA*	*DIPE*	*ETBE*	*MTBE*
	06/04/08	4.31	321.85	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**1,100**	<2.0	<2.0	**4,300**
	09/11/08	4.62	321.54	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**1,100**	<2.0	<2.0	**3,200**
	12/23/08	4.24	321.92	**590**	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**2,300**
	03/17/09	3.41	322.75	**1,700**	<0.50	<0.50	<0.50	<1.0	**2.9**	<10	<2.0	<2.0	**4,100**
	06/26/09	4.61	321.55	**440**	<0.50	<0.50	<0.50	<1.0	<2.0	**2,000**	<2.0	<2.0	**2,400**
	12/03/09	4.75	321.41	**2,500**	<0.50	<0.50	<0.50	<1.0	<2.0	**21**	<2.0	<2.0	**3,400**
	06/11/10	4.03	322.13	**630**	<0.50	<0.50	<0.50	<1.0	<2.0	**680**	<2.0	<2.0	**2,700**
MW-8	04/27/06	3.05	322.83	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**2,000**
"B" Zone	06/01/06	4.09	321.79	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**2,000**
<325.88>	09/12/06	4.58	321.3	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**150**	<2.0	<2.0	**2,500**
	11/21/06	5.73	320.15	<50	<0.50	<0.50	<0.50	<1.0	**2.2**	**430**	<2.0	<2.0	**1,900**
	02/27/07	3.03	322.85	NA	<0.50	<0.50	<0.50	<1.0	<2.0	**330**	<2.0	<2.0	**1,600**
	06/07/07	4.32	321.56	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**1,500**
	09/14/07	4.45	321.43	NA	<0.50	<0.50	<0.50	<1.0	<2.0	**58**	<2.0	<2.0	**630**
	11/17/07	4.39	321.49	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**640**
	02/28/08	–	–	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
	06/04/08	4.02	321.86	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**120**	<2.0	<2.0	**870**
	09/11/08	4.26	321.62	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**290**	<2.0	<2.0	**1,300**
	12/23/08	3.91	321.97	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**150**
	03/17/09	3.11	322.77	**640**	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**1,400**
	06/26/09	4.27	321.61	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**85**

Table 3
CUMULATIVE MONITORING WELL GROUNDWATER LABORATORY ANALYTICAL RESULTS
Dublin Toyota UST Site

Sample ID	*Sample Date*	*GW Depth*	*GW Elevation*	*Concentrations, in micrograms per liter (ug/l)*									
				TPH-G	*B*	*T*	*E*	*X*	*TAME*	*TBA*	*DIPE*	*ETBE*	*MTBE*
	12/03/09	4.45	321.43	**540**	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**770**
	06/11/10	3.74	322.14	**220**	<0.50	<0.50	<0.50	<1.0	<2.0	**130**	<2.0	<2.0	**1,100**
MW-9	04/27/06	2.45	322.84	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**2,200**
"B" Zone	06/01/06	3.52	321.77	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**1,000**
<325.29>	09/12/06	4.01	321.28	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**130**	<2.0	<2.0	**2,100**
	11/21/06	4.08	321.21	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**180**	<2.0	<2.0	**1,200**
	02/27/07	2.69	322.60	NA	<0.50	<0.50	<0.50	<1.0	<2.0	**270**	<2.0	<2.0	**930**
	06/07/07	3.73	321.56	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**1,400**
	09/14/07	4.02	321.27	NA	<0.50	<0.50	<0.50	<1.0	<2.0	**35**	<2.0	<2.0	**460**
	11/17/07	--	--	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**910**
	02/28/08	2.13	323.16	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**1,200**
	06/04/08	3.41	321.88	<50	<0.50	<0.50	<0.50	<1.0	**2.4**	**1,400**	<2.0	<2.0	**5,500**
	09/11/08	3.70	321.59	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**810**	<2.0	<2.0	**2,700**
	12/23/08	3.29	322.00	**62**	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**260**
	03/17/09	2.59	322.70	**1,800**	<0.50	<0.50	<0.50	<1.0	**3.0**	<10	<2.0	<2.0	**3,800**
	06/26/09	3.73	321.56	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**41**
	12/03/09	--	--	**2,200**	<0.50	<0.50	<0.50	<1.0	<2.0	**12**	<2.0	<2.0	**2,800**
	06/09/10	3.20	322.09	**850**	<0.50	<0.50	<0.50	<1.0	<2.0	**660**	<2.0	<2.0	**3,800**
MW-10	04/27/06	2.65	322.89	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**15**
"B" Zone	06/01/06	3.72	321.82	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
<325.54>	09/12/06	4.27	321.27	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**12**

Table 3
CUMULATIVE MONITORING WELL GROUNDWATER LABORATORY ANALYTICAL RESULTS
Dublin Toyota UST Site

Sample ID	*Sample Date*	*GW Depth*	*GW Elevation*	*Concentrations, in micrograms per liter (ug/l)*									
				TPH-G	*B*	*T*	*E*	*X*	*TAME*	*TBA*	*DIPE*	*ETBE*	*MTBE*
	11/21/06	4.35	321.19	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**15**
	02/27/07	3.78	321.76	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**11**
	06/07/07	3.91	321.63	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**12**
	09/14/07	4.22	321.32	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
	11/17/07	4.06	321.48	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**6.1**
	02/28/08	2.83	322.71	NA	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
	06/04/08	--	--	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**9.5**
	09/11/08	4.33	321.21	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**7.8**
	12/23/08	3.44	322.10	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
	03/17/09	3.50	322.04	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
	06/26/09	4.63	320.91	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
	12/03/09	4.11	321.43	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**7.4**
	06/09/10	3.42	322.12	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**6.4**
MW-11	06/11/10	6.68	322.36	<50	<0.50	<0.50	<0.50	<1.0	<2.0	**550**	<2.0	<2.0	**160**
"A" Zone													
<329.04>													
MW-12	06/11/10	6.83	322.29	**190**	<0.50	<0.50	<0.50	<1.0	<2.0	**2,400**	<2.0	<2.0	**870**
"A" Zone													
<329.12>													

Table 3
CUMULATIVE MONITORING WELL GROUNDWATER LABORATORY ANALYTICAL RESULTS
Dublin Toyota UST Site

Sample ID	*Sample Date*	*GW Depth*	*GW Elevation*	*Concentrations, in micrograms per liter (ug/l)*									
				TPH-G	*B*	*T*	*E*	*X*	*TAME*	*TBA*	*DIPE*	*ETBE*	*MTBE*
MW-13	06/11/10	6.64	322.29	**150**	<0.50	<0.50	<0.50	<1.0	<2.0	**780**	<2.0	<2.0	**800**
"A" Zone													
<328.93>													
MW-14	06/10/10	2.48	321.90	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**150**
"B" Zone													
<324.38>													
MW-15	06/10/10	4.24	321.52	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
"B" Zone													
<325.76>													
MW-16	06/10/10	4.65	321.64	**230**	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	**1,200**
"B" Zone													
<326.29>													
MW-17	06/10/10	3.50	322.96	<50	<0.50	<0.50	<0.50	<1.0	<2.0	<10	<2.0	<2.0	<1.0
"B" Zone													
<326.46>													
EW-1	06/10/10	6.47	322.47	**170**	**15**	<0.50	**4.4**	**1.2**	<2.0	<10	<2.0	<2.0	**76**
"A" Zone													
<328.94>													
EW-2	06/10/10	6.62	322.37	**99**	**11**	**1.0**	**3.0**	**3.3**	<2.0	<10	<2.0	<2.0	**110**
"A" Zone													
<328.99>													

Table Notes:

GW Depth = Groundwater depth below top of casing.
GW Elevation = Groundwater mean sea level elevation.
TPH-D = Total Petroleum Hydrocarbons as Diesel
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil
TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
TAME = Tert-amyl Methyl Ether
TBA = tert-Butanol
DIPE = Diisopropyle ether ETBE = Ethyl-tert-butyl ether
MTBE = Methyl-t-Butyl Ether
NA = Not analyzed for particular parameter
<0.050 = Not detected above the expressed value.
<328.88> = Surveyed top of casing mean sea level elevation.
“A” Zone = Discontinuous sand and gravel layers shallower than 25 feet in depth.
“B” Zone = Semi-continuos sand and gravel layer between about 30 and 35 feet in depth.
1 = MTBE result was confirmed using USEPA Method 8260B.

Table 4
SUMMARY OF AFVR RESULTS
Dublin Toyota UST Site

AFVR Well	Time	Activity	AFVR Flow Rate (scfm, est.)	AFVR Vacuum (psi)	Observation Well								Concentration, *water = ug/l*, vapor =ug/l					
					EW-1		EW-2		MW-1		MW-2							
					DTW	VAC	DTW	VAC	DTW	VAC	DTW	VAC	TPH-G	B	T	E	X	MTBE
AFVR Event No. 1: February 23 and 24, 2006																		
EW-1	1935	Collect water sample	--–	--	7.16	--	7.15	--	7.03	--	5.72	--	*5700*	*180*	*<0.5*	*220*	*53.6*	*9000*
	1955	Start AFVR	200	18	--	--	--	--	--	--	--	--						
	2000	Collect vapor sample	200	18	--	--	7.81	32.2	7.46	0.00	6.21	0.7	130	0.36	0.94	0.65	0.84	<7.0
	2354	Collect vapor sample	200	20	--	--	8.12	31.6	7.46	0.00	6.21	0.3	<25	<0.25	0.34	0.25	0.52	<2.5
	23:55	Stop AFVR	--	--	--	--	--	--	--	--	--	--						
EW-2	1940	Collect water sample	--–	--	7.16	--	7.15	--	7.03	--	5.72	--	*500*	*32*	*<0.5*	*<0.5*	*<1.0*	*18,000*
	2410	Start AFVR	200	22	--	--	--	--	--	--	--	--						
	2415	Collect vapor sample	200	22	8.43	12.2	--	--	7.35	0.00	6.11	0.2	180	2.7	0.32	0.54	<0.25	86
	0415	Collect vapor sample	200	22	--	--	--	--	--	--	--	--	130	1.5	0.49	0.75	0.54	22
	0420	Stop AFVR	--	--	--	--	--	--	--	--	--	--						
AFVR Event No. 1: Total Water Extracted: 377 gallons																		
AFVR Event No. 2: March 2 and 3, 2006																		
EW-1	1920	Collect water depths[A]	--–	--	6.71	--	6.75	--	6.65	--	5.25	--	--	--	--	--	--	--
	1935	Start AFVR	200	22	--	--	--	--	--	--	--	--						
	1940	Collect vapor sample	200	22	--	--	8.00	32.4	7.05	0.01	5.64	1.7	110	0.96	8.4	1.3	7.5	<2.5
	2355	Collect vapor sample	200	20	--	--	--	--	--	--	--	--	71	0.36	3.7	0.80	5.3	<2.5
	23:55	Stop AFVR	--	--	--	--	--	--	--	--	--	--						
EW-2	1920	Collect water sample[A]	--–	--	6.71	--	6.75	--	6.65	--	5.25	--	--[A]	--	--	--	--	--
	2400	Start AFVR	200	20	--	--	--	--	--	--	--	--						
	2405	Collect vapor sample	200	20	8.90	19.1	--	--	7.01	0.00	5.63	0.2	92	2.0	2.3	0.72	2.6	61
	0400	Collect vapor sample	200	20	--	--	--	--	6.96	0.00	5.61	0.2	97	1.2	2.0	0.45	1.9	<35
	0400	Stop AFVR	--	--	--	--	--	--	--	--	--	--						
AFVR Event No. 2: Total Water Extracted: 399 gallons																		

Table 4
SUMMARY OF AFVR RESULTS
Dublin Toyota UST Site

AFVR Well	Time	Activity	AFVR Flow Rate (scfm, est.)	AFVR Vacuum (psi)	Observation Well								Concentration, *water = ug/l*, vapor =ug/l					
					EW-1		EW-2		MW-1		MW-2							
					DTW	VAC	DTW	VAC	DTW	VAC	DTW	VAC	TPH-G	B	T	E	X	MTBE
AFVR Event No. 3: March 9 and 10, 2006																		
EW-1	1935	Collect water sample	--–	--	6.35	--	6.43	--	6.24	--	4.91	--	*10,000*	*500*	*14*	*1,200*	*813*	*13,000*
	1955	Start AFVR	200	21	--	--	--	--	--	--	--	--						
	2000	Collect vapor sample	200	22	--	--	8.05	34.5	6.51	0.00	4.95	0.00	380	0.94	16	6.1	32	<2.5
	2354	Collect vapor sample	200	22	--	--	–	--	–	--	–	--	44	<0.25	2.0	0.75	4.3	<2.5
	23:55	Stop AFVR	--	--	--	--	--	--	--	--	--	--						
EW-2	1940	Collect water sample	--–	--	6.35	--	6.43	--	6.24	--	4.91	--	*1,200*	*40*	*<0.5*	*84*	*18*	*16,000*
	2405	Start AFVR	200	22	--	--	--	--	--	--	--	--						
	2410	Collect vapor sample	200	22	8.51	14.7	--	--	6.34	0.00	4.89	0.00	340	12	0.87	4.6	1.2	120
	0355	Collect vapor sample	200	22	--	--	--	--	7.01	0.00	4.97	0.00	78	0.37	4.3	1.7	9.7	8.8
	0355	Stop AFVR	--	--	--	--	--	--	--	--	--	--						
AFVR Event No. 3: Total Water Extracted: 480 gallons																		
AFVR Event No. 4: March 16 and 17, 2006																		
EW-1	1930	Collect water sample	--–	--	6.25	--	6.05	--	6.15	--	4.78	--	*8,500*	*360*	*14*	*760*	*409*	*12,000*
	1945	Start AFVR	200	21	--	--	--	--	--	--	--	--						
	1950	Attempt to collect vapor sample[B]	200	22	--	--	8.23	33.4	6.55	0.00	7.82	0.10	–[B]	--	--	--	--	--
	2355	Collect vapor sample	200	22	--	--	–	--	–	--	–	--	25	<0.25	0.80	0.37	2.1	<2.5
	2355	Stop AFVR	--	--	--	--	--	--	--	--	--	--						
EW-2	1940	Collect water sample	--–	--	6.25	--	6.05	--	6.15	--	4.78	--	*440*	*19*	*<0.5*	*35*	*14.3*	*990*
	2400	Start AFVR	200	22	--	--	--	--	--	--	--	--						
	2410	Collect vapor sample	200	22	8.15	14.7	--	--	6.55	0.00	5.26	0.10	100	4.5	0.76	1.9	1.8	70
	0355	Collect vapor sample	200	22	--	--	--	--	--	--	--	--	<25	<0.25	0.91	0.38	2.1	<2.5
	0355	Stop AFVR	--	--	--	--	--	--	--	--	--	--						
AFVR Event No. 4: Total Water Extracted: 434 gallons																		

Table 4
SUMMARY OF AFVR RESULTS
Dublin Toyota UST Site

AFVR Well	Time	Activity	AFVR Flow Rate (scfm, est.)	AFVR Vacuum (psi)	Observation Well								Concentration, *water = ug/l*, vapor =ug/l					
					EW-1		EW-2		MW-1		MW-2							
					DTW	VAC	DTW	VAC	DTW	VAC	DTW	VAC	TPH-G	B	T	E	X	MTBE
AFVR Event No. 5: March 23 and 24, 2006																		
EW-1	1930	Collect water sample	-––	--	6.15	--	6.21	--	6.08	--	4.76	--	*770*	*48*	*2.1*	*75*	*119*	*4,000*
	1950	Start AFVR	200	18	--	--	--	--	--	--	--	--						
	1955	Collect vapor sample	200	18	--	--	7.45	32.4	6.48	0.01	5.17	0.00	170	0.72	9.6	3.2	15	4.4
	2358	Collect vapor sample	200	18	--	--	–	--	–	--	–	--	77	0.36	3.4	1.2	6.4	<2.5
	2358	Stop AFVR	--	--	--	--	--	--	--	--	--	--						
EW-2	1930	Collect water sample	-––	--	6.15	--	6.21	--	6.08	--	4.76	--	*620*	*8.6*	*4.1*	*22*	*15.1*	*4,000*
	2400	Start AFVR	200	22	--	--	--	--	--	--	--	--						
	2410	Collect vapor sample	200	22	8.31	20.1	--	--	6.55	0.01	5.21	0.00	42	0.60	0.51	0.41	1.2	48
	0355	Collect vapor sample	200	22	--	--	--	--	--	--	--	--	57	0.84	1.4	0.71	2.5	22
	0400	Stop AFVR	--	--	--	--	--	--	--	--	--	--						
AFVR Event No. 5: Total Water Extracted: 480 gallons																		
AFVR Event No. 6: March 30 and 31, 2006																		
EW-1	1905	Collect water sample	-––	--	6.50	--	6.11	--	5.81	--	4.55	--	*1,500*	*34*	*2.4*	*68*	*158*	*3,200*
	1925	Start AFVR	200	20	--	--	--	--	--	--	--	--						
	1930	Collect vapor sample	200	20	--	--	--	--	--	--	--	--	230	0.83	11	2.6	14	<2.5
	2350	Collect vapor sample	200	20	--	--	7.20	32.3	6.27	0.4	4.98	0.2	48	<0.25	1.0	0.47	2.7	<2.5
	2355	Stop AFVR	--	--	--	--	--	--	--	--	--	--						
EW-2	1910	Collect water sample	-––	--	6.50	--	6.11	--	5.81	--	4.55	--	*550*	*45*	*1.3*	*78*	*18.1*	*11,000*
	2400	Start AFVR	200	22	--	--	--	--	--	--	--	--						
	2410	Attempt to collect vapor sample[B]	200	24	--	--	--	--	--	--	--	--	--[B]	--	--	--	--	--
	0355	Collect vapor sample	200	22	7.04	19.1	--	--	6.33	0.4	4.95	0.1	51	0.68	1.1	0.74	2.6	21
	0400	Stop AFVR	--	--	--	--	--	--	--	--	--	--						
AFVR Event No. 6: Total Water Extracted: 497 gallons																		

Table 4
SUMMARY OF AFVR RESULTS
Dublin Toyota UST Site

AFVR Well	Time	Activity	AFVR Flow Rate (scfm, est.)	AFVR Vacuum (psi)	Observation Well								Concentration, *water = ug/l*, vapor =ug/l					
					EW-1		EW-2		MW-1		MW-2							
					DTW	VAC	DTW	VAC	DTW	VAC	DTW	VAC	TPH-G	B	T	E	X	MTBE
AFVR Event No. 7: April 6 and 7, 2006																		
EW-1	1935	Collect water sample	--–	--	5.42	--	5.48	–	5.35	--	4.01	--	*4,700*	*250*	*3.4*	*470*	*189.9*	*16,000*
	1950	Start AFVR	200	18	--	--	--	--	--	--	--	--						
	1955	Collect vapor sample	200	18	--	--	--	--	--	--	--	--	110	0.64	9.1	3.1	18	7.0
	2355	Collect vapor sample	200	20	--	--	6.51	32.2	5.81	0.02	4.45	0.04	30	<0.25	0.65	0.34	2.0	<2.5
	2400	Stop AFVR	--	--	--	--	--	--	--	--	--	--						
EW-2	1945	Collect water sample	--–	--	5.42	--	5.48	–	5.35	--	4.01	--	*510*	*6.0*	*<0.50*	*6.1*	*<1.0*	*16,000*
	2405	Start AFVR	200	22	--	--	--	--	--	--	--	--						
	2410	Collect vapor sample	200	22	--	--	--	--	--	--	--	--	<25	0.56	<0.25	0.48	0.35	56
	0355	Collect vapor sample	200	22	8.17	15.1	--	--	5.89	0.01	4.65	0.03	46	0.58	0.65	0.66	2.0	32
	0400	Stop AFVR	--	--	--	--	--	--	--	--	--	--						
AFVR Event No. 7: Total Water Extracted: 549 gallons																		

DTW = Depth to water, in feet below top of casing.
VAC = Vacuum pressure, in inches of water
AFVR Flow Rate = Approximate AFVR soil vapor extraction flow rate, in standard cubic feet per minute (scfm). Estimate only
AFVR Vacuum = Applied vacuum pressure during soil vapor extraction, in pounds per square inch.
TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl-t-Butyl Ether
-- = Not applicable.
A = Sampling pump malfunction
B = Tedlar bag failed.

Table 5
AFVR GROUNDWATER EXTRACTION EFFECTIVENESS
Former Dublin Toyota UST Site

Extraction Well	Volume Extracted (gal)	Concentration (ug/L)			Mass Removed (pounds)		
		TPH-G	B	MTBE	TPH-G	B	MTBE
AFVR Event No. 1: February 23 and 24, 2006							
EW-1	190	5,700	180	9,000	0.009	0.000	0.014
EW-2	190	500	32	18,000	0.001	0.000	0.028
AFVR Event No. 2: March 2 and 3, 2006							
EW-1	200	7,850[A]	340	11,000	0.013	0.001	0.018
EW-2	200	850[A]	36	17,000	0.001	0.000	0.028
AFVR Event No. 3: March 9 and 10, 2006							
EW-1	240	10,000	500	13,000	0.020	0.001	0.026
EW-2	240	1,200	40	16,000	0.002	0.000	0.032
AFVR Event No. 4: March 16 and 17, 2006							
EW-1	217	8,500	360	12,000	0.015	0.001	0.022
EW-2	217	400	19	990	0.001	0.000	0.002
AFVR Event No. 5: March 23 and 24, 2006							
EW-1	240	770	48	4,000	0.002	0.000	0.008
EW-2	240	170	8.6	4,000	0.000	0.000	0.008
AFVR Event No. 6: March 30 and 31, 2006							
EW-1	250	1,500	34	3,200	0.003	0.000	0.007
EW-2	250	550	45	11,000	0.001	0.000	0.023
AFVR Event No. 7: April 6 and 7, 2006							
EW-1	275	4,700	250	16,000	0.011	0.001	0.037
EW-2	275	510	6.0	16,000	0.001	0.000	0.037
TOTAL	**3,224**	--	--	--	**0.081**	**0.004**	**0.289**

Volume Extracted = Approximate volume of water extracted for specified time interval, in gallons.
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
B = Benzene
MTBE = Methyl-t-butyl Ether
Mass Removed = Calculated mass of specified constituent removed, in pounds.
A = No water samples collected; used concentration averages from 2/23/06 and 3/9/06 sampling events.

Table 6
AFVR SOIL VAPOR EXTRACTION EFFECTIVENESS
Former Dublin Toyota UST Site

Extr. Well	Hours of Operation	Flow Rate (scfm)	Volume Extracted (gal)	Ave Concentration (ug/L)			Mass Removed (pounds)		
				TPH-G	B	MTBE	TPH-G	B	MTBE
AFVR Event No. 1: February 23 and 24, 2006									
EW-1	4	200.0	359,040	77.5	0.31	4.8	0.23	0.00	0.01
EW-2	4	200.0	359,040	155.0	2.1	54.0	0.46	0.01	0.16
AFVR Event No. 2: March 2 and 3, 2006									
EW-1	4	200.0	359,040	90.5	0.66	2.5	0.27	0.00	0.01
EW-2	4	200.0	359,040	94.5	1.6	48.0	0.28	0.00	0.14

Table 6
AFVR SOIL VAPOR EXTRACTION EFFECTIVENESS
Former Dublin Toyota UST Site

Extr. Well	Hours of Operation	Flow Rate (scfm)	Volume Extracted (gal)	Ave Concentration (ug/L)			Mass Removed (pounds)		
				TPH-G	B	MTBE	TPH-G	B	MTBE
AFVR Event No. 3: March 9 and 10, 2006									
EW-1	4	200.0	359,040	212.0	0.60	2.5	0.63	0.00	0.01
EW-2	4	200.0	359,040	209.0	6.19	64.4	0.62	0.02	0.19
AFVR Event No. 4: March 16 and 17, 2006									
EW-1	4	200.0	359,040	25.0	0.25	2.5	0.07	0.00	0.01
EW-2	4	200.0	359,040	62.5	2.4	36.3	0.19	0.01	0.11
AFVR Event No. 5: March 23 and 24, 2006									
EW-1	4	200.0	359,040	123.5	0.54	3.5	0.37	0.00	0.01
EW-2	4	200.0	359,040	49.5	0.72	35.0	0.15	0.00	0.10
AFVR Event No. 6: March 30 and 31, 2006									
EW-1	4	200.0	359,040	139.0	0.54	2.5	0.41	0.00	0.01
EW-2	4	200.0	359,040	51.0	0.68	21.0	0.15	0.00	0.06
AFVR Event No. 7: April 6 and 7, 2006									
EW-1	4	200.0	359,040	70.0	0.45	4.8	0.21	0.00	0.01
EW-2	4	200.0	359,040	28.5	0.57	44.0	0.08	0.00	0.13
TOTAL	**56**		**5,026,560**	--	--	--	**4.13**	**0.05**	**0.97**

Flow Rate = Approximate vapor extraction flow rate for specific time interval, in standard cubic feet per minute.
Volume Extracted = Approximate total volume of soil vapors extracted for specified time interval, in gallons
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
B = Benzene
MTBE = Methyl-t-butyl Ether
Mass Removed = Calculated mass of specified constituent removed, in pounds.

Table 7
SUMMARY OF SHALLOW SOIL GAS ANALYTICAL RESULTS, JULY 2010
Dublin Toyota UST Site

Sample ID	Sample Matrix	Sample Depth	Soil Gas Concentration: milligrams per cubic meter (µg/m^3),						
			TPH-G	Benzene	Toluene	Ethyl-benzene	Xylenes	TBA	MTBE
SG-1	Soil	4.0 feet	**1,400,000**	**810**	<200	<100	<290	<100	**4,100**
SG-2 [1]	Soil	4.0 feet	**370,000**	**85**	**420**	<100	**530**	<100	**1,600**
SG-3	Soil	4.0 feet	**27,000**	**120**	**420**	<100	**470**	<100	**3,900**
SG-4	Soil	4.0 feet	**16,000**	**180**	**290**	<100	**320**	<100	**960**
Shallow Soil Gas ESL, Residential Land Use			**10,000**	**84**	**63,000**	**980**	**21,000**	**—**	**9,400**
Shallow Soil Gas ESL, Commercial Land Use			**29,000**	**280**	**180,000**	**3,300**	**58,000**	**—**	**31,000**

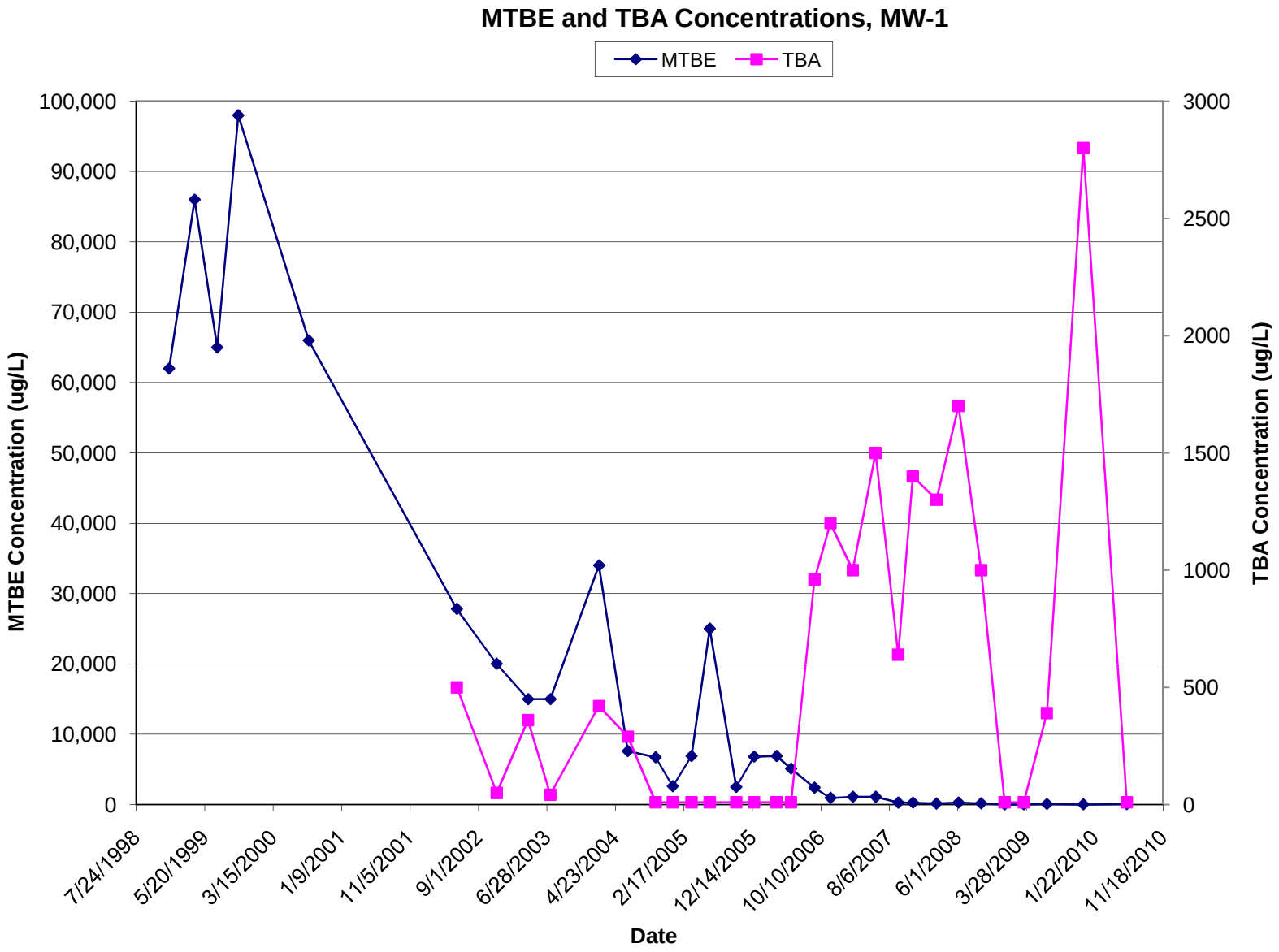
Table Notes:

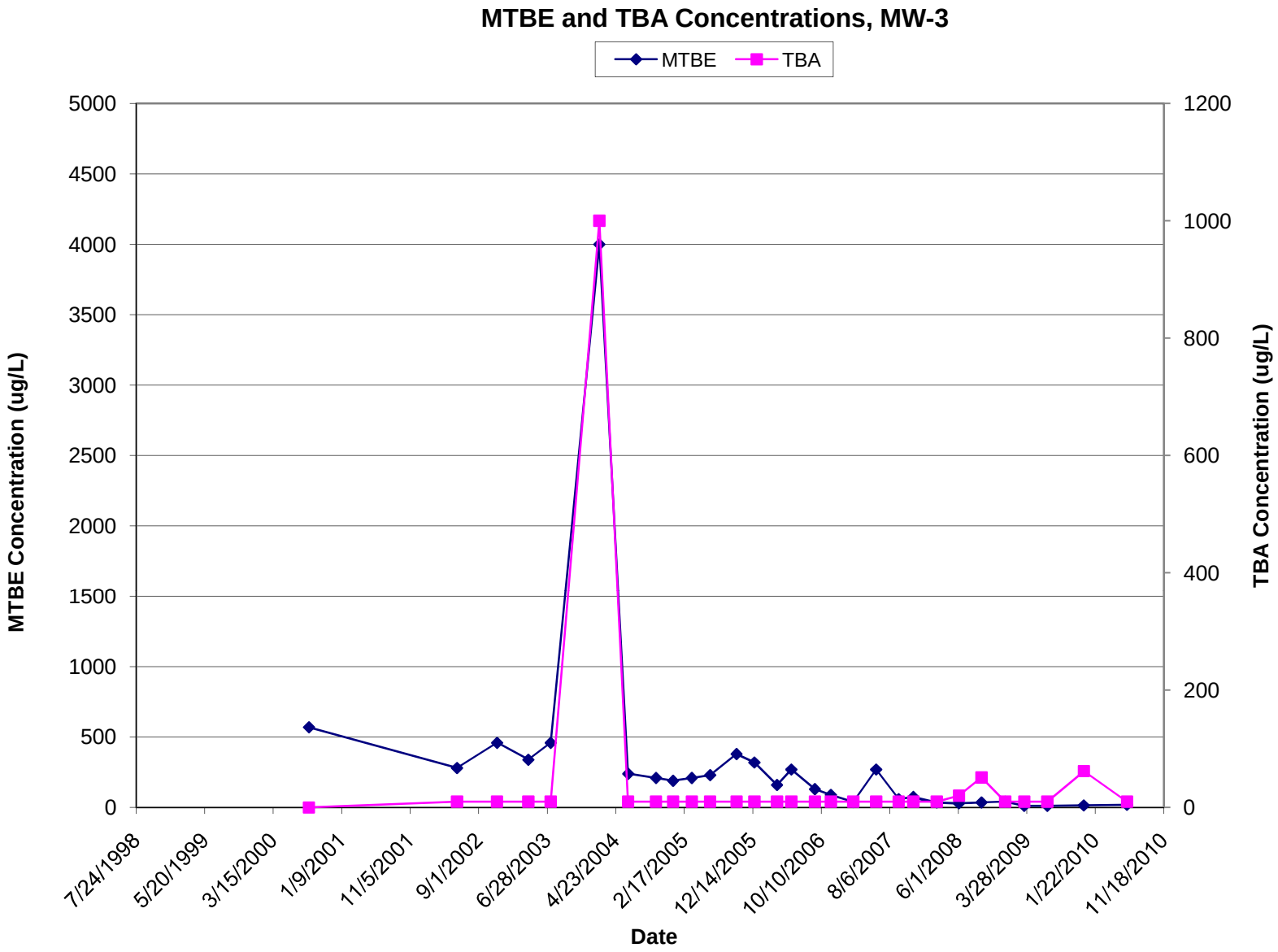
TPH-D = total petroleum hydrocarbons as diesel
TPH-G = total petroleum hydrocarbons as gasoline
MTBE = Methyl tert-butyl ether
<1.0 = Not detected above the expressed detection level.
All ND = No detectable concentrations of full list of constituents

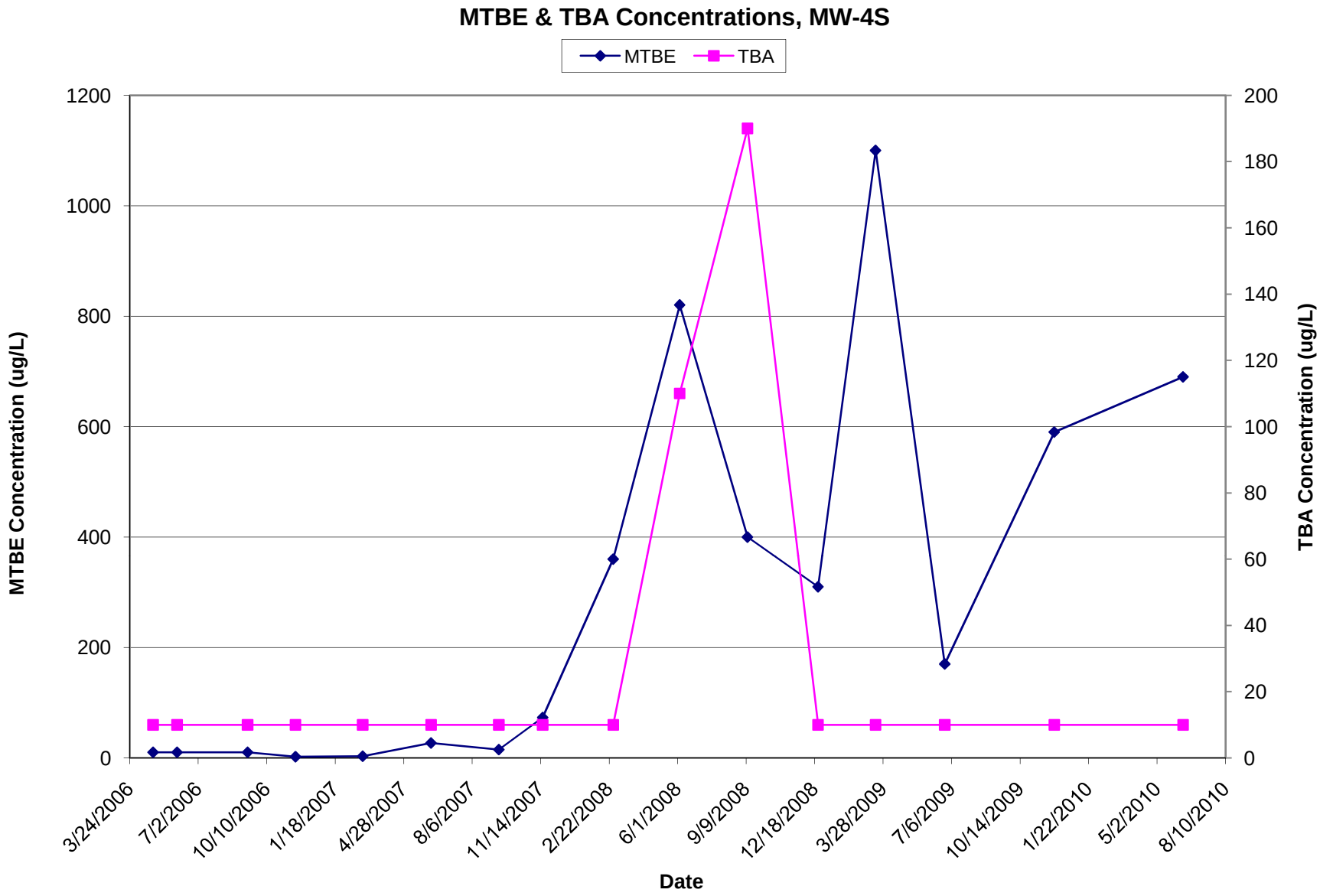
[1] = Leak check compound was reported in sample results but affected soil gas concentrations by less than 0.5%.
ESL = Environmental Screening Levels, as contained in *Table E, Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, San Francisco Bay Regional Water Quality Control Board, Interim Final, May 2008.

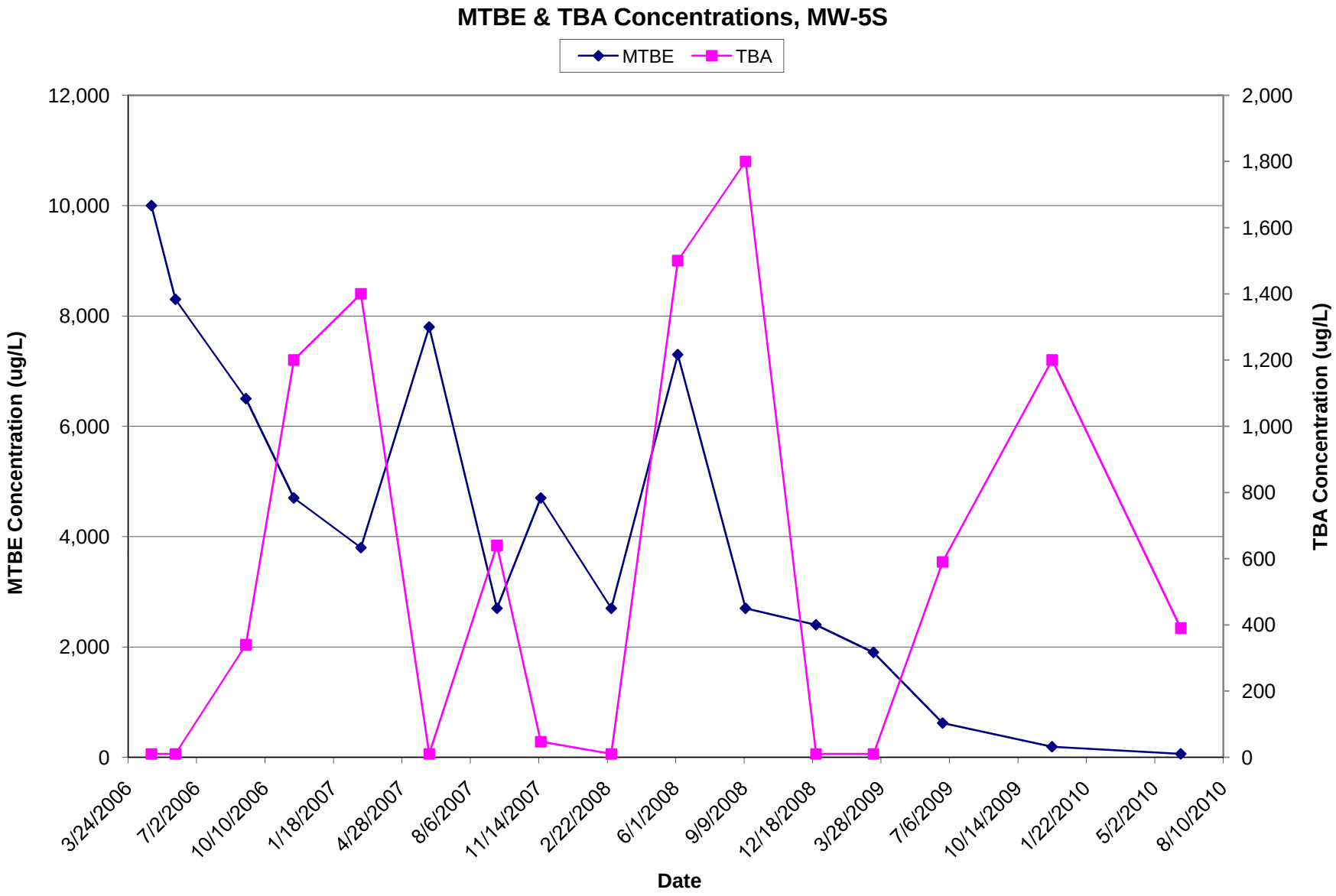
APPENDIX A

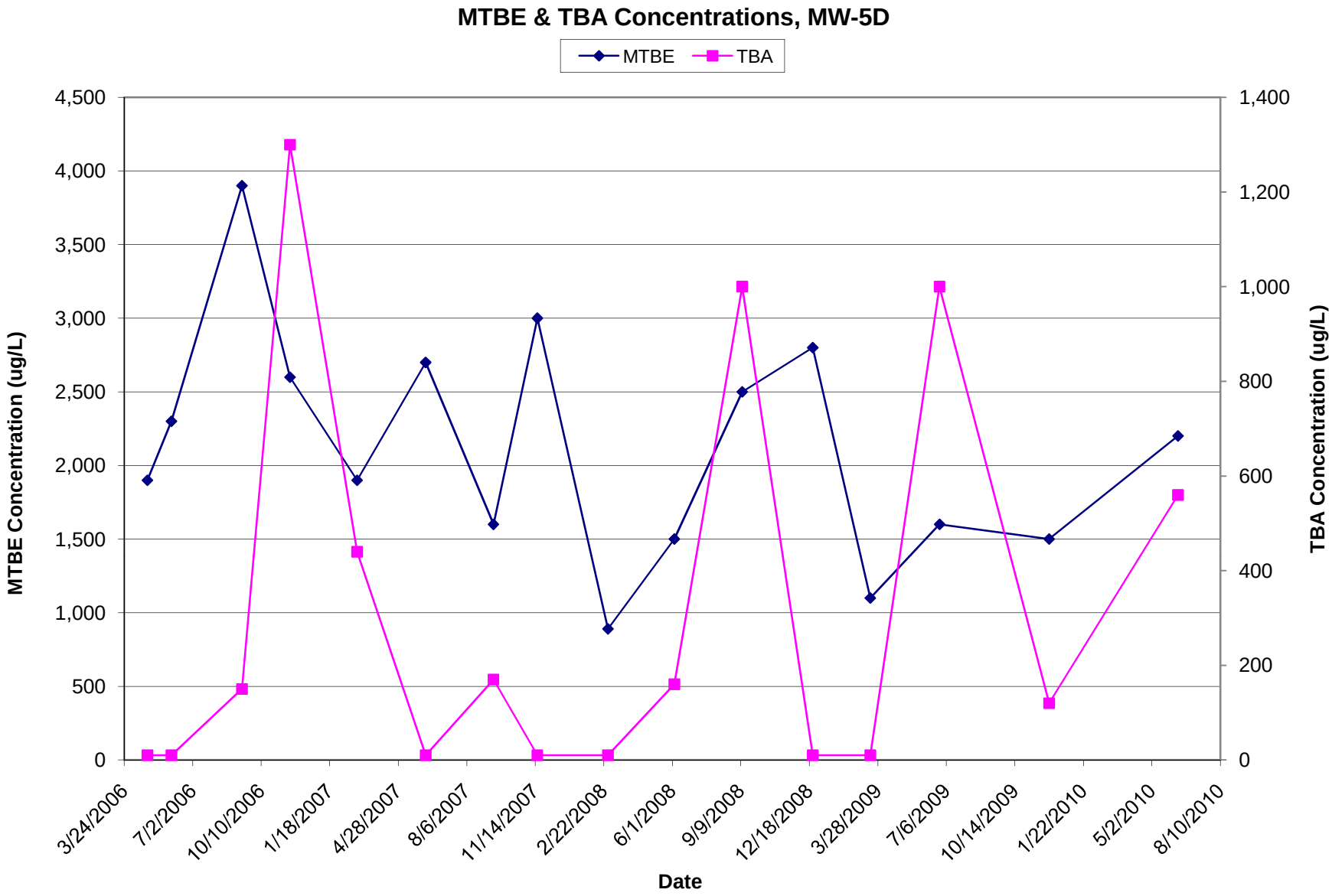
MTBE/TBA TREND GRAPHS
FOR SELECTED WELLS

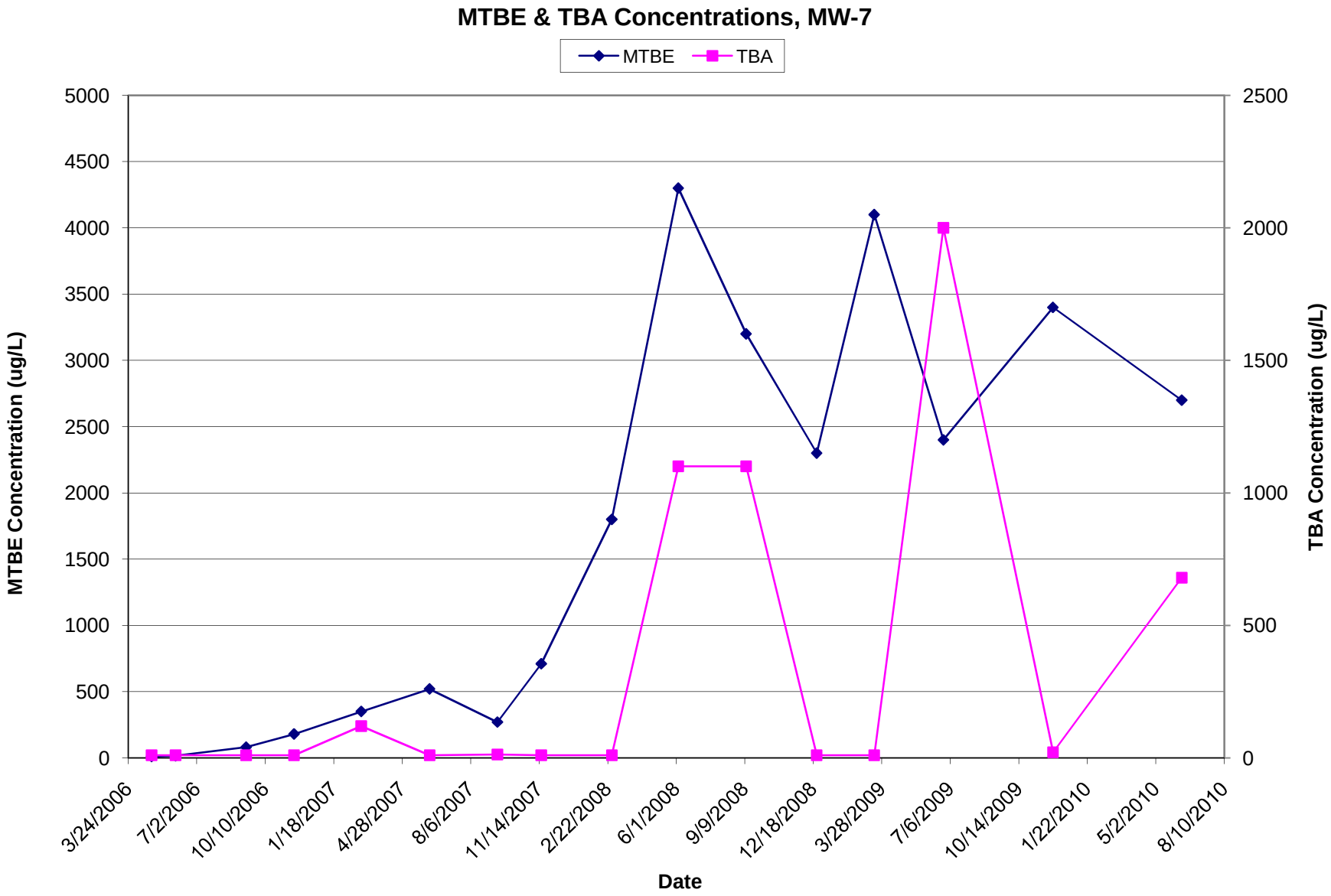

MTBE and TBA Concentrations, MW-1
MTBE
TBA
MTBE Concentration (ug/L)
TBA Concentration (ug/L)
100,000
90,000
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
3000
2500
2000
1500
1000
500
0
7/24/1998
5/20/1999
3/15/2000
1/9/2001
11/5/2001
9/1/2002
6/28/2003
4/23/2004
2/17/2005
12/14/2005
10/10/2006
8/6/2007
6/1/2008
3/28/2009
1/22/2010
11/18/2010
Date

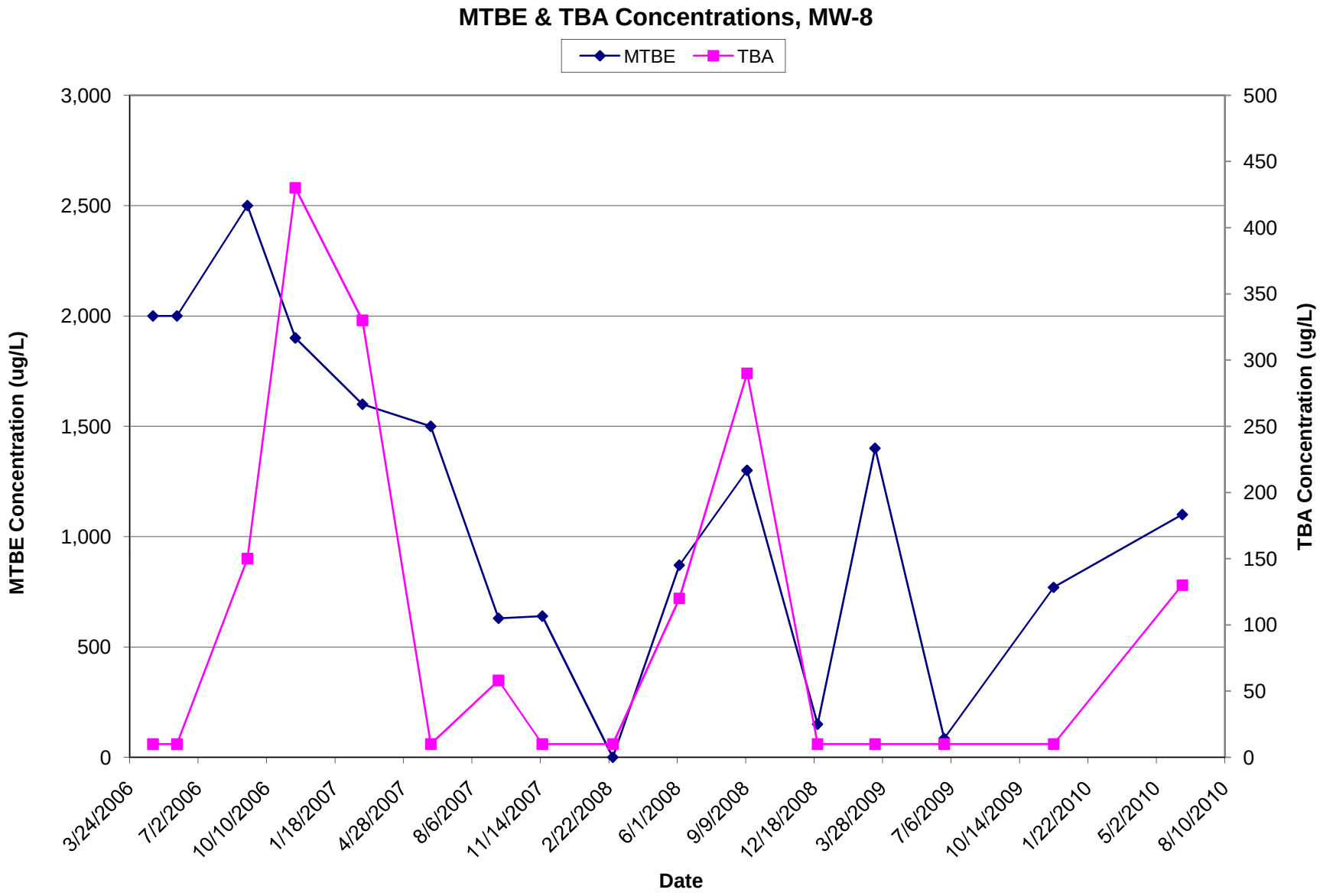

MTBE and TBA Concentrations, MW-3
MTBE
TBA
MTBE Concentration (ug/L)
TBA Concentration (ug/L)
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
1200
1000
800
600
400
200
0
7/24/1998
5/20/1999
3/15/2000
1/9/2001
11/5/2001
9/1/2002
6/28/2003
4/23/2004
2/17/2005
12/14/2005
10/10/2006
8/6/2007
6/1/2008
3/28/2009
1/22/2010
11/18/2010
Date

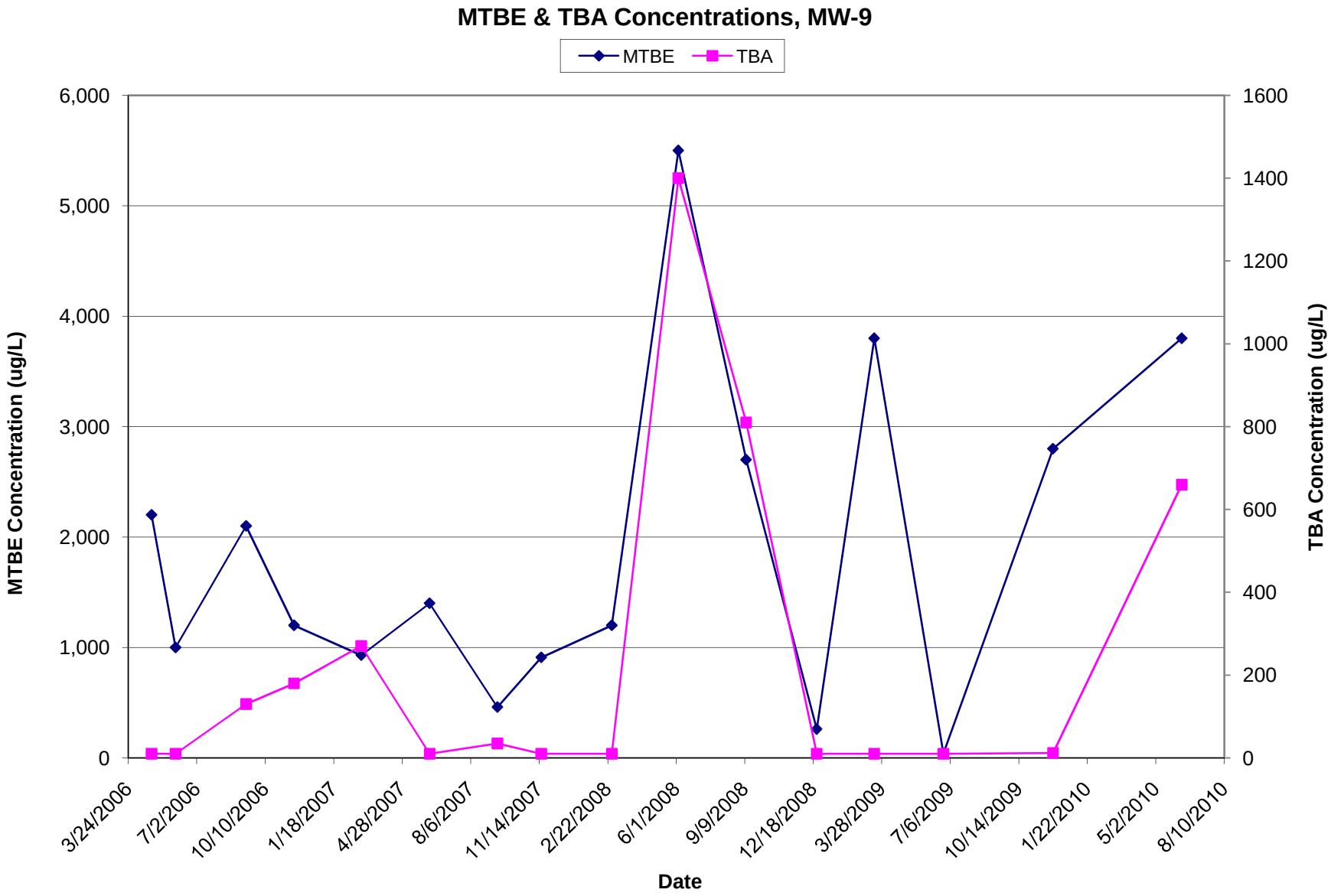

MTBE & TBA Concentrations, MW-4S
MTBE
TBA
MTBE Concentration (ug/L)
TBA Concentration (ug/L)
Date
0
200
400
600
800
1000
1200
0
20
40
60
80
100
120
140
160
180
200
3/24/2006
7/2/2006
10/10/2006
1/18/2007
4/28/2007
8/6/2007
11/14/2007
2/22/2008
6/1/2008
9/9/2008
12/18/2008
3/28/2009
7/6/2009
10/14/2009
1/22/2010
5/2/2010
8/10/2010


MTBE & TBA Concentrations, MW-5S
MTBE
TBA
MTBE Concentration (ug/L)
TBA Concentration (ug/L)
12,000
10,000
8,000
6,000
4,000
2,000
0
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
3/24/2006
7/2/2006
10/10/2006
1/18/2007
4/28/2007
8/6/2007
11/14/2007
2/22/2008
6/1/2008
9/9/2008
12/18/2008
3/28/2009
7/6/2009
10/14/2009
1/22/2010
5/2/2010
8/10/2010
Date


MTBE & TBA Concentrations, MW-5D
MTBE
TBA
MTBE Concentration (ug/L)
TBA Concentration (ug/L)
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1,400
1,200
1,000
800
600
400
200
0
3/24/2006
7/2/2006
10/10/2006
1/18/2007
4/28/2007
8/6/2007
11/14/2007
2/22/2008
6/1/2008
9/9/2008
12/18/2008
3/28/2009
7/6/2009
10/14/2009
1/22/2010
5/2/2010
8/10/2010
Date


MTBE & TBA Concentrations, MW-7
MTBE
TBA
MTBE Concentration (ug/L)
TBA Concentration (ug/L)
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
2500
2000
1500
1000
500
0
3/24/2006
7/2/2006
10/10/2006
1/18/2007
4/28/2007
8/6/2007
11/14/2007
2/22/2008
6/1/2008
9/9/2008
12/18/2008
3/28/2009
7/6/2009
10/14/2009
1/22/2010
5/2/2010
8/10/2010
Date


MTBE & TBA Concentrations, MW-8
MTBE
TBA
MTBE Concentration (ug/L)
TBA Concentration (ug/L)
3,000
2,500
2,000
1,500
1,000
500
0
500
450
400
350
300
250
200
150
100
50
0
3/24/2006
7/2/2006
10/10/2006
1/18/2007
4/28/2007
8/6/2007
11/14/2007
2/22/2008
6/1/2008
9/9/2008
12/18/2008
3/28/2009
7/6/2009
10/14/2009
1/22/2010
5/2/2010
8/10/2010
Date


MTBE & TBA Concentrations, MW-9
MTBE
TBA
MTBE Concentration (ug/L)
TBA Concentration (ug/L)
6,000
5,000
4,000
3,000
2,000
1,000
0
1600
1400
1200
1000
800
600
400
200
0
3/24/2006
7/2/2006
10/10/2006
1/18/2007
4/28/2007
8/6/2007
11/14/2007
2/22/2008
6/1/2008
9/9/2008
12/18/2008
3/28/2009
7/6/2009
10/14/2009
1/22/2010
5/2/2010
8/10/2010
Date