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July 10, 2006

Mr. Jerry Wickham, P.G., C.E.G.
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

RE: Former Exxon RAS #7-3567/3192 Santa Rita Road, Pleasanton, California.

Dear Mr. Wickham:

Attached for your review and comment is a letter report entitled ***Site Conceptual Model and Recommendation for Case Closure***, dated July 10, 2006, for the above-referenced site. The report was prepared by Environmental Resolutions, Inc. (ERI) of Novato, California, and details groundwater monitoring and sampling activities at the subject site.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document is true and correct to the best of my knowledge.

If you have any questions or comments, please contact me at (510)547-8196.

Sincerely,

Jennifer C. Sedlachek
Project Manager

Attachment: ERI's Site Conceptual Model and Recommendation for Case Closure, dated July 10, 2006.

cc: w/ attachment
Mr. Eddy So, California Regional Water Quality Control Board, San Francisco Bay Region
Ms. Colleen Morf, Zone 7 Water Agency
Mr. Robert C. Ehlers, M.S., P.E., The Valero Companies, Environmental Liability Management

w/o attachment
Ms. Paula Sime, Environmental Resolutions, Inc.

ENVIRONMENTAL RESOLUTIONS, INC.

July 10, 2006
ERI 243114.R02

Ms. Jennifer C. Sedlachek
ExxonMobil Refining & Supply – Global Remediation
4096 Piedmont Avenue #194
Oakland, California 94611

SUBJECT Site Conceptual Model and Recommendation for Case Closure
Former Exxon Service Station 7-3567
3192 Santa Rita Road, Pleasanton, California

Ms. Sedlachek:

At the request of Exxon Mobil Corporation (Exxon Mobil), Environmental Resolutions, Inc. (ERI) has compiled geological, hydrogeological, and analytical data for the subject site and has prepared this Site Conceptual Model (SCM) and Recommendation for Case Closure. This SCM summarizes previous environmental work, site conditions, and the risk to human health and the environment posed by the occurrence of petroleum fuel hydrocarbons and related constituents in soil and groundwater underlying the site and vicinity.

The purpose of this SCM is to document the extent and stability of petroleum hydrocarbons and related constituents in soil and groundwater under and in the vicinity of the site, and the impact on public health and the environment.

BACKGROUND

The site (Assessor's Parcel Number 946-1105-38-4) is located on the southeastern corner of Las Positas Boulevard and Santa Rita Road in Pleasanton, California, as shown on the Site Vicinity Map (Plate 1). The locations of underground storage tanks (USTs), dispenser islands, groundwater monitoring wells, and select site features are shown on the Generalized Site Plan (Plate 2). The site lies at an elevation of approximately 341 feet above mean sea level (fmsl).

The site existed as a gasoline service station as early as 1969. Exxon Mobil owned the property as early as 1986. Property ownership was transferred from Exxon Mobil to Valero Energy Corporation (Valero) in June 2000. Currently, the property is owned by BNY Western Trust Company, and an independent dealer, Steve Asmann Incorporated, operates the site as a Valero-branded gasoline service station (ERI, 2002b). Properties in the vicinity of the site are commercial and residential.

Currently, there are eight groundwater monitoring wells (MW1 through MW8) at the subject site. Boring logs and well construction diagrams are included as Attachment A. Well construction details are summarized on Table 1. Cumulative monitoring and sampling data are summarized on Tables 2A and 2B.

SUMMARY OF ENVIRONMENTAL INVESTIGATIONS

UST Removal and Replacement

On December 20 and 21, 1988, Applied GeoSystems observed Telstar Constructors, Inc., of Houston, Texas, excavate and remove four USTs at the subject site. Tank removal and replacement activities were part of Exxon Mobil's planned remodel of the service station. A 1986 Application for Permit to

Operate Underground Storage Tanks on file with the Livermore-Pleasanton Fire Department indicates that the tanks were installed in 1969. The USTs consisted of one 10,000-gallon unleaded tank (T1), one 8,000-gallon regular leaded tank (T2), one 6,000-gallon super unleaded tank (T3), and one 500-gallon waste oil tank. All four tanks were constructed of single-wall carbon steel. Applied GeoSystems visually examined the tanks and observed the following (Applied GeoSystems, 1989):

- All four tanks were "moderately rusted."
- The tanks had "slight to moderate corrosion along seams at tank ends."
- No holes were observed in gasoline tanks.
- Two ½-inch diameter holes were observed in the east end of the waste oil tank approximately 2 inches above the base of the tank.

Following tank examination, Applied GeoSystems observed the soil at the base of the UST excavation to have "moderate discoloration" near tanks T2 and T3 (Applied GeoSystems, 1989). No groundwater was observed in the UST excavations. On December 20, 2006, Applied GeoSystems collected six soil samples from the UST excavations and submitted them for laboratory analyses of total petroleum hydrocarbons as gasoline (TPHg); benzene, toluene, ethylbenzene, and total xylenes (BTEX); total petroleum hydrocarbons as diesel (TPHd); total oil and grease (TOG); select volatile organic compounds (VOCs); and total organic lead. Residual TPHg was present in soil at a maximum concentration of 2,901 milligrams per kilogram (mg/kg). Benzene, toluene, ethylbenzene, and total xylenes were present at maximum concentrations of 18, 78, 116, and 803 mg/kg, respectively. TPHd, TOG, VOCs, and lead were not present in reportable concentrations. On December 30, 1988, the UST pit was over-excavated to an approximate depth of 14 to 17 feet below ground surface (fbgs), and three additional soil samples were collected from the base of the excavation. Constituent concentrations were below reporting limits in these additional soil samples. Analytical results of all soil samples collected during UST removal are included in Table 3 and summarized on Plate 3.

Following over-excavation and soil sampling activities, the gasoline UST excavation was extended to the north to accommodate new USTs. The new USTs included of one 12,000-gallon and one 10,000-gallon unleaded tank, one 10,000-gallon premium unleaded tank, one 6,000-gallon diesel tank, and one 1,000-gallon waste oil tank. The five new USTs are constructed of double-walled fiberglass.

More than 340 cubic yards of soil were excavated from the old and new UST excavations. Unknown quantities of soil were re-used to backfill around the new USTs. The remaining soil was reportedly sent to a Class III landfill (Applied GeoSystems, 1989).

Unauthorized Release – Surface Spill

On March 6, 1990, at approximately 4:00 pm, approximately 20 gallons of product were spilled during tank filling operations (Gibson, 1990). The product drained west off the site and into the gutter along Santa Rita Road where it traveled approximately 380 feet south to a storm drain inlet. The product entered the storm drain inlet and traveled further south where it emptied into the Arroyo Mocho Canal. The spill was reported to authorities at approximately 8:30 am on March 7, 1990. At that time, it appeared that absorbent material had been applied to the product in the gutter immediately adjacent to the subject site. Exxon Mobil summoned International Technology Corporation (IT) to the site at 9:30 am to commence cleanup activities. Cleanup activities were conducted from approximately 12:20 pm on March 7, 1990, to 11:00 am on March 8, 1990. Cleanup activities included digging a trench around the storm drain effluent pond and applying absorbent booms to the trench, installation of three rows of booms downstream on Arroyo Mocho, street and gutter cleaning, washing out of the storm drain inlet and lines leading to Arroyo Mocho, and venting of the storm drain line to clear out lingering vapors (IT, 1990). Water samples were collected prior to and following cleaning activities. TPHg was present at a concentration of 94,000 µg/L in the storm drain effluent near Arroyo Mocho, 1,200 µg/L at 100 feet downstream in Arroyo Mocho, and 2,400 µg/L at 400 feet downstream. Following cleanup activities, TPHg was present at a concentration of 1,200 µg/L in the storm drain effluent and 64 µg/L at 400 feet

downstream in Arroyo Mocho. Analytical results of the water samples collected before and after cleanup activities and a map showing sample locations are included as Attachment B.

Waste Oil Piping Replacement and Abandonment

Between November 16 and December 16, 1995, Dan Brenton Construction, Inc., of San Jose, California, conducted waste oil piping replacement and abandonment activities (PFD, 1995). Approximately 30 linear feet of waste oil drain line beneath the floor of the service bay were replaced with new line, and approximately 28 linear feet of waste oil drain line were abandoned in place after being pressure tested, rinsed, drained, and slurry-filled. The drain line was replaced because secondary containment was allowing water from an outside source to enter into the containment sump. A schematic drawing showing the approximate locations of replaced and abandoned waste oil piping is included as Attachment C.

Hoist Removal

On October 14, 1998, Delta Environmental Consultants, Inc. (Delta) of Rancho Cordova, California, observed the excavation and removal of one fiberglass-coated hoist and one fiberglass-coated 50-gallon underground hydraulic oil reservoir (Delta, 1998). Upon inspection, the hoist and reservoir appeared to be in relatively good condition, and no holes or cracks were observed. Two soil samples were collected from beneath the hoist at approximately 7.5 fbgs, and one soil sample was collected from beneath the reservoir at 5.5 fbgs. The two soil samples from beneath the hoist contained concentrations of total recoverable petroleum hydrocarbons (TRPH) at 1,700 and 1,500 mg/kg. TRPH was present at a concentration of 56 mg/kg in the soil sample from beneath the reservoir. Approximately 18 cubic yards of soil were generated during excavation associated with hoist and hydraulic oil reservoir removal and disposed of at the BFI-Vasco Road Sanitary Landfill in Livermore, California.

Product Line Removal and Replacement

On August 9, 2002, ERI observed dispenser island and product line replacement activities at the subject site (Horizon, 2002). The work was conducted by Horizon Environmental Inc. (Horizon) of El Dorado Hills, California, for Ultramar Ltd. (Ultramar), a wholly owned subsidiary of Valero. Work included replacement of single-walled product lines with double-walled product lines and installation of dispenser pans under dispensers. Horizon and ERI each collected 19 soil samples from beneath the dispenser islands and the base of the excavated product line trenches. Horizon submitted the 19 samples for analysis while ERI submitted 8 soil samples for analysis and 11 were submitted on hold. Seven of the eight samples submitted by ERI contained reportable concentrations of MTBE from 0.0072 to 0.189 mg/kg. Toluene and total xylenes were present at reportable concentrations (both 0.0023 mg/kg) in one sample. TPHd, TPHg, benzene, and VOCs were not present in reportable concentrations. Depths of analyzed soil samples ranged from 4 to 6.5 fbgs. Pea gravel excavated from the product line trenches was aerated and used to fill the trenches once the new product lines were installed. Analytical results of soil samples collected by ERI during product line removal are included in Table 3 and summarized on Plate 3. Analytical results of soil samples collected by Horizon are included in Attachment D.

Environmental Assessment Activities

In November 1998, ERI installed four groundwater monitoring wells (MW1 through MW4) at the site (ERI, 1998a).

On April 13, 2000, ERI observed soil boring activities at the subject site (ERI, 2000a). The work was conducted by Environ Corporation (Environ) for Valero in conjunction with the transfer of ownership of the property. Work included the advancement of three soil borings (B1 through B3) to total depths of approximately 52 to 55 fbgs. Environ and ERI collected groundwater samples for laboratory analysis from 52 fbgs in soil boring B1 and 55 fbgs in soil boring B3. Free groundwater was not encountered in soil boring B2. Soil samples were not collected from the soil borings. Analytical results of groundwater samples collected by ERI are summarized on Table 4. Locations of soil borings B1 through B3 are shown on Plate 2.

Groundwater monitoring wells MW5 through MW7 were installed by ERI in July 2000 (ERI, 2000b). In March 2001, ERI installed groundwater monitoring well MW8 at the site (ERI, 2001b).

Groundwater Monitoring

Groundwater monitoring began at the site in November 1998 (ERI, 1998a). Cumulative groundwater monitoring and sampling data are provided as Tables 2A and 2B.

Sensitive Receptor Surveys

In November and December 1998, as part of a baseline investigation, ERI conducted a limited sensitive receptor survey (SRS) at the site. The SRS consisted of a site visit to identify utility vaults locations and characteristics and a site vicinity search (1,000-foot radius) to identify surface water bodies, wells, basements, and underground parking garages (ERI, 1998a).

In June 2000, ERI conducted a search at Alameda County Environmental Health Services for water supply wells in the vicinity (3,000-foot radius) of the site (ERI, 2001a).

In May 2002, ERI conducted an SRS update. The update included a search of the DWR Well Driller's Report Archive; a site visit to map utility vault locations and characteristics; and a site vicinity search (1,000-foot radius) to confirm locations of municipal water supply wells, surface water bodies, and other sensitive receptors (ERI, 2002a).

In April 2004, ERI conducted an SRS update. The update included a search of the DWR Well Driller's Report Archive; a site visit to map utility vault locations and characteristics; and a site vicinity search (2,000-foot radius) to confirm locations of municipal water supply wells, surface water bodies, and other sensitive receptors.

In November 2005, ERI conducted an SRS update. The update included a search of the DWR Well Driller's Report Archive; a search of Zone 7 Water Agency's well database for wells within 2,000 feet of the site; a review of the City of Pleasanton (the City) water and storm sewer line maps; a site visit to map utility vault locations and characteristics; and a site vicinity search (2,000-foot radius) to confirm locations of municipal water supply wells, surface water bodies, and other sensitive receptors.

In June 2006, ERI conducted an SRS update. The update included a review of DWR Well Drillers' Reports obtained in November 2005; a search of Zone 7 Water Agency's well database for wells within 1,500 meters of the site; a site visit to confirm utility vault locations and characteristics; and a site vicinity search (1,500-meter radius) to confirm locations of municipal water supply wells, surface water bodies, and other sensitive receptors.

PREVIOUS CASE CLOSURE AND RE-OPENING

Exxon Mobil received notice of case closure from Alameda County Health Care Services (the County) in a letter dated November 25, 1997 (County, 1997). The letter confirmed completion of a site investigation and remedial action for the USTs removed in 1988 and indicated that no further action was required.

In a letter from the County dated February 28, 2000, Exxon Mobil was given a "Notice of Responsibility" and named as a responsible party (County, 2000a). The case was re-opened based on the discovery of methyl tertiary butyl ether (MTBE) in shallow groundwater in wells at the site on November 17, 1998, and the site's proximity to municipal water supply wells (County, 2000b).

SUMMARY OF SITE CONDITIONS

Geology and Hydrogeology

Regional Geology

The City is underlain by Quaternary valley sediments. Helley and Graymer (1997) identified both floodplain and basin deposits under the City and floodplain deposits under the subject site. Graymer et al (1996) mapped sediments beneath the City and subject site as undivided surficial deposits. The Livermore Formation underlies the valley alluvium (LLNL, 1995).

The City lies in the Amador Valley, which trends approximately northeast-southwest from Pleasanton Ridge, part of the Diablo Range, in the southwest to the Livermore Valley in the east. A right-lateral strike slip fault trending northwest-southeast is mapped at the base of Pleasanton Ridge, on the western edge of the Amador Valley (Graymer et al, 1996). The subject site lies approximately 2.75 miles east of this strike-slip fault. A concealed oblique fault with thrust or reverse motion is mapped northeast of the site along the northeast edge of the Amador Valley (Graymer et al, 1996), approximately 1.33 miles northeast of the site. Additionally, a concealed fault with undesignated motion is mapped approximately 0.72 mile west of the site, trending northwest-southeast through the Amador Valley (Graymer et al, 1996).

Regional Hydrogeology

The site is located within the Livermore Valley Groundwater Basin. This basin has been designated as having the following existing or potential beneficial uses: agriculture, industrial service water supply, industrial process water supply, and municipal and domestic supply (Regional Board, 2000). Groundwater is produced from the valley alluvium sediments, which extend from the surface to approximately 500 fbgs (Regional Board, 2000).

The Arroyo Mocho canal is located approximately 1,020 feet south of the site, Tassajara Creek is located approximately 1,830 feet west of the site, the Pleasanton Canal is located approximately 3,180 feet southwest of the site, and an unnamed canal is located approximately 3,770 feet northeast of the site. The unnamed canal flows south and merges into Arroyo Mocho approximately 3,770 feet northeast of the site. Tassajara Creek flows southwest and merges into Arroyo Mocho approximately 4,215 feet southwest of the subject site. Arroyo Mocho and the Pleasanton canal flow southwest and eventually merge into Arroyo de la Laguna, which flows south out of the Amador Valley.

Site Hydrostratigraphy

Based on review of the boring logs and field observations, ERI has identified two hydrostratigraphic units underlying the site and vicinity. Geologic cross sections drawn along traces A-A' and B-B' (Plate 4) showing the distribution of sediments and hydrostratigraphic units are included as Plates 5 and 6. Boring logs are included as Attachment A.

From surface grade to depth, the identified units are:

1. UPPER CLAY UNIT: A sequence of interbedded clayey sediments composed primarily of clay with varying amounts of silt and sand, with layers of clayey sand, silty sand, and clayey silt occurs at surface grade. The predominant characteristics of this unit are the high proportion of clay (even with the coarser-grained layers) and lateral homogeneity. In several borings, the entire sequence from surface grade to total depth is logged as clay with silt. Thickness of this unit is relatively consistent across the site, ranging from total depth in select borings (31 to 41.5 feet) to approximately 43 feet, and is present in the drilled locations. In the western and southern areas of the site, the upper clay unit is underlain by a 3- to 4-foot thick clayey silt layer. In addition, a 7-foot thick clayey sand layer was observed above this clayey silt layer in the boring for MW7. Groundwater saturation levels in this unit are variable. Free water was encountered in select borings between 25 and 39 fbgs.

2. LOWER SAND AND GRAVEL UNIT: A unit consisting of interbedded sand and gravel layers with varying amounts of clay and silt underlies the upper clay unit. The predominant characteristics of this unit are the high proportion of fine-grained sand and lateral homogeneity. Layers are composed of clayey sand, silty sand, gravelly sand, and sandy gravel. The first-encountered depth of this unit is relatively consistent across the site ranging from 41 to 50.5 fbgs. Groundwater saturation levels in this unit are generally moist to wet. Free water in this unit was encountered in select borings at 50 and 62 fbgs.

Based on differences in depth to water measurements in wells screened exclusively in the upper clay unit (approximately 20 to 28.5 fbgs) and lower sand and gravel unit (approximately 55.5 fbgs), these two units do not appear to be hydraulically connected.

Occurrence of Groundwater

Hydrographs 1 through 8 summarize historical groundwater elevations and dissolved-phase constituent concentrations. Groundwater elevations fluctuate seasonally up to 7 feet with highest elevations occurring during the first quarter of the year and lowest elevations occurring during the second quarter.

Depth to groundwater in the upper clay unit (as measured in groundwater monitoring wells MW1, MW2, and MW5), is typically between approximately 20 and 28.5 fbgs. Historically, groundwater in monitoring wells MW1, MW2, and MW5 has been as shallow as 14.12 fbgs and as deep as 29.37 fbgs. Average depth to groundwater in the lower sand and gravel unit (as measured in groundwater monitoring well MW8), is approximately 55.5 fbgs. Historically, groundwater in monitoring well MW8 has been as shallow as 46.63 fbgs and as deep as 65.15 fbgs. Groundwater monitoring wells MW3, MW4, and MW6 are screened across both the upper clay unit and the lower sand and gravel unit. Depth to groundwater in these wells is typically between approximately 37 and 41 fbgs. Historically, groundwater in monitoring wells MW3, MW4, and MW6 has been as shallow as 29.34 fbgs and as deep as 50.20 fbgs. Groundwater monitoring well MW7 is screened across clayey sand, silty clay, and clayey silt layers in the upper clay unit. Average depth to water in MW7 is approximately 26 fbgs. Historically, groundwater in monitoring well MW7 has been as shallow as 22.46 fbgs and as deep as 29.74 fbgs.

Groundwater Flow and Hydraulic Gradient

The regional groundwater flow in the Livermore Valley Groundwater Basin is westerly, toward the Arroyo de la Laguna, and then flows south into the Sunol Valley Groundwater Basin; however, subsurface flow has not continued into the Sunol Valley Groundwater Basin since 1945 due to groundwater pumping in the Livermore Valley Groundwater Basin (LLNL, 1995).

Based on recent groundwater elevation maps for the site, the groundwater flow direction under static conditions in the vicinity of the site in the upper clay unit is east to east-southeast, under hydraulic gradients of 0.123 to 0.267. The groundwater flow direction under static conditions in the vicinity of the site in the lower sand and gravel unit is southwest under hydraulic gradients of 0.039 to 0.238. Groundwater Flow Direction Rose Diagrams for the upper and lower hydrostratigraphic units are included as Plates 7 and 8, respectively. The well construction of MW7 is different from other wells screened in the upper clay unit; therefore, it was not used in construction of the Groundwater Flow Direction Rose Diagram.

Aquifer Characteristics

Based on review of boring logs, groundwater saturation levels within the upper clay unit are variable. Sediments were logged as dry, slightly damp, damp, moist, and wet. Free water was encountered in select borings between 25 and 39 fbgs. Groundwater saturation levels within the lower sand and gravel unit are consistent across the site. With the exception of one unit logged as dry to moist, sand and gravel layers in this unit were logged as wet. Free water in this unit was encountered in select borings at 50 and

62 fbgs. Based on sediment size and groundwater saturation levels included on the boring logs, hydraulic conductivity in the lower sand and gravel unit is likely higher than that of the upper clay unit.

Distribution of Chemicals of Concern in Soil and Groundwater

Residual Hydrocarbons in Soil

Cumulative results of laboratory analyses of soil samples collected at the subject site are summarized on Table 3. The concentrations and areal distribution of gasoline-range hydrocarbons (as TPHg), benzene, and MTBE are summarized on Plate 3 and indicate the following:

- Residual TPHg, benzene, and MTBE are spatially associated with the UST pit and dispenser islands. Residual TPHg, benzene, and MTBE were not present in soil samples collected from the soil borings for groundwater monitoring wells MW1 through MW8, except for MTBE in the sample from 21 fbgs in the soil boring for MW7 (0.001 mg/kg).
- Soil containing residual TPHg and benzene underlying the UST excavation were removed during over-excavation activities.
- Residual MTBE was present in soil samples collected by ERI and Horizon during product line and dispenser replacement. Maximum concentrations of residual MTBE are spatially associated with dispensers D5 and D8. BTEX compounds were not present in reportable concentrations in the 19 soil samples collected by Horizon (Attachment D). Toluene (0.0023 mg/kg) and xylenes (estimated at 0.0032 mg/kg) were present in one of eight samples collected by ERI.

Dissolved-Phase Hydrocarbons in Groundwater

Cumulative groundwater monitoring and sampling data are summarized on Tables 2A and 2B and are shown graphically on Hydrographs 1 through 8. Grab groundwater samples are summarized in Table 4. Isoconcentration maps constructed using first quarter 2006 data are included as Plates 9, 10, and 11. The distribution and concentration trends of dissolved-phase constituents indicate the following:

- Maximum current concentrations of dissolved-phase TPHg and MTBE are spatially associated with groundwater monitoring wells MW3, MW4, and MW5 on the eastern edge of the site.
- MTBE concentrations are at or near reporting limits in the southern portion of the site (MW2, MW7, and MW8).
- MTBE is present in MW1 west of the USTs but is below reporting limits in MW6.
- Dissolved-phase constituent concentrations, particularly MTBE, in MW1, MW3, MW4, MW6, and MW7 show decreasing trends since first quarter 2005. Dissolved-phase MTBE in MW2 appears to have episodic fluctuations, possibly associated with groundwater elevation fluctuations. Dissolved-phase MTBE in MW5 shows an increasing trend since fourth quarter 2004. Dissolved-phase MTBE has not been present in reportable concentrations in MW8 since its initial sampling in fourth quarter 2004, except for one sample (analyzed using EPA Method 8021B) at a concentration of 0.58µg/L.

The presence of dissolved-phase MTBE in groundwater monitoring wells MW3, MW4, and MW5 suggests that MTBE is present in the upper and clay transitional clayey sand hydrostratigraphic units. MTBE does not appear to be present in the lower sand and gravel unit (MW8).

Non-Aqueous Phase Liquids

Non-aqueous phase liquids (NAPL) have not historically been observed in soil or on groundwater at the subject site. Dissolved-phase and residual-phase hydrocarbon concentrations in groundwater and soil samples collected at the site do not suggest the presence of NAPL.

Sensitive Receptors

On June 23, 2006, ERI visited the subject site to identify and confirm reported sensitive receptors. Five active municipal water supply wells (Mocho #1 through Mocho #4 and Stoneridge) were identified within 1,500 meters (4,925 feet) of the site. The well search at Zone 7 Water Agency also revealed the presence of 11 inactive but not destroyed water supply wells (both domestic and municipal), and 18 "supplemental" water supply wells (primarily domestic) within 1,500 meters (4,925 feet) of the subject site. The map and table generated by Zone 7 Water Agency are included as Attachment E. In addition, ERI confirmed the presence of four surface water bodies (Arroyo Mocho Canal, Tassajara Creek, Pleasanton Canal, and an unnamed canal) within 1,500 meters (4,925 feet) meters of the site. Locations of the active municipal supply wells and surface water bodies are shown on the Regional Area Map (Plate 9). ERI confirmed the presence of 23 utility vaults, four storm drains, and five irrigation control boxes on the subject site (Plate 10). Utility vault details are summarized on Table 5. No surface water bodies, wetlands, or private water supply wells were identified within 300 meters (984 feet) of the site. Five multi-unit residential buildings and two medical offices were identified within 100 meters (328 feet) of the site. No basements, tunnels or subways, or other public use areas were identified within 100 meters (328 feet) of the site. Locations of sensitive receptors identified within 300 meters (984 feet) of the site are shown on the Local Area Map (Plate 11).

SOURCE IDENTIFICATION AND RISK EVALUATION

Release History

The following observations summarize information regarding the timing and location of releases of petroleum hydrocarbons and related constituents at the site:

- In December 1988, the USTs were removed and replaced. Residual hydrocarbons were present in reportable concentrations in soil samples collected from the excavation; TPHg was present at a maximum concentration of 2,901 mg/kg. Soil samples collected following over-excavation activities did not contain reportable concentrations of petroleum hydrocarbons. Water was not observed in the excavation.
- On March 6, 1990, approximately 20 gallons of product were spilled during tank filling operations. Dissolved-phase TPHg was present in water samples collected along the storm drain and Arroyo Mocho canal at a maximum concentration of 94,000 µg/L prior to the cleanup effort. Following cleanup activities, dissolved-phase TPHg was present at a maximum concentration of 1,200 µg/L in the storm drain effluent entering Arroyo Mocho.
- In November 1998, ERI installed groundwater monitoring wells MW1 through MW4 at the subject site. The first groundwater samples collected from wells MW2, MW3, and MW4 on November 17, 1998, contained reportable concentrations of dissolved-phase petroleum hydrocarbons, including MTBE at concentrations of 23, 220 and 4.1 µg/L, respectively.
- In August 2002, product lines and dispensers were replaced at the subject site. Soil samples collected from beneath product line trenches and dispenser locations contained low concentrations of MTBE (0.0072 to 0.189 mg/kg).

Based on these observations, ERI concludes:

- A release most likely occurred from the old USTs prior to 1988.
- A release most likely occurred from the dispensers, product piping, or new USTs between 1988 and 1998.
- The surface spill in 1990 probably did not contribute to residual or dissolved-phase hydrocarbon or oxygenated compound concentrations in soil and groundwater underlying the site.

Constituents of Concern

ERI has identified gasoline hydrocarbons (as TPHg) and MTBE as potential constituents of concern (COCs) at the site.

Potential Sources

Current potential primary sources of COCs that could impact human health or the environment include the current UST and dispensing system. The current UST and dispensing system, operated by an independent dealer, is not currently known to leak.

Potential secondary sources of COCs that could impact human health and the environment include residual COCs in unsaturated vadose sediment within the upper clay unit and dissolved-phase COCs in groundwater in the upper clay and lower sand and gravel units.

Comparison of Current Site Conditions to Environmental Screening Levels

ERI has compared current residual and dissolved-phase COC concentrations in soil and groundwater at the site to environmental screening levels (ESLs) established by the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Board, 2005).

Plate 12 summarizes the locations of soil samples with MTBE concentrations that exceed the ESL for groundwater protection under a residential exposure scenario. Soil samples collected from the UST excavation are excluded because samples collected following over-excavation activities did not contain reportable concentrations of residual petroleum hydrocarbons. This map indicates that MTBE concentrations in soil samples collected in the vicinity of dispensers D5 and D8 during product line and dispenser replacement activities exceed the ESL for groundwater protection.

Plates 13 through 15 summarize the locations of grab groundwater samples and first quarter 2006 groundwater monitoring and sampling data with benzene and MTBE that exceed the ESLs for toxicity and ceiling (taste and odor). These maps indicate the following:

- The area in which dissolved-phase benzene exceeds the ESL for toxicity is limited to the immediate vicinity of groundwater monitoring well MW8.
- The area in which dissolved-phase MTBE exceeds the ESL for taste and odor is limited to the northeastern quarter of the site.
- The area in which dissolved-phase MTBE exceeds the ESL for toxicity is limited to the northern half of the site.

TIER 2 HUMAN HEALTH RISK ASSESSMENT

ERI conducted a Tier 2 human health risk assessment (HHRA) for the site. The purpose of the HHRA was to evaluate potential baseline carcinogenic risk and baseline toxic effects posed by the chemicals of concern in soil and groundwater underlying the site.

ERI conducted the HHRA in general accordance with the standards and methods established by the American Society of Testing and Materials (ASTM) Designation E-1739 (ASTM, 1995) and the California Environmental Protection Agency (CalEPA) (CalEPA, 1994; 2005). ERI employed two models to calculate baseline risks and toxic effects:

- The *RBCA Tool Kit for Chemical Releases, Version 1.3a*, distributed by Groundwater Services, Inc. (GSI), used to evaluate risk posed by both soil and groundwater sources. This software incorporates the Johnson and Ettinger (1991) vapor intrusion model for soil and groundwater sources.

- The Johnson and Ettinger (1991) vapor intrusion model, as modified by CalEPA in January 2005, used to evaluate vapor intrusion risk posed by the groundwater source. The CalEPA version of the Johnson and Ettinger model does not include a module for soil sources.

Model output documentation is included as Attachment F.

Exposure Pathways and Receptors

ERI evaluated the following exposure pathways:

- Direct dermal contact with, and ingestion of, soil.
- Volatilization from soil and transport into indoor air.
- Volatilization from groundwater and transport into indoor air.

ERI evaluated vapor intrusion pathways for the residential exposure scenario. ERI evaluated the direct dermal contact and ingestion pathway for residential and construction worker exposure scenarios.

Model Input Parameters

Exposure Parameters, Target Risk Values, and Cumulative Risks

Exposure parameters used in the models are summarized in Table 6. ERI used a target risk of one in one million (1E-06) for carcinogenic effects. ERI used hazard indexes and hazard quotients of one for non-carcinogenic toxic effects. Total cumulative risks were calculated for the individual pathways and for the combined vapor intrusion pathway with both soil and groundwater sources.

Toxicological Properties

The toxicological properties for individual COCs are summarized in Table 7.

Source Media, Chemicals of Concern, and Representative Concentrations

ERI included soil and groundwater as source media. Chemicals of concern include BTEX compounds and MTBE. For the GSI model, the reported xylene concentrations were modeled as mixed xylenes. For the CalEPA version of the Johnson and Ettinger model, the reported mixed isomer concentrations were input for each individual isomer, which is a highly conservative measure.

For each COC, representative concentrations were selected as follows:

- For the direct dermal contact/soil ingestion and volatilization from soil to indoor air pathways, ERI selected the maximum residual concentration of each COC reported in all samples representative of soil remaining in place at the site or the nominal reporting limit (0.005 mg/kg), whichever was greater.
- For the vapor intrusion pathway for the groundwater source, ERI identified the monitoring wells with the highest dissolved-phase concentration of each COC reported during the last four monitoring events, and calculated the mean COC concentration in each well over those events. The highest mean concentration was selected as the representative concentration for each COC.

Soil Parameters

ERI reviewed boring logs compiled during subsurface assessment activities at the site and concludes that the predominate sediment underlying the site is clay, as classified under the USCS. The Johnson and Ettinger model uses the United States Soil Conservation Service classification system; the corresponding sediment type in this system is clay. For the GSI model, ERI selected default physical properties

specified by the ASTM (1998) for clay. For the Johnson and Ettinger model, ERI accepted the default physical properties for clay. Model input soil parameters are summarized in Table 8.

Building Parameters

The building parameters input into the models and sources are summarized in Table 8.

Results

The baseline carcinogenic risks, expressed as the Individual Excess Lifetime Cancer Risk (IELCR), and baseline toxic effects, expressed as the hazard index, for the modeled pathways are summarized in Table 9 through Table 11. The results indicate:

- For the direct dermal contact and ingestion of soil pathway, the cumulative IELCRs and hazard indexes do not exceed target risk values.
- For the exposure pathway involving volatilization from groundwater and vapor intrusion into indoor air, the cumulative IELCRs and hazard indexes do not exceed target risk values.
- For the exposure pathway involving volatilization from soil and vapor intrusion into indoor air, the cumulative IELCRs and hazard indexes do not exceed the target risk values.

CONCLUSIONS AND RECOMMENDATIONS

Based on the cumulative results of environmental investigations and our knowledge of site conditions, ERI concludes:

- Residual gasoline (as TPHg) and BTEX compounds are not present in soil underlying the site, except for one sample (S-5-PL8), which contained toluene (0.0023 mg/kg) and xylenes (0.0032 mg/kg).
- Residual MTBE was present in 15 of 45 samples collected from soil that remains in place at the site. Residual MTBE concentrations range from less than the reporting limits (0.0020 mg/kg to 0.025 mg/kg). Select residual MTBE concentrations exceed ESLs for groundwater protection.
- Residual diesel-range hydrocarbons (as TPHd) are present in six of 38 samples collected from soil that remains in place. TPHd concentrations range from less than the reporting limits (1.0 mg/kg to 10 mg/kg) to a maximum of 19 mg/kg.
- Dissolved-phase concentrations of fuel hydrocarbons (TPHd, TPHg), BTEX compounds, and MTBE show declining trends or stable trends at concentrations near the reporting limits, except for well MW5, which shows fluctuating concentrations.
- The current maximum concentration of TPHd (190 µg/L) does not exceed the ESL for toxicity (210 µg/L), but does exceed the ESL for taste and odor (100 µg/L). However, based on the laboratory reports, the diesel-range hydrocarbons are not representative of diesel fuel and probably represent the heavy components of weathered gasoline.
- The current maximum concentration of TPHg (63 µg/L) does not exceed ESLs for toxicity or taste and odor thresholds.
- Toluene and xylenes were not present in reportable concentrations during the most recent monitoring event. Benzene was not present in reportable concentrations, except for one well (MW8, 1.4 µg/L). Ethylbenzene was not present in reportable concentrations except for one well (MW8, 0.83 µg/L).
- Based on observed decreasing concentration trends of dissolved-phase constituents in most wells, natural attenuation is occurring at the site.
- Additional assessment, monitoring, and active remediation at the site are not warranted.

ERI recommends closure of the environmental investigation at the site, and destruction of the existing monitoring wells.

DOCUMENT DISTRIBUTION

ERI recommends forwarding copies of this report to:

Mr. Jerry Wickham, P.G., C.E.G.
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Mr. Eddy So
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Ms. Colleen Morf
Zone 7 Water Agency
100 North Canyon Parkway
Livermore, California 94551

Mr. Robert C. Ehlers, M.S., P.E.
The Valero Companies
Environmental Liability Management
685 West Third Street
Hanford, California 93230

LIMITATIONS

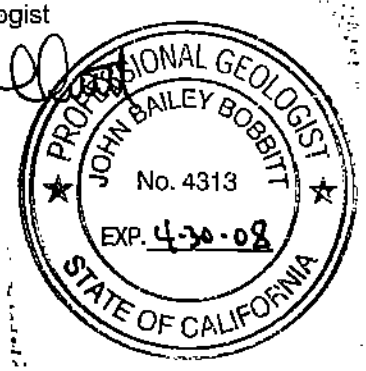
This report was prepared in accordance with generally accepted standards of environmental practice in California at the time this investigation was performed. This report has been prepared for Exxon Mobil, and any reliance on this report by third parties shall be at such party's sole risk.

Please call Ms. Paula Sime, ERI's project manager for this site, at (707) 766-2000 with questions regarding this report.

Sincerely,
Environmental Resolutions, Inc.

Kent L. Murch
Senior Staff Geologist

John B. Bobbitt
P.G. 4313



Attachments: References

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Table 9:	Summary of Risks and Hazards, Direct Contact and Ingestion of Soil
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Hydrographs 1 through 8

Attachment A:	United Soil Classification System, Symbol Key, and Boring Logs
Attachment B:	Analytical Results and Sample Location Map for 1990 Surface Spill
Attachment C:	Schematic Drawing of 1995 Waste Oil Piping Replacement and Abandonment
Attachment D:	Analytical Results of 2002 Product Line Soil Samples Collected by Horizon
Attachment E:	Zone 7 Water Agency Well Location Map and Table
Attachment F:	Human Health Risk Assessment, Model Output Documentation

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TABLE 1
WELL CONSTRUCTION DETAILS
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

Well ID	Date Well Installed	Top of Casing Elevation (fmsl)	Borehole Diameter (inches)	Total Depth of Boring (fbgs)	Well Depth (fbgs)	Well Casing Diameter (inches)	Well Casing Material	Screened Interval (fbgs)	Slot Size (inches)	Filter Pack Interval (fbgs)	Filter Pack Material
MW1	11/12/98	340.86	8	36.5	35	2	NS	20-35	0.200	19-36.5	#3 Sand
MW2	11/12/98	340.16	8	41.5	35	2	NS	20-35	0.020	19-35	#3 Sand
MW3	11/11/98	342.95	8	51.5	50	2	NS	35-50	0.020	34-51.5	#3 Sand
MW4	11/11/98	342.96	8	51.5	50	2	NS	35-50	0.020	34-51.5	#3 Sand
MW5	07/18/00	342.87	8	31	30	2	NS	20-30	0.020	19-31	#3 Sand
MW6	07/19/00	341.05	8	54	53	2	NS	43-53	0.020	42-54	#3 Sand
MW7	07/18/00	341.73	8	50	49	2	NS	39-49	0.020	38-50	#3 Sand
MW8	03/16/01	341.44	8	70	70	2	NS	55-70	0.020	55-70	#3 Sand

Notes:
fmsl = Feet above mean sea level.
fbgs = Feet below ground surface.
NS = Not specified.

TABLE 2A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

Well ID	Sampling Date	TOC (fmsl)	DTW (fbgs)	GW Elev. (fmsl)	SUBJ (µg/L)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW1	11/17/98	340.86	21.90	318.96	NLPH	<50	<50	<2.5	—	<0.5	<0.5	<0.5	<0.5
MW1	03/15/99	340.86	21.15	319.71	NLPH	<50	<50	<2.5	—	<0.5	<0.5	<0.5	<0.5
MW1	06/25/99	340.86	20.34	320.52	NLPH	a	<50	<2.0	—	<0.5	<0.5	<0.5	<0.5
MW1	09/24/99	340.86	20.42	320.44	NLPH	<50	<50	24.6	—	<0.5	<0.5	<0.5	<0.5
MW1	12/22/99	340.86	21.11	319.75	NLPH	<61	<50	<2	—	<0.5	<0.5	<0.5	<0.5
MW1	03/07/00	340.86	14.12	326.74	NLPH	57	<50	220	—	<0.5	<0.5	<0.5	<0.5
MW1	06/06/00	340.86	17.79	323.07	NLPH	<50	<50	5.4	—	<0.5	<0.5	<0.5	<0.5
MW1	06/16/00	340.86	Property transferred to Valero Refining Company.										
MW1	07/31/00	340.86	19.02	321.84	NLPH	<50	<50	51	38	<0.5	<0.5	<0.5	<0.5
MW1	10/10/00	340.86	18.56	322.30	NLPH	<50	<50	63	—	<0.5	<0.5	<0.5	<0.5
MW1	01/11/01	340.86	21.43	319.43	NLPH	<50	<50	110	98	<0.5	<0.5	<0.5	<0.5
MW1	04/11/01	340.86	19.83	321.03	NLPH	960e	<50	29	33	<0.5	<0.5	<0.5	<0.5
MW1	07/20/01	340.86	20.50	320.36	NLPH	<50	<50	27	20	<0.5	<0.5	<0.5	<0.5
MW1	10/19/01	340.86	19.48	321.38	NLPH	<50	<50	390	420	<0.5	<0.5	<0.5	<0.5
MW1	Nov-2001	340.86	Well surveyed in compliance with AB 2886 requirements.										
MW1	01/28/02	340.86	19.72	321.14	NLPH	<100	178	196	—	<0.50	<0.50	<0.50	<0.50
MW1	04/17/02	340.86	22.17	318.69	NLPH	<50	124	116.1	131	<0.5	<0.50	<0.50	<0.50
MW1	07/17/02	340.86	22.51	318.35	NLPH	<50	<50.0	5.1	8.76	<0.5	<0.5	<0.5	<0.5
MW1	10/24/02	340.86	22.51	318.35	NLPH	<50	217	574	302	<0.5	<0.5	<0.5	<0.5
MW1	03/21/03	340.86	21.32	319.54	NLPH	<50	70.9	—	83.4	<0.50	<0.5	<0.5	<0.5
MW1	04/10/03	340.86	21.27	319.59	NLPH	<51	67.2	—	71.0	<0.50	<0.5	<0.5	<0.5
MW1	07/17/03	340.86	21.13	319.73	NLPH	<50	88.9	—	44.6	<0.50	<0.5	<0.5	<0.5
MW1	10/09/03	340.86	21.55	319.31	NLPH	<50	<50.0	32.3	41.2	<0.50	<0.5	<0.5	<0.5
MW1	01/21/04	340.86	19.96	320.90	NLPH	<50	625	970	974	<0.50	<0.5	<0.5	<0.5
MW1	05/25/04	340.86	22.11	318.75	NLPH	<50	196	234	204	<0.50	<0.5	<0.5	<0.5
MW1	08/26/04	340.86	21.28	319.58	NLPH	57	148	153	153	<0.50	<0.5	<0.5	<0.5
MW1	12/07/04 j	340.86	21.43	319.43	NLPH	<50	966	789	1,130	<0.50	<0.5	<0.5	<0.5
MW1	03/17/05	340.86	17.99	322.87	NLPH	57k	1,720	—	2,600	<0.50	<0.5	<0.5	1.0
MW1	06/20/05	340.86	21.26	319.60	NLPH	<50	74.4	102	103	<0.50	<0.5	<0.5	<0.50
MW1	09/20/05	340.86	17.33	323.53	NLPH	228k	<50.0	15.4	15.3	<0.50	<0.50	<0.50	<0.50
MW1	12/22/05	340.86	17.49	323.37	NLPH	<50.0	<50.0	12.0	14.6	<0.50	<0.50	<0.50	<0.50
MW1	**03/23/06**	**340.86**	**16.81**	**324.05**	**NLPH**	**<47**	**<50**	**14**	**10.4**	**<0.50**	**<0.50**	**<0.50**	**<0.50**
MW2	11/17/98	340.61	20.42	320.19	NLPH	91	<50	17	23	1.5	<0.5	0.98	2.6
MW2	03/15/99	340.61	28.35	312.26	NLPH	90	<50	12	12.5	0.73	1.1	2.4	2.2
MW2	06/25/99	340.61	25.20	315.41	NLPH	a	<50	<2.0	—	<0.5	<0.5	<0.5	<0.5
MW2	09/24/99	340.61	23.93	316.68	NLPH	<50	<50	3.06	—	<0.5	<0.5	<0.5	<0.5
MW2	12/22/99	340.61	23.39	317.22	NLPH	<56	<50	<2	—	<0.5	<0.5	<0.5	<0.5
MW2	03/07/00	340.61	17.08	323.53	NLPH	52	<50	<2	—	<0.5	0.80	<0.5	<0.5
MW2	06/06/00	340.61	21.01	319.60	NLPH	<50	<50	<2	—	<0.5	<0.5	<0.5	<0.5
MW2	06/16/00	340.61	Property transferred to Valero Refining Company.										

TABLE 2A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

Well ID	Sampling Date	TOC (fmsl)	DTW (fbgs)	GW Elev. (fmsl)	SUBJ (µg/L)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW2	07/31/00	340.61	22.08	318.53	NLPH	<50	<50	6.8	<5	<0.5	<0.5	<0.5	<0.5
MW2	10/10/00	340.61	22.35	318.26	NLPH	<50	<50	<2	---	<0.5	<0.5	<0.5	<0.5
MW2	01/11/01	340.61	23.74	316.87	NLPH	<50	<50	<2	---	0.54	<0.5	<0.5	<0.5
MW2	04/11/01	340.61	22.34	318.27	NLPH	760e	<50	<2	---	<0.5	1.4	<0.5	<0.5
MW2	07/20/01	340.61	23.74	316.87	NLPH	<50	<50	<2	---	<0.5	<0.5	<0.5	<0.5
MW2	10/19/01	340.61	22.68	317.93	NLPH	<50	<50	<2	---	<0.5	<0.5	<0.5	<0.5
MW2	Nov-2001	340.16	Well surveyed in compliance with AB 2886 requirements.										
MW2	01/28/02	340.16	20.79	319.37	NLPH	<50.0	<50.0	0.70	---	<0.50	<0.50	<0.50	<0.50
MW2	04/17/02	340.16	25.52	314.64	NLPH	<50	<50.0	4.20	4.35	<0.5	0.90	<0.50	<0.50
MW2	07/17/02	340.16	28.18	311.98	NLPH	<50	<50.0	9.4	10.3	<0.5	0.6	2.4	2.0
MW2	10/24/02	340.16	28.42	311.74	NLPH	<50	<50.0	8.6	9.30	<0.5	<0.5	<0.5	<0.5
MW2	03/21/03	340.16	23.54	316.62	NLPH	<50	<50.0	---	<0.50	1.10	0.5	1.3	2.2
MW2	04/10/03	340.16	28.19	311.97	NLPH	<50	<50.0	---	2.10	0.60	0.5	0.8	1.0
MW2	07/17/03	340.16	24.13	316.03	NLPH	<50	<50.0	---	<0.50	<0.50	<0.5	<0.5	<0.5
MW2	10/09/03	340.16	26.21	313.95	NLPH	90	<50.0	0.6	0.60	<0.50	<0.5	<0.5	<0.5
MW2	01/21/04	340.16	22.40	317.76	NLPH	<50	<50.0	<0.5	<0.50	0.50	<0.5	<0.5	<0.5
MW2	05/25/04	340.16	25.17	314.99	NLPH	<50	<50.0	1.2	1.8	<0.50	<0.5	0.8	1.3
MW2	08/26/04	340.16	27.56	312.60	NLPH	<50	<50.0	<0.5	<0.50	<0.50	<0.5	<0.5	<0.5
MW2	12/07/04 j	340.16	25.36	314.80	NLPH	<50	<50.0	8.0	8.6	<0.50	<0.5	<0.5	<0.5
MW2	03/17/05	340.16	20.28	319.88	NLPH	<50	57.8	---	1.10	<0.50	<0.5	<0.5	<0.5
MW2	06/20/05	340.16	23.48	316.68	NLPH	<53	<50.0	<0.5	<0.50	<0.50	<0.5	<0.5	1.0
MW2	09/20/05	340.16	23.11	317.05	NLPH	<50.0	<50.0	3.50	2.31	<0.50	<0.50	<0.50	<0.50
MW2	12/22/05	340.16	23.96	316.20	NLPH	<50.0	<50.0	<0.50	<0.500	<0.50	<0.50	<0.50	<0.50
MW2	**03/23/06**	**340.16**	**21.11**	**319.05**	**NLPH**	**<47**	**<50**	**<2.5**	**1.82**	**<0.50**	**<0.50**	**<0.50**	**<0.50**
MW3	11/17/98	342.95	36.58	306.37	NLPH	120	<50	180	220	<0.5	<0.5	<0.5	<0.5
MW3	03/15/99	342.95	40.01	302.94	NLPH	180	<50	290	314	<0.5	<0.5	<0.5	<0.5
MW3	06/25/99	342.95	46.83	296.12	NLPH	a	<50	107	113	<0.5	<0.5	<0.5	<0.5
MW3	9/24/99[b]	342.95	47.71	295.24	NLPH	---	—	—	---	---	---	—	---
MW3	12/22/99	342.95	43.82	299.13	NLPH	140	<50	65	---	<0.5	<0.5	<0.5	<0.5
MW3	03/07/00	342.95	32.75	310.20	NLPH	<50	<50	82	---	<0.5	0.88	<0.5	<0.5
MW3	06/06/00	342.95	36.05	306.90	NLPH	<50	<50	140	---	<0.5	<0.5	0.82	<0.5
MW3	06/16/00	342.95	Property transferred to Valero Refining Company.										
MW3	07/31/00	342.95	36.77	306.18	NLPH	<50	<50	230	160	<0.5	<0.5	<0.5	<0.5
MW3	10/10/00	342.95	35.82	307.13	NLPH	<50	<50	200	—	<0.5	<0.5	<0.5	<0.5
MW3	01/11/01	342.95	38.08	304.87	NLPH	<50	<50	280	230	<0.5	<0.5	<0.5	<0.5
MW3	04/11/01	342.95	36.03	306.92	NLPH	1,000e	<50	240	280	<0.5	<0.5	<0.5	<0.5
MW3	07/20/01	342.95	36.05	306.90	NLPH	<50	270	240	190	<0.5	<0.5	<0.5	<0.5
MW3	10/19/01	342.95	34.58	308.37	NLPH	<50	<50	180	190	<0.5	<0.5	<0.5	<0.5
MW3	Nov-2001	342.95	Well surveyed in compliance with AB 2886 requirements.										
MW3	01/28/02	342.95	34.96	307.99	NLPH	<100	167	179	---	<0.50	<0.50	<0.50	<0.50

TABLE 2A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

Well ID	Sampling Date	TOC (fmsl)	DTW (fbgs)	GW Elev. (fmsl)	SUBJ (µg/L)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW3	04/17/02	342.95	38.21	304.74	NLPH	<50	194	179.3	216	<0.5	<0.50	<0.50	<0.50
MW3	07/17/02	342.95	g	g	g	<50h	163h	185	198h	<0.5h	<0.5h	<0.5h	<0.5h
MW3	10/24/02	342.95	38.68	304.27	NLPH	<50	128	163	183	<0.5	<0.5	<0.5	<0.5
MW3	03/21/03	342.95	36.50	306.45	NLPH	<50	119	---	141	<0.50	<0.5	<0.5	<0.5
MW3	04/10/03	342.95	36.82	306.13	NLPH	<53	119	—	130	<0.50	<0.5	<0.5	<0.5
MW3	07/17/03	342.95	37.98	304.97	NLPH	---	—	—	---	—	---	---	---
MW3	07/18/03	342.95	—	---	NLPH	<50	142	—	123	<0.50	<0.5	<0.5	<0.5
MW3	10/09/03	342.95	38.5	304.45	NLPH	<50	120	122	147	<0.50	<0.5	<0.5	<0.5
MW3	01/21/04	342.95	35.45	307.50	NLPH	94	90.6	118	148	<0.50	<0.5	<0.5	<0.5
MW3	05/25/04	342.95	38.07	304.88	NLPH	<0.50	139	170	146	<0.50	<0.5	<0.5	<0.5
MW3	08/26/04	342.95	36.00	306.95	NLPH	112	163	169	165	<0.50	<0.5	<0.5	<0.5
MW3	12/07/04 j	342.95	37.97	304.98	NLPH	<50	174	143	186	<0.50	<0.5	<0.5	<0.5
MW3	03/17/05	342.95	31.44	311.51	NLPH	<50	516	—	740	<0.50	<0.5	<0.5	<0.5
MW3	06/20/05	342.95	37.29	305.66	NLPH	<50	134	183	241	<0.50	<0.5	<0.5	0.5
MW3	09/20/05	342.95	36.11	306.84	NLPH	72.3e	129	116	125	<0.50	<0.50	<0.50	<0.50
MW3	12/22/05	342.95	34.52	308.43	NLPH	<50.0	87.5	73.0	92.9	<0.50	<0.50	<0.50	<0.50
MW3	**03/23/06**	**342.95**	**32.04**	**310.91**	**NLPH**	**<47**	**63o**	**76**	**72.0**	**<0.50**	**<0.50**	**<0.50**	**<0.50**
MW4	11/17/98	342.96	50.20	292.76	NLPH	72	<50	4.1	3.5	<0.5	<0.5	<0.5	<0.5
MW4	03/15/99	342.96	47.93	295.03	NLPH	91	<50	280	260	<0.5	<0.5	<0.5	<0.5
MW4	06/25/99 b	342.96	48.15	294.81	NLPH	---	---	---	---	---	---	---	---
MW4	09/24/99 b	342.96	49.29	293.67	NLPH	---	—	—	---	---	---	---	—
MW4	12/22/99	342.96	49.33	293.63	NLPH	b	—	—	---	---	—	---	—
MW4	03/07/00	342.96	49.05	293.91	NLPH	190	<50	710	---	<0.5	0.84	<0.5	<0.5
MW4	06/06/00	342.96	49.02	293.94	NLPH	110	<50	460	---	<0.5	<0.5	<0.5	<0.5
MW4	06/16/00	342.96	Property transferred to Valero Refining Company.										
MW4	07/31/00	342.96	49.13	293.83	NLPH	<50	<50	480	490	<0.5	<0.5	<0.5	<0.5
MW4	10/10/00	342.96	40.08	302.88	NLPH	c	c	c	c	c	c	c	c
MW4	01/11/01	342.96	36.41	306.55	NLPH	110	<50	27	21	<0.5	<0.5	<0.5	<0.5
MW4	04/11/01	342.96	36.43	306.53	NLPH	870e	<50	3.6	14	<0.5	0.56	<0.5	<0.5
MW4	07/20/01	342.96	---	---	f	---	---	—	---	---	---	---	---
MW4	10/19/01	342.96	33.67	309.29	NLPH	71	<50	15	16	<0.5	<0.5	<0.5	<0.5
MW4	Nov-2001	342.96	Well surveyed in compliance with AB 2886 requirements.										
MW4	01/28/02	342.96	33.11	309.85	NLPH	148	<50.0	18.7	—	<0.50	<0.50	<0.50	<0.50
MW4	04/17/02	342.96	36.03	306.93	NLPH	<50	<50.0	19.10	23.4	<0.5	<0.50	<0.50	<0.50
MW4	07/17/02	342.96	37.65	305.31	NLPH	<50	<50.0	16.7	15.8	<0.5	<0.5	<0.5	<0.5
MW4	10/24/02	342.96	37.41	305.55	NLPH	<50	<50.0	8.7	8.90	<0.5	<0.5	<0.5	<0.5
MW4	03/21/03	342.96	36.18	306.78	NLPH	<56	<50.0	—	14.2	<0.50	<0.5	<0.5	<0.5
MW4	04/10/03	342.96	36.55	306.41	NLPH	<51	<50.0	---	15.3	<0.50	<0.5	<0.5	<0.5
MW4	07/17/03	342.96	36.45	306.51	NLPH	<50	<50.0	—	11.4	<0.50	<0.5	<0.5	<0.5
MW4	10/09/03	342.96	37.7	305.26	NLPH	<50	<50.0	8.5	6.90	<0.50	<0.5	<0.5	<0.5

TABLE 2A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

Well ID	Sampling Date	TOC (fmsl)	DTW (fbgs)	GW Elev. (fmsl)	SUBJ (µg/L)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW4	01/21/04	342.96	35.78	307.18	NLPH	<50	<50.0	8.4	9.40	<0.50	<0.5	<0.5	<0.5
MW4	05/25/04	342.96	35.88	307.08	NLPH	<50	<50.0	18.0	14.40	<0.50	<0.5	<0.5	<0.5
MW4	08/26/04	342.96	i	i	i	<50i	<50.0i	8.3	11.1i	<0.50i	<0.5i	<0.5i	<0.5i
MW4	12/07/04 j	342.96	35.65	307.31	NLPH	f	f	f	f	f	f	f	f
MW4	03/17/05	342.96	29.34	313.62	NLPH	67k	<50.0	—	63.0	<0.50	<0.5	<0.5	<0.5
MW4	06/20/05	342.96	34.61	308.35	NLPH	<50	70.4	97.1	116	<0.50	<0.5	<0.5	<0.5
MW4	09/20/05	342.96	33.73	309.23	NLPH	159k	71.2	85.1	87.4	<0.50	<0.50	<0.50	<0.50
MW4	12/22/05	342.96	31.99	310.97	NLPH	<50.0	74.9	62.1	78.9	<0.50	<0.50	<0.50	<0.50
MW4	**03/23/06**	**342.96**	**31.63**	**311.33**	**NLPH**	**<47**	**53o**	**64**	**57.1**	**<0.50**	**<0.50**	**<0.50**	**<0.50**
MW5	06/16/00	342.87	Property transferred to Valero Refining Company.										
MW5	07/31/00 b	342.87	—	—	—	—	—	—	—	—	—	—	—
MW5	10/10/00	342.87	29.12	313.75	NLPH	150	<50	4.2	—	<0.5	<0.5	<0.5	<0.5
MW5	01/11/01	342.87	28.89	313.98	NLPH	b	b	b	—	b	b	b	b
MW5	04/11/01	342.87	28.23	314.64	NLPH	b	b	b	—	b	b	b	b
MW5	07/20/01 f	342.87	—	—	—	—	—	—	—	—	—	—	—
MW5	10/19/01	342.87	27.62	315.25	NLPH	86	<50	3.4	5	<0.5	<0.5	<0.5	<0.5
MW5	Nov-2001	342.87	Well surveyed in compliance with AB 2886 requirements.										
MW5	01/28/02	342.87	28.04	314.83	NLPH	<100	<50.0	5.90	—	<0.50	<0.50	<0.50	<0.50
MW5	04/17/02	342.87	29.10	313.77	NLPH	85	<50.0	5.60	6.7	<0.5	<0.50	<0.50	<0.50
MW5	07/17/02	342.87	29.37	313.50	NLPH	b	b	b	b	b	b	b	b
MW5	10/24/02	342.87	29.36	313.51	NLPH	b	b	b	b	b	b	b	b
MW5	03/21/03	342.87	28.55	314.32	NLPH	b	57.8	—	8.70	2.50	1.0	3.5	5.9
MW5	04/10/03	342.87	29.10	313.77	NLPH	b	56.1	—	7.20	5.50	3.0	2.9	4.3
MW5	07/17/03	342.87	28.91	313.96	NLPH	b	<0.50	—	12.0	1.00	<0.50	0.7	1.2
MW5	10/09/03	342.87	29.17	313.70	NLPH	<100	<50.0	5.5	4.50	<0.50	<0.5	<0.5	<0.5
MW5	01/21/04	342.87	28.75	314.12	NLPH	<50	<50.0	3.7	4.00	1.30	1.40	<0.5	2.4
MW5	05/25/04	342.87	28.95	313.92	NLPH	—	<50.0	3.6	2.90	0.70	0.7	1.8	2.9
MW5	08/26/04	342.87	i	i	i	<50i	<50.0i	5.1	5.20i	<0.50i	<0.5i	<0.5i	<0.5i
MW5	12/07/04 j	342.87	28.29	314.58	NLPH	106k, l	<50.0	1.9	2.00	0.70	<0.5	0.5	1.6
MW5	03/17/05	342.87	26.39	316.48	NLPH	143k	<50.0	—	4.40	<0.50	<0.5	<0.5	<0.5
MW5	06/20/05	342.87	28.01	314.86	NLPH	<59	<50.0	10.9	13.0	<0.50	<0.5	<0.5	0.5
MW5	09/20/05	342.87	28.61	314.26	NLPH	1,730k	75.3	8.06	6.38	<0.50	<0.50	<0.50	<0.50
MW5	12/22/05	342.87	28.67	314.20	NLPH	70.3k	104	8.76	9.00	4.95	4.69	2.34	39.0
MW5	**03/23/06**	**342.87**	**28.03**	**314.84**	**NLPH**	**140k**	**<50**	**20**	**18.5**	**<0.50**	**<0.50**	**<0.50**	**<0.50**
MW6	06/16/00	341.05	Property transferred to Valero Refining Company.										
MW6	07/31/00	341.05	39.72	301.33	NLPH	<50	<50	<2	<5	<0.5	<0.5	<0.5	<0.5
MW6	10/10/00	341.05	40.12	300.93	NLPH	<50	c	c	—	c	c	c	c
MW6	01/11/01	341.05	46.13	294.92	NLPH	<50	<50	<2	—	<0.5	<0.5	<0.5	<0.5
MW6	04/11/01	341.05	45.40	295.65	NLPH	b	b	b	—	b	b	b	b

TABLE 2A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

Well ID	Sampling Date	TOC (fmsl)	DTW (fbgs)	GW Elev. (fmsl)	SUBJ (µg/L)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW6	07/20/01	341.05	41.75	299.30	NLPH	<50	<50	<5	---	<0.3	<0.3	<0.6	<0.6
MW6	10/19/01	341.05	44.10	296.95	NLPH	<50	<50	<2	---	<0.5	<0.5	<0.5	<0.5
MW6	Nov-2001	341.05	Well surveyed in compliance with AB 2886 requirements.										
MW6	01/28/02	341.05	39.57	301.48	NLPH	<100	<50.0	<0.50	---	<0.50	<0.90	<0.50	<0.50
MW6	04/17/02	341.05	41.84	299.21	NLPH	52	<50.0	<0.50	---	<0.5	<0.50	<0.50	<0.50
MW6	07/17/02	341.05	42.85	298.20	NLPH	<50	<50.0	<0.5	---	<0.5	<0.5	<0.5	<0.5
MW6	10/24/02	341.05	42.10	298.95	NLPH	<50	<50.0	<0.5	---	<0.5	<0.5	<0.5	<0.5
MW6	03/21/03	341.05	44.81	296.24	NLPH	107	<50.0	<0.5	---	<0.50	<0.5	<0.5	<0.5
MW6	04/10/03	341.05	44.28	296.77	NLPH	60	<50.0	—	0.80	<0.50	<0.5	<0.5	<0.5
MW6	07/17/03	341.05	41.56	299.49	NLPH	<50	<50.0	—	<0.50	<0.50	<0.5	<0.5	<0.5
MW6	10/09/03	341.05	41.54	299.51	NLPH	452	<50.0	0.50	0.60	<0.50	<0.5	<0.5	<0.5
MW6	01/21/04	341.05	38.20	302.85	NLPH	<50	<50.0	<0.5	<0.50	<0.50	<0.5	<0.5	<0.5
MW6	05/25/04	341.05	40.35	300.70	NLPH	<50	<50.0	<0.5	<0.50	<0.50	<0.5	<0.5	<0.5
MW6	08/26/04	341.05	i	i	i	314i	<50.0i	0.6	1.00i	2.10i	0.9i	0.8i	2.9i
MW6	12/07/04 j, m	341.05	---	---	---	---	---	---	---	---	---	---	---
MW6	03/17/05	341.05	37.44	303.61	NLPH	<50	<50.0	—	0.60	<0.50	<0.5	<0.5	<0.5
MW6	06/20/05	341.05	40.42	300.63	NLPH	<50	<50.0	<0.5	0.60	<0.50	<0.5	<0.5	<0.5
MW6	09/20/05	341.05	38.00	303.05	NLPH	117k	<50.0	0.66	0.570	<0.50	<0.50	<0.50	<0.50
MW6	12/22/05	341.05	37.55	303.50	NLPH	331k	<50.0	0.65	<0.500	0.86	1.39	<0.50	<0.50
MW6	**03/23/06**	**341.05**	**35.72**	**305.33**	**NLPH**	**<47**	**<50**	**<2.5**	**<1.00**	**<0.50**	**<0.50**	**<0.50**	**<0.50**
MW7	06/16/00	341.73	Property transferred to Valero Refining Company.										
MW7	07/31/00	341.73	24.22	317.51	NLPH	150	<50	13	8	<0.5	<0.5	<0.5	<0.5
MW7	10/10/00	341.73	24.09	317.64	NLPH	1,500	c	c	c	c	c	c	c
MW7	01/11/01	341.73	25.86	315.87	NLPH	330	<50	6.9	7	0.55	<0.5	<0.5	<0.5
MW7	04/11/01	341.73	24.28	317.45	NLPH	980e	<250	<10	---	<2.5	<2.5	<2.5	<2.5
MW7	07/20/01	341.73	25.52	316.21	NLPH	300	<50	8.2	6	<0.5	<0.5	<0.5	<0.5
MW7	10/19/01	341.73	24.99	316.74	NLPH	120	<50	4.9	<5	<0.5	<0.5	<0.5	<0.5
MW7	Nov-2001	341.73	Well surveyed in compliance with AB 2886 requirements.										
MW7	01/28/02	341.73	23.84	317.89	NLPH	<100	<50.0	8.50	---	<0.50	<0.50	<0.50	<0.50
MW7	04/17/02	341.73	28.19	313.54	NLPH	55	<50.0	9.70	11.6	<0.5	2.10	<0.50	<0.50
MW7	07/17/02	341.73	29.74	311.99	NLPH	69	<50.0	9.7	9.0	<0.5	<0.5	<0.5	<0.5
MW7	10/24/02	341.73	29.50	312.23	NLPH	262	<50.0	5.4	6.0	<0.5	<0.5	<0.5	<0.5
MW7	03/21/03	341.73	26.07	315.66	NLPH	<50	<50.0	6.00	---	<0.50	0.8	<0.5	<0.5
MW7	04/10/03	341.73	26.06	315.67	NLPH	<50	<50.0	---	9.00	<0.50	<0.5	<0.5	<0.5
MW7	07/17/03	341.73	27.18	314.55	NLPH	<50	<50.0	—	9.10	<0.50	<0.5	<0.5	<0.5
MW7	10/09/03	341.73	28.27	313.46	NLPH	<50	<50.0	12.5	5.60	<0.50	<0.5	<0.5	<0.5
MW7	01/21/04	341.73	24.51	317.22	NLPH	140	<50.0	15.1	17.6	<0.50	<0.5	<0.5	<0.5
MW7	05/25/04	341.73	28.87	312.86	NLPH	---	<50.0	17.6	13.10	<0.50	<0.5	<0.5	<0.5
MW7	08/26/04	341.73	i	i	i	322i	<50.0i	20.4	19.9i	<0.50i	<0.5i	<0.5i	<0.5i
MW7	12/07/04 j	341.73	27.68	314.05	NLPH	469k	<50.0	4.4	5.30	<0.50	<0.5	<0.5	<0.5

TABLE 2A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

Well ID	Sampling Date	TOC (fmsl)	DTW (fbgs)	GW Elev. (fmsl)	SUBJ (µg/L)	TPHd (µg/L)	TPHg (µg/L)	MTBE 8021B (µg/L)	MTBE 8260B (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW7	03/17/05	341.73	22.80	318.93	NLPH	131k	<50.0	---	16.5	<0.50	<0.5	<0.5	<0.5
MW7	06/20/05	341.73	26.73	315.00	NLPH	68k	<50.0	9.4	11.1	<0.50	<0.5	<0.5	<0.5
MW7	09/20/05	341.73	24.28	317.45	NLPH	4,690k	<5,000n	<50.0n	<0.500	<50.0n	<50.0n	<50.0n	<50.0n
MW7	12/22/05	341.73	24.54	317.19	NLPH	799k	<50.0	<0.50	<0.500	<0.50	0.76	<0.50	0.64
MW7	**03/23/06**	**341.73**	**22.46**	**319.27**	**NLPH**	**190k**	**<50**	**<2.5**	**<1.00**	**<0.50**	**<0.50**	**<0.50**	**<0.50**
MW8	06/16/00	341.44	Property transferred to Valero Refining Company.										
MW8	10/10/00 - 08/26/04	Well dry.											
MW8	12/07/04 h, j	341.44	65.15	276.29	NLPH	b	<50.0	7.6	2.40	<0.50	<0.5	<0.5	<0.5
MW8	03/17/05	341.44	59.75	281.69	NLPH	<50	<50.0	---	<0.50	<0.50	<0.5	<0.5	<0.5
MW8	06/20/05	341.44	55.15	286.29	NLPH	<50	<50.0	<0.5	<0.50	<0.50	<0.5	<0.5	<0.5
MW8	09/20/05	341.44	55.39	286.05	NLPH	229k	<50.0	0.58	<0.500	<0.50	<0.50	<0.50	0.52
MW8	12/22/05	341.44	51.96	289.48	NLPH	<50.0	<50.0	<0.50	<0.500	<0.50	<0.50	<0.50	<0.50
MW8	**03/23/06**	**341.44**	**46.63**	**294.81**	**NLPH**	**100k**	**<50**	**<2.5**	**<1.00**	**1.4**	**<0.50**	**0.83**	**<0.50**

TABLE 2A
CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

Notes:

TOC	=	Top of well casing elevation; datum is mean sea level.
SUBJ	=	Results of subjective evaluation, liquid-phase hydrocarbon thickness (HT) in feet.
NLPH	=	No liquid-phase hydrocarbons present in well.
DTW	=	Depth to water.
GW Elev.	=	Groundwater elevation; datum is mean sea level.
TPHd	=	Total petroleum hydrocarbons as diesel analyzed using modified EPA Method 8015.
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using modified EPA Method 5030/8015 (modified).
MTBE 8021B	=	Methyl tertiary butyl ether analyzed using EPA Method 8020 or 8021B.
MTBE 8260B	=	Methyl tertiary butyl ether analyzed using EPA Method 8260B.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8021B.
ETBE	=	Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
TAME	=	Tertiary amyl methyl ether analyzed using EPA Method 8260B.
TBA	=	Tertiary butyl alcohol analyzed using EPA Method 8260B.
EDB	=	1,2-dibromoethane analyzed using EPA Method 8260B.
1,2-DCA	=	1,2-dichloroethane analyzed using EPA Method 8260B.
DIPE	=	Di-isopropyl ether analyzed using EPA Method 8260B.
µg/L	=	Micrograms per liter.
fmsl	=	Feet above mean sea level.
fbgs	=	Feet below ground surface.
<	=	Not detected at or above the stated laboratory method reporting limit.
...	=	Not analyzed/Not applicable.
a	=	No result because of sample loss during laboratory fire.
b	=	Not enough water to gauge and/or sample.
c	=	Samples were damaged during transportation to laboratory.
d	=	Analyzed using EPA Method 8260.
e	=	Diesel-range hydrocarbons detected in bailer blank; result is suspect.
f	=	Well inacessible.
g	=	DTW was not measured due to equipment failure.
h	=	Grab sample.
i	=	Groundwater elevation data invalidated; analytical results suspect.
j	=	Incorrect date recorded on the Chain-of-Custody form and/or laboratory analytical report. The correct date is shown.
k	=	Diesel-range organic compounds reported in sample; however, chromatogram pattern is not representative of diesel fuel.
l	=	Analyte detected in laboratory method blank; result is suspect.
m	=	Incorrect well monitored and sampled. Results invalidated.
n	=	Elevated reporting limit used due to sample matrix effects.
o	=	Result elevated due to single analyte peak in quantitation range.

TABLE 2B
ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

Well ID	Sampling Date	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	Ethanol (µg/L)
MW1	11/17/98 - 06/16/00	Not analyzed for these analytes.						
MW1	07/31/00	<10	<10	<500	<5	<5	<10	---
MW1	10/10/00 - 10/24/02	Not analyzed for these analytes.						
MW1	03/21/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW1	04/10/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW1	07/17/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW1	10/09/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW1	01/21/04	<0.50	2.20	57.9	<0.50	<0.50	<0.50	---
MW1	05/25/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	---
MW1	08/26/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	---
MW1	12/07/04 J	<0.50	2.00	49.6	<0.50	<0.50	<0.50	---
MW1	03/17/05	<0.50	7.60	201	<0.50	<0.50	<0.50	---
MW1	06/20/05	<0.50	<0.50	135	<0.50	<0.50	<0.50	---
MW1	09/20/05	<0.500	<0.500	30.6	<0.500	<0.500	<0.500	---
MW1	12/22/05	<0.500	<0.500	114	<0.500	<0.500	<0.500	---
MW1	**03/23/06**	**<1.00**	**<1.00**	**93.8**	**<1.00**	**<1.00**	**<1.00**	**<100**
MW2	11/17/98 - 06/16/00	Not analyzed for these analytes.						
MW2	07/31/00	<10	<10	<500	<5	<5	<10	---
MW2	10/10/00 - 10/24/02	Not analyzed for these analytes.						
MW2	03/21/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW2	04/10/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW2	07/17/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW2	10/09/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW2	01/21/04	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW2	05/25/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	---
MW2	08/26/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	---
MW2	12/07/04 J	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	---
MW2	03/17/05	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	---
MW2	06/20/05	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	---
MW2	09/20/05	<0.500	<0.500	<10.0	<0.500	<0.500	<0.500	---
MW2	12/22/05	<0.500	<0.500	<10.0	<0.500	<0.500	<0.500	---
MW2	**03/23/06**	**<1.00**	**<1.00**	**<10.0**	**<1.00**	**<1.00**	**<1.00**	**<100**
MW3	11/17/98 - 06/16/00	Not analyzed for these analytes.						
MW3	07/31/00	<10	<10	<500	<5	<5	<10	---
MW3	10/10/00 - 10/24/02	Not analyzed for these analytes.						
MW3	03/21/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW3	04/10/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---

TABLE 2B
ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

Well ID	Sampling Date	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	Ethanol (µg/L)
MW3	07/17/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW3	07/18/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW3	10/09/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW3	01/21/04	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW3	05/25/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	---
MW3	08/26/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	---
MW3	12/07/04 j	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	---
MW3	03/17/05	<0.50	<0.50	22.7	<0.50	<0.50	<0.50	---
MW3	06/20/05	<0.50	<0.50	13.3	<0.50	<0.50	<0.50	---
MW3	09/20/05	<0.500	<0.500	<10.0	<0.500	<0.500	<0.500	---
MW3	12/22/05	<0.500	<0.500	<10.0	<0.500	<0.500	<0.500	---
MW3	**03/23/06**	**<1.00**	**<1.00**	**<10.0**	**<1.00**	**<1.00**	**<1.00**	---
MW4	11/17/98 - 06/16/00	Not analyzed for these analytes.						
MW4	07/31/00	<10	<10	<500	<5	<5	<10	---
MW4	10/10/00 - 10/24/02	Not analyzed for these analytes.						
MW4	03/21/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW4	04/10/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW4	07/17/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW4	10/09/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW4	01/21/04	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW4	05/25/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	---
MW4	08/26/04	<0.50i	<0.50i	<10.0i	<0.50i	<0.50i	<0.50i	---
MW4	12/07/04 f, j	---	---	---	---	---	---	---
MW4	03/17/05	<0.50	0.70	<10.0	<0.50	<0.50	<0.50	---
MW4	06/20/05	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	---
MW4	09/20/05	<0.500	<0.500	<10.0	<0.500	<0.500	<0.500	---
MW4	12/22/05	<0.500	<0.500	<10.0	<0.500	<0.500	<0.500	---
MW4	**03/23/06**	**<1.00**	**<1.00**	**<10.0**	**<1.00**	**<1.00**	**<1.00**	---
MW5	06/16/00	---	---	---	---	---	---	---
MW5	07/31/00	<10	<10	<500	<5	<5	<10	---
MW5	10/10/00 - 10/24/02	Not analyzed for these analytes.						
MW5	03/21/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW5	04/10/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW5	07/17/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW5	10/09/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW5	01/21/04	<0.50	<0.50	<10	<0.50	<0.50	<0.50	---
MW5	05/25/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	---

TABLE 2B
ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

Well ID	Sampling Date	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	Ethanol (µg/L)
MW5	08/26/04	<0.50i	<0.50i	<10.0i	<0.50i	<0.50i	<0.50i	—
MW5	12/07/04 j	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—
MW5	03/17/05	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—
MW5	06/20/05	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—
MW5	09/20/05	<0.500	<0.500	<10.0	<0.500	<0.500	<0.500	—
MW5	12/22/05	<0.500	<0.500	<10.0	<0.500	<0.500	<0.500	—
MW5	**03/23/06**	**<1.00**	**<1.00**	**<10.0**	**<1.00**	**<1.00**	**<1.00**	—
MW6	06/16/00	—	—	—	—	—	—	—
MW6	07/31/00	<10	<10	<500	<5	<5	<10	—
MW6	10/10/00 - 10/24/02	Not analyzed for these analytes.						
MW6	03/21/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	—
MW6	04/10/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	—
MW6	07/17/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	—
MW6	10/09/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	—
MW6	01/21/04	<0.50	<0.50	<10	<0.50	<0.50	<0.50	—
MW6	05/25/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—
MW6	08/26/04	<0.50i	<0.50i	<10.0i	<0.50I	<0.50i	<0.50i	—
MW6	12/07/04 j,m	—	—	—	—	—	—	—
MW6	03/17/05	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—
MW6	06/20/05	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—
MW6	09/20/05	<0.500	<0.500	<10.0	<0.500	<0.500	<0.500	—
MW6	12/22/05	<0.500	<0.500	<10.0	<0.500	<0.500	<0.500	—
MW6	**03/23/06**	**<1.00**	**<1.00**	**<10.0**	**<1.00**	**<1.00**	**<1.00**	—
MW7	06/16/00 - 10/24/02	Not analyzed for these analytes.						
MW7	03/21/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	—
MW7	04/10/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	—
MW7	07/17/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	—
MW7	10/09/03	<0.50	<0.50	<10	<0.50	<0.50	<0.50	—
MW7	01/21/04	<0.50	<0.50	<10	<0.50	<0.50	<0.50	—
MW7	05/25/04	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—
MW7	08/26/04	<0.50i	<0.50i	<10.0i	<0.50i	<0.50i	<0.50i	—
MW7	12/07/04 j	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—
MW7	03/17/05	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—
MW7	06/20/05	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	—
MW7	09/20/05	<0.500	<0.500	<10.0	<0.500	<0.500	<0.500	—
MW7	12/22/05	<0.500	<0.500	<10.0	<0.500	<0.500	<0.500	—
MW7	**03/23/06**	**<1.00**	**<1.00**	**<10.0**	**<1.00**	**<1.00**	**<1.00**	**<100**

TABLE 2B
ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

Well ID	Sampling Date	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	Ethanol (µg/L)
MW8	07/31/00	<10	<10	<500	<5	<5	<10	--
MW8	10/10/00 - 08/26/04	Well dry.						
MW8	12/07/04 h, j	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	--
MW8	03/17/05	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	--
MW8	06/20/05	<0.50	<0.50	<10.0	<0.50	<0.50	<0.50	--
MW8	09/20/05	<0.500	<0.500	<10.0	<0.500	<0.500	<0.500	--
MW8	12/22/05	<0.500	<0.500	<10.0	<0.500	<0.500	<0.500	--
MW8	**03/23/06**	**<1.00**	**<1.00**	**<10.0**	**<1.00**	**<1.00**	**<1.00**	**<100**

TABLE 2B
ADDITIONAL CUMULATIVE GROUNDWATER MONITORING AND SAMPLING DATA
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

Notes:

TOC	=	Top of well casing elevation; datum is mean sea level.
SUBJ	=	Results of subjective evaluation, liquid-phase hydrocarbon thickness (HT) in feet.
NLPH	=	No liquid-phase hydrocarbons present in well.
DTW	=	Depth to water.
GW Elev.	=	Groundwater elevation; datum is mean sea level.
TPHd	=	Total petroleum hydrocarbons as diesel analyzed using modified EPA Method 8015.
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using modified EPA Method 5030/8015 (modified).
MTBE 8021B	=	Methyl tertiary butyl ether analyzed using EPA Method 8020 or 8021B.
MTBE 8260B	=	Methyl tertiary butyl ether analyzed using EPA Method 8260B.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8021B.
ETBE	=	Ethyl tertiary butyl ether analyzed using EPA Method 8260B.
TAME	=	Tertiary amyl methyl ether analyzed using EPA Method 8260B.
TBA	=	Tertalry butyl alcohol analyzed using EPA Method 8260B.
EDB	=	1,2-dibromoethane analyzed using EPA Method 8260B.
1,2-DCA	=	1,2-dichloroethane analyzed using EPA Method 8260B.
DIPE	=	Di-isopropyl ether analyzed using EPA Method 8260B.
µg/L	=	Micrograms per liter.
fmsl	=	Feet above mean sea level.
fbgs	=	Feet below ground surface.
<	=	Not detected at or above the stated laboratory method reporting limit.
---	=	Not analyzed/Not applicable.
a	=	No result because of sample loss during laboratory fire.
b	=	Not enough water to gauge and/or sample.
c	=	Samples were damaged during transportation to laboratory.
d	=	Analyzed using EPA Method 8260.
e	=	Diesel-range hydrocarbons detected in bailer blank; result is suspect.
f	=	Well inacessible.
g	=	DTW was not measured due to equipment failure.
h	=	Grab sample.
i	=	Groundwater elevation data invalidated; analytical results suspect.
j	=	Incorrect date recorded on the Chain-of-Custody form and/or laboratory analytical report. The correct date is shown.
k	=	Diesel-range organic compounds reported in sample; however, chromatogram pattern is not representative of diesel fuel.
l	=	Analyte detected in laboratory method blank; result is suspect.
m	=	Incorrect well monitored and sampled. Results invalidated.
n	=	Elevated reporting limit used due to sample matrix effects.
o	=	Result elevated due to single analyte peak in quantitation range.

TABLE 3
CUMULATIVE ANALYTICAL RESULTS OF SOIL SAMPLES
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

Sample ID	Depth (fbgs)	Date	TPHd (mg/kg)	TPHg (mg/kg)	MTBE (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	Total Lead (mg/kg)	TRPH (mg/kg)	HVOCs (mg/kg)	SVOCs (µg/kg)	VOCs (µg/kg)	TOG (mg/kg)
UST Replacement															
S-13-T1E	13	12/20/88	—	169	—	3.08	10.06	3.33	26.52	—	—	—	—	—	—
S-13-T1W	13	12/20/88	—	16	—	0.42	0.39	0.33	0.61	—	—	—	—	—	—
S-13-T2E	13	12/20/88	—	8	—	0.70	0.69	0.26	1.70	<0.16	—	—	—	—	—
S-13-T2W	13	12/20/88	—	117	—	0.96	0.92	2.85	17.03	<0.16	—	—	—	—	—
S-13-T3E	13	12/20/88	—	19	—	0.72	1.02	1.02	3.95	—	—	—	—	—	—
S-13-T3W	13	12/20/88	—	2,901	—	18	78	116	803	—	—	—	—	—	—
S-16-T1E	16	12/30/88	—	<2	—	<0.05	<0.05	<0.05	<0.05	—	—	—	—	—	—
S-13-T2E	13	12/30/88	—	—	—	—	—	—	—	—	—	—	—	—	—
S-14-T2W	14	12/30/88	—	<2	—	<0.05	<0.05	<0.05	<0.05	<0.2	—	—	—	—	—
S-17-T3W	17	12/30/88	—	<2	—	<0.05	<0.05	<0.05	<0.05	<0.2	—	—	—	—	—
S-10-WOT (T4)	10	12/20/88	<10	<1	—	—	—	—	—	—	—	—	—	—	<30
Monitoring Well Installation															
S-10-B1	10	11/11/98	<1.0	<1.0	<0.025	<0.005	<0.005	<0.005	<0.005	—	<50	—	ND	ND	—
S-15-B1	15	11/11/98	5.3	<1.0	<0.025	<0.005	<0.005	<0.005	<0.005	—	<50	—	ND	ND	—
S-35-B1	35	11/11/98	<1.0	<1.0	<0.025	<0.005	<0.005	<0.005	<0.005	—	<50	—	ND	ND	—
S-15-B2	15	11/11/98	<1.0	<1.0	<0.025	<0.005	<0.005	<0.005	<0.005	—	—	—	—	—	—
S-35-B2	35	11/11/98	<1.0	<1.0	<0.025	<0.005	<0.005	<0.005	<0.005	—	—	—	—	—	—
S-15-B3	15	11/12/98	1.3	<1.0	<0.025	<0.005	<0.005	<0.005	<0.005	—	—	—	—	—	—
S-25-B3	25	11/12/98	19	<1.0	<0.025	<0.005	<0.005	<0.005	<0.005	—	—	—	—	—	—
S-15-B4	15	11/12/98	<1.0	<1.0	<0.025	<0.005	<0.005	<0.005	<0.005	—	—	—	—	—	—
S-25-B4	25	11/12/98	<1.0	<1.0	<0.025	<0.005	<0.005	<0.005	<0.005	—	—	—	—	—	—
S-16-MW5	16	07/18/00	<2	<1	<0.001	<0.001	<0.001	<0.001	<0.001	—	—	—	—	—	—
S-30-MW5	30	07/18/00	3.8	<1	<0.001	<0.001	<0.001	<0.001	<0.001	—	—	—	—	—	—
S-18-MW6	18	07/19/00	<2	<1	<0.001	<0.001	<0.001	<0.001	<0.001	—	—	—	—	—	—
S-30-MW6	30	07/19/00	<2	<1	<0.001	<0.001	<0.001	<0.001	<0.001	—	—	—	—	—	—
S-15-MW7	15	07/18/00	<2	<1	<0.001	<0.001	<0.001	<0.001	<0.001	—	—	—	—	—	—
S-21-MW7	21	07/18/00	<2	<1	0.001	<0.001	<0.001	<0.001	0.001	—	—	—	—	—	—
S-15-MW8	15	03/16/01	<2	<1	<0.001	<0.001	<0.001	<0.001	<0.001	—	—	—	—	—	—
S-30-MW8	30	03/16/01	<2	<1	<0.0017	<0.001	<0.001	<0.001	<0.001	—	—	—	—	—	—
Product Line and Dispenser Replacement															
S-5.5-D1	5.5	08/09/02	<9.84	<25.0	0.0073	<0.0020	<0.0020	<0.0020	<0.0020	—	—	—	—	ND	—
S-6.5-PL1	6.5	08/09/02	<9.96	<25.0	0.0098	<0.0020	<0.0020	<0.0020	<0.0020	—	—	—	—	ND	—
S-4-PL3	4	08/09/02	<9.88	<25.0	0.0072	<0.0020	<0.0020	<0.0020	<0.0020	—	—	—	—	ND	—
S-5-D5	5	08/09/02	<9.96	<25.0	0.0625	<0.0020	<0.0020	<0.0020	<0.0020	—	—	—	—	ND	—
S-4-PL5	4	08/09/02	<9.84	<25.0	0.0222	<0.0020	<0.0020	<0.0020	<0.0020	—	—	—	—	ND	—
S-4.5-PL7	4.5	08/09/02	<10.0	<25.0	0.0148	<0.0020	<0.0020	<0.0020	<0.0020	—	—	—	—	ND	—
S-5-PL8	5	08/09/02	<10.0	<25.0	0.189	<0.0020	0.0023	<0.0020	0.0032b	—	—	—	—	ND	—
S-6-PL10	6	08/09/02	<9.92	<25.0	<0.0200	<0.0020	<0.0020	<0.0020	<0.0020	—	—	—	—	ND	—

TABLE 3
CUMULATIVE ANALYTICAL RESULTS OF SOIL SAMPLES
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California
(Page 2 of 2)

Sample ID	Depth (fbgs)	Date	TPHd (mg/kg)	TPHg (mg/kg)	MTBE (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	Total Lead (mg/kg)	TRPH (mg/kg)	HVOCs (mg/kg)	SVOCs (µg/kg)	VOCs (µg/kg)	TOG (mg/kg)
Stockpile Samples															
SP1-1 (1-4)	1	11/12/98	11	<1.0	<0.025	<0.005	<0.005	<0.005	<0.005	<5	<50	ND	---	---	---
SP-1-1	1	07/19/00	<2	<1	---	<0.001	<0.001	<0.001	<0.001	5.64	---	0.0023a	---	---	---
SP-1-(1-4)	1	03/16/01	<2	<1	<0.0022	<0.001	<0.001	<0.001	0.001	8.11	---	ND	---	---	---

Notes:

S-10-B1	=	Soil sample-depth in feet below ground surface-boring number.
SP1-1(1-4)	=	Stockpile soil sample-depth in feet below ground surface.
TPHd	=	Total petroleum hydrocarbons as diesel analyzed using EPA Method 8015M.
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015M.
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8021B or 8260B.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8021B.
TRPH	=	Total recoverable petroleum hydrocarbons analyzed using EPA Method 5520 E and F.
Total Lead	=	Total lead analyzed using EPA Method 6010B.
HVOCs	=	Halogenated volatile organic compounds analyzed using EPA Method 8010B.
SVOCs	=	Semi-volatile organic compounds analyzed using EPA Method 8270.
VOCs	=	Volatile organic compounds analyzed using EPA Method 8240 or 8260B.
TOG	=	Total oil and grease.
fbgs	=	Feet below ground surface.
ND	=	Not detected (various detection limits).
mg/kg	=	Milligrams per kilogram.
µg/kg	=	Micrograms per kilogram.
<	=	Less than the detection limit indicated.
---	=	Not analyzed/Not Applicable.
a	=	Methelyne Chloride.
b	=	Estimated value below reported limit.

TABLE 4
ANALYTICAL RESULTS OF GRAB GROUNDWATER SAMPLES
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

Sample ID	Sampling Date	Depth (fbgs)	TPHd (µg/L)	TPHg (µg/L)	MTBE (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
W-52-7-3567SB1	04/13/00	52	a	68	56	<0.5	<0.5	<0.5	<0.5
W-55-7-3567SB3	04/13/00	52	190	<50	290	<0.5	<0.5	<0.5	<0.5

Notes:

Sample ID	=	Water-Depth-Site ID-Soil Boring Number.
Depth	=	Depth of sample below ground surface.
TPHd	=	Total petroleum hydrocarbons as diesel analyzed using modified EPA Method 8015.
TPHg	=	Total petroleum hydrocarbons as gasoline analyzed using modified EPA Method 5030/8015 (modified).
MTBE	=	Methyl tertiary butyl ether analyzed using EPA Method 8260B.
BTEX	=	Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8021B.
µg/L	=	Micrograms per liter.
fbgs	=	Feet below ground surface.
<	=	Not detected at or above the stated laboratory method reporting limit.
—	=	Not analyzed/Not applicable.
a	=	There was insufficient sample quantity to perform analysis.

TABLE 5
UTILITY VAULT DATA
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

Map Designation	Type of Vault	Provider	Approximate Depth (inches)
V1	Telephone	Pacific Bell	18
V2	Electric	PG&E	26
V3	Electric	PG&E	—
V4	Electric	PG&E	8
V5	TV Cable	Comcast	15
V6	Traffic Signal	City of Pleasanton	—
V7	Traffic Signal	City of Pleasanton	10
V8	Traffic Signal	City of Pleasanton	—
V9	Electric	PG&E	—
V10	Electric	PG&E	—
V11	Water	City of Pleasanton	9
V12	Water	City of Pleasanton	10
V13	Traffic Signal	City of Pleasanton	8.5
V14	Sanitary Sewer	City of Pleasanton	—
V15	Sewer Clean Out	Private - Station	—
V16	Sewer Clean Out	Private - Station	—
V17	Sewer Clean Out	Private - Station	—
V18	Sewer Clean Out	Private - Station	—
V19	Sewer Clean Out	Private - Station	—
V20	Sanitary Sewer	City of Pleasanton	—
V21	Sewer Clean Out	Private - Station	—
V22	Sewer Clean Out	Private - Station	—
V23	Electric	PG&E	—
IR1	Irrigation	Private - Station	8
IR2	Irrigation	Private - Station	7
IR3	Irrigation	Private - Station	5
IR4	Irrigation	Private - Station	7
IR5	Irrigation	Private - Station	12
SD1	Storm drain	Private - Station	6
SD2	Storm drain	Private - Station	9
SD3	Storm drain	Private - Station	5
SD4	Storm drain	City of Pleasanton	66

Map designation corresponds to approximate location depicted on the Utility Vault Map.

V1 = Utility vault number 1.
IR1 = Irrigation control box number 1.
SD1 = Storm drain number 1.
— = Not applicable/Not determined.

TABLE 6
SUMMARY OF MODEL INPUT PARAMETERS
EXPOSURE PARAMETERS
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

EXPOSURE PARAMETER	UNITS	MODEL INPUT VALUE				SOURCE
		RESIDENTIAL		COMMERCIAL	CONSTRUCTION	
		Adult	Child			
Averaging time for carcinogens	yr	70	70	70	70	CalEPA 2004a
Averaging time for non-carcinogens	yr	30	—	25	1	CalEPA 2004a; model default
Body Weight	Kg	70	15	70	70	CalEPA 2004a
Exposure Duration	yr	30	6	25	1	CalEPA 2004a
Exposure frequency	days/yr	350	350	250	180	CalEPA 2004a
Exposure frequency, dermal exposure	days/yr	350	350	250	250	CalEPA 2004a
Ingestion rate of soil	mg/day	100	200	100	100	CalEPA 2004a
Skin surface area (dermal contact)	cm^2	5700	2800	3300	3300	CalEPA 2004a
Skin absorption factor (chemical specific)	unitless	0.1	0.1	0.1	0.1	CalEPA 2004a
Soil to skin adherence factor	mg/cm^2-day	0.2	0.2	0.2	0.2	CalEPA 2004a

TABLE 7
SUMMARY OF MODEL INPUT PARAMETERS
TOXICOLOGICAL PROPERTIES
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

CONSTITUENT OF CONCERN	GSI/ASTM						JOHNSON AND ETTINGER	
	ORAL[a]		DERMAL[b]		INHALATION[a]		INHALATION[a]	
	REFERENCE DOSE	SLOPE FACTOR	REFERENCE DOSE	SLOPE FACTOR	REFERENCE CONCENTRATION	UNIT RISK FACTOR	REFERENCE CONCENTRATION	UNIT RISK FACTOR
	mg/(kg-day)	$(mg/kg\text{-}day)^{-1}$	mg/(kg-day)	$(mg/kg\text{-}day)^{-1}$	ug/m^3	$(ug/m^3)^{-1}$	ug/m^3	$(ug/m^3)^{-1}$
Benzene	3.00E-03	1.00E-01	3.88E-03	5.67E-02	3.00E-02	2.90E-05	3.00E-02	2.90E-05
Toluene	2.00E-01	--	6.40E-02	--	3.00E-01	--	3.00E-01	--
Ethylbenzene	1.00E-01	--	9.70E-02	--	1.00E+00	--	1.00E+00	--
Xylenes, mixed isomers	2.00E-01	--	1.80E-01	--	1.00E-01	--	--	--
m-Xylene	--	--	--	--	--	--	1.00E-01	--
o-Xylene	--	--	--	--	--	--	1.00E-01	--
p-Xylene	--	--	--	--	--	--	1.00E-01	--
MTBE	8.60E-01	1.80E-03	8.00E-03	2.25E-03	3.00E+00	2.60E-07	3.00E+00	2.60E-07

Notes:
a = Source: CalEPA, 2004a.
b = Source: Risk Assessment Information System, 2006.

TABLE 8
SUMMARY OF MODEL INPUT PARAMETERS
SOIL AND BUILDING PARAMETERS
Former Exxon Service Station 7-3567
3192 Santa rita Road
Pleasanton, California

MODEL INPUT PARAMETER	UNITS	MODEL INPUT VALUE				SOURCE
		GSI/ASTM		Johnson and Ettinger		
		RESIDENTIAL	COMMERCIAL	RESIDENTIAL	COMMERCIAL	
SOIL PARAMETERS						
Soil type		Clay	Clay	Clay	Clay	Site specific
Capillary zone thickness	cm	31	31	81.52	81.52	Model default for soil type
Vadose zone thickness	cm	688	688	637.48	637.48	Model default for soil type
Soil bulk density	g/cm^3	1.7	1.7	1.43	1.43	ASTM 1995; model default
Fraction organic carbon	unitless	0.01	0.01	—	—	Site specific (estimate)
Soil total porosity	unitless	0.38	0.38	0.399	0.399	Model default for soil type
Volumetric water content (vadose)	unitless	0.37	0.37	0.148	0.148	Model default for soil type
Volumetric air content (vadose)	unitless	0.01	0.01	0.244	0.244	Model default for soil type
Vertical hydraulic permeability	cm/d	0.00086	0.00086	—	—	Model default for soil type
Vapor permeability	cm^2	1.00E-14	1.00E-14	1.89E-09	1.89E-09	Model default for soil type
Depth to groundwater	cm	719	719	719	719	Site specific
Depth to top of affected soil	cm	61	61	—	—	Site specific
Depth to base of affected soil	cm	688	688	637.48	637.48	Site specific
Soil/groundwater pH	pH units	6.8	6.8	—	—	Site specific (estimate)
Average soil/groundwater temperature	C	—	—	22	22	Site specific (estimate)
BUILDING PARAMETERS						
Building volume/area ratio	cm	244	244	—	—	CalEPA 2004a
Foundation area	cm^2	1.00E+06	1.00E+06	1.00E+06	1.00E+06	CalEPA 2004a
Foundation perimeter	cm	4000	4000	4000	4000	CalEPA 2004a
Building air exchange rate	d^{-1}	12	24	0.75	0.75	CalEPA 2004a
Foundation thickness	cm	15	15	15	15	ASTM 1995; model default
Depth to bottom of foundation slab	cm	15	15	15	15	ASTM 1995; model default
Foundation crack fraction	unitless	0.0028	0.0028	0.005	0.005	Johnson 2002 (mid-range; upper value)
Soil gas advection rate	L/m	—	—	5	5	CalEPA 2004a

TABLE 9
SUMMARY OF RISKS AND HAZARDS
DIRECT CONTACT AND INGESTION OF SOIL
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

CONSTITUENT OF CONCERN	Representative Concentration[a]	RESIDENTIAL		CONSTRUCTION	
		IELCR	Hazard Index	IELCR	Hazard Index
	(mg/Kg)	(unitless)	(unitless)	(unitless)	(unitless)
Benzene	0.005	4.8E-10	4.3E-05	7.6E-12	2.0E-06
Toluene	0.005		1.6E-07		6.8E-08
Ethylbenzene	0.005		1.5E-07		6.9E-08
Xylene (mixed isomers)	0.005		7.7E-08		3.5E-08
m-Xylene					
o-Xylene					
p-Xylene					
MTBE	0.19	4.8E-10	3.7E-05	7.3E-12	1.5E-05
TOTAL:		**9.7E-10**	**4.2E-05**	**1.5E-11**	**1.8E-05**

Notes:
mg/Kg = Miligrams per kilogram.
IELCR = Individual Excess Lifetime Cancer Risk.
a = Representative concentration based on maximum reported concentration or nominal reporting limit (0.005 mg/Kg), whichever is greater.

TABLE 10
SUMMARY OF RISKS AND HAZARDS
VOLATILIZATION FROM GROUNDWATER INTO INDOOR AIR
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

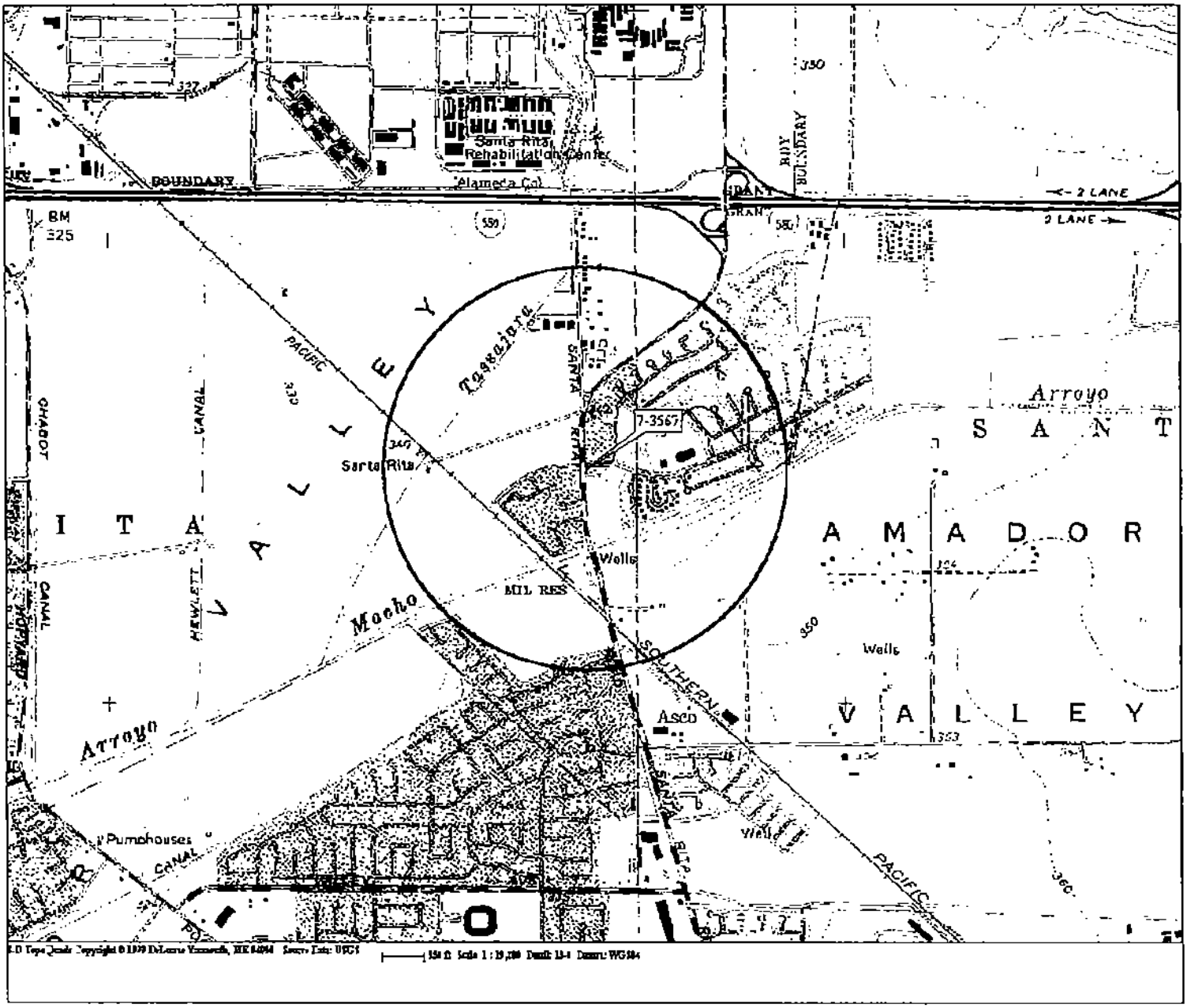
CONSTITUENT OF CONCERN	Representative Concentration in Groundwater[a]	RESIDENTIAL	
		IELCR	Hazard Index
	(µg/L)	(unitless)	(unitless)
Benzene	1.61	3.7E-08	9.9E-05
Toluene	1.55		9.9E-06
Ethylbenzene	0.96		1.8E-06
Xylene (mixed isomers)			
m-Xylene	10.13		1.7E-04
o-Xylene	10.13		1.8E-04
p-Xylene	10.13		1.9E-04
MTBE	133	1.2E-08	3.7E-05
TOTAL:		**4.9E-08**	**6.9E-04**

Notes:
µg/L = Micrograms per liter.
IELCR = Individual Excess Lifetime Cancer Rate.
a = Representative concentration obtained by calculating average COC concentration in each well over last four monitoring events, and selecting the maximum mean concentration.

TABLE 11
SUMMARY OF RISKS AND HAZARDS
VOLATILIZATION FROM SOIL TO INDOOR AIR
Former Exxon Service Station 7-3567
3192 Santa Rita Road
Pleasanton, California

CONSTITUENT OF CONCERN	Representative Concentration[a]	RESIDENTIAL	
		IELCR	Hazard Index
	(mg/Kg)	(unitless)	(unitless)
Benzene	0.005	8.3E-08	2.2E-04
Toluene	0.005		1.0E-05
Ethylbenzene	0.005		2.0E-06
Xylene (mixed isomers)	0.005		2.0E-05
m-Xylene			
o-Xylene			
p-Xylene			
MTBE	0.19	1.7E-07	5.2E-04
TOTAL:		**2.6E-07**	**7.7E-04**

Notes:
mg/Kg = Miligrams per kilogram.
IELCR = Individual Excess Lifetim Individual Excess Lifetime Cancer Risk
a = Representative concentration based on maximum reported concentration or nominal reporting limit (0.005 mg/Kg), whichever is greater.



FN 2431Topo

EXPLANATION

1/2-mile radius circle

N

APPROXIMATE SCALE

0 0.5 1 mile

SOURCE:
Modified from a map
provided by
DeLorme 3-D TopoQuads

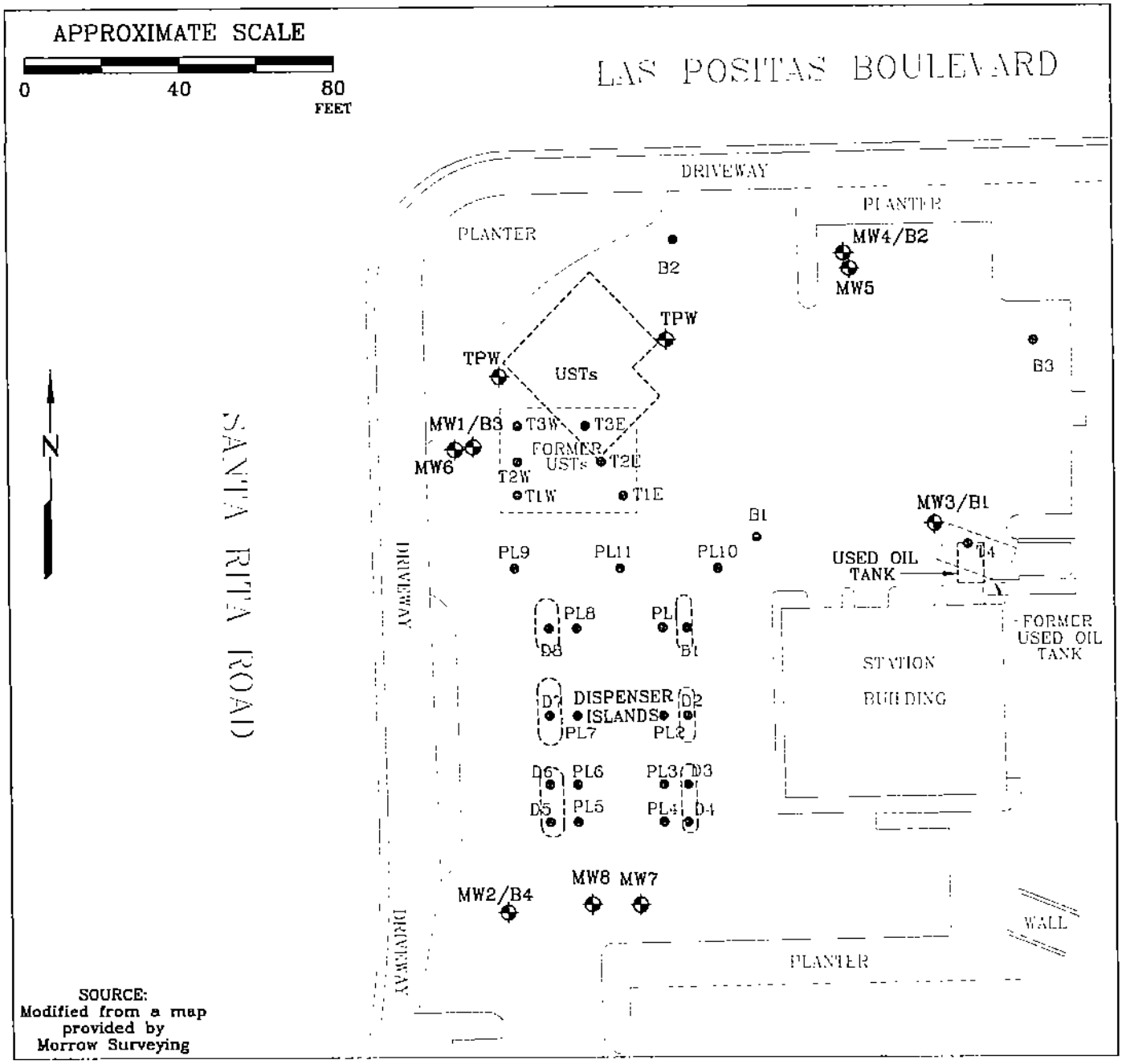
ENVIRONMENTAL RESOLUTIONS, INC.

SITE VICINITY MAP

FORMER EXXON SERVICE STATION 7-3567
3192 Santa Rita Road
Pleasanton, California

PROJECT NO. 2431

PLATE 1



FN 24310003

EXPLANATION

- Groundwater Monitoring Well
- TPW — Tank Pit Well
- B3 — Boring Location

ENVIRONMENTAL RESOLUTIONS, INC.

GENERALIZED SITE PLAN

FORMER EXXON SERVICE STATION 7-3567
3192 Santa Rita Road
Pleasanton, California

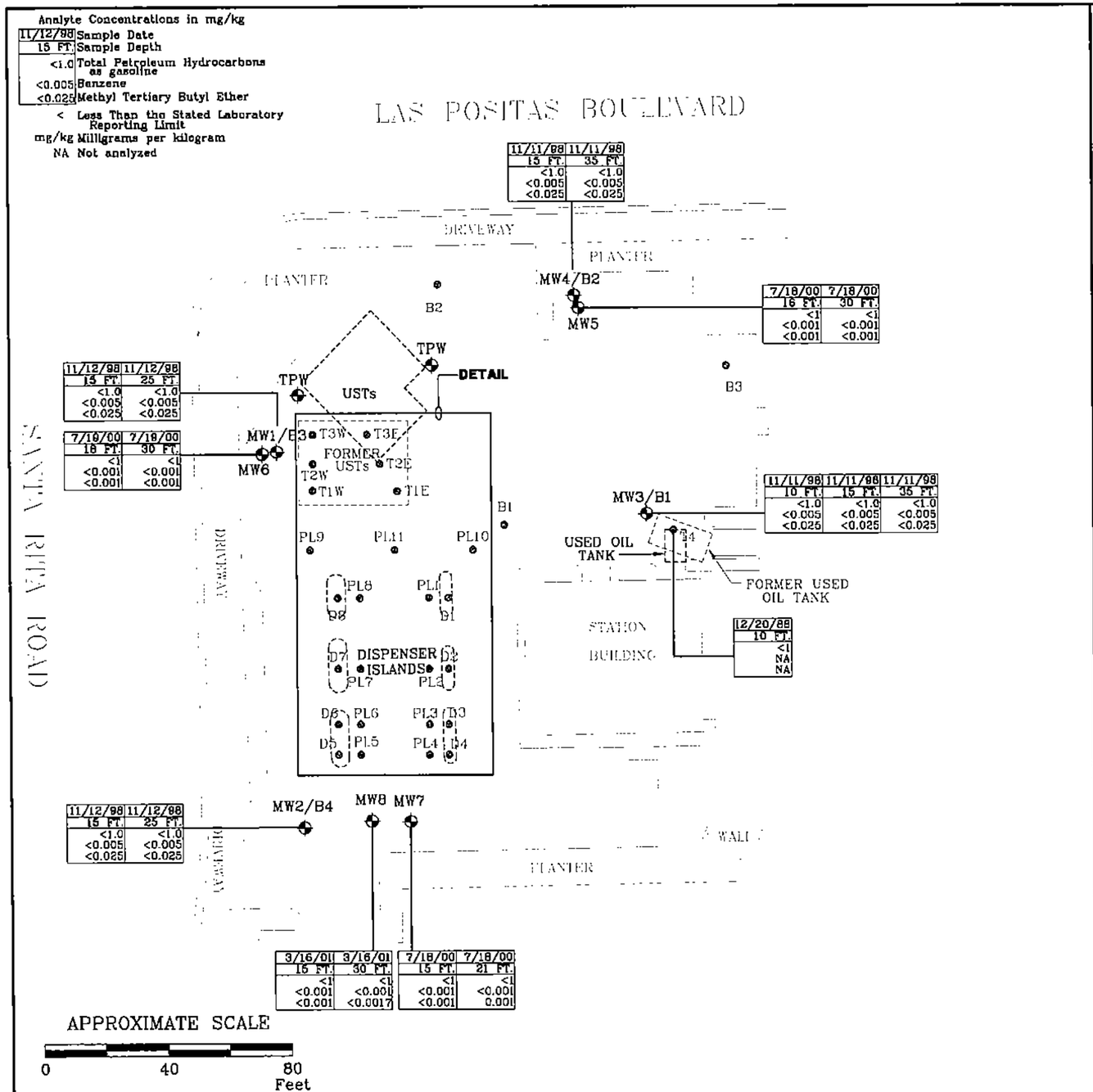
PROJECT NO. 2431

PLATE 2

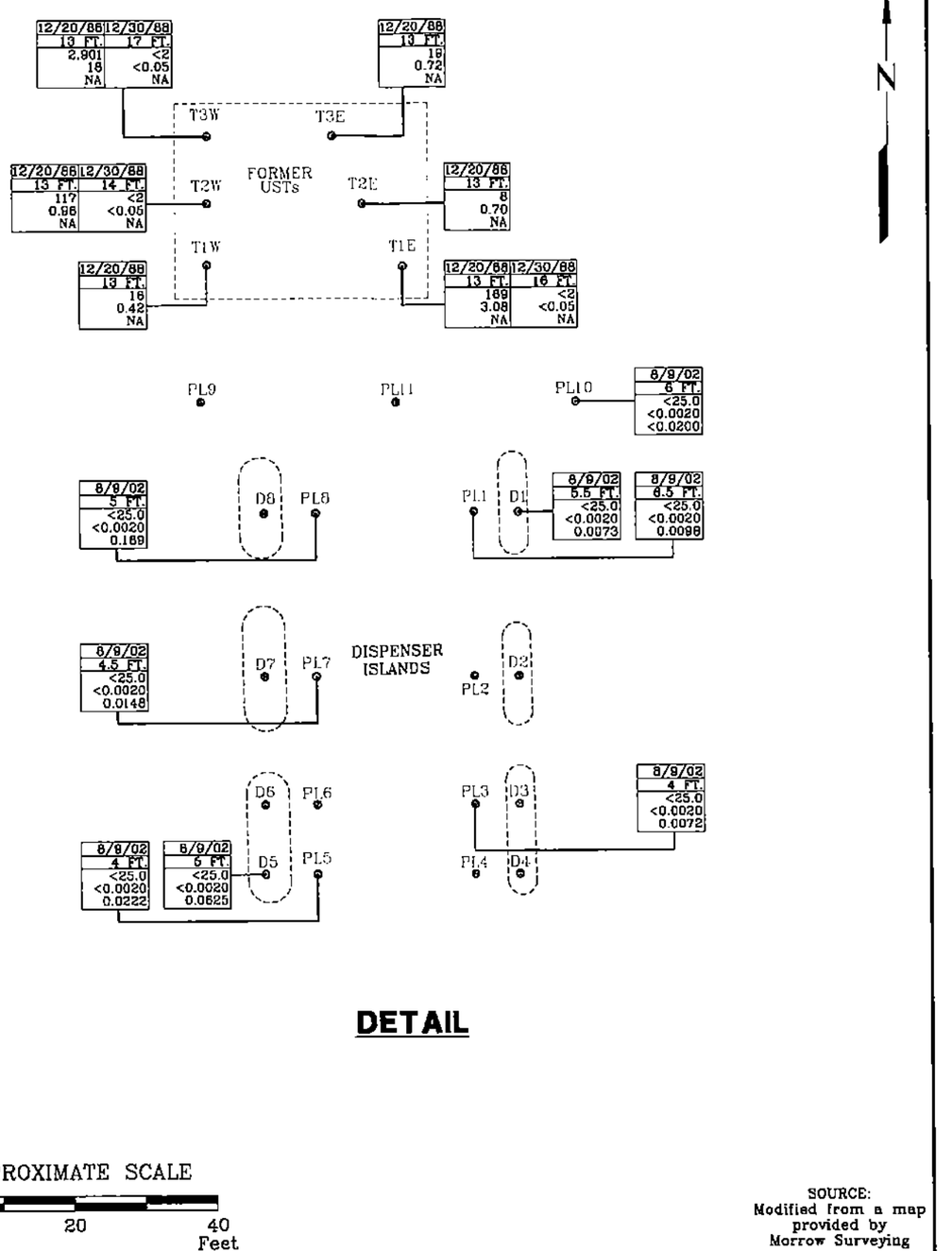
Analyte Concentrations in mg/kg

11/12/98	Sample Date
15 FT.	Sample Depth
<1.0	Total Petroleum Hydrocarbons as gasoline
<0.005	Benzene
<0.025	Methyl Tertiary Butyl Ether

< Less Than the Stated Laboratory Reporting Limit
mg/kg Milligrams per kilogram
NA Not analyzed



FN 24310004_SP



DETAIL

APPROXIMATE SCALE
0
20
40
Feet

SOURCE:
Modified from a map provided by Morrow Surveying

ENVIRONMENTAL RESOLUTIONS, INC.

RESIDUAL HYDROCARBON CONCENTRATIONS IN SOIL

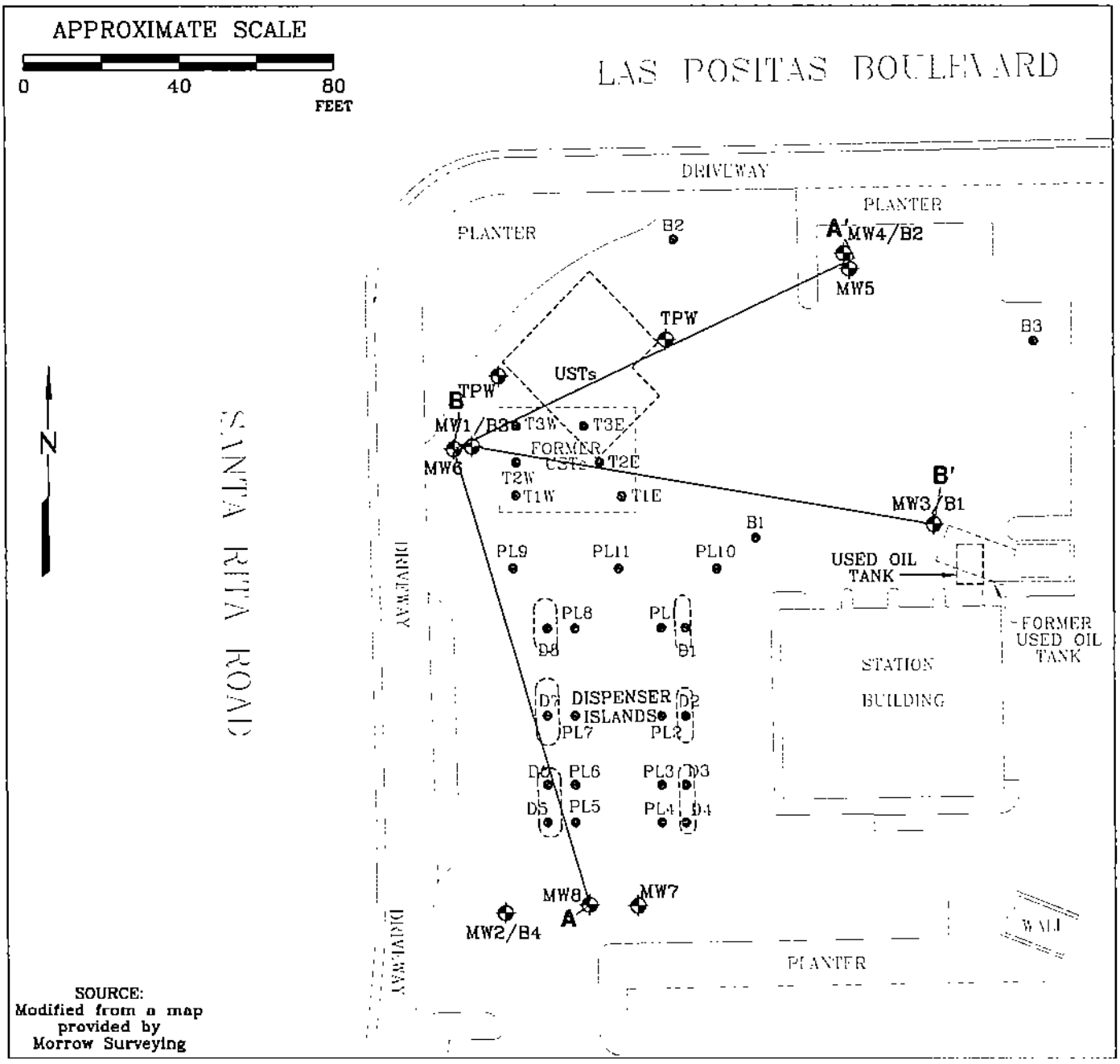
FORMER EXXON SERVICE STATION 7-3567
3192 Santa Rita Road
Pleasanton, California

EXPLANATION

- MW8 — Groundwater Monitoring Well
- TPW — Tank Pit Well
- S — Boring Location

PROJECT NO. 2431

PLATE 3



FN 24310003_SP

EXPLANATION

MW8 — Groundwater Monitoring Well

TPW — Tank Pit Well

D3 — Boring Location

B — B' Cross Section

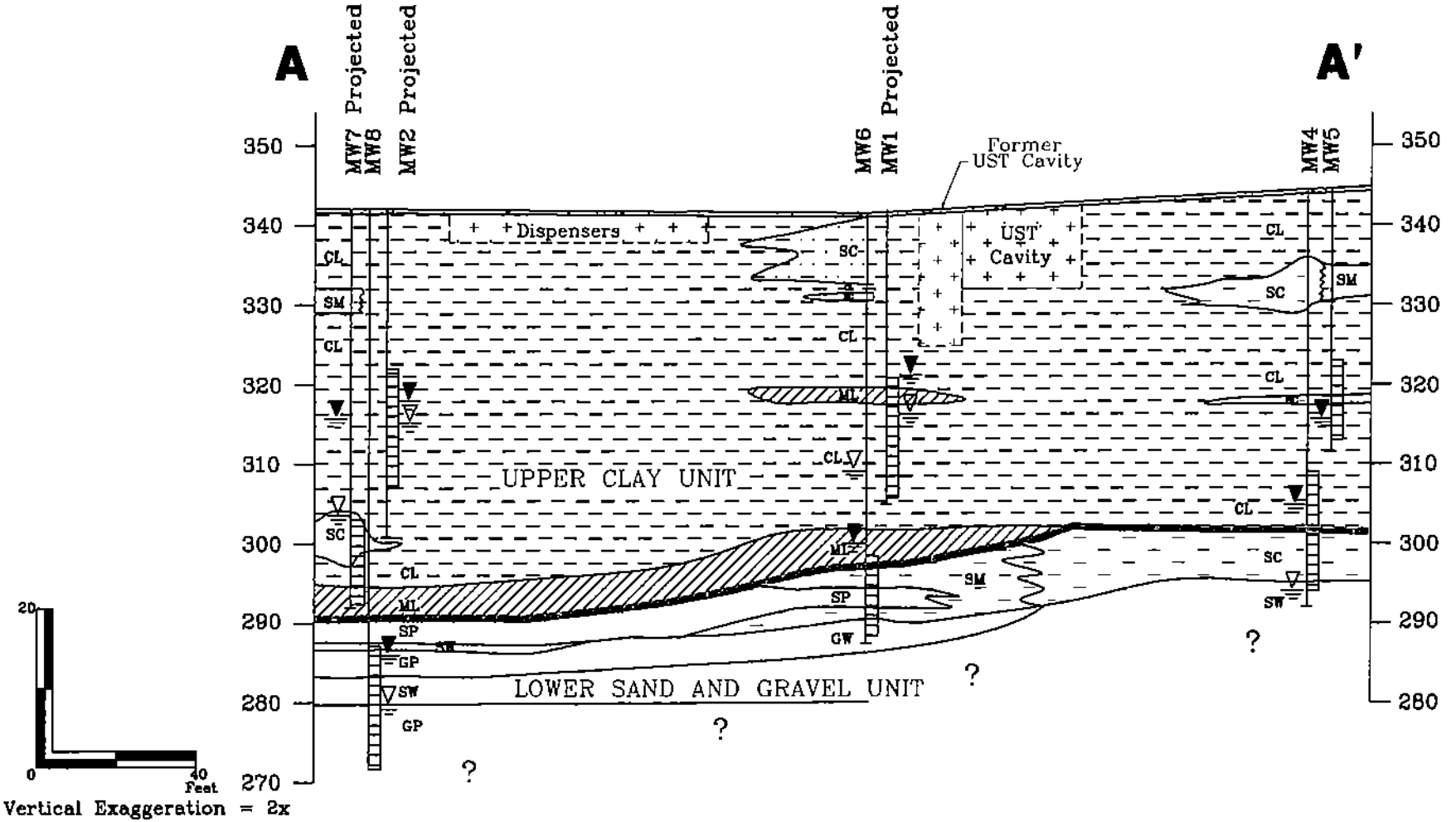
ENVIRONMENTAL RESOLUTIONS, INC.

GENERALIZED SITE PLAN

FORMER EXXON SERVICE STATION 7-3567
3192 Santa Rita Road
Pleasanton, California

PROJECT NO. 2431

PLATE 4



FN 2431SXAA

ERI ENVIRONMENTAL RESOLUTIONS, INC.

CROSS-SECTION A-A'

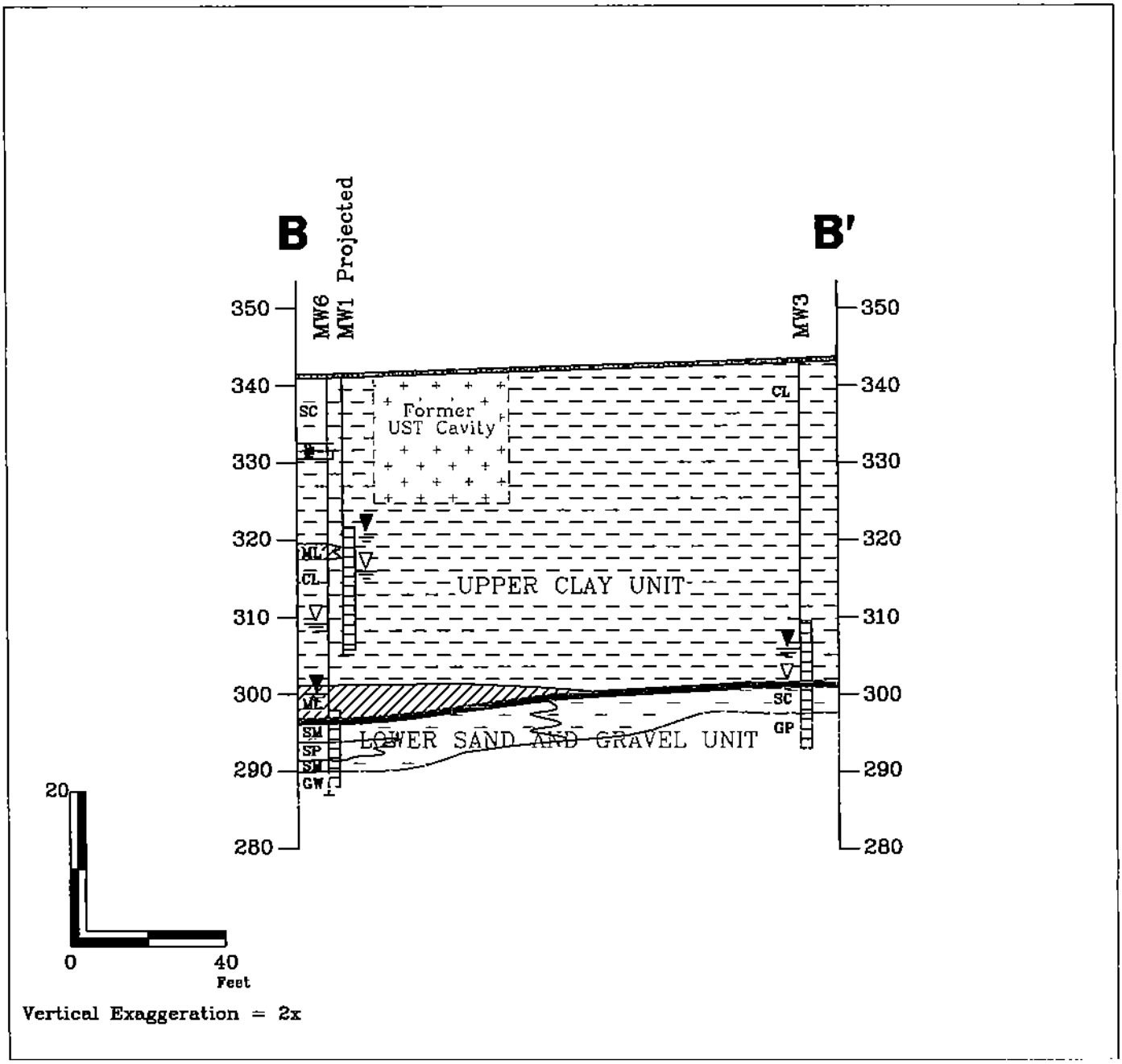
FORMER
EXXON SERVICE STATION 7-3567
3192 Santa Rita Road
Pleasanton, California

EXPLANATION

- Clay
- Silty Sand
- First encountered groundwater
- Sand
- Clayey Sand
- Static groundwater
- Sandy Gravel
- Screened Interval of Well
- Sandy/Clayey Silt

PROJECT NO. 2431

PLATE 5



FN 2431SXBB

EXPLANATION

- Clay
- Sandy/Clayey Silt
- Clayey Sand
- Silty Sand
- Gravelly Sand
- Sand
- Static Groundwater
- First Encountered Groundwater
- Screened Interval of Well

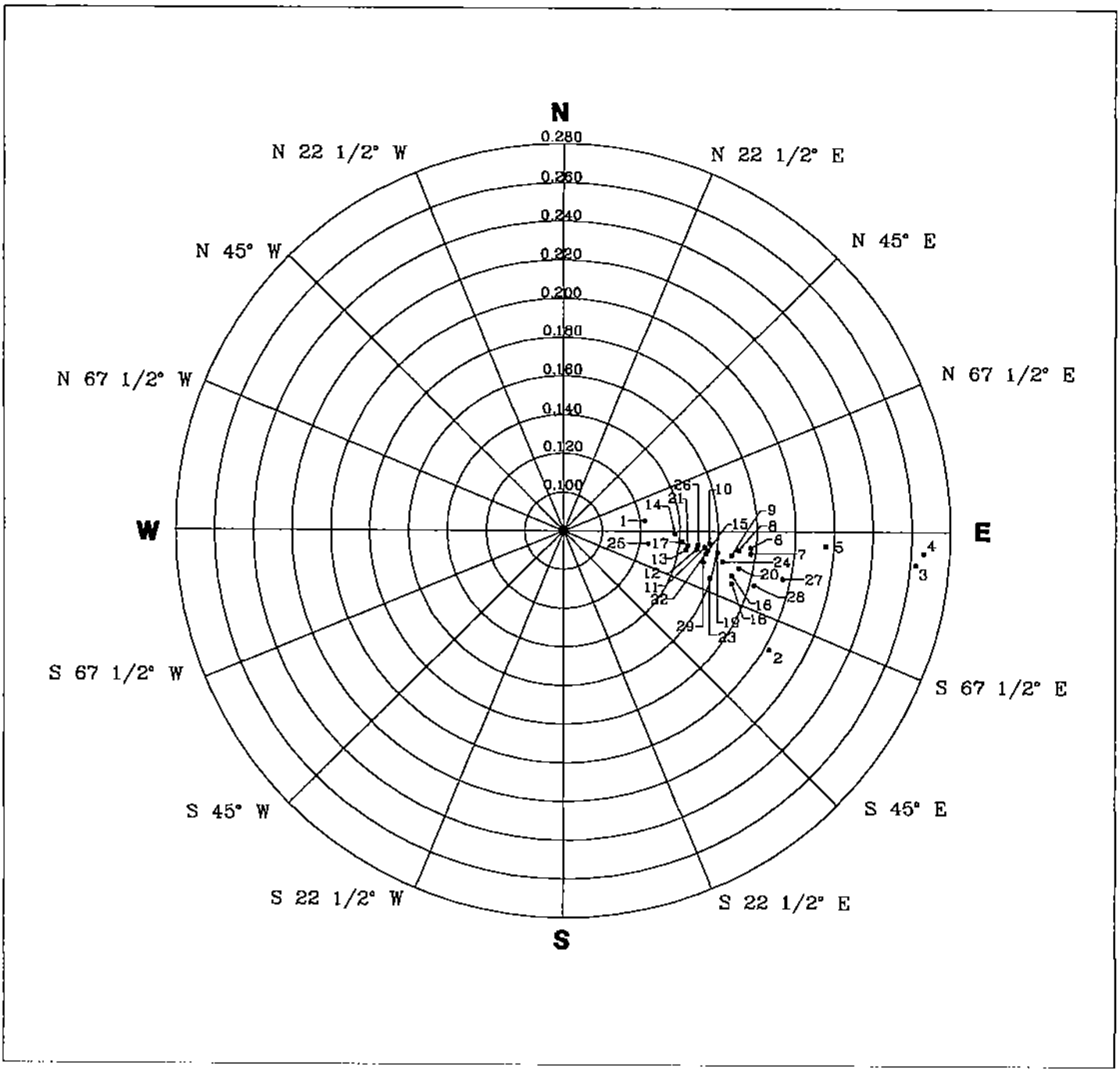
ENVIRONMENTAL RESOLUTIONS, INC.

CROSS-SECTION B-B'

FORMER EXXON SERVICE STATION 7-3567
3192 Santa Rita Road
Pleasanton, California

PROJECT NO. 2431

PLATE 6



2431RoseShallowSCM

EXPLANATION

N Compass Direction

29 Data Points Shown

Rose diagram developed by evaluating the groundwater gradient direction from the quarterly monitoring data. Each circle on the rose diagram represents the number of monitoring events that the gradient plotted in that 22 1/2 degree sector.

1: 11/17/98	5: 12/22/99	9: 10/10/00	13: 10/19/01	17: 03/21/03	21: 01/21/04	25: 03/17/05
2: 03/15/99	6: 03/07/00	10: 01/11/01	14: 01/28/02	18: 04/10/03	22: 05/25/04	26: 06/20/05
3: 06/25/99	7: 06/06/00	11: 04/11/01	15: 04/17/02	19: 07/17/03	23: 08/26/04	27: 09/20/05
4: 09/24/99	8: 07/31/00	12: 07/20/01	16: 10/24/02	20: 10/09/03	24: 12/07/04	28: 12/22/05
						29: 03/23/06

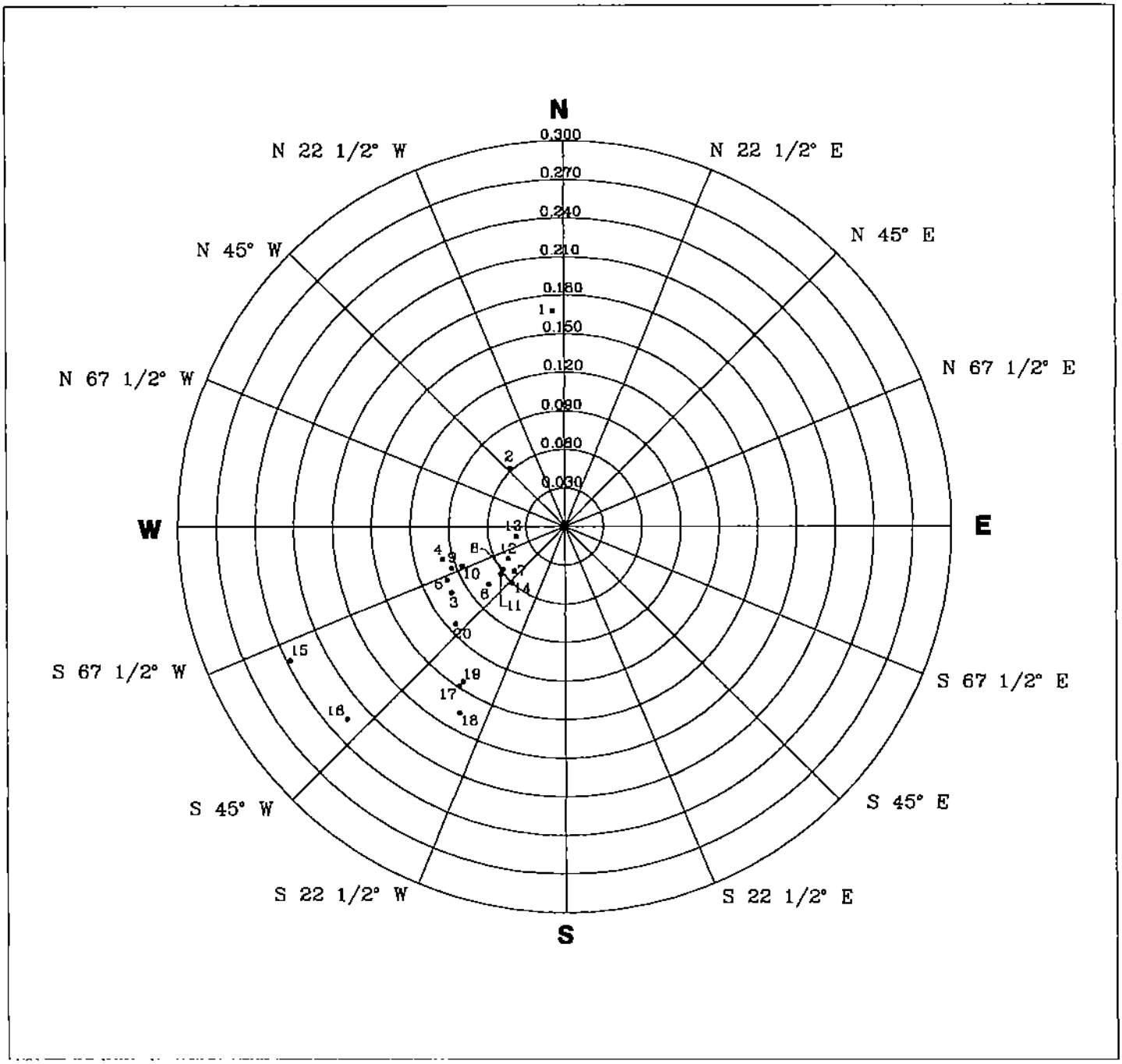
ERI ENVIRONMENTAL RESOLUTIONS, INC.

GROUNDWATER FLOW DIRECTION ROSE DIAGRAM - UPPER UNIT

FORMER EXXON SERVICE STATION 7-3567
3192 Santa Rita Road
Pleasanton, California

PROJECT NO. 2431

PLATE 7



2431RoseDeepSCM

EXPLANATION

N Compass Direction

20 Data Points Shown

Rose diagram developed by evaluating the groundwater gradient direction from the quarterly monitoring data. Each circle on the rose diagram represents the number of monitoring events that the gradient plotted in that 22 1/2 degree sector.

1: 07/31/00	5: 10/19/01	9: 03/21/03	13: 01/21/04	17: 06/20/05
2: 10/10/00	6: 01/28/02	10: 04/10/03	14: 05/25/04	18: 09/20/05
3: 01/11/01	7: 04/17/02	11: 07/17/03	15: 12/07/04	19: 12/22/05
4: 04/11/01	8: 10/24/02	12: 10/09/03	16: 03/17/05	20: 03/23/06

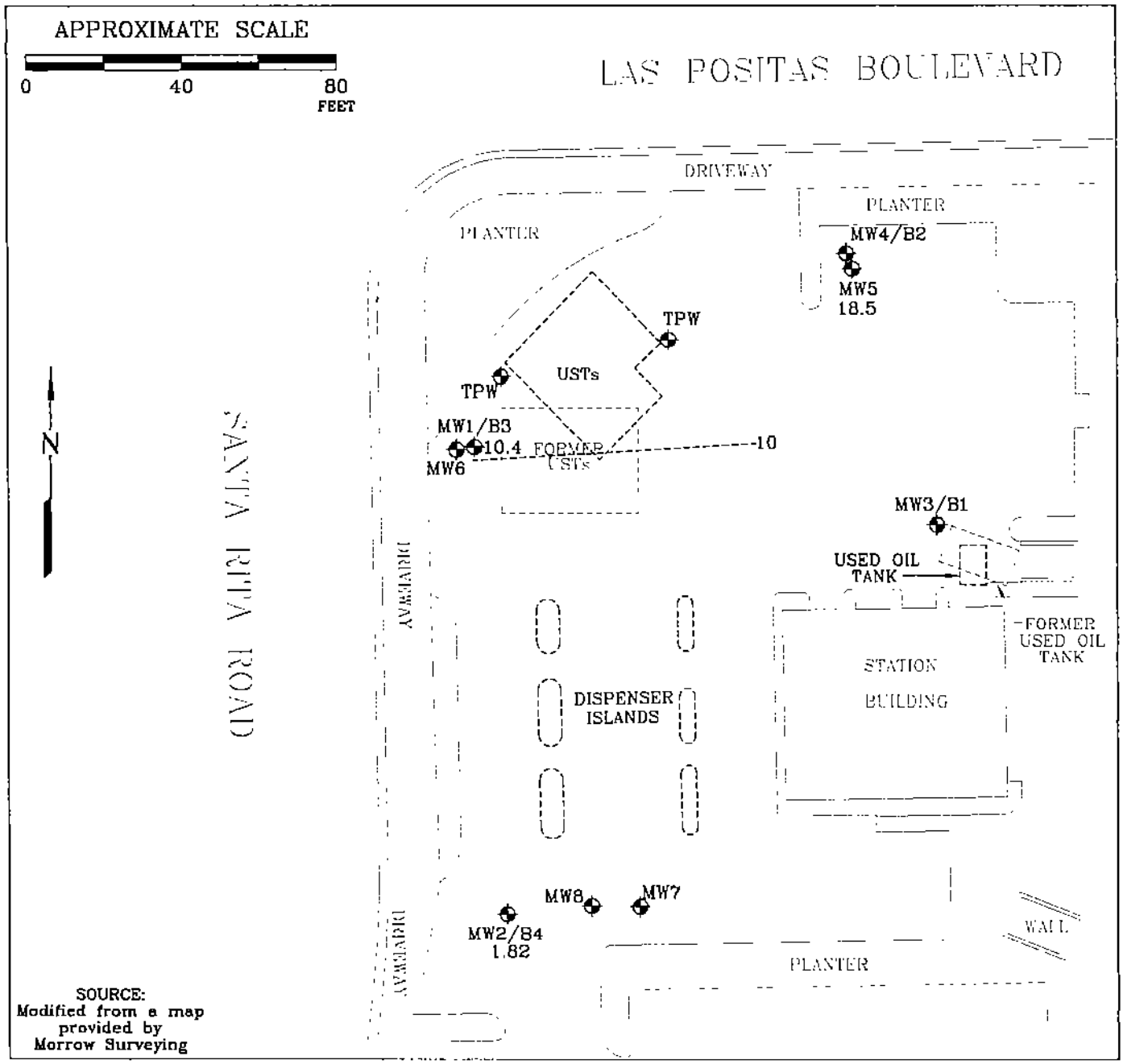
ERI ENVIRONMENTAL RESOLUTIONS, INC.

GROUNDWATER FLOW DIRECTION ROSE DIAGRAM - LOWER UNIT

FORMER EXXON SERVICE STATION 7-3567
3192 Santa Rita Road
Pleasanton, California

PROJECT NO. 2431

PLATE 8



FN 24310003_SP

EXPLANATION

MW2
Groundwater Monitoring Well

0.5 MTBE concentrartion (ug/L)

TPW
Tank Pit Well

10 ------Line of Equal MTBE Concentration (ug/L)

(Micrograms per Liter [ug/l])

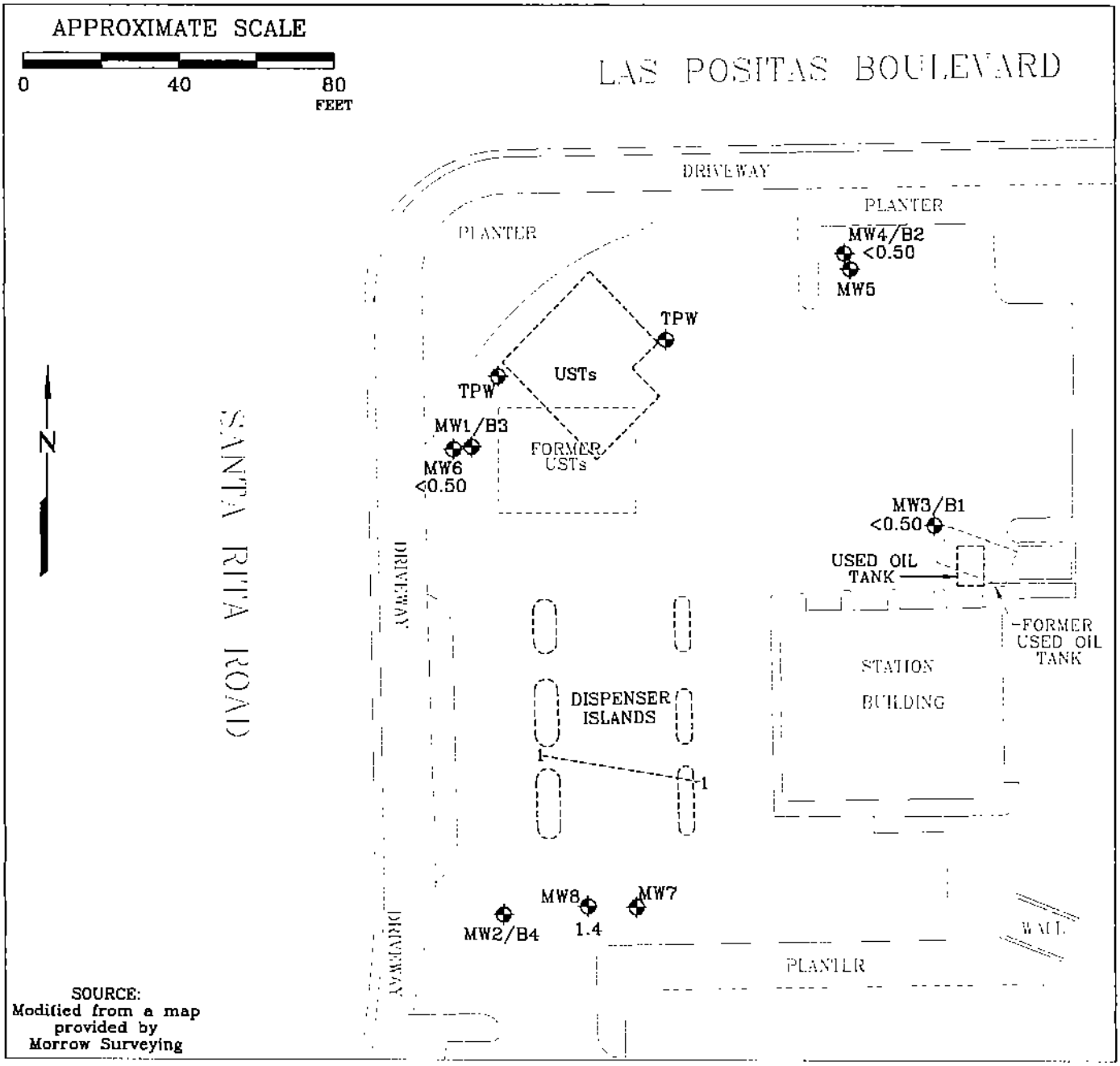
ENVIRONMENTAL RESOLUTIONS, INC.

MTBE ISOCONCENTRATION MAP SHALLOW ZONE

FORMER EXXON SERVICE STATION 7-3567
3192 Santa Rita Road
Pleasanton, California

PROJECT NO.
2431

PLATE
9



FN 24310003_SP

EXPLANATION

MW8 — Groundwater Monitoring Well

1.4 — Benzene concentrartion (ug/L)

TPW — Tank Pit Well

1-------Line of Equal Benzene Concentration (ug/L)

(Micrograms per Liter [ug/l])

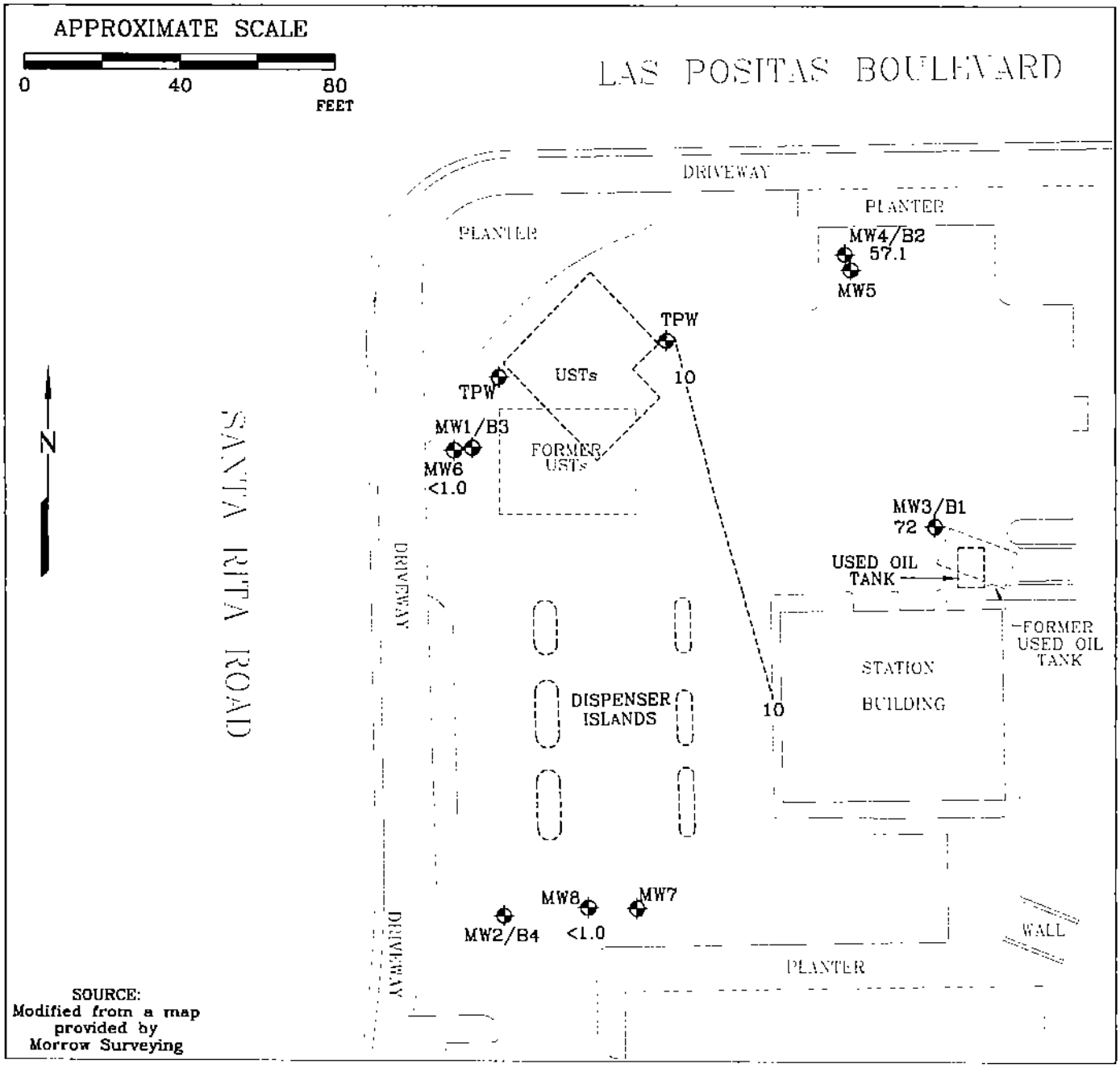
ENVIRONMENTAL RESOLUTIONS, INC.

BENZENE ISOCONCENTRATION MAP DEEP ZONE

FORMER EXXON SERVICE STATION 7-3567
3192 Santa Rita Road
Pleasanton, California

PROJECT NO. 2431

PLATE 10



FN 24310003_SP

EXPLANATION

MW8
Groundwater Monitoring Well

<1.0 MTBE concentrartion (ug/L)

TPW
Tank Pit Well

10------Line of Equal MTBE Concentration (ug/L)

(Micrograms per Liter [ug/l])

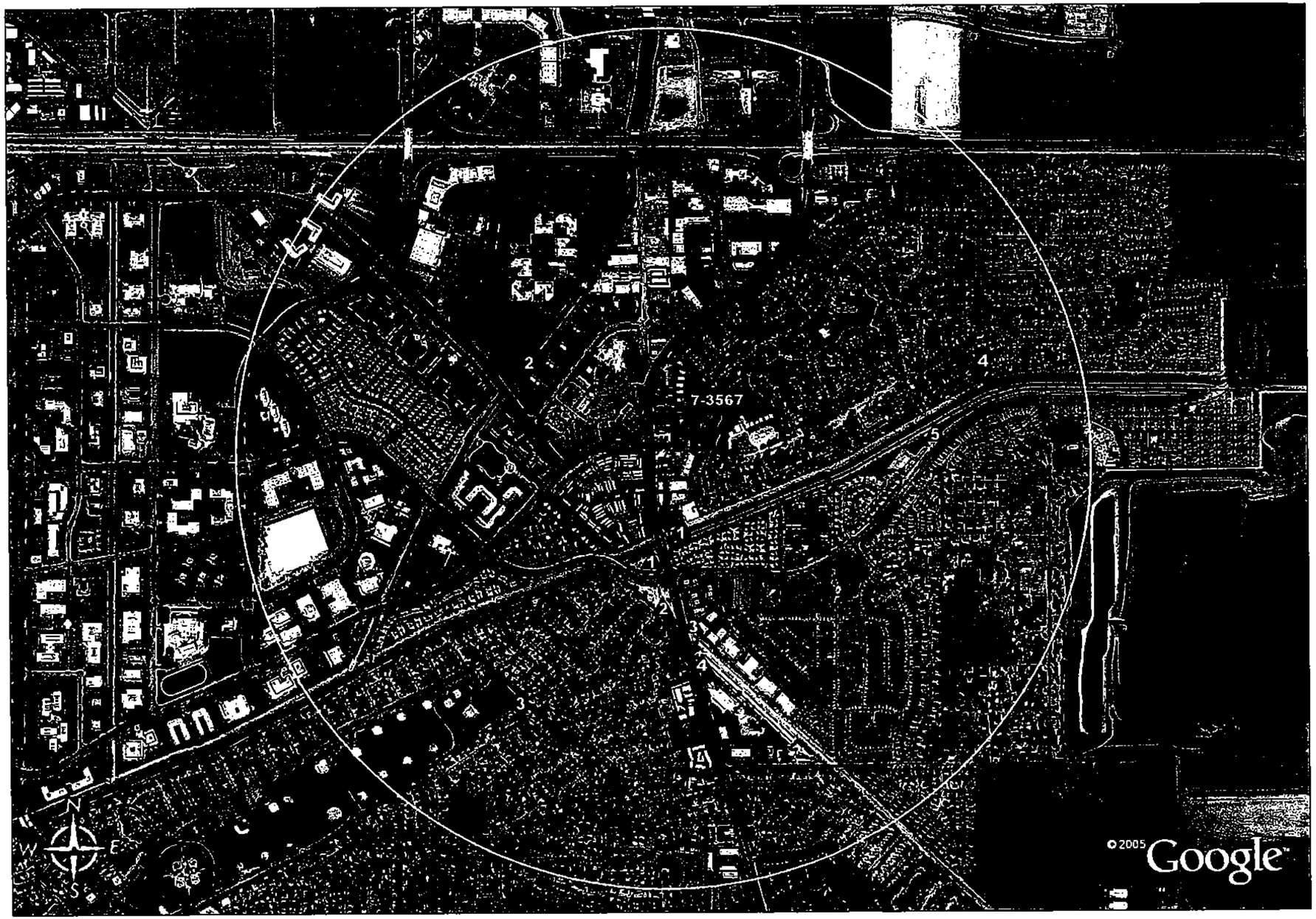
ERI ENVIRONMENTAL RESOURCES, INC.

MTBE ISOCONCENTRATION MAP DEEP ZONE

FORMER EXXON SERVICE STATION 7-3567
3192 Santa Rita Road
Pleasanton, California

PROJECT NO. 2431

PLATE 11



N

LEGEND

WELLS

1. Mocho 4
2. Mocho 3
3. Mocho 1
4. Mocho 2
5. Stoneridge

SURFACE WATER BODIES

1. Arroyo Mocho Canal
2. Tassajara Creek
3. Pleasanton Canal
4. Unnamed Canal

1,500 Meter Radius

APPROXIMATE SCALE

0 400 800 METERS

REGIONAL AREA MAP

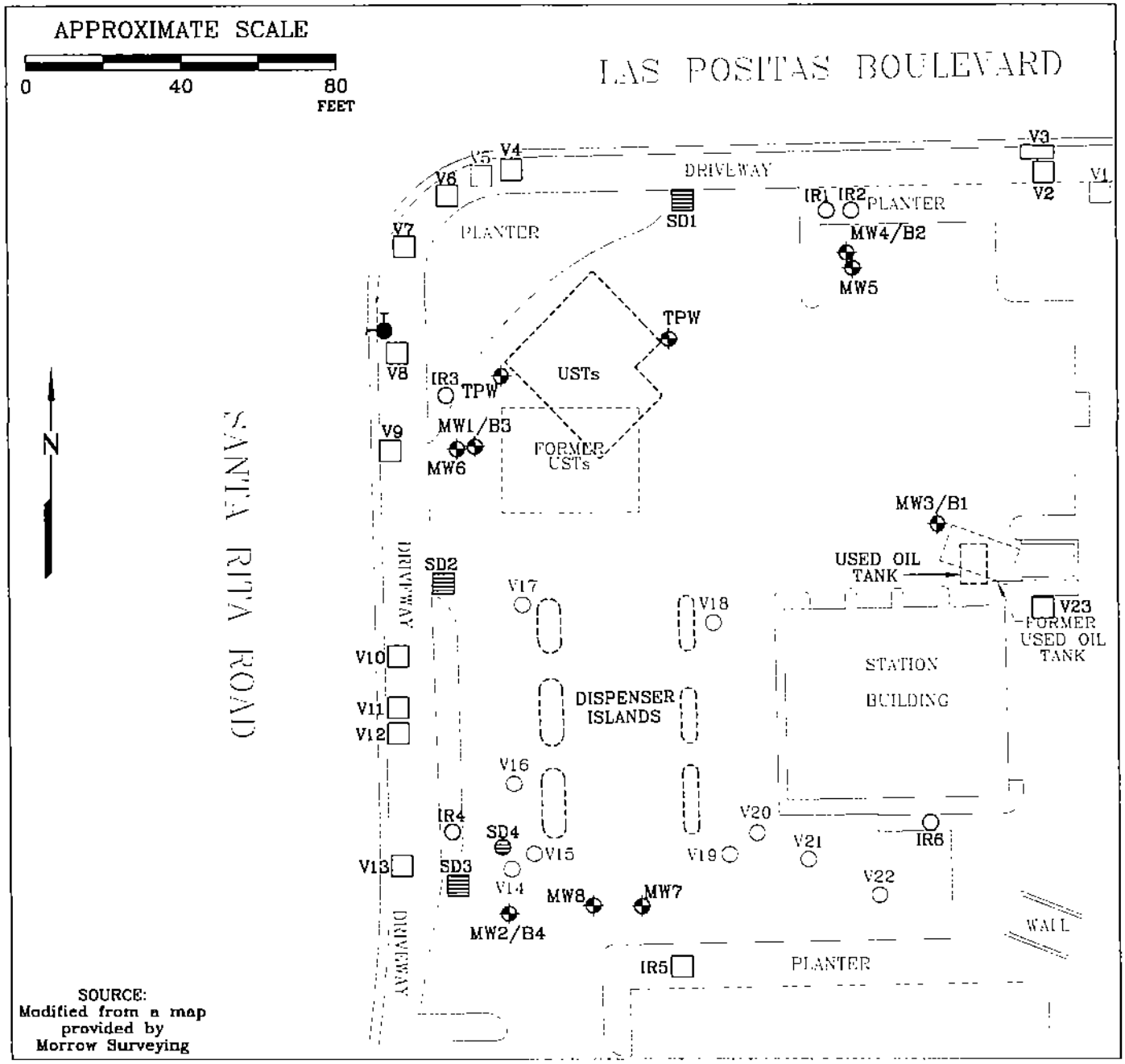
FORMER EXXON SERVICE STATION 7-3567
3192 Santa Rita Road
Pleasanton, California

ERI ENVIRONMENTAL RESOLUTIONS, INC.

PROJECT NO. 2431

PLATE 12

FN 2431_SP 06 SRS AERIAL



FN 24310003_SP

EXPLANATION

MW2
Groundwater Monitoring Well

TPW
Tank Pit Well

UTILITY LEGEND

- ELECTRICAL
- TELEPHONE
- WATER
- STORM DRAIN
- SANITARY SEWER OR CLEAN OUT
- FIRE HYDRANT

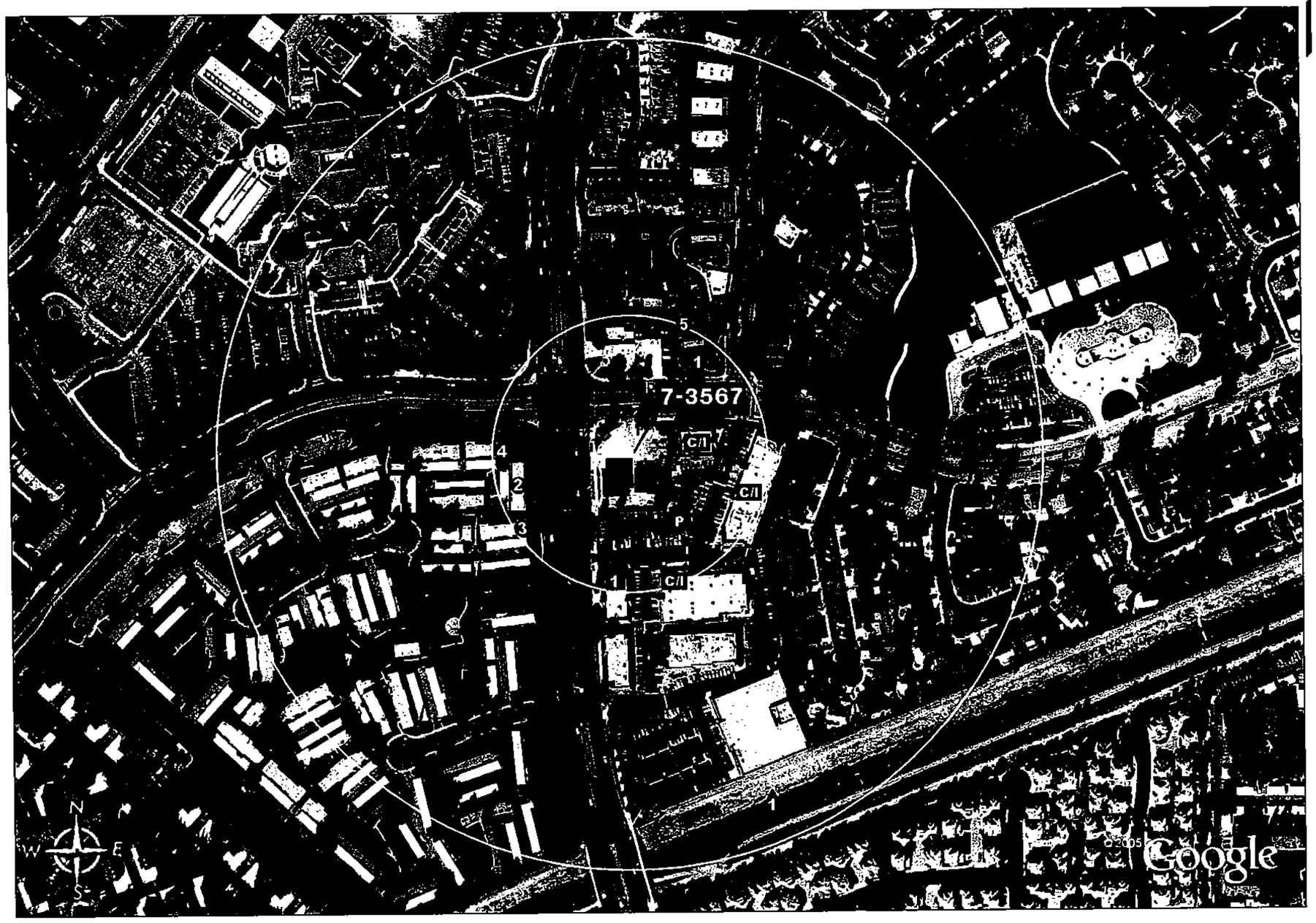
ENVIRONMENTAL RESOLUTIONS, INC.

UTILITY VAULT MAP

FORMER EXXON SERVICE STATION 7-3567
3192 Santa Rita Road
Pleasanton, California

PROJECT NO. 2431

PLATE 13



LEGEND

- C/I — Commericial / Industrial
- VAC — Vacant Lot
- P — Parking Lot
- R — Additional Residential

WELLS

There are no public or private wells within a 300m radius. See the Regional Area Map.

SURFACE WATER BODIES

1. Arroyo Mocho Canal

RESIDENCES

1. 4321/4337/4353 Las Positas Blvd., 4499 Fairlands Drive
2. 4401/4407/4411/4419/4425 Seminole Way
3. 4405/4413/4421/4429/4437 Comanche Way
4. 4429/4431/4433/4435 Seminole Way
5. 4469/4477/4481/4487 Fairlands Drive

PUBLIC USE AREAS

1. Pacific Dental Care

100 Meter and 300 Meter Radius

APPROXIMATE SCALE

0 80 160 METERS

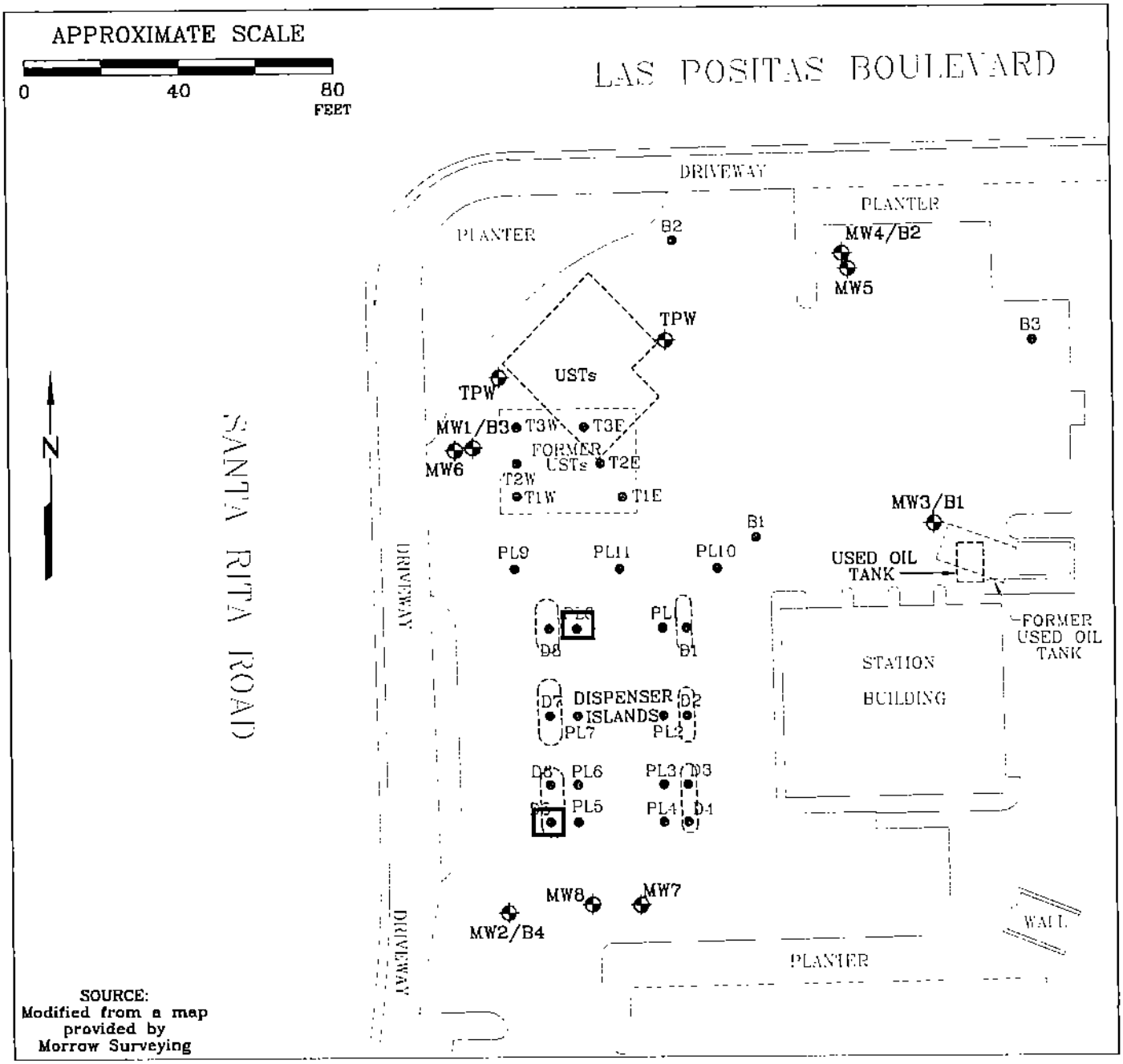
LOCAL AREA MAP

FORMER EXXON SERVICE STATION 7-3567
3192 Santa Rita Road
Pleasanton, California

ERI ENVIRONMENTAL RESOLUTIONS, INC.

PROJECT NO.	PLATE
2431	14

FN 2431_SP 06 SRS AERIAL



SOURCE:
Modified from a map
provided by
Morrow Surveying

FN 24310003_SP

EXPLANATION

MW2 — Groundwater Monitoring Well

Locations where residual MTBE exceeds the ESL for groundwater protection

TPW — Tank Pit Well

B3 — Boring Location

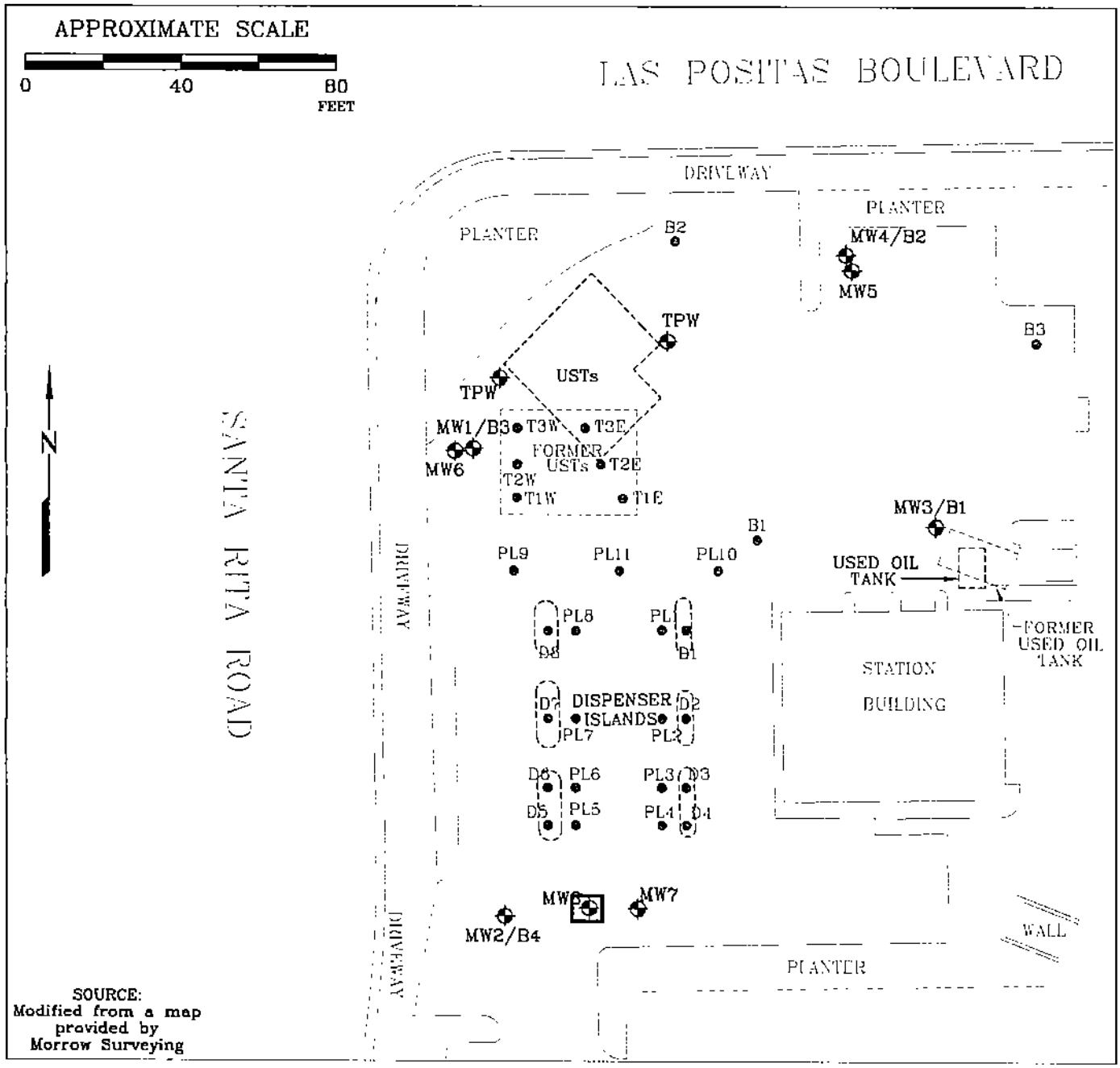
ENVIRONMENTAL RESOLUTIONS, INC.

LOCATIONS WHERE RESIDUAL MTBE EXCEEDS THE ESL FOR GROUNDWATER PROTECTION

FORMER EXXON SERVICE STATION 7-3567
3192 Santa Rita Road
Pleasanton, California

PROJECT NO. 2431

PLATE 15



FN 24310003_SP

EXPLANATION

MW2 — Groundwater Monitoring Well

Locations where dissolved-phase benzene exceeds the ESL for toxicity

TPW — Tank Pit Well

B3 — Boring Location

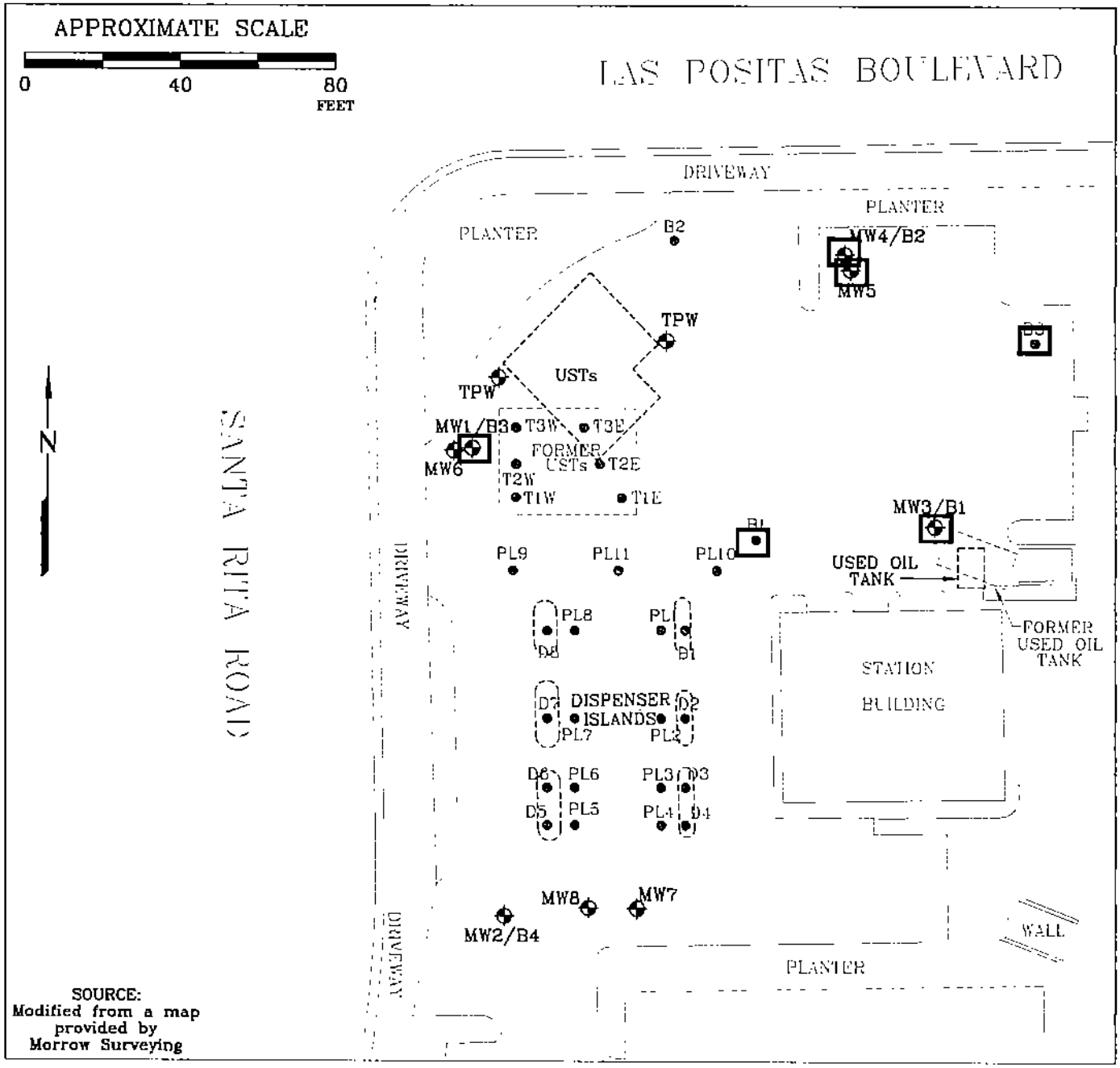
ENVIRONMENTAL RESOLUTIONS, INC.

LOCATIONS WHERE DISSOLVED-PHASE BENZENE EXCEEDS THE ESL FOR TOXICITY

FORMER EXXON SERVICE STATION 7-3567
3192 Santa Rita Road
Pleasanton, California

PROJECT NO. 2431

PLATE 16



FN 24310003_SP

EXPLANATION

MW2 — Groundwater Monitoring Well

Locations where dissolved-phase MTBE exceeds the ESL for ceiling

TPW — Tank Pit Well

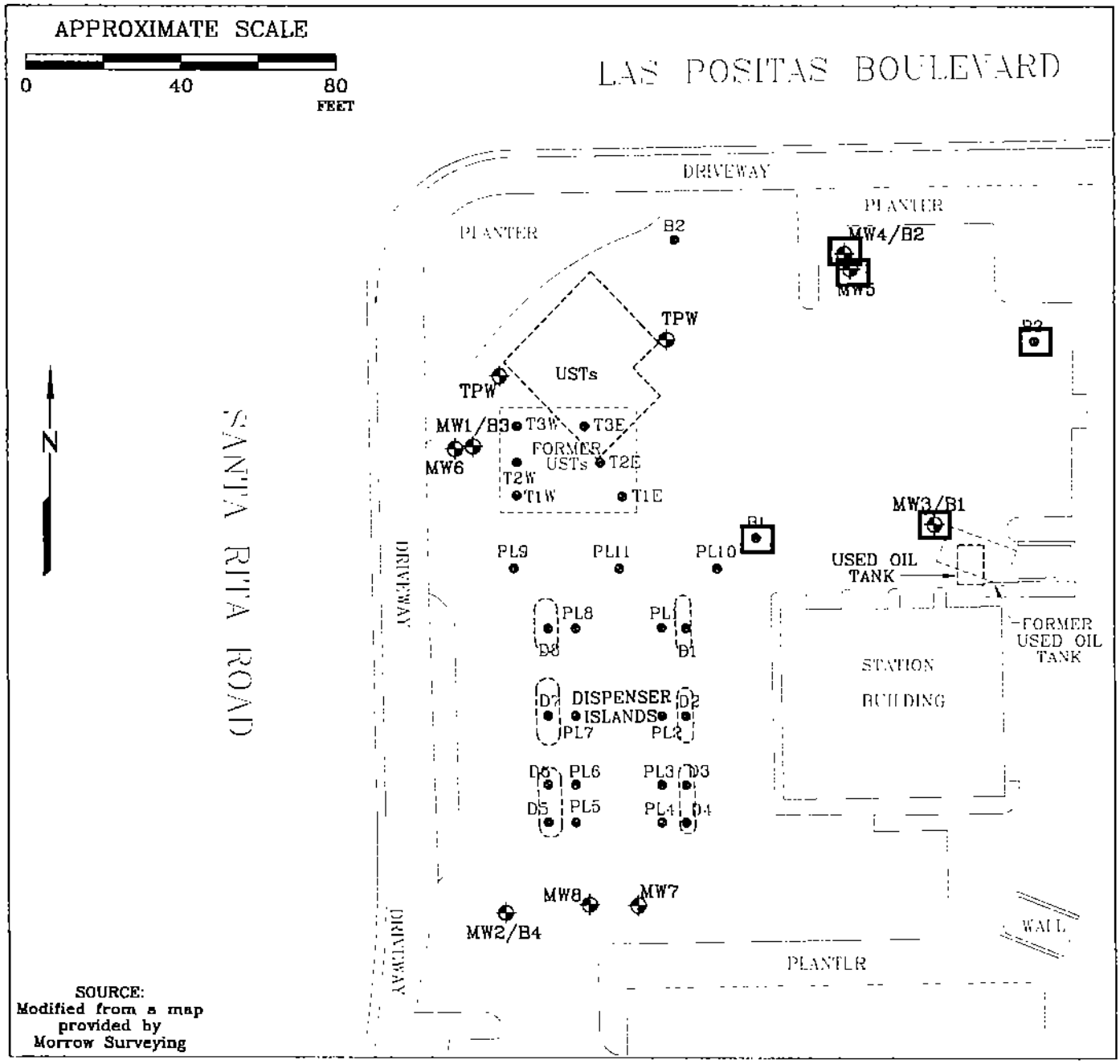
B3 — Boring Location

ENVIRONMENTAL RESOLUTIONS, INC.

LOCATIONS WHERE DISSOLVED-PHASE MTBE EXCEEDS THE ESL FOR CEILING

FORMER EXXON SERVICE STATION 7-3567
3192 Santa Rita Road
Pleasanton, California

PROJECT NO.
2431
PLATE
17



FN 24310003_SP

EXPLANATION

MW2 — Groundwater Monitoring Well

Locations where dissolved-phase MTBE exceeds the ESL for toxicity

TPW — Tank Pit Well

B3 — Boring Location

ENVIRONMENTAL RESOLUTIONS, INC.

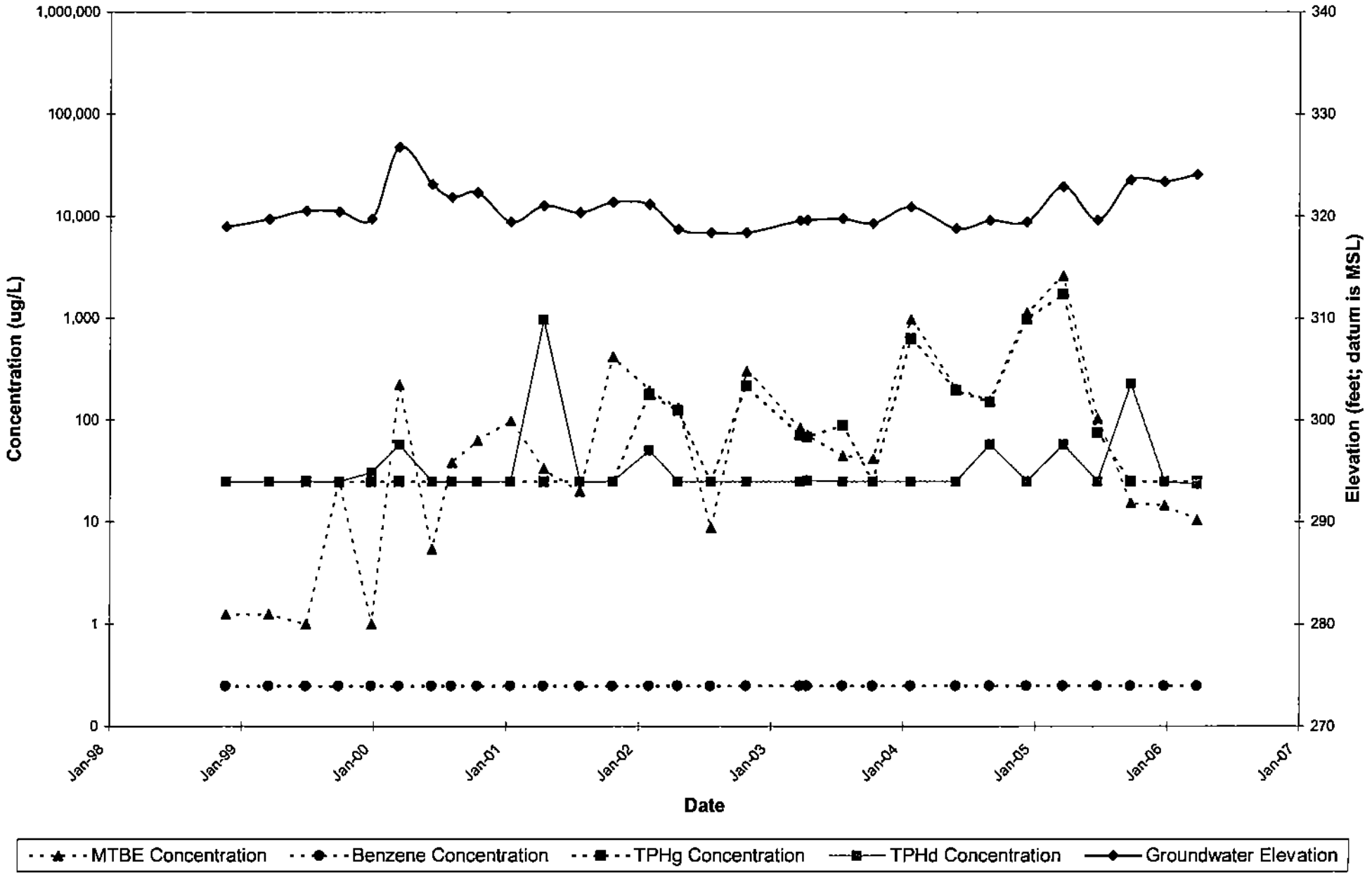
LOCATIONS WHERE DISSOLVED-PHASE MTBE EXCEEDS THE ESL FOR TOXICITY

FORMER EXXON SERVICE STATION 7-3567
3192 Santa Rita Road
Pleasanton, California

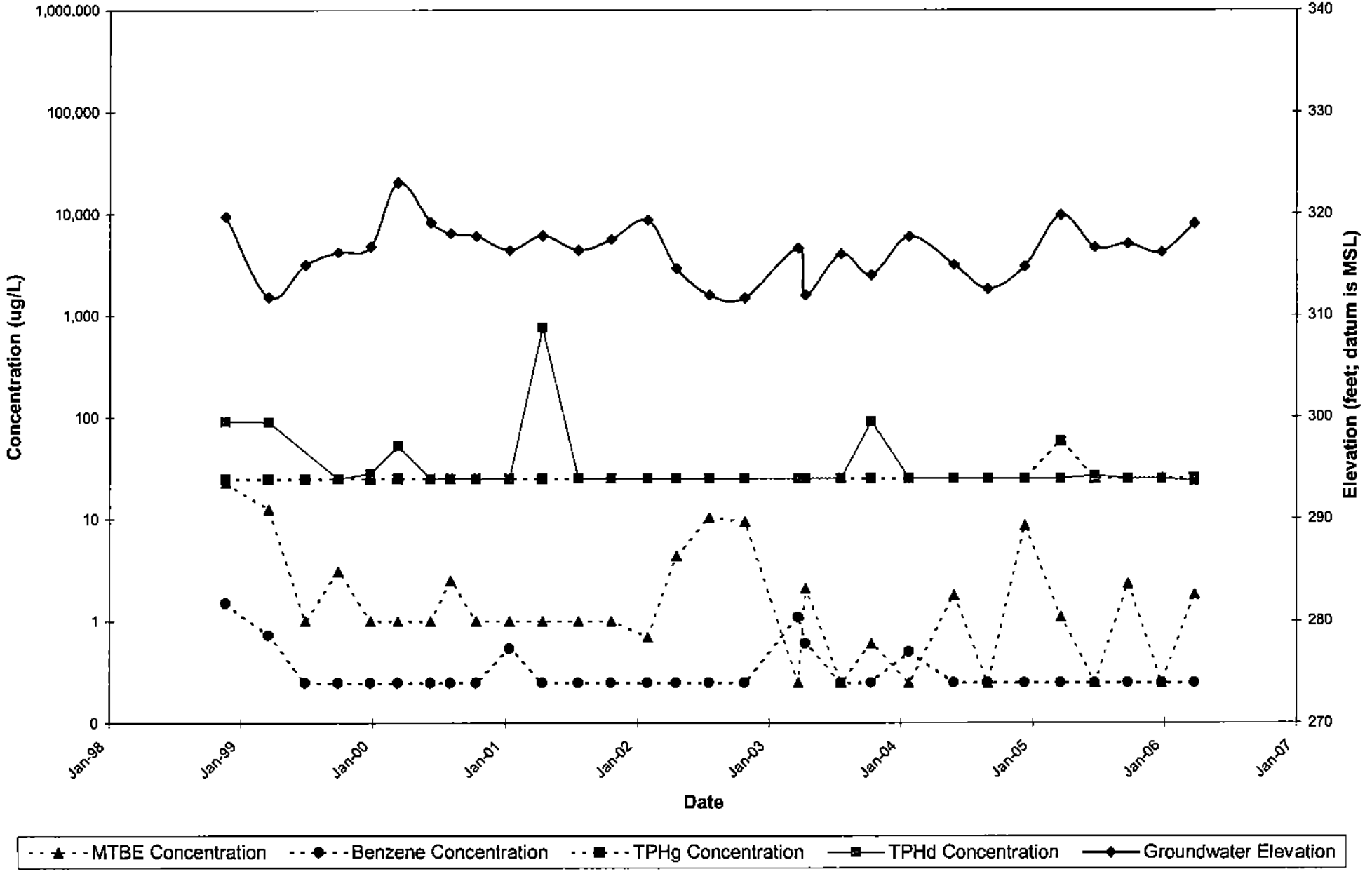
PROJECT NO. 2431

PLATE 18

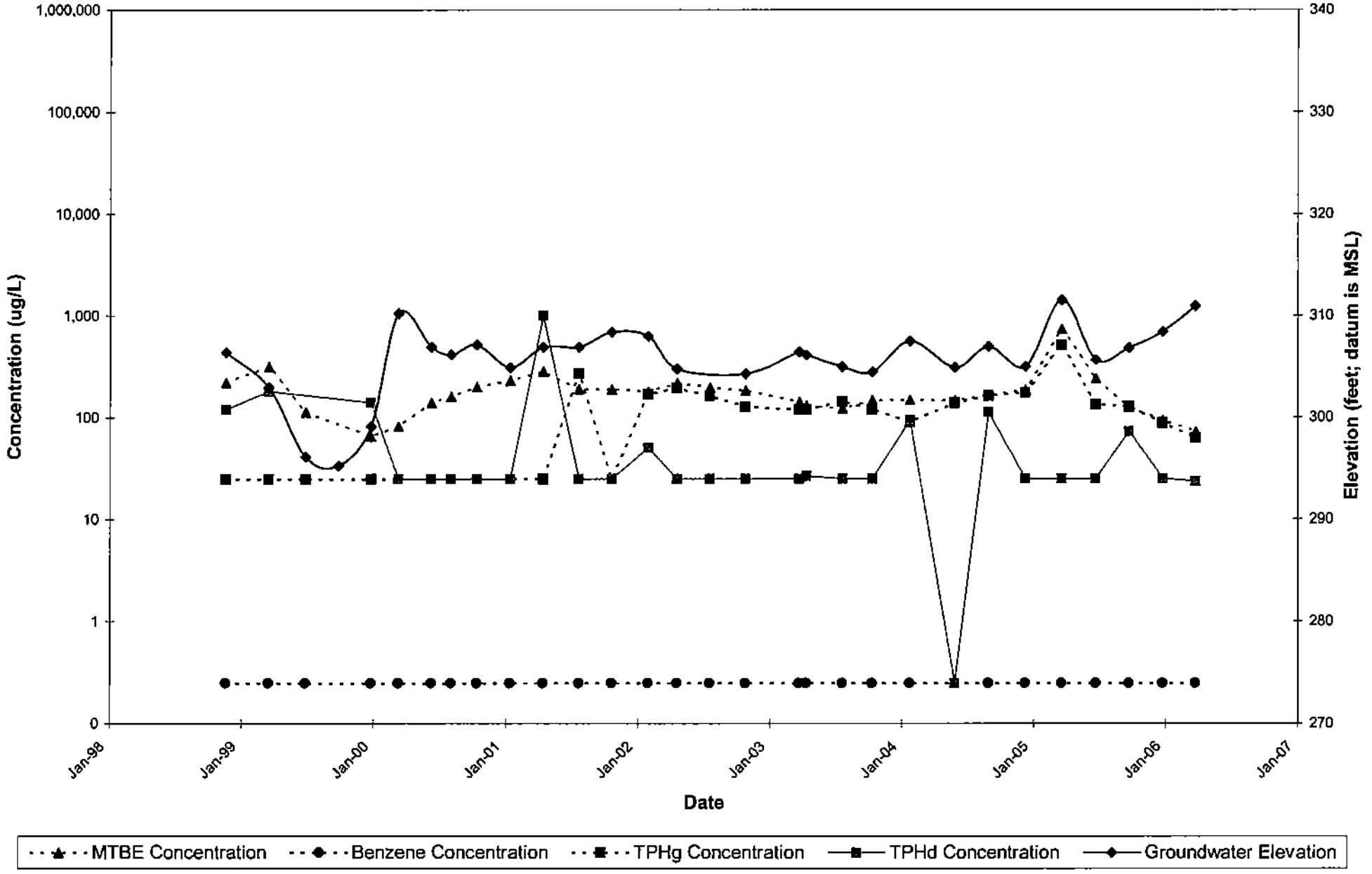
GRAPH 1
Well MW1 - Groundwater Elevation and TPHd, TPHg, MTBE, and Benzene Concentrations vs. Time
Former Exxon Service Station 7-3567
Pleasanton, California



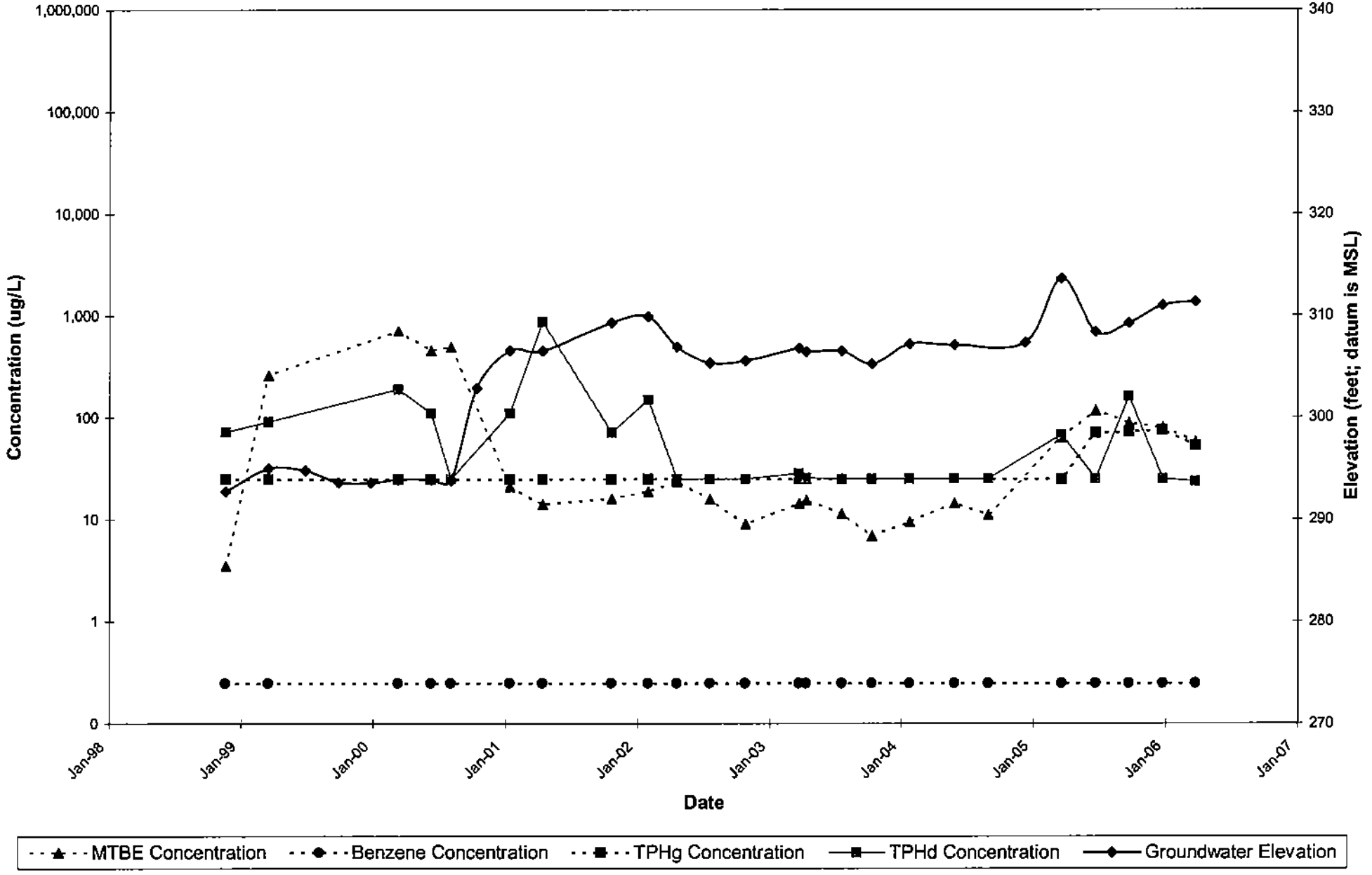
GRAPH 2
Well MW2 - Groundwater Elevation and TPHd, TPHg, MTBE, and Benzene Concentrations vs. Time
Former Exxon Service Station 7-3567
Pleasanton, California



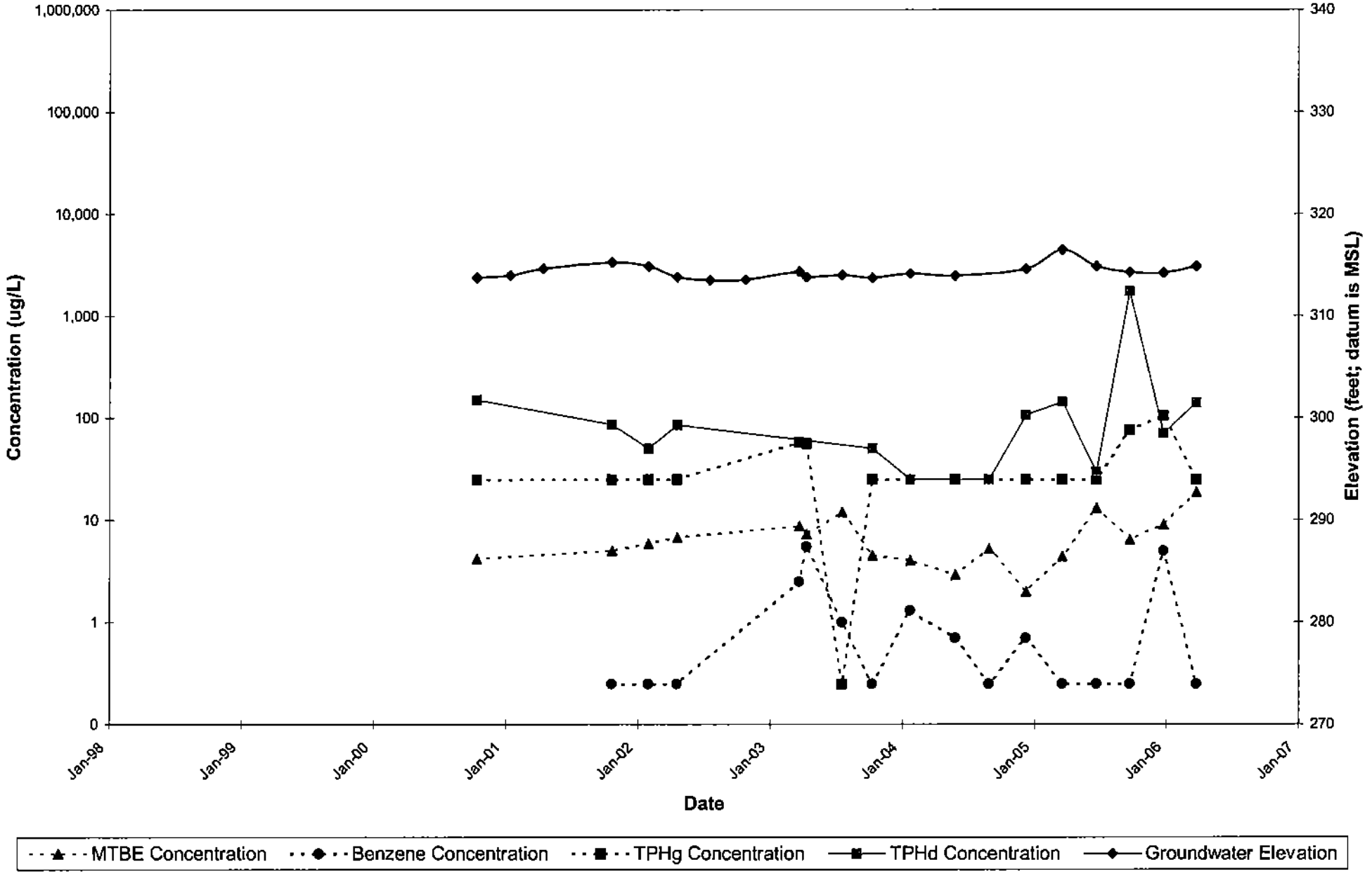
GRAPH 3
Well MW3 - Groundwater Elevation and TPHd, TPHg, MTBE, and Benzene Concentrations vs. Time
Former Exxon Service Station 7-3567
Pleasanton, California



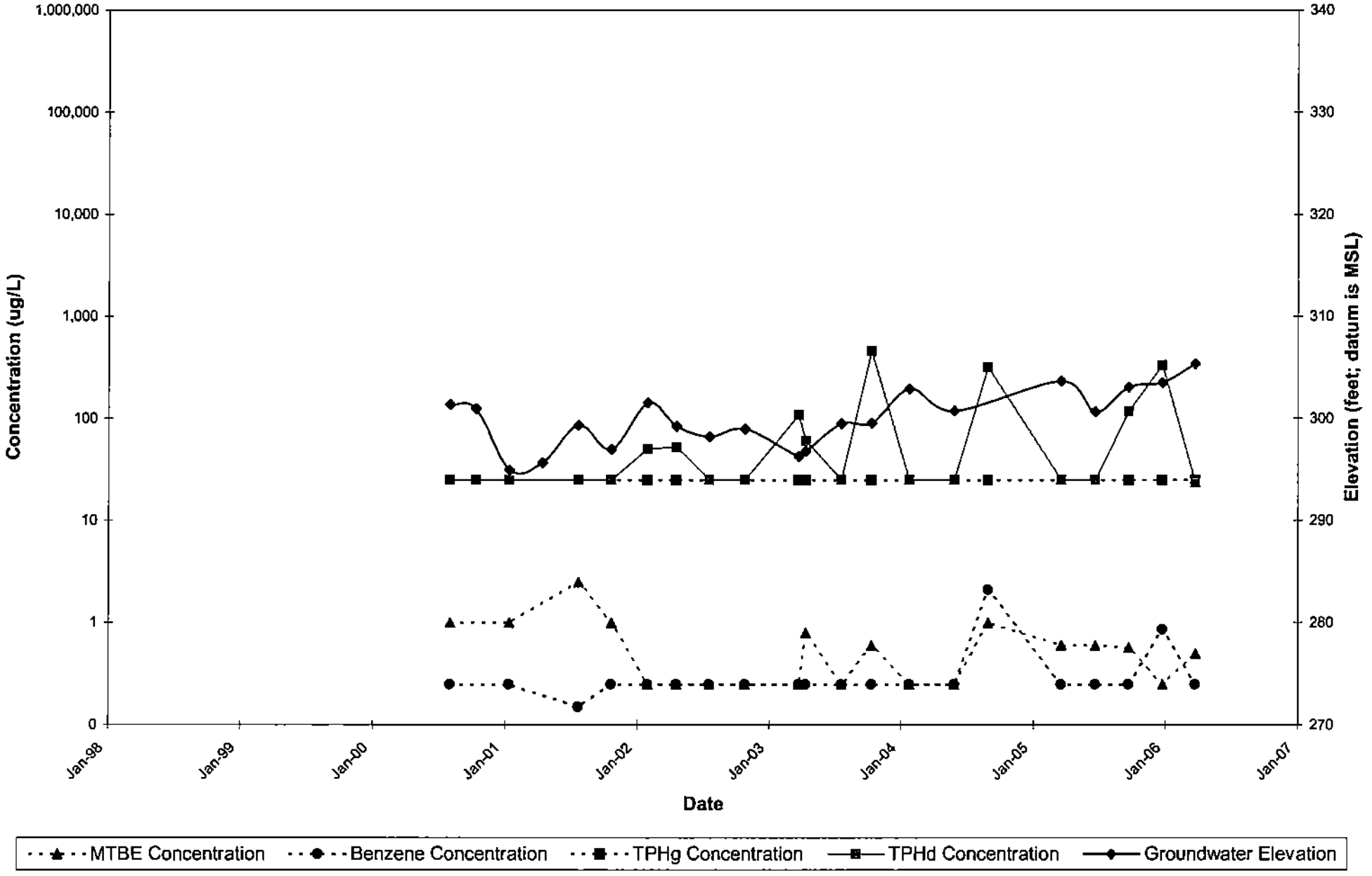
GRAPH 4
Well MW4 - Groundwater Elevation and TPHd, TPHg, MTBE, and Benzene Concentrations vs. Time
Former Exxon Service Station 7-3567
Pleasanton, California



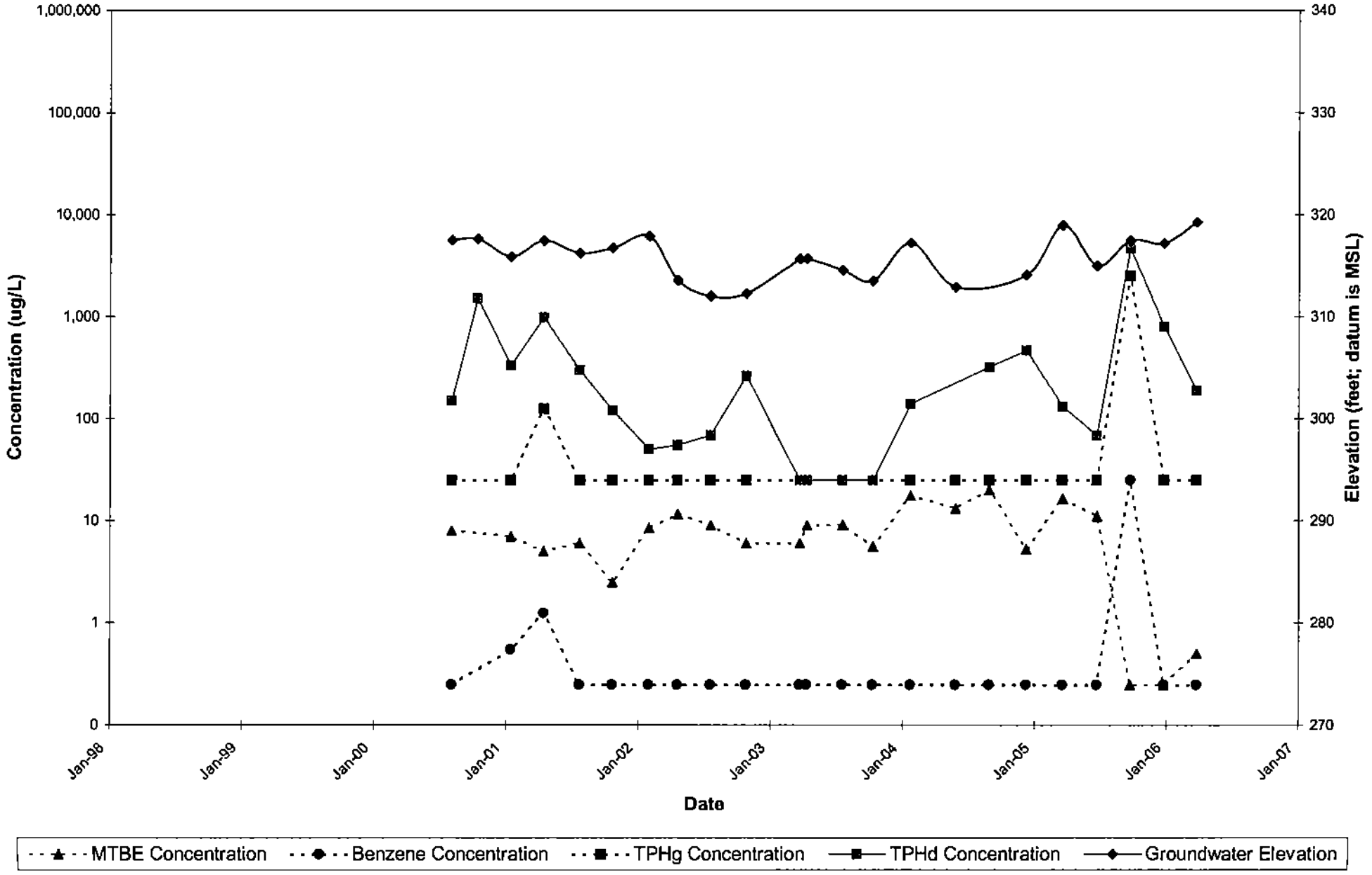
GRAPH 5
Well MW5 - Groundwater Elevation and TPHd, TPHg, MTBE, and Benzene Concentrations vs. Time
Former Exxon Service Station 7-3567
Pleasanton, California



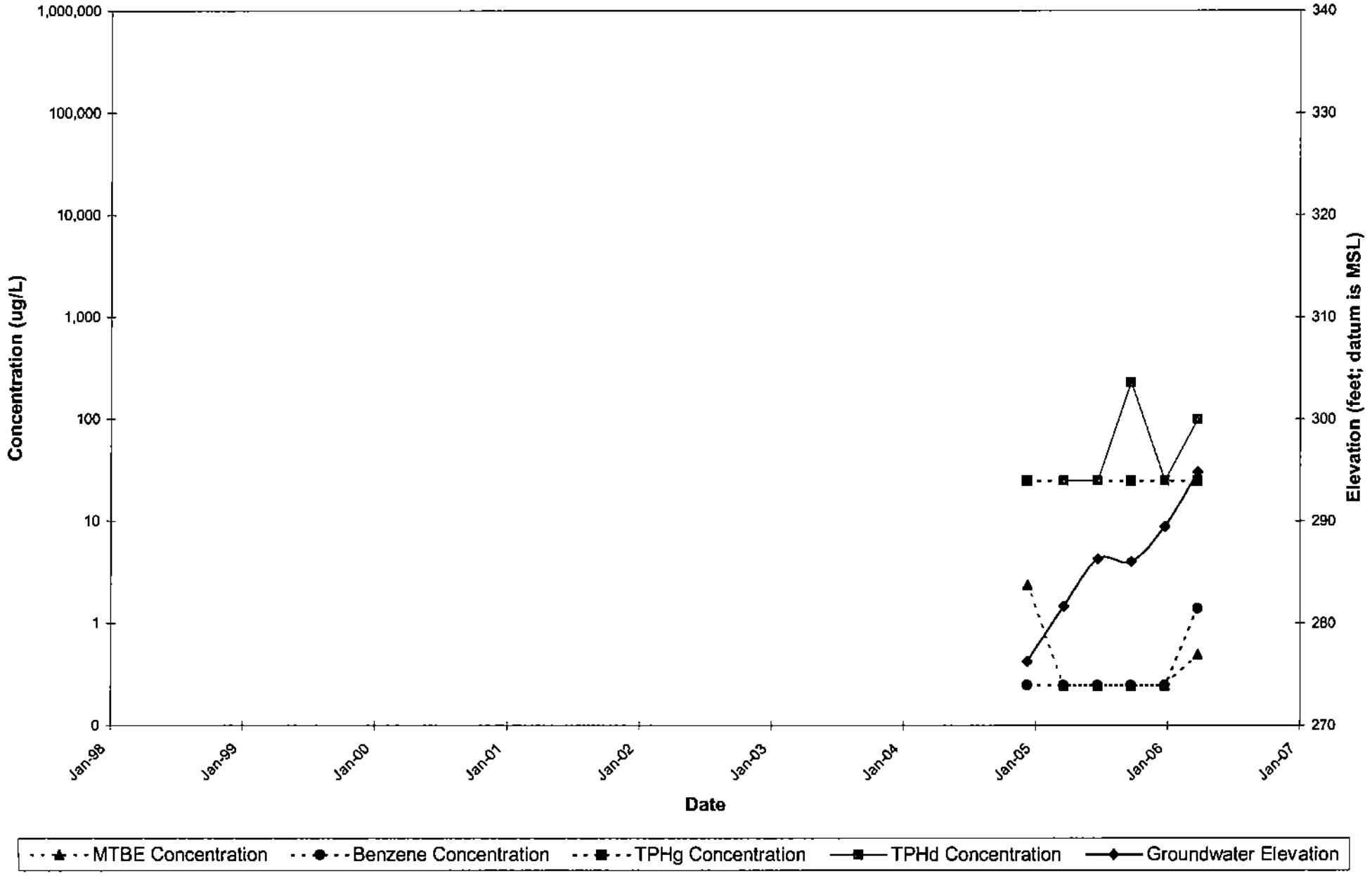
GRAPH 6
Well MW6 - Groundwater Elevation and TPHd, TPHg, MTBE, and Benzene Concentrations vs. Time
Former Exxon Service Station 7-3567
Pleasanton, California



GRAPH 7
Well MW7 - Groundwater Elevation and TPHd, TPHg, MTBE, and Benzene Concentrations vs. Time
Former Exxon Service Station 7-3567
Pleasanton, California



GRAPH 8
Well MW8 - Groundwater Elevation and TPHd, TPHg, MTBE, and Benzene Concentrations vs. Time
Former Exxon Service Station 7-3567
Pleasanton, California



ATTACHMENT A

UNITED SOIL CLASSIFICATION SYSTEM, SYMBOL KEY, AND BORING LOGS

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS		LTR	DESCRIPTION
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	GW	Well-graded gravels or gravel sand mixtures, little or no fines
		GP	Poorly-graded gravels or gravel sand mixture, little or no fines
		GM	Silty gravels, gravel-sand-clay mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	SAND AND SANDY SOILS	SW	Well-graded sands or gravelly sands, little or no fines
		SP	Poorly-graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures

MAJOR DIVISIONS		LTR	DESCRIPTION
FINE GRAINED SOILS	SILTS AND CLAYS LL<50	ML	Inorganic silts and very fine-grained sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		OL	Organic silts and organic silt-clays of low plasticity
	SILTS AND CLAYS LL>50	MH	Inorganic silts, micaceous or diatomaceous fine-grained sandy or silty soils, elastic silts
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic clays of medium to high plasticity
HIGHLY ORGANIC SOILS		Pt	Peat and other highly organic soils

DEPTH THROUGH WHICH SAMPLER IS DRIVEN

RELATIVELY UNDISTURBED SAMPLE

MISSED SAMPLE

GROUNDWATER LEVEL OBSERVED FROM FIRST WET SOIL SAMPLE IN BORING

STATIC GROUNDWATER LEVEL

OVM — ORGANIC VAPOR METER READING IN PARTS PER MILLION

PID — PHOTO-IONIZATION DETECTOR READING IN PARTS PER MILLION

WELL DESIGN

SAND PACK

BENTONITE ANNULAR SEAL

NEAT CEMENT ANNULAR SEAL

BLANK PVC

MACHINE-SLOTTED PVC

S-10 — SAMPLE LOCATION

NR — NOT RECORDED

NA — NOT ANALYZED

BLOW/FT. REPRESENTS THE NUMBER OF BLOWS OF A 140-POUND HAMMER FALLING 30 INCHES TO DRIVE THE SAMPLER THROUGH THE LAST 12 INCHES OF AN 18-INCH OR 24-INCH PENETRATION.

DASHED LINES SEPARATING UNITS ON THE LOG REPRESENT APPROXIMATE BOUNDARIES ONLY. ACTUAL BOUNDARIES MAY BE GRADUAL. LOGS REPRESENT SUBSURFACE CONDITIONS AT THE BORING LOCATION AT THE TIME OF DRILLING ONLY.

ERI ENVIRONMENTAL RESOLUTIONS, INC.

PROJECT 2431

UNIFIED SOIL CLASSIFICATION SYSTEM AND LOG OF BORINGS SYMBOL KEY

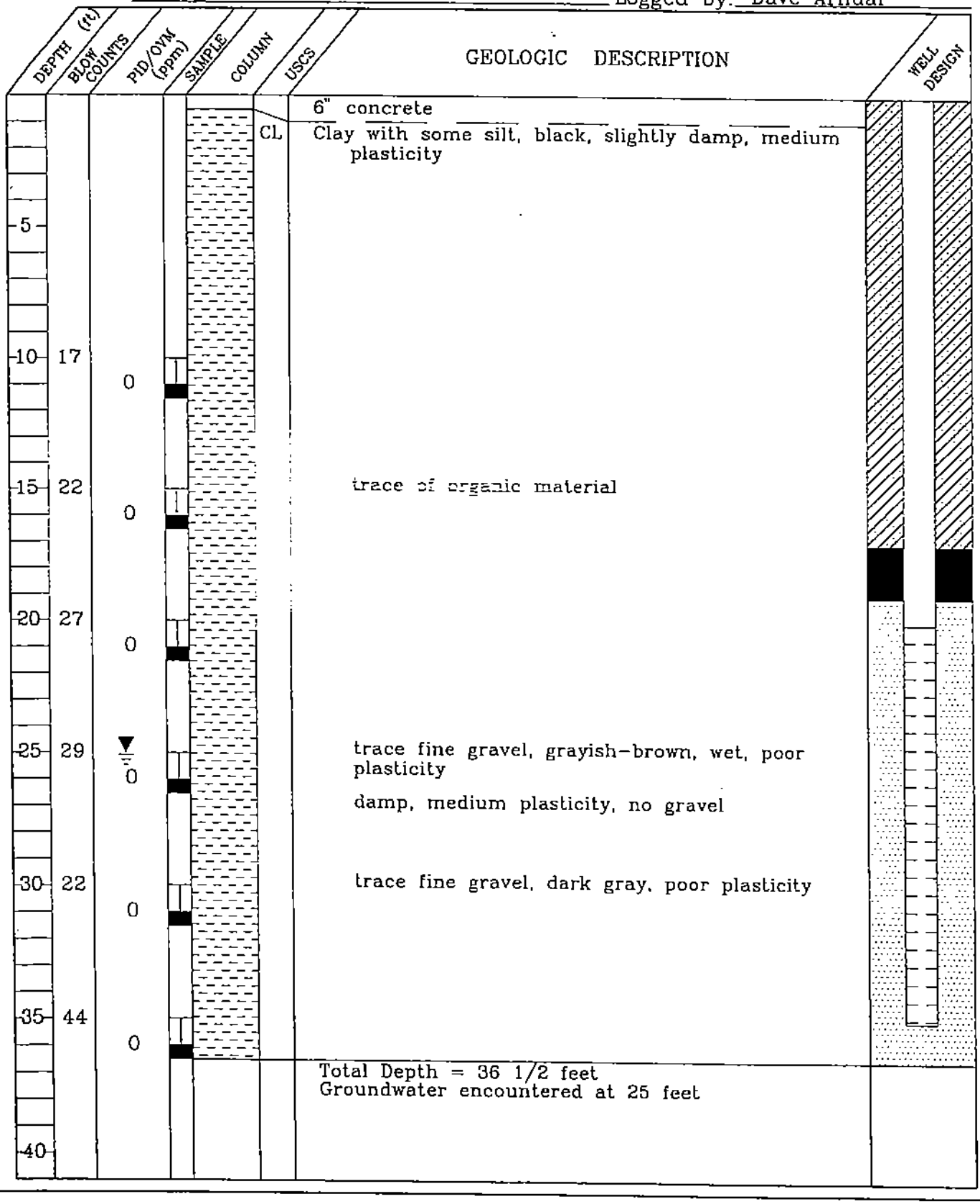
FORMER EXXON SERVICE STATION 7-3567
3192 Santa Rita Road
Pleasanton, California

ATTACHMENT

A

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2431 Boring: B3/MW1 Plate: APPENDIX
Site: Exxon Station 7-3567 Date: 11/12/98
Drill Contractor: Woodward
Sample Method: Split Spoon Geologist: STEVE M. ZIGAN
Drill Rig: B-57 Bore Hole Diameter: 8" Signature: Steve M. Zigan
Location: Western corner of underground tank field Registration: R.G. 4333
Logged by: Dave Arndal



ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2431 Boring: B4/MW2 Plate: APPENDIX
Site: Exxon Station 7-3567 Date: 11/12/98
Drill Contractor: Woodward
Sample Method: Split Spoon Geologist: STEVE M. ZIGAN
Drill Rig: B-57 Bore Hole Diameter: 8" Signature: Steve M. Zigan
Location: Southwestern corner of dispenser island canopy Registration: R.G. 4336
Logged by: Dave Arndal

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						FILL	
5	7	0					
					CL	Clay with trace silt, very dark gray, moist, medium plasticity, areas of mottled oxidation with organics, poor plasticity	
10	16	0					
15	23	0					
20	23	0				caliche nodules	
25		▼ 0					
		0				damp, medium plasticity	
30							
35	46	0				grayish-brown	
						light olive-brown	
40						Total Depth = 41 1/2 feet Groundwater encountered at 26 1/2 feet	

Casing Diameter: 2", Slot Size: 0.020", Sand Size: #3, Grout: Portland Type I/II

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2431 Boring: B1/MW3 Plate: 1 OF 2
Site: Exxon Station 7-3567 Date: 11/11/98
Drill Contractor: Woodward
Sample Method: Split Spoon Geologist: STEVE M. ZIGAN
Drill Rig: B-57 Bore Hole Diameter: 8" Signature: Steve M. Zigan
Location: North of eastern half of station building Registration: R.G. 4333
Logged by: Dave Arndal

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						6" concrete	
					CL	Clay with some silt, dark olive-brown, slightly damp, low plasticity	
5	34	0					
10	15	0				olive-gray, high plasticity	
15	31	0				very dark grayish brown, medium plasticity	
20	28	0				slightly mottled, very dark grayish-brown and light gray, low plasticity	
25	29	0				trace small organics (roots)	
30	51	0				no organics	
35	36	0				olive-brown, caliche nodules up to 1/4", trace organics	
40							

(Continued downward on next page.)

Casing Diameter: 2", Slot Size: 0.020", Sand Size: #3, Grout: Portand Type I/II

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2431 Boring: B1/MW3 Plate: 2 OF 2
Site: Exxon Station 7-3567 Date: 11/11/98
Drill Contractor: Woodward
Sample Method: Split Spoon Geologist: STEVE M. ZIGAN
Drill Rig: B-57 Bore Hole Diameter: 8" Signature: Steve M. Zigan
Location: North of eastern half of station building Registration: R.G. 4333
Logged by: Dave Arndal

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION (Continued downward from previous page.)	WELL DESIGN
40		0			CL	Clay with some silt, olive-brown, caliche nodules up to 1/4", trace organics	
					SC	Clayey sand, fine-grained, dark yellowish-brown, wet	
45	76	0					
					GP	Sandy gravel, gravel up to 3/4", fine-grained sand, dark yellowish-brown, wet	
50	76/8"						
						Total Depth = 51 1/2 feet Groundwater encountered at 41 1/2 feet	
55							
60							
65							
70							
75							
80							

Casing Diameter: 2", Slot Size: 0.020", Sand Size: #3, Grout: Portland Type I/II

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2431 Boring: B2/MW4 Plate: 1 OF 2
Site: Exxon Station 7-3567 Date: 11/11/98
Drill Contractor: Woodward
Sample Method: Split Spoon Geologist: STEVE M. ZIGAN
Drill Rig: B-57 Bore Hole Diameter: 8" Signature: Steve M. Zigan
Location: Central northern property line Registration: R.G. 4338
Logged by: Jen Schulte

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	USCS	GEOLOGIC DESCRIPTION
				6" concrete
			CL	Clay with some silt, very dark gray, damp, medium plasticity
5	23	0		
			SC	Clayey sand, dark gray, damp, low plasticity
10	14	0		
15	8	0	CL	Clay with some silt, dark gray, moist, medium plasticity
20	24	0		caliche nodules, trace organics/woody fiber
25	16	0		gray with mottled oxidation
			SC	Clayey sand, gray, damp, low plasticity
			CL	Clay with trace silt, very dark gray, moist, medium plasticity
30	31	0		
35	25	0		dark grayish-brown, trace organics and mottled oxidation
				light olive-brown, caliche areas
40	42			(Continued downward on next page.)

WELL DESIGN

Casing Diameter: 2", Slot Size: 0.020", Sand Size: #3, Grout: Portland Type I/II

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2431 Boring: B2/MW4 Plate: 2 OF 2
Site: Exxon Station 7-3567 Date: 11/11/98
Drill Contractor: Woodward
Sample Method: Split Spoon Geologist: STEVE M. ZIGAN
Drill Rig: B-57 Bore Hole Diameter: 8" Signature: Steve M. Zigan
Location: Central northern property line Registration: R.G. 4333
Logged by: Jen Schulte

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION (Continued downward from previous page.)	WELL DESIGN
40	42	0			CL	Clay with trace silt, light olive-brown, moist, medium plasticity	
					SC	Clayey sand, fine-grained, light olive-brown, moist	
45	28	0				with grayish-brown areas	
					SW	Gravelly sand, gravel up to 1", fine-grained, light olive-brown, wet	
50	74/10"	▼ 0				Total Depth = 51 1/2 feet Groundwater encountered at 50 feet	
55							
60							
65							
70							
75							
80							

Casing Diameter: 2", Slot Size: 0.020", Sand Pack: #3, Grout: Portland Type I/II

ERI ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2431 Boring: MW5 Plate: APPENDIX
Site: Former Exxon Service Station 7-3567 Date: 7/18/00
Drill Contractor: Woodward Drilling

Sample Method: Continuous | Geologist: JOHN B. BOBBIT
Drill Rig: B57 Bore Hole Diameter: 8" | Signature: [signature]
Location: 4 Feet South of MW4 | Registration: R.G. 4313
85 Feet North of Station Building | Logged by: Tom Culig

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
0						6" concrete	
					CL	Clay, gray, wet, high plasticity	
5							
						iron oxidation	
10					SM	Silty sand, gray, damp	
						wet	
					CL	Silty clay, gray, medium plasticity, dry	
15							
						calcium carbonate nodules	
20							
25					SC	Clayey sand with silt, light gray, high plasticity, damp, low density	
					CL	Sandy clay, gray, low plasticity, high density	
30							
						Total depth at 31 feet. No groundwater encountered.	
35							

Casing Diameter: 2" Slot Size: 0.020", Sand Size: #3 , Grout: Portland Type I/II

FN: 2431MW05

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2431 Boring: MW6 Plate: 1 OF 2
Site: Former Exxon Service Station 7-3567 Date: 7/19/00
Drill Contractor: Woodward Drilling
Sample Method: Continuous Geologist: JOHN B. BOBBITT
Drill Rig: B57 Bore Hole Diameter: 8" Signature:
Location: 4 Feet West of MW1 Registration: R.G. 4313
25 Feet East of Santa Rita Road Logged by: Tom Culig

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						6" concrete	
						Clayey sand, brown, wet	
5					SC		
					CL	Sandy clay, brown, moist, high plasticity	
10					SC	Clayey sand, brown, wet	
						Sandy clay	
						silty clay, dark gray, high plasticity	
15					CL		
						small nodules of calcium carbonate, medium plasticity, very dense	
20							
						Clayey silt, light gray, moist, high plasticity	
					ML		
25						Clay with trace of silt, dark gray, little mottled iron oxidation, moderate plasticity, high density	
						trace of small gravel	
30					CL	no gravel, up to 1/4" nodules of calcium carbonate	
						encountered water at 9:40am clay with trace amounts of silt, medium plasticity, very dense, no sign lithologic changes upon encountering water	
35						clay, lighter gray color, iron oxidation, trace organics, calcium nodules up to 1/4"	
						silty clay, gray/light brown, large calcium nodules organics	
40						(Continued downward on next page)	

Casing Diameter: 2" Slot Size: 0.020", Sand Size: #3, Grout: Portland Type I/II

FN: 2431MW06

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2431 Boring: MW6 Plate: 2 OF 2
Site: Former Exxon Service Station 7-3567 Date: 7/19/00
Drill Contractor: Woodward Drilling
Sample Method: Continuous Geologist: JOHN B. BOBBITT
Drill Rig: B57 Bore Hole Diameter: 8" Signature: JBBobbitt
Location: 4 Feet West of MW1 Registration: R.G. 4313
25 Feet East of Santa Rita Road Logged by: Tom Culig

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						(Continued downward from previous page)	
					ML	clayey silt with very fine-grained sand, gray/ brown organics	
45					SM	Silty sand, brown, high plasticity	
					SP	Sand with trace pebbles, wet, very loose with some pebbles to 1/2" increasing pebble content, angular to sub-angular	
50					SM	Silty sand with 1/4" gravel	
					GW	Sandy gravel with 1/4"-2" pebbles	
65						Total depth at 54 feet. Groundwater encountered at 32 feet.	

Casing Diameter: 2" Slot Size: 0.020", Sand Size: #3, Grout Portland Type I/II

FN: 2431MW6A

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2431 Boring: MW7 Plate: 1 OF 2
Site: Former Exxon Service Station 7-3567 Date: 7/18/00
Drill Contractor: Woodward Drilling
Sample Method: Continuous Geologist: JOHN B. BOBBITT
Drill Rig: B57 Bore Hole Diameter: 8" Signature:
Location: 35 Feet East of MW2 Registration: R.G. 4313
18 Feet South of Dispenser Islands Logged by: Tom Culig

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						6" concrete	
						Clay, brown, high plasticity	
5					CL		
						silty clay	
10						Silty sand, black/brown, wet	
					SM	brown color, high plasticity	
						Silty clay, dark brown, high plasticity	
15						clay with little silt, dark gray/black, moderate plasticity, massive layer, no bedding, very dense	
20						gray color, higher plasticity	
25					CL	clay with trace of silt and sand, gray/brown, wet, less dense as overlying bed	
						clay with very small traces of silt and iron oxide	
30							
35						small white nodules of calcium carbonate larger nodules	
						clay with traces of silt, light brown	
					SC	Clayey sandy, wet, very low density	
40						(Continued downward on next page)	

Casing Diameter: 2" Slot Size: 0.020", Sand Size: #3, Grout: Portland Type I/II

EN: B431MW07

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2431 Boring: MW7 Plate: 2 OF 2
Site: Former Exxon Service Station 7-3567 Date: 7/18/00
Drill Contractor: Woodward Drilling
Sample Method: Continuous Geologist: JOHN B. BOBBITT
Drill Rig: B57 Bore Hole Diameter: 8" Signature: JB Bobbitt
Location: 35 Feet East of MW2 Registration: R.G. 4313
18 Feet South of Dispenser Islands Logged by: Tom Culig

DEPTH (ft.)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION (Continued downward from previous page)	WELL DESIGN
					SC	higher density	
						clayey sand, dark brown, wet, very loose	
45					CL	Clay with traces of sand, light brown	
					SC	Clayey sand, dark brown, wet, very loose	
					CL	Sandy clay, light brown, very dense, moderate plasticity	
					ML	Clayey silt with traces of sand, bands of iron oxide, high plasticity	
50						Total depth at 50 feet. Groundwater encountered at 38 feet.	

Casing Diameter: 2" Slot Size: 0.020", Sand Size: #3, Grout: Portland Type I/II

FS: 2431MW7A

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 243103X Boring: MW8 Plate: 1 OF 2
Site: 7-3567 Date: 3/16/01
Drill Contractor: GREG DRILLING
Sample Method: Split Spoon Geologist: John B. Bobbitt
Drill Rig: B-57 Bore Hole Diameter: 8 Signature:
Location: 19 feet south of southwestern dispenser island. Registration: R.G. 4313
Logged by: Tom Culig

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						6" Conrete Clay dark, brown,high plasticity	
5	3 4 4					Silty clay, brown	
10	3 4 5					Clay, dark gray, medium plasticity, oxidation	
15	4 7 8					Clay with little silt, dark brown/grey moderate plasticity, very dense	
20	5 8 12					dark grey, caliche nodules	
25	5 9 12				CL	Clay with trace of silt, gray brown, dry	
30	4 7 12					Gray, traces of iron oxide	
35						White nodules of calcium carbonate	
	4 8 14	▼					
40	7 10 15					Larger nodules, higher density, wet	

Casing Diameter: 2" Slot Size: 0.020", Sand Size: #3, Grout: Portland Type I/II

FW 243mw8

ERI ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 243103X Boring: MW8 Plate: 2 of 2
Site: 7-3567 Date: 3/16/01
Drill Contractor: GREG DRILLING
Sample Method: Split Spoon Geologist: John B. Bobbitt
Drill Rig: B-57 Bore Hole Diameter: 8 Signature: [signature]
Location: 19 feet south of southwest dispenser island. Registration: R.G. 4313
Logged by: Tom Culig

Columns: DEPTH (ft) | BLOW COUNTS | PID/OVM (ppm) | SAMPLE | COLUMN | USCS | GEOLOGIC DESCRIPTION | WELL DESIGN

GEOLOGIC DESCRIPTION
(Continued downward from previous page)

USCS	Geologic Description
CL	
SC	Clayey sand, gray/brown, wet
	Sandy clay, brown, wet
CL	Clay with traces of silt, light brown, wet
	Sandy clay, brown, iron oxide
ML	Clayey silt with traces of sand, high plasticity
	Increasing sand, bands of iron oxide
SP	Sand with pebbles up to 1 inch subrounded, dry – moist, trace silt
SW	Gravelly sand, pebbles up to 1 inch
GP	Sandy gravel
SW	Gravelly sand
GP	Sandy gravel, gravel up to 1 inch, subrounded, wet
	Pebbles up to 1 3/4 inch, subangular

Total depth at 70 feet.
Groundwater encountered at 39.5 feet and 62 feet.

Depth markers: 45, 50, 55, 60, 65, 70

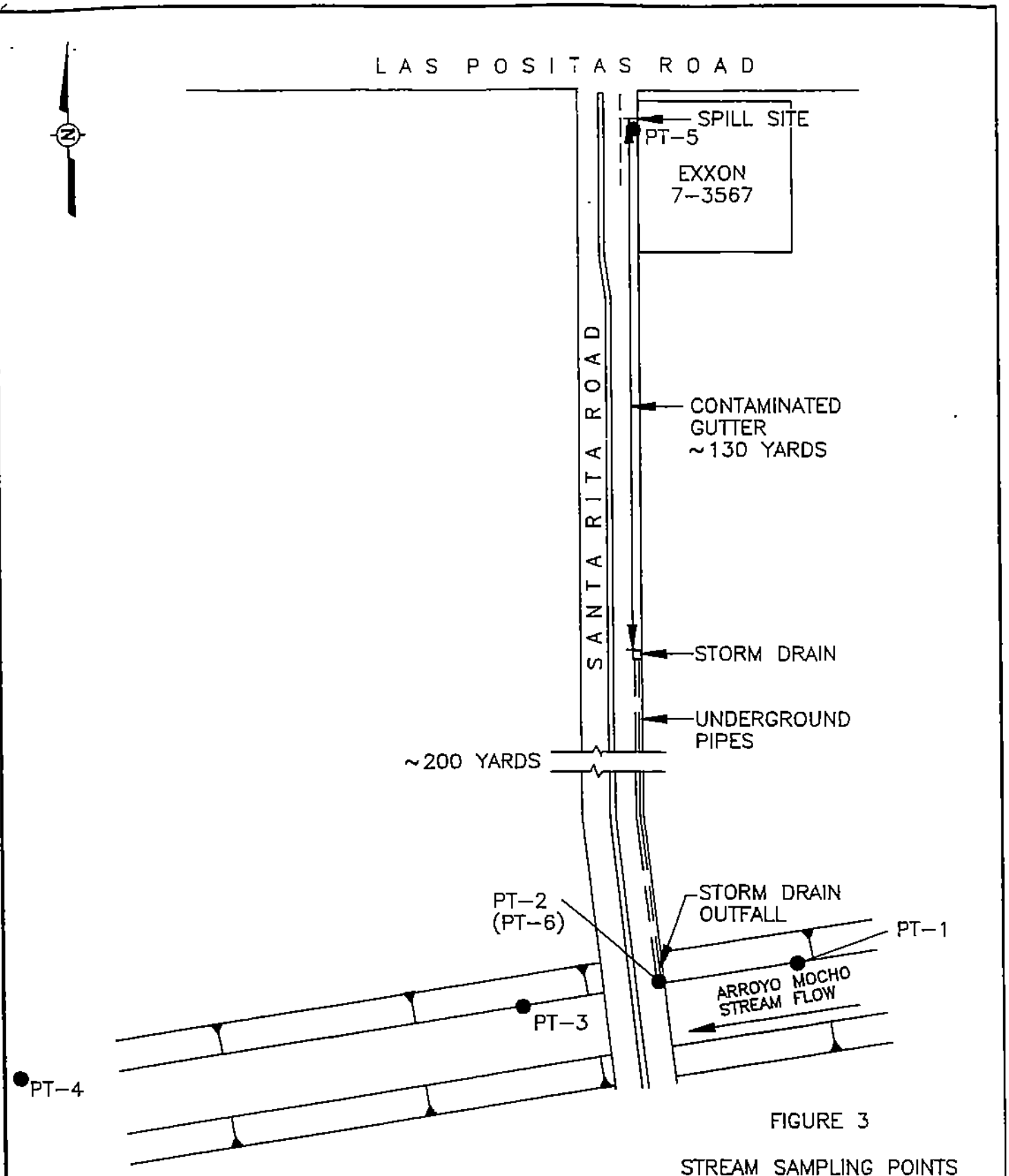
Blow counts: 4, 5, 9, 4, 5, 7, 7, 13, 22, 10, 16, 7, 10, 16, 9, 16, 18, 12, 20, 23, 15, 22, 16, 20, 25, 15, 21, 28, 18, 26, 31, 17, 17, 35, 21, 38, 44, 30, 32, 45, 25, 35, 32, 37, 35, 43, 25, 45, 40, 26, 45, 50

Casing Diameter: 2", Slot Size: 0.020", Sand Size: #3, Grout: Portland Type I/II

FK 243mw8

ATTACHMENT B

ANALYTICAL RESULTS AND SAMPLE LOCATION MAP FOR 1990 SURFACE SPILL



DRAWING NUMBER 148044-A3

DRAWN BY	CHECKED BY	APPROVED BY
SJZ		
3-9-90		

FIGURE 3

STREAM SAMPLING POINTS

EXXON #7-3567
3192 SANTA RITA ROAD

PREPARED FOR

EXXON COMPANY USA

INTERNATIONAL TECHNOLOGY CORPORATION

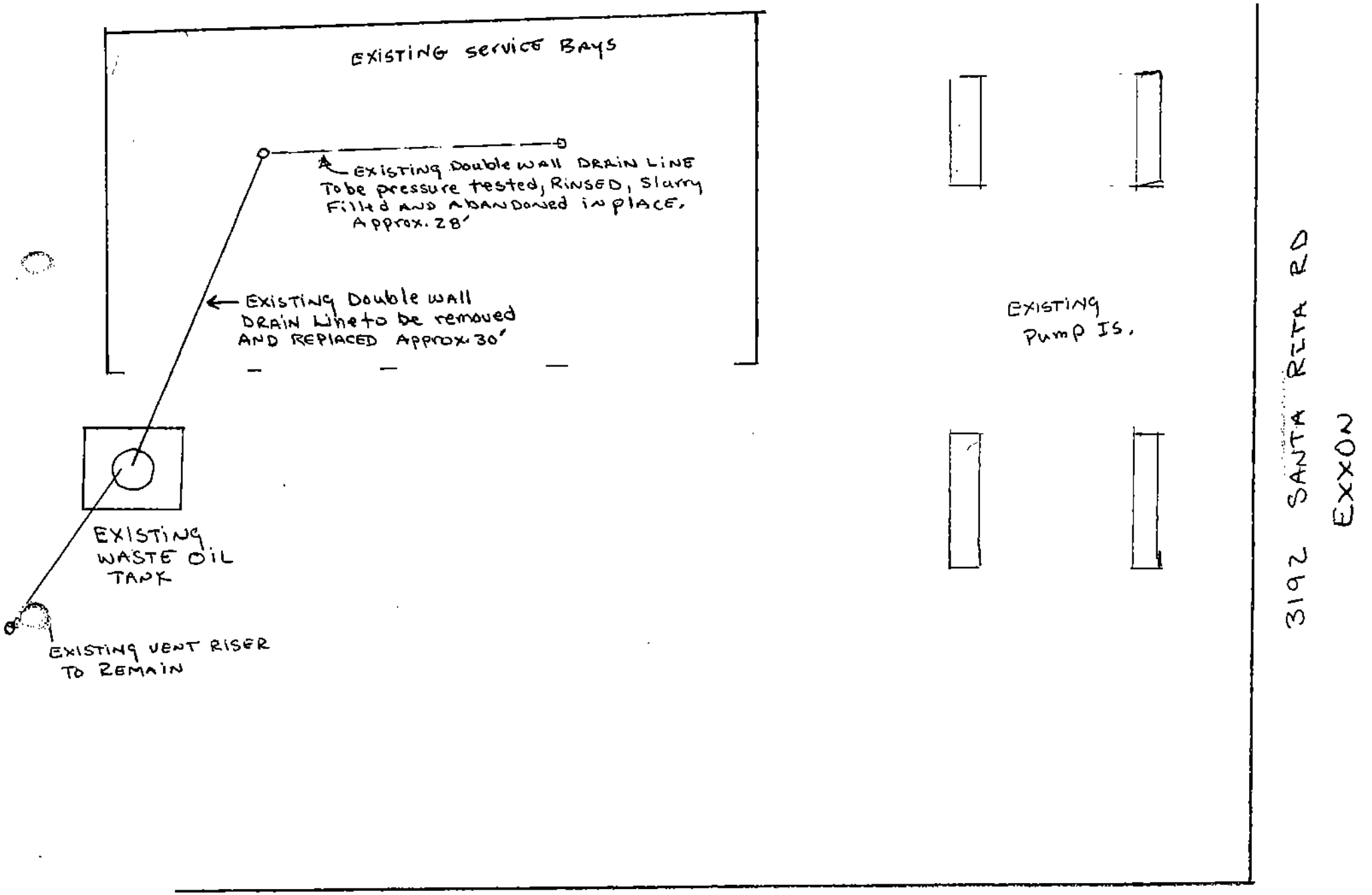
TABLE 1
SURFACE WATER SAMPLE ANALYSIS
EXXON STATION #7-3567
13192 SANTA RITA ROAD; PLEASANTON, CALIFORNIA
RESULTS IN PARTS PER BILLION (PPB)

Date	Location	TPH as Gas	Benzene	Toluene	Ethyl-Benzene	Xylene
03/07/90	PT-1	BDL	BDL	BDL	BDL	BDL
03/07/90	PT-2	94000	950	7100	2100	13000
03/07/90	PT-3	1200	BDL	1.5	2.8	1.6
03/07/90	PT-5	2400	49	270	80	390
03/07/90	PT-6	10000	23	140	88	480
03/08/90	PT-1	BDL	BDL	BDL	BDL	BDL
03/08/90	PT-2	1200	12	140	52	260
03/08/90	PT-3	BDL	BDL	0.7	0.9	5.8
03/08/90	PT-4	64	BDL	1.9	2.1	10
03/08/90	FB	BDL	BDL	BDL	BDL	BDL

BDL = Below Detection Limits
PT-1 = 100 feet upstream from drainage outflow pipe
PT-2 = Drainage pipe outflow
PT-3 = 100 feet downstream from drainage outflow pipe
PT-4 = 400 feet downstream from drainage outflow pipe
PT-5 = gutter at southern property boundary
PT-6 = Drainage pipe outflow following rinsing efforts

ATTACHMENT C

SCHEMATIC DRAWING OF 1995 WASTE OIL PIPING REPLACEMENT AND ABANDONMENT


EXISTING service BAYS
EXISTING Double WALL DRAIN LINE
To be pressure tested, RINSED, Slurry
Filled AND ABANDONED IN PLACE,
Approx. 28'
EXISTING Double WALL
DRAIN Line to be removed
AND REPLACED Approx. 30'
EXISTING
WASTE OIL
TANK
EXISTING VENT RISER
TO REMAIN
EXISTING
Pump Is.
3192 SANTA RITA RD
EXXON

ATTACHMENT D

ANALYTICAL RESULTS OF 2002 PRODUCT LINE SOIL SAMPLES COLLECTED BY HORIZON

Table 1 - Soil Analytical Data
Valero Station No. 3827
3192 Santa Rita Road, Pleasanton, California

Sample Number	Location on Figure 2	Date Sampled	Sample Depth (bsg)	TPHd (ppm)	TPHg (ppm)	B (ppm)	T (ppm)	E (ppm)	X (ppm)	MTBE (ppm)	TBA (ppm)	DIPE (ppm)	ETBE (ppm)	TAME (ppm)
S-7-PL1	PL-1	08/09/02	7 feet	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.0059	<0.0050	<0.0050	<0.0050	<0.0050
S-5-D1	D1	08/09/02	5 feet	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
S-5-PL2	PL-2	08/09/02	5 feet	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.014	<0.0050	<0.0050	<0.0050
S-4-D2	D2	08/09/02	4 feet	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
S-3-D3	D3	08/09/02	3 feet	<1.0	na	<0.0050	<0.0050	<0.0050	<0.0050	na	na	na	na	na
S-4-PL3	PL-3	08/09/02	4 feet	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.015	<0.0050	<0.0050	<0.0050	<0.0050
S-4-D4	D-4	08/09/02	4 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.014	0.0050	<0.0050	<0.0050	<0.0050
S-4-PL4	PL-4	08/09/02	4 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.041	0.0068	<0.0050	<0.0050	<0.0050
S-4-PL5	PL5	08/09/02	4 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.035	0.019	<0.0050	<0.0050	<0.0050
S-5-D5	D5	08/09/02	5 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.12	0.040	<0.0050	<0.0050	<0.0050
S-4-PL6	PL-6	08/09/02	4 feet	1.2	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.024	0.0081	<0.0050	<0.0050	<0.0050
S-4-D6	D-6	08/09/02	4 feet	<1.0	na	<0.0050	<0.0050	<0.0050	<0.0050	na	na	na	na	na
S-4.5-PL7	PL7	08/09/02	4.5 feet	19	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.011	0.013	<0.0050	<0.0050	<0.0050
S-4-D7	D-7	08/09/02	4 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.019	<0.0050	<0.0050	<0.0050	<0.0050
S-5-PL8	PL-8	08/09/02	5 feet	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.048	<0.0050	<0.0050	<0.0050	<0.0050
S-3-D8	D7	08/09/02	3 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.19	0.063	<0.0050	<0.0050	<0.0050
S-6-PL9	PL-9	08/09/02	6 feet	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
S-6-PL10	PL-10	08/09/02	6 feet	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
S-7-PL11	PL-11	08/09/02	7 feet	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	0.0062	<0.0050	<0.0050	<0.0050	<0.0050
SP-(A)B(C)D	Soil Pile	08/23/02	Soil Pile	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na	na	na	na	na

Notes:

TPHd = total petroleum hydrocarbons as diesel

TPHg = total petroleum hydrocarbons as gasoline

B = benzene

T = toluene

E = ethylbenzene

X = xylenes

MTBE = methyl tertiary butyl ether

TBA = tert butanol

DIPE = diisopropyl ether

ETBE = ethyl tert butyl ether

TAME = tert amyl methyl ether

ppm = parts per million

< = less than indicated detection level

bsg = below surface grade

PL = fuel Pipe Line

D = Dispenser

ATTACHMENT E

ZONE 7 WATER AGENCY WELL LOCATION MAP AND TABLE

	ZONE 7 WATER AGENCY **100 NORTH CANYONS PARKWAY** **LIVERMORE, CA 94551**	**WELL LOCATION MAP**	**SCALE: 1"= 1500 ft** **DATE: 6/23/06** **3192 Santa Rita Road**

WELL NO.	DEPTH	DIA	USE	RP	ADDRESS	CITY	OWNER	APN	OTHER	CCE	CCN	DRILLER	DATE	SEAL	LOG	PERF_U	PERF_L	DEPTH	DATE	REMARK
3S/1E 4L 1	42.0	2.0	mon	0.00	6750 SANTA RITA RD	PLEASANTON	SHELL OIL	998 1101 037 00	MW-1	6164836.8	2080219.8	GREGG DRILLING & TEST	10/8/2002	25	0	27.0	42.0	42.5	00000000	
3S/1E 4L 2	42.0	2.0	mon	0.00	6750 SANTA RITA RD	PLEASANTON	SHELL OIL	998 1101 037 00	MW-2	6164898.4	2080217.9	GREGG DRILLING & TEST	10/8/2002	25	0	27.0	42.0	42.5	00000000	
3S/1E 4L 3	44.0	2.0	mon	0.00	6750 SANTA RITA RD	PLEASANTON	SHELL OIL	998 1101 037 00	MW-3	1603507.4	439712.8	GREGG DRILLING & TEST	10/8/2002	27	0	29.0	44.0	44.5	00000000	
3S/1E 4L 4	44.0	2.0	mon	0.00	6750 SANTA RITA RD	PLEASANTON	SHELL OIL	998 1101 037 00	MW-4	6164801.4	2080118.9	GREGG DRILLING & TEST	10/8/2002	27	0	29.0	44.0	44.5	00000000	
3S/1E 4L 5	32.0	2.0	mon	0.00	6750 SANTA RITA RD	PLEASANTON	SHELL OIL PRODUCTS	946 1101 037 00	MW-5	1603459.6	439625.7	DELTA ENVIRONMENTAL	1/26/2005	24	1	27.0	32.0	35.0	00000000	
3S/1E 4L 6	0.0	0.0	mon	0.00	6700 SANTA RITA RD	PLEASANTON	SHELL OIL		MW-6	1603412.7	439636.5	DELTA ENVIRONMENTAL	00000000	0	0	0.0	0.0	0.0	00000000	
3S/1E 4L 7	0.0	0.0	mon	0.00	6700 SANTA RITA RD	PLEASANTON	SHELL OIL		MW-7	1603506.8	439606.8	DELTA ENVIRONMENTAL	00000000	0	0	0.0	0.0	0.0	00000000	
3S/1E 4Q 1	72.9	2.5	mon	342.20			Z7-MON			6166675.5	2078629.1	USGS HEW	10/25/1976	0	1	62.9	67.9	0.0	00000000	BURIED UNDER SIDEWLK
3S/1E 4Q 2	90.0	2.5	mon	342.80	FC CHANNEL @ GULFSTREAM		Z7-MON			6166717.0	2078605.0	USGS HEW	00000000	0	1	80.0	85.0	0.0	00000000	
3S/1E 5F 1	35.5	2.5	mon	341.10	AT COUNTY STORES I580 FRONTAGE RD		Z7-MON			6159995.2	2081084.3	USGS HEW	00000000	0	1	25.5	30.5	0.0	00000000	
3S/1E 5F 2	150.0	4.0	mon	341.60	SANTA RITA REHAB.		Z7-MON			6160154.4	2081190.3		00000000	0	1	143.0	147.0	0.0	00000000	
3S/1E 5H 2	35.0	4.0	mon	0.00	TASSAJARA ROAD & I 580	DUBLIN	ALAMEDA COUNTY		SR-9	6161880.9	2081561.0	VERSAR, INC.	6/10/1994	0	0	20.0	35.0	35.0	6/22/1995	DTW 27.5
3S/1E 5H 3	35.0	4.0	mon	0.00	HACIENDA DRIVE	DUBLIN			OG1	6161583.1	2081289.0	ESE	11/4/1993	0	1	15.0	35.0	35.0	5/5/1995	
3S/1E 5H 4	35.0	4.0	mon	0.00	HACIENDA DRIVE	DUBLIN			OG2	6161578.0	2081289.5	ESE	11/4/1993	0	1	15.0	35.0	35.0	5/5/1995	
3S/1E 5H 5	35.0	4.0	mon	0.00	HACIENDA DRIVE	DUBLIN			OG3	6161583.1	2081294.6	ESE	11/5/1993	0	1	15.0	35.0	35.0	5/5/1995	
3S/1E 5H 6	35.0	4.0	mon	0.00	HACIENDA DRIVE	DUBLIN			OG4	6161588.5	2081289.8	ESE	11/5/1993	0	1	15.0	35.0	35.0	5/5/1995	
3S/1E 5J 1	205.0	10.0	sup	342.00	OLD SANTA RITA RD	PLEASANTON	ALDRIDGE			6162792.7	2080372.3	ACME	00000000	0	0	0.0	0.0	0.0	2/15/1963	
3S/1E 5J 2	100.0	2.5	mon	345.00	3980 N.Santa Rita Rd	PLEASANTON	Z7-MON			6162935.0	2080182.0	USGS HEW	00000000	0	1	90.0	95.0	100.0	6/1/1987	
3S/1E 5J 3	160.0	10.0	dom	345.00	OLD SANTA RITA RD	PLEASANTON	MASTER POOLS			6162962.7	2080157.7		00000000	0	0	0.0	0.0	0.0	8/20/1985	
3S/1E 5J 4	0.0	8.0	sup	345.00	OLD SANTA RITA RD	PLEASANTON	AUTO JUNK YARD			6162873.9	2080699.7		00000000	0	0	0.0	0.0	0.0	10/1/1985	
3S/1E 5J 5	0.0	0.0	sup	348.00	3920 OLD SANTA RITA RD	PLEASANTON	CARLTON SULLINS			6162936.7	2080174.1		00000000	0	0	0.0	0.0	0.0	3/1/1984	
3S/1E 5J 6	0.0	8.0	sup	348.00	3908 OLD SANTA RITA RD	PLEASANTON	RICHARD GUASCO			6163020.9	2080208.6		00000000	0	0	0.0	0.0	0.0	00000000	HAVE GM DATA 22 NOV
3S/1E 5J 7	0.0	0.0	unk	354.00	OLD SANTA RITA RD	PLEASANTON				6162944.0	2079786.1		00000000	0	0	0.0	0.0	0.0	00000000	HAVE GQ DATA 21 NOV
3S/1E 5J 8	35.0	0.0	mon	346.69		PLEASANTON	HACIENDA BUSINESS		HBP-P 5	6162630.0	2080589.0		00000000	0	0	19.0	35.0	0.0	00000000	
3S/1E 5J 9	0.0	8.0	sup	345.00	I-580 AT TASSAJARA RD	PLEASANTON	HACIENDA BUSINESS		HBP-	6162927.1	2080767.9		00000000	0	0	0.0	0.0	0.0	3/22/1996	RP FROM QUAD
3S/1E 5J10	68.0	0.0	unk	348.00		PLEASANTON	HACIENDA BUSINESS			6163038.2	2080384.2		00000000	0	0	0.0	0.0	0.0	00000000	HAVE GM DATA 22 NOV
3S/1E 5J11	0.0	2.0	mon	349.43	ROSEWOOD AT OLD SANTA RITA RD.	PLEASANTON	HACIENDA BUSINESS		HBP-P 5A	6162620.3	2080634.4	WAHLER ASSOC.	9/29/1987	0	0	0.0	0.0	38.5	00000000	
3S/1E 5K 1	130.0	0.0	sup	351.20	ROSEWOOD DR & OLD SANTA RITA RD	PLEASANTON	ALAMEDA SUGAR CO.		#42	6161282.0	2080625.6		00000000	0	0	0.0	0.0	0.0	00000000	HAVE GQ DATA 21 NOV
3S/1E 5K 2	29.0	0.0	unk	345.73		PLEASANTON	HACIENDA BUSINESS PARK		HBP-DH10	6161303.0	2080753.0		00000000	0	0	18.0	28.0	29.0	00000000	
3S/1E 5K 4	30.0	0.0	mon	340.00	I-580 & HACIENDA DR	PLEASANTON	HACIENDA BUSINESS		HBP-P 4	6160481.0	2080667.0	WAHLER	00000000	0	0	15.0	30.0	0.0	6/12/1990	
3S/1E 5K 5	66.0	4.0	mon	340.00	ROSEWOOD DR - INTERSTATE 580	PLEASANTON	HACIENDA BUSINESS PARK		MW-3	6161602.9	2080684.4	PACIFIC ENVIRON	11/30/1989	0	1	43.0	66.0	68.0	11/20/1997	
3S/1E 5K 6	75.0	4.0	mon	343.41	N. OF ROSEWOOD DR.	PLEASANTON	ZONE 7			6161820.1	2080716.1	PITCHER DRILLIN	6/7/1990	0	1	40.0	70.0	75.0	00000000	REPLACES 5F2
3S/1E 5K 7	150.0	4.0	mon	343.55	N. OF ROSEWOOD DR.	PLEASANTON	ZONE 7			6161828.0	2080716.1	PITCHER DRILLIN	6/8/1990	0	1	134.0	144.0	200.0	00000000	REPLACES 5F1
3S/1E 5K 8	50.0	2.0	mon	0.00	I-580 & TASSAJARA CREEK	PLEASANTON	HACIENDA BUSINESS PARK		MW-1	1601325.7	440317.9	WOODWARD-CLYDE	00000000	0	0	0.0	0.0	0.0	00000000	FROM WORK PLAN
3S/1E 5K 9	50.0	2.0	mon	0.00	I-580 & HACIENDA DR	PLEASANTON	HACIENDA BUSINESS PARK		MW-1	6160782.4	2080734.5	WOODWARD-CLYDE	5/26/1993	0	1	10.0	50.0	120.0	00000000	DTW-22
3S/1E 5L 3	40.0	2.0	mon	336.78	OWENS DR & HACIENDA DR	PLEASANTON	ZONE 7			6159471.0	2079873.0	WOODWARD DRILLING	12/11/2001	13	1	15.0	40.0	40.0	00000000	SMP WELL
3S/1E 5M 1	93.0	10.0	sup	336.30		PLEASANTON	HACIENDA BUSINESS PARK			6158928.4	2079680.1		00000000	0	3	0.0	0.0	0.0	00000000	
3S/1E 5N 1	47.0	4.0	mon	330.27	HACIENDA DR & GIBRALTAR DR	PLEASANTON	HACIENDA BUSINESS PARK		HBP-DH 3	6158339.1	2078469.7	WAHLER ASSOCIAT	2/7/1984	24	1	27.0	47.0	51.5	2/8/1999	
3S/1E 5N 2	39.0	2.0	mon	332.39	OWENS DR. & HACIENDA DR.	PLEASANTON	HACIENDA BUSINESS PARK		HBP-DH 11	6158963.5	2079515.8	WAHLER ASSOCIAT	11/26/1984	0	1	24.0	39.0	39.0	00000000	
3S/1E 5P 1	30.0	0.0	mon	334.26	HACIENDA DR. & OWENS DR.	PLEASANTON	HACIENDA BUSINESS		HBP-P 7	6159955.0	2079522.0		00000000	0	0	25.0	30.0	0.0	00000000	
3S/1E 5P 2	35.0	0.0	mon	333.80		PLEASANTON	HACIENDA BUSINESS		HBP-P 11	6159955.0	2078272.0		00000000	0	0	14.0	35.0	0.0	00000000	
3S/1E 5P 3	31.5	2.0	mon	340.53	HACIENDA DR. AT OWENS DR.	PLEASANTON	HACIENDA BUSINESS PARK		HBP-P 7A	6159868.5	2079520.3	WAHLER ASSOC.	10/1/1987	0	0	0.0	0.0	31.5	00000000	
3S/1E 5P 4	32.5	2.0	mon	334.38	OWENS DR. NR. SP RR	PLEASANTON	HACIENDA BUSINESS PARK		HBP-P 11A	6159663.2	2078516.3	WAHLER ASSOC.	10/2/1987	0	0	22.5	32.5	35.0	00000000	
3S/1E 5P 5	305.0	0.1	unk	0.00		PLEASANTON			BORING 1	6159656.4	2079464.4	HARDING LAWSON	10/27/1981	0	1	0.0	0.0	305.0	10/20/1981	GEOTECH,DK TODD
3S/1E 5P 6	35.0	2.0	mon	334.00	OWENS DR & ROSEWOOD DR	PLEASANTON	ZONE 7		SMP LOC-3	6160233.0	2078721.0	WOODWARD DRILLING	12/19/2000	17	1	25.0	35.0	0.0	00000000	SMP WELL
3S/1E 5Q 1	41.5	0.0	mon	339.61		PLEASANTON	HACIENDA BUSINESS PARK		HBP-DH12	6161613.0	2078725.0		00000000	0	0	31.5	41.5	42.0	00000000	
3S/1E 5Q 2	25.0	0.0	mon	336.60	ROSEWOOD DR. & OWENS DR.	PLEASANTON	HACIENDA BUSINESS		HBP-P 8	6161094.0	2079760.0	WAHLER	00000000	0	0	10.0	25.0	0.0	00000000	
3S/1E 5Q 3	40.0	0.0	mon	337.50	OWENS DR. & TASSAJARA CK	PLEASANTON	HACIENDA BUSINESS PARK		HBP-P 12	6161152.0	2078125.0	WAHLER	10/12/1984	0	1	23.0	40.0	40.0	00000000	
3S/1E 5Q 4	31.5	2.0	mon	343.60	ROSEWOOD DR. NR. OWENS DR.	PLEASANTON	HACIENDA BUSINESS PARK		HBP-P 8A	6160831.6	2079559.9	WAHLER ASSOC.	10/2/1987	17	1	20.0	30.0	31.5	00000000	
3S/1E 5R 1	175.0	8.0	sup	345.00	3744 OLD SANTA RITA RD	PLEASANTON	ERMA THEODORE			6162889.4	2079449.4	HAWTHORNE	1/1/1947	0	3	0.0	0.0	175.0	6/7/2004	LOG DIAMETER 12"??
3S/1E 5R 2	230.0	10.0	sup	345.00	3654 N.Santa Rita Rd.	PLEASANTON	SKINNER CONSTRUCTION			6162964.9	2079225.2	ACME DRILLING	3/16/1955	0	2	190.0	220.0	230.0	11/13/1986	
3S/1E 5R 3	35.0	1.0	mon	343.50	TASSAJARA CREEK & ROSEWOOD DR.	PLEASANTON	HACIENDA BUSINESS		HBP-P 9	6162324.0	2079651.0	WAHLER ASSOCIAT	10/15/1984	0	1	17.0	35.0	0.0	00000000	
3S/1E 5R 4	46.5	2.0	mon	0.00	ANDREWS DR & OLD SANTA RITA	PLEASANTON	HACIENDA BUSINESS PARK		MW-1	1600986.6	438439.6	KALDVEER & ASSOC	8/13/1987	0	0	0.0	0.0	0.0	00000000	
3S/1E 5R 5	49.0	2.0	mon	0.00	3830 OLD SANTA RITA RD	PLEASANTON	J.GORDON BINGHAM			6162409.3	2080126.9	GEOMATRIX	00000000	0	0	0.0	0.0	0.0	5/29/1990	
3S/1E 5R 6	47.0	2.0	mon	0.00	3830 OLD SANTA RITA RD	PLEASANTON	J.GORDON BINGHAM			6162402.5	2080073.1	GEOMATRIX	00000000	0	0	0.0	0.0	0.0	5/29/1990	
3S/1E 5R 7	47.0	2.0	mon	0.00	3830 OLD SANTA RITA RD, PLEASANTON	PLEASANTON	J.GORDON BINGHAM, E.BAY		MW-1	6163010.0	2079584.0	ALL TERRAIN DRI	4/19/1990	0	0	0.0	0.0	49.0	10/31/1990	
3S/1E 8A 1	160.0	12.0	sup	0.00	OLD SANTA RITA RD	PLEASANTON	CPS			6162586.1	2078164.0	SILVA BROS.	00000000	0	0	0.0	0.0	0.0	1/26/1985	
3S/1E 8B 1	91.0	4.0	mon	335.62	TASSAJARA FC CHANNEL	PLEASANTON	ZONE 7			6160733.0	2077394.0		00000000	0	1	55.0	82.0	0.0	00000000	
3S/1E 8B 2	41.5	0.0	mon	335.59			HACIENDA BUSINESS PARK		HBP-DH17	6160391.0	2077833.0		00000000	0	0	27.0	37.0	42.0	00000000	
3S/1E 8D 1	39.5	4.0	mon	326.07	HACIEDA DR & GIBRALTER DR	PLEASANTON	HACIENDA BUSINESS PARK		HBP-P 15	6158154.7	2077391.5	WAHLER ASSOCIAT	10/10/1984	0	1	0.0	39.0	39.5	2/16/1999	
3S/1E 8D 2	40.0	2.0	mon	326.07	HACIENDA DR & GIBRALTER DR	PLEASANTON	HACIENDA OWNERS ASSOC		HBP-P15A	6158154.5	2077392.3	WAHLER ASSOCIAT	11/6/1986	19	1	24.0	40.0	40.0	2/16/1999	
3S/1E 8E 1	50.0	0.0	mon	328.32	HACIENDA DR. & STONERIDGE DR.	PLEASANTON	HACIENDA BUSINESS PARK		HBP-DH18	6158262.0	2076418.0		00000000	0	0	20.0	48.0	50.0	00000000	
3S/1E 8F 1	245.0	14.0	irr	0.00			PRUDENTIAL INS CO			6159879.5	2076472.8		00000000	0	2	0.0	0.0	0.0	00000000	
3S/1E 8F 3	46.0	4.0	mon	333.95	GIBRALTAR DRIVE	PLEASANTON	HACIENDA BUSINESS PARK		HBP-DH 5	6159337.0	2076875.0	WAHLER ASSOCIAT	2/7/1984	25	1	27.0	42.0	46.0	00000000	
3S/1E 8F 4	700.0	0.0	oth	0.00	OWENS DR & TASSAJARA CREEK	PLEASANTON	DSRSD		M-2 TESTHO	6160749.0	2077877.8	BRADLEY & SONS	5/27/1997	0	1	0.0	0.0	700.0	00000000	FILLED IN
3S/1E 8G 1	0.0	0.0	sup	0.00	STONERIDGE DR & W. LAS POSITAS BLVD	PLEASANTON				6160479.3	2076630.9		00000000	0	0	0.0	0.0	0.0	00000000	HAVE GQ DATA 21 NOV
3S/1E 8G 3	47.0	4.0	mon	334.27	W LAS POSITAS BLVD & STONERIDGE DR	PLEASANTON	HACIENDA BUSINESS PARK		HBP-DH 6	6160908.8	2076259.1	WAHLER ASSOCIAT	2/7/1984	33	1	37.0	47.0	60.0	3/2/1999	
3S/1E 8G 4	85.0	2.0	mon	338.61	ITHACA WY & APACHE DR	PLEASANTON	ZONE 7			6161686.0	2076895.0	WOODWARD DRILLING	12/19/2001	57	1	60.0	85.0	85.0	00000000	SMP WELL
3S/1E 8H 1	301.0	12.0	sup	336.30			JIMMY LEMOS			6162359.0	2076787.3		00000000	0	0	50.0	291.0	0.0	00000000	DESTROYED- NO DATE

WELL NO.	DEPTH	DIA	USE	RP	ADDRESS
3S/1E 8H 2	205.0	14.0	sup	340.67	SANTA RITA AT STONERIDGE (FAR NORTH)
3S/1E 8H 3	203.0	14.0	sup	342.00	SANTA RITA AT STONERIDGE (NEAR NORTH)
3S/1E 8H 4	200.0	14.0	sup	339.36	SANTA RITA AT STONERIDGE (SOUTH)
3S/1E 8H 5	215.0	14.0	muni	0.00	SANTA RITA AT STONERIDGE (DEST)
3S/1E 8H 6	63.0	0.0	sup	0.00	SANTA RITA RD 1300' N OF RR XING
3S/1E 8H 7	86.5	2.0	mon	339.03	5505 SPRINGHOUSE DR
3S/1E 8H 8	85.0	2.0	mon	339.03	5505 SPRINGHOUSE DR
3S/1E 8H 9	240.0	2.0	mon	336.48	NW COR STONERIDGE & SANTA RITA
3S/1E 8H10	440.0	2.0	mon	336.51	NW COR STONERIDGE & SANTA RITA
3S/1E 8H11	730.0	2.0	mon	336.45	NW COR STONERIDGE & SANTA RITA
3S/1E 8H12	846.0	0.0	oth	340.00	NW COR STONERIDGE & SANTA RITA
3S/1E 8H13	800.0	2.0	mon	338.30	STONERIDGE DR & SANTA RITA RD
3S/1E 8H14	760.0	8.0	oth TH	324.00	SW CORNER OF STONE RIDGE & SANTA RITA
3S/1E 8H16	745.0	20.0	muni	338.60	SANTA RITA RD & STONERIDGE DR
3S/1E 8H19	0.0	0.0	mon	0.00	STONERIDGE DR & SANTA RITA RD
3S/1E 8J 1	156.0	14.0	mon	336.50	
3S/1E 8J 2	156.0	14.0	sup	338.80	
3S/1E 8J 3	0.0	0.0	unk	0.00	
3S/1E 8K 1	99.0	2.5	mon	329.70	NR PARKSIDE & SUTTERGATE
3S/1E 8L 1	0.0	0.0	unk	0.00	
3S/1E 8L 2	43.5	0.0	mon	329.30	W.LAS POSITAS/TASSAJARA CREEK
3S/1E 8L 4	0.0	6.0	mon	0.00	BELLEZA DR & STONERIDGE DR
3S/1E 8L 5	0.0	0.0		0.00	BELLEZA DR & CASADERO CT
3S/1E 8L 6	0.0	0.0		0.00	BELLEZA LN & BELLEZA DR
3S/1E 8L 7	0.0	0.0	mon	0.00	BELLEZA LN & BELLEZA DR
3S/1E 8L 8	0.0	0.0	mon	0.00	BELLEZA LN & BELLEZA DR
3S/1E 8R 1	0.0	0.0	irr	0.00	
3S/1E 8R 2	0.0	0.0	irr	0.00	
3S/1E 8R 3	107.5	0.0	mon	337.33	
3S/1E 8R 4	264.0	14.0	irr	0.00	VALLEY AVE & GREENWOOD RD
3S/1E 9A 1	145.0	6.0	sup	347.80	2485 MARTIN AV
3S/1E 9B 1	820.0	20.0	muni	348.38	4000' US OF SANTA RITA ON ARROYO MOCHO
3S/1E 9D 1	352.0	14.0	sup	339.75	LOS POSITAS ELEMENTARY SCHOOL
3S/1E 9D 2	180.0	10.0	sup	342.00	3442 SANTA RITA RD
3S/1E 9D 3	235.0	10.0	sup	0.00	3534 SANTA RITA RD
3S/1E 9D 4	196.0	2.0	mon	339.60	4151 W. LAS POSITAS BLVD
3S/1E 9D 5	270.0	2.0	mon	339.50	4151 W. LAS POSITAS BLVD
3S/1E 9D 6	47.0	0.0	cath	0.00	3192 SANTA RITA RD
3S/1E 9D 7	0.0	0.0	dom	0.00	
3S/1E 9D 8	76.0	2.0	mon	339.75	4151 W. LAS POSITAS BLVD
3S/1E 9D 9	16.0	6.0	unk	342.00	3442 SANTA RITA RD
3S/1E 9D10	50.0	2.0	mon	330.00	3192 SANTA RITA RD
3S/1E 9D11	50.0	2.0	mon	330.00	3192 SANTA RITA RD
3S/1E 9D12	35.0	2.0	mon	330.00	3192 SANTA RITA RD
3S/1E 9D13	35.0	2.0	mon	330.00	3192 SANTA RITA RD
3S/1E 9D14	70.0	2.0	mon	0.00	3192 SANTA RITA RD
3S/1E 9E 1	295.0	0.0	oth cat	0.00	SANTA RITA RD & STONERIDGE DR
3S/1E 9E 2	277.0	0.0	oth cat	0.00	SANTA RITA RD & STONERIDGE DR
3S/1E 9F 1	170.0	8.0	dom	340.00	2365 OAKLAND AVE. PLEAS
3S/1E 9F 7	0.0	8.0	sup	350.00	3820 TRENERY
3S/1E 9G 1	160.0	9.0	sup	349.70	3775 Trenery (Kamp)
3S/1E 9G 2	240.0	10.0	sup	353.60	3760 TRENERY DR
3S/1E 9G 3	220.0	8.0	sup	0.00	3737 TRENERY DR.
3S/1E 9G 4	230.0	8.0	sup	350.00	3800 TRENERY
3S/1E 9G 5	236.0	10.0	sup	350.00	3752 TRENERY DR
3S/1E 9H 1	160.0	10.0	sup	354.00	3711 TRENERY
3S/1E 9H 2	172.0	8.0	sup	354.00	3711 TRENERY DR
3S/1E 9H 3	240.0	10.0	sup	351.20	3710 TRENERY
3S/1E 9H 4	168.0	8.0	sup	0.00	2215 MARTIN
3S/1E 9H 5	153.0	8.0	sup	348.00	2207 MARTIN
3S/1E 9H 6	153.0	8.0	sup	351.00	2201 MARTIN
3S/1E 9H 7	241.0	6.0	dom	363.50	2221 MARTIN
3S/1E 9H 9	0.0	0.0	sup	350.00	
3S/1E 9H10	145.0	2.0	mon	350.20	MARTIN AVE & TRENERY DR
3S/1E 9H11	190.0	2.0	mon	350.30	MARTIN AVE & TRENERY DR
3S/1E 9J 3	225.0	6.0	dom	0.00	3623 CAMERON AVE
3S/1E 9J 4	230.0	6.0	sup	355.00	2313 MARTIN
3S/1E 9J 5	237.0	8.0	sup	355.00	3710 CAMERON AVE
3S/1E 9J 6	192.0	8.0	sup	353.80	3926 CAMERON AVE. PLEAS

CITY	OWNER	APN	OTHER	CCE	CCN	DRILLER
PLEASANTON	US ARMY		ARMY 1	6162907.8	2076016.2	
PLEASANTON	US ARMY		ARMY 2	6162956.5	2075874.0	
PLEASANTON	US ARMY		ARMY 3	6162995.5	2075743.0	
PLEASANTON	US ARMY		ARMY 4	6162692.4	2075938.1	
PLEASANTON	DONAHUE		SFWD 40	6162730.0	2076626.1	
PLEASANTON	NORTHWEST MUTUAL LIFE	941 2764 012 01	HBP-DH13	6162140.0	2076147.0	WAHLER ASSOCIAT
PLEASANTON	NORTHWESTERN MUTUAL	941 2764 012 01	DH-13A	6162132.8	2076173.1	DANIEL SALAICES
PLEASANTON	DSRSD		MW 1	6162776.1	2076009.7	LUHDORF AND SCA
PLEASANTON	DSRSD		MW 2	6162776.3	2076009.4	LUHDORF AND SCA
PLEASANTON	DSRSD		MW 3	6162776.9	2076009.1	LUHDORF AND SCA
PLEASANTON	DSRSD		TESTHOLE 1	6162776.6	2076010.0	LUHDORF AND SCA
PLEASANTON	ZONE 7	946 3325 095 03	TH7A	6162867.1	2075674.9	FUGRO WEST
PLEASANTON	ZONE 7	946 3325 095 03	TH7B	6162858.1	2075704.9	FUGRO WEST
PLEASANTON	Z7-MUNI	946 3200 005 02	MOCHO 4	6162808.0	2076045.0	BEYLIK DRILLING
PLEASANTON	ZONE 7 WATER AGENCY			1601299.4	435631.0	GEOMATRIX
				6162561.2	2074800.3	
				6163074.1	2074740.1	
				6162495.0	2074462.0	
	ZONE 7			6160717.0	2074605.0	USGS HEW
				6160015.0	2074866.0	
	HACIENDA BUSINESS		HBP-P 20	6159728.0	2075506.0	
PLEASANTON	SIGNATURE PROPERTIES		B-1	6161332.0	2075822.5	TREADWELL & ROLLO
PLEASANTON	SIGNATURE PROPERTIES		B-2	6160818.3	2075858.7	TREADWELL & ROLLO
PLEASANTON	SIGNATURE PROPERTIES		B-3	6160349.2	2075660.2	TREADWELL & ROLLO
PLEASANTON	SIGNATURE PROPERTIES		B-4	6160446.7	2075500.4	TREADWELL & ROLLO
PLEASANTON	SIGNATURE PROPERTIES		B-5	6160534.7	2075529.8	TREADWELL & ROLLO
				6163046.4	2073825.7	
PLEASANTON	THOMSEN		31E-38	6162583.0	2073526.0	
				6162112.7	2073505.3	
PLEASANTON	TONY DAVILLA			6162191.0	2073250.0	SILVA BROS.
PLEASANTON	STANDARD PACIFIC			6167466.9	2077204.9	
PLEASANTON	Z7-MUNI		STONERIDGE	6165773.0	2077441.0	LANE WESTERN
PLEASANTON	ZONE 7			6164118.0	2077625.9	SILVA BROS
PLEASANTON	R & B EQUIPMENT			6163067.9	2077899.6	WESTERN WELL DR
PLEASANTON				6163114.0	2077662.0	ACME
PLEASANTON	ZONE 7			6164667.0	2077405.0	ZONE 7
PLEASANTON	ZONE 7			6164109.8	2077624.8	ZONE 7
PLEASANTON	EXXON			6163059.0	2077160.0	
				6163150.7	2077112.7	
PLEASANTON	ZONE 7			6164122.8	2077618.8	ZONE 7
PLEASANTON	R & B CONSTRUCTION			6163035.9	2077913.5	
PLEASANTON	EXXON COMPANY	946 1105 038 04	MW3	6163035.1	2077250.7	ENVIRONMENTAL R
PLEASANTON	EXXON COMPANY	946 1105 038 04	MW4	6163013.0	2077309.5	ENVIRONMENTAL R
PLEASANTON	EXXON COMPANY	946 1105 038 04	MW1	6162915.7	2077267.4	ENVIRONMENTAL R
PLEASANTON	EXXON COMPANY	946 1105 038 04	MW2	6162921.4	2077137.0	ENVIRONMENTAL R
PLEASANTON	EXXON/MOBIL	946 1105 038 04	MW-8	6162941.2	2077145.8	GREG DRILLING
PLEASANTON	LAVWMA		L-3	6163396.7	2076349.6	PITCHER
PLEASANTON	LAVWMA			6163473.9	2076380.4	PITCHER
PLEASANTON	NEILSON			6164772.9	2075570.8	ACME DRILLING
PLEASANTON			3820 TRENE	1604675.7	435609.2	
	MRS. KAMP			6166117.0	2075705.0	
PLEASANTON	ROBERT MOLINARO			6166266.4	2075931.4	SILVA BRO
PLEASANTON	ALBERT WIEMKEN			6166698.1	2075664.7	LEITE BROS.
PLEASANDTON	JOHN MONTGOMERY			1604655.1	435651.1	HENNINGS BROS.
PLEASANTON	SUMITHRA RAMIREDDY			6166587.0	2075950.6	DELUCCHI
	COOPER		3711 TRENN	6167089.7	2075760.0	
PLEASANTON	COOPER		3711 TRENN	6166961.4	2075589.8	ACME DRILLING
PLEASANTON	PRESTON		3710 TRENN	6167054.1	2076024.1	
PLEASANTON	GONSALVES, DAVID		2215 MARTI	6167139.5	2076443.4	LEITE PUMP SALE
	HERBERT SINGLETON			6167377.9	2076559.6	
				6167192.4	2076572.7	
	Eugene Lauer		2221 MARTI	6166939.6	2076192.1	Acme Drilling
				6166846.3	2075374.1	
PLEASANTON	ZONE 7 WATER AGENCY	946 1151 011 03		1606098.5	435438.7	WDC EXPLORATION
PLEASANTON	ZONE 7 WATER AGENCY	946 1151 011 03		1606098.5	435438.7	WDC EXPLORATION
PLEASANTON	KENNETH WATERS			6167132.2	2074829.8	HENNINGS BROS.
PLEASANTON	SELWAY			6167154.8	2075066.7	HENNINGS BROS.
PLEASANTON	KENNETH ZOTTI		COLLAPSED	6167069.4	2074678.5	BITNER DRILLING
PLEASANTON	ZOTTE			6167074.5	2074714.4	

DATE	SEAL	LOG	PERF_U	PERF_L	DEPTH	DATE	REMARK
1/7/1943	0	2	124.0	165.0	205.0	00000000	YLD 500 PER LEE HALL
1/7/1943	0	2	124.0	171.0	203.0	00000000	
1/7/1943	0	2	130.0	181.0	200.0	00000000	YIELD 500 GPM
00000000	0	0	120.0	205.0	215.0	8/19/1988	
00000000	0	0	0.0	0.0	0.0	00000000	HAVE GQ DATA 21 NOV
11/28/1984	0	1	47.0	67.0	87.0	2/5/1999	
11/5/1986	46	1	55.0	85.0	85.0	2/5/1999	
12/12/1996	0	1	210.0	230.0	845.0	00000000	
12/12/1996	0	1	290.0	430.0	846.0	00000000	
12/12/1996	0	1	520.0	720.0	846.0	00000000	
12/12/1996	0	1	0.0	0.0	845.0	00000000	
12/11/1998	280	1	570.0	790.0	805.0	00000000	E-LOG,DXF,ASCII
2/13/1999	28	0	560.0	730.0	760.0	00000000	
8/9/2000	98	2	515.0	730.0	800.0	00000000	E-log
00000000	0	0	0.0	0.0	0.0	00000000	
00000000	0	0	0.0	0.0	0.0	00000000	
00000000	0	0	0.0	0.0	0.0	00000000	CHRISTY BX PAVED OVR
00000000	0	0	0.0	0.0	0.0	00000000	SMITH NO. 36, SFWD
00000000	0	1	89.0	94.0	0.0	00000000	
00000000	0	0	0.0	0.0	0.0	00000000	ENT'D FR WELL LIST
00000000	0	0	25.0	37.0	0.0	00000000	
00000000	0	0	0.0	0.0	0.0	00000000	
00000000	0	0	0.0	0.0	0.0	00000000	
00000000	0	0	0.0	0.0	0.0	00000000	
00000000	0	0	0.0	0.0	0.0	00000000	
00000000	0	0	0.0	0.0	0.0	00000000	
00000000	0	0	0.0	0.0	0.0	00000000	
00000000	0	0	0.0	0.0	0.0	00000000	DESTROYED BY HOUSING
00000000	0	0	0.0	0.0	0.0	00000000	
7/15/1950	0	2	164.0	199.0	264.0	00000000	
00000000	0	3	0.0	145.0	0.0	5/4/1895	
4/7/1992	0	2	250.0	800.0	1003.0	00000000	FORMERLY 9A 2
10/15/1949	0	2	50.0	347.0	352.0	4/30/2002	
6/2/1950	0	2	150.0	175.0	180.0	7/15/1997	
00000000	0	0	0.0	0.0	0.0	00000000	ENT'D FR WELL LIST
4/9/1969	0	1	181.0	191.0	352.0	4/30/2002	ELEMENTARY SCHOOL
4/9/1969	0	1	255.0	265.0	352.0	4/30/2002	ELEMENTARY SCHOOL
00000000	0	0	0.0	0.0	0.0	00000000	ENT'D FR WELL LIST
00000000	0	0	0.0	0.0	0.0	00000000	may be deepened 9D3
4/9/1969	0	1	61.0	71.0	352.0	4/30/2002	ELEMENTARY SCHOOL
00000000	0	0	0.0	0.0	0.0	7/15/1997	
11/11/1998	32	1	35.0	50.0	51.5	00000000	
11/11/1998	32	1	35.0	50.0	51.5	00000000	
11/12/1998	17	1	20.0	35.0	36.5	00000000	
11/12/1998	17	1	20.0	35.0	41.5	00000000	
2/22/2001	0	0	55.0	70.0	70.0	00000000	
2/5/1979	0	1	0.0	0.0	295.0	11/1/1993	
11/4/1993	0	1	0.0	0.0	277.0	00000000	
7/26/1962	0	2	134.0	162.0	0.0	12/19/1983	
00000000	0	0	0.0	0.0	0.0	4/16/1991	
00000000	0	2	77.0	149.0	0.0	00000000	
10/25/1960	0	0	99.0	227.0	240.0	7/5/1995	
11/1/1977	0	0	0.0	0.0	0.0	00000000	
7/12/1978	0	0	0.0	0.0	0.0	00000000	
8/3/1979	0	2	199.0	232.0	236.0	7/5/1995	DTW 100.75'
00000000	0	0	0.0	0.0	0.0	00000000	
10/22/1957	0	2	0.0	0.0	172.0	00000000	
11/2/1960	0	2	205.0	230.0	240.0	00000000	
2/1/1976	0	0	0.0	0.0	0.0	00000000	
00000000	0	0	0.0	0.0	0.0	00000000	
00000000	0	0	0.0	0.0	0.0	00000000	
3/28/1963	0	0	78.5	241.0	241.0	00000000	
00000000	0	0	0.0	0.0	0.0	00000000	
11/22/2004	160	1	120.0	140.0	230.0	00000000	
11/22/2004	114	1	165.0	185.0	230.0	00000000	
11/6/1978	150	2	205.0	225.0	250.0	00000000	
1/24/1981	30	2	210.0	230.0	265.0	00000000	
9/29/1981	0	2	197.0	237.0	240.0	00000000	WILL REDRILL
00000000	0	0	0.0	0.0	0.0	00000000	

WELL NO.	DEPTH	DIA	USE	RP	ADDRESS	CITY	OWNER	APN	OTHER	CCE	CCN	DRILLER	DATE	SEAL	LOG	PERF_U	PERF_L	DEPTH	DATE	REMARK
3S/1E 9K 1	155.0	8.0	dom	350.00			KAMP			6168657.7	2074411.8		00000000	0	0	0.0	0.0	0.0	5/20/1985	
3S/1E 9K 2	200.0	16.0	irr	354.80			SHEFIELD			6165912.4	2074886.0		00000000	0	0	0.0	0.0	0.0	5/27/1985	
3S/1E 9K 3	82.0	6.0	sup	354.50			KAMP			6165946.3	2074886.3		00000000	0	0	0.0	0.0	0.0	00000000	
3S/1E 9K 4	217.0	6.0	dom	0.00	3750 CAMERON AVE	PLEASANTON	ROBERT BOUCHIER			6166680.6	2074423.2	WATER MAN DRILLING	5/16/1978	35	2	97.0	217.0	217.0	00000000	
3S/1E 9L 1	120.0	9.0	sup	350.20						6164794.4	2074840.8		00000000	0	0	0.0	0.0	0.0	1/13/1983	
3S/1E 9L 2	150.0	12.0	irr	350.20			NELS NIELSON			6164783.9	2074791.9		00000000	0	3	10.0	20.0	0.0	1/13/1983	
3S/1E 9M 1	200.0	12.0	mon	339.90						6163713.7	2075484.0		00000000	0	0	0.0	0.0	0.0	00000000	
3S/1E 9M 2	530.0	16.0	muni	341.90	2722 SANTA RITA RD.	PLEASANTON	Z7-MUNI		MOCHO 1	6163288.0	2075356.0	WESTERN WELL	4/24/1964	0	2	150.0	510.0	558.0	00000000	
3S/1E 9M 3	575.0	16.0	muni	344.20	2552 SANTA RITA RD.	PLEASANTON	Z7-MUNI		MOCHO 2	6163371.0	2074828.0	C&N PUMP & WELL	2/28/1967	0	2	250.0	570.0	615.0	00000000	
3S/1E 9M 4	498.0	20.0	muni	339.90	SANTA RITA RD & STONERIDGE DR	PLEASANTON	Z7-MUNI	946 3325 095 03	MOCHO 3	6162922.0	2075534.0	BEYLIK DRILLING	6/24/2000	103	2	315.0	493.0	514.0	00000000	E-log
3S/1E 9N 1	200.0	0.0	mon	338.90			TONY DAVILLA			6163550.2	2073343.9		00000000	0	0	0.0	0.0	0.0	00000000	
3S/1E 9N 2	85.0	12.0	mon	342.00	2401 SANTA RITA RD.		CITY OF PLEASANTON			6163011.6	2074237.4		00000000	0	0	0.0	0.0	0.0	00000000	
3S/1E 9N 3	0.0	0.0	unk	0.00						6163928.0	2074399.0		00000000	0	0	0.0	0.0	0.0	00000000	ENT'D FR WELL LIST
3S/1E 9N 4	0.0	0.0	sup	350.00						6163317.5	2073992.5		00000000	0	0	0.0	0.0	0.0	00000000	HAVE GQ DATA 21 NOV
3S/1E 9P 1	106.0	8.0	sup	345.90	4115 MOHR AVE	PLEASANTON	EDEN CONTRUCTION CO.	946 4550 018 02	SVWC MOHR6	6164557.1	2073659.9	SPRING VALLEY	1/1/1917	0	2	0.0	115.0	116.0	4/1/1999	
3S/1E 9P 2	115.0	12.0	mon	343.60	TRACT # 3184					6164317.9	2073545.2		00000000	0	0	0.0	0.0	0.0	3/14/1975	
3S/1E 9P 4	246.0	12.0	sup	344.90	2500 SANTA RITA	PLEASANTON	CARPENTER'S HALL		TEMP. MOHR	6164376.2	2073885.9		00000000	0	0	0.0	0.0	0.0	00000000	sound 246 aug88
3S/1E 9P 5	105.0	2.5	mon	346.70	MOHR AVE & SANTA RITA RD	PLEASANTON	Z7-MON		MOHR KEY	1603841.6	433277.9	USGS HEW	11/3/1977	0	1	95.0	100.0	105.0	00000000	
3S/1E 9P 6	150.0	2.0	mon	0.00	MOHR AVE & SPRR TRACKS	PLEASANTON	ZONE 7 WATER AGENCY			1603492.4	433290.6	MAGGIORA BROS.	5/9/2003	0	0	125.0	145.0	512.0	00000000	
3S/1E 9P 7	305.0	2.0	mon	0.00	MOHR AVE & SPRR TRACKS	PLEASANTON	ZONE 7 WATER AGENCY			6164858.5	2073695.6	MAGGIORA BROS DRILLIN	5/9/2003	0	0	285.0	305.0	512.0	00000000	
3S/1E 9P 8	420.0	2.0	mon	0.00	MOHR AVE & SPRR TRACKS	PLEASANTON	ZONE 7 WATER AGENCY			6164858.5	2073695.6	MAGGIORA BROS DRILLIN	5/9/2003	0	0	405.0	420.0	512.0	00000000	
3S/1E 9P 9	210.0	2.0	mon	346.87	MOHR AVE & RR TRACK	PLEASANTON	ZONE 7 WATER AGENCY			1603618.5	433191.4	WDC WELLS & EXPLORATI	3/23/2005	20	1	165.0	205.0	440.0	00000000	1 OF 3 NESTED
3S/1E 9P10	310.0	2.0	mon	346.79	MOHR AVE & RR TRACK	PLEASANTON	ZONE 7 WATER AGENCY			1603618.5	433191.4	WDC WELLS & EXPLORATI	3/23/2005	20	1	285.0	305.0	440.0	00000000	2 OF 3 NESTED
3S/1E 9P11	425.0	2.0	mon	346.72	MOHR AVE & RR TRACK	PLEASANTON	ZONE 7 WATER AGENCY			1603618.5	433191.4	WDC WELLS & EXPLORATI	3/23/2005	20	1	405.0	420.0	440.0	00000000	3 OF 3 NESTED
3S/1E 9Q 3	207.0	8.0	sup	345.32	3727 MOHR	PLEASANTON	JERALD JENNARO		3727 MOHR	6166309.2	2073986.9	WATER MAN DRILL	5/4/1978	37	0	104.0	204.0	207.0	00000000	SOUNDED 205
3S/1E 9Q 4	0.0	0.0	sup	352.00	3500 Mohr Ave.	PLEASANTON	De Vour Nursery			6165905.6	2073949.3	delucchi	00000000	0	0	0.0	0.0	0.0	7/1/1988	HAVE GM DATA 22 NOV
3S/1E 17A 3	85.0	12.0	sup	0.00	4687 VALLEY AVE	PLEASANTON	W. BUCK			6162197.0	2072798.0		00000000	0	0	0.0	0.0	0.0	00000000	

ATTACHMENT F

HUMAN HEALTH RISK ASSESSMENT
MODEL OUTPUT DOCUMENTATION

Main Screen

RBCA Tool Kit for Chemical Releases
Version 1.3b © 2000

1. Project Information

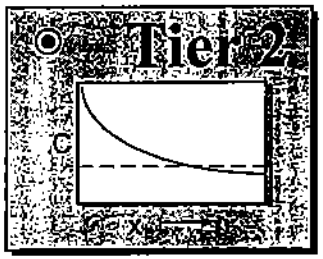
Site Name:	Former Exxon Service Station 7-3567		
Location:	Pleasonton, California		
Compl. By:	JBB		
Date:	28-Jun-06	Job ID:	2431

2. Which Type of RBCA Analysis? (?)

○ Tier 1

Generic Values
On-Site
Exposure

◉ Tier 2



Site-Specific Values
On- or Off-Site Exposure

3. Calculation Options (?)

Affects which input data are required

☑ ***Baseline Risks (Forward mode)***

☑ ***RBCA Cleanup Standards (Backward mode)***

4. RBCA Evaluation Process

Prepare Input Data

Data Complete? (■= yes, ■= no)

- ■□ Exposure Pathways
- ■□ Constituents of Concern (COCs)
- ■□ Transport Models
- ■□ Soil Parameters
- ■□ GW Parameters
- ■□ Air Parameters

Review Output

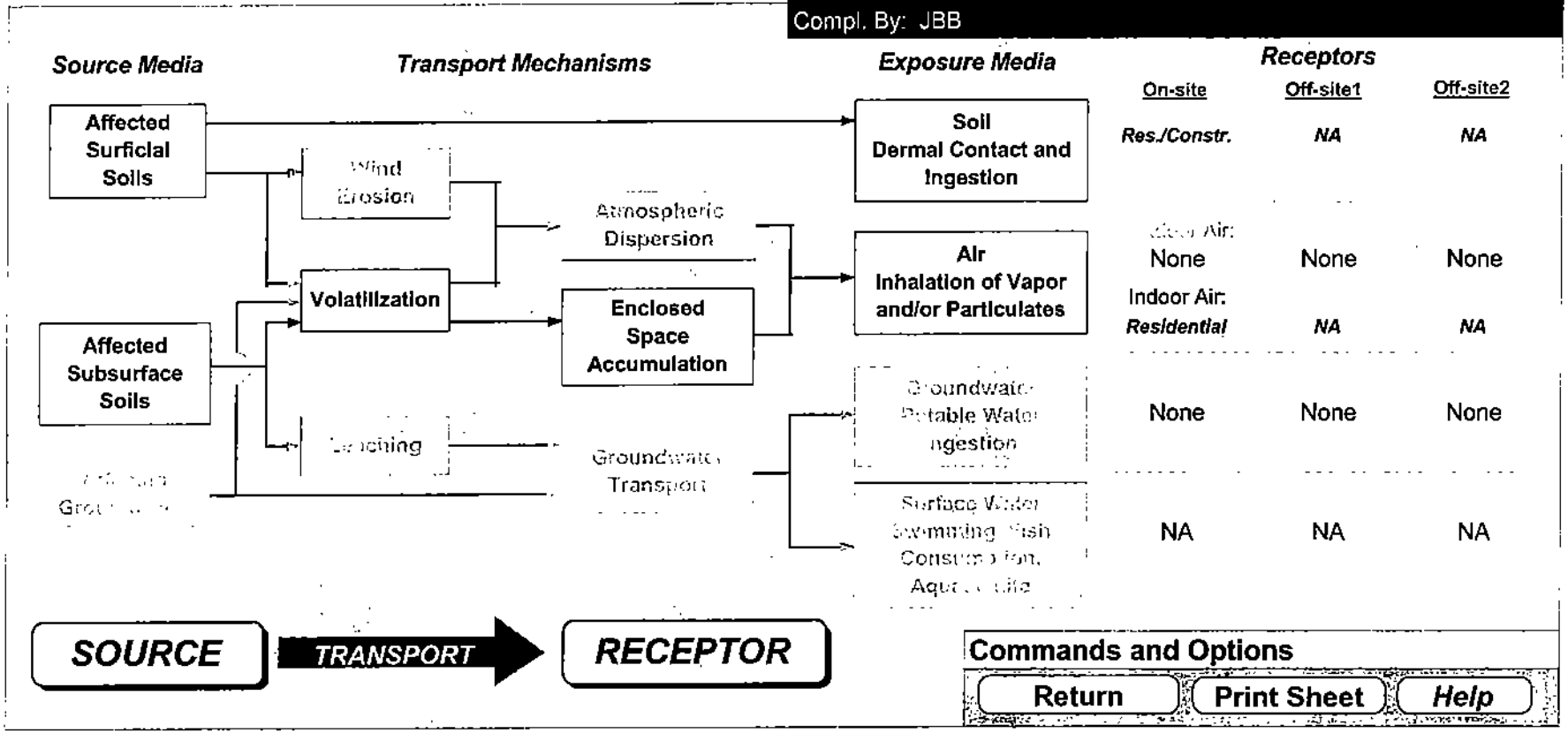
- Exposure Flowchart
- COC Chem. Parameters
- Input Data Summary
- User-Spec. COC Data...
- Transient Domenico Analysis
- Baseline Risks...
- Cleanup Standards...

5. Commands and Options

New Site	Load Data...	Save Data As...	Quit
Print Sheet	Set Units	Custom Chem. Data...	*Help*

Exposure Pathway Flowchart

Site Name: Former Exxon Service Station 7-3567 | Job ID: 2431
Location: Pleasonton, California | Date: 28-Jun-06
Compl. By: JBB



Commands and Options

Return | Print Sheet | Help

RBCA SITE ASSESSMENT

Input Parameter Summary

Site Name: Former Exxon Service Station 7-3567
Site Location: Pleasanton, California

Completed By: JBB
Date Completed: 28-Jun-06

Job ID: 2431

Exposure Parameters		Residential			Commercial/Industrial	
		Adult	(1-6yrs)	(1-19 yrs)	Chronic	Construc.
AT_c	Averaging time for carcinogens (yr)	70				
AT_n	Averaging time for non-carcinogens (yr)	30			25	1
BW	Body weight (kg)	70	15	35	70	
ED	Exposure duration (yr)	30	6	10	25	1
t	Averaging time for vapor flux (yr)	30			25	1
EF	Exposure frequency (days/yr)	350			250	180
EF_D	Exposure frequency for dermal exposure	350			250	
IR_w	Ingestion rate of water (L/day)	2			1	
IR_s	Ingestion rate of soil (mg/day)	100	200		100	100
SA	Skin surface area (dermal) (cm^2)	5700		2800	3300	3300
M	Soil to skin adherence factor	0.2				
ET_{swim}	Swimming exposure time (hr/event)	3				
EV_{swim}	Swimming event frequency (events/yr)	12	12	12		
IR_{swim}	Water ingestion while swimming (L/hr)	0.05	0.5			
SA_{swim}	Skin surface area for swimming (cm^2)	23000		8100		
IR_{fish}	Ingestion rate of fish (kg/yr)	0.025				
FI_{fish}	Contaminated fish fraction (unitless)	1				

Complete Exposure Pathways and Receptors	On-site	Off-site 1	Off-site 2
Groundwater:			
Groundwater Ingestion	None	None	None
Soil Leaching to Groundwater Ingestion	None	None	None
Applicable Surface Water Exposure Routes:			
Swimming			NA
Fish Consumption			NA
Aquatic Life Protection			NA
Soil:			
Direct Ingestion and Dermal Contact	Res./Constr.		
Outdoor Air:			
Particulates from Surface Soils	None	None	None
Volatilization from Soils	None	None	None
Volatilization from Groundwater	None	None	None
Indoor Air:			
Volatilization from Subsurface Soils	Residential	NA	NA
Volatilization from Groundwater	None	NA	NA

Receptor Distance from Source Media	On-site	Off-site 1	Off-site 2	(Units)
Groundwater receptor	NA	NA	NA	(cm)
Soil leaching to groundwater receptor	NA	NA	NA	(cm)
Outdoor air inhalation receptor	NA	NA	NA	(cm)

Target Health Risk Values		Individual	Cumulative
TR_a	Target Risk (class A&B carcinogens)	1.0E-6	1.0E-4
TR_c	Target Risk (class C carcinogens)	1.0E-6	
THQ	Target Hazard Quotient (non-carcinogenic risk)	1.0E+0	1.0E+0

Modeling Options	
RBCA tier	Tier 2
Outdoor air volatilization model	NA
Indoor air volatilization model	Johnson & Ettinger model
Soil leaching model	NA
Use soil attenuation model (SAM) for leachate?	NA
Air dilution factor	NA
Groundwater dilution-attenuation factor	NA

NOTE: NA = Not applicable

Surface Parameters		General	Construction	(Units)
A	Source zone area	NA	NA	(cm^2)
W	Length of source-zone area parallel to wind	NA	NA	(cm)
W_{gw}	Length of source-zone area parallel to GW flow	NA		(cm)
U_{air}	Ambient air velocity in mixing zone	NA		(cm/d)
δ_{air}	Air mixing zone height	NA		(cm)
P_a	Areal particulate emission rate	NA		(g/cm^2/s)
L_{ss}	Thickness of affected surface soils	NA		(cm)

Surface Soil Column Parameters		Value			(Units)
h_{cap}	Capillary zone thickness	NA			(cm)
h_v	Vadose zone thickness	NA			(cm)
ρ_b	Soil bulk density	1.7E+0			(g/cm^3)
f_{oc}	Fraction organic carbon	1.0E-2			(-)
θ_T	Soil total porosity	3.8E-1			(-)
K_{vs}	Vertical hydraulic conductivity	8.6E-4			(cm/d)
k_v	Vapor permeability	1.0E-14			(cm^2)
L_{gw}	Depth to groundwater	NA			(cm)
L_s	Depth to top of affected soils	6.1E+1			(cm)
L_{scm}	Depth to base of affected soils	3.0E+2			(cm)
L_{scm}	Thickness of affected soils	2.4E+2			(cm)
pH	Soil/groundwater pH	6.8E+0			(-)
		capillary	vadose	foundation	
θ_w	Volumetric water content	0.375	0.37	0	(-)
θ_a	Volumetric air content	0.005	0.01	1	(-)

Building Parameters		Residential	Commercial	(Units)
L_b	Building volume/area ratio	2.44E+2	NA	(cm)
A_b	Foundation area	1.00E+6	NA	(cm^2)
X_{crk}	Foundation perimeter	4.00E+3	NA	(cm)
ER	Building air exchange rate	1.21E+1	NA	(1/d)
L_{crk}	Foundation thickness	1.50E+1	NA	(cm)
Z_{crk}	Depth to bottom of foundation slab	1.50E+1	NA	(cm)
η	Foundation crack fraction	1.00E-3	NA	(-)
dP	Indoor/outdoor differential pressure	0.00E+0	NA	(g/cm/s^2)
Q_s	Convective air flow through slab	0.00E+0	NA	(cm^3/d)

Groundwater Parameters		Value	(Units)
δ_{gw}	Groundwater mixing zone depth	NA	(cm)
I_r	Net groundwater infiltration rate	NA	(cm/yr)
U_{gw}	Groundwater Darcy velocity	NA	(cm/d)
V_{gw}	Groundwater seepage velocity	NA	(cm/d)
K_s	Saturated hydraulic conductivity	NA	(cm/d)
I	Groundwater gradient	NA	(-)
S_w	Width of groundwater source zone	NA	(cm)
S_d	Depth of groundwater source zone	NA	(cm)
θ_{ae}	Effective porosity in water-bearing unit	NA	(-)
f_{oc-aq}	Fraction organic carbon in water-bearing unit	NA	(-)
pH_{aq}	Groundwater pH	NA	(-)
	Biodegradation considered?	NA	

Transport Parameters		Off-site 1	Off-site 2	Off-site 1	Off-site 2	(Units)
Lateral Groundwater Transport		Groundwater Ingestion		Soil Leaching to GW		
α_x	Longitudinal dispersivity	NA	NA	NA	NA	(cm)
α_y	Transverse dispersivity	NA	NA	NA	NA	(cm)
α_z	Vertical dispersivity	NA	NA	NA	NA	(cm)
Lateral Outdoor Air Transport		Soil to Outdoor Air Inhal.		GW to Outdoor Air Inhal.		
σ_y	Transverse dispersion coefficient	NA	NA	NA	NA	(cm)
σ_z	Vertical dispersion coefficient	NA	NA	NA	NA	(cm)
ADF	Air dispersion factor	NA	NA	NA	NA	(-)

Surface Water Parameters		Off-site 2	(Units)
Q_{sw}	Surface water flowrate	NA	(cm^3/d)
W_{sw}	Width of GW plume at SW discharge	NA	(cm)
δ_{gz}	Thickness of GW plume at SW discharge	NA	(cm)
DF_{sw}	Groundwater-to-surface water dilution factor	NA	(-)

CHEMICAL DATA FOR SELECTED COCs

Physical Property Data

Constituent	CAS Number	type	Molecular Weight (g/mole) MW	ref	Diffusion Coefficients in air (cm2/s) Dair	ref	Diffusion Coefficients in water (cm2/s) Dwat	ref	log (Koc) or log(Kd) (@ 20 - 25 C) log(L/kg) partition		ref	Henry's Law Constant (@ 20 - 25 C) (atm-m3) mol	(unitless)	ref	Vapor Pressure (@ 20 - 25 C) (mm Hg)	ref	Solubility (@ 20 - 25 C) (mg/L)	ref	acid pKa	base pKb	ref
Benzene*	71-43-2	A	78.1	PS	8.80E-02	R2	9.80E-06	R2	1.79	Koc	R2	5.53E-03	2.26E-01	R2	9.52E+01	PS	1.80E+03	R2	-	-	-
Toluene*	108-88-3	A	92.4	5	8.70E-02	R2	8.60E-06	R2	2.15	Koc	R2	6.57E-03	2.71E-01	R2	3.00E+01	4	5.26E+02	R2	-	-	-
Ethylbenzene*	100-41-4	A	106.2	PS	7.50E-02	R2	7.80E-06	R2	2.30	Koc	R2	7.63E-03	3.23E-01	R2	1.00E+01	PS	1.69E+02	R2	-	-	-
Xylene (mixed isomers)*	1330-20-7	A	106.2	5	7.00E-02	R2	7.80E-06	R2	2.30	Koc	R2	7.25E-03	2.99E-01	R2	7.00E+00	4	1.61E+02	R2	-	-	-
Methyl t-Butyl ether*	1634-04-4	A	88.146	5	8.10E-02	R2	9.41E-05	R2	1.07	Koc	R2	5.84E-04	2.41E-02	R2	2.49E+02	-	4.80E+04	R2	-	-	-

* = Chemical with user-specified data

Site Name: Former Exxon Service Station 7-3587

Site Location: Pleasanton, California

Completed By: JBB

Date Completed: 28-Jun-06

Job ID: 2431

CHEMICAL DATA FOR SELECTED COCs

Toxicity Data

Constituent	Reference Dose (mg/kg/day) Oral RfD_oral	ref	Reference Dose (mg/kg/day) Dermal RfD_dermal	ref	Reference Conc. (mg/m3) Inhalation RfC_Inhal	ref	Slope Factors 1/(mg/kg/day) Oral SF_oral	ref	Slope Factors 1/(mg/kg/day) Dermal SF_dermal	ref	Unit Risk Factor 1/(µg/m3) Inhalation URF_Inhal	ref	EPA Weight of Evidence	Is Constituent Carcinogenic ?
Benzene*	3.00E-03	R2	3.88E-03	D	3.00E-02	JE	1.00E-01	R2	5.67E-02	R3	2.90E-05	JE	A	TRUE
Toluene*	2.00E-01	R2	8.40E-02	0.06	3.00E-01	JE	-	-	-	-	-	JE	D	FALSE
Ethylbenzene*	1.00E-01	R2	9.70E-02	0.1	1.00E+00	JE	-	-	-	-	-	JE	D	FALSE
Xylene (mixed isomers)*	2.00E-01	R2	1.84E-01	0.18	1.00E-01	JE	-	-	-	-	-	JE	D	FALSE
Methyl t-Butyl ether*	8.60E-01	R2	8.00E-03	0.01	3.00E+00	JE	1.80E-03	R2	2.25E-03	R3	2.60E-07	JE	A	TRUE

* = Chemical with user-specified

Site Name: Former Exxon Servi

Site Location: Pleasonton, Ca

Miscellaneous Chemical Data

Constituent	Maximum Contaminant Level MCL (mg/L)	ref	Time-Weighted Average Workplace Criteria TWA (mg/m3)	ref	Aquatic Life Prot. Criteria AQL (mg/L)	ref	Biocon-centration Factor (L-wat/kg-fish)
Benzene*	1.00E-03	-	3.25E+00	-	4.60E-02	R2	12.6
Toluene*	1.50E-01	-	1.47E+02	ACGIH	1.30E-01	R2	70
Ethylbenzene*	7.00E-01	-	4.35E+02	-	2.90E-01	R2	1
Xylene (mixed isomers)*	1.75E+00	-	4.34E+02	ACGIH	1.30E-02	R2	1
Methyl t-Butyl ether*	1.30E-02	-	8.00E+01	NIOSH	8.00E+00	R2	1

* = Chemical with user-specified

Site Name: Former Exxon Servi

Site Location: Pleasonton, Ca

CHEMICAL DATA FOR SELECTED COCs

Miscellaneous Chemical Data

Constituent	Dermal Relative Absorp. Factor (unitless)	Water Dermal Permeability Data: Dermal Permeability Coeff. (cm/hr)	Lag time for Dermal Exposure (hr)	Critical Exposure Time (hr)	Relative Contr of Derm Perm Coeff (unitless)	Water/Skin Derm Adsorp Factor (cm/event)	ref	Detection Limits: Groundwater (mg/L)	ref	Soil (mg/kg)	ref	Half Life (First-Order Decay) (days): Saturated	Unsaturated	ref
Benzene*	0.1	0.021	0.26	0.63	0.013	7.3E-2	R3	0.0005	S	0.001	S	720	720	H
Toluene*	0.1	0.045	0.32	0.77	0.054	1.6E-1	CA	0.0005	S	0.001	S	28	28	H
Ethylbenzene*	0.1	0.074	0.39	1.3	0.14	2.7E-1	R3	0.0005	S	0.001	S	228	228	H
Xylene (mixed isomers)*	0.1	0.08	0.39	1.4	0.16	2.9E-1	CA	0.0005	S	0.001	S	360	360	H
Methyl t-Butyl ether*	0.1	-	-	-	-	-	CA	0.0005	-	0.001	L1	360	180	H

* = Chemical with user-specified

Site Name: Former Exxon Servi

Site Location: Pleasonton, Ca

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

INDOOR AIR EXPOSURE PATHWAYS ■ (CHECKED IF PATHWAY IS ACTIVE)

SOILS (61 - 305 cm): VAPOR INTRUSION INTO ON-SITE BUILDINGS

Constituents of Concern	1) Source Medium Soil Conc. (mg/kg)	2) NAF Value (m^3/kg) Receptor Residential	3) Exposure Medium Indoor Air: POE Conc. (mg/m^3) (1) / (2) Residential	4) Exposure Multiplier (EFxED)/(ATx365) (unitless) Residential	5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4) Residential
Benzene*	5.0E-3	7.2E+2	7.0E-6	4.1E-1	2.9E-6
Toluene*	5.0E-3	1.6E+3	3.2E-6	9.6E-1	3.1E-6
Ethylbenzene*	5.0E-3	2.3E+3	2.1E-6	9.6E-1	2.0E-6
Xylene (mixed isomers)*	5.0E-3	2.4E+3	2.1E-6	9.6E-1	2.0E-6
Methyl t-Butyl ether*	1.9E-1	1.2E+2	1.6E-3	4.1E-1	6.6E-4

* = Chemical with user-specified data

NOTE: AT = Averaging time (days) EF = Exposure frequency (days/yr) ED = Exposure duration (yr) NAF = Natural attenuation factor POE = Point of exposure

Site Name: Former Exxon Service Station 7-3567
Site Location: Pleasonton, California
Completed By: JBB

Date Completed: 28-Jun-06
Job ID: 2431

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

INDOOR AIR EXPOSURE PATHWAYS ☐ (CHECKED IF PATHWAY IS ACTIVE)

GROUNDWATER: VAPOR INTRUSION INTO ON-SITE BUILDINGS

Exposure Concentration

Constituents of Concern	1) Source Medium Groundwater Conc. (mg/L)	2) NAF Value (m^3/L) Receptor None	3) Exposure Medium Indoor Air: POE Conc. (mg/m^3) (1) / (2) None	4) Exposure Multiplier (EFxED)/(ATx365) (unitless) None	5) Average Inhalation Exposure Concentration (mg/m^3) (3) X (4) None
Benzene*	1.0E+0				
Toluene*	1.0E+0				
Ethylbenzene*	1.0E+0				
Xylene (mixed isomers)*	1.0E+0				
Methyl t-Butyl ether*	1.0E+0				

NOTE: AT = Averaging time (days) EF = Exposure frequency (days/yr) ED = Exposure duration (yr) NAF = Natural attenuation factor POE = Point of exposure

Site Name: Former Exxon Service Station 7-3567
Site Location: Pleasonton, California
Completed By: JBB

Date Completed: 28-Jun-06
Job ID: 2431


3

RBCA SITE ASSESSMENT

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

INDOOR AIR EXPOSURE PATHWAYS

Constituents of Concern	TOTAL PATHWAY EXPOSURE (mg/m^3) (Sum average exposure concentrations from soil and groundwater routes.) Residential
Benzene*	2.9E-6
Toluene*	3.1E-6
Ethylbenzene*	2.0E-6
Xylene (mixed isomers)*	2.0E-6
Methyl t-Butyl ether*	6.6E-4

Site Name: Former Exxon Service Station 7-3567 Date Completed: 28-Jun-06
Site Location: Pleasonton, California Job ID: 2431
Completed By: JBB

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

INDOOR AIR EXPOSURE PATHWAYS ■ (CHECKED IF PATHWAYS ARE ACTIVE)

CARCINOGENIC RISK

Constituents of Concern	(1) EPA Carcinogenic Classification	(2) Total Carcinogenic Exposure (mg/m^3) Residential	(3) Inhalation Unit Risk Factor (µg/m^3)^-1	(4) Individual COC Risk (2) x (3) x 1000 Residential
Benzene*	A	2.9E-6	2.9E-5	8.3E-8
Toluene*	D			
Ethylbenzene*	D			
Xylene (mixed isomers)*	D			
Methyl t-Butyl ether*	A	6.6E-4	2.6E-7	1.7E-7

Total Pathway Carcinogenic Risk = **2.6E-7**

Site Name: Former Exxon Service Station 7-3567
Site Location: Pleasonton, California
Completed By: JBB

Date Completed: 28-Jun-06
Job ID: 2431

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

INDOOR AIR EXPOSURE PATHWAYS ■ **(CHECKED IF PATHWAYS ARE ACTIVE)**

Constituents of Concern	(5) Total Toxicant Exposure (mg/m^3) Residential	TOXIC EFFECTS (6) Inhalation Reference Concentration (mg/m^3)	(7) Individual COC Hazard Quotient (5) / (6) Residential
Benzene*	6.7E-6	3.0E-2	2.2E-4
Toluene*	3.1E-6	3.0E-1	1.0E-5
Ethylbenzene*	2.0E-6	1.0E+0	2.0E-6
Xylene (mixed isomers)*	2.0E-6	1.0E-1	2.0E-5
Methyl t-Butyl ether*	1.5E-3	3.0E+0	5.2E-4

Total Pathway Hazard Index = **7.7E-4**

Site Name: Former Exxon Service Station 7-3567
Site Location: Pleasonton, California
Completed By: JBB

Date Completed: 28-Jun-06
Job ID: 2431

RBCA SITE ASSESSMENT

Site Name: Former Exxon Service Station 7-3 Site Location: Pleasonton, California Completed By: JBB Date Completed: 28-Jun-06

TIER 2 EXPOSURE CONCENTRATION AND INTAKE CALCULATION

SOIL EXPOSURE PATHWAY ■ **(CHECKED IF PATHWAY IS ACTIVE)**

SURFACE SOILS OR SEDIMENTS: ON-SITE INGESTION AND DERMAL CONTACT

Constituents of Concern	1) Source/Exposure Medium	2) Exposure Multiplier (IR*SA*M*RAF)xEFxED/(BWxAT) (kg/kg/day)		3) Average Daily Intake Rate (mg/kg/day) (1) x (2)	
	Surface Soil Conc. (mg/kg)	Residential	Construction Worker	Residential	Construction Worker
Benzene*	5.0E-3	1.3E-6	1.9E-8	6.3E-9	9.6E-11
Toluene*	5.0E-3	2.9E-6	1.4E-6	1.5E-8	6.8E-9
Ethylbenzene*	5.0E-3	2.9E-6	1.4E-6	1.5E-8	6.8E-9
Xylene (mixed isomers)*	5.0E-3	2.9E-6	1.4E-6	1.5E-8	6.8E-9
Methyl t-Butyl ether*	1.9E-1	1.3E-6	1.9E-8	2.4E-7	3.6E-9

NOTE: RAF = Relative absorption factor (-) AT = Averaging time (days) ED = Exposure duration (yrs) IR = Soil ingestion rate (mg/day)
M = Adherence factor (mg/cm^2) BW = Body weight (kg) EF = Exposure frequency (days/yr) SA = Skin exposure area (cm^2/day)

Site Name: Former Exxon Service Station 7-3567
Site Location: Pleasonton, California
Completed By: JBB
Date Completed: 28-Jun-06
Job ID: 2431

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

SOIL EXPOSURE PATHWAY ■ (CHECKED IF PATHWAY IS ACTIVE)

CARCINOGENIC RISK

Constituents of Concern	(1) EPA Carcinogenic Classification	(2) Total Carcinogenic Intake Rate (mg/kg/day)				(3) Slope Factor (mg/kg/day)^-1		(4) Individual COC Risk	
		(a) via Ingestion	(b) via Dermal Contact	(c) via Ingestion	(d) via Dermal Contact			(2a)x(3a) + (2b)x(3b)	(2c)x(3a) + (2d)x(3b)
		Residential		Construction Worker		(a) Oral	(b) Dermal	Residential	Construction Worker
Benzene*	A	2.9E-9	3.3E-9	5.0E-11	4.6E-11	1.0E-1	5.7E-2	4.8E-10	7.6E-12
Toluene*	D								
Ethylbenzene*	D								
Xylene (mixed isomers)*	D								
Methyl t-Butyl ether*	A	1.1E-7	1.3E-7	1.9E-9	1.7E-9	1.8E-3	2.3E-3	4.8E-10	7.3E-12

* No dermal slope factor available—oral slope factor used.

Total Pathway Carcinogenic Risk = **9.7E-10** | **1.5E-11**

Site Name: Former Exxon Service Station 7-3567
Site Location: Pleasonton, California
Completed By: JBB

Date Completed: 28-Jun-06
Job ID: 2431

RBCA SITE ASSESSMENT

TIER 2 PATHWAY RISK CALCULATION

SOIL EXPOSURE PATHWAY ■ (CHECKED IF PATHWAY IS ACTIVE)

TOXIC EFFECTS

Constituents of Concern	(5) Total Toxicant Intake Rate (mg/kg/day)				(6) Oral Reference Dose (mg/kg-day)		(7) Individual COC Hazard Quotient	
	(a) via Ingestion	(b) via Dermal Contact	(c) via Ingestion	(d) via Dermal Contact			(5a)/(6a) + (5b)/(6b)	(5c)/(6a) + (5d)/(6b)
	Residential		Construction Worker		(a) Oral	(b) Dermal	Residential	Construction Worker
Benzene*	6.8E-9	7.8E-9	3.5E-9	3.2E-9	3.0E-3	3.9E-3	4.3E-6	2.0E-6
Toluene*	6.8E-9	7.8E-9	3.5E-9	3.2E-9	2.0E-1	6.4E-2	1.6E-7	6.8E-8
Ethylbenzene*	6.8E-9	7.8E-9	3.5E-9	3.2E-9	1.0E-1	9.7E-2	1.5E-7	6.9E-8
Xylene (mixed isomers)*	6.8E-9	7.8E-9	3.5E-9	3.2E-9	2.0E-1	1.8E-1	7.7E-8	3.5E-8
Methyl t-Butyl ether*	2.6E-7	3.0E-7	1.3E-7	1.2E-7	8.6E-1	8.0E-3	3.7E-5	1.5E-5

* No dermal reference dose available—oral reference dose used.

Total Pathway Hazard Index = **4.2E-5** **1.8E-5**

Site Name: Former Exxon Service Station 7-3567
Site Location: Pleasonton, California
Completed By: JBB

Date Completed: 28-Jun-06
Job ID: 2431

RBCA SITE ASSESSMENT

Baseline Risk Summary-All Pathways

Site Name: Former Exxon Service Station 7-3567
Site Location: Pleasonton, California

Completed By: JBB
Date Completed: 28-Jun-06

TIER 2 BASELINE RISK SUMMARY TABLE

EXPOSURE PATHWAY	BASELINE CARCINOGENIC RISK: Individual COC Risk – Maximum Value	Individual COC Risk – Target Risk	Cumulative COC Risk – Total Value	Cumulative COC Risk – Target Risk	Risk Limit(s) Exceeded?	BASELINE TOXIC EFFECTS: Hazard Quotient – Maximum Value	Hazard Quotient – Applicable Limit	Hazard Index – Total Value	Hazard Index – Applicable Limit	Toxicity Limit(s) Exceeded?
OUTDOOR AIR EXPOSURE PATHWAYS										
Complete:	NA	NA	NA	NA	☐	NA	NA	NA	NA	☐
INDOOR AIR EXPOSURE PATHWAYS										
Complete:	1.7E-7	1.0E-6	2.6E-7	1.0E-4	☐	5.2E-4	1.0E+0	7.7E-4	1.0E+0	☐
SOIL EXPOSURE PATHWAYS										
Complete:	4.8E-10	1.0E-6	9.7E-10	1.0E-4	☐	3.7E-5	1.0E+0	4.2E-5	1.0E+0	☐
GROUNDWATER EXPOSURE PATHWAYS										
Complete:	NA	NA	NA	NA	☐	NA	NA	NA	NA	☐
SURFACE WATER EXPOSURE PATHWAYS										
Complete:	NA	NA	NA	NA	☐	NA	NA	NA	NA	☐
CRITICAL EXPOSURE PATHWAY (Maximum Values From Complete Pathways)										
	1.7E-7	***1.0E-6***	***2.6E-7***	***1.0E-4***	☐	***5.2E-4***	***1.0E+0***	***7.7E-4***	***1.0E+0***	☐
	Indoor Air		***Indoor Air***			***Indoor Air***		***Indoor Air***		

DATA ENTRY SHEET

GW-SCREEN
Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES X

DTSC
Vapor Intrusion Guidance
Interim Final 12/04
(last modified 1/21/05)

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
71432	1.61E+00	Benzene

MORE

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	719	C	22	5

MORE

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
C			C	1.43	0.459	0.215

MORE

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	30	30	350

Used to calculate risk-based groundwater concentration.

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based Indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final Indoor exposure groundwater conc., (µg/L)
4.38E+01	1.63E+04	4.38E+01	1.79E+06	4.38E+01

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	NA

MESSAGE SUMMARY BELOW:
MESSAGE: The values of Csource and Cbuilding on the INTERCALCS worksheet are based on unity and do not represent actual values.

END

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final indoor exposure groundwater conc., (µg/L)
NA	NA	NA	1.79E+06	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
3.7E-09	9.9E-05

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

GW-SCREEN
Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

DTSC
Vapor Intrusion Guidance
Interim Final 12/04
(last modified 1/21/05)

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_w (µg/L)	Chemical
108883	1.55E+00	Toluene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	719	C	22	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
C			C	1.43	0.459	0.215

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	30	30	350

Used to calculate risk-based groundwater concentration.

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based Indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final indoor exposure groundwater conc., (µg/L)
NA	NA	NA	5.26E+05	NA

MESSAGE SUMMARY BELOW:

END

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	9.9E-06

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final indoor exposure groundwater conc., (µg/L)
NA	1.56E+06	1.56E+06	5.26E+05	1.56E+06

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	NA

MESSAGE SUMMARY BELOW:
MESSAGE: The values of Csource and Cbuilding on the INTERCALCS worksheet are based on unity and do not represent actual values.

END

DATA ENTRY SHEET

GW-SCREEN
Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [X]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES [ ]

DTSC
Vapor Intrusion Guidance
Interim Final 12/04
(last modified 1/21/05)

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_w (µg/L)	Chemical
100414	9.60E-01	Ethylbenzene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	719	C	22	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
C			C	1.43	0.459	0.215

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	30	30	350

Used to calculate risk-based groundwater concentration.

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final Indoor exposure groundwater conc., (µg/L)
NA	5.36E+05	5.36E+05	1.69E+05	NOC

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	NA

MESSAGE SUMMARY BELOW:
MESSAGE: The values of Csource and Cbuilding on the INTERCALCS worksheet are based on unity and do not represent actual values.
NOC = NOT OF CONCERN. The groundwater conc. at or above the solubility limit is not of concern for this pathway.

END

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final Indoor exposure groundwater conc., (µg/L)
NA	NA	NA	1.69E+06	NA

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	1.8E-05

MESSAGE SUMMARY BELOW:

END

DATA ENTRY SHEET

GW-SCREEN Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

DTSC
Vapor Intrusion Guidance
Interim Final 12/04
(last modified 1/21/05)

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_w (µg/L)	Chemical
108383	1.01E+01	m-Xylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_s (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	719	C	22	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
C			C	1.43	0.459	0.215

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	30	30	350

Used to calculate risk-based groundwater concentration.

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final indoor exposure groundwater conc., (µg/L)
NA	NA	NA	1.61E+05	NA

MESSAGE SUMMARY BELOW:

END

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	1.7E-04

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based Indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final Indoor exposure groundwater conc., (µg/L)
NA	6.89E+04	6.89E+04	1.61E+05	6.89E+04

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	NA

MESSAGE SUMMARY BELOW:
MESSAGE: The values of Csource and Cbuilding on the INTERCALCS worksheet are based on unity and do not represent actual values.

END

DATA ENTRY SHEET

GW-SCREEN
Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

DTSC
Vapor Intrusion Guidance
Interim Final 12/04
(last modified 1/21/05)

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
95476	1.01E+01	o-Xylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	719	C	22	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)		ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
C			C	1.43	0.459	0.215

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	30	30	350

Used to calculate risk-based groundwater concentration.

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final indoor exposure groundwater conc., (µg/L)
NA	NA	NA	1.78E+06	NA

MESSAGE SUMMARY BELOW:

END

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	1.8E-04

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final indoor exposure groundwater conc., (µg/L)
NA	5.78E+04	5.78E+04	1.78E+05	5.78E+04

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	NA

MESSAGE SUMMARY BELOW:
MESSAGE: The values of Csource and Cbuilding on the INTERCALCS workbheet are based on unity and do not represent actual values.

END

DATA ENTRY SHEET

GW-SCREEN
Version 3.0; 04/03

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES [X]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES [ ]

DTSC
Vapor Intrusion Guidance
Interim Final 12/04
(last modified 1/21/06)

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_w (µg/L)	Chemical
106423	1.01E+01	p-Xylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	719	C	22	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vandose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
C			C	1.43	0.469	0.215

MORE ↓

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)
1.0E-06	1	70	30	30	350

Used to calculate risk-based groundwater concentration.

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based Indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final Indoor exposure groundwater conc., (µg/L)
NA	5.24E+04	5.24E+04	1.86E+06	5.24E+04

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	NA

MESSAGE SUMMARY BELOW:
MESSAGE: The values of Csource and Cbuilding on the INTERCALCS worksheet are based on unity and do not represent actual values.

END

RESULTS SHEET

RISK-BASED GROUNDWATER CONCENTRATION CALCULATIONS:

Indoor exposure groundwater conc., carcinogen (µg/L)	Indoor exposure groundwater conc., noncarcinogen (µg/L)	Risk-based indoor exposure groundwater conc., (µg/L)	Pure component water solubility, S (µg/L)	Final indoor exposure groundwater conc., (µg/L)
1.07E+04	3.67E+06	1.07E+04	6.10E+07	1.07E+04

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	NA

MESSAGE SUMMARY BELOW:
MESSAGE: The values of Csource and Cbuilding on the INTERCALCS worksheet are based on unity and do not represent actual values.

END