NW 0911

FINAL

REMEDIAL INVESTIGATION AND SITE SUMMARY REPORT

Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

August 20, 2007

Prepared for:

Chevron

Chevron Environmental Management Company
6001 Bollinger Canyon Road, Room K2252
San Ramon, California 94583-2324

Prepared by:

SAIC
From Science to Solutions™

Science Applications International Corporation
18912 North Creek Parkway, Suite 101
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EXECUTIVE SUMMARY

This report presents the Remedial Investigation and Site Summary (RI/SS) for the former Texaco service station (Chevron Site No. 211577), located at 631 Queen Anne Avenue North in Seattle, Washington. The RI/SS documents the completed investigation of petroleum contamination caused by past activities at the former Texaco station. This investigation included a characterization of the extent of soil and groundwater contamination throughout the site, evaluation and assessment of potential exposure pathways, and determination of Model Toxics Control Act (MTCA) cleanup criteria and points of compliance. These conclusions are based on field and analytical testing that occurred from 2002 to 2006 during the RI period. This RI was completed by Chevron Environmental Management Company (Chevron EMC) as a Voluntary Cleanup Program (VCP) action under the Washington State Department of Ecology (WDOE) with VCP Case No. NW0911.

The former station operated from 1927 to 1993. The property is currently owned in trust by the Arnold's family estate and is occupied by a convenience store (the Manhattan Express). The property is situated in a mixed residential and commercial neighborhood northwest of downtown Seattle. Within one city block surrounding the former facility are several multi-story apartment buildings, a hotel, and several retail and commercial shops. A former Union Oil Company 76 (Unocal) service station was located across the street to the northeast. Paramount Dry Cleaners formerly occupied the property east of the former Unocal station.

The area potentially impacted by subsurface releases of gasoline and diesel product from the former Texaco service station (and possibly from other sources) extends to the west and southwest a maximum distance of approximately 430 feet from the center of the former service station. In this report, the term "property" is strictly used to describe the former Texaco service station property, while the term "site" is used to describe the entire impacted area including the former Texaco property and other properties downgradient and adjacent to the former station. The downgradient properties (to the west and southwest) include the Monterey Apartments, the Del Roy Apartments, the northwest corner of Lindberg Apartments property, the Queen Anne Arms Apartments, the U-Park lot, and the Bank of America parking lot.

The former Texaco property is located in an established "neighborhood-commercial" zone and future site uses are expected to remain similar to the present uses. The two main exposure pathways of concern that may affect individuals at the site include the soil vapor to indoor air pathway and the soil direct human contact pathway.

Petroleum releases were first noted in 1978 at the Monterey Apartments, southwest of the former station, in the form of odors in the basement and non-aqueous phase liquid (NAPL) in an outdoor basement sump. Environmental investigations related to the former Texaco began at the site in 1986, which led to a series of investigations and remedial actions that extend to this day.

Previous subsurface investigations indicated the site is underlain by three major distinct lithologic units, which include the Vashon Till, Esperance Sand, and Lawton Clay. Sixty-six borings have been advanced at the site during environmental investigations and additional seven boring have been advanced at the site for other purposes (e.g., geotechnical borings for building foundations). Fifty-two groundwater monitoring, extraction, and recovery wells and four soil-vapor probes have been installed at the site.

The RI identified petroleum contamination in soil on the former station property and as far west as the eastern side of 1st Avenue West. Beyond this location, soil contamination markedly decreases in concentration under the street and westward into the area of the U-Park lot. On the former Texaco property and the Del Roy and Monterey properties, contaminated soil exceeding the MTCA Method B cleanup levels was identified within the point of compliance depth (down to 15 feet below ground surface [bgs]) for direct contact by humans and ecological receptors. In the downgradient area (1st Avenue West and areas to the west), soil concentrations within the point of compliance do not exceed Method B cleanup levels, with the exception of one soil sample collected under 1st Avenue West, adjacent to the Del Roy property. WDOE has agreed that soil cleanup at the site should meet Method B cleanup levels for dermal contact.

Groundwater on the site was monitored in 1986, 1990, 1991, 1993, and then periodically from 1995 to 1997 by the state of Washington Department of Ecology (WDOE). Texaco performed groundwater monitoring on a semi-annual basis from December 1999 through June 2000. Beginning in 2002, groundwater monitoring activities have been conducted at least biannually. A groundwater petroleum plume has been characterized and delineated in the downgradient direction using monitoring and extraction wells that were installed and sampled from 2002 to 2006. Shallow groundwater occurs in sand, or sand with some silt, that overlies a very thick unit of clayey silt; this silt is encountered as shallow as 10 feet bgs in the northern areas of the site and as deep as 35 feet bgs in the western areas of the site. Depth to shallow groundwater typically ranges from 8 to 20 feet bgs and flows approximately west-southwest with a varying hydraulic gradient. A zone of somewhat finer-grained soil exists in the area surrounding the western side of the former Texaco property and the eastern Monterey property, which produces locally perched groundwater and lower yield to wells.

Petroleum contamination has been identified in the shallow groundwater that originates at the former Texaco station and extends downgradient nearly to 2nd Avenue West. NAPL has been present in wells on the southwestern portion of the former Texaco property and on the Monterey and Del Roy properties. Concentrations of dissolved petroleum constituents remain elevated as far as the western end of the U-Park lot. Beyond this point, attenuation is considerable, and analytical results for groundwater along 2nd Avenue West have been below analytical detection limits.

Due to heavy urban usage, the shallow aquifer in this vicinity is not considered a drinking water source, and no water wells are located within it. Because the highest beneficial use of this aquifer is not drinking water, WDOE has determined that drinking water cleanup standards do not apply to the groundwater plume at the site. However, WDOE required that the groundwater plume be delineated in the downgradient area, and groundwater throughout the site must be remediated to the extent that it would not generate vapors at levels of concern for the indoor air pathway.

The WDOE began active remediation in the eastern portion of the site in 1993, by installation of a soil vapor extraction (SVE) system to treat petroleum constituents in the subsurface. This system later underwent modifications and operated intermittently until December 1997. In April 2003, Chevron EMC revamped and restarted the SVE system, and it operated until October 2005 when it was dismantled and replaced with a dual-phase extraction (DPE) system. The DPE system was started in February 2006 and expanded in October 2006. Since start-up, the system has been operated on a continuous basis with minimal down-time. As of March 31, 2007, the

DPE system has been successful in removing an estimated 40,000 pounds of hydrocarbon mass from the subsurface.

Petroleum constituent concentrations in soil vapor below the Monterey Apartments were identified in 2002. The SVE/DPE system, which has operated since 2003 in the eastern portion of the site, removes and treats soil vapor, and maintains a vacuum in the subsurface, thereby preventing vapors from intruding upward into buildings.

Results of vapor sampling at two locations in the downgradient area near the Queen Anne Arms Apartments showed very low concentrations of petroleum constituents; the greatest benzene concentration in soil vapor was less than that measured in ambient outdoor air at this location. Vapor intrusion model results show that the incremental risk from exposure to benzene, PCE, TCE and toluene is negligible.

Soil vapor is the exposure pathway of greatest concern and will be the main factor used to determine site cleanup; however, a specific cleanup measure for petroleum vapors and the DPE system shutdown criteria have not yet been determined. The plan going forward is to install sub-slab vapor points in the Del Roy Apartments, and to utilize the existing vapor points in the Monterey Apartments (or replace them with new points). These vapor points would be sampled in the future during multiple events, to assist in determining site cleanup conditions and timing of system shutdown. Engineering decisions will also be involved in the timing of system pulsing and shutdown. In addition, site cleanup will involve confirmation soil sampling and measurement for the presence of NAPL in wells.

Because the RI findings indicate that a vapor intrusion pathway and occurrence of NAPL do not exist in the downgradient area, additional active remediation is not required west of 1st Avenue West. Active DPE remediation in the upgradient area is expected to reduce contaminant concentrations under this street (near the Del Roy Apartments).

DPE remediation at the site will beneficially affect the soil dermal contact exposure pathway, address MTCA requirements such as removal of remaining visible NAPL, and prevent vapors from intruding upward into buildings. Therefore, the current DPE system, which is presently considered to be an interim action, will become the final remedial action for the site.

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1.0 INTRODUCTION

This Remedial Investigation (RI) was conducted to investigate petroleum contamination caused by past activities at the former Texaco service station (Chevron Site No. 211577) in the Queen Anne area of Seattle, Washington. Contamination has affected soil and groundwater, and has potentially affected soil vapor below neighboring residential properties. In early 2001, Chevron Corporation (Chevron) acquired liability of the property through the merger of Chevron and Texaco. This RI was completed by Chevron Environmental Management Company (Chevron EMC) as a Voluntary Cleanup Program (VCP) action under the Washington State Department of Ecology (WDOE) under VCP Case No. NW0911. Further history of the investigation and interaction with WDOE is included in Section 1.4. The RI was conducted under the guidance established by the Model Toxics Control Act (MTCA) of 2001.

This RI and Site Summary (RI/SS) Report documents environmental data collected at the site from 2002 through 2006; it analyzes potential exposure pathways for soil, groundwater, and soil vapor to humans; and it documents the actions leading to remediation of the site using dual-phase extraction (DPE) technology. This report does not include full details on the remedial system installation or performance data, which are available in other reports (SAIC, 2006a, 2006b, 2007a, and 2007b). As described in Sections 1.3 and 2.3, RI activities took place concurrent with remediation through an agreement with WDOE.

1.1 Site Description

The former Texaco service station (Chevron Site No. 211577) is located on lower Queen Anne Hill at 631 Queen Anne Avenue North in Seattle (Figure 1-1). The property occupies the southwestern corner of the intersection of West Roy Street and Queen Anne Avenue North (Figure 1-2). The property is currently owned in trust by the Arnold's family estate and is occupied by a convenience store (the Manhattan Express).

The former Texaco property is on a rectangle-shaped property that is approximately 100 by 130 feet, amounting to more than ¼ acre. The convenience store sits on the southern half of the property, with parking areas in the northern half of the property. At the southwestern corner of the property is a remediation enclosure that currently houses equipment for the DPE system. The northern and eastern sides of the property are bounded by sidewalks and city right-of-ways. The property is surrounded by West Roy Street to the north, Queen Anne Avenue North to the east, the Lindberg Apartments to the south, and the Del Roy Apartments to the west. The Monterey Apartments are located southwest of the property.

The property is situated in a mixed residential and commercial neighborhood northwest of downtown Seattle. Within one city block surrounding the former facility are several multi-story apartment buildings, a hotel, and several retail and commercial shops. A former Union Oil Company 76 (Unocal) service station was located across the street to the northeast. Paramount Dry Cleaners formerly occupied the property east of the former Unocal station.

The area potentially impacted by subsurface releases of gasoline and diesel product from the former Texaco service station (and possibly from other sources) extends to the west and southwest a maximum distance of approximately 430 feet from the center of the former service station.

In this report, the term "property" is strictly used to describe the former Texaco service station property, while the term "site" is used to describe the entire impacted area including the former Texaco property and other properties downgradient and adjacent to the former Texaco service station. The downgradient properties (to the west and southwest) include the Monterey Apartments, the Del Roy Apartments, the northwest corner of Lindberg Apartments property, the Queen Anne Arms Apartments, the U-Park lot, and the Bank of America parking lot (Figure 1-2).

1.2 Site History

1.2.1 Former Texaco Service Station

1.2.1.1 Ownership History

A service station was operated continuously on the property from late 1927 through 1993. In December 1927, California Petroleum Corporation (CalPet) opened a gasoline service station at the property; operation of the service station was subleased to a dealer. The Texaco Corporation acquired CalPet in 1928, and in 1929, a new sublease was entered into between the dealer and Texaco. The property itself was owned by a third party, who leased the property to CalPet and later Texaco, who in turn subleased the business out to various dealers. In 1954, Texaco purchased the property, demolished the existing service station, and built a new service station. Texaco remodeled the station in 1967. In 1977 the property and business were purchased by the Arnold family; the service station continued operations under the Texaco brand name. The Arnolds sold the property and business in 1989; however, the sales agreement was rescinded in 1993 and ownership of the property was returned to the Arnolds. Following the return of the property to the Arnolds, the service station was decommissioned. The station building continues to be used as a deli/convenience store.

1.2.1.2 Operational History

The 1927 CalPet service station consisted of two 550-gallon underground storage tanks (USTs), which were installed under the sidewalk adjacent to Queen Anne Avenue North (USTs 1 and 2 on Figure 1-3). Fuel was dispensed through a suction pump placed over the USTs. These USTs were abandoned prior to 1934. Eight 50-gallon USTs were installed on the northern and southern sides (four on each side) of the station building, which was located at the center of the property. Lube oils were dispensed from the 50-gallon USTs. These USTs were likely removed from the property when the CalPet station was demolished in 1954. A wash rack, two grease pits, tire shop, tailor shop, and accessories store occupied the southern portion of the property. Figure 1-3 shows the historical configurations of the former Texaco service station.

Prior to 1934, Texaco installed one 550-gallon UST and one 1,000-gallon UST in the center of the property (USTs 3 and 4 on Figure 1-3), and two 4,000-gallon USTs at the eastern property line (USTs 5A and 6A on Figure 1-3). These tanks were likely constructed of steel. A 1938 station map shows that one grease pit was replaced with a hoist in the southern portion and a fuel dispenser in the eastern portion of the property.

A third 4,000-gallon UST was installed at the site in 1954 when the CalPet station was demolished (UST 7A on Figure 1-3). Based on Texaco property plans, it appears the northern dispenser was installed when the new station was constructed in 1954. The station building was apparently moved to the southern portion of the property at this time.

Two steel 10,000-gallon USTs were installed during station remodeling in 1967 (USTs 8 and 9 on Figure 1-3). Canopies over the dispensers in the central and eastern portions of the property were installed in 1968. In 1971, one steel 6,000-gallon UST was installed (UST 10 on Figure 1-3) when Low Lead gasoline was introduced by Texaco.

In 1982, the Arnolds replaced the 1954 4,000-gallon UST with a steel 6,000-gallon UST in the same location (UST 7B on Figure 1-3) and the 1934 4,000-gallon USTs with two 8,000-gallon USTs in the same locations (USTs 5B and 6B on Figure 1-3). The new 8,000-gallon USTs were installed to store diesel fuel. Since Texaco did not market diesel fuel in the Seattle area until 1986, the Arnolds would have obtained diesel from another source. The eastern dispenser and lube service bay were removed in 1984 to make a seating area for the deli and to install restrooms in the western portion of the building.

In 1993, seven USTs were removed from the property and one UST (UST 6B) was abandoned in place.

1.2.2 Downgradient Apartment Buildings

The Del Roy Apartment building is located at 25 West Roy (formerly 628 1st Avenue West), adjacent to and west of the former Texaco service station (Figure 1-2). The building was constructed in 1914, according to King County assessor records. The Del Roy has a partial sub-grade basement on its western side and a crawl space beneath the remainder of the building. A boiler room is located in the basement area west of the central courtyard. An abandoned heating oil tank (contents unknown) is located in the central courtyard.

The Monterey Apartment building is located at 622 1st Avenue West, southwest of the former Texaco service station and south of the Del Roy Apartments. According to King County assessor records, the Monterey building was construction in 1907. A mostly paved alley separates the Monterey and Del Roy buildings. Two abandoned heating oil UST are located in the alley between the Del Roy and Monterey buildings. There are pipes leading from the eastern UST to the Monterey basement stairwell. A third abandoned heating oil UST lies next to the southeastern corner of the Monterey Apartments building (not shown on maps). A fill port for the UST remains inside a flush box in the adjacent parking lot and a vent for the UST is present in the exterior of the southeastern corner wall.

In February 1978, residents of the Monterey Apartments notified the Seattle Fire Department of the presence of petroleum odors in the basement laundry room and lower apartments. The Fire Department found light non-aqueous phase liquid (LNAPL, or more generally NAPL) in a basement-level outdoor sump at the Monterey, and the investigation focused on the Texaco service station and the then-active Unocal service station to the northeast. Odors apparently abated after March 1978, and no complaints were documented until January 1984. In January 1984, May 1985 and October 1986, Monterey Apartment residents again reported gasoline odors. Similarly, an investigation identified NAPL in the basement sump, and the former Texaco property was identified as the source. In 1987 and 1989, further odors and vapor alarms were reported. In May 2005, plumbers digging in the basement storage room of the Monterey Apartments encountered strong gasoline odors and had to stop work for safety concerns. This room, which was damp and partly dirt-floored, is adjacent to the laundry room. Further investigation identified that the continual wetness resulted from washing machines discharging gray water directly into the shallow subsurface through perforated piping. This caused mounding of the water table under this part of the Monterey building, thereby bringing

petroleum contamination close to the basement level of the building. The three basement apartments at the Monterey were closed in 2005 due to unrelated flooding problems.

The Alvena Vista Apartment building is a multi-story building located at 612 1st Avenue West, southwest of the former Texaco service station and directly south of the Monterey Apartments (Figure 1-2). The two buildings are separated by an asphalt-covered parking lot belonging to the Monterey. According to King County assessor records, the Alvena Vista building was constructed in 1929. An abandoned heating oil UST (current contents unknown) is located along the southwestern corner of this building.

The Lindberg Apartment building is located at 625 Queen Anne Avenue North, adjacent to and south of the former Texaco service station (Figure 1-2). The buildings making up the large Lindberg complex were constructed in 1906 and 1925 as mixed-use facility with retail spaces that have ranged over the years from restaurants to beauty shops and 24 apartment units. The building has a tall cellar under the entire apartment area of the building. The apartments were originally constructed with a boiler room in the basement. An abandoned heating oil UST is located along the western side of the building adjacent to the Monterey Apartments.

The Queen Anne Arms Apartment building is located at 621 1st Avenue West, on the western side of the street and across from the Monterey Apartments. According to King County assessor records, the Queen Anne Arms building was constructed in 1918. The Queen Anne Arms has subgrade basement apartments that face the U-Park lot to the north and the Bank of America parking lot to the south. The basement floor on the north is approximately 3 to 4 feet below grade of the U-Park lot. At the northeastern corner of the building, where a boiler room is housed, the basement depth increases to 8 to 10 feet below grade of the U-Park lot. An exterior above-ground heating oil tank is located at the northeastern corner of the building at basement level.

1.2.3 Other Downgradient Properties

Other downgradient properties include the U-Park lot and the Bank of America to the west and southwest of the former Texaco. The U-Park lot is a gravel parking lot located at the southwest corner of the intersection of West Roy Street and 1st Avenue West. The lot is approximately 0.54 acre in area. The U-Park lot is bordered by the Queen Anne Arms Apartments to the south. The Bank of America property consists of the bank building and a paved parking lot at the northwest corner of the intersection of West Mercer Street and 1st Avenue West. The bank building occupies approximately 9,000 square feet of the 25,600 square foot property.

Additional business, residences, and apartment buildings present in the downgradient area include the Chandler Hall Apartments, the Uptown Studios Apartments, the Tup Tim Thai restaurant and private residences.

1.2.4 Upgradient Properties

Site histories and descriptions of the upgradient properties, including environmental investigations and remedial actions performed at these sites, are summarized in this section. These properties are discussed in detail in the *Background Investigation Report* prepared by Texaco Inc. (Texaco, 2000) and the *Conceptual Site Model, Risk Assessment and Supplemental Investigation Proposal* (CSM) prepared by Delta Environmental Consultants (Delta, 2002).

1.2.4.1 Former Unocal Service Station

The former Unocal service station is located at 700 Queen Anne Avenue North (Figure 1-2) and it operated from 1922 through 1991. From 1992 to the present, the property has been a vacant lot. Several environmental investigations were performed at the former Unocal from 1986 to 2000 to characterize petroleum contamination in soil and groundwater.

In February 1992, the station was decommissioned and Unocal performed tank and line removal and test pit exploration activities. Six USTs were removed including two 12,000-gallon gasoline USTs, one 550-gallon heating oil UST, one 550-gallon waste oil UST, one 2,000-gallon gasoline/diesel/waste oil UST, and one 4,500-gallon UST (of unknown usage) that was filled with concrete. Unocal also removed product lines, two hydraulic hoists and a service bay sump. The soil contamination at the property includes areas containing gasoline, diesel fuel, Stoddard solvent, hydraulic oil, and motor oil.

Unocal washed their service bay floors with solvent every night, using approximately 50 gallons per week. The waste solvent was washed down the bay drains typically connected to the combined sanitary/storm sewer. Stoddard solvent contamination was found in soil on the excavation wall of the 4,500-gallon tank.

Unocal reported that it had completed soil cleanup at the facility in 1998, and that residual soil contamination (above MTCA Method A cleanup levels for total petroleum hydrocarbons [TPH]) remained along the southern and western sides of the property boundary. Approximately 4,170 tons of soil contaminated with solvents, gasoline-, diesel-, hydraulic oil-, and motor-oil range hydrocarbons were removed from the Unocal site.

Groundwater monitoring and sampling activities were initiated at the former Unocal site in 1986 and continue to the present time. In February 1999, separate phase hydrocarbon (SPH, or NAPL) was observed on surface water in the northeast corner of the former Unocal site. The SPH had impacted a significant portion of the ground surface at the Unocal property and also discharged into the sewer catchbasin at the southwest corner of the property. The soil impacts associated with this release reached depths of at least 4 feet below ground surface (bgs). A remedial excavation was performed at the eastern property line. Confirmation soil samples collected from the eastern, southern and western walls contained concentrations of gasoline-, diesel-, and/or heavy oil-range hydrocarbons greater than the MTCA Method A cleanup levels.

Results from December 2006 monitoring indicate that groundwater flows south-southwest from the former Unocal site to the MarQueen property and under adjacent streets. Groundwater sampling results from 2005 and 2006 indicate the presence of NAPL in three wells installed in and adjacent to Roy Street. Concentrations of gasoline-, diesel-range hydrocarbons or BTEX exceeding the MTCA Method A cleanup levels have been detected in all wells associated with the former Unocal service station during 2005 and 2006 sampling (ENSR Corporation, 2007).

1.2.4.2 Former Paramount Dry Cleaners

This property is located at 14 Roy Street and is occupied currently by a four-story, mixed use building with 28 residential units, retail space, and an underground parking garage (Figure 1-2).

In 1944, a laundry and dry cleaning business was established at the site. In 1953, Paramount Cleaners added a boiler room and installed one 4,000-gallon UST, which was used to store dry-cleaning chemicals. From 1974 to 1997 the property was occupied by a retail plant store, then

by a series of restaurants. Orestes Restaurant was the last to occupy the property in January 1997. The owners of the property, Roy Street Holdings, Inc./Motion Financial Management Group, demolished the restaurant in November 1997. In May 2000, Motion Financial Management, Ltd. constructed the current building on the property.

Several environmental investigations associated with the dry cleaning business and petroleum contamination were performed at the site between 1995 and 1999. Approximately 829 tons of contaminated soil were removed from the property. Concentrations of petroleum hydrocarbons and chlorinated hydrocarbons exceeding MTCA Method A cleanup levels remain in the soil along the western and southern property boundaries. Chlorinated solvents and petroleum hydrocarbons were detected in shallow groundwater located approximately 7 to 12 feet bgs at concentrations above MTCA Method A cleanup levels.

In March 1999, the WDOE issued a "No Further Action" letter to the property owners. In 2000, the Seattle Fire Department issued temporary permits to remove one 675-gallon heating oil UST and one 800-gallon fuel oil UST.

1.2.4.3 MarQueen Property

This property is located at 600 Queen Anne Avenue North, southeast of the former Texaco station. It is currently a mixed-use building with a hotel, retail space, and an underground parking garage. In the past, this property has been used as an engineering school, an automotive repair garage, an apartment building and a public parking garage.

In 1993, Meridian Construction removed one 1,200-gallon gasoline UST (which may have been used for heating oil as well), one 2,000-gallon gasoline UST, and one 2,000-gallon heating oil UST from the MarQueen property. All three USTs were in poor condition with evident pitting and corrosion, and contained a mixture of SPH and water. Approximately 200 cubic yards of contaminated soils were removed from the excavation, although impacted soil beneath the foundation of the parking garage was left in place. Concentrations of gasoline-range hydrocarbons in the impacted soil exceeded the MTCA Method A cleanup levels.

1.3 Previous Environmental Investigations and Remedial Actions

Environmental investigations and remedial actions performed prior to this RI are discussed in detail in the *Background Investigation Report* (Texaco, 2000) and the CSM (Delta, 2002). Historical site plans showing sampling locations are provided in Appendix A.

Since the first reported hydrocarbon vapor complaints at the Monterey Apartments in February 1978, various agencies, consultants, and contractors have conducted a number of separate investigations and sampling events on the site.

WDOE performed the first subsurface investigation on the site in 1986. Nine vapor extraction/groundwater monitoring wells were installed at the station and near the Monterey Apartments (VP-3/MW-2, VP-5/MW-5, VP-7/MW-3, VP-8/MW-7, MW-4, MW-6, MW-9, MW-10, RW-1 and RW-2). An estimated 4,800 to 8,000 gallons of gasoline had been spilled at the Texaco station prior to 1986. Early analyses of NAPL in wells showed both gasoline and diesel-range hydrocarbons.

In 1990 and 1991, an RI was initiated and performed under the direction of WDOE. A pilot soil-gas survey was performed at the station and in the vicinity. During this event, monitoring wells were gauged and sampled, soil-gas samples were collected, NAPL samples were collected, and

neighborhood buildings were inspected. Residents of these buildings were also interviewed; one resident complained of frequent gasoline odors within the basement of the Lindberg Apartment building. In 1991, a Phase I RI was performed that included installation of 25 direct-push borings, collection of groundwater samples, an evaluation of groundwater flow, and an evaluation of contaminant nature and distribution.

The former Texaco service station was decommissioned in 1993. Seven USTs (gasoline, diesel, waste oil) and other infrastructure were removed from the former service station, and one UST was closed in place. Visible signs of subsurface petroleum contamination, such as soil discoloration, were present in the UST excavation. Grab soil samples collected between 6 and 11 feet bgs from the UST excavation indicated the presence of gasoline- and diesel-range hydrocarbons, benzene, toluene, ethylbenzene, and total xylenes (BTEX) at concentrations greater than the MTCA Method A cleanup levels (see Appendix A). According to field notes, impacted soil was placed back into the excavation as backfill material. In summer 1993, wells VP-1, VP-2, VP-4, VP-6, VP-9, and RW-3 through RW-5 were installed at the site. Soil vapor extraction (SVE) and groundwater recovery systems were installed with a spray aeration vacuum extraction (SAVE) treatment system and connected to eight wells around the Monterey Apartments and on the former Texaco property. The SVE system also connected to a series of horizontal extraction lines (8 to 12 feet deep) in the former Texaco UST pits. Four recovery wells for NAPL and groundwater were also utilized in the Monterey/former Texaco area and piped to the system enclosure in the former Texaco parking lot. In 1996 the SAVE system was replaced with a catalytic oxidizer, and the SVE system then continued operations intermittently until December 1997.

In April 2003 with the contractor transfer of site activities from Delta to Science Applications International Corporation (SAIC), the existing non-operational SVE system was upgraded and restarted. As discussed in Section 2.3, a DPE system replaced the SVE system in 2006.

Groundwater on the site was monitored in 1986, 1990, 1991, 1993, and then periodically from 1995 to 1997 by WDOE. Texaco performed groundwater monitoring on a semi-annual basis from December 1999 through June 2000. Beginning in 2002, groundwater monitoring activities have been conducted at least biannually. A groundwater petroleum plume has been characterized and delineated in the downgradient direction using monitoring and extraction wells that were installed and sampled from 2002 to 2006.

1.4 Recent Environmental Regulatory Activities

In 2002, the site was placed under the VCP and the recent RI period was initiated. Between 2002 and 2004, a number of meetings and agreements took place between WDOE, Chevron EMC, Chevron EMC's environmental consultants, and consultants for the Monterey and Arnold (former Texaco) properties. The plan for the path forward at this complex site was developed over the course of meetings and correspondence, analysis of field and laboratory investigation results, pilot testing, and alternative selection.

WDOE recognized that the site warranted a final cleanup action beyond the SVE system, which had operated intermittently since 1993, and requested that Chevron EMC make active progress toward developing the final remedial action. Additionally, WDOE recognized that the RI was still ongoing, particularly in the downgradient portion of the site (west of 1st Avenue West), concurrent with the remedial selection and implementation process. In late 2004, DPE was selected as the remedial action for the upgradient area of the site (east of 1st Avenue West);

however, this would be considered by WDOE as an interim action for the site pending completion of the RI, which included preparation of the RI report. If data collected in the downgradient portion of the site showed the need for remediation in that area, then an additional action or expanded action would be considered. If these data did not show the need for additional remediation in the downgradient area, then the upgradient interim action would become the final remedial action for the site. In order to be able to proceed with proper remedial planning under these circumstances and to facilitate this process, WDOE developed site-specific environmental cleanup expectations, which will be discussed in Chapter 5.0.

2.0 REMEDIAL INVESTIGATION FIELD ACTIVITIES 2002 THROUGH 2006

The purpose of this RI was to fully characterize the extent of petroleum hydrocarbon contamination in environmental media in order to provide input for remedial selection at the site. The investigation area covers the former Texaco property and the downgradient properties to the west and southwest of the former station (Figure 2-1). RI activities were initiated by Delta in 2002 and were completed by SAIC between early 2003 and 2006. The following section outlines RI field events and is arranged by environmental media and consultant. Results of these field events will be discussed in Chapter 4.0.

2.1 Soil and Groundwater Investigations

A summary of the field activities is presented in Table 2-1. Well construction details are presented in Table 2-2. Soil boring and monitoring well locations are shown in Figure 2-1. Soil boring logs and well construction diagrams are presented in Appendix B. The following text summarizes the phases of field work performed for investigation of soil and groundwater during the RI period from 2002 to 2006.

2.1.1 Delta Environmental Consultants

- *September 2002.* Investigation activities included the installation of two vapor probes (DVP-1 and DVP-2) in the Monterey basement and seven direct-push borings, DP-1 through DP-7, and collection of soil samples for laboratory analysis. The purpose of this phase of work was to fill data gaps in understanding the nature and extent of contamination on the former Texaco property. In addition to these seven borings, eleven additional soil borings (DB-1 through DB-11) were completed and sampled during a second field mobilization. Six of the eleven soil borings were completed as monitoring wells MW-12 through MW-17 (Figure 2-1). Following installation, each well was surveyed and developed prior to sampling. In addition to chemical analysis, four soil samples were submitted for physical analysis. Prior to these field activities, Delta, WDOE, and other site stakeholders mutually agreed upon locations for soil borings and monitoring wells.

2.1.2 SAIC

- *March 2004.* Field activities included the installation of monitoring wells MW-18, MW-19, and DPE-2, and completion of four soil borings, SP-1 through SP-4. In addition to these new wells, well VP-6 was drilled out and completed as well DPE-1. Wells DPE-1 and DPE-2 were completed as monitoring wells with the intention of possible future use as extraction wells. Well DPE-1 was connected into the existing SVE system. Following well installation, all wells were developed, surveyed, and sampled. All wells were added to the Gettler-Ryan Inc. (Gettler-Ryan) groundwater monitoring program.
- *August 2004.* Field activities for this event included the installation of cross-gradient and downgradient monitoring wells MW-20 and MW-21. Soil samples were collected and submitted for laboratory analysis from each boring. MW-20 was advanced to a total depth of 31.5 feet bgs and screened in a silt/clay unit; groundwater was not encountered during well installation. After well installation, both wells were surveyed and well MW-21 was developed. Due to extremely low yield, well MW-20 was not developed.

- *October 2004.* Activities included the installation and sampling of monitoring wells MW-22 through MW-26. Wells MW-22 through MW-24 were installed with a limited access direct-push rig, and completed as 1-inch diameter monitoring wells. Wells MW-25 and MW-26 were completed as 4-inch diameter wells for possible future use as extraction wells. Soil samples were collected for chemical analysis from each boring. Following installation, each well was developed and surveyed prior to sampling.
- *February 2005.* Wells MW-30 and MW-31 were installed as downgradient monitoring wells. Soil samples were collected from the borings and field screened for petroleum hydrocarbons, but were not submitted for chemical analysis due to lack of field indications. Following installation, both wells were developed and surveyed prior to sampling.
- *July to November 2005.* Two downgradient monitoring wells, MW-32 and MW-33, were installed in the U-Park lot during July 2005. Extraction wells DPE-5 through DPE-7 were installed at the property and well RW-1 was abandoned in October 2005 (well RW-1 was located southwest of well MW-6). In November 2005, downgradient wells MW-34 and MW-35 were installed in order to better define the extent of groundwater contamination in the U-Park area. Soil samples were collected for chemical analysis from all borings except well MW-34. Soil from well MW-34 was field screened for petroleum hydrocarbons. Following installation, each well was developed and surveyed prior to sampling.
- *September to October 2006.* Extraction wells DPE-3, DPE-4, DPE-8, and DPE-9 were installed. Well MW-22 was over-drilled and replaced by well DPE-8. Well VP-1 was decommissioned. Extraction well DPE-9 was installed approximately 19 feet east of well VP-1. Soil samples were collected for chemical analysis from all well borings except well DPE-8. Soil from well DPE-8 was field screened for petroleum hydrocarbons. Following installation, each well was developed and surveyed prior to sampling.

2.1.3 Groundwater Monitoring (Gettler-Ryan and SAIC)

- *Third Quarter 2002 to Present.* Gettler-Ryan was contracted by Chevron EMC to perform quarterly groundwater monitoring on the site from the Third Quarter 2002 to 2006. In January 2005, Chevron EMC took custody of three existing downgradient wells (MW-27 through MW-29) and added them to the groundwater monitoring program. These wells were originally installed in 1994 by Law Crandall for the Queen Anne Square Association. The scope of work for all monitoring events includes gauging and sampling all accessible wells onsite containing a sufficient volume of water that is free of visible NAPL.

2.2 Soil Vapor Investigations

Soil vapor samples are collected for two purposes: 1) to investigate the potential for petroleum vapors present in soil pore spaces to migrate and intrude into buildings and 2) to monitor the performance of a remediation system. To investigate petroleum vapors, soil probes are installed into the vadose zone of the soil, commonly to a shallow sub-slab depth or to multiple depths. SUMMA canisters under vacuum are then used to collect soil vapor samples over a specified time interval. System performance monitoring samples are collected simply by filling Tedlar bags.

Soil vapor probes have been installed in the basement of the Monterey Apartments and adjacent to the Queen Anne Arms Apartments along the southern boundary of the U-Park lot. Vapor probe locations are shown on Figure 2-1.

2.2.1 Delta Environmental Consultants

- *September through October 2002.* Field activities included the installation and sampling of two shallow vapor probes, DVP-1 and DVP-2, in the basement of the Monterey Apartments. During vapor probe installation, the borings were extended to groundwater, and both soil and groundwater samples were collected from the boring locations. After the vapor probes were installed to a depth of 18 inches below the top of the basement slab, soil vapor samples were collected with SUMMA canisters.

2.2.2 SAIC

- *June to October 2004.* Soil vapor samples were collected on a monthly schedule from DVP-1 and DVP-2 to monitor SVE system performance. Vapor samples were collected in Tedlar bags.
- *July to August 2005 and April 2006.* Two multi-nested soil vapor sampling probes, NV-1 and NV-2, were installed adjacent to the Queen Anne Arms Apartments in the U-Park lot during July 2005. Sampling devices were installed at 5 and 8 feet bgs in vapor probe NV-1 and at 5, 10, and 15 feet bgs in vapor probe NV-2. Soil vapor samples were collected from vapor probes NV-1 and NV-2 and ambient air sampling was conducted on August 12, 2005 and on April 7, 2006. All samples were collected in SUMMA canisters.

2.3 Remediation Activities

2.3.1 Soil Vapor Extraction System

The existing non-operational SVE system (see Section 1.3) was upgraded and restarted in April 2003. The system was not used as a primary remediation technique; it was operated in order to create negative pressure in the soils below the Monterey and Del Roy Apartments, thereby preventing vapor intrusion into these buildings. The concentration of petroleum hydrocarbons removed in the soil vapor stream was minimal, but significant vacuum levels were measured in wells and vapor points near and within the two buildings. The system operated with few interruptions until July 2005 when mechanical problems caused shutdown of the SVE unit. In October 2005 the system was decommissioned in order to install the DPE system.

2.3.2 Dual-Phase Extraction System

In 2003, Chevron EMC began the remediation alternative selection process as a voluntary cleanup action under WDOE. After pilot testing and a multi-tiered screening and selection process, DPE was selected as the final remediation method. The system is designed to dewater the contaminated vadose zone beneath the former Texaco property and the area surrounding the Monterey and Del Roy Apartments. Petroleum constituents in impacted soils exposed by dewatering are then removed by an expanded vapor extraction system. Contaminants removed from the subsurface are treated onsite by oxidation and carbon filtration. The proposed DPE system was presented to WDOE and key stakeholders in December 2004 and was accepted by all parties.

The DPE system was constructed in two phases on the former Texaco property beginning in October 2005 and ending in January 2006. Following the first phase of construction, the system was started on February 27, 2006. Pneumatic groundwater extraction pumps were installed in wells DPE-5, DPE-6, and DPE-7. During second quarter 2006, SAIC began pilot tests using wells DPE-1 and RW-2 as two-phase extraction (TPE) wells by equipping each well with an extraction drop tube (stinger). These wells were chosen for their ability to be readily equipped in this fashion and their optimal locations between other pumping wells. Results of this testing showed that TPE at these locations was only marginally effective in terms of additional groundwater drawdown, and therefore this configuration was not considered to be an effective final remedy. SAIC also experimented with the addition of a pneumatic extraction pump at well RW-3; however, groundwater recharge at this well was found to be insufficient for permanent pump installation.

During the second phase, four new DPE wells (DPE-3, DPE-4, DPE-8 and DPE-9) were installed in September 2006 and trenching and piping installation to the system compound was completed in October 2006, which including piping connections to DPE-1 and DPE-2. Pneumatic groundwater extraction pumps were installed in wells DPE-1, DPE-3, DPE-4, and DPE-8. Extraction wells DPE-2 and DPE-9 initially operated as SVE-only wells. The full system was restarted on November 1, 2006. As of March 31, 2007, the DPE system has been successful in removing an estimated 40,000 pounds of hydrocarbon mass from the subsurface. On July 17, 2007, pneumatic pumps were activated in wells DPE-2 and DPE-9, to bring the number of wells operating under DPE to nine.

3.0 SITE PHYSICAL SETTING

3.1 Regional Setting

The physiography of Seattle is characterized by a series of north/south-trending ridges and troughs. The site is located at the southern base of one of these ridges, Queen Anne Hill, just north of downtown Seattle. The site is situated between two large troughs, Puget Sound and Lake Washington, at approximately 130 feet above mean sea level (msl). The north/south-trending ridges and troughs are characteristic of glacially overridden terrain in the Puget lowland.

The regional geology in the Seattle area consists of a thick series of glacial and interglacial soils overlying bedrock. These sediments were deposited as glaciers advanced and retreated during the Pleistocene Epoch. As the glaciers advanced to the south, proglacial lakes formed and filled with lacustrine sediments that consist of laminated silt and clay (Lawton Clay). Above the lacustrine sediments, glacial advance outwash was deposited, which includes poorly graded sand (Esperance Sand). Overlying the sand is glacial till consisting of compacted, silty, gravelly, fine sand (Vashon Till).

Well logs from the vicinity of lower Queen Anne Hill show fill, glacial till, and other shallow soils that have thicknesses up to more than 46 feet. Underlying these shallow soils is outwash sand with a maximum thickness of 33 feet. Below this is lacustrine clay/silt (Lawton Clay) that ranges from about 90 to 150 feet thick, underlain by well-graded sand up to 70 feet or more thick.

Groundwater in the lower Queen Anne area occurs within two water-bearing zones: a shallow aquifer and a deeper confined aquifer. The groundwater in the shallow aquifer occurs within till and outwash layers above the low-permeability Lawton Clay. Some wells in the vicinity did not encounter any groundwater above the Lawton Clay. A deeper confined aquifer is present within the well-graded sand layer below the Lawton Clay. The potentiometric surface of the deeper aquifer in the area varies from 56 to 127 feet in depth.

3.2 Site Geology

The local site geology is defined based on the large number of environmental borings that have been drilled at the site, in addition to supplementary information from previous reports, a geologic map, and online subsurface data (http://geomapnw.ess.washington.edu/index.php). The site geology is represented in three cross sections, with locations shown in Figure 3-1, and sections presented as Figures 3-2 through 3-4. Three major distinct lithologic units have been identified onsite, which are labeled from top to bottom, Vashon Till, Esperance Sand, and Lawton Clay.

3.2.1 Vashon Till and Fill

A silty, gravelly sand layer that occurs at shallow depths onsite appears to be glacial till with some fill overlying the till. This lithologic unit is composed of very dense, very fine to medium sand with 10 to 40 percent silt and 5 to 30 percent gravel. Based on borings on the former Texaco property, this unit is observed near the surface at the intersection of Roy Street and Queen Anne Avenue, and it pinches out to the southwest. This unit was also identified at boring MW-20, but was not found on the western and southwestern portions of the site. This unit is up to 17 feet thick (Figures 3-2 through 3-4). This unit corresponds to the Vashon Till and it overlies the Esperance Sand below the western end of the former Texaco property and at well

MW-20. The Vashon Till overlies Lawton Clay at the northeastern corner of the former Texaco property.

3.2.2 Esperance Sand

This unit contains two distinct lithologies or subunits: poorly graded sand and poorly graded sand with minor silt. The sand lithology is composed of dense to very dense sand with 0 to 5 percent silt and 0 to 5 percent gravel. This subunit is up to 28 feet thick in southwestern portion of the site near well MW-21, and it thins to the northeast toward the former Texaco property. The sand with minor silt lithology is composed of dense to very dense sand, with approximately 10 to 15 percent silt and 0 to 10 percent gravel. The sand with minor silt lithology varies in thickness from 3 to 35 feet. Silty sand and silt/clay lenses are observed within this unit throughout the area. This silty sand unit appears to be especially pervasive in the western and southwestern parts of the former Texaco property and in adjacent properties. In this area it is locally fine-grained enough to perch groundwater (see Figures 3-2 through 3-4 and Section 3.3.1). Below the former Texaco property, this unit pinches out to the northeast (Figure 3-2). This unit corresponds to glacial advance outwash of the Esperance Sand and it overlies the Lawton Clay throughout the site, except at the northeastern corner of the former Texaco property.

3.2.3 Lawton Clay

This lithologic unit consists of laminated silt and clay in varying proportions. Typically, the unit consists of more silt than clay. It is described as hard to very hard with a low to medium plasticity. Based on numerous soil borings, the uppermost surface of this unit is present at a shallow depth, approximately 10 feet bgs in the northeastern and northern areas of the site, but slopes gradually down to the west-southwest, reaching approximately 35 feet bgs. Figure 3-5 depicts the contoured surface of the top of this unit.

3.3 Site Hydrogeology

Groundwater in the vicinity of the site occurs within two water-bearing zones, a shallow water-table aquifer and a deeper confined aquifer. The relatively impervious, fine-grained material in the Lawton Clay forms an aquitard between the two water-bearing zones and confines the lower aquifer. With the exception of two wells, MP-2 and MW-20 (Figure 2-1), all groundwater monitoring wells at the site are screened above the Lawton Clay in the shallow aquifer. Some areas of shallow perched groundwater are also present in the vicinity of the former Texaco service station.

3.3.1 Shallow Aquifer

The shallow water-table aquifer on site occurs primarily within the Esperance Sand, and in the Vashon Till at the former Texaco property. This aquifer has been identified above the Lawton Clay in almost all wells on site. However, at well MW-20 the shallow water table is located within the upper Lawton Clay and possibly in the lowermost Esperance Sand. The aquifer, as defined by saturated Esperance Sand, is generally less than a few feet thick on the northern and northeastern margins of the site, but it thickens to the south and west (Figures 3-2 through 3-4).

Groundwater within the shallow aquifer flows generally to the west and southwest, with a variable horizontal gradient. A moderate to steep gradient is observed on the northeastern portion of the site and extending to the former Unocal service station farther northeast. The

groundwater gradient becomes shallower below the area of the Monterey and Del Roy Apartments and resumes a moderate to steep southwest gradient on the southwestern portion of the site. The horizontal gradient (under non-pumping conditions) averages approximately 0.014 foot per foot (ft/ft) in the vicinity of the Monterey and former Texaco properties. A steep gradient has been observed at the U-Park lot between wells MW-16 and MW-35 and wells MW-32 and MW-33. The groundwater flow direction mirrors both the surface topography and the upper surface of the Lawton Clay. The local topography north of the site slopes steeply southward to the base of Queen Anne Hill, along Roy Street, but slopes moderately southwest over much of the site. Figure 3-5 depicts the upper surface elevation of the Lawton Clay, which decreases in elevation to the southwest across the site. Figures 3-6 through 3-13 show groundwater elevation contours in the shallow aquifer from October 2004 to October 2006. Figures 3-12 and 3-13 show groundwater elevation after the DPE system began pumping groundwater from the subsurface.

In a few wells, shallow groundwater appears to be perched above the surrounding water table. This situation has been identified at wells VP-9, MW-9, MW-12, MW-23, MW-24, DPE-5, and occasionally at RW-2. The area of perched groundwater coincides with an area of overall somewhat finer-grained material in the Esperance Sand (see Figures 3-2 and 3-4). During installation of wells, MW-23 and DPE-7, a double-stacked soil contaminant zone that centers on the water table (the "smear zone" as described in Chapter 4.0) was identified. This marks a condition where the highest static groundwater at these locations varied between perched and normal water table elevations. A similar condition apparently exists at well RW-2. Groundwater occurs as shallow as 4 feet bgs in wells screened in the perched groundwater. Groundwater typically occurs between 8 and 20 feet bgs in the shallow aquifer (under static conditions, deeper due to DPE pumping). The shallow water table shows a total vertical variation within each well of approximately 0.14 to 9.4 feet, as observed in groundwater monitoring results from 2002 to 2006. At maximum elevation, the water table does not appear to contact the basement slab of the onsite apartment buildings, as shown in Figure 3-2. However, due to gray water discharge occurring until 2005, groundwater mounding was reaching close to the basement floor level in the middle of the Monterey building.

Groundwater pumping since February 2006 (as part of the DPE system operation) has gradually lowered the water table under the former Texaco property and the Del Roy and Monterey properties. This pumping has subsequently decreased recharge to downgradient areas, thereby also dropping the water table elevation in those areas.

During pilot testing for remedial selection and design, two episodes of pump testing of the shallow aquifer took place at well DPE-1 (see Appendix C). Hydrogeologic analysis of drawdown in surrounding wells showed that the aquifer in the vicinity of well DPE-1 has a relatively high hydraulic conductivity, ranging from 6E-03 to 3E-02 centimeter per second (cm/sec). Given the average hydraulic gradient of 0.014 ft/ft, this yields a horizontal transport velocity for groundwater ranging from approximately 1.2 to 2.5 feet per day. However, additional hydrogeologic investigations related to system design and performance have revealed that the aquifer around well DPE-1 has the greatest hydraulic yield identified onsite. Other areas of the site likely would have significantly lower hydraulic conductivity values and consequently slower groundwater velocities. Some wells on site can readily be pumped or bailed dry. An area centered at the intersection of the former Texaco, Del Roy, Monterey, and Lindberg properties has a lower conductivity due to greater silt content, which accounts for the perched zones.

3.3.2 Deep Aquifer

A deep aquifer that is observed regionally beneath the Lawton Clay is also present at the site, with a potentiometric surface at approximately 115 feet bgs. Well MP-2, set at a total depth of 165 feet bgs, is screened within the lower aquifer. The depth to water in this well on April 17, 2006, was 114.6 feet bgs or 17.5 feet below the site datum (site datum is 32.9 feet lower than msl). This potentiometric depth is generally similar to depths measured for the deep aquifer at other locations in the surrounding area. These potentiometric depths are situated within the Lawton Clay. Data gathered from borings that have been drilled through the Lawton Clay to the deeper aquifer show that the deep aquifer is confined, as water levels in the boreholes tend to rise significantly above the basal depth of the Lawton Clay. The flow direction of groundwater in this deep aquifer is unknown, but likely flows toward Elliott Bay and Puget Sound.

4.0 DATA ANALYSIS AND INTERPRETATION

4.1 Contaminants of Potential Concern

In this report, the term "contaminant" is used as defined in MTCA: "contaminant means any hazardous substance that does not occur naturally or occurs at greater than natural background levels" (WAC 173-340-200). The term "contaminant" does not imply that the substance is above a regulatory cleanup level or is hazardous to a receptor, but merely that it is impacting one or more environmental media above natural levels.

Site-specific cleanup objectives and levels for each impacted medium will be discussed in greater detail in Chapter 5.0. Cleanup levels for this site are primarily driven by the soil vapor to indoor air pathway, due to the potential health risks associated with the contaminants present on site.

The discussion below includes contamination within three environmental media: soil, groundwater and soil vapor. Identified onsite contaminants include petroleum constituents of gasoline-, diesel-, and heavy oil-range hydrocarbons, and small quantities of chlorinated volatile organic compounds (VOCs). Petroleum NAPL is also present onsite, consisting largely of leaded gasoline and lesser amounts of diesel. The specific contaminants of potential concern (COPC) that have been identified on the site include the following:

- Benzene, toluene, ethylbenzene, xylenes (BTEX): volatile aromatic hydrocarbons present in all fresh (unweathered) gasoline and to a lesser extent in diesel-range fuels.
- Semi-volatile organic compounds (SVOCs): SVOCs are constituents of petroleum and include naphthalene, 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene, phenol, phenanthrene, and 4-ethyltoluene.
- Lead: a common gasoline additive used until about 1995. The U.S. Environmental Protection Agency (EPA) began reducing the lead content of gasoline in 1973 from approximately 2 to 3 grams per gallon (g/gal) down to 0.1 g/gal in 1986.
- Tetrachloroethene (PCE): a chlorinated solvent most commonly used in dry-cleaning and its breakdown products, trichloroethene (TCE), cis-1,2,-dichloroethene (cis-1,2-DCE), and vinyl chloride, which are known carcinogens derived from an offsite source (most likely the former Paramount Dry Cleaners).

The occurrence of these COPCs in the three environmental media is summarized below:

Contaminants of Potential Concern	Soil	Groundwater	Soil Vapor
Volatile Organic Compounds:			
BTEX	X	X	X
PCE		X	X
cis-1,2-DCE		X	
TCE		X	X
Vinyl chloride		X	
Gasoline-range hydrocarbons	X	X	X
Semi-Volatile Organic Compounds:			
Naphthalenes	X	X	
1,3,5-trimethylbenzene	X	X	X
1,2,4-trimethylbenzene	X	X	X
Phenol	X	X	
Phenanthrene	X		
4-ethyltoluene			X
Diesel-range hydrocarbons	X	X	
Metals:			
Lead	X	X	

Petroleum constituents released into the environment from the former Texaco service station are the main COPCs and are the drivers in this investigation. The most significant contaminant is considered to be benzene because it is widespread at the site and is a known carcinogen with relatively high toxicity. Benzene is contained within manufactured gasoline and thus gasoline-range hydrocarbons are included as a COPC.

Cleanup levels for benzene and gasoline-range hydrocarbons will be the most conservative of all COPCs, and the concentrations of other COPCs on site will likely be remediated below the necessary cleanup levels when achieving acceptable levels of benzene and gasoline-range hydrocarbons. Due to the high concentrations at which benzene and gasoline-range hydrocarbons exist on site, the other COPCs, including PCE and its breakdown products, the semi-VOCs, and lead are not discussed below, as the potential risk produced by these constituents is insignificant compared with the potential risk associated with benzene and gasoline-range hydrocarbons. During the RI, other constituents were analyzed for, but were either undetected, or detected below MTCA Method A cleanup levels.

Results for all samples collected in the scope of the RI are summarized in Tables 4-1 through 4-6 for soil, Tables 4-7 through 4-11 for groundwater, and Tables 4-12 and 4-13 for soil vapor.

4.2 Data Quality Assessment

Analytical procedures were carried out in accordance with the requirements of WAC 173-340-830. North Creek Analytical of Bothell, Washington, Lancaster Laboratories of Lancaster, Pennsylvania, or Air Toxics Limited of Folsom, California, performed chemical laboratory analyses. These laboratories are all accredited by the state of Washington under WAC 173-50 for the analytical methods performed for this project.

The only laboratory data discrepancy comes from groundwater samples collected from borings DVP-1 and DVP-2 in September 2002. North Creek Analytical improperly processed these samples for diesel- and heavy oil-range hydrocarbons. No representative analytical results were generated for these analyses. No other analytical results for the RI sampling were rejected by the laboratories. The laboratory reports for all samples collected during the RI period are included in Appendix D.

In this report, measured concentrations of contaminants in soil and groundwater are initially screened against MTCA Method A cleanup levels to identify specific areas to potentially target for remediation. However, Method A cleanup levels are only used as a screening tool and are not planned to be used for the final cleanup determinations (see Chapter 5.0). Furthermore, published table values for cleanup levels of total petroleum hydrocarbons (gasoline and diesel) are available for Method A, but need to be generated for site-specific conditions under Method B.

4.3 Nature and Distribution of Soil Contaminants

As discussed in Chapter 3.0, the subsurface conditions of the site greatly influence the offsite transport of contaminants. Tables 4-1 through 4-5 present all analytical results for soil samples collected during the RI. Figures 4-1 and 4-2 show the approximate extents of subsurface soil contamination (gasoline-range hydrocarbons and benzene) based on laboratory analytical and field screening results for all depths.

Field-screening and analytical data collected from each boring were evaluated to determine zones of "most-contaminated" soil, which typically occurs in a zone above and below the water table. As NAPL on the water table moves up and down with seasonal changes, the NAPL is vertically "smeared" through the soil. As a result this contaminated are near the water table is referred to as the "smear zone." The elevation of the top of subsurface contamination generally decreases to the west and southwest from the former Texaco service station, following the groundwater flow pattern (Figures 3-6 through 3-13). Figure 4-3 shows the approximate depth to the smear zone, where present, in each boring.

For ease of discussion, the site is divided into three areas: the former Texaco service station property (primary source area); the Del Roy and Monterey Apartments properties (secondary source area); and 1st Avenue West and properties to the west (downgradient area). The soil analytical results are compared to the respective MTCA Method A cleanup levels as an initial screening tool to identify areas of the site that are impacted and may require remediation. The soil samples discussed in the following paragraphs were collected by Delta and SAIC between 2002 and 2006.

4.3.1 Primary Source Area

Former Texaco Service Station

Gasoline- and diesel-range hydrocarbons and benzene have been detected on the former Texaco property in all areas except the northern and eastern sides of the site (Figures 4-1 and 4-2). The highest historical concentrations of gasoline- and diesel-range hydrocarbons and benzene in soil are:

- Gasoline-range hydrocarbons: 8,160 milligrams per kilogram (mg/kg) in the 14 feet bgs sample collected from boring DP-5, which is located in the former UST area in the central area of the property.
- Diesel-range hydrocarbons: 2,800 mg/kg in the 14 feet bgs sample collected from boring DPE-5, which is in the remediation system enclosure at the southwestern corner of the property.
- Benzene: 52.2 mg/kg in the 22 feet bgs sample collected from boring DP-6, which is located on the western side of the property.

Heavy oil-range hydrocarbons have not been detected in soil samples on the former Texaco service station above MTCA Method A cleanup levels.

The depth of the smear zone on the former Texaco property varies from 10 to 22 feet bgs on the northern and eastern sides of the property, and 14 to 27 feet bgs on the western and southwestern portions of the property. Two distinct zones of contamination from 11 to 13 feet bgs and 21 to 27 feet bgs were identified during soil sampling and well installation at well DPE-7. representing separate smear zones in the perched and water table zones.

4.3.2 Secondary Source Area

Impacts on the Del Roy and Monterey Apartment properties appear to exist beneath much of the footprint of the Monterey building, the southern portion of the Del Roy building, in the alley between the apartments, the northern portion of the Monterey parking lot, and the northwest corner of the Lindberg Apartments property (Figures 4-1 and 4-2). Concentrations of gasoline-range hydrocarbons collected from the Del Roy and Monterey properties range from non-detect up to 24,000 mg/kg in SP-3/DPE-2 at 13 feet bgs, located in the Monterey parking lot.

Benzene concentrations surrounding the Del Roy and Monterey Apartment buildings range from non-detect up to 93 mg/kg in boring SP-3/DPE-2 at 13 feet bgs. Soil samples collected during vapor probe installation in the basement of the Monterey Apartments contained a maximum level of benzene of 14.0 mg/kg in the sample collected from boring DVP-2 at 6 feet below the top of the basement slab.

The soil samples collected from boring DVP-1 indicate that soil contamination was present at concentrations above MTCA Method A cleanup levels at a depth of only 1 foot below the top of the basement slab at the time of vapor probe installation in September 2002. This location is close to the gray water discharge point, where the water table and its smear zone were elevated. The DVP-1 sample collected from directly below the slab contained gasoline-range hydrocarbons at 1,640 mg/kg, and benzene at 0.554 mg/kg. Note that the quality assurance trip blank sample shipped with these soil samples did contain an elevated level of benzene of 0.586 parts per billion (ppb).

Three soil samples collected from the Monterey property contained diesel-range hydrocarbons at concentrations above MTCA Method A cleanup levels. These samples, DB-5 at 13 feet bgs, SP-3/DPE-2 at 13 feet bgs, and DVP-2 at 6 feet below the top of the basement slab, contained concentrations of 3,060 mg/kg, 3,000 mg/kg, and 2,030 mg/kg respectively (the diesel-range concentration reported in the DVP duplicate sample collected at this 6-ft depth, DVP-4-6, was 2,170 mg/kg). Diesel-range hydrocarbons concentrations in other samples collected from the Del Roy and Monterey properties were below the MTCA Method A cleanup level.

Five of the soil samples collected contained heavy oil-range hydrocarbons concentrations above laboratory detection limits. Heavy-oil range hydrocarbons were reported at a concentration above the MTCA Method A cleanup level in only one sample, 3,400 mg/kg in SB-22 at 12 feet bgs, which is located in the courtyard of the Del Roy Apartments. The four remaining samples were collected on the Monterey property. The concentrations in these samples ranged from 31.8 mg/kg in DVP-1 to 65.0 mg/kg in DVP-2 both at 6 feet below the top of the basement slab. The source of these detections is not known.

The smear zone in the secondary source area is generally identified at 12 to 19 feet bgs, although the top of the smear zone is present at 7 to 9 feet bgs at boring DB-4, and wells VP-2, VP-3/MW-2, VP-8/MW-7, RW-3, and RW-5. These are areas that have been likely influenced by shallow perched groundwater. At well MW-23, which is screened in a perched groundwater zone, two distinct smear zones were identified at 9 to 13 feet bgs and 15.5 to 18 feet bgs.

4.3.3 Downgradient Area

This area includes 1st Avenue West and the properties to the west of the avenue. In this downgradient area, gasoline-, diesel-, and/or heavy oil-range hydrocarbons have been detected in only eight samples, with all but one concentration below the MTCA Method A cleanup levels. The soil sample collected at 12.5 feet bgs from well MW-25 contained gasoline-range hydrocarbons at a concentration of 8,100 mg/kg. Well MW-25 is located on the east side of 1st Avenue West and approximately 15 feet west of the Del Roy Apartments.

Benzene has been reported in three soil samples collected in this downgradient area. Benzene concentrations of 0.20 and 0.40 mg/kg were detected in two samples collected from well MW-26 at 12.5 and 20 feet bgs, respectively, and were above the MTCA Method A cleanup level for benzene. The remaining benzene concentration (0.07 mg/kg) slightly exceeded the cleanup level in the 35 feet bgs sample at well MW-21 (at the base of the aquifer); it may represent dissolved benzene in water within the sample.

In this area of the site, soil in many of the borings had non-detectable concentrations of petroleum constituents or had concentrations too low to differentiate a smear zone. A smear zone was identified only in the boring for well MW-25, with an approximate thickness of 2 feet, from 12 to 14 feet bgs.

4.3.4 Discussion of Soil Impacts

Soil impacts from gasoline-range hydrocarbons and BTEX constituents appear to be most extensive in the south central and southwestern portions of the former Texaco property, and extend west and southwest to the Del Roy and Monterey Apartments.

Based on the results of the soil samples collected during the RI, the lateral extents of soil contamination above the MTCA Method A cleanup levels are presented in Figures 4-1 and 4-2.

The vertical extent of soil contamination extends approximately from 5 to 7 feet bgs to the top of the Lawton Clay. Figure 4-3 presents the depths of the smear zone (if present) in each soil boring. The depths of petroleum hydrocarbon contamination are summarized in Table 4-6.

Twenty-five soil samples collected from various boring locations on the site were analyzed for PCE and its breakdown products (TCE, cis-1,2-DCE, and vinyl chloride). None of the samples contained concentrations of these constituents above the laboratory detection limits (see laboratory reports in Appendix D).

4.4 Nature and Distribution of Groundwater Contaminants and NAPL

Petroleum hydrocarbon contamination in shallow groundwater beneath the site appears to originate from the former Texaco property, and extend west and southwest beneath the Del Roy Apartments, the Monterey Apartments, and across 1st Avenue West. NAPL appears to originate from the former Texaco service station and possibly also from former heating oil USTs around the Del Roy and Monterey Apartments. Since groundwater monitoring began in 1986, NAPL has been observed in wells VP-4, VP-7/MW-3, MW-4, MW-6, MW-9, DPE-1/VP-6, DPE-2, DPE-5, DPE-8/MW-22, DPE-9, RW-2, and RW-4. NAPL has not been present within wells in the downgradient area beneath or west of 1st Avenue West. Figure 4-4 shows the extent of NAPL in site wells in terms of maximum measured thickness since 1986 and recent (2006) thickness.

Concentrations of dissolved groundwater constituents exceeding the MTCA Method A cleanup levels extend west as far as well MW-35, and southwest to wells VP-5/MW-5, VP-8/MW-7, MW-15, MW-21 and MW-23. This plume does not reach west to 2nd Avenue West. The northern edge of the plume is bounded between MW-16 and MW-25. The northeastern edge is bounded between wells MW-9 and MW-10 and between wells DPE -6 and MW-13. Refer to Table 4-7 and Figures 4-5 through 4-16 for gasoline, diesel, benzene, and total BTEX groundwater concentrations from all site monitoring wells during 2005 and 2006. Charts showing changes in groundwater elevations and chemical concentrations versus time are presented as Appendix E.

As with soil, the site is divided into three areas for ease of discussing groundwater contamination and NAPL distribution. Groundwater analytical results are compared to the MTCA Method A cleanup levels as an initial screening tool and to identify areas of the site that may require remediation. Chemical concentrations are listed in ppb, units that are equivalent to micrograms per liter (µg/L). The discussion of groundwater quality in the following paragraphs includes groundwater data collected at the site between 1986 and 2006.

4.4.1 Primary Source Area

Former Texaco Service Station

NAPL has been observed in wells MW-6, DPE-5, and RW-4, all located at the western side of the former Texaco property (Figure 4-4). Although the maximum NAPL thickness observed was 2.26 feet in well MW-6, NAPL has not been detected in either well MW-6 or RW-4 since mid-2004. NAPL was also found in well MW-9 up to 0.17 foot thick in March 1991, but has not been found during subsequent monitoring events. In January 2006, NAPL was found in well DPE-5 up to 0.05 foot thick; however, this extraction well has been pumped since that time and NAPL is not measurable.

Gasoline-range hydrocarbons have been detected in all wells installed on the former Texaco property, except well MW-13. However, groundwater samples have never been collected from well MW-13 due to an insufficient amount of water in the well. In other wells, concentrations of gasoline-range hydrocarbons in groundwater samples consistently exceed the MTCA Method A cleanup level, except in the northern wells, VP-9, MW-9, and MW-10. The gasoline-range hydrocarbons reported in these upgradient or cross-gradient wells have been below the cleanup level since December 1999 in well MW-10 and since October 2004 in wells VP-9 and MW-9. Gasoline-range hydrocarbons have been reported twice in nearby, upgradient perched well MW-12, but have not been detected in any samples since January 2004.

Diesel-range hydrocarbons concentrations have been detected above the MTCA Method A cleanup level in all wells in this portion of the site, except well MW-13. Heavy oil-range hydrocarbon concentrations above the MTCA Method A cleanup level have been detected in wells VP-9, MW-9, MW-10, MW-12, and RW-4. The source of diesel- and heavy oil-range hydrocarbons in wells MW-10 and MW-12 is assumed to be either the upgradient former Unocal service station or infiltration from the road surface and parking lot.

Benzene concentrations in groundwater at the former Texaco property also have exceeded the MTCA Method A cleanup level, with the exception of wells MW-12 and MW-13. Toluene, ethylbenzene, and total xylenes concentrations have exceeded the respective MTCA Method A cleanup levels in wells MW-6, MW-9, DPE-5, DPE-6, DPE-7, and RW-4. Exceedances in wells MW-9 and RW-4 occurred only once in March 1991 (well MW-9) and in July 1993 (well RW-4).

PCE and TCE were detected in groundwater from well upgradient MW-12 at concentrations of 9.58 ppb and 2.75 ppb respectively in October 2002, and at lower concentrations in wells MW-6 and MW-10 prior to 2002 (Table 4-9). The source of this contamination is likely the former Paramount Dry Cleaners located northeast across Queen Anne Avenue North (see Section 1.2.4.2).

Depth to groundwater in this area of the site is typically measured between 16.5 and 19.75 feet bgs in the wettest months and between 19 and 27 feet bgs in the driest months, excluding the wells screened in perched groundwater zones. Concentrations of petroleum constituents are generally greater when depth to groundwater is deepest and generally lesser when depth to groundwater is most shallow (see charts in Appendix E).

4.4.2 Secondary Source Area

Del Roy and Monterey Apartments

NAPL has been observed in wells VP-4, VP-7/MW-3, MW-4, DPE-1/VP-6, DPE-2, DPE-8/MW-22, DPE-9, and RW-2 (Figure 4-4). In wells VP-7/MW-3 and MW-4, NAPL was measured during single monitoring events. NAPL has not been measured in well RW-2 since monitoring resumed at this well in 2002 or in well VP-4 since April 2004. NAPL thickness in well DPE-1/VP-6 has been measured at a maximum thickness of 1.83 feet; measured in October 2006 just prior to beginning DPE operation in the well. NAPL was not present in well DPE-2 from July 2004 to January 2006. Prior to the first phase of the DPE system startup in February 2006, a NAPL thickness of 0.92 foot was measured in well DPE-2. The NAPL thickness steadily decreased until October 2006 when a NAPL thickness of 0.30 foot was observed in the well prior to the second phase of the DPE system startup. NAPL thickness in well

DPE-8/MW-22 was 1.37 feet in October 2006, although NAPL had not been observed in the well prior to August 2006 and was not observed when monitored one week later. NAPL has been observed only as a sheen in well DPE-9.

Concentrations of gasoline- and diesel-range hydrocarbons exceeding the MTCA Method A cleanup levels have been detected in all wells in this area except wells DPE-3, DPE-9 and MW-24. However, wells DPE-3 and DPE-9 have been sampled only once, and well MW-24 is screened in a perched groundwater zone above the contaminated water table. Gasoline-range hydrocarbons have not exceeded the MTCA Method A cleanup level in well VP-8/MW-7 since April 2004, well RW-2 since January 2005, and well RW-5 since April 2005. Diesel-range hydrocarbon exceedances in this area suggest a secondary source because these heavier-range hydrocarbons generally do not migrate large distances from their source. The wells in this area of the site are 140 or more feet from the former diesel USTs at the former Texaco property. Two heating oil USTs are present in the alley between the Monterey and Del Roy apartments. A heating oil UST is also present near the southeastern corner of the Monterey Apartments building.

Concentrations of heavy oil-range hydrocarbons exceeding the MTCA Method A cleanup level are consistently observed in wells VP-1, VP-2, VP-7/MW-3, VP-8/MW-7 (although no exceedances have been reported in well VP-8/MW-7 since January 2005), DPE-4, and sporadically in well DPE-8/MW-22. The greatest concentrations of heavy oil-range hydrocarbons in this portion of the site are observed in the wells located in the alley between the Monterey and Del Roy Apartments. Wells MW-4, RW-3, and RW-5 have historically contained elevated levels of heavy oil-range hydrocarbons exceeding the MTCA Method A cleanup level. Heavy oil-range concentrations have not exceeded the MTCA Method A cleanup level in wells VP-5, MW-18, MW-19, MW-23, MW-24, DPE-1/VP-6, DPE-2, DPE-3, DPE-9, and RW-2. However, the laboratory detection limit for heavy-oil range hydrocarbons has consistently exceeded the cleanup level for the groundwater samples collected from well DPE-1/VP-6. The limited extent of this heavy oil-range contamination suggests a separate source in the vicinity of the contaminated wells, as heavier hydrocarbons do not typically migrate large distances from their source. The source of these detections is uncertain.

Benzene concentrations exceeding the MTCA Method A cleanup level have been detected in all wells in this area except wells DPE-3, DPE-9 and MW-24 (for the same reasons listed above for gasoline and diesel hydrocarbons). Toluene, ethylbenzene, and total xylenes concentrations exceeding the MTCA Method A cleanup levels have been detected in all wells except DPE-3, DPE-4, DPE-9, and MW-24. The highest BTEX concentrations in this area of the site are consistently observed in wells VP-7/MW-3, MW-4, MW-18, MW-19, MW-23, and DPE-8/MW-22.

PCE and TCE have been detected in wells VP-7/MW-3, VP-8/MW-7, and DPE-8/MW-22 (TCE detection only). PCE concentrations exceeding the MTCA Method A cleanup value have ranged from 29 ppb in well VP-7/MW-3 to 167 ppb in well VP-8/MW-7. TCE concentrations exceeding the MTCA Method A cleanup level have also been detected in these three wells. Groundwater samples collected from these wells have not been analyzed for PCE or TCE since 1997 for wells VP-7/MW-3 and VP-8/MW-7, and since 2004 for well DPE-8/MW-22 (Table 4-9).

Depth to groundwater in this area of the site is typically measured between 9 and 14 feet bgs during the wettest months and between 12 and 18 feet bgs during the driest months, excluding the wells screened in perched groundwater zones. Concentrations of petroleum constituents appear to be less influenced by fluctuations in depth to groundwater in this area of the site than at the former Texaco property, but still follow the general trend of greater concentrations when depth to groundwater is deepest and lesser concentrations when depth to groundwater is most shallow (see charts in Appendix E).

4.4.3 Downgradient Area

NAPL has not been observed in this portion of the site, which includes 1st Avenue West and properties to the west.

Dissolved gasoline-, diesel-, and heavy oil-range hydrocarbons are present in groundwater in the downgradient area. Gasoline-range hydrocarbon concentrations exceeding the MTCA Method A cleanup level are consistently detected in wells MW-14, MW-17, MW-25, MW-26, MW-32 and MW-33. Diesel-range hydrocarbon concentrations are generally below the MTCA Method A cleanup level; exceptions include wells MW-14 and MW-25, where concentrations consistently exceed the cleanup level, and in wells MW-15 and MW-26 where sporadic concentrations exceeding the cleanup level have been observed. The initial samples collected from wells MW-32 and MW-33 contained diesel-range hydrocarbon concentrations exceeding the cleanup level, but subsequent detections have been below the cleanup level. Heavy oil-range hydrocarbon concentrations have exceeded the MTCA Method A cleanup levels in only one downgradient area groundwater sample, well MW-17 in April 2005. Subsequent samples collected from well MW-17 have been nondetect for heavy oil-range hydrocarbons.

Benzene concentrations consistently exceed the MTCA Method A cleanup level in wells MW-14, MW-17, MW-21, MW-25, MW-26, MW-32, MW-33, and MW-35. Benzene exceedances have been detected sporadically in wells MW-15 and MW-16; benzene has not been detected in either well since the first half of 2005. Benzene was detected just below the MTCA Method A cleanup level in well MW-30 in February 2005 (its initial sampling) but has not been detected in this well in subsequent sampling events. Toluene, ethylbenzene, and total xylenes concentrations detected in well MW-14 consistently exceed the MTCA Method A cleanup levels. Occasional exceedances of the cleanup levels for toluene, ethylbenzene, and total xylenes have been observed in well MW-26. Other exceedances of these chemicals have been non-repeatable detections in single sampling events.

Wells MW-32, MW-33, and MW-35 are located in an unpaved parking lot. Small leaks from vehicles in the lot and contaminated storm-water runoff may infiltrate the unpaved surface of the lot and percolate into the deeper soil, contributing to groundwater concentrations observed in these wells.

PCE was detected at the detection limit of 1 ppb in one groundwater sample collected from well MW-34, which is below the MTCA Method A cleanup level. No other analytes have been detected in the most downgradient wells, MW-11, MW-27 through MW-31, and MW-34, indicating that the dissolved-phase plume is fully defined in the downgradient direction and does not reach 2nd Avenue West or West Mercer Street (see Tables 4-7 through 4-11).

Depth to groundwater in the downgradient area varies greatly. On the eastern side of the downgradient area, depth to groundwater is typically measured between 9 and 12 feet bgs during

the wettest months and between 11.5 and 14 feet bgs during the driest months. On the western side of the downgradient area, depth to groundwater is typically measured between 24.5 and 30 feet bgs throughout the year. Concentrations of petroleum constituents on the eastern side of the downgradient area appear to be less influenced by fluctuations in depth to groundwater than at the former Texaco property, but still follow the general trend of greater concentrations when depth to groundwater is deepest and lesser concentrations when depth to groundwater is most shallow. On the western side of the downgradient area, concentrations of petroleum hydrocarbons do not appear to be influenced by the small fluctuations in depth to groundwater (see charts in Appendix E).

4.4.4 Discussion of Groundwater Impacts

Groundwater impacts from gasoline- and diesel-range hydrocarbons and BTEX constituents are most extensive in the south central and southwestern portions of the former Texaco property and in the southern Del Roy and northern Monterey Apartments properties. The groundwater plume extends west and southwest across 1st Avenue West to the U-Park Lot, the Queen Anne Arms Apartments, and the Bank of America parking lot, but does not reach 2nd Avenue West or West Mercer Street. The downgradient extent of petroleum hydrocarbon contamination in groundwater has been fully delineated. Based on the results of the groundwater samples collected during the RI, the lateral extent of groundwater contamination at the end of 2006 is presented in Figures 4-15 and 4-16. Charts illustrating the changes through time in groundwater elevation and concentrations of chemicals of concern are presented as Appendix E.

4.5 Nature and Distribution of Soil Vapor Contaminants

Soil vapor samples have been collected in two areas at the site, the Monterey Apartments and adjacent to the Queen Anne Arms Apartments. Vapor probes DVP-1 and DVP-2 are located in the basement of the Monterey Apartments and screened from 12 to 18 inches below the top of the basement slab. Vapor probes NV-1 and NV-2 are located in the U-Park lot immediately north of the Queen Anne Arms Apartments (west of 1st Avenue West) and are screened at multiple depths, including one screen at just below the basement slab bottom elevation in each vapor probe. Analytical results for soil vapor samples collected from vapor probes DVP-1 and DVP-2 are summarized in Table 4-12 and the results for vapor probes NV-1 and NV-2 are summarized in Table 4-13. Indoor air samples were not collected because indoor air samples are often contaminated by ambient sources and therefore not representative of chemical concentrations resulting from soil vapor intrusion. Indoor air is a difficult medium to sample and obtain meaningful results, because a number of common indoor and outdoor equipment and substances emit volatile chemicals, such as benzene, at relatively high concentrations. As a result, determining the relative contribution of contamination from soil vapors from other ambient contamination sources in indoor air is difficult to assess.

4.5.1 Monterey Apartments

Vapor samples were collected in October 2002, prior to revamping and startup of the recent SVE system. The higher contaminant concentrations seen in these samples represent site conditions after a period of nearly five years with no remedial activities. Contaminants detected in these initial soil vapor samples included the BTEX compounds, 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene, 4-ethyltoluene, and PCE.

Vapor samples were collected in 2004 to monitor performance of the SVE system. As shown in Table 4-12, the 2004 vapor concentrations are much lower than those detected in October 2002. The final set of vapor samples from vapor probes DVP-1 and DVP-2 were collected on October 27, 2004; no analytes (BTEX) were detected in these soil vapor samples, indicating that the SVE system was effective in preventing collection of petroleum vapors below the basement slab.

4.5.2 U-Park Lot

Soil vapor samples were collected in two rounds at depths of 5 and 8 feet bgs in vapor probe NV-1 and at depths of 5, 10, and 15 feet bgs in vapor probe NV-2. An outdoor ambient air sample was collected at a surface location between the two vapor probes during each sampling round.

4.5.2.1 Soil Vapor Results

Results from the soil vapor samples indicate the presence of 23 VOCs at concentrations exceeding their respective laboratory reporting limits (Table 4-13).

During the August 2005 sampling event, benzene was detected at concentrations of 0.49 and 0.74 $\mu g/m^3$ in samples NV-2-15 and NV-2-15 Dup, respectively. During the April 2006 sampling event, benzene was not detected above the laboratory reporting limit in the soil vapor samples filled from the 15-foot sampling device in vapor probe NV-2. Benzene has not been detected in any of the soil vapor samples collected from vapor probe NV-1 or from the two shallower sampling devices in vapor probe NV-2.

PCE was detected in soil vapor samples collected during the August 2005 sampling event. Concentrations ranged from 0.99 $\mu g/m^3$ (NV-2-10) to 5.7 $\mu g/m^3$ (NV-1-8 DUP). PCE was not detected in the soil vapor samples collected from vapor probes NV-1 and NV-2 during the April 2006 sampling event.

TCE was detected at a concentration of 0.84 $\mu g/m^3$ in soil vapor sample NV-1-8 DUP during the August 2005 sampling event. TCE was not detected in any of the other August 2005 samples or during the April 2006 sampling event.

Chloroform was detected in all the soil vapor samples collected from vapor probe NV-1 and in one sample (NV-2-5) collected from vapor probe NV-2 during the August 2005 sampling event. Chloroform ranged in concentration from 1.5 $\mu g/m^3$ (NV-1-8) to 2.9 $\mu g/m^3$ (NV-1-5). Chloroform was not detected in the soil vapor samples collected from vapor probes NV-1 and NV-2 during the April 2006 sampling event.

Carbon tetrachloride was detected in both of the 8-foot samples from vapor probe NV-1 and in the 10- and 15-foot samples from vapor probe NV-2 during the August 2005 sampling event. Carbon tetrachloride ranged in concentration from 0.83 $\mu g/m^3$ (NV-1-8) to 1.7 $\mu g/m^3$ (NV-2-15 Dup). Carbon tetrachloride was not detected in any of the soil vapor samples collected during the April 2006 sampling event.

Oxygen concentrations in soil vapor ranged between 3.7 and 21 percent, and generally decreased with increasing depth, as expected. Carbon dioxide concentrations in soil vapor ranged between 2.5 and 5.5 percent, and generally increased with increasing depth, also as expected.

4.5.2.2 Ambient Outdoor Air Results

Results from the August 2005 ambient outdoor air sampling indicated the presence of 10 VOCs (benzene, toluene, m- and p-xylene, Freon 11 and 12, chloromethane, acetone, 2-propanol, 2-butanone and ethanol) at concentrations exceeding their respective laboratory reporting limits (Table 4-14). Of these 10 compounds, only benzene was detected at a concentration (1.5 $\mu g/m^3$) exceeding the MTCA Method B cleanup levels for ambient air.

Results for the April 2006 ambient outdoor air sampling indicated the presence of 12 separate VOCs (benzene, toluene, ethylbenzene, m- and p-xylene, o-xylene, Freon 11 and 12, chloromethane, acetone, 2-butanone, ethanol, and 1,2,4-trimethylbenzene) at concentrations exceeding their respective laboratory reporting limits. Benzene concentrations detected in ambient air exceeded concentrations detected in soil vapor. Of these 12 compounds only benzene was detected at a concentration (1.7 $\mu g/m^3$) exceeding the MTCA Method B cleanup level.

The ambient outdoor air samples were also analyzed for percent oxygen and carbon dioxide. The August 2005 results indicated that the sample contained 20 percent oxygen and 0.036 percent carbon dioxide. The April 2006 results indicated that the sample contained 22 percent oxygen and 0.040 percent carbon dioxide. These are consistent with expected atmospheric conditions.

4.5.2.3 Discussion

Benzene was detected in the August 2005 soil vapor samples collected at 15 feet bgs at low concentrations, but was not detected within any of the shallow soil vapor sampling devices. (Note that benzene was not detected in the April 2006 soil vapor samples collected from the sampling devices at all depths.) These results indicate that benzene vapors are not migrating from the deeper subsurface to shallow (basement) depths. In addition, benzene concentrations detected in the ambient air samples were actually greater than the benzene concentrations detected in the soil vapor samples. Benzene concentrations exceeding the MTCA Method B cleanup levels for ambient air were detected in the ambient air samples. Low concentrations of PCE, TCE, chloroform and carbon tetrachloride were reported in the vapor sampling devices, but were not detected in the ambient air samples. Soil vapor modeling of potential intrusion to indoor air is presented in Section 5.4.3.2.

5.0 CONCEPTUAL SITE MODEL

In order to understand the relationships between contaminants, affected environmental media, indoor media, and human receptors, a conceptual site model (CSM) was developed. MTCA defines a *conceptual site model* as "a conceptual understanding of a site that identifies potential or suspected sources of hazardous substances, types and concentrations of hazardous substances, potentially contaminated media, and actual and potential exposure pathways and receptors" [WAC 173-340-200]. This chapter includes discussion of these various aspects of a CSM, although the sources, types and concentrations of hazardous substances have been described in previous chapters. Chapter 5.0 also includes discussion of cleanup levels and other key aspects of the MTCA regulation.

5.1 Potential Sources of Petroleum Contamination

The potential sources contributing to petroleum contamination in soil, groundwater, and soil vapor at the site include the former Texaco service station, the upgradient former Unocal service station, and former heating oil USTs associated with apartment buildings. Hydrocarbon releases have contaminated the soil and groundwater below the Texaco property. This contamination has then migrated to the west and southwest, affecting properties in the neighborhood.

The elevated concentrations of heavy oil-range and diesel-range hydrocarbons detected in groundwater at cross-gradient well MW-12 are assumed to have migrated from the former Unocal service station. The former Unocal service station, which is located upgradient of the site, has documented historical petroleum releases. However, the majority of contamination currently existing on the former Texaco property was generated from service station operations at the former Texaco property.

PCE and TCE detected in groundwater within several wells at the former Texaco service station and adjacent areas likely originated at the upgradient, former Paramount Dry Cleaners. Subsurface investigations performed at the dry cleaning site confirmed that dry cleaning solvents had impacted soil and groundwater beneath the property. Remedial actions were subsequently completed and a No Further Action (NFA) letter was issued by WDOE to the property owners. Aside from wells VP-7/MW-3, VP-8/MW-7, MW-6, MW-10, MW-12, MW-34, and DPE-8/ MW-22, chlorinated solvents were not detected in any other soil or groundwater samples at the site. However, the initial soil vapor sample collected from vapor probe DVP-1 in the basement of the Monterey Apartments did contain an elevated concentration of PCE, and relatively low PCE concentrations were detected in soil vapor at the U-Park lot. The origins of these scattered detections are uncertain, but may have originated at the Paramount site.

5.2 Current and Potential Land Uses

The lower Queen Anne area is a highly developed commercial/residential neighborhood. It is specifically zoned as a "neighborhood-commercial" district. Surrounding the site are apartment complexes, condominiums, fast food restaurants, grocery stores, and other retail shops and offices. Almost the entire neighborhood is paved, except for some planter boxes, grass strips, and dirt alleyways. Due to the level of development and established history of this area, it is unlikely the property will be rezoned. The majority of buildings in the area are at least 30 years old. However, redevelopment remains a possibility due to the prime location and high cost of real estate in this part of Seattle.

The specific site uses that are expected to continue into the foreseeable future include a small retail business at the Manhattan Express, multi-family residential units at the various apartment buildings (Monterey, Del Roy, Lindberg, Alvena Vista, and Queen Anne Arms), a bank parking lot (Bank of America), and a public rental parking lot (U-Park lot). It is unlikely that these land uses would change significantly in the near future, although the gravel U-Park lot could possibly be redeveloped.

5.3 Exposure Pathways and Potential Receptors

The core of the site conceptual model pertains to exposure pathways and potential receptors. MTCA [WAC 173-340-200] defines an *exposure pathway* as: "the path a hazardous substance takes or could take from a source to an exposed organism. An exposure pathway describes the mechanism by which an individual or population is exposed or has the potential to be exposed to hazardous substances at or originating from a site."

The exposure aspects of the site are represented by a flow-diagram (Figure 5-1) that relates contaminants to site receptors that may be impacted by these substances via certain exposure pathways. Three general types of exposure pathways or their components are recognized. *Primary* exposure pathways are those routes that are known to be currently transporting petroleum contaminants to or within certain environmental media and then to a receptor organism. *Secondary* exposure pathways are those routes that: (a) have transported contaminants in the past, but may not be currently; or (b) may transport contaminants in the future, but there is uncertainty or no current activity to complete the pathway (such as soil contaminants potentially affecting future construction workers). *Precluded* exposure pathways are those that are not possible at any time, based on physical evidence, and are therefore considered closed pathways. The contaminated media at the site include soil, shallow groundwater, and soil vapor. The two shaded blocks on Figure 5-1 show that currently contaminated media are limited to shallow soil, groundwater in the shallow aquifer, and soil pore space (i.e., soil vapor). Potential receptors include building occupants and construction workers. The potential exposure pathways for soil, groundwater, and soil vapor are each discussed below.

5.3.1 Soil

Soil as an environmental medium relates to a few different potential exposure pathways, other media, and receptors. These include: soil to soil vapor and intruding to indoor air, direct human contact through the construction worker scenario, and interaction with terrestrial ecological species. An evaluation of the appropriate point of compliance pertaining to the open exposure pathways at the site is presented in the following table.

Potential Soil Exposure Pathways			
Potential Exposure Pathway/Scenario	***MTCA-Defined Point of Compliance***	***Applicability to Queen Anne Site***	***Site-Specific Point of Compliance***
Soil to Soil Vapor to Indoor Air	Throughout the site from ground surface to the water table.	Primary. Eastern portion of site has been undergoing SVE/DPE remediation, which maintains subsurface vacuum. Western portion of site was modeled for vapor intrusion and shows negligible risk.	Throughout the site from ground surface to the water table.
Direct Human Contact (Construction Scenario)	Throughout the site from ground surface to 15 feet bgs	Secondary. Although the site is mostly paved or covered with buildings, subsurface soil could be potentially disturbed during future construction or utility work. Because the site comprises private property and city rights-of-way, it is not likely feasible to implement an institutional control to prevent subsurface soil disturbance.	Up to 15 feet bgs
Terrestrial Ecological Interaction	Standard point of compliance to 15 feet bgs; conditional point of compliance to 6 feet bgs with institutional controls to prevent disturbance of subsurface soils		Up to 15 feet bgs

Various structures at the former Texaco property and other potential sources have released petroleum hydrocarbons to the soil and shallow groundwater, as depicted on Figure 5-1. This contamination has moved downgradient through the shallow aquifer by lateral transport at or below the water table. This transport involves both NAPL and dissolved-phase groundwater contaminant movement.

Soil contamination on the site is known to exist at depths as shallow as 5 to 7 feet bgs, but in the Monterey-Del Roy area the top of contamination is in the range of 8 to 15 feet bgs. Due to the depth of the Monterey basement below grade, the most contaminated soil ("smear-zone") is within a few vertical feet below the basement slab, but was more shallow where groundwater mounding occurred due to gray water discharge.

The entire site is largely paved or covered by buildings. However, the depth of soil contamination does not allow for exclusion of the potential pathway of incidental dermal contact and particle or volatile inhalation by future construction and utility workers on the site. MTCA deems that the "point of compliance" for soil without institutional controls is 15 feet bgs. This is the maximum depth at which contaminated soils are likely to be encountered by construction workers, in terms of direct human contact, or the maximum depth of interaction by terrestrial ecological species. This possible future exposure pathway is considered a secondary pathway.

5.3.2 Groundwater

Groundwater as an environmental medium relates to a number of potential exposure pathways, other media, and receptors. These include: drinking water ingestion or household contact, incidental exposure (construction scenario), groundwater to surface water, groundwater to deep aquifer, and groundwater or NAPL to vapor and indoor air. A summary of the potential groundwater exposure pathways at the site is presented in the following table.

Potential Groundwater Exposure Pathways	
Potential Groundwater Exposure Pathway/ Scenario	***Applicability***
Drinking Water Ingestion/Household Contact	**Not Applicable.** The shallow and deep aquifers are not a source of potable or non-potable water. WDOE has determined that shallow groundwater does not constitute a drinking water pathway.
Incidental Exposure (Construction Scenario)	**Secondary.** Because static groundwater may be encountered at depths as shallow as 4 feet bgs, but is typically encountered at depths of approximately 8 to 20 feet bgs in the eastern portion of the site (deeper now due to DPE pumping), contaminated groundwater may be incidentally encountered (contacted, ingested, inhaled) during site redevelopment or utility construction activities.
Groundwater to Surface Water	**Precluded**. The site is located a distance from Elliott Bay (approx ½ mile downgradient), and contamination in the shallow aquifer does not reach anywhere near to surface water.
Groundwater to Deep Aquifer	**Precluded.** The deep aquifer is separated from the shallow aquifer by more than 100 feet of a fine-grained aquitard. The deep aquifer is not a source of potable or non-potable water; no water wells are known to utilize this aquifer in the vicinity.
Groundwater/NAPL to Vapor (Indoor Air)	**Primary.** The presence of dissolved groundwater contamination and NAPL in the shallow aquifer is likely contributing to the soil vapor measured in the subsurface. The DPE system is maintaining vacuum in the eastern portion of the site, and vapors are thus not entering building basements. Under the current site conditions with the operating DPE system, this pathway is secondary. In the western portion of the site, vapor intrusion modeling shows a negligible risk.

Groundwater exists in two recognized aquifers below the site, as discussed in Chapter 3.0. No individuals or municipalities in this area are known to currently use the shallow or deep aquifers as sources of water, either potable or non-potable. It is highly unlikely that this situation will change in the future for this part of Seattle. The shallow aquifer in this area (and most of Seattle) has been heavily affected by urban activities for more than 100 years. Consequently, permission has been granted by WDOE to exclude shallow groundwater as a potential drinking water pathway at the site because the highest beneficial use of this aquifer is not drinking water. Correspondence from WDOE stating this condition is presented in Appendix F. However, WDOE did request that the groundwater plume from the site be delineated in the downgradient direction.

Groundwater onsite may be encountered as shallow as 4 feet bgs in areas of shallow perched groundwater near the former Texaco property, but in the Monterey-Del Roy area static groundwater is more typically 8 to 20 feet bgs. As a result, incidental dermal contact or inhalation of volatile constituents by workers may become an exposure pathway during any future redevelopment or utility construction activities.

Based on analytical data, petroleum-impacted groundwater does not reach surface water (in fact, does not reach 2nd Avenue West). Because the nearest surface water body (Elliott Bay) is 0.5 mile distant, the groundwater discharge to surface water pathway is precluded. The deeper confined aquifer is more than 100 feet bgs. Identified soil and groundwater contamination at the site is limited to Esperance Sand and Vashon Till, within the shallow aquifer. Petroleum hydrocarbon contamination in the underlying Lawton Clay has been detected in only one site boring, well DPE-7. Field screening of soil from this boring indicated the presence of petroleum hydrocarbons in the top 2 feet of the clayey silt layer, but the underlying Lawton Clay was unaffected. The deep aquifer is separated from the shallow aquifer by this very thick, fine-grained aquitard that offers ideal protection. Additionally, the deep aquifer is not a source of potable or non-potable water. As a result, the pathway to the deep aquifer is considered precluded.

5.3.3 Soil Vapor

The third media, soil vapor, is of primary importance. All key parties have agreed that the soil vapor to indoor air pathway will drive cleanup actions on site, as potential inhalation of petroleum vapors is of greatest concern. In the vicinity of the Monterey Apartments, soil vapors originate in large part from NAPL and gradually emanate upward through the soil column, likely encountering the base of building foundations. Petroleum vapors may enter the buildings through cracks or seams in the footings and slab, thereby potentially exposing occupants via inhalation.

This is mainly a concern in buildings with occupied basements, which include the eastern half of the Monterey Apartments and the western wing of the Del Roy Apartments (southern half of the western wing is within the area of contamination). The other portions of these buildings are underlain by crawl spaces. The Lindberg Apartments building has a tall cellar under the entire apartment area of the building. Note that the three basement apartments in the Monterey building have not been occupied since 2005; these apartments were abandoned after a series of floods damaged the basement structures due to sewer problems in the neighborhood.

Soil vapors containing relatively high concentrations of petroleum constituents were previously measured in 2002 below a portion of the basement slab of the Monterey Apartments. However, since early 2003, the area near the Monterey and Del Roy Apartments and Manhattan Express has been under vacuum from the SVE/DPE systems, consequently mitigating the soil vapor pathway into the interior of buildings (i.e., operation of the DPE system closes the soil vapor pathway). Because the soil and groundwater are actively being remediated by the DPE system, it is believed that the NAPL source will be removed, thereby closing the soil vapor pathway. Consequently, building occupants will be protected even after shutting down the DPE system.

In the downgradient area of the site, west of 1st Avenue West, low-concentration soil vapors likely emanate from the dissolved-phase groundwater plume; but these vapors do not appear to migrate to the surface or to the building slab depth. Modeling of the soil vapor data from the U-

Park lot, adjacent to the Queen Anne Arms building, has shown that petroleum vapors in soil do not pose a risk concern for indoor air (see Section 5.4.3.2 and Appendix G).

5.4 Cleanup Levels

WDOE has indicated that the drivers for this site are the soil vapor to indoor air (inhalation) pathway and direct contact with soil (see Section 5.5). This is described in more detail below.

Under MTCA [WAC 173-340-200], a *cleanup level* means: "the concentration of a hazardous substance in soil, water, air, or sediment that is determined to be protective of human health and the environment under specified exposure conditions." Cleanup levels, in combination with points of compliance, typically define the area or volume of soil, water, air, or sediment at a site that must be cleaned up. The current potential receptors and development of the site-specific cleanup levels are presented below.

5.4.1 Soil

Under MTCA, residential land use is generally considered the site use requiring the most protective cleanup level. Exposure to hazardous substances under residential land use conditions represents the reasonable maximum exposure (RME) scenario. Unless a site qualifies for use of an industrial soil cleanup level under WAC 173-340-745 (which this site does not), then soil cleanup levels shall use the residential land use exposure scenario. A cleanup action must address all areas where the concentration of hazardous substances in the soil exceeds cleanup levels at the relevant point of compliance.

Based on the results presented in Section 5.3.1, the point of compliance for the site is based on direct contact by both humans and ecological receptors and on potential exposures of vapors to humans; therefore, the point of compliance for soil cleanup levels is throughout the site to 15 feet bgs (soil contact) and within the subgrade floors of buildings (soil vapor to indoor air pathway).

MTCA provides three approaches for establishing soil cleanup levels: Method A, Method B, and Method C. Because the major contaminants of concern at the site are petroleum constituents, it is appropriate to use the Method B soil cleanup levels. WDOE has agreed that Method B soil cleanup levels should be applied to this site (see Section 5.5).

Method B cleanup levels for TPH were calculated from analytical test results of two samples collected in different areas of the site in 2005 and 2006 (Appendix H). Additional Method B analytical suite samples may be collected at a later date in order to further refine the appropriate cleanup levels. The following table presents the TPH cleanup levels determined from these two samples.

Sample Identification (boring and depth)	**Sample Date**	**Calculated Method B Soil Cleanup Levels for Total Petroleum Hydrocarbons (direct contact) (mg/kg)**
DPE-7-20	10/21/05	2,988
DPE-9-13.5	09/18/06	6,477
Note: The residual saturation value for gasoline in a fine to medium sand is 5,625 mg/kg [WAC 173-340-747(10), and WDOE, 2001, p. 343]. The higher cleanup level of 6,477 mg/kg exceeds this value and is thus not pertinent. Consequently, the value of 2,988 mg/kg is the resultant Method B soil cleanup level for combined TPH, based on these samples at this time.		

Tables 4-1 through 4-4 present a comparison of analytical results obtained in soil at all depths to the Method B cleanup levels. Ten locations with soil samples exceeding the Method B cleanup levels were detected within or near the point of compliance (less than 15 feet bgs) for direct contact by humans and ecological receptors. These nine locations are described below:

- Two benzene concentrations (23 and 93 mg/kg) exceeding the MTCA Method B cleanup level were detected in samples DB-5-13 and SP-3-13, both collected at 13 feet bgs (in the saturated zone) in 2002 and 2004. DPE and biodegradation since that time are likely to have beneficially reduced the concentration of benzene in the soil at these locations.
- At eight locations, detections of gasoline-range hydrocarbons exceeding the calculated Method B cleanup level for combined TPH (2,988 mg/kg) were reported in samples collected between 12 and 14 feet bgs; more shallow samples were not analyzed because significant field indications of contamination were not found. The boring locations are DVP-1, DVP-2, DB-5, SP-3/DPE-2, MW-25, DPE-4, and DPE-9 located in the area of the Del Roy and Monterey apartments, and boring DP-5 located on the former Texaco property.
- Diesel-range hydrocarbon sample concentrations exceeding the Method B cleanup level for combined TPH (2,988 mg/kg) were detected in samples collected at 13 feet bgs from borings DB-5 and SP-3/DPE-2, both located in the area of the Del Roy and Monterey apartments.
- One exceedance of heavy oil-range hydrocarbons was reported in well boring MW-22 at 12 feet bgs. Well MW-22 was located in the courtyard of the Del Roy Apartments and has since been replaced by well DPE-8.
- In one sample, DPE-5-14, the combined TPH value exceeded the Method B cleanup level. Well DPE-5 is located in the remediation compound at the former Texaco property.

The resultant Method B soil cleanup level stated above pertains to direct human contact and ecological species interaction. Additionally, site-specific soil cleanup levels need to consider the potential risk to humans resulting from soil vapor. Soil cleanup that incorporates soil vapor risk is evaluated further in the following two sections.

5.4.2 Groundwater

As stated above in Section 5.3.2, three of these pathways are precluded or not applicable (drinking water ingestion/contact, groundwater to surface water, and groundwater to deep aquifer). Two open pathways (groundwater/NAPL to vapor and indoor air, and incidental exposure/ construction scenario) pose potential risk to human health resulting from contaminant releases at the site, as discussed below.

- The primary pathway of concern is groundwater/NAPL to soil vapor to indoor air via vapor intrusion of buildings. Potential receptors for the contaminants in soil vapor include occupants in the apartment buildings. Currently, the residents are being protected by the action of the DPE system, which maintains an active subsurface vacuum and is actively removing contaminants under the area east of 1st Avenue West. Soil vapor and potential vapor intrusion are further discussed in Section 5.4.3.

- A secondary pathway of concern is incidental exposure to contaminated groundwater via contact, ingestion, or inhalation of volatile constituents. Groundwater occurs as shallow as 4 feet bgs, but typically occurs at approximately 8 feet bgs (under static conditions, deeper due to DPE) and may be encountered during development or utility construction at the site. Contaminants in the shallow aquifer are present at concentrations that could pose a risk to human health if ingested. This pathway is similar to that for soil contact in Section 5.4.1.

Groundwater cleanup levels are based on estimates pertaining to the highest beneficial use and the RME expected to occur under both current and potential future site uses. In addition to risk-based cleanup levels, MTCA requires that for petroleum hydrocarbons the cleanup levels comply with the limitation on NAPL. Specifically, the cleanup level may not exceed a concentration that would result in NAPL remaining on the groundwater [WAC 173-340-720(7)(d) and 173-340-747(10)]. MTCA further allows that "physical observations of groundwater at or above the cleanup level, such as the lack of a film, sheen, or discoloration of the groundwater or lack of sludge or emulsion in the groundwater may be used to determine compliance with this requirement." Therefore, the groundwater cleanup level for this site is elimination of NAPL until visual confirmation of removal is achieved. However, NAPL cannot remain in amounts that would cause generation of vapors that may intrude buildings, as described below.

5.4.3 Soil Vapor and Indoor Air

5.4.3.1 Del Roy and Monterey Apartments Area

The State of Washington does not directly regulate the quality or cleanup levels for soil vapor. However, MTCA does specify Method B cleanup levels for ambient air, which includes outdoor ambient air and indoor air. At the Queen Anne site, WDOE is concerned with concentrations of soil vapors, as they affect the potential to adversely impact indoor air quality through vapor intrusion to apartment buildings. In the Del Roy and Monterey Apartments area, the method of confirming protection of the indoor air pathway to the satisfaction of WDOE has not yet been determined. Therefore, "cleanup levels" for soil vapor are undefined at this time and will be addressed based on future discussions with WDOE. To aid this discussion, additional soil vapor samples under the concrete slabs at the Monterey and Del Roy Apartments will be collected at a future date, after the DPE system is allowed to operate further (see Section 5.5).

5.4.3.2 Downgradient Area

In the downgradient area, west of 1st Avenue West, soil vapor samples in the U-Park lot (near the Queen Anne Arms Apartment) and outdoor ambient air samples were collected. These data sets were compared and show that petroleum constituent concentrations in soil vapor are lower than those in the local ambient air. In order to evaluate the potential for soil vapor intrusion to indoor air, and to estimate the equivalent indoor air concentrations and resultant incremental risk at the adjacent Queen Anne Arms Apartments, an indoor air vapor intrusion model was calculated, using the vapor probe sample results (Table 4-13).

According to WDOE (Zieber et al., 2003), a common, accepted vapor pathway model is the Johnson & Ettinger (J&E) model (1991). The J&E steady-state model uses a large number of input parameters, including maximum soil vapor concentrations, sampling depth, soil types and depths, building and basement dimensions, exposure information, and air exchange rate. The residential scenario exposure duration is 30 years for carcinogenic and noncarcinogenic

compounds. The model calculates a very conservative (i.e., worst case) potential carcinogenic risk (for benzene, PCE, and TCE) or noncarcinogenic risk (for toluene) for exposure to human receptors by indoor air. Details of input parameters and model output are included in Appendix G.

For the downgradient area near the Queen Anne Arms Apartments, the model was run using the measured soil vapor concentrations of benzene, toluene, PCE, and TCE. The calculated indoor air concentrations for these chemicals are below MTCA Method B cleanup levels (Table 5-1). Results in Table 5-1 also show that carcinogenic incremental risks from benzene, PCE, and TCE exposure are lower than MTCA's single-chemical acceptable risk level of 1E-06 ($1x10^{-6}$ or one in 1,000,000). Similarly, the noncarcinogenic hazard quotient for toluene is lower than MTCA's single-chemical acceptable level of 1 (one). Even for a worst-case example (a single occupant lives in a basement apartment for 30 years with a very high exposure frequency), this does not pose an unacceptable risk; the risk to residents of these apartments is negligible (<1E-06 carcinogenic risk). These results indicate that exposure to petroleum chemicals originating in the subsurface are not adversely impacting residents breathing indoor air in the Queen Anne Arms Apartments. Considering the many conservative input parameters and calculations used in this model, it is very likely that the model overstates risk to these occupants.

These modeling results are expected based on the low detected concentrations for benzene and other chemicals in soil vapor. Furthermore, benzene is found in lower concentrations in subsurface vapor than in outdoor ambient air.

5.5 Cleanup Goals and Remedial Actions

The overall objectives of remedial actions on the Queen Anne site are to clean up the subsurface such that the exposure pathways become precluded and closed, and to comply with MTCA to the satisfaction of WDOE. As described above, the two major pathways that will need to be closed include the soil vapor intrusion pathway to indoor air, and the soil direct human contact pathway. Other exposure pathways (such as incidental exposure to groundwater) and MTCA requirements (such as no remaining visible NAPL) are expected to be met during the process of remediating the site and closing the two major pathways.

During 2002 to 2004, in order to determine the project cleanup goals, several meetings took place between WDOE, Chevron EMC and their consultants, and the consultants for the Monterey Apartments and the Arnold's estate. A key meeting took place on December 1, 2004, when the cleanup plan and path forward for this site were discussed and agreed upon. Topics of consensus included the cleanup expectations for the exposure pathways of interest, the relationship between remedial actions on the eastern and western portions of the site, and the role of the RI process and report. The following listing summarizes the key results of that meeting, which forms the basis for the project path now in effect.

- DPE with an expanded SVE network was presented as the preferred remediation alternative for the area east of 1st Avenue West. Extraction wells would be placed in the vicinity of the Manhattan Express, the Monterey Apartments, and the southern Del Roy Apartments.
- An RI in the downgradient area, west of 1st Avenue West, would continue to be conducted. This would include evaluation of soil, groundwater, and soil vapor. If RI soil vapor investigations in the vicinity of downgradient apartments (especially the Queen

Anne Arms) showed the potential for vapor intrusion, then a separate or expanded remedial action would be implemented there.

- During design and installation of the DPE system, data for the RI would continue to be accumulated. After this RI field and analytical work were completed, an RI report would be presented to WDOE and key stakeholders. Until that time, the DPE remedial action would be considered an interim action. If the RI report showed that no downgradient remedial action was necessary, then the DPE interim action would eventually become the final remedial action for the site.
- Groundwater in the shallow aquifer would not need to be cleaned up to drinking water standards, because the highest beneficial use of this aquifer is not drinking water. However, the downgradient extent of the groundwater plume would be delineated. Because the DPE system pumps and treats groundwater and removes NAPL, it is expected that this system would clean up the shallow aquifer to the extent that the liquid constituents which emanate vapors would be removed. In other words, site groundwater has no pertinent cleanup levels, but in practice it needs to be remediated until it no longer is a significant source of vapors.
- Soil at the site would be remediated to comply with MTCA Method B cleanup levels (direct contact), down to the point of compliance. This would be verified by representative soil sampling near the end of remedial activities.
- Subslab soil vapors would be sampled at the Monterey and Del Roy Apartments near the end of remedial activities. This would take place over two or more rounds of representative sampling. Soil vapor would be the key exposure pathway to be evaluated for determining shutdown of the DPE system and approval of site cleanup. A number of possible specific means of showing compliance or protectiveness for indoor air were discussed but not agreed upon. These included comparison of soil vapor concentrations to regional or local ambient outdoor air data or other standards; vapor intrusion modeling was not considered. Agreement on a specific method would be a topic of future discussions.

6.0 SUMMARY AND CONCLUSIONS

This RI/SS for the former Texaco service station documents the completed investigation of petroleum contamination caused by past activities at the station. This investigation included a characterization of the extent of soil and groundwater contamination throughout the site, evaluation and assessment of potential exposure pathways, and determination of MTCA cleanup criteria and points of compliance. These conclusions are based on field and analytical testing that occurred from 2002 to 2006 during the RI period. The following sections summarize the RI/SS and describe the cleanup objectives and path forward in detail.

6.1 Background and Remediation History

The former Texaco service station has been identified as a primary source of petroleum contamination affecting downgradient properties, for a distance of almost two city blocks. This affected area includes several apartment buildings located west and southwest of the former service station. Petroleum releases were first noted in 1978 at the Monterey Apartments, southwest of the former station, in the form of odors in the basement and NAPL in a basement sump. This led to a series of investigations and remedial actions that extend to this day.

WDOE began active remediation in the eastern portion of the site in 1993, by installation of an SVE system to treat petroleum constituents in the subsurface. This system later underwent modifications and operated intermittently until December 1997. In April 2003, Chevron revamped and restarted the SVE system, and it operated until October 2005 when it was dismantled and replaced with a DPE system. The DPE system was started in February 2006 and expanded in October 2006. Since start-up, the system has been operated on a continuous basis with minimal down-time. As of March 31, 2007, the DPE system has been successful in removing an estimated 40,000 pounds of hydrocarbon mass from the subsurface.

6.2 Investigation Findings

The investigation identified petroleum contamination in soil on the former station property and as far west as the eastern side of 1st Avenue West. Beyond 1st Avenue West, soil contamination markedly decreases in concentration under the street and into the area of the U-Park lot. On the former Texaco property and the Del Roy and Monterey properties, contaminated soil exceeding the Method B cleanup levels was identified within the point of compliance depth (down to 15 feet bgs) for direct contact by humans and ecological receptors. In the downgradient area, soil concentrations within the point of compliance do not exceed Method B cleanup levels, with the exception of one soil sample collected under 1st Avenue West and adjacent to the Del Roy property (MW-25).

Shallow groundwater occurs in sand, or sand with some silt, that overlies a very thick unit of clayey silt; the silt that is encountered as shallow as 10 feet bgs in the northern areas of the site and as deep as 35 feet bgs in the western areas of the site. Depth to shallow groundwater typically ranges from 8 to 20 feet bgs and flows approximately west-southwest with a varying hydraulic gradient. A zone of somewhat finer-grained soil exists in the area surrounding the western side of the former Texaco property and the eastern Monterey property, which produces locally perched groundwater and lower yield to wells.

Petroleum contamination has been identified in the shallow groundwater that originates at the former Texaco station and extends downgradient nearly to 2nd Avenue West. NAPL has been

present in wells on the southwestern portion of the former Texaco property and on the Monterey and Del Roy properties. Concentrations of dissolved petroleum constituents remain elevated as far as the western end of the U-Park lot. Beyond this point, attenuation is considerable, and analytical results for groundwater along 2nd Avenue West have been below analytical detection levels.

Petroleum constituent concentrations in soil vapor below the Monterey Apartments were identified in 2002. The SVE/DPE system, which has operated since 2003 in the eastern portion of the site, removes and treats soil vapor, and maintains a vacuum in the subsurface, thereby preventing vapors from intruding upward into buildings.

Soil vapor was also evaluated at two locations in the downgradient area using multiple depth sampling points located in the U-Park lot immediately adjacent to the Queen Anne Arms Apartments. Results of this vapor sampling showed very low concentrations of petroleum constituents; the greatest benzene concentration in soil vapor was less than that measured in ambient outdoor air at this location. Vapor intrusion model results show that the incremental risk from exposure to these chemicals is negligible.

6.3 Cleanup Objectives and Path Forward

The former Texaco property is located in an established "neighborhood-commercial" zone and future site uses are expected to remain similar to the present uses. The primary exposure pathways of concern that may affect individuals at the site include the soil vapor to indoor air pathway and the soil direct human contact pathway. DPE remediation at the site will beneficially affect both exposure pathways and address MTCA requirements such as removal of remaining visible NAPL.

Due to heavy urban usage, the shallow aquifer in this vicinity is not considered a drinking water source, and no water wells are located within it. Because the highest beneficial use of this aquifer is not drinking water, WDOE has determined that drinking water cleanup standards do not apply to the groundwater plume at the site. However, WDOE required that the groundwater plume be delineated in the downgradient area, and groundwater throughout the site must be remediated to the extent that it would not generate vapors at levels of concern for the indoor air pathway. WDOE also agreed that soil cleanup at the site should meet Method B cleanup levels for dermal contact.

Soil vapor is the exposure pathway of greatest concern and will be the main factor used to determine site cleanup; however, a specific cleanup measure for petroleum vapors and the DPE system shutdown criteria have not yet been determined. The plan going forward is to install sub-slab vapor points in the Del Roy Apartments, and to utilize the existing vapor points in the Monterey Apartments (or replace them with new points). These vapor points would be sampled in the future during multiple events, to assist in determining site cleanup conditions and timing of system shutdown. Engineering decisions will also be involved in the timing of system pulsing and shutdown. In addition, site cleanup will involve confirmation soil sampling and measurement for the presence of NAPL in wells.

Because these findings indicate that a vapor intrusion pathway and occurrence of NAPL do not exist in the downgradient area, additional active remediation is not required west of 1st Avenue West. Active DPE remediation in the upgradient area is expected to reduce contaminant

concentrations under this street (near well MW-25). Therefore, the current DPE system, which is presently considered to be an interim action, will become the final remedial action for the site.

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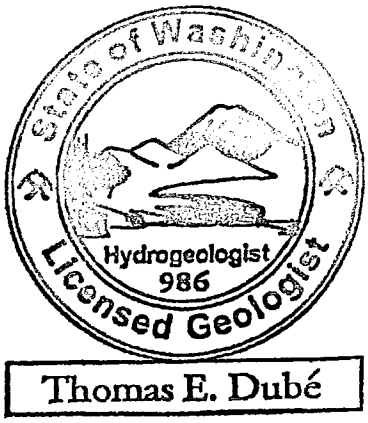
7.0 LIMITATIONS

Limitation of Use: SAIC's investigation was restricted to collection and analyses of a limited number of environmental samples and visual observations obtained during the physical site visit, and from records made available by Chevron EMC during the investigation. Because the investigation consisted of collecting and evaluating a limited supply of information, SAIC may not have identified all potential items of concern and, therefore, SAIC warrants only that the project activities under this contract have been performed within the parameters and scope communicated by Chevron EMC and reflected in the contract. SAIC has made no independent investigations concerning the accuracy or completeness of the information relied upon. This report is intended to be used in its entirety. Taking or using excerpts from this report in any way are not permitted, and any party doing this does so at its own risk.



Thomas Dubé 8-20-07

Thomas Dubé
State of Washington, Licensed Hydrogeologist, No. 986

TABLES

Table 2-1
Field Activities Chronology
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Date	Site Characterization	Downgradient[1] Delineation	SVE System Monitoring/ DPE System Installation
2002	• Installed vapor probes DVP-1 and DVP-2 • Completed borings DP-1 through DP-7 and DB-1 through DB-11 • Installed wells MW-12 and MW-13 • Quarterly groundwater monitoring	• Completed boring DB-11 and installed wells MW-14 through MW-17 • Quarterly groundwater monitoring	• Soil vapor samples collected from DVP-1 and DVP-2
2003	• Quarterly groundwater monitoring	• Quarterly groundwater monitoring	• Restart SVE system in April
2004	• Installed wells MW-18, MW-19, and MW-22 through MW-24 • Completed borings SP-1 through SP-4 • Quarterly groundwater monitoring	• Installed wells MW-20, MW-21, MW-25, and MW-26 • Quarterly groundwater monitoring	• Collected monthly soil vapor samples from DVP-1 and DVP-2 from June to October • Replaced well VP-6 with DPE-1 and installed well DPE-2
2005	• Quarterly groundwater monitoring	• Existing wells MW-27 through MW-29 added to the groundwater monitoring program • Installed wells MW-30 through MW-35 • Installed vapor probes NV-1 and NV-2 and collected soil vapor and ambient air samples • Quarterly groundwater monitoring	• Installed wells DPE-5 through DPE-7 • Installed DPE system on former Texaco property • Abandoned well RW-1
2006	• Groundwater monitoring	• Collected soil vapor samples from vapor points NV-1 and NV-2 and ambient air sample • Groundwater monitoring	• Installed wells DPE-3, DPE-4, and DPE-9 • Replaced well MW-22 with DPE-8 • Abandoned wells VP-1 and VP-3 • First phase of DPE system startup in February • Second phase of DPE system startup in November

SVE = Soil Vapor Extraction
DPE – Dual-Phase Extraction
[1]Downgradient area includes 1st Avenue West and properties west of 1st Avenue West.

Table 2-2
Well Completion Details
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Well Identification	Date Installed	Elevation of Top of Well Casing (relative feet)	Casing Diameter (inches)	Screened Interval (feet bgs)	Sand Pack Interval (feet bgs)	Purpose	Active/ Abandoned	Location
VP-1	05/17/93	103.03	2	4.5-14.5	4-15	SVE/GWM	Abandoned	South of Del Roy Apartments
VP-2[1]	05/17/93	105.11	2	5-15	4-15	SVE/GWM	Active	South of Del Roy Apartments
VP-3/MW-2	10/27/86	104.75	2	Unknown	Unknown	SVE/GWM	Abandoned	Monterey Apartments parking lot
VP-4	05/18/93	103.35	2	5-15	4-15	SVE/GWM	Active	Monterey Apartments parking lot
VP-5/MW-5	10/27/86	102.63	2	9-19	6-19.5	SVE/GWM	Active	Monterey Apartments parking lot
VP-6[2]	05/18/93	101.90	2	5-15	4-15	SVE/GWM	Abandoned	Monterey Apartments parking lot
VP-7/MW-3	10/27/86	100.40	2	4-19	2.5-19.5	SVE/GWM	Active	Monterey Apartments parking lot
VP-8/MW-7	10/29/86	104.88	2	9-19	7-19.5	SVE/GWM	Active	Monterey Apartments parking lot
VP-9	05/17/93	112.35	2	4.5-14.5	4-15	SVE/GWM	Active	Manhattan Express parking lot
MW-4	10/27/86	102.07	2	9-19	6-19.5	GWM	Active	South of Del Roy Apartments
MW-6	10/27/86	113.32	2	15-29	11-29.5	GWM	Active	Manhattan Express
MW-9	10/31/86	114.27	2	14-29	13-29.5	GWM	Active	Manhattan Express
MW-10	10/31/86	115.28	2	10-30	9-30	GWM	Active	Manhattan Express
MW-11	unknown	97.32	2	Unknown	Unknown	GWM	Active	1st Avenue West
MW-12	09/26/02	113.36	2	7-17	5-17	GWM	Active	Queen Anne Avenue North
MW-13	09/18/02	114.80	2	10-20	7-21.5	GWM	Active	Manhattan Express
MW-14	09/25/02	101.56	2	10-25	7-26.5	GWM	Active	1st Avenue West
MW-15	09/25/02	99.03	2	10-25	7-35	GWM	Active	1st Avenue West
MW-16	09/24/02	101.75	2	10-25	7-31	GWM	Active	1st Avenue West
MW-17	09/23/02	99.29	2	10-25	7-34	GWM	Active	1st Avenue West
MW-18	03/16/04	101.52	2	5-25	4-25	GWM	Active	Monterey Apartments parking lot
MW-19	03/16/04	101.18	2	5-25	4-25	GWM	Active	Monterey Apartments parking lot
MW-20	08/06/04	105.64	2	5-20	3-20	GWM	Active	North of West Roy Steet
MW-21	08/09/04	94.76	2	15-35	13-35	GWM	Active	Bank of America parking lot
MW-22[2]	10/04/04	104.83	0.75	9.75-19.75	9.5-20	GWM	Abandoned	Del Roy Apartments courtyard
MW-23	10/04/04	107.82	0.75	5.5-13.5	5.25-20	GWM	Active	Lindberg Apartments yard
MW-24	10/05/04	107.95	0.75	4.2-14.2	4-20.5	GWM	Active	Del Roy Apartments alley
MW-25	10/25/04	101.96	4	8-23	6-26.5	GWM	Active	1st Avenue West
MW-26	10/27/04	100.47	4	7.75-22.75	6-26.5	GWM	Active	1st Avenue West
MW-27	11/22/94	97.26	2	14-35	13-35	GWM	Active	2nd Avenue West
MW-28	11/22/94	87.78	2	9.25-25	8.6-25	GWM	Active	2nd Avenue West
MW-29	11/22/94	80.88	2	9.25-25	8.6-25	GWM	Active	West Mercer Street
MW-30	02/07/05	91.81	2	19.7-34.7	18-20	GWM	Active	2nd Avenue West
MW-31	02/07/05	87.22	2	15-30	13-32	GWM	Active	2nd Avenue West
MW-32	07/05/05	101.09	2	8.6-28.6	6.5-28.6	GWM	Active	U-Park Parking Lot
MW-33	07/05/05	100.36	2	24.6-34.6	21-34.5	GWM	Active	U-Park Parking Lot
MW-34	11/21/05	94.35	2	22-37	20-37	GWM	Active	2nd Avenue West

Table 2-2
Well Completion Details
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Well Identification	Date Installed	Elevation of Top of Well Casing (relative feet)	Casing Diameter (inches)	Screened Interval (feet bgs)	Sand Pack Interval (feet bgs)	Purpose	Active/ Abandoned	Location
MW-35	11/21/05	100.52	2	22-37	20-40	GWM	Active	U-Park Parking Lot
DPE-1/VP-6	03/15/04	101.55	4	10-25	9-25	DPE/GWM	Active	Monterey Apartments parking lot
DPE-2	03/12/04	102.43	4	10-25	9-25	DPE/GWM	Active	Monterey Apartments parking lot
DPE-3	09/15/06	103.93	4	10-18	8.5-22	DPE/GWM	Active	Monterey Apartments parking lot
DPE-4	09/14/06	102.26	4	10.5-20.5	8.5-23.5	DPE/GWM	Active	South of Del Roy Apartments
DPE-5	10/26/05	113.81	4	14-24	13-27	DPE/GWM	Active	Remediation enclosure
DPE-6	10/17/05	113.32	4	15.5-30.5	14.5-33.5	DPE/GWM	Active	Manhattan Express parking lot
DPE-7	10/17/05	113.15	4	11-29	10-33.5	DPE/GWM	Active	Manhattan Express parking lot
DPE-8/MW-22	09/18/06	104.35	4	10-20	8-24	DPE/GWM	Active	Del Roy Apartments courtyard
DPE-9	09/18/06	103.38	4	10.5-15.5	8.5-21.5	DPE/GWM	Active	South of Del Roy Apartments
RW-2	11/01/86	106.63	8	Unknown	Unknown	GWM	Active	Del Roy Apartments alley
RW-3	05/21/93	100.70	8	10-20	6.8-20.6	GWM	Active	South of Del Roy Apartments
RW-4	05/25/93	110.82	8	17-32	14-32	GWM	Active	Manhattan Express parking lot
RW-5	05/24/93	104.22	8	6-16	4-17.5	GWM	Active	South of Del Roy Apartments
MP-1	unknown	104.95	2	Unknown, shallow	Unknown	GWM	Not Used	Monterey Apartments parking lot
MP-2	unknown	97.04	2	Unknown, deep	Unknown	GWM	Not Used	1st Avenue West; deep aquifer
DVP-1	09/12/02	--	0.25	0.25-1.25	0.25-2	SVS	Active	Monterey Apartments basement
DVP-2	09/12/02	--	0.25	0.25-1.25	0.25-2	SVS	Active	Monterey Apartments basement
NV-1	07/06/05	134.33	0.25	5.0-5.5	4.5-6.0	SVS	Active	U-Park Parking Lot
				8.0-8.5	7.5-9.0	SVS	Active	U-Park Parking Lot
NV-2	07/06/05	133.60	0.25	5.0-5.5	4.0-5.5	SVS	Active	U-Park Parking Lot
				10.0-10.5	9.0-11.0	SVS	Active	U-Park Parking Lot
				15-15.5	14.0-16.0	SVS	Active	U-Park Parking Lot

[1] Well VP-2 was modified by SAIC on March 15, 2004.

[2] VP-6 drilled out and replaced by DPE-1 on March 15, 2004 by SAIC. MW-22 drilled out and replaced by DPE-8 on September 18, 2006 by SAIC.

Top of well casing is measured relative to an arbitrary site elevation.

bgs = below ground surface

SVE = soil vapor extraction

GWM = groundwater monitoring

DPE = dual-phase extraction

SVS = soil vapor sampling

SAIC re-surveyed the top of casing of wells VP-7/MW-3, MW-4, MW-11, MW-14, MW-15, MW-16, MW-17, DPE-1/VP-6, DPE-2, MW-20, MW-21, MW-25, MW-26, MW-29, MW-31, MW-32, and MW-33 on July 27, 2005.

SAIC re-surveyed the top of casing of wells MW-27, MW-28, and MW-30 on November 30, 2005.

DPE wells DPE-2 and DPE-9 were installed as dual-phase extraction wells, but used as soil vapor extraction wells until July 2007. In July 2007, SAIC began dual-phase extraction at these wells.

Vapor probes NV-1 and NV-2 are multi-nested vapor probes installed at discrete intervals and piped to the surface with 025-inch diameter nylon tubing.

Table 4-1
Soil Analytical Results - Petroleum Hydrocarbon Constituents
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Boring/Well Identification	Sample Identification[1]	Sample Date	Diesel-Range Hydrocarbons (mg/kg)	Heavy Oil-Range Hydrocarbons (mg/kg)	Gasoline-Range Hydrocarbons (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	VPH (mg/kg)	EPH (mg/kg)
DVP-1[2]	DVP-1-1	09/12/02	333	--	**1,640**	**0.554**	--	**13.3**	**49.7**	1,020	382
	DVP-1-6	09/12/02	1,360	31.8	***4,600***	**7.72**	**84.6**	**41.9**	**175**	--	--
DVP-2[2]	DVP-2-1	09/12/02	<10	<25.0	<5.00	<0.300	<0.500	<0.500	<0.100	<5.00	<5.00
	DVP-2-6	09/12/02	**2,030**	52.4	***8,850***	**14.0**	**157**	**112**	**523**	4,980	1,950
	DVP-4-6[3]	09/12/02	**2,170**	65.0	***5,860***	**10.7**	**101**	**75.4**	**370**	4,590	2,200
DP-1	DP-1-16	09/18/02	<10	<25.0	<5.00	<0.030	<0.0500	0.0568	0.121	<5.00	8.64
DP-2	DP-2-14	09/18/02	<10	<25.0	<5.00	**0.0571**	<0.0500	<0.0500	<0.100	<5.00	<5.00
DP-3	DP-3-12	09/20/02	1,060	<25.0	**1,140**	**2.39**	2.01	**10.3**	**20.3**	1,410	685
DP-4	DP-4-20	09/20/02	18.4	<25.0	**90.9**	**0.131**	0.248	0.851	3.34	60.6	<5.00
DP-5	DP-5-14	09/20/02	1,200	<25.0	***8,160***	**17.4**	**98.2**	**97.2**	**569**	3,440	355
DP-6	DP-6-22	09/20/02	88.7	<25.0	***7,750***	***33***	**242**	**83.7**	**369**	2,050	259
DP-7	DP-7-20	09/20/02	788	<25.0	**329**	**0.844**	4.25	2.61	**10.3**	326	1,890
DB-1/MW-12	DB-1-16.0	09/26/02	<10	<25.0	<5.00	<0.030	<0.050	<0.050	<0.100	--	--
DB-2/MW-13	DB-2-14.0	09/24/02	<10	<25.0	<5.00	<0.030	<0.050	<0.050	<0.100	<5.00	<5.00
	DB-2-20	09/18/02	--	--	--	--	--	--	--	<5.00	<5.00
DB-3	DB-3-11.0	09/26/02	10.5	<25.0	8.30	<0.030	<0.050	0.0602	0.176	--	--
	DB-3-31.5	09/26/02	<10	<25.0	5.74	**0.0544**	0.309	0.160	0.840	--	--
DB-4	DB-4-9.0	09/25/02	802	<125	**1,740**	<0.300	2.56	**10.2**	**20.4**	--	--
	DB-4-11.5	09/25/02	100	<25.0	**728**	<0.300	1.31	**11.0**	**56.3**	--	--
	DB-4-21.5	09/25/02	42.6	<25.0	<5.00	**0.820**	0.0674	<0.500	<0.100	--	--
DB-5	DB-5-13.0	09/23/02	***3,060***	<500	***10,200***	***23.0***	**145**	**105**	**445**	--	--
	DB-5-24.0	09/23/02	<10	<25.0	<5.00	<0.030	<0.0500	<0.0500	<0.100	--	--
DB-6/MW-14	DB-6-16.5	09/25/02	<10	<25.0	<5.00	<0.030	<0.0500	0.0516	0.216	--	--
	DB-6-26.5	09/25/02	<10	<25.0	<5.00	<0.030	<0.0500	<0.0500	<0.100	--	--
DB-7	DB-7-11.5	09/24/02	<10	<25.0	<5.00	<0.030	<0.0500	<0.0500	<0.100	<5.00	<5.00
	DB-7-33.5	09/24/02	< 10	<25.0	<5.00	**0.117**	<0.0500	<0.0500	<0.100	--	--
DB-8/MW-15	DB-8-16.5	09/25/02	<10	<25.0	<5.00	<0.030	<0.0500	<0.0500	<0.100	<5.00	<5.00
DB-9/MW-16	DB-9-16.0	09/24/02	<10	<25.0	<5.00	<0.030	<0.0500	<0.0500	<0.100	--	--
DB-10/MW-17	DB-10-11.0	09/23/02	<10	<25.0	<5.00	<0.030	<0.0500	<0.0500	<0.100	--	--
DB-11	DB-11-10.5	09/26/02	18.4	41.4	<5.00	<0.030	<0.0500	<0.0500	<0.100	--	--
SP-1	SP-1-19	03/12/04	88	<10	**100**	**0.09**	0.3	0.6	3.6	--	--
SP-2	SP-2-11	03/12/04	14	<10	2.9	0.008	0.03	0.03	0.2	--	--

Table 4-1
Soil Analytical Results - Petroleum Hydrocarbon Constituents
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Boring/Well Identification	Sample Identification[1]	Sample Date	Diesel-Range Hydrocarbons (mg/kg)	Heavy Oil-Range Hydrocarbons (mg/kg)	Gasoline-Range Hydrocarbons (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	VPH (mg/kg)	EPH (mg/kg)
SP-3/DPE-2	SP-3-13	03/12/04	***3,000***	<500	***24,000***	***93***	**390**	**200**	**1,000**	--	--
SP-4	SP-4-9	03/12/04	<3.0	<10	1.2	0.007	0.04	0.02	0.1	--	--
SB-20/MW-20	SB-20-8	08/05/04	<3.0	<10	<1.0	<0.005	<0.005	<0.005	<0.02	--	--
SB-21/MW-21	SB-21-25	08/09/04	<3.0	<10	<1.0	<0.005	<0.005	<0.005	<0.02	--	--
	SB-21-35	08/09/04	<3.0	<10	<1.0	**0.07**	<0.005	<0.005	<0.02	--	--
SB-22/MW-22	SB-22-12	10/04/04	1,900	***3,400***	<40	**0.10**	0.20	0.84	2.0	--	--
	SB-22-15	10/04/04	<3.0	<10	6.8	0.004	0.001	0.01	0.06	--	--
	SB-22-19	10/04/04	<3.0	<10	2.3	0.007	0.011	0.015	0.057	--	--
SB-23/MW-23	SB-23-10	10/04/04	310	<50	**1,200**	**0.12**	**9.7**	**21**	**117**	--	--
	SB-23-14	10/04/04	<3.0	<10	<1.0	<0.0005	0.002	0.002	0.040	--	--
	SB-23-20	10/04/04	20	<10	12	<0.062	<0.12	0.71	2.7	--	--
SB-24/MW-24	SB-24-9	10/05/04	<3.0	<10	<1.0	<0.0005	<0.001	<0.001	<0.001	--	--
	SB-24-16	10/05/04	6.3	<10	11	**0.060**	0.082	0.077	0.4	--	--
	SB-24-18.5	10/05/04	64	<10	***3,100***	**1.1**	**11**	6.0	**40**	--	--
MW-25	MW-25-12.5	10/25/04	23	<20	***8,100***	<2.0	<4.5	**47**	**210**	--	--
	MW-25-17.5	10/25/04	<3.0	<10	7	<0.005	<0.005	0.04	0.1	--	--
	MW-25-23	10/25/04	<3.0	<10	11	<0.005	<0.005	0.01	0.05	--	--
MW-26	MW-26-12.5	10/27/04	<3.0	<10	4.1	**0.2**	0.3	0.09	0.6	--	--
	MW-26-20	10/27/04	<3.0	<10	2.6	**0.4**	0.06	0.09	0.4	--	--
SB-32/MW-32	SB-32-10	07/05/05	<3.4	13	<1.0	<0.0006	<0.001	<0.001	<0.001	--	--
SB-33/MW-33	SB-33-25	07/06/05	4.3	<10	<1.1	<0.0005	<0.001	<0.001	<0.001	--	--
MW-35	MW-35-27.5	11/22/05	<3.0	<10	<1.0	<0.005	<0.005	<0.005	<0.02	--	--
DPE-3	DPE-3-10	09/15/06	<3.0	<10	<1	0.014	0.006	0.006	0.13	--	--
	DPE-3-12.5	09/15/06	<3.0	<10	<1.0	**0.036**	0.029	0.51 E	1.5 E	--	--
	DPE-3-15	09/15/06	190	52	**210**	**0.13**	0.37	**7.2**	**25**	--	--
DPE-4	DPE-4-13	10/24/06	480	<500	***13,000***	**7**	**130**	**44**	**400**	--	--
	DPE-4-16	10/24/06	400	<500	**62**	**0.12**	**0.26**	**0.15**	**0.89**	--	--
DPE-5	DPE-5-14	10/31/05	**2,800**	<200	**460**	<0.3	<0.3	5.3	<1.5	--	--
	DPE-5-17	10/31/05	870	<100	**250**	<0.5	<1.0	4.8	**24**	--	--
DPE-6	DPE-6-17.5	10/17/05	420	<50	**140**	<1.0	1.8	2.4	**13**	--	--
	DPE-6-20	10/17/05	360	<50	**96**	<0.5	0.5	0.4	2.1	--	--

Table 4-1
Soil Analytical Results - Petroleum Hydrocarbon Constituents
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Boring/Well Identification	Sample Identification[1]	Sample Date	Diesel-Range Hydrocarbons (mg/kg)	Heavy Oil-Range Hydrocarbons (mg/kg)	Gasoline-Range Hydrocarbons (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	VPH (mg/kg)	EPH (mg/kg)
DPE-7	DPE-7-11	10/21/05	**2,400**	<120	**440**	<0.2	0.5	1.6	6	--	--
	DPE-7-20	10/21/05	--	--	**1,400**	<0.100	0.771	**7.3**	**15.25**	600	860
DPE-9	DPE-9-13.5	09/18/06	1,400	<200	***10,000***	**17.3**	**38**	**80**	**343**	--	--
MTCA Method A Cleanup Levels:			**2,000**	**2,000**	**30**	**0.03**	**7**	**6**	**9**	NA	NA
MTCA Method B Cleanup Levels:				***2,988***		***18***	***6,400***	***8,000***	***16,000***	NA	NA

Notes:

[1] = The last number in the sample identification is depth below ground surface (bgs) in feet for the top of the sample.

[2] = DVP-1 and DVP-2 sampeles were collected in the Monterey Apartments basement at 1 and 6 feet below the top of the basement slab. The top of the slab is approximately 9 feet bgs.

[3] = DVP-4-6 is a duplicate sample of DVP-2-6.

Diesel-range hydrocarbons and heavy-oil range hydrocarbons analyzed by State of Washington Department of Ecology (WDOE) Method NWTPH-Dx.

Gasoline-range hydrocarbons analyzed by WDOE Method NWTPH-Gx.
Benzene, toluene, ethylbenzene, and total xylenes (BTEX) analyzed by U.S. Environmental Protection Agency (EPA) Method 8021, except for samples DPE-7-20 and DPE-9-13.5 BTEX analyzed by WDOE Method WA VPH.
VPH = volatile petroleum hydrocarbons analyzed by WDOE Method WA VPH.
EPH = extractable petroleum hydrocarbons analyzed by WDOE Method WA EPH.

mg/kg = milligrams per kilogram

< = Analyte not detected at or above the laboratory reporting limit. Number represents the reporting limit.

-- = Sample not analyzed.

E= The concentrations reported for ethylbenzene is estimated since they exceeded the calibration range of the instrument when determined by the low level method, but were less than the quantization limit when determined by the high level method. The results reported are from the low level determination.

Bold results are between WDOE Model Toxics Control Act (MTCA) Method A Cleanup Levels and MTCA Method B Cleanup Levels.

Bold and italicized results exceed MTCA Method B Cleanup Levels.

Only those analytes that were detected at or above the laboratory reporting limit in one or more samples are included in this table.

Table 4-2
Soil Analytical Results - Volatile Organic Compounds
Former Texaco Service Station / Chervron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Boring/Well Identification	Sample Identification[1]	Sample Date	Acetone (mg/kg)	Benzene (mg/kg)	n-Butyl benzene (mg/kg)	sec-Butyl benzene (mg/kg)	Ethyl-benzene (mg/kg)	Isopropyl benzene (mg/kg)	p-Isopropyl toluene (mg/kg)	Methylene chloride (mg/kg)	Naphth-alene (mg/kg)	n-Propyl benzene (mg/kg)	Toluene (mg/kg)	1,2,4-Trimethyl benzene (mg/kg)	1,3,5-Trimethyl benzene (mg/kg)	m,p-Xylenes (mg/kg)	o-Xylenes (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	EDC (mg/kg)	EDB (mg/kg)
DVP-1[2]	DVP-1-1	9/12/02	<2.00	<0.200	33.7	5.74	**50.6**	7.60	14.3	<2.00	**23.0**	47.1	2.42	149	64.2	--	--	**211**	<0.00200	<0.200	<0.0100
	DVP-1-1[3]	9/12/02	<20	<2.00	23.7	4.53	**41.3**	6.06	8.94	<20	**16.7**	29.9	<2.00	189	58.3	--	--	**229**	<0.0200	<2.00	<1.00
	DVP-1-1[3]	9/12/02	<100	<10.0	36.8	<10	**58.0**	<10	13.1	<100	**26.8**	42.1	<10	276	79.2	--	--	**330**	<0.100	<10.0	<0.500
DVP-2[2]	DVP-2-1	9/12/02	<0.300	<0.00150	<0.005	<0.005	<0.004	<0.005	<0.005	<0.0035	<0.005	<0.005	0.00176	<0.005	<0.005	--	--	<0.1	<0.00100	<0.00125	<0.00500
DP-1	DP-1-16	9/18/02	<0.0300	0.00336	<0.005	<0.005	<0.004	<0.005	<0.005	<0.00350	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	<0.01	<0.00100	<0.00200	<0.00500
DP-2	DP-2-14	9/18/02	<1.00	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1.00	<0.1	<0.1	<0.1	<0.1	<0.1	--	--	<0.01	<0.00100	<0.100	<0.00500
DP-3	DP-3-12	9/20/02	<1.00	<0.1	0.170	<0.1	<0.1	<0.1	<0.1	<1.00	<0.1	<0.1	<0.1	0.587	0.184	--	--	0.193	<0.00100	<0.100	<0.00500
DP-4	DP-4-20	9/20/02	<1.00	<0.1	0.813	<0.1	0.233	<0.1	0.281	<1.00	0.421	0.395	<0.1	3.09	0.947	--	--	1.17	<0.00100	<0.100	<0.00500
DP-5	DP-5-14	9/20/02	<1.00	**5.35**	14.5	3.35	**32.3**	3.86	6.74	<1.00	**13.4**	22.0	**59.5**	65.2	27.9	--	--	**137**	<0.00100	<0.100	<0.00500
	DP-5-14[3]	9/20/02	<40.0	**5.23**	13.3	<4.00	**34.6**	<4.00	5.33	<40.0	**13.7**	17.6	**69.1**	94.6	28.5	--	--	**214**	<0.400	<4.00	<0.200
DP-6	DP-6-22	9/20/02	<10.0	***52.2***	28.7	<1.00	**112**	8.03	9.96	<10.0	**40.2**	39.0	**423**	214	68.0	--	--	**568**	<0.0100	<1.00	<0.0500
	DP-6-22[3]	9/20/02	<200	***51.8***	30.4	<20.0	**110**	<20.0	<20.0	<200	**42.7**	37.7	**448**	236	60.9	--	--	**629**	<0.200	<20.0	<1.00
DP-7	DP-7-20	9/20/02	<1.00	**1.39**	2.75	<0.100	4.83	0.503	0.985	<1.00	2.81	2.64	**9.49**	15.4	4.57	--	--	**26.8**	<0.00100	<0.100	<0.00500
	DP-7-20[3]	9/20/02	<20.0	< 2.00	2.82	<2.00	4.77	<2.00	<2.00	<20.0	2.88	2.49	**8.67**	16.1	4.92	--	--	**27.9**	<0.0200	<2.00	<0.100
DB-2/MW-13	DB-2-14.0	9/24/02	0.0507	<0.0015	<0.005	--	<0.004	<0.005	<0.005	0.00469	<0.005	<0.005	<0.0015	0.00879	<0.005	--	--	<0.01	--	--	--
DB-3	DB-3-11.0	9/26/02	<0.030	<0.0015	<0.005	--	<0.004	<0.005	<0.005	<0.0035	<0.005	<0.005	<0.0015	<0.005	<0.005	--	--	<0.01	--	--	--
DB-4	DB-4-9.0	9/25/02	<5	<0.5	0.963	--	1.09	<0.5	<0.5	<5	1.70	1.22	<0.5	9.39	2.84	6.58	1.04	--	--	--	--
DB-5	DB-5-13.0	9/23/02	<100	***29.2***	48.6	--	**180**	16.3	15.3	<100	**66.0**	68.5	**339**	472	158	--	--	**1,050**	--	--	--
DB-6/MW-14	DB-6-16.5	9/25/02	0.0625	0.0171	<0.005	--	0.0129	<0.005	<0.005	<0.0035	0.0431	<0.005	0.0266	0.0586	0.0117	--	--	0.118	--	--	--
DB-7	DB-7-11.5	9/24/02	<0.03	<0.0015	<0.005	--	<0.004	<0.005	<0.005	0.00488	<0.005	<0.005	<0.0015	<0.005	<0.005	--	--	<0.1	--	--	--
DB-8/MW-15	DB-8-16.5	9/25/02	<0.03	<0.0015	<0.005	--	<0.005	<0.005	<0.005	<0.0035	<0.005	<0.005	<0.0015	<0.005	<0.005	--	--	<0.01	--	--	--
SB-22/MW-22	SB-22-12	10/4/04	--	**0.1**	--	--	0.84	--	--	0.011	--	--	0.2	--	--	1.5	0.49	--	<0.002	--	--
	SB-22-15	10/4/04	--	0.004	--	--	0.01	--	--	0.004	--	--	0.001	--	--	0.05	0.009	--	<0.0005	--	--
	SB-22-19	10/4/04	--	0.007	--	--	0.015	--	--	0.003	--	--	0.011	--	--	0.041	0.016	--	<0.0005	--	--
SB-23/MW-23	SB-23-10	10/4/04	--	**0.12**	--	--	**21**	--	--	<0.25	--	--	**9.7**	--	--	83	34	--	<0.063	--	--
	SB-23-14	10/4/04	--	<0.0005	--	--	0.002	--	--	0.003	--	--	0.002	--	--	0.024	0.016	--	<0.0005	--	--
	SB-23-20	10/4/04	--	<0.062	--	--	0.71	--	--	<0.25	--	--	<0.12	--	--	2.4	0.32	--	<0.062	--	--
SB-24/MW-24	SB-24-16	10/5/04	--	**0.06**	--	--	0.077	--	--	<0.002	--	--	0.082	--	--	0.31	0.1	--	<0.0005	--	--
	SB-24-18.5	10/5/04	--	**1.1**	--	--	**6**	--	--	<2.5	--	--	**11**	--	--	28	9.8	--	<0.062	--	--
	SB-24-9	10/5/04	--	< 0.0005	--	--	<0.001	--	--	0.004	--	--	<0.001	--	--	<0.001	<0.001	--	<0.0005	--	--
SB-32/MW-32	SB-32-10	7/5/05	--	<0.0006	--	--	<0.001	--	--	0.01	--	--	<0.001	--	--	<0.001	<0.001	--	--	--	--
SB-33/MW-33	SB-33-25	7/6/05	--	<0.0005	--	--	<0.001	--	--	<0.002	--	--	<0.001	--	--	<0.001	<0.001	--	--	--	--
DPE-7	DPE-7-11	10/21/05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	DPE-7-20	10/21/05	--	**0.093**	--	--	**9.9**	--	--	--	--	--	0.2	--	--	--	--	**16**	<0.022	<0.043	--
DPE-9	DPE-9-13.5	9/18/06	--	**5.1**	--	--	**58**	--	--	--	--	--	**26**	--	--	--	--	**290**	<0.23	<0.45	<0.45
MTCA Method A Cleanup Levels:			NA	**0.03**	NA	NA	**6**	NA	NA	**0.02**	**5**	NA	**7**	NA	NA	NA	NA	**9**	**20**	NA	**0.005**
MTCA Method B Cleanup Levels:			***8,000***	***18***	NA	NA	***8,000***	NA	NA	***130***	***1,600***	NA	***6,400***	NA	NA	***16,000***	***16,000***	***16,000***	***560***	***11***	***0.012***

Table 4-2
Soil Analytical Results - Volatile Organic Compounds
Former Texaco Service Station / Chervron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Notes:

All analytes analyzed by U.S. Environmental Prtoection Agency (EPA) Method 8260B unless noted.

[1] = The last number in the sample identification is depth below ground surface (bgs) in feet for the top of the sample.

[2] = DVP-1 and DVP-2 samples were collected in the Monterey Apartments basement at 1 foot below the top of the basement slab. The top of the slab is approximately 9 feet bgs.

[3] = Laboratory duplicate

MTBE = methyl tertiary butyl ether

EDC = 1,2-dichloroethane

EDB = 1,2-dibromoethane

mg/kg = milligrams per kilogram

< = Analyte not detected at or above the laboratory reporting limit. Number represents the reporting limit.

-- = Sample not analyzed.

Bold results are between Washington Department of Ecology (WDOE) Model Toxics Control Act (MTCA) Method A Cleanup Levels and MTCA Method B Cleanup Levels.

Bold and italicized results exceed MTCA Method B Cleanup Levels.

Only those analytes that were detected at or above the laboratory reporting limit in one or more samples are included in this table.

Table 4-3
Soil Analytical Results - Total Metals
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Boring/Well Identification	Sample Identification[1]	Sample Date	Silver (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Mercury (mg/kg)	Selenium (mg/kg)	Lead (mg/kg)
DVP-1[2]	DVP-1-1	9/12/02	<0.658	3.72	88.6	<0.658	**41.1**	<0.2	<0.658	6.00
DVP-2[2]	DVP-2-1	9/12/02	<0.5	2.28	81.6	<0.5	**37.5**	<0.2	<0.5	2.91
	DVP-2-6	9/12/02	<0.694	2.46	46.1	<0.694	**27.1**	<0.2	<0.694	5.04
	DVP-4-6[2]	9/12/02	<0.5	2.45	47.8	<0.5	**31.6**	<0.2	<0.5	4.35
DP-1	DP-1-16	9/18/02	<0.5	2.33	57.1	<0.5	**30.5**	<0.2	<0.5	1.92
DP-2	DP-2-14	9/18/02	<0.5	3.58	83.9	<0.5	**36.2**	<0.2	<0.5	2.39
	DP-2-20	9/20/02	--	--	--	--	--	--	--	1.85
DP-3	DP-3-12	9/20/02	<0.5	2.66	79.0	0.572	**29.5**	<0.2	<0.5	4.15
DP-4	DP-4-18	9/20/02	--	--	--	--	--	--	--	3.36
	DP-4-20	9/20/02	<0.5	1.69	29.0	<0.5	12.0	<0.2	<0.5	1.78
DP-5	DP-5-14	9/20/02	--	--	--	--	--	--	--	3.53
DP-6	DP-6-14	9/20/02	--	--	--	--	--	--	--	5.13
	DP-6-22	9/20/02	<0.5	1.65	60.4	0.873	**22.6**	<0.2	<0.5	4.74
DP-7	DP-7-10	9/20/02	--	--	--	--	--	--	--	5.40
	DP-7-20	9/20/02	<0.5	2.14	74.9	<0.5	**29.6**	<0.2	<0.5	9.48
DB-2	DB-2-14	9/24/02	<0.5	4.53	80.2	<0.5	**48.6**	<0.2	0.935	2.61
	DB-2-16.5	9/24/02	--	--	--	--	--	--	--	2.56
DB-3	DB-3-11	9/26/02	<0.5	2.27	49.6	<0.5	**29.2**	<0.2	<0.5	6.89
	DB-3-31.5	9/26/02	--	--	--	--	--	--	--	6.46
DB-4	DB-4-11.5	9/25/02	<0.5	3.18	82.1	<0.5	**33.1**	<0.2	<0.5	3.78
	DB-4-21.5	9/25/02	--	--	--	--	--	--	--	2.00
DB-5	DB-5-13	9/23/02	<0.5	1.73	49.9	<0.5	**30.4**	<0.2	<0.5	8.72
	DB-5-24	9/23/02	--	--	--	--	--	--	--	1.29
DB-6/MW-14	DB-6-16.5	9/25/02	<0.5	1.87	52.0	<0.5	**25.7**	<0.2	<0.5	2.44
	DB-6-26.5	9/25/02	--	--	--	--	--	--	--	3.32
DB-7	DB-7-11.5	9/24/02	<0.5	3.18	58.4	<0.5	**25.8**	<0.2	<0.5	2.04
	DB-7-33.5	9/24/02	--	--	--	--	--	--	--	10.5
DB-8/MW-15	DB-8-16.5	9/25/02	<0.5	1.19	33.6	<0.5	**22.8**	<0.2	<0.5	1.62
DB-9/MW-16	DB-9-16	9/24/02	--	--	--	--	--	--	--	1.82
DB-10/MW-17	DB-10-11	9/23/02	--	--	--	--	--	--	--	3.41

Table 4-3
Soil Analytical Results - Total Metals
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Boring/Well Identification	Sample Identification[1]	Sample Date	Silver (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Mercury (mg/kg)	Selenium (mg/kg)	Lead (mg/kg)
SB-32/MW-32	SB-32-10	7/5/05	--	--	--	--	--	--	--	17.6
MW-35	MW-35-27	11/22/05	--	--	--	--	--	--	--	1.54
MTCA Method A Cleanup Levels:			NA	**20**	NA	**2**	**19**	***2***	NA	**250**
MTCA Method B Cleanup Levels:			NA	***24***	NA	***80***	***240/120,000***	***24***	NA	NA

Notes:

All analytes analyzed by U.S. Environmental Protection Agency (EPA) 6000/7000 Series Methods.

[1] = The last number in the sample identification is depth below ground surface (bgs) in feet for the top of the sample.

[2] = DVP-1 and DVP-2 samples were collected in the Monterey Apartments basement at 1 foot below the top of the basement slab. The top of the slab is approximately 9 feet bgs.

[3] = Laboratory duplicate

mg/kg = milligrams per kilogram

< = Analyte not detected at or above the laboratory reporting limit. Number represents the reporting limit.

-- = Sample not analyzed.

Bold results are between Washington Department of Ecology (WDOE) Model Toxics Control Act (MTCA) Method A Cleanup Levels and MTCA Method B Cleanup Levels.

Bold and italicized results exceed MTCA Method B Cleanup Levels.

Table 4-4
Soil Analytical Results - Semivolatile Organic Compounds
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Avenue North
Seattle, Washington

Boring/Well Identification	Sample Identification[1]	Sample Date	Benzoic Acid	Fluorene	Iso-phorone	Di-n-octyl phthalate	Phen-anthrene	Phenol	Benzyl alcohol	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Chrysene	Indeno (1,2,3-cd) pyrene	Naph-thalene	1-Methyl naphthalene	2-Methyl naphthalene
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
DVP-1[2]	DVP-1-1	9/12/02	--	--	--	--	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	1.82	1.92	3.86
DVP-2[2]	DVP-2-1	9/12/02	--	--	--	--	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
DP-1	DP-1-16	9/18/02	<1	<0.33	<0.33	<0.33	<0.33	0.515	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
DP-2	DP-2-14	9/18/02	1.01	< 0.33	<0.33	< 0.33	<0.33	1.05	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
DP-3	DP-3-12	9/20/02	<1	<0.33	<0.33	0.575	2.56	2.15	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.207	1.96	3.20
DP-4	DP-4-20	9/20/02	< 1	< 0.33	<0.33	<0.33	<0.33	<0.33	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0231	0.0354	0.068
DP-5	DP-5-14	9/20/02	<1	1.80	0.666	<0.33	2.92	<0.33	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.210	0.744	1.28
DP-6	DP-6-22	9/20/02	< 1	<0.33	<0.33	0.339	1.37	0.653	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.863	1.86	3.70
DP-7	DP-7-20	9/20/02	<1	<0.33	<0.33	<0.33	0.827	1.41	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	4.99	7.50	14.1
DB-2/MW-13	DB-2-14	9/23/02	--	--	--	--	--	--	4.99	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0106	<0.01	<0.01
DB-3	DB-3-11	9/26/02	--	--	--	--	--	--	6.34	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0206	<0.01
DB-4	DB-4-9	9/25/02	--	--	--	--	--	--	<0.33	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	2.42	2.53	6.03
DB-5	DB-5-13	9/23/02	--	--	--	--	--	--	9.27	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**25.9**	16.3	31.5
DB-6/MW-14	DB-6-16.5	9/25/02	--	--	--	--	--	--	<0.33	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0179	<0.01	0.0106
DB-7	DB-7-11.5	9/24/02	--	--	--	--	--	--	7.71	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
DB-8/MW-15	DB-8-16.5	9/25/02	--	--	--	--	--	--	<0.33	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	< 0.01	<0.01
DPE-6	DPE-6-17	10/17/05	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6	0.52	0.97
	DPE-6-20	10/17/05	--	--	--	--	--	--	--	--	--	--	--	--	--	0.6	0.46	0.83
DPE-7	DPE-7-11	10/21/05	--	--	--	--	--	--	--	--	--	--	--	--	--	2.4	3.2	2.3
	DPE-7-20	10/21/05	--	--	--	--	--	--	--	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	**13**	9.9	17
DPE-5	DPE-5-14	10/31/05	--	--	--	--	--	--	--	--	--	--	--	--	--	**18**	19	30
	DPE-5-17	10/31/05	--	--	--	--	--	--	--	--	--	--	--	--	--	1.5	1.7	2.9
DPE-9	DPE-9-13.5	9/18/06	--	--	--	--	--	--	--	0.0059	0.0027	0.0026	0.0010	0.0093	0.0014	**18.0**	8.1	18.0
MTCA Method A Cleanup Levels:			NA	NA	NA	NA	NA	NA	NA	NA	**0.1**	NA	NA	NA	NA	**5**	NA	NA
MTCA Method B Cleanup Levels:			***320,000***	***3,200***	***1,100***	***1,600***	NA	***48,000***	***24,000***	***0.14***	***0.14***	***0.14***	***0.14***	***0.14***	***0.14***	***1,600***		

Notes:
All analytes analyzed by U.S. Environmental Protection Agency (EPA) Method 8270 unless noted.
[1] = The last number in the sample ID is depth below ground surface (feet) for the top of the sample.
[2] = DVP-1 and DVP-2 samples were collected in the Monterey Apartments basement at 1 foot below the top of the basement slab. The top of the slab is approximately 9 feet bgs.
mg/kg = milligrams per kilogram
< = Analyte not detected at or above the laboratory reporting limit. Number represents the reporting limit.
-- = Sample not analyzed.
Bold results are between Washington Department of Ecology (WDOE) Model Toxics Control Act (MTCA) Method A Cleanup Levels and MTCA Method B Cleanup Levels.
Bold and italicized results exceed MTCA Method B Cleanup Levels.
Only those analytes that were detected at or above the laboratory reporting limit in one or more samples are included in this table.

Table 4-5
Soil Physical Data
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Boring/Well Identification	Sample Identification[1]	Sample Date	Organic Content[2] (% dry weight)	Moisture Content[3] (% dry weight)	Dry Density[4] (lbs/ft^3)	Total Porosity (%)	Air Permeability[5] (cm^2)	Effective Porosity[6] (%)	Hydraulic Conductivity (cm/s)
DB-3	DB-3-18	09/26/02	1.12	19.98	118.3	31	--	27	3.41E-02
DB-4	DB-4-6.5	09/25/02	0.78	18.32	95.3	44	1.72E-08	--	--
	DB-4-18	09/25/02	1.48	22.41	113.9	33	--	28	3.11E-03
DB-5	DB-5-9	09/23/02	0.38	20.57	97.6	40	<1.87E-10	--	--
	DB-5-18	09/23/02	1.56	10.95	114.1	33	--	12	3.69E-03
DB-7	DB-7-6.5	09/24/02	0.62	17.54	85	49	1.52E-08	--	--
	DB-7-20.5	09/24/02	0.55	9.54	110.2	35	--	35	2.76E-02

Notes:

1 = The last number in the sample ID is depth below ground surface (feet) for the top of the sample.

2 - Measured by American Society for Testing and Materials (ASTM) D-2974.

3 - Measured by ASTM D-2216.

4 - Measured by ASTM D-2937.

5 - Measured by ASTM D-4525.

6 - Calculated from the break through curve developed by passing a tracer through the sample.

% = percent

lbs/ft^3 = pounds per cubic foot

cm/s = centimeter per second

cm2 = square centimeters

-- = Sample not analyzed

Table 4-6
Depth of Petroleum Hydrocarbon Contamination in Soil
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Boring/Well Identification	Top of Soil Sample[1]		Analytical Detections[2]	Hydrocarbon Odor	PID Reading (ppm)	Comment	Approximate Smear Zone Depths (ft bgs)
	Depth (ft bgs)	Elevation (ft asd)					
VP-1	7.5	96	na	none	--	no analyses (odor at ~9 ft)	10 to 14
	12.5	91	na	slight	--		
VP-2	7.5	98	na	strong (>7.5')	--	no analyses	9 to 13
	12.5	92	na	slight	--		
VP-3/MW-2	12.5	93	na	none	--	probable contamination	8 to 12.5
VP-4	12.5	91	na	strong	--	no analyses	12 to >15
	15	89	na	strong	--		
VP-5/MW-5	14	89	na	none	--	possibly no contamination	--
VP-7/MW-3	10	91	na	none	--	possibly no contamination	--
	14	87	na	none	--		
VP-8/MW-7	8.5	97	na	strong	--	probable contamination	8 to 12.5
	13.5	92	na	present?	--		
VP-9	20.5	92	ND	strong (13')	--	possible contamination	13 to 15
MW-4	13	90	na	slight	--	possible contamination	13 to 15
	18	85	na	none	--		
MW-6	13	101	na	slight	--	contamination; product at 22-24 ft	17 to 27
	18	96	na	strong	--		
	28	86	na	none	--		
MW-9	13	102	na	strong	--	no analyses	13 to 22
	23	92	na	none	--		
MW-10	14.5	101	na	none	--	no contamination	--
DP-1	12	103	na	present	14.5	no contamination	--
	13.5	102	na	present	33.3		
	16	99	<MTCA	none	70.1		
DP-2	5	110	na	present	672	Possibly above MTCA-A between 6-14 ft	10 to 15
	10	105	na	present	1,340		
	14	101	B	present	>2,000		
DP-3	12	103	G,B,T,E,X	present	>2,000	--	11.5 to 16.5
	14	101	na	present	>2,000		
	17	98	na	present	1,557		
DP-4	19	96	GB	present	>2,000	--	19 to 21
	21	94	na	present	21.7		
DP-5	13	101	G,B,T,E,X	present	2,000	--	14 to 21
	16	98	na	present	2,000		
	20	94	na	present	2,000		
	23	91	na	present	1,162		
DP-6	21	93	G,B,T,E,X	present	>2,000	--	21 to 24
	24	90	na	present	>2,000		
	25	89	na	present	33.4		
DP-7	19	95	G,B,X	present	>2,000	--	20 to 22
	22	92	na	present	>2,000		
	23	91	na	present	18.2		
DB-1/MW-12	16	98	ND	none	--	no contamination	--

Table 4-6
Depth of Petroleum Hydrocarbon Contamination in Soil
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Boring/Well Identification	Top of Soil Sample[1]		Analytical Detections[2]	Hydrocarbon Odor	PID Reading (ppm)	Comment	Approximate Smear Zone Depths (ft bgs)
	Depth (ft bgs)	Elevation (ft asd)					
DB-2/MW-13	12.5	103	na	strong	277	--	12 to 14
	15	100	ND	none	68		
DB-3	10.5	104	<MTCA	present	140	possibly contaminated at 15.5 ft	--
	13	102	na	present	22		
	16.5	98	na	present	125		
	23	92	na	present	89		
DB-4	7.5	98	G,E,X	strong	>2,000	--	7 to 16
	15	90	na	present	>2,000		
	17.5	88	na	none	189		
DB-5	12	91	G,D,B,T,E,X	strong	>2,000	--	12 to 17
	17.5	86	na	strong	797		
	22	81	na	strong	381		
DB-6/MW-14	15	87	<MTCA	present	1,367	Possibly above MTCA-A at 16.5 ft	--
	20	82	na	present	402		
	26.5	75	ND	present	180		
DB-7	11.5	89	na	none	3	no contamination	--
	16	85	na	none	32		
DB-8/MW-15	16.5	83	ND	slight	31	no contamination	--
	21	78	na	present	27		
DB-9/MW-16	16	86	ND	none	12	no contamination	--
	20	82	na	none	34		
DB-10/MW-17	11	89	ND	none	7	no contamination	--
	15.5	84	na	slight	34		
DB-11	10	88	ND	none	2	no contamination	--
	11	87	ND	none	2		
SP-1	12	102	na	present	1,553	--	15 to >22
	19	95	G, B	present	1 to 2,900		
	>22	<92	na	strong	>4,040		
SP-2	8	96	<MTCA	strong	44.7	not continuous	13 to 15
	10	94	na	present	0		
	14	90	na	strong	>4,040		
	15	89	na	slight	26.3		
SP-4	12	90	na	strong/slight	81	no analyses	14 to 18
	14	88	na	strong	1,801		
	18	84	na	slight	37.1		
MW-18	15	87	na	strong	588	no analyses	14 to 17
	20	82	na	slight	152		
MW-19	15	87	na	strong	208	no analyses	15 to 16
	16	86	na	slight	9.2		
MW-20	8	98	ND	none	0	no contamination	--
MW-21	25	70	ND	none	16.1	--	--
	35	60	B	slight	26.7		
	40	55	na	none	0		
MW-23	10	98	G,B,T,E,X	strong	>10,358	moderate to strong sheen	9 to 13, 15.5 to 18
	14	94	--	strong	>10,358	moderate sheen	
	20	88	--	slight	>10,358	--	

Table 4-6
Depth of Petroleum Hydrocarbon Contamination in Soil
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Boring/Well Identification	Top of Soil Sample[1]		Analytical Detections[2]	Hydrocarbon Odor	PID Reading (ppm)	Comment	Approximate Smear Zone Depths (ft bgs)
	Depth (ft bgs)	Elevation (ft asd)					
MW-24	9	100	ND	none	1.5	--	16 to 19
	16	93	B	strong	>4,506	moderate sheen	
	18.5	90	G,B,T,X	strong	>4,506	moderate sheen	
MW-25	12.5	90	G,E,X	strong	588	slight sheen	12 to 14
	17.5	85	ND	moderate	50.1	--	
	23	80	ND	none	121	--	
MW-26	12.5	89	B	slight	310	--	--
	20	81	B	slight	290		
MW-30	--	--	na	none	3.2 to 14.8	no contamination	--
MW-31	--	--	na	none	2.6 to 6.2	no contamination	--
MW-32	10	91.5	<MTCA	none	0	--	--
	23.5	78.0	na	slight	125		
MW-33	35	66.0	ND	none	101.3	no contamination	--
MW-34	--	--	na	none	1.7 to 6	no contamination	--
MW-35	--	--	ND	none	na	no contamination	--
DPE-1/VP-6	12.5	90	na	strong	--	no analyses	12 to >15
	15	87	na	strong			
SP-3/DPE-2	13	90	G,D,B,T,E,X	strong	>4,040	--	12 to 15.5
	15	88	na	strong	>4,040		
	17	86	na	no odor	1,350		
DPE-3	10	95	B,T,E,X	slight	15.7	--	12 to 17
	12.5	92	B,T,E,X	present	78.8		
	15	90	G,D,O,B,T,E,X, Pb	strong	1,088		
DPE-4	13	90	G,D,B,T,E,X,Pb	present	2,546	--	12.5 to 19
	16	87	G,D,B,T,E,X	strong	194		
DPE-5	14	100	G,D,E	strong	215	--	15 to 22.5
	17	97	G,D,E,X	strong	2,214		
DPE-6	17.5	96	G,D,T,E,X	present	1,329	--	19 to 21
	20	94	G,D,T,E,X	strong	470		
DPE-7	11	103	G,D,T,E,X	strong	722	not continuous	11 to 13, 21 to 27
	20	94	G,B,T,E,X	strong	580		
DPE-8/MW-22	12	93	B,O	strong	6,100	strong sheen from 12 to 16 ft, moderate	12 to 19
	15	90	ND	strong	6,100		
	19	86	ND	slight	2,058		
DPE-9	13.5	91	G,D,B,T,E,X,Pb	strong	390	--	13 to 17
RW-3	7.5	96	na	present	>1,000	no analyses	8 to 13
	10	93	na	slight	>800		
RW-4	10	103	na	present at 7'	264	no analyses	17 to 26
	17.5	96	na	strong	1,200		
	25	88	na	strong	300		

Table 4-6
Depth of Petroleum Hydrocarbon Contamination in Soil
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Boring/Well Identification	Top of Soil Sample[1]		Analytical Detections[2]	Hydrocarbon Odor	PID Reading (ppm)	Comment	Approximate Smear Zone Depths (ft bgs)
	Depth (ft bgs)	Elevation (ft asd)					
RW-5	10	97	na	strong	>1,000	no analyses	9 to 15
	12.5	94	na	present	40		
DVP-1[4]	1	95	G,B,E,X	present	1,480	contamination depth >7 ft	1 to >7
	5	91	na	present	>2,000		
	7	89	G,B,T,E,X	present	>2,000		
DVP-2[4]	1	95	ND	present	13.9	contamination depth >7 ft	3 to >7
	3	93	na	present	649		
	7	89	G,D,B,T,E,X	present	1,327		
NV-1	--	--	na	none	0	no contamination	--
NV-2	--	--	na	none	0.1 to 4.7	no contamination	--

Footnotes:

[1] = Top depth of soil samples:
bgs = below ground surface
asd = above site datum (relative elevation)

[2] = Exceedance above Model Toxics Control Act (MTCA) Method A cleanup levels:
G = TPH-Gasoline range
D = TPH-Diesel range
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes (total)
O = Oil
PB = lead
na = not analyzed
ND = not detected above MTCA Method A cleanup levels
(ppm) = parts per million
-- = not applicable/not recorded

3 = Soil contaminant depths based on exceedance of MTCA Method A cleanup levels, using PID and odor descriptions to interpolate.

[4] = depths are below top of basement slab, top of slab is approximately 9 feet bgs.

No data were available for review from wells/borings MW-11, MP-1, MP-2, RW-1, and RW-2.

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
VP-1	06/14/00	103.03	NM	NM	--	--	**75,600**	<12,500	**5,000**	**21.6**	14.4	32.8	435	
VP-1	07/24/02	103.03	NP	11.59	0.00	91.44	**18,000**	**1,500**	**35,000**	**120**	820	280	**4,600**	
VP-1	10/17-18/02	103.03	NP	12.70	0.00	90.33	**7,500**	**598**	**27,300**	**170**	756	334	**4,820**	Laboratory report indicates the heavy oil-range present are due to hydrocarbons eluting primarily in the diesel-range.
VP-1	01/21/03	103.03	NP	12.70	0.00	90.33	**14,200**	**807**	**36,700**	**90.5**	801	500	**6,630**	Laboratory report indicates the heavy oil-range organics present are due to hydrocarbons eluting primarily in the diesel range.
VP-1	04/23-24/03	103.03	NP	11.63	0.00	91.40	**2,830**	<500	**24,200**	**110**	136	225	**2,780**	
VP-1	06/30-07/01/03	103.03	NP	12.21	0.00	90.82	**20,200**	**1,750**	**8,000**	**36.8**	49.2	47.1	618	Sample analyzed outside holding time for TPH-D and BTEX analysis.
VP-1	10/01-02/03	103.03	NP	13.11	0.00	89.92	**40,000**	**6,300**	**7,600**	**56**	47	22	690	
VP-1	01/21-23/04	103.03	NP	12.21	0.00	90.82	**17,000**	**3,200**	**4,500**	**11**	6.2	<20	85	
VP-1	04/29-30/04	103.03	NP	11.87	0.00	91.16	**3,600**	**1,100**	**4,200**	**24**	3.6	9.8	85	
VP-1	07/15-16/04	103.03	NP	13.41	0.00	89.62	**1,050**	<500	**1,880**	**21.7**	2.77	6.92	50.7	DTW measured by SAIC. Laboratory report indicates the hydrocarbons present are a complex mixture of diesel-range and heavy oil-range.
VP-1	08/03/04	103.03	NP	12.71	0.00	90.32	NOT SAMPLED		--	--	--	--	--	
VP-1	10/28-11/01/04	103.03	NP	12.84	0.00	90.19	**35,000**	**18,000**	**2,100**	**25**	5.5	7.6	97	
VP-1	01/24-31/05	103.03	NP	12.38	0.00	90.65	**3,600**	**1,300**	670	**5.2**	0.8	1.4	13	
VP-1	04/18-21/05	103.03	NP	12.09	0.00	90.94	**5,500**	**2,200**	340	<1.0	<0.5	0.7	5.2	
VP-1	07/27-28/05	103.03	NP	12.38	0.00	90.65	NOT SAMPLED		--	--	--	--	--	
VP-1	11/08-10/05	103.03	NP	13.48	0.00	89.55	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-1	02/22/06	103.03	NP	10.89	0.00	92.14	NOT SAMPLED		--	--	--	--	--	
VP-1	04/17/06	103.03	NP	12.10	0.00	90.93	NOT SAMPLED		--	--	--	--	--	
VP-1	Well Abandoned September 2006													
VP-2	12/15/99	104.72	NM	NM	--	--	**29,900**	<2,500	**5,980**	**935**	345	43.8	305	
VP-2	06/14/00	104.72	NM	NM	--	--	**2,810**	<1,000	**2,030**	**45.9**	16.2	<3.00	196	
VP-2	07/24/02	104.72	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
VP-2	10/17-18/02	104.72	NP	13.60	0.00	91.12	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-2	01/21/03	104.72	NP	13.63	0.00	91.09	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-2	04/23-24/03	104.72	NP	12.15	0.00	92.57	**12,100**	<250	**6,230**	**549**	42.6	106	**1,120**	
VP-2	06/30-07/01/03	104.72	NP	12.51	0.00	92.21	**35,900**	**1,380**	**3,330**	**180**	58.8	32.4	510	
VP-2	10/01-02/03	104.72	NP	14.12	0.00	90.60	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-2	01/21-23/04	104.72	NP	13.06	0.00	91.66	**480,000**	<56,000	**1,700**	**69**	16	<10	210	
VP-2	04/29-30/04	104.72	NP	10.53	0.00	94.19	**850**	**2,200**	**6,400**	**1,500**	94	68	760	
VP-2	07/15-16/04	104.72	NP	13.50	0.00	91.22	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	DTW measured by SAIC.
VP-2	08/03/04	104.72	NP	13.66	0.00	91.06	NOT SAMPLED		--	--	--	--	--	
VP-2	10/28-11/01/04	105.11	NP	14.18	0.00	90.93	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-2	01/24-31/05	105.11	NP	13.51	0.00	91.60	**24,000**	**1,600**	640	**23**	3.6	5.3	57	
VP-2	04/18-21/05	105.11	NP	13.20	0.00	91.91	**120,000**	**8,700**	<50	2.1	<0.5	<0.5	3.6	
VP-2	07/27-28/05	105.11	NP	13.75	0.00	91.36	NOT SAMPLED		--	--	--	--	--	
VP-2	11/08-10/05	105.11	NP	14.08	0.00	91.03	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-2	02/22/06	105.11	NP	12.02	0.00	93.09	NOT SAMPLED							
VP-2	04/17/06	105.11	NP	DRY	0.00	--	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-2	10/17/06	105.11	NP	14.66	0.00	90.45	NOT SAMPLED		--	--	--	--	--	
VP-3/ MW-2	07/07/93	104.75	NP	DRY	--	--	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-3/ MW-2	07/24/02	104.75	NP	DRY	--	--	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-3/ MW-2	10/17-18/02	104.75	NP	DRY	--	--	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-3/ MW-2	01/21/03	104.75	NP	DRY	--	--	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-3/ MW-2	04/23-24/03	104.75	NP	DRY	--	--	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
VP-3/ MW-2	06/30-07/01/03	104.75	NP	DRY	--	--	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-3/ MW-2	10/01-02/03	104.75	NP	9.05	0.00	95.70	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-3/ MW-2	01/21-23/04	104.75	NP	DRY	--	--	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-3/ MW-2	04/29-30/04	104.75	NP	DRY	--	--	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-3/ MW-2	07/15-16/04	104.75	NP	DRY	--	--	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-3/ MW-2	08/03/04	104.75	NP	DRY	--	--	NOT SAMPLED	--	--	--	--	--	--	
VP-3/ MW-2	10/28-11/01/04	104.75	NP	DRY	--	--	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-3/ MW-2	01/24-31/05	104.75	NP	DRY	--	--	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-3/ MW-2	04/18-21/05	104.75	NP	DRY	--	--	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-3/ MW-2	07/27-28/05	104.75	NP	DRY	--	--	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-3/ MW-2	11/08-10/05	104.75	NP	DRY	--	--	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-3/ MW-2	04/17/06	104.75	NP	DRY	--	--	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
VP-3/ MW-2	Well Abandoned September 2006													
VP-4	06/13/00	103.35	NM	NM	--	--	**1,850**	<552	**26,400**	**1,020**	**3,270**	**809**	**6,160**	
VP-4	07/24/02	103.35	NP	11.89	0.00	91.46	**78,000**	<9,700	**89,000**	**7,300**	**7,500**	**1,900**	**13,000**	
VP-4	10/17-18/02	103.35	12.75	12.78	0.03	90.59	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	
VP-4	01/21/03	103.35	12.61	12.71	0.10	90.72	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	
VP-4	04/23-24/03	103.35	11.72	11.75	0.03	91.62	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	
VP-4	06/30-07/01/03	103.35	12.31	12.34	0.03	91.03	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	
VP-4	10/01-02/03	103.35	13.26	13.29	0.03	90.08	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	
VP-4	01/21-23/04	103.35	12.34	12.37	0.03	91.00	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	
VP-4	04/29-30/04	103.35	NP	12.21	0.00	91.14	**28,000**	<2,300	150	1.7	2.6	1	20	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
VP-4	07/15-16/04	103.35	NP	12.65	0.00	90.70	**18,600**	**789**	**32,200**	**2,230**	746	212	**3,710**	DTW measured by SAIC. Laboratory report indicates the heavy oil-range organics present are due to hydrocarbons eluting primarily in the diesel range.
VP-4	08/03/04	103.35	NP	12.91	0.00	90.44	NOT SAMPLED		--	--	--	--	--	
VP-4	10/28-11/01/04	103.35	NP	12.98	0.00	90.37	**330,000**	<100,000	**48,000**	**2,500**	**1,400**	560	**5,400**	
VP-4	01/24-31/05	103.35	NP	12.38	0.00	90.97	**110,000**	<9,500	**19,000**	**360**	750	89	**2,000**	
VP-4	04/18-21/05	103.35	NP	12.14	0.00	91.21	**46,000**	<10,000	**2,800**	**23**	30	6.8	270	
VP-4	07/27-28/05	103.35	NP	12.51	0.00	90.84	NOT SAMPLED		--	--	--	--	--	
VP-4	11/08-10/05	103.35	NP	12.91	0.00	90.44	NOT SAMPLED		--	--	--	--	--	
VP-4	02/22/06	103.35	NP	11.03	0.00	92.32	NOT SAMPLED							
VP-4	04/17/06	103.35	NP	12.12	0.00	91.23	NOT SAMPLED		--	--	--	--	--	
VP-4	10/17/06	103.35	NP	14.10	0.00	89.25	NOT SAMPLED		--	--	--	--	--	
VP-5/ MW-5	11/03/86	103.21	NP	15.15	0.00	88.06	NOT SAMPLED		--	--	--	--	--	
VP-5/ MW-5	09/90	102.92	NP	13.49	0.00	89.43	NOT SAMPLED		--	--	--	--	--	
VP-5/ MW-5	03/26-28/91	102.91	NP	12.58	0.00	90.33	--	--	--	**5,300**	**1,300**	**900**	**4,600**	
VP-5/ MW-5	07/07/93	102.91	NP	12.29	0.00	90.62	NOT SAMPLED		--	--	--	--	--	
VP-5/ MW-5	12/15/99	102.91	NM	NM	--	--	**2,490**	<500	**23,400**	**841**	191	**1,480**	**7,720**	
VP-5/ MW-5	06/13/00	102.91	NM	NM	--	--	**1,340**	<1,120	**25,600**	**793**	155	**1,380**	**5,690**	
VP-5/ MW-5	07/24/02	102.63	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
VP-5/ MW-5	10/17-18/02	102.63	NP	12.31	0.00	90.32	**3,900**	<500	**15,900**	**318**	49.3	**880**	**1,870**	
VP-5/ MW-5	01/21/03	102.63	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
VP-5/ MW-5	04/23-24/03	102.63	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
VP-5/ MW-5	06/30-07/01/03	102.63	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
VP-5/ MW-5	10/01-02/03	102.63	NP	12.81	0.00	89.82	**1,500**	270	**22,000**	**330**	76	**1,000**	**2,200**	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
VP-5/ MW-5	01/21-23/04	102.63	NP	11.91	0.00	90.72	**1,500**	310	**19,000**	**310**	100	**980**	**1,600**	
VP-5/ MW-5	04/29-30/04	102.63	NP	11.80	0.00	90.83	**1,400**	400	**3,500**	**61**	13	190	180	
VP-5/ MW-5	07/15-16/04	102.63	NP	12.20	0.00	90.43	<250	<500	**7,900**	**58.3**	18.4	384	475	DTW measured by SAIC.
VP-5/ MW-5	08/03/04	102.63	NP	12.52	0.00	90.11	NOT SAMPLED		--	--	--	--	--	
VP-5/ MW-5	10/28-11/01/04	102.63	NP	12.57	0.00	90.06	**710**	<200	**19,000**	**98**	56	**860**	**1,600**	
VP-5/ MW-5	01/24-31/05	102.63	NP	11.96	0.00	90.67	**910**	<250	**16,000**	**86**	60	**770**	**1,300**	
VP-5/ MW-5	04/18-21/05	102.63	NP	11.75	0.00	90.88	**3,100**	<250	**12,000**	**39**	42	**710**	**1,200**	
VP-5/ MW-5	07/27-28/05	102.63	NP	12.05	0.00	90.58	NOT SAMPLED		--	--	--	--	--	
VP-5/ MW-5	11/08-10/05	102.63	NP	12.42	0.00	90.21	NOT SAMPLED		--	--	--	--	--	
VP-5/ MW-5	02/22/06	102.63	NP	10.62	0.00	92.01	NOT SAMPLED							
VP-5/ MW-5	04/17/06	102.63	NP	11.56	0.00	91.07	NOT SAMPLED		--	--	--	--	--	
VP-5/ MW-5	10/17/06	102.63	NP	14.03	0.00	88.60	NOT SAMPLED		--	--	--	--	--	
VP-6	NOT MONITORED/SAMPLED. REPLACED BY WELL DPE-1. SEE DPE-1 FOR VP-6 DATA.													
VP-7/ MW-3	11/03/86	100.81	NP	12.13	0.00	88.68	NOT SAMPLED		--	--	--	--	--	
VP-7/ MW-3	09/90	100.51	NP	11.48	0.00	89.03	NOT SAMPLED		--	--	--	--	--	
VP-7/ MW-3	03/26-28/91	100.48	NP	10.36	0.00	90.12	--	--	--	**3,700**	**1,600**	**740**	**3,500**	
VP-7/ MW-3	07/07/93	100.48	NP	10.46	0.00	90.02	--	--	**20,000**	**4,700**	**2,000**	**910**	**3,600**	
VP-7/ MW-3	10/95	100.48	NM	NM	--	--	--	--	**33,000**	**11,700**	**2,330**	**1,070**	**4,130**	
VP-7/ MW-3	01/97	100.48	NM	NM	--	--	--	--	**51,000**	**12,400**	**5,200**	**990**	**5,200**	
VP-7/ MW-3	04/97	100.48	NM	NM	--	--	--	--	**53,000**	**11,100**	**4,800**	**1,400**	**7,600**	
VP-7/ MW-3	07/97	100.48	NM	NM	--	--	--	--	**37,000**	**11,000**	**3,700**	**1,500**	**7,100**	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
VP-7/ MW-3	11/97	100.48	NM	NM	--	--	--	--	34,000	15,900	3,600	1,500	6,600	
VP-7/ MW-3	12/14/99	100.48	NM	NM	--	--	3,310	<500	73,400	16,800	9,670	1,890	10,500	
VP-7/ MW-3	06/14/00	100.48	NM	NM	--	--	931	<1,460	54,400	10,000	8,230	1,380	7,470	
VP-7/ MW-3	07/24/02	100.40	NP	9.74	0.00	90.66	5,800	580	60,000	8,200	7,000	1,500	8,300	
VP-7/ MW-3	10/17-18/02	100.40	NP	10.57	0.00	89.83	5,160	510	71,600	11,100	5,880	1,940	10,800	Laboratory report indicates the heavy oil-range hydrocarbons present are due to hydrocarbons eluting primarily in the diesel range.
VP-7/ MW-3	01/21/03	100.40	NP	10.29	0.00	90.11	714	<500	41,600	9,440	1,470	1,360	6,190	Laboratory report indicates results in the diesel-range organics are primarily due to overlap from a gasoline range product.
VP-7/ MW-3	04/23-24/03	100.40	INACCESSIBLE - VEHICLE PARKED OVER WELL				--	--	--	--	--	--	--	
VP-7/ MW-3	06/30-07/01/03	100.40	10.08	10.11	0.03	90.31	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	
VP-7/ MW-3	10/01-02/03	100.40	NP	10.98	0.00	89.42	3,800	520	61,000	10,000	4,500	2,000	10,000	
VP-7/ MW-3	01/21-23/04	100.40	NP	10.09	0.00	90.31	<250	<250	1,700	660	69	70	350	
VP-7/ MW-3	04/29-30/04	100.40	NP	9.96	0.00	90.44	<800	<1,000	<50	28	1.7	1.8	6.0	
VP-7/ MW-3	07/15-16/04	100.40	NP	10.40	0.00	90.00	342	<500	36,800	9,900	985	1,270	2,770	DTW measured by SAIC.
VP-7/ MW-3	08/03/04	100.40	NP	10.66	0.00	89.74	NOT SAMPLED		--	--	--	--	--	
VP-7/ MW-3	10/28-11/01/04	100.40	NP	10.76	0.00	89.64	850	<1,000	100	250	<0.5	<0.5	1.6	
VP-7/ MW-3	01/24-31/05	100.40	NP	10.13	0.00	90.27	390	<250	21,000	4,900	1,900	890	3,200	
VP-7/ MW-3	04/18-21/05	100.40	NP	9.97	0.00	90.43	4,000	<580	26,000	5,800	760	1,300	5,100	
VP-7/ MW-3	07/27-28/05	100.40	NP	10.28	0.00	90.12	NOT SAMPLED		--	--	--	--	--	
VP-7/ MW-3	11/08-10/05	100.40	NP	10.57	0.00	89.83	NOT SAMPLED		--	--	--	--	--	
VP-7/ MW-3	02/22/06	100.40	NP	9.89	0.00	90.51	NOT SAMPLED							
VP-7/ MW-3	04/17/06	100.40	NP	9.94	0.00	90.46	NOT SAMPLED		--	--	--	--	--	
VP-7/ MW-3	10/17/06	100.40	NP	12.31	0.00	88.09	NOT SAMPLED		--	--	--	--	--	
VP-8/ MW-7	11/03/86	105.33	Trace	14.22	0.00	91.11	NOT SAMPLED		--	--	--	--	--	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
VP-8/ MW-7	09/90	104.88	NP	13.3	0.00	91.58	NOT SAMPLED		--	--	--	--	--	
VP-8/ MW-7	03/26-28/91	104.88	NP	12.02	0.00	92.86	--	--	--	**280**	510	130	**1,100**	
VP-8/ MW-7	07/07/93	104.88	NP	12.23	0.00	92.65	--	--	**7,000**	**220**	210	61	480	
VP-8/ MW-7	10/95	104.88	NM	NM	--	--	--	--	**3,100**	2.5	1.2	3	16	
VP-8/ MW-7	01/97	104.88	NM	NM	--	--	--	--	**8,000**	**816**	824	26	594	
VP-8/ MW-7	04/97	104.88	NM	NM	--	--	--	--	**18,000**	**605**	786	119	**1,774**	
VP-8/ MW-7	07/97	104.88	NM	NM	--	--	--	--	**9,100 J**	**96**	246	52	980	
VP-8/ MW-7	11/97	104.88	NM	NM	--	--	--	--	**830 J**	**5.6**	7	11	32.6	
VP-8/ MW-7	12/15/99	104.88	NM	NM	--	--	**2,780**	<500	**7,640**	**540**	927	201	**1,430**	
VP-8/ MW-7	06/13/00	104.88	NM	NM	--	--	**2,280**	<1,100	233	1.10	1.81	1.95	7.99	
VP-8/ MW-7	07/24/02	104.88	NP	11.70	0.00	93.18	**1,800**	420	**1,500**	**9.4**	9.2	34	50	
VP-8/ MW-7	10/17-18/02	104.88	NP	12.78	0.00	92.10	**1,830**	<500	552	**9.75**	1.45	4.25	5.73	
VP-8/ MW-7	01/21/03	104.88	NP	12.63	0.00	92.25	**1,120**	<500	**1,910**	**139**	291	59.1	216	
VP-8/ MW-7	04/23-24/03	104.88	NP	10.72	0.00	94.16	**800**	<500	700	**65.6**	35.7	22.9	69.8	
VP-8/ MW-7	06/30-07/01/03	104.88	NP	12.45	0.00	92.43	**939**	<500	379	2.68	1.57	3.70	4.69	
VP-8/ MW-7	10/01-02/03	104.88	NP	13.49	0.00	91.39	**19,000**	**2,100**	290	3.4	1.2	5.8	11	
VP-8/ MW-7	01/21-23/04	104.88	NP	12.16	0.00	92.72	**3,400**	**620**	89	<0.5	<0.5	<0.5	<1.5	
VP-8/ MW-7	04/29-30/04	104.88	NP	11.91	0.00	92.97	**620**	<250	460	0.6	<0.5	1.6	<3.0	
VP-8/ MW-7	07/15-16/04	104.88	NP	12.74	0.00	92.14	**528**	<500	430	0.985	<0.500	1.50	2.40	DTW measured by SAIC.
VP-8/ MW-7	08/03/04	104.88	NP	12.94	0.00	91.94	NOT SAMPLED		--	--	--	--	--	
VP-8/ MW-7	10/28-11/01/04	104.88	NP	13.09	0.00	91.79	**130,000**	<20,000	210	2.7	0.7	2.6	9.9	
VP-8/ MW-7	01/24-31/05	104.88	NP	12.49	0.00	92.39	<250	<250	450	**5.1**	9.9	3.2	21	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
VP-8/ MW-7	04/18-21/05	104.88	NP	12.30	0.00	92.58	<250	<250	240	0.9	<0.5	6.2	4.7	
VP-8/ MW-7	07/27-28/05	104.88	NP	12.59	0.00	92.29	NOT SAMPLED		--	--	--	--	--	
VP-8/ MW-7	11/08-10/05	104.88	NP	13.12	0.00	91.76	NOT SAMPLED		--	--	--	--	--	
VP-8/ MW-7	02/22/06	104.88	NP	11.05	0.00	93.83	NOT SAMPLED		--	--	--	--	--	
VP-8/ MW-7	04/17/06	104.88	NP	12.40	0.00	92.48	NOT SAMPLED		--	--	--	--	--	
VP-8/ MW-7	08/08/06	104.88	NP	14.00	0.00	90.88	--	--	380	<2.0	0.9	2.8	6.5	
VP-9	12/15/99	112.35	NM	NM	--	--	<250	<500	118	<0.500	<0.500	<0.500	<1.00	Perched well.
VP-9	06/14/00	112.35	NM	NM	--	--	**1,420**	<1,130	474	4.97	<1.30	55.6	4.48	Perched well.
VP-9	07/24/02	112.35	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	Perched well.
VP-9	10/17-18/02	112.35	NP	11.90	0.00	100.45	**13,200**	**786**	**1,910**	**11.3**	2.62	8.86	14.7	Perched well. Laboratory report indicates the heavy oil range organics present are due to hydrocarbons eluting primarily in the diesel range.
VP-9	01/21/03	112.35	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	Perched well.
VP-9	04/23-24/03	112.35	NP	8.28	0.00	104.07	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	Perched well.
VP-9	06/30-07/01/03	112.35	NP	9.74	0.00	102.61	<250	<500	681	1.22	0.735	5.07	3.28	Perched well.
VP-9	10/01-02/03	112.35	NP	11.72	0.00	100.63	**5,400**	**1,300**	**1,600**	**5.3**	1.4	2.3	<10	Perched well.
VP-9	01/21-23/04	112.35	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	Perched well.
VP-9	04/29-30/04	112.35	NP	9.58	0.00	102.77	**1,500**	<1,000	750	0.8	<0.5	13	<1.5	Perched well.
VP-9	07/15-16/04	112.35	NP	11.15	0.00	101.20	259	<500	**1,270**	1.67	0.699	2.79	5.77	Perched well.
VP-9	08/03/04	112.35	NP	12.50	0.00	99.85	NOT SAMPLED		--	--	--	--	--	Perched well.
VP-9	10/28-11/01/04	112.35	NP	9.82	0.00	102.53	<800	<1,000	610	<0.5	<0.5	<0.5	<1.5	Perched well.
VP-9	01/24-31/05	112.35	NP	10.30	0.00	102.05	<250	<250	100	<0.5	<0.5	<0.5	<1.5	Perched well.
VP-9	04/18-21/05	112.35	NP	9.00	0.00	103.35	NOT SAMPLED		--	--	--	--	--	Perched well.
VP-9	07/27-28/05	112.35	NP	9.77	0.00	102.58	NOT SAMPLED		--	--	--	--	--	Perched well.

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
VP-9	11/08-10/05	112.35	NP	DRY	0.00	--	NOT SAMPLED		--	--	--	--	--	Perched well.
VP-9	02/22/06	112.35	NP	9.38	0.00	102.97	NOT SAMPLED		--	--	--	--	--	Perched well.
VP-9	04/17/06	112.35	NP	9.10	0.00	103.25	NOT SAMPLED		--	--	--	--	--	Perched well.
MW-4	11/03/86	102.38	NP	13.55	0.00	88.83	NOT SAMPLED		--	--	--	--	--	
MW-4	09/90	102.08	NP	12.87	0.00	89.21	NOT SAMPLED		--	--	--	--	--	
MW-4	03/26-28/91	102.08	NP	11.78	0.00	90.30	--	--	--	**10,000**	**12,000**	500	**9,800**	
MW-4	10/95	102.08	NM	NM	--	--	--	--	**95,000**	**19,600 E**	**12,000**	**2,070**	**10,800**	
MW-4	01/97	102.08	NM	NM	--	--	--	--	**88,000**	**12,900**	**12,400**	**1,400**	**10,600**	
MW-4	04/97	102.08	NM	NM	--	--	--	--	**100,000**	**14,300**	**14,500**	**1,700**	**11,000**	
MW-4	07/97	102.08	NM	NM	--	--	--	--	**120,000**	**19,600**	**19,700**	**2,100**	**13,100**	
MW-4	11/97	102.08	NM	NM	--	--	--	--	**89,000**	**17,500**	**16,000**	**1,900**	**12,200**	
MW-4	12/15/99	102.08	NM	NM	--	--	**3,340**	<500	**73,300**	**13,700**	**13,500**	**1,830**	**11,000**	
MW-4	06/14/00	102.08	NM	NM	--	--	**3,390**	<1,240	**74,400**	**14,400**	**9,440**	**1,840**	**10,800**	
MW-4	07/24/02	102.07	NP	11.18	0.00	90.89	**10,000**	**680**	**83,000**	**11,000 / 12,000**	**9,900 / 10,000**	**1,800 / 1,800**	**11,000 / 12,400**	BTEX analyzed by EPA Methods 8021B and 8260B. Second concentrations listed were obtained by EPA Method 8260B.
MW-4	10/17-18/02	102.07	NP	11.98	0.00	90.09	**9,860**	**697**	**110,000**	**14,500**	**11,600**	**2,630**	**15,200**	Laboratory report indicates the heavy oil range organics present are due to hydrocarbons eluting primarily in the diesel range.
MW-4	10/17-18/02	102.07	--	--	--	--	**7,100**	<500	**92,400**	**12,400**	**9,980**	**2,090**	**12,200**	Duplicate sample
MW-4	01/21/03	102.07	NP	11.81	0.00	90.26	**2,540**	<500	**80,000**	**10,700**	**10,100**	**1,920**	**11,700**	Laboratory report indicates the sample chromatographic pattern does not resemble the fuel standard used for quantitation.
MW-4	04/23-24/03	102.07	NP	11.03	0.00	91.04	**1,680**	<500	**79,300**	**8,990**	**7,350**	**1,780**	**10,300**	
MW-4	06/30-07/01/03	102.07	NP	11.55	0.00	90.52	**3,910**	<500	**108,000**	**12,100**	**11,200**	**2,630**	**15,300**	
MW-4	10/01-02/03	102.07	NP	12.46	0.00	89.61	**3,800**	<500	**100,000**	**9,700**	**11,000**	**2,000**	**12,000**	
MW-4	01/21-23/04	102.07	NP	11.59	0.00	90.48	**62,000**	**2,800**	**93,000**	**11,000**	**10,000**	**1,800**	**12,000**	
MW-4	04/29-30/04	102.07	NP	11.48	0.00	90.59	**13,000**	**610**	**80,000**	**8,900**	**8,200**	**1,600**	**11,000**	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
MW-4	07/15-16/04	102.07	NP	13.41	0.00	88.66	**943**	<500	**100,000**	**10,300**	**7,600**	**2,090**	**13,300**	DTW measured by SAIC.
MW-4	08/03/04	102.07	NP	12.09	0.00	89.98	NOT SAMPLED		--	--	--	--	--	
MW-4	10/28-11/01/04	102.07	NP	12.26	0.00	89.81	**7,500**	<1,000	**71,000**	**9,000**	**5,900**	**2,000**	**12,000**	
MW-4	01/24-31/05	102.07	NP	11.68	0.00	90.39	**1,500**	<250	**56,000**	**8,900**	**5,100**	**1,700**	**9,600**	
MW-4	04/18-21/05	102.07	NP	11.47	0.00	90.60	**3,700**	<510	**64,000**	**9,200**	**6,800**	**2,000**	**12,000**	
MW-4	07/27-28/05	102.07	NP	11.73	0.00	90.34	NOT SAMPLED		--	--	--	--	--	
MW-4	11/08-10/05	102.07	NP	12.12	0.00	89.95	NOT SAMPLED		--	--	--	--	--	
MW-4	02/22/06	102.07	NP	10.38	0.00	91.69	NOT SAMPLED							
MW-4	04/17/06	102.07	NP	11.59	0.00	90.48	NOT SAMPLED		--	--	--	--	--	
MW-4	08/08/06	102.07	NP	13.37	0.00	88.70	--	--	**23,000**	**1,500**	870	**750**	**4,400**	
MW-4	08/19/06	102.07	13.72	13.78	0.06	88.34	NOT SAMPLED		--	--	--	--	--	System performance monitoring
MW-4	10/17/06	102.07	NP	13.92	0.00	88.15	NOT SAMPLED		--	--	--	--	--	
MW-6	11/03/86	113.71	22.03	24.29	2.26	91.23	NOT SAMPLED		--	--	--	--	--	
MW-6	09/90	113.38	21.14	21.95	0.81	92.08	NOT SAMPLED		--	--	--	--	--	
MW-6	03/26-28/91	113.38	20.55	21.22	0.67	92.70	--	--	--	**25,000**	**29,000**	**2,500**	**19,000**	
MW-6	06/25/93	113.38	NP	21.00	0.00	92.38	NOT SAMPLED		--	--	--	--	--	
MW-6	07/07/93	113.38	20.70	22.30	1.60	92.36	NOT SAMPLED		--	--	--	--	--	
MW-6	10/95	113.38	NM	NM	--	--	--	--	**62,000**	**12,000 E**	**13,800 E**	**920**	**5,690**	
MW-6	01/97	113.38	NM	NM	--	--	--	--	**54,000**	**7,290**	**12,400**	**2,340**	**19,800**	
MW-6	07/24/02	113.32	NP	19.76	0.00	93.56	**29,000**	<10,000	**31,000**	**8,900**	**1,600**	**820**	**4,200**	
MW-6	10/17-18/02	113.32	20.64	20.69	0.05	92.67	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	
MW-6	01/21/03	113.32	21.71	21.74	0.03	91.60	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
MW-6	04/23-24/03	113.32	20.88	20.91	0.03	92.43	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	
MW-6	06/30-07/01/03	113.32	21.38	21.41	0.03	91.93	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	
MW-6	10/01-02/03	113.32	23.04	23.07	0.03	90.27	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	
MW-6	01/21-23/04	113.32	INACCESSIBLE - JUNKED VEHICLE OVER WELL				--	--	--	--	--	--	--	
MW-6	04/29-30/04	113.32	20.20	20.22	0.02	93.12	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	Absorbent sock in well.
MW-6	07/15-16/04	113.32	NP	20.51	0.00	92.81	**3,800**	<500	**46,600**	**9,610**	**3,190**	**758**	**3,060**	DTW measured by SAIC.
MW-6	08/03/04	113.32	NP	20.65	0.00	92.67	NOT SAMPLED		--	--	--	--	--	
MW-6	10/28-11/01/04	113.32	NP	20.93	0.00	92.39	**9,200**	<960	**24,000**	**8,600**	**2,800**	690	**3,100**	
MW-6	01/24-31/05	113.32	NP	20.38	0.00	92.94	**11,000**	<480	**5,600**	**220**	60	110	310	
MW-6	04/18-21/05	113.32	NP	20.31	0.00	93.01	**7,700**	<1,000	**3,600**	**1,000**	120	110	360	
MW-6	07/27-28/05	113.32	NP	20.39	0.00	92.93	NOT SAMPLED		--	--	--	--	--	
MW-6	11/08-10/05	113.32	NP	20.79	0.00	92.53	NOT SAMPLED		--	--	--	--	--	
MW-6	02/22/06	113.32	NP	19.49	0.00	93.83	NOT SAMPLED							
MW-6	04/17/06	113.32	NP	26.22	0.00	87.10	NOT SAMPLED		--	--	--	--	--	
MW-6	08/09/06	113.32	NP	25.85	0.00	87.47	**14,000**	<2,300	**15,000**	**1,900**	**1,000**	590	**1,700**	
MW-6	10/17/06	113.32	NP	27.06	0.00	86.26	NOT SAMPLED		--	--	--	--	--	
MW-9	11/03/86	114.65	NP	22.56	0.00	92.09	NOT SAMPLED		--	--	--	--	--	
MW-9	09/90	114.40	NP	21.28	0.00	93.12	NOT SAMPLED		--	--	--	--	--	
MW-9	03/26-28/91	114.65	20.44	20.61	0.17	94.18	--	--	--	**1,600**	**2,900**	250	**3,100**	
MW-9	06/25/93	114.65	NP	20.12	0.00	94.53	NOT SAMPLED		--	--	--	--	--	
MW-9	07/07/93	114.65	NP	20.11	0.00	94.54	NOT SAMPLED		--	--	--	--	--	
MW-9	10/95	114.65	NM	NM	--	--	--	--	**3,400**	**3,520**	70 J	<200	312 J	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
MW-9	01/97	114.65	NM	NM	--	--	--	--	**4,400**	**2,600**	53	310	285	
MW-9	04/97	114.65	NM	NM	--	--	--	--	**9,100**	**2,980**	173	413	674	
MW-9	07/97	114.65	NM	NM	--	--	--	--	**2,200 J**	**2,680**	127	460	620 J	
MW-9	11/97	114.65	NM	NM	--	--	--	--	**5,000**	**2,010**	80	334	400	
MW-9	12/15/99	114.65	NM	NM	--	--	**8,510**	<500	**4,460**	**831**	22.4	274	138	
MW-9	06/14/00	114.65	NM	NM	--	--	**6,070**	<500	**4,740**	**786**	26.0	274	156	
MW-9	10/17-18/02	114.27	NP	20.88	0.00	93.39	**43,600**	**671**	**6,380**	**493**	13.0	230	107	Laboratory report indicates the heavy oil-range organics present are due to hydrocarbons eluting primarily in the diesel range.
MW-9	01/21/03	114.27	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
MW-9	04/23-24/03	114.27	NP	20.04	0.00	94.23	**3,680**	<500	**6,760**	**388**	15.9	277	105	
MW-9	06/30-07/01/03	114.27	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
MW-9	10/01-02/03	114.27	NP	21.26	0.00	93.01	**33,000**	<5,000	**3,500**	**110**	30	100	<100	
MW-9	01/21-23/04	114.27	NP	20.36	0.00	93.91	**100,000**	<5,100	**2,300**	**7.2**	2.4	45	19	
MW-9	04/29-30/04	114.27	NP	20.38	0.00	93.89	**92,000**	<5,000	**1,200**	2.0	1.2	10	7.8	
MW-9	07/15-16/04	114.27	NP	20.77	0.00	93.50	**2,540**	<500	**9,540**	3.84	10.4	25.9	31.6	DTW measured by SAIC.
MW-9	08/03/04	114.27	NP	20.92	0.00	93.35	NOT SAMPLED		--	--	--	--	--	
MW-9	10/28-11/01/04	114.27	NP	21.22	0.00	93.05	**3,900**	420	300	1.4	0.5	1.9	<3.0	
MW-9	01/24-31/05	114.27	NP	20.66	0.00	93.61	**140,000**	<5,300	730	1.7	<1.0	2.7	<6.0	
MW-9	04/18-21/05	114.27	NP	20.59	0.00	93.68	**14,000**	<630	480	1.4	<1.0	5.7	3.1	
MW-9	07/27-28/05	114.27	NP	20.65	0.00	93.62	NOT SAMPLED		--	--	--	--	--	
MW-9	11/08-10/05	114.27	NP	21.29	0.00	92.98	NOT SAMPLED		--	--	--	--	--	
MW-9	02/22/06	114.27	NP	19.75	0.00	94.52	NOT SAMPLED		--	--	--	--	--	
MW-9	04/17/06	114.27	NP	22.55	0.00	91.72	NOT SAMPLED		--	--	--	--	--	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
MW-9	08/09/06	114.27	NP	22.80	0.00	91.47	**2,700**	<540	450	**66**	1.9	0.8	47	
MW-9	10/17/06	114.27	NP	24.12	0.00	90.15	NOT SAMPLED		--	--	--	--	--	
MW-10	11/03/86	115.75	NP	14.84	0.00	100.91	NOT SAMPLED		--	--	--	--	--	
MW-10	09/90	115.49	NP	14.75	0.00	100.74	NOT SAMPLED		--	--	--	--	--	
MW-10	03/26-28/91	115.75	NP	13.14	0.00	102.61	--	--	--	<5	<5	<5	<5	
MW-10	03/26-28/91	--	--	--	--	--	--	--	--	<5	<5	<5	<5	Duplicate sample
MW-10	06/25/93	115.75	NP	13.63	0.00	102.12	NOT SAMPLED		--	--	--	--	--	
MW-10	07/07/93	115.75	NP	13.81	0.00	101.94	--	--	380	**13**	<5.0	11	24	
MW-10	10/95	115.75	NM	NM	--	--	--	--	780	1.8	2.9	0.82 J	5.6	
MW-10	01/97	115.75	NM	NM	--	--	--	--	180	1.5	<1	<1	<2	
MW-10	04/97	115.75	NM	NM	--	--	--	--	420	**5.1**	1	<1	2.0 J	
MW-10	07/97	115.75	NM	NM	--	--	--	--	**1,100**	10	2.1	2.4	4.34 J	
MW-10	11/97	115.75	NM	NM	--	--	--	--	**1,000**	4.2	2	4.8	2.2 J	
MW-10	09/09/99	115.75	NP	13.36	0.00	102.39	NOT SAMPLED		--	--	--	--	--	
MW-10	12/15/99	115.75	NM	NM	--	--	353	<500	618	**7.02**	<0.910	<0.850	<4.22	
MW-10	06/14/00	115.75	NM	NM	--	--	<250	<500	99.2	1.56	ND	ND	ND	
MW-10	07/24/02	115.28	NM	13.14	0.00	102.14	320	**600**	240	2.5/2	<0.50/<0.5	<1.0/0.5	<1.5/<0.5	BTEX analyzed by EPA Methods 8021B and 8260B. Second concentrations listed were obtained by EPA Method 8260B.
MW-10	10/17-18/02	115.28	NM	13.59	0.00	101.69	**667**	<500	490	3.42	<0.500	1.34	5.00	
MW-10	01/21/03	115.28	NM	12.46	0.00	102.82	<250	<500	416	3.44	0.550	0.519	3.24	
MW-10	04/23-24/03	115.28	NM	11.76	0.00	103.52	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	Sample broke during transport to laboratory.
MW-10	06/30-07/01/03	115.28	NM	12.91	0.00	102.37	<250	<500	255	2.01	<0.500	0.535	2.53	
MW-10	10/01-02/03	115.28	NM	13.68	0.00	101.60	<250	<250	190	2.6	<0.5	0.5	<3.0	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
MW-10	01/21-23/04	115.28	NM	11.99	0.00	103.29	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	
MW-10	04/29-30/04	115.28	NM	13.23	0.00	102.05	<250	<250	<50	1.5	<0.5	<0.5	<1.5	
MW-10	07/15-16/04	115.28	NM	13.43	0.00	101.85	<250	<500	362	2.75	<0.500	0.549	3.45	DTW measured by SAIC.
MW-10	08/03/04	115.28	NM	13.53	0.00	101.75	NOT SAMPLED		--	--	--	--	--	
MW-10	10/28-11/01/04	115.28	NM	13.31	0.00	101.97	<82	<100	210	4.1	<0.5	1.2	2.1	
MW-10	01/24-31/05	115.28	NM	12.36	0.00	102.92	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	
MW-10	04/18-21/05	115.28	NM	12.70	0.00	102.58	NOT SAMPLED		--	--	--	--	--	
MW-10	07/27-28/05	115.28	NM	13.39	0.00	101.89	NOT SAMPLED		--	--	--	--	--	
MW-10	11/08-10/05	115.28	NM	13.11	0.00	102.17	NOT SAMPLED		--	--	--	--	--	
MW-10	02/22/06	115.28	NM	11.84	0.00	103.44	NOT SAMPLED		--	--	--	--	--	
MW-10	04/17/06	115.28	NM	14.66	0.00	100.62	NOT SAMPLED		--	--	--	--	--	
MW-10	10/17/06	115.28	NM	14.68	0.00	100.60	NOT SAMPLED		--	--	--	--	--	
MW-11	03/26-28/91	97.32	NP	11.7	0.00	85.62	--	--	--	<5	<5	<5	<5	
MW-11	07/24/02	97.32	NP	11.16	0.00	86.16	<250	<250	<50	<0.50/<0.5	<0.50/<0.5	<0.50/<0.5	<1.5/<0.5	BTEX analyzed by EPA Methods 8021B and 8260B. Second concentrations listed were obtained by EPA Method 8260B.
MW-11	10/17-18/02	97.32	NP	11.43	0.00	85.89	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	
MW-11	01/21/03	97.32	NP	11.29	0.00	86.03	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	
MW-11	04/23-24/03	97.32	NP	11.09	0.00	86.23	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	
MW-11	06/30-07/01/03	97.32	NP	11.39	0.00	85.93	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	
MW-11	10/01-02/03	97.32	NP	12.10	0.00	85.22	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	
MW-11	01/21-23/04	97.32	NP	11.69	0.00	85.63	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	
MW-11	04/29-30/04	97.32	NP	11.41	0.00	85.91	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	
MW-11	07/15-16/04	97.32	NP	11.56	0.00	85.76	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	DTW measured by SAIC.

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
MW-11	08/03/04	97.32	NP	11.65	0.00	85.67	NOT SAMPLED		--	--	--	--	--	
MW-11	10/28-11/01/04	97.32	NP	11.73	0.00	85.59	<78	<98	<50	<0.5	<0.5	<0.5	<1.5	
MW-11	01/24-31/05	97.32	NP	11.35	0.00	85.97	NOT SAMPLED		--	--	--	--	--	
MW-11	04/18-21/05	97.32	NP	11.41	0.00	85.91	NOT SAMPLED		--	--	--	--	--	
MW-11	07/27-28/05	97.32	NP	11.44	0.00	85.88	NOT SAMPLED		--	--	--	--	--	
MW-11	11/08-10/05	97.32	NP	11.52	0.00	85.80	NOT SAMPLED		--	--	--	--	--	
MW-11	04/17/06	97.32	NP	11.29	0.00	86.03	NOT SAMPLED		--	--	--	--	--	
MW-11	08/08/06	97.32	NP	11.26	0.00	86.06	NOT SAMPLED		--	--	--	--	--	
MW-11	10/17/06	97.32	NP	11.39	0.00	85.93	NOT SAMPLED		--	--	--	--	--	
MW-12	10/17-18/02	113.36	NP	12.22	0.00	101.14	<250	<500	<50.0	0.516/<1.00	0.869/<1.00	<0.500 / <1.00	<1.00/<2.00	Perched well. BTEX analyzed by EPA Methods 8021B and 8260B. Second concentrations listed were obtained by EPA Method 8260B.
MW-12	01/21/03	113.36	NP	11.72	0.00	101.64	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	Perched well.
MW-12	04/23-24/03	113.36	NP	11.04	0.00	102.32	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	Perched well.
MW-12	06/30-07/01/03	113.36	NP	11.32	0.00	102.04	**1,690**	<500	**1,040**	2.91	1.05	10.0	26.5	Perched well.
MW-12	10/01-02/03	113.36	NP	12.12	0.00	101.24	470	<250	69	1.2	<0.5	<0.5	<1.5	Perched well.
MW-12	01/21-23/04	113.36	NP	10.02	0.00	103.34	**1,500**	**5,700**	<50	<0.5	<0.5	<0.5	<1.5	Perched well.
MW-12	04/29-30/04	113.36	NP	10.59	0.00	102.77	260	440	<50	<0.5	<0.5	<0.5	<1.5	Perched well.
MW-12	07/15-16/04	113.36	NP	11.14	0.00	102.22	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	Perched well. DTW measured by SAIC.
MW-12	07/19/04	113.36	NM	NM	--	--	<800	<1,000	<50	<0.5	<0.5	<0.5	<1.5	Perched well.
MW-12	08/03/04	113.36	NP	12.55	0.00	100.81	NOT SAMPLED		--	--	--	--	--	Perched well.
MW-12	10/28-11/01/04	113.36	NP	12.03	0.00	101.33	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	Perched well.
MW-12	01/24-31/05	113.36	NP	12.22	0.00	101.14	NOT SAMPLED		--	--	--	--	--	Perched well.
MW-12	04/18-21/05	113.36	NP	12.27	0.00	101.09	NOT SAMPLED		--	--	--	--	--	Perched well.

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
MW-12	07/27-28/05	113.36	NP	12.31	0.00	101.05	NOT SAMPLED	--	--	--	--	--	Perched well.	
MW-12	11/08-10/05	113.36	NP	12.29	0.00	101.07	NOT SAMPLED	--	--	--	--	--	Perched well.	
MW-12	02/22/06	113.36	NP	10.70	0.00	102.66	NOT SAMPLED	--	--	--	--	--	Perched well.	
MW-12	04/17/06	113.36	NP	11.53	0.00	101.83	NOT SAMPLED	--	--	--	--	--	Perched well.	
MW-12	10/17/06	113.36	NP	12.60	0.00	100.76	NOT SAMPLED	--	--	--	--	--	Perched well.	
MW-13	10/17-18/02	114.80	NP	19.31	0.00	95.49	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
MW-13	01/21/03	114.80	NP	19.01	0.00	95.79	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
MW-13	04/23-24/03	114.80	INACCESSIBLE - VEHICLE PARKED OVER WELL				--	--	--	--	--	--		
MW-13	06/30-07/01/03	114.80	NP	18.72	0.00	96.08	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
MW-13	10/01-02/03	114.80	NP	19.32	0.00	95.48	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
MW-13	01/21-23/04	114.80	INACCESSIBLE - VEHICLE PARKED OVER WELL				--	--	--	--	--	--		
MW-13	04/29-30/04	114.80	NP	18.72	0.00	96.08	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
MW-13	07/15-16/04	114.80	NP	19.12	0.00	95.68	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	DTW measured by SAIC.
MW-13	08/03/04	114.80	NP	19.26	0.00	95.54	NOT SAMPLED	--	--	--	--	--	--	
MW-13	10/28-11/01/04	114.80	NP	19.37	0.00	95.43	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
MW-13	01/24-31/05	114.80	NP	19.19	0.00	95.61	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
MW-13	04/18-21/05	114.80	NP	18.97	0.00	95.83	NOT SAMPLED	--	--	--	--	--	--	
MW-13	07/27-28/05	114.80	NP	19.06	0.00	95.74	NOT SAMPLED	--	--	--	--	--	--	
MW-13	11/08-10/05	114.80	NP	19.40	0.00	95.40	NOT SAMPLED	--	--	--	--	--	--	
MW-13	02/22/06	114.80	NP	18.03	0.00	96.77	NOT SAMPLED	--	--	--	--	--	--	
MW-13	04/17/06	114.80	NP	19.45	0.00	95.35	NOT SAMPLED	--	--	--	--	--	--	
MW-13	10/17/06	114.80	NP	19.28	0.00	95.52	NOT SAMPLED	--	--	--	--	--	--	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
MW-14	11/14/02	101.64	NP	11.88	0.00	89.76	**4,710**	<500	**43,100**	**9,900**	**4,930**	**1,540**	**6,020**	Laboratory report indicates this sample was received and analyzed unpreserved.
MW-14	01/21/03	101.64	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
MW-14	04/23-24/03	101.64	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
MW-14	06/30-07/01/03	101.64	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
MW-14	10/01-02/03	101.64	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
MW-14	10/14/03	101.64	NM	NM	--	--	**2,100**	130	**69,000**	**12,000**	**9,900**	**1,600**	**7,900**	
MW-14	01/21-23/04	101.64	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
MW-14	04/29-30/04	101.64	NP	11.12	0.00	90.52	**1,500**	<250	**27,000**	**4,800**	**2,500**	**910**	**3,300**	
MW-14	07/15-16/04	101.64	NP	11.44	0.00	90.20	**836**	<500	**61,800**	**10,400**	**5,550**	**1,350**	**5,890**	DTW measured by SAIC. Laboratory report indicates results in the diesel-range organics are primarily due to overlap from a gasoline range product.
MW-14	10/26-27/04	101.64	NM	NM	--	--	<800	<1,000	**57,000**	**13,000**	**11,000**	**1,500**	**8,300**	
MW-14	10/28-11/01/04	101.64	NP	11.94	0.00	89.70	NOT SAMPLED		--	--	--	--	--	
MW-14	01/24-31/05	101.64	NP	11.37	0.00	90.27	480	<250	**24,000**	**4,400**	**2,300**	**760**	**3,300**	
MW-14	04/18-21/05	101.64	NP	11.19	0.00	90.45	**1,500**	<250	**23,000**	**5,000**	**2,500**	**860**	**3,700**	Laboratory report indicates the observed sample pattern is not typical of diesel/#2 fuel oil.
MW-14	07/27-28/05	101.56	NP	11.36	0.00	90.20	**2,300**	<250	**24,000**	**5,000**	**2,200**	**760**	**3,300**	Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes earlier in the diesel range.
MW-14	11/08-10/05	101.56	NP	11.82	0.00	89.74	**2,600**	<520	**37,000**	**8,900**	**4,600**	**1,100**	**4,900**	Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes earlier in the diesel range.
MW-14	04/17/06	101.56	NP	11.26	0.00	90.30	**1,900**	<100	**40,000**	**4,400**	**3,300**	**1,300**	**7,200**	Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes earlier in the diesel range.
MW-14	08/08/06	101.56	NP	13.10	0.00	88.46	**6,800**	<1,000	**52,000**	**4,200**	**3,900**	**1,500**	**8,600**	
MW-14	10/17/06	101.56	NP	13.65	0.00	87.91	NOT SAMPLED		--	--	--	--	--	
MW-15	11/14/02	99.03	NP	9.44	0.00	89.59	**780**	<500	**3,280**	**1,640**	5.23	5.06	<10.0	
MW-15	01/21/03	99.03	NP	9.29	0.00	89.74	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	
MW-15	04/23-24/03	99.03	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
MW-15	06/30-07/01/03	99.03	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
MW-15	10/01-02/03	99.03	NP	9.72	0.00	89.31	410	<250	**810**	**1,700**	60	48	110	
MW-15	01/21-23/04	99.03	NP	8.94	0.00	90.09	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	
MW-15	04/29-30/04	99.03	NP	8.19	0.00	90.84	**700**	390	<50	<0.5	<0.5	<0.5	<1.5	
MW-15	07/15-16/04	99.03	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
MW-15	08/03/04	99.03	NP	13.82	0.00	85.21	NOT SAMPLED		--	--	--	--	--	
MW-15	10/26-27/04	99.03	NM	NM	--	--	<800	<1,000	**1,700**	**230**	99	99	260	
MW-15	10/28-11/01/04	99.03	NP	9.65	0.00	89.38	NOT SAMPLED		--	--	--	--	--	
MW-15	01/24-31/05	99.03	NP	9.00	0.00	90.03	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	
MW-15	04/18-21/05	99.03	NP	8.98	0.00	90.05	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	
MW-15	07/27-28/05	99.03	NP	9.31	0.00	89.72	NOT SAMPLED		--	--	--	--	--	
MW-15	11/08-10/05	99.03	NP	9.26	0.00	89.77	NOT SAMPLED		--	--	--	--	--	
MW-15	02/22/06	99.03	NP	8.21	0.00	90.82	NOT SAMPLED		--	--	--	--	--	
MW-15	04/17/06	99.03	NP	8.67	0.00	90.36	NOT SAMPLED		--	--	--	--	--	
MW-15	10/18/06	99.03	NP	11.12	0.00	87.91	NOT SAMPLED		--	--	--	--	--	
MW-16	11/14/02	101.83	NP	12.36	0.00	89.47	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	
MW-16	01/21/03	101.83	NP	11.88	0.00	89.95	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	
MW-16	04/23-24/03	101.83	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
MW-16	06/30-07/01/03	101.83	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
MW-16	10/01-02/03	101.83	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
MW-16	10/14/03	101.83	NM	NM	--	--	<160	<200	740	**26**	1	3.8	3.6	
MW-16	01/21-23/04	101.83	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
MW-16	04/29-30/04	101.83	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
MW-16	05/03/04	101.83	NP	11.53	0.00	90.30	<75	<94	150	2.1	<0.5	1.7	<1.5	
MW-16	07/15-16/04	101.83	NP	11.89	0.00	89.94	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	
MW-16	08/03/04	101.83	NP	12.03	0.00	89.80	NOT SAMPLED		--	--	--	--	--	
MW-16	10/26-27/04	101.83	NM	NM	--	--	<800	<1,000	220	**9.1**	1.1	5.7	2.3	
MW-16	10/28-11/01/04	101.83	NP	12.42	0.00	89.41	NOT SAMPLED		--	--	--	--	--	
MW-16	01/24-31/05	101.83	NP	11.91	0.00	89.92	<250	<250	210	**8.4**	1	6.0	3.2	
MW-16	04/18-21/05	101.83	NP	11.69	0.00	90.14	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	
MW-16	07/27-28/05	101.75	NP	11.81	0.00	89.94	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	
MW-16	11/08-10/05	101.75	NP	12.36	0.00	89.39	<79	<99	<48	0.9	<0.5	0.7	<1.5	
MW-16	04/17/06	101.75	NP	11.59	0.00	90.16	<81	100	<48	<0.5	<0.5	<0.5	<1.5	
MW-16	08/08/06	101.75	NP	13.33	0.00	88.42	NOT SAMPLED		--	--	--	--	--	
MW-16	10/17/06	101.75	NP	14.08	0.00	87.67	NOT SAMPLED		--	--	--	--	--	
MW-17	11/14/02	99.29	NP	10.00	0.00	89.29	<250	<500	**2,780**	**569**	31.0	91.1	250	
MW-17	01/21/03	99.29	NP	9.62	0.00	89.67	<250	<500	<50.0	<0.500	<0.500	<0.500	<1.00	
MW-17	04/23-24/03	99.29	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
MW-17	06/30-07/01/03	99.29	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
MW-17	10/01-02/03	99.29	NP	10.30	0.00	88.99	<250	<250	**1,100**	**420**	69	38	130	
MW-17	01/21-23/04	99.29	NP	9.48	0.00	89.81	<250	<250	<50	1.6	<0.5	<0.5	<1.5	
MW-17	04/29-30/04	99.29	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
MW-17	05/03/04	99.29	NP	9.31	0.00	89.98	190	<95	**2,300**	**370**	20	89	100	
MW-17	07/15-16/04	99.29	NP	9.72	0.00	89.57	<250	<500	**1,310**	**171**	8.98	43.1	83.5	DTW measured by SAIC.

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
MW-17	08/03/04	99.29	NP	9.90	0.00	89.39	NOT SAMPLED		--	--	--	--	--	
MW-17	10/28-11/01/04	99.29	NP	10.11	0.00	89.18	<400	<500	**5,600**	**1,900**	280	230	700	
MW-17	01/24-31/05	99.29	NP	9.42	0.00	89.87	<250	<250	310	**160**	4.9	17	27	
MW-17	02/17/05	99.29	NP	9.37	0.00	89.92	<76	<95	**1,000**	**320**	12	41	52	
MW-17	04/18-21/05	99.29	NP	9.32	0.00	89.97	<250	**750**	<50	**18**	0.6	<0.5	<3.0	
MW-17	07/27-28/05	99.29	NP	9.64	0.00	89.65	<250	<250	730	**230**	9.3	17	26	
MW-17	11/08-10/05	99.29	NP	9.98	0.00	89.31	<76	<95	110	**65**	2.0	1.5	4.9	
MW-17	04/17-19/06	99.29	NP	9.26	0.00	90.03	<79	<98	<48	0.7	<0.5	<0.5	<1.5	
MW-17	08/08/06	99.29	NP	10.98	0.00	88.31	--	--	**1,200**	**400**	41	39	130	
MW-17	10/17/06	99.29	NP	11.65	0.00	87.64	NOT SAMPLED		--	--	--	--	--	
MW-18	04/29-30/04	101.52	NP	10.95	0.00	90.57	**1,700**	<250	**76,000**	**9,200**	**11,000**	**1,400**	**8,400**	
MW-18	07/15/04	101.52	NP	11.36	0.00	90.16	NOT SAMPLED		--	--	--	--	--	DTW measured by SAIC.
MW-18	08/03/04	101.52	NP	11.66	0.00	89.86	NOT SAMPLED		--	--	--	--	--	
MW-18	10/28-11/01/04	101.52	NP	11.72	0.00	89.80	230	<97	**42,000**	**4,700**	**5,400**	**860**	**4,300**	
MW-18	01/24-31/05	101.52	NP	11.10	0.00	90.42	270	<250	**24,000**	**2,800**	**3,400**	600	**3,100**	
MW-18	04/18-21/05	101.52	NP	10.91	0.00	90.61	**1,500**	<250	**20,000**	**2,500**	**3,200**	540	**2,900**	
MW-18	07/27-28/05	101.52	NP	11.22	0.00	90.30	NOT SAMPLED		--	--	--	--	--	
MW-18	11/08-10/05	101.52	NP	11.53	0.00	89.99	NOT SAMPLED		--	--	--	--	--	
MW-18	02/22/06	101.52	NP	9.83	0.00	91.69	NOT SAMPLED							
MW-18	04/17/06	101.52	NP	10.93	0.00	90.59	NOT SAMPLED		--	--	--	--	--	
MW-18	08/08/06	101.52	NP	12.65	0.00	88.87	--	--	**1,100**	**210**	74	43	130	
MW-18	10/17/06	101.52	NP	13.29	0.00	88.23	NOT SAMPLED		--	--	--	--	--	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
MW-19	04/29-30/04	101.18	NP	10.63	0.00	90.55	**680**	<250	**18,000**	**1,700**	**1,700**	470	**2,400**	
MW-19	07/15-16/04	101.18	NP	11.07	0.00	90.11	NOT SAMPLED		--	--	--	--	--	DTW measured by SAIC.
MW-19	08/03/04	101.18	NP	11.31	0.00	89.87	NOT SAMPLED		--	--	--	--	--	
MW-19	10/28-11/01/04	101.18	NP	11.41	0.00	89.77	270	<100	**21,000**	**1,900**	**1,400**	**880**	**3,500**	
MW-19	01/24-31/05	101.18	NP	10.78	0.00	90.40	280	<250	**25,000**	**1,700**	**1,500**	**940**	**3,700**	
MW-19	04/18-21/05	101.18	NP	10.61	0.00	90.57	**1,200**	<250	**23,000**	**1,900**	**1,400**	**1,000**	**3,800**	
MW-19	07/27-28/05	101.18	NP	10.92	0.00	90.26	NOT SAMPLED		--	--	--	--	--	
MW-19	11/08-10/05	101.18	NP	11.25	0.00	89.93	NOT SAMPLED		--	--	--	--	--	
MW-19	02/22/06	101.18	NP	9.55	0.00	91.63	NOT SAMPLED		--	--	--	--	--	
MW-19	04/17/06	101.18	NP	10.61	0.00	90.57	NOT SAMPLED		--	--	--	--	--	
MW-19	10/17/06	101.18	NP	12.93	0.00	88.25	NOT SAMPLED		--	--	--	--	--	
MW-20	10/28-11/01/04	105.64	NP	8.91	0.00	96.73	<80	220	<50	<0.5	<0.5	<0.5	<0.5	BTEX analyzed by EPA Method 8260B.
MW-20	01/24-31/05	105.64	NP	5.94	0.00	99.70	NOT SAMPLED		--	--	--	--	--	
MW-20	04/18-21/05	105.64	NP	6.39	0.00	99.25	NOT SAMPLED		--	--	--	--	--	
MW-20	07/27-28/05	105.64	NP	7.88	0.00	97.76	NOT SAMPLED		--	--	--	--	--	
MW-20	11/08-10/05	105.64	NP	8.08	0.00	97.56	NOT SAMPLED		--	--	--	--	--	
MW-20	02/22/06	105.64	NP	6.56	0.00	99.08	NOT SAMPLED		--	--	--	--	--	
MW-20	04/17/06	105.64	NP	6.64	0.00	99.00	NOT SAMPLED		--	--	--	--	--	
MW-20	08/08/06	105.64	NP	8.00	0.00	97.64	NOT SAMPLED		--	--	--	--	--	
MW-20	10/17/06	105.64	NP	8.32	0.00	97.32	NOT SAMPLED		--	--	--	--	--	
MW-21	08/03/04	94.76	NP	25.89	0.00	68.87	NOT SAMPLED		--	--	--	--	--	
MW-21	08/12/04	94.76	NP	25.89	0.00	68.87	140	160	120	**360**	<0.5	<0.5	3.1	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
MW-21	10/28-11/01/04	94.76	NP	25.95	0.00	68.81	<800	<1,000	**31,000**	**5,200**	730	**1,300**	**4,500**	
MW-21	01/24-31/05	94.76	NP	25.85	0.00	68.91	<250	<250	130	**230**	0.6	<0.5	4.3	
MW-21	02/10/05	94.76	NP	25.80	0.00	68.96	NOT SAMPLED		--	--	--	--	--	
MW-21	02/17/05	94.76	NP	25.82	0.00	68.94	<85	<110	130	**280**	<0.5	<0.5	<1.5	
MW-21	04/18-21/05	94.76	NP	25.94	0.00	68.82	<250	<250	110	**230**	<0.5	<0.5	3.9	
MW-21	07/27-28/05	94.76	NP	25.75	0.00	69.01	<250	<250	79	**220**	<0.5	<0.5	<3.0	
MW-21	11/08-10/05	94.76	NP	25.46	0.00	69.30	<78	<97	110	**250**	<0.5	<0.5	<1.5	
MW-21	02/22/06	94.76	NP	25.58	0.00	69.18	NOT SAMPLED		--	--	--	--	--	
MW-21	04/17/06	94.76	NP	25.62	0.00	69.14	<79	<99	<48	**84**	<0.5	<0.5	<1.5	
MW-21	08/09/06	94.76	NP	25.38	0.00	69.38	--	--	130	**170**	<0.5	<0.5	1.6	
MW-21	10/17/06	94.76	NP	25.81	0.00	68.95	NOT SAMPLED		--	--	--	--	--	
MW-22		NOT MONITORED/SAMPLED. REPLACED BY WELL DPE-8. SEE DPE-8 FOR MW-22 DATA.												
MW-23	10/26-27/04	107.82	NP	9.59	0.00	98.23	**42,000**	<5,000	**57,000**	**810**	**10,000**	**2,200**	**12,200**	Perched well.
MW-23	10/28/04	107.82	NP	9.64	0.00	98.18	NOT SAMPLED		--	--	--	--	--	Perched well.
MW-23	10/28-11/01/04	107.82	NP	13.50	0.00	94.32	NOT SAMPLED		--	--	--	--	--	Perched well.
MW-23	01/24-31/05	107.82	NP	5.32	0.00	102.50	**13,000**	<4,100	**19,000**	**190**	210	**710**	**3,600**	Perched well.
MW-23	04/18-21/05	107.82	NP	8.78	0.00	99.04	**2,400**	<250	**54,000**	**630**	**7,000**	**1,700**	**9,200**	Perched well.
MW-23	07/27-28/05	107.82	NP	9.71	0.00	98.11	NOT SAMPLED		--	--	--	--	--	Perched well.
MW-23	11/08-10/05	107.82	NP	9.69	0.00	98.13	NOT SAMPLED		--	--	--	--	--	Perched well.
MW-23	04/17/06	107.82	NP	9.91	0.00	97.91	NOT SAMPLED		--	--	--	--	--	Perched well.
MW-24	10/26-27/04	107.95	NP	6.19	0.00	101.76	<800	<1,000	500	<0.5	<0.5	<0.5	3.0	Perched well.
MW-24	10/28/04	107.95	NP	6.41	0.00	101.54	NOT SAMPLED		--	--	--	--	--	Perched well.

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
MW-24	10/28-11/01/04	107.95	NP	14.20	0.00	93.75	NOT SAMPLED		--	--	--	--	--	Perched well.
MW-24	01/24-31/05	107.95	NP	5.58	0.00	102.37	<250	<250	<50	<0.5	0.6	<0.5	1.6	Perched well.
MW-24	04/18-21/05	107.95	NP	4.76	0.00	103.19	NOT SAMPLED		--	--	--	--	--	Perched well.
MW-24	07/27-28/05	107.95	NP	6.68	0.00	101.27	NOT SAMPLED		--	--	--	--	--	Perched well.
MW-24	11/08-10/05	107.95	NP	4.84	0.00	103.11	NOT SAMPLED		--	--	--	--	--	Perched well.
MW-24	02/22/06	107.95	NP	5.81	0.00	102.14	NOT SAMPLED		--	--	--	--	--	Perched well.
MW-24	04/17/06	107.95	NP	5.55	0.00	102.40	NOT SAMPLED		--	--	--	--	--	Perched well.
MW-25	10/26-27/04	101.96	NP	12.31	0.00	89.65	260	<99	**11,000**	**52**	110	340	**1,850**	
MW-25	10/28-11/01/04	101.96	NP	12.36	0.00	89.60	NOT SAMPLED		--	--	--	--	--	
MW-25	01/24-31/05	101.96	NP	11.81	0.00	90.15	440	<250	**7,400**	**6.8**	42	160	**1,100**	
MW-25	04/18-21/05	101.96	NP	11.63	0.00	90.33	**2,800**	<250	**22,000**	**17**	300	**750**	**3,900**	Laboratory report indicates the observed sample pattern is not typical of diesel/#2 fuel oil.
MW-25	07/27/05	101.96	NP	11.73	0.00	90.23	**2,400**	<250	**22,000**	<20	210	630	**3,100**	Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes earlier in the diesel range.
MW-25	11/08-10/05	101.96	NP	12.23	0.00	89.73	**870**	<100	**14,000**	<20	59	450	**1,600**	Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes earlier in the diesel range.
MW-25	02/22/06	101.96	NP	10.50	0.00	91.46	NOT SAMPLED		--	--	--	--	--	
MW-25	04/17/06	101.96	NP	11.65	0.00	90.31	**520**	<100	780	<2.0	2.9	14	49	
MW-25	08/08/06	101.96	NP	13.39	0.00	88.57	**1,100**	210	**6,300**	**19**	31	240	650	
MW-25	10/17/06	101.96	NP	14.06	0.00	87.90	NOT SAMPLED		--	--	--	--	--	
MW-26	10/28-11/01/04	100.47	NP	11.18	0.00	89.29	**760**	<200	**57,000**	**8,300/9,100**	**4,300/4,400**	**1,600/1,500**	**8,700/9,100**	BTEX analyzed by EPA Methods 8021B and 8260B. Second concentrations listed were obtained by EPA Method 8260B.
MW-26	01/24-31/05	100.47	NP	10.59	0.00	89.88	<250	<250	**3,100**	**310**	190	54	510	
MW-26	02/17/05	100.47	NP	10.56	0.00	89.91	310	<95	**27,000**	**6,800**	**1,900**	**990**	**4,800**	
MW-26	04/18-21/05	100.47	NP	10.39	0.00	90.08	<250	<250	**3,500**	**730**	320	100	660	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
MW-26	07/27/05	100.47	NP	10.55	0.00	89.92	270	<250	**5,100**	**1,200**	370	130	880	Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes earlier in the diesel range.
MW-26	11/08-10/05	100.47	NP	11.02	0.00	89.45	**1,200**	<94	**15,000**	**5,700**	850	590	**2,400**	Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes earlier in the diesel range.
MW-26	02/22/06	100.47	NP	9.32	0.00	91.15	NOT SAMPLED		--	--	--	--	--	
MW-26	04/17/06	100.47	NP	10.35	0.00	90.12	<80	<100	<48	<0.5	<0.5	<0.5	<1.5	
MW-26	08/08/06	100.47	NP	12.11	0.00	88.36	240	150	**4,900**	**1,200**	310	160	750	
MW-26	10/17/06	100.47	NP	12.8	0.00	87.67	NOT SAMPLED		--	--	--	--	--	
MW-27	01/24-26/05	97.26	NP	29.81	0.00	67.45	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	
MW-27	02/10/05	97.26	NP	29.76	0.00	67.50	NOT SAMPLED		--	--	--	--	--	
MW-27	04/18-21/05	97.26	NP	29.85	0.00	67.41	NOT SAMPLED		--	--	--	--	--	
MW-27	07/28/05	97.26	NP	29.86	0.00	67.40	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	
MW-27	11/08-10/05	97.26	NP	29.91	0.00	67.35	NOT SAMPLED		--	--	--	--	--	
MW-27	04/17/06	97.26	NP	29.69	0.00	67.57	NOT SAMPLED		--	--	--	--	--	
MW-27	10/18/06	97.26	NP	29.90	0.00	67.36	NOT SAMPLED		--	--	--	--	--	
MW-28	01/24-26/05	87.78	NP	21.18	0.00	66.60	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	
MW-28	02/10/05	87.78	NP	21.17	0.00	66.61	<79	<98	<48	<0.5	<0.5	<0.5	<1.5	
MW-28	04/18-21/05	87.78	NP	21.22	0.00	66.56	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	
MW-28	07/27-28/05	87.78	NP	21.26	0.00	66.52	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	
MW-28	11/08-10/05	87.78	NP	21.32	0.00	66.46	NOT SAMPLED		--	--	--	--	--	
MW-28	04/17/06	87.78	NP	21.19	0.00	66.59	NOT SAMPLED		--	--	--	--	--	
MW-28	10/18/06	87.78	NP	21.28	0.00	66.50	NOT SAMPLED		--	--	--	--	--	
MW-29	01/24-26/05	80.88	NP	15.14	0.00	65.74	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
MW-29	04/18-21/05	80.88	NP	14.31	0.00	66.57	NOT SAMPLED		--	--	--	--	--	
MW-29	07/27-28/05	80.88	NP	14.79	0.00	66.09	NOT SAMPLED		--	--	--	--	--	
MW-29	11/08-10/05	80.88	NP	14.70	0.00	66.18	NOT SAMPLED		--	--	--	--	--	
MW-29	04/17/06	80.88	NP	14.60	0.00	66.28	NOT SAMPLED		--	--	--	--	--	
MW-29	10/18/06	80.88	NP	15.16	0.00	65.72	NOT SAMPLED		--	--	--	--	--	
MW-30	02/10/05	91.81	NP	24.70	0.00	67.11	<77	<96	<48	4.1	<0.5	<0.5	<1.5	
MW-30	04/18-21/05	91.81	NP	24.76	0.00	67.05	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	
MW-30	07/27-28/05	91.81	NP	24.72	0.00	67.09	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	
MW-30	11/08-10/05	91.81	NP	24.82	0.00	66.99	<83	<100	<48	<0.5	<0.5	<0.5	<1.5	
MW-30	04/17/06	91.81	NP	24.68	0.00	67.13	<80	<100	<50	<0.5	<0.5	<0.5	<1.5	
MW-30	10/17/06	91.81	NP	24.80	0.00	67.01	NOT SAMPLED		--	--	--	--	--	
MW-31	02/10/05	87.22	NP	19.89	0.00	67.33	<77	<96	<48	<0.5	<0.5	<0.5	<1.5	
MW-31	04/18-21/05	87.22	NP	20.02	0.00	67.20	<800	<1,000	<50	<0.5	<0.5	<0.5	<1.5	
MW-31	07/27-28/05	87.22	NP	19.89	0.00	67.33	<250	<250	<50	<0.5	<0.5	<0.5	<1.5	
MW-31	11/08-10/05	87.22	NP	20.12	0.00	67.10	NOT SAMPLED		--	--	--	--	--	
MW-31	04/17/06	87.22	NP	19.94	0.00	67.28	NOT SAMPLED		--	--	--	--	--	
MW-31	10/17/06	87.22	NP	20.14	0.00	67.08	NOT SAMPLED		--	--	--	--	--	
MW-32	07/27-28/05	101.09	NP	11.43	0.00	89.66	**1,200**	<250	**17,000**	**2,300/2,100**	540/470	630/560	**2,600/2,500**	BTEX analyzed by EPA Methods 8021B and 8260B. Second concentrations listed were obtained by EPA Method 8260B. Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes earlier in the diesel range.
MW-32	11/08-10/05	101.09	NP	11.81	0.00	89.28	<80	<100	580	**200**	29	5.4	130	
MW-32	02/22/06	101.09	NP	10.15	0.00	90.94	NOT SAMPLED		--	--	--	--	--	
MW-32	04/17/06	101.09	NP	11.12	0.00	89.97	<81	<100	70	**47**	1.9	4.0	8.7	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
MW-32	08/08/06	101.09	NP	12.86	0.00	88.23	400	140	**4,000**	**1,500**	130	210	730	
MW-33	07/27-28/05	100.36	NP	28.33	0.00	72.03	**630**	<250	**2,200**	**2,500/4,800**	200/180	93/86	170/153	Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes earlier in the diesel range.
MW-33	11/08-10/05	100.36	NP	28.50	0.00	71.86	340	<100	**1,900**	**4,800**	180	110	170	Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes earlier in the diesel range.
MW-33	04/17/06	100.36	NP	27.95	0.00	72.41	250	<110	**1,900**	**4,000**	140	93	170	Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes earlier in the diesel range.
MW-33	08/09/06	100.36	NP	28.65	0.00	71.71	490	<98	**3,000**	**4,100**	220	180	290	
MW-33	10/17/06	100.36	NP	28.96	0.00	71.40	NOT SAMPLED		--	--	--	--	--	
MW-34	11/28/05	94.35	NP	27.05	0.00	67.30	<84	<110	<48	<0.5	<0.5	<0.5	<0.5	BTEX analyzed by EPA Method 8260B.
MW-34	04/17/06	94.35	NP	26.97	0.00	67.38	<80	<100	<48	<0.5	<0.5	<0.5	<1.5	
MW-34	10/17/06	94.35	NP	27.13	0.00	67.22	NOT SAMPLED		--	--	--	--	--	
MW-35	11/28/05	100.52	NP	30.54	0.00	69.98	280	180	250	**30**	<0.5	<0.5	1	Laboratory report indicates the observed sample pattern includes #2 fuel/diesel, additional patterns which elute earlier and later in the diese; range. BTEX analyzed by EPA Method 8260B.
MW-35	02/22/06	100.52	NP	30.32	0.00	70.20	NOT SAMPLED		--	--	--	--	--	
MW-35	04/17/06	100.52	NP	30.41	0.00	70.11	270	<100	370	**100**	1.3	1.0	3.9	
MW-35	08/09/06	100.52	NP	30.75	0.00	69.77	300	230	780	**150**	3.1	1.9	5.8	
MW-35	10/18/06	100.52	NP	30.94	0.00	69.58	NOT SAMPLED		--	--	--	--	--	
DPE-1/ VP-6	07/24/02	101.90	10.60	12.18	1.58	90.98	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	
DPE-1/ VP-6	10/17-18/02	101.90	11.35	12.00	0.65	90.42	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	
DPE-1/ VP-6	01/21/03	101.90	11.27	12.90	1.63	90.30	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	
DPE-1/ VP-6	04/23-24/03	101.90	10.75	10.90	0.15	91.12	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	
DPE-1/ VP-6	06/30-07/01/03	101.90	11.32	11.54	0.22	90.54	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	
DPE-1/ VP-6	10/01-02/03	101.90	12.12	12.91	0.79	89.62	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	
DPE-1/ VP-6	01/21-23/04	101.90	NOT MONITORED/SAMPLED DUE TO WELL OBSTRUCTION AT 2.41 FEET							--	--	--	--	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
DPE-1/ VP-6	04/29-30/04	101.84	11.20	11.25	0.05	90.63	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	DPE-1 replaced VP-6
DPE-1/ VP-6	07/15-16/04	101.84	11.67	11.68	0.01	90.17	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	DTP and DTW measured by SAIC.
DPE-1/ VP-6	08/03/04	101.84	NP	11.85	0.00	89.99	NOT SAMPLED		--	--	--	--	--	
DPE-1/ VP-6	10/28-11/01/04	101.84	NP	11.99	0.00	89.85	**180,000**	<20,000	**81,000**	**7,500**	**9,500**	**1,100**	**9,000**	
DPE-1/ VP-6	01/24-31/05	101.84	NP	11.37	0.00	90.47	**21,000**	<1,000	**19,000**	**1,800**	**1,200**	75	**3,300**	
DPE-1/ VP-6	04/18-21/05	101.84	NP	11.19	0.00	90.65	**280,000**	<11,000	**8,000**	**190**	240	48	800	
DPE-1/ VP-6	07/27-28/05	101.84	NP	11.50	0.00	90.34	NOT SAMPLED		--	--	--	--	--	
DPE-1/ VP-6	08/02/05	101.84	11.53	11.57	0.04	90.30	NOT SAMPLED		--	--	--	--	--	
DPE-1/ VP-6	08/09/05	101.84	11.59	11.60	0.01	90.24	NOT SAMPLED		--	--	--	--	--	
DPE-1/ VP-6	11/08-10/05	101.84	NP	11.76	0.00	90.08	NOT SAMPLED		--	--	--	--	--	
DPE-1/ VP-6	02/22/06	101.84	Sheen	10.02	0.00	91.82	NOT SAMPLED		--	--	--	--	--	
DPE-1/ VP-6	04/17/06	101.84	NP	11.25	0.00	90.59	NOT SAMPLED		--	--	--	--	--	
DPE-1/ VP-6	08/31/06	101.84	13.21	13.13	0.00	88.71	NOT SAMPLED		--	--	--	--	--	System performance monitoring
DPE-1/ VP-6	09/15/06	101.84	13.31	13.35	0.04	88.49	NOT SAMPLED		--	--	--	--	--	System performance monitoring
DPE-1/ VP-6	10/17/06	101.55	12.85	14.68	1.83	88.33	NOT SAMPLED		--	--	--	--	--	
DPE-2	04/29-30/04	102.17	11.31	11.51	0.20	90.82	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	
DPE-2	07/15-16/04	102.17	NP	11.79	0.00	90.38	NOT SAMPLED		--	--	--	--	--	DTW measured by SAIC.
DPE-2	08/03/04	102.17	NP	12.17	0.00	90.00	NOT SAMPLED		--	--	--	--	--	
DPE-2	10/28-11/01/04	102.17	NP	12.12	0.00	90.05	**6,200**	<1,000	**48,000**	**2,500**	**3,000**	**940**	**5,400**	
DPE-2	01/24-31/05	102.17	NP	11.51	0.00	90.66	**870**	<250	**2,200**	**70**	79	13	140	
DPE-2	04/18-21/05	102.17	NP	11.30	0.00	90.87	290	<250	**2,000**	**210**	170	42	220	
DPE-2	07/27-28/05	102.17	NP	11.64	0.00	90.53	NOT SAMPLED		--	--	--	--	--	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
DPE-2	11/08-10/05	102.17	NP	12.02	0.00	90.15	NOT SAMPLED		--	--	--	--	--	
DPE-2	02/22/06	102.17	10.06	10.98	0.92	91.93	NOT SAMPLED		--	--	--	--	--	
DPE-2	02/27/06	102.17	10.20	11.09	0.89	91.79	NOT SAMPLED		--	--	--	--	--	System performance monitoring
DPE-2	04/17/06	102.17	11.25	11.71	0.46	90.83	NOT SAMPLED		--	--	--	--	--	
DPE-2	07/31/06	102.17	12.76	12.80	0.04	89.40	NOT SAMPLED		--	--	--	--	--	System performance monitoring
DPE-2	08/19/06	102.17	13.33	13.45	0.12	88.82	NOT SAMPLED		--	--	--	--	--	System performance monitoring
DPE-2	09/15/06	102.43	13.69	13.73	0.04	88.73	NOT SAMPLED		--	--	--	--	--	System performance monitoring
DPE-2	09/29/06	102.43	13.83	13.86	0.03	88.59	NOT SAMPLED		--	--	--	--	--	System performance monitoring
DPE-2	10/17/06	102.43	13.91	13.92	0.01	88.52	NOT SAMPLED		--	--	--	--	--	
DPE-2	10/24/06	102.43	14.20	14.50	0.30	88.17	NOT SAMPLED		--	--	--	--	--	System performance monitoring
DPE-3	10/17/06	103.93	NP	14.49	0.00	89.44	NOT SAMPLED		--	--	--	--	--	
DPE-3	10/26/06	103.93	NP	14.79	0.00	89.14	<80	<100	<48	<0.5	<0.5	<0.5	<0.5	BTEX analyzed by EPA Method 8260B.
DPE-4	10/17/06	102.26	NP	14.29	0.00	87.97	NOT SAMPLED		--	--	--	--	--	
DPE-4	10/18/06	102.26	NP	14.29	0.00	87.97	NOT SAMPLED		--	--	--	--	--	
DPE-4	10/24/06	102.26	NP	14.00	0.00	88.26	**920**	**1,400**	**4,900**	**260**	240	39	720	Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes earlier in the diesel range. BTEX analyzed by EPA Method 8260B.
DPE-5	11/28/05	113.81	NP	17.26	0.00	96.55	**5,300**	<1,000	**36,000**	**2,200**	**3,000**	660	**5,700**	Perched well. Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes earlier in the diesel range. BTEX analyzed by EPA Method 8260B.
DPE-5	01/23/06	113.32	16.70	16.75	0.05	96.61	NOT SAMPLED		--	--	--	--	--	Perched well. System performance monitoring
DPE-5	02/22/06	113.81	NP	17.16	0.00	96.65	NOT SAMPLED		--	--	--	--	--	Perched well.
DPE-5	04/17/06	113.81	NM	NM	--	--	**4,800**	<190	**19,000**	**1,100**	**1,400**	160	**2,900**	Perched well.
DPE-6	11/28/05	113.32	NP	19.30	0.00	94.02	170	<100	280	**98**	4	3	10	Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes earlier in the diesel range. BTEX analyzed by EPA Method 8260B.

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
DPE-6	02/22/06	113.32	NP	19.62	0.00	93.70	NOT SAMPLED		--	--	--	--	--	
DPE-6	04/17/06	113.32	NM	NM	--	--	--	--	**38,000**	**3,000**	**5,400**	690	**4,900**	Pump in well.
DPE-7	11/28/05	113.15	NP	20.50	0.00	92.65	**6,200**	<1,000	**17,000**	**630**	**1,600**	260	**2,430**	Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes earlier in the diesel range. BTEX analyzed by EPA Method 8260B.
DPE-7	02/22/06	113.15	NP	19.20	0.00	93.95	NOT SAMPLED		--	--	--	--	--	
DPE-7	04/17/06	113.15	NM	NM	--	--	**8,600**	<500	**29,000**	**4,500**	**1,800**	470	**4,200**	Pump in well.
DPE-8/ MW-22	10/26-27/04	104.83	NP	14.10	0.00	90.73	**5,000**	<1,000	**54,000**	**6,600**	**7,500**	**1,600**	**9,900**	
DPE-8/ MW-22	10/28-11/01/04	104.83	NP	14.11	0.00	90.72	NOT SAMPLED		--	--	--	--	--	
DPE-8/ MW-22	01/24-31/05	104.83	NP	13.62	0.00	91.21	**980**	<250	**55,000**	**5,200**	**6,300**	**1,500**	**8,800**	
DPE-8/ MW-22	04/18-21/05	104.83	NP	13.42	0.00	91.41	**2,000**	<250	**40,000**	**4,600**	**4,300**	**1,200**	**6,800**	
DPE-8/ MW-22	07/27-28/05	104.83	NP	13.53	0.00	91.30	NOT SAMPLED		--	--	--	--	--	
DPE-8/ MW-22	11/08-10/05	104.83	NP	14.14	0.00	90.69	NOT SAMPLED		--	--	--	--	--	
DPE-8/ MW-22	02/22/06	104.83	NP	12.34	0.00	92.49	NOT SAMPLED		--	--	--	--	--	
DPE-8/ MW-22	04/17/06	104.83	NP	14.60	0.00	90.23	NOT SAMPLED		--	--	--	--	--	
DPE-8/ MW-22	08/08/06	104.83	16.55	16.56	0.01	88.28	**2,000**	<210	**41,000**	**3,100**	**3,500**	**1,200**	**6,400**	
DPE-8/ MW-22	08/19/06	104.83	15.30	15.65	0.35	89.46	NOT SAMPLED		--	--	--	--	--	System performance monitoring
DPE-8/ MW-22	08/31/06	104.83	15.21	16.33	1.12	89.40	NOT SAMPLED		--	--	--	--	--	System performance monitoring
DPE-8/ MW-22	09/15/06	104.83	15.47	16.55	1.08	89.14	NOT SAMPLED		--	--	--	--	--	System performance monitoring
DPE-8/ MW-22	10/17/06	104.35	15.75	17.12	1.37	88.32	NOT SAMPLED		--	--	--	--	--	DPE-8 replaced MW-22
DPE-9	10/17/06	103.38	NP	14.92	0.00	88.46	**5,200**	**880**	**67,000**	**3,100**	**4,900**	**1,800**	**11,000**	BTEX analyzed by EPA Method 8260B.
DPE-9	10/18/06	103.38	NP	14.92	0.00	88.46	NOT SAMPLED		--	--	--	--	--	
DPE-9	10/24/06	103.38	Sheen	13.78	0.00	89.60	220	<100	<48	<0.5	<0.5	<0.5	<0.5	BTEX analyzed by EPA Method 8260B

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
RW-2	09/90	104.54	12.68	12.72	0.04	91.85	NOT SAMPLED		--	--	--	--	--	Perched well.
RW-2	03/26-28/91	104.54	10.13	10.21	0.08	94.39	--	--	--	**19,000**	**46,000**	**2,500**	**120,000**	Perched well.
RW-2	07/07/93	104.54	NP	11.71	0.00	92.83	NOT SAMPLED		--	--	--	--	--	Perched well.
RW-2	01/97	104.54	NM	NM	--	--	--	--	390	**31**	14	6	49	Perched well.
RW-2	04/97	104.54	NM	NM	--	--	--	--	**11,000**	**189**	243	99	743	Perched well.
RW-2	07/97	104.54	NM	NM	--	--	--	--	**24,000**	**4,230**	**2,490**	398	**2,732**	Perched well.
RW-2	11/97	104.54	NM	NM	--	--	--	--	**4,400**	**3,140**	**1,200**	338	**2,265**	Perched well.
RW-2	07/24/02	106.63	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	Perched well.
RW-2	10/17-18/02	106.63	NP	14.44	0.00	92.19	**988**	<500	**1,380**	**90.5**	8.05	29.2	31.5	Perched well.
RW-2	01/21/03	106.63	NP	10.61	0.00	96.02	<250	<500	126	**33.5**	0.859	1.28	4.11	Perched well.
RW-2	04/23-24/03	106.63	NP	10.30	0.00	96.33	<250	<500	55.7	<0.500	<0.500	0.642	2.64	Perched well.
RW-2	06/30-07/01/03	106.63	NP	13.72	0.00	92.91	**505**	<500	**2,380**	**53.5**	8.72	39.8	43.2	Perched well.
RW-2	10/01-02/03	106.63	NP	15.05	0.00	91.58	**1,400**	<250	**2,300**	**75**	7.3	29	33	Perched well.
RW-2	01/21-23/04	106.63	NP	10.22	0.00	96.41	<250	<250	53	1.2	0.7	1.3	8.9	Perched well.
RW-2	04/29-30/04	106.63	NP	13.31	0.00	93.32	270	<250	81	**11**	0.9	2.0	1.9	Perched well.
RW-2	07/15-16/04	106.63	NP	14.32	0.00	92.31	<250	<500	634	**25.7**	2.39	6.18	3.55	Perched well. DTW measured by SAIC.
RW-2	08/03/04	106.63	NP	14.90	0.00	91.73	NOT SAMPLED		--	--	--	--	--	Perched well.
RW-2	10/28-11/01/04	106.63	NP	14.68	0.00	91.95	**280,000**	<40,000	**26,000**	**410**	63	470	950	Perched well.
RW-2	01/24-31/05	106.63	NP	12.57	0.00	94.06	<250	<250	94	<0.5	<0.5	<2.0	2.5	Perched well.
RW-2	04/18-21/05	106.63	NP	9.18	0.00	97.45	260	<250	130	0.8	<0.5	2.3	6.1	Perched well.
RW-2	07/27-28/05	106.63	NP	14.16	0.00	92.47	NOT SAMPLED		--	--	--	--	--	Perched well.
RW-2	11/08-10/05	106.63	NP	9.99	0.00	96.64	NOT SAMPLED		--	--	--	--	--	Perched well.

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
RW-2	04/17/06	106.63	NP	10.80	0.00	95.83	NOT SAMPLED		--	--	--	--	--	Perched well.
RW-2	10/18/06	106.63	NP	17.96	0.00	88.67	NOT SAMPLED		--	--	--	--	--	Perched well.
RW-3	07/07/93	100.70	NP	16.14	0.00	84.56	NOT SAMPLED		--	--	--	--	--	Pump in well.
RW-3	07/24/02	100.70	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	
RW-3	10/17-18/02	100.70	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	
RW-3	01/21/03	100.70	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	
RW-3	04/23-24/03	100.70	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	
RW-3	06/30-07/01/03	100.70	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	
RW-3	10/01-02/03	100.70	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	
RW-3	01/21-23/04	100.70	NP	10.32	0.00	90.38	**3,000**	270	**9,100**	**4,400**	360	520	**1,300**	
RW-3	04/29-30/04	100.70	NP	10.19	0.00	90.51	**5,200**	<250	**11,000**	**5,000**	750	550	**1,600**	
RW-3	07/15-16/04	100.70	NP	10.55	0.00	90.15	**1,300**	**1,330**	**18,900**	**5,350**	341	554	**1,350**	DTW measured by SAIC. Pump in well.
RW-3	10/28-11/01/04	100.70	NP	10.98	0.00	89.72	**680**	<250	**10,000**	**4,800**	120	680	**1,100**	
RW-3	01/24-31/05	100.70	NP	10.49	0.00	90.21	**770**	<250	**6,600**	**3,000**	170	460	940	
RW-3	04/18-21/05	100.70	NP	10.17	0.00	90.53	**3,700**	<250	**8,200**	**3,900**	380	550	**1,300**	Laboratory report indicates the observed sample pattern is not typical of diesel/#2 fuel oil.
RW-3	07/27-28/05	100.70	NP	10.45	0.00	90.25	NOT SAMPLED		--	--	--	--	--	
RW-3	11/08-10/05	100.70	NP	10.57	0.00	90.13	NOT SAMPLED		--	--	--	--	--	
RW-3	04/17/06	100.70	NP	10.72	0.00	89.98	NOT SAMPLED		--	--	--	--	--	
RW-3	10/18/06	100.70	NP	12.55	0.00	88.15	NOT SAMPLED		--	--	--	--	--	
RW-4	06/25/93	110.82	NP	20.76	0.00	90.06	NOT SAMPLED		--	--	--	--	--	Pump in well.
RW-4	07/07/93	110.82	NP	21.65	0.00	89.17	--	--	**14,000**	**6,500**	**2,800**	370	**2,000**	Pump in well. Water level measured from top of well box instead of top of casing.
RW-4	07/24/02	110.82	NP	18.30	0.00	92.52	**15,000**	<2,000	**990**	**62/70**	1.3/1	32/36	7.0/5	BTEX analyzed by EPA Methods 8021B and 8260B. Second concentrations listed were obtained by EPA Method 8260B.

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
RW-4	10/17-18/02	110.82	NP	19.29	0.00	91.53	**8,930**	**939**	**3,160**	**59.8**	2.50	40.4	15.6	
RW-4	01/21/03	110.82	NP	17.88	0.00	92.94	**2,830**	<500	689	0.991	<0.500	2.37	7.03	
RW-4	04/23-24/03	110.82	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
RW-4	06/30-07/01/03	110.82	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
RW-4	10/01-02/03	110.82	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
RW-4	01/21-23/04	110.82	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
RW-4	04/29-30/04	110.82	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
RW-4	07/15-16/04	110.82	17.95	18.17	0.22	92.83	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--	DTP and DTW measured by SAIC.
RW-4	10/28/04	110.82	NP	18.44	0.00	92.38	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
RW-4	10/28-11/01/04	110.82	NP	DRY	0.00	--	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
RW-4	01/24-31/05	110.82	NP	18.04	0.00	92.78	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	
RW-4	04/18-21/05	110.82	NP	17.86	0.00	92.96	NOT SAMPLED DUE TO INSUFFICIENT WATER/OBSTRUCTION							
RW-4	07/27-28/05	110.82	INACCESSIBLE - VEHICLE PARKED OVER WELL					--	--	--	--	--	--	
RW-4	04/17/06	110.82	NP	25.25	0.00	85.57	NOT SAMPLED		--	--	--	--	--	
RW-4	10/18/06	110.82	NP	23.64	0.00	87.18	NOT SAMPLED		--	--	--	--	--	
RW-5	07/07/93	104.22	NP	12.34	0.00	91.88	NOT SAMPLED		--	--	--	--	--	Pump in well.
RW-5	07/24/02	104.22	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	
RW-5	10/17-18/02	104.22	NP	12.63	0.00	91.59	**84,900**	**3,650**	**3,370**	**696**	67.2	63.0	408	
RW-5	01/21/03	104.22	NP	11.81	0.00	92.41	**1,860**	<500	493	**17.1**	4.43	1.37	52.9	
RW-5	04/23-24/03	104.22	NP	11.31	0.00	92.91	**2,050**	<500	**2,490**	**9.73**	13.4	<5.00	870	
RW-5	06/30-07/01/03	104.22	NP	11.91	0.00	92.31	**8,010**	<500	**2,170**	**34.6**	20.3	8.10	**1,050**	
RW-5	10/01-02/03	104.22	NP	13.29	0.00	90.93	NOT SAMPLED DUE TO INSUFFICIENT WATER					--	--	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
RW-5	01/21-23/04	104.22	NP	11.52	0.00	92.70	**1,800**	<250	470	**64**	12	2.5	65	
RW-5	04/29-30/04	104.22	NP	11.88	0.00	92.34	NOT SAMPLED DUE TO WIRE OBSTRUCTION					--	--	
RW-5	07/15-16/04	104.22	NP	12.22	0.00	92.00	NOT SAMPLED DUE TO INSUFFICIENT WATER/OBSTRUCTION						--	DTW measured by SAIC. Pump in well.
RW-5	10/28-11/01/04	104.22	NP	12.98	0.00	91.24	**36,000**	<10,000	**890**	**120**	12	11	58	
RW-5	01/24-31/05	104.22	NP	11.31	0.00	92.91	**3,200**	360	**880**	**45**	13	6.6	190	
RW-5	04/18-21/05	104.22	NP	11.40	0.00	92.82	**1,900**	400	150	1.3	<0.5	0.8	9.4	Laboratory report indicates the observed sample pattern is not typical of diesel/#2 fuel oil.
RW-5	07/27-28/05	104.22	NP	12.16	0.00	92.06	NOT SAMPLED		--	--	--	--	--	
RW-5	11/08-10/05	104.22	NP	11.84	0.00	92.38	NOT SAMPLED		--	--	--	--	--	
RW-5	04/17/06	104.22	NP	12.41	0.00	91.81	NOT SAMPLED		--	--	--	--	--	
RW-5	10/18/06	104.22	NP	14.38	0.00	89.84	NOT SAMPLED		--	--	--	--	--	
MP-1	07/24/02	104.95	INACCESIBLE - UNABLE TO OPEN WELL				--	--	--	--	--	--	--	
MP-1	10/17-18/02	104.95	INACCESIBLE - UNABLE TO OPEN WELL				--	--	--	--	--	--	--	
MP-1	08/03/04	104.95	NP	DRY	0.00	--	--	--	--	--	--	--	--	
MP-1	04/17/06	104.95	NP	4.32	0.00	100.63	NOT SAMPLED		--	--	--	--	--	
MP-2	07/24/02	97.04	INACCESSIBLE - VEHICLE PARKED OVER WELL				--		--	--	--	--	--	
MP-2	10/17-18/02	97.04	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	
MP-2	08/03/04	97.04	NP	115.00	0.00	-17.96	NOT SAMPLED		--	--	--	--	--	
MP-2	04/17/06	97.04	NP	114.56	0.00	-17.52	NOT SAMPLED		--	--	--	--	--	
Station 5	04/05/91	--	NM	NM	--	--	--	--	**7,400**	**5,040**	12.3	42.1	41.2	Bank of America parking lot, temporary monitoring well
Station 5	04/05/91	--	--	--	--	--	--	--	**7,030**	**3,850**	15.0	51.8	50.9	Bank of America parking lot, temporary monitoring well duplicate sample
Station 25	04/05/91	--	NM	NM	--	--	--	--	**3,000**	0.9 J	13.8	10.2	134	U-Park lot, temporary monitoring well
Station 25	04/19/91	--	NM	NM	--	--	--	--	<0.05	<0.5	<1.0	<1.0	1.4 J	U-Park lot, temporary monitoring well

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
DVP-1	09/12/02	--	NP	6.00	--	--	--	--	**98,100**	**7,640**	**18,600**	**2,660**	**15,000**	Grab groundwater sample
DVP-2	09/12/02	--	NP	6.00	--	--	--	--	**107,000**	**13,500**	**19,100**	**2,140**	**12,400**	Grab groundwater sample
DVP-4	09/12/02	--	NP	6.00	--	--	--	--	**102,000**	**12,300**	**17,400**	**1,980**	**11,500**	Grab groundwater sample, duplicate of DVP-2.
TRIP BLANK/QA	04/19/91	--	--	--	--	--	--	--	<0.05	<0.5	<1.0	<1.0	<1.0	
TRIP BLANK/QA	07/07/93	--	--	--	--	--	--	--	<250	<5.0	<5.0	<5.0	<7.5	
TRIP BLANK/QA	07/24/02	--	--	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	
TRIP BLANK/QA	09/12/02	--	--	--	--	--	--	--	<50.0	<0.500	0.586	<0.500	<1.00	
TRIP BLANK/QA	10/17-18/02	--	--	--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	
TRIP BLANK/QA	11/14/02	--	--	--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	
TRIP BLANK/QA	01/21/03	--	--	--	--	--	--	--	--	--	--	--	--	
TRIP BLANK/QA	04/23-24/03	--	--	--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	
TRIP BLANK/QA	06/30-07/01/03	--	--	--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	
TRIP BLANK/QA	10/01-02/03	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	
TRIP BLANK/QA	10/14/03	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	
TRIP BLANK/QA	01/21-23/04	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	
TRIP BLANK/QA	04/29-30/04	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	
TRIP BLANK/QA	05/03/04	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	
TRIP BLANK/QA	07/15-16/04	--	--	--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<1.00	
TRIP BLANK/QA	07/19/04	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	
TRIP BLANK/QA	08/12/04	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	
TRIP BLANK/QA	10/26-27/04	--	--	--	--	--	--	--	<50	<0.5/<0.5	<0.5/<0.5	<1.5/<0.5	<1.5/<0.5	BTEX analyzed by EPA Methods 8021B and 8260B. Second concentrations listed were obtained by EPA Method 8260B.
TRIP BLANK/QA	10/28-11/01/04	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	

Table 4-7

Groundwater Monitoring Data and Hydrocarbon Constituent Results

Former Texaco Service Station / Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	TOC (relative ft.)	DTSPH (ft. bgs)	DTW (ft. bgs)	SPHT (ft.)	GWE (relative ft.)	TPH-D (ppb)	TPH-O (ppb)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	Comments
TRIP BLANK/QA	01/26-27/05	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	
TRIP BLANK/QA	01/31/05	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	
TRIP BLANK/QA	02/10/05	--	--	--	--	--	--	--	<48	<0.5	<0.5	<0.5	<1.5	
TRIP BLANK/QA	02/17/05	--	--	--	--	--	--	--	<48	<0.5	<0.5	<0.5	<1.5	
TRIP BLANK/QA	03/10/05	--	--	--	--	--	--	--	<48	<0.5	<0.5	<0.5	<1.5	
TRIP BLANK/QA	04/18-21/05	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	
TRIP BLANK/QA	07/27-28/05	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	
TRIP BLANK/QA	11/08-10/05	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	
TRIP BLANK/QA	11/28/05	--	--	--	--	--	--	--	<48	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<1.5/<0.5	BTEX analyzed by EPA Methods 8021B and 8260B. Second concentrations listed were obtained by EPA Method 8260B.
TRIP BLANK/QA	04/17/06	--	--	--	--	--	--	--	--	<0.5	<0.5	<0.5	<0.5	
TRIP BLANK/QA	08/08/06	--	--	--	--	--	--	--	<48	<0.5	1.2	<0.5	1.5	
TRIP BLANK/QA	10/24/06	--	--	--	--	--	--	--	<48	<0.5	<0.5	<0.5	<1.5	
	Standard Laboratory Reporting Limits:						250	500	50	0.5	0.5	0.5	1.5	
	MTCA Method A Cleanup Levels:						**500**	**500**	**800/1,000**	**5**	**1,000**	**700**	**1,000**	
	Current Method:						**NWTPH-D Extended**		**NWTPH-G**	**EPA 8021 or 8260B**				

Notes:

TOC = Top of Casing

(ft. bgs) = Feet below ground surface

DTW = Depth to Water

DTSPH = Depth to Separated Phase Hydrocarbons

SPHT = Separated Phase Hydrocarbons Thickness

GWE = Groundwater Elevation, referenced to an arbitrary site datum.

B = Benzene by EPA Method 8021 or 8260B

T = Toluene by EPA Method 8021 or 8260B

E = Ethylbenzene by EPA Method 8021 or 8260B

X = Xylenes by EPA Method 8021 or 8260B

BTEX = Benzene, Tolune, Ethylbenzene, and Total Xylenes

(ppb) = Parts per billion

NM = Not Measured

NP = No Product

-- = Not applicable (groundwater measurements) or sample not analyzed (chemical data)

< = Analyte not detected at or above the laboratory reporting limit. Number represents reporting limit

MTCA = Model Toxics Control Act Cleanup Regulations [WAC 173-340-720(2)(a)(I), as amended 02/01].

EPA = U.S. Environmental Protection Agency

J = Estimated result between the method detection limit and the laboratory reporting limit

E = Concentration exceeds the instrument calibration range

Where SPH thickness is greater than 0.00 GWE is corrected for the presence of SPH; correction factor: [(TOC - DTW) + (SPHT x 0.8)].

TPH-D = Total Petroleum Hydrocarbons as Diesel analyzed by Washington Department Of Ecology (WDOE) North West Total Petroleum Hydrocarbons -Diesel (NWTPH-D) extended with silica gel cleanup (diesel-range hydrocarbons)

TPH-O = Total Petroleum Hydrocarbons as Oil analyzed by WDOE NWTPH-D extended with silica gel cleanup (heavy oil-range hydrocarbons)

TPH-G = Total Petroleum Hydrocarbons as Gasoline analyzed by WDOE NWTPH- G (gasoline-range hydrocarbons)

Bold results exceed MTCA Method A Cleanup Levels.

Table 4-8

Groundwater Analytical Results - Semivolatile Organic Compounds

Former Texaco Service Station/Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	2-Methylnaphthalene (ppb)	2,4-Dimethylphenol (ppb)	Naphthalene (ppb)	Phenol (ppb)	2-Methylphenol (ppb)	4- Methylphenol (ppb)	bis (2-Ethylhexyl) phthalate (ppb)	Benzoic acid (ppb)
VP-1	7/24/2002	84	80	**160**	<5.0	13	18	31	<10
VP-7/MW-3	7/24/2002	69	28	**420**	<5.0	<5.0	6	<10	34
VP-8/MW-7	7/24/2002	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<10
MW-4	7/24/2002	160	24	**500**	<5.0	6	9	<10	<10
MW-10	7/24/2002	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	13	<10
MW-11	7/24/2002	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<10
MW-12	10/17-18/02	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0[1]	<50.0	<20.0
MW-14	11/14/02	52.2	13.4	**242**	34.5	11.0	24.8[1]	<50.0	<20.0
MW-15	11/14/02	<10.0	<10.0	<10.0	37.0	<10.0	<10.0[1]	<50.0	<20.0
RW-4	7/24/2002	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<10
MTCA Method A Cleanup Levels:		NA	NA	**160**	NA	NA	NA	NA	NA

Notes:

All analytes analyzed by U.S. Enivronmental Protection Agency (EPA) Method 8270.

(ppb) = Parts per billion

-- = Sample not analyzed

NA = Not applicable

MTCA = Model Toxics Control Act Cleanup Regulations [WAC 173-340-720(2)(a)(I), as amended 02/01].

< = Analyte not detected at or above the laboratory reporting limit. Number represents reporting limit

[1] = Results are for 3 & 4-Methylphenol.

Bold results exceed MTCA Method A Cleanup Levels.

Only those analytes that were detected at or above the laboratory reporting limit in one or more sample are included in this table.

Table 4-9

Groundwater Analytical Results - Volatile Organic Compounds

Former Texaco Service Station/Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	Acetone (ppb)	Carbon Disulfide (ppb)	Chloroform (ppb)	Chloromethane (ppb)	cis-1,2-Dichloroethene (ppb)	Tetrachloroethene (ppb)	Trichloroethene (ppb)	Hexane (ppb)	Isopropylbenzene (ppb)	n-Propylbenzene (ppb)	1,3,5-Trimethylbenzene (ppb)	1,2,4-Trimethylbenzene (ppb)	sec-Butylbenzene (ppb)	p-Isopropyltoluene (ppb)	n-Butylbenzene (ppb)	Naphthalene (ppb)	Comments
VP-7/MW-3	03/26-28/91	310 J	<120	--	--	--	**29 J**	**67 J**	200 J	--	--	--	--	--	--	--	--	
VP-8/MW-7	03/26-28/91	<100	<50	--	--	--	**140**	**170**	170	--	--	--	--	--	--	--	--	
VP-8/MW-7	10/95	--	--	--	--	26	**167**	**69**	--	--	--	6.2	19	--	--	--	--	
VP-8/MW-7	01/97	--	--	--	--	<10	<10	<10	--	--	--	111	109	--	--	--	--	
VP-8/MW-7	04/97	--	--	--	--	5.1	<10	<10	--	--	--	170	290	--	--	--	--	
VP-8/MW-7	07/97	--	--	--	--	483	**53**	**80**	--	--	--	143	282	--	--	--	--	
VP-8/MW-7	11/97	--	--	--	--	135	**120**	**106**	--	--	--	15	27	--	--	--	--	
MW-4	07/24/02	--	--	<8.0	<10	<8.0	<8.0	<10	--	46	140	500	1,800	<10	<10	23	**360**	
MW-6	10/95	--	--	--	--	2.9	1.6	2.3	--	--	--	334	1,140	--	--	--	--	
MW-6	01/97	--	--	--	--	<1,000	<1,000	<1,000	--	--	--	3,710	1,070	--	--	--	--	
MW-9	03/26-28/91	<500	1,600 J	--	--	--	<250	<250	ND	--	--	--	--	--	--	--	--	
MW-9	04/97	--	--	--	--	<1	<1	<1	--	--	--	68.6	425	--	--	--	--	
MW-9	07/97	--	--	--	--	<200	<100	<100	--	--	--	18	287	--	--	--	--	
MW-9	11/97	--	--	--	--	<1	<1	<1	--	--	--	24	116	--	--	--	--	
MW-10	03/26-28/91	<10.0	<5.0	--	--	--	<5.0	<5.0	7 J	--	--	--	--	--	--	--	--	
MW-10	03/26-28/91	<8.0	<5.0	--	--	--	<5	<5	ND	--	--	--	--	--	--	--	--	
MW-10	10/95	--	--	--	--	<1	<1	0.7	--	--	--	<1	<1	--	--	--	--	Duplicate sample
MW-10	07/24/02	--	--	<1	<2	15	<1	<1	--	<2	<1	<1	<1	1	<1	<1	<2	
MW-11	07/24/02	--	--	<1	<2	<1	<1	<1	--	<2	<1	<1	<1	<1	<1	<1	<2	
MW-12	10/17-18/02	--	--	1.68	<5.00	9.07	**9.58**	2.75	--	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
MW-20	10/28-11/01/04	--	--	<0.8	1	<0.8	<0.8	<1	--	--	--	--	--	--	--	--	--	
MW-23	10/26-27/04	--	--	<8	<10	<8	<8	<10	--	--	--	--	--	--	--	--	--	
MW-24	10/26-27/04	--	--	<0.8	<1	<0.8	<0.8	<1	--	--	--	--	--	--	--	--	--	
MW-25	10/26-27/04	--	--	<4	<5	<4	<4	<5	--	--	--	--	--	--	--	--	--	
MW-26	10/28-11/01/04	--	--	<4	<5	<4	<4	<5	--	--	--	--	--	--	--	--	--	

Table 4-9

Groundwater Analytical Results - Volatile Organic Compounds

Former Texaco Service Station/Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

Well Identification	Date	Acetone (ppb)	Carbon Disulfide (ppb)	Chloroform (ppb)	Chloromethane (ppb)	cis-1,2-Dichloroethene (ppb)	Tetrachloroethene (ppb)	Trichloroethene (ppb)	Hexane (ppb)	Isopropylbenzene (ppb)	n-Propylbenzene (ppb)	1,3,5-Trimethylbenzene (ppb)	1,2,4-Trimethylbenzene (ppb)	sec-Butylbenzene (ppb)	p-Isopropyltoluene (ppb)	n-Butylbenzene (ppb)	Naphthalene (ppb)	Comments
MW-32	07/27-28/05	--	--	<3	<4	<3	<3	<4	--	--	--	--	--	--	--	--	--	
MW-33	07/27-28/05	--	--	<3	8	<3	<3	<4	--	--	--	--	--	--	--	--	--	
MW-34	11/28/05	--	--	<0.8	<1	<0.8	1	<1	--	--	--	--	--	--	--	--	--	
MW-35	11/28/05	--	--	<0.8	<1	<0.8	<0.8	<1	--	--	--	--	--	--	--	--	--	
DPE-5	11/28/05	--	--	<0.8	<1	<0.8	<0.8	<1	--	--	--	--	--	--	--	--	--	
DPE-6	11/28/05	--	--	<0.8	<1	8	<0.8	<1	--	--	--	--	--	--	--	--	--	
DPE-7	11/28/05	--	--	<0.8	<1	<0.8	<0.8	<1	--	--	--	--	--	--	--	--	--	Laboratory report indicates analysis was performed using a previously opened vial with less than 1mL of headspace.
DPE-8/MW-22	10/26-27/04	--	--	<4	<5	8	<4	**9**	--	--	--	--	--	--	--	--	--	
RW-2	01/97	--	--	--	--	<1	<1	<1	--	--	--	17	7.6	--	--	--	--	
RW-2	04/97	--	--	--	--	<1	<1	<1	--	--	--	150	364	--	--	--	--	
RW-2	07/97	--	--	--	--	<50	<25	<25	--	--	--	255	681	--	--	--	--	
RW-2	11/97	--	--	--	--	<1	<1	<1	--	--	--	246	371	--	--	--	--	
RW-4	07/24/02	--	--	<1	<2	<1	<1	<1	--	<2	3	<1	20	<1	2	1	5	
Trip Blank	10/26-27/04	--	--	<0.8	<1	<0.8	<0.8	<1	--	--	--	--	--	--	--	--	--	
Trip Blank	11/28/05	--	--	<0.8	<1	<0.8	<0.8	<1	--	--	--	--	--	--	--	--	--	
thod A Cleanup Levels:		NA	NA	NA	NA	NA	**5.0**	**5.0**	NA	NA	NA	NA	NA	NA	NA	NA	**160**	

Notes:

All analytes analyzed by U.S. Enivronmental Protection Agency (EPA) Method 8260B.

(ppb) = Parts per billion

-- = Sample not analyzed

< = Analyte not detected at or above the laboratory reporting limit. Number represents reporting limit

ND = Not detected, laboratory reporting limit not available.

J = Estimated result between the method detection limit and the laboratory reporting limit

mL = milliliter

NA = Not applicable

MTCA = Model Toxics Control Act Cleanup Regulations [WAC 173-340-720(2)(a)(I), as amended 02/01].

Bold results exceed MTCA Method A Cleanup Levels.

Only those analytes that were detected at or above the laboratory reporting limit in one or more sample are included in this table.

Table 4-10

Groundwater Analytical Results - Oxygenate Compounds

Former Texaco Service Station/Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

WELL IDENTIFICATION	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	EDC (ppb)	EDB (ppb)	COMMENTS
VP-7/MW-3	03/26-28/91	--	--	--	--	--	--	67 J	<0.01	
VP-7/MW-3	10/18/02	<40.0	<100	<10.0	<2.00	<2.00	<2.00	<1.00	<1.00	
VP-8/MW-7	03/26-28/91	--	--	--	--	--	--	<50	--	
MW-4	07/24/02	--	120	6	--	--	--	<5.0	--	
MW-4	10/17/02	<200	<500	<50.0	<10.0	<10.0	<10.0	<5.00	<5.00	
MW-10	03/26-28/91	--	--	--	--	--	--	<5	<0.01	
MW-10	03/26-28/91	--	--	--	--	--	--	<5	<0.01	Duplicate sample
MW-10	07/24/02	--	<100	<2	--	--	--	<2	--	
MW-11	07/24/02	--	<100	<2	--	--	--	<2	--	
MW-12	10/18/02	<20.0	<50.0	<5.00	<1.00	<1.00	<1.00	<0.500	<0.500	
MW-14	10/14/03	--	--	<250	--	--	--	--	--	EPA Method 8021
MW-16	10/14/03	--	--	<10	--	--	--	--	--	EPA Method 8021
MW-16	05/03/04	--	--	<10	--	--	--	--	--	EPA Method 8021
MW-17	05/03/04	--	--	<50	--	--	--	--	--	EPA Method 8021
MW-20	10/28-11/01/04	--	--	<0.5	--	--	--	<1	<0.5	
MW-21	08/12/04	--	--	<10	--	--	--	--	--	EPA Method 8021
MW-22	10/26-27/04	--	--	<3	--	--	--	<3	<3	
MW-23	10/26-27/04	--	--	<5	--	--	--	<5	<5	
MW-24	10/26-27/04	--	--	<0.5	--	--	--	<0.5	<0.5	
MW-25	10/26-27/04	--	--	<3	--	--	--	<3	<3	
MW-26	10/28-11/01/04	--	--	<3	--	--	--	<5	<3	
MW-32	07/27-28/05	--	--	<2	--	--	--	<2	--	
MW-33	07/27-28/05	--	--	4	--	--	--	<3	--	

Table 4-10

Groundwater Analytical Results - Oxygenate Compounds

Former Texaco Service Station/Chevron Site No. 211577

631 Queen Anne Avenue North

Seattle, Washington

WELL IDENTIFICATION	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	EDC (ppb)	EDB (ppb)	COMMENTS
VP-7/MW-3	03/26-28/91	--	--	--	--	--	--	67 J	<0.01	
VP-7/MW-3	10/18/02	<40.0	<100	<10.0	<2.00	<2.00	<2.00	<1.00	<1.00	
VP-8/MW-7	03/26-28/91	--	--	--	--	--	--	<50	--	
MW-34	11/28/05	--	--	<0.5	--	--	--	<0.5	--	
MW-35	11/28/05	--	--	<0.5	--	--	--	<0.5	--	
DPE-5	11/28/05	--	--	<0.5	--	--	--	<0.5	--	
DPE-6	11/28/05	--	--	<0.5	--	--	--	<0.5	--	
DPE-7	11/28/05	--	--	<0.5	--	--	--	<0.5	--	Laboratory report indicates analysis was performed using a previously opened vial with less than 1mL of headspace.
RW-4	07/24/02	--	<100	<2	--	--	--	<2	--	
Trip Blank	10/14/03	--	--	<2.5	--	--	--	--	--	
Trip Blank	05/03/04	--	--	<2.5	--	--	--	--	--	
Trip Blank	08/12/04	--	--	<2.5	--	--	--	<0.5	--	
Trip Blank	10/26-27/04	--	--	<0.5	--	--	--	<0.5	--	
Trip Blank	11/28/05	--	--	<0.5	--	--	--			
MTCA Method A Cleanup Levels:		NA	NA	20	NA	NA	NA	5	0.01	

Notes:

All analytes analyzed by U.S. Enivronmental Protection Agency (EPA) Method 8260B.

TBA = tertiary butyl alcohol

MTBE = methyl tertiary butyl ether

DIPE = di-isopropyl ether

ETBE = ethyl tertiary butyl ether

TAME = tertiary amyl methyl ether

EDC = 1,2-dichloroethane

EDB = 1,2-dibromoethane

(ppb) = Parts per billion

-- = Sample not analyzed

< = Analyte not detected at or above the laboratory reporting limit. Number represents reporting limit

J = Estimated result between the method detection limit and the laboratory reporting limit

mL = milliliter

NA = Not applicable

MTCA = Model Toxics Control Act Cleanup Regulations [WAC 173-340-720(2)(a)(I), as amended 02/01].

Bold results exceed MTCA Method A Cleanup Levels.

Table 4-11
Dissolved Metals and Inorganic Compounds
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Well Identification	Sample Date	Arsenic (ppb)	Barium (ppb)	Cadmium (ppb)	Calcium (ppb)	Chromium (ppb)	Copper (ppb)	Iron (ppb)	Lead (total) (ppb)	Lead (dissolved) (ppb)	Magnesium (ppb)	Manganese (ppb)	Mercury (ppb)	Potassium (ppb)	Selenium (ppb)	Silicon (ppb)	Silver (ppb)	Sodium (ppb)	Zinc (ppb)	Ferrous Iron (mg/L)	Nitrate-Nitrogen (mg/L)	Sulfate (mg/L)	Comments
VP-1	06/14/00	--	--	--	--	--	--	--	**33.4**	**33.9**	--	--	--	--	--	--	--	--	--	--	--	--	
VP-1	07/24/02	--	--	--	--	--	--	--	--	**22.9**	--	--	--	--	--	--	--	--	--	--	--	--	
VP-1	10/17-18/02	--	--	--	--	--	--	--	<300[1]	**18.0**	--	--	--	--	--	--	--	--	--	--	--	--	
VP-1	01/21/03	--	--	--	--	--	--	--	--	**47.1**	--	--	--	--	--	--	--	--	--	--	--	--	
VP-1	04/23-24/03	--	--	--	--	--	--	--	--	**36.4**	--	--	--	--	--	--	--	--	--	--	--	--	
VP-1	06/30-07/01/03	--	--	--	--	--	--	--	--	13.2	--	--	--	--	--	--	--	--	--	--	--	--	
VP-1	10/01-02/03	--	--	--	--	--	--	--	--	**31.2**	--	--	--	--	--	--	--	--	--	--	--	--	
VP-1	01/21-23/04	--	--	--	--	--	--	--	--	4.2	--	--	--	--	--	--	--	--	--	--	--	--	
VP-1	04/29-30/04	--	--	--	--	--	--	--	--	2.6	--	--	--	--	--	--	--	--	--	--	--	--	
VP-1	07/15-16/04	--	--	--	--	--	--	--	--	2.46	--	--	--	--	--	--	--	--	--	--	--	--	
VP-2	12/15/99	--	--	--	--	--	--	--	**262**	**61.7**	--	--	--	--	--	--	--	--	--	--	--	--	
VP-2	06/14/00	--	--	--	--	--	--	--	**37.8**	**9.87**	--	--	--	--	--	--	--	--	--	--	--	--	
VP-2	10/17-18/02	--	--	--	--	--	--	--	<300[1]	--	--	--	--	--	--	--	--	--	--	--	--	--	
VP-2	04/23-24/03	--	--	--	--	--	--	--	--	1.52	--	--	--	--	--	--	--	--	--	--	--	--	
VP-2	06/30-07/01/03	--	--	--	--	--	--	--	--	3.97	--	--	--	--	--	--	--	--	--	--	--	--	
VP-2	01/21-23/04	--	--	--	--	--	--	--	--	5.3	--	--	--	--	--	--	--	--	--	--	--	--	
VP-2	04/29-30/04	--	--	--	--	--	--	--	--	2.1	--	--	--	--	--	--	--	--	--	--	--	--	
VP-4	06/13/00	--	--	--	--	--	--	--	9.12	4.66	--	--	--	--	--	--	--	--	--	--	--	--	
VP-4	07/24/02	--	--	--	--	--	--	--	--	**28.0**	--	--	--	--	--	--	--	--	--	--	--	--	
VP-4	04/29-30/04	--	--	--	--	--	--	--	--	4.0	--	--	--	--	--	--	--	--	--	--	--	--	
VP-4	07/15-16/04	--	--	--	--	--	--	--	--	8.90	--	--	--	--	--	--	--	--	--	--	--	--	
VP-5/MW-5	12/15/99	--	--	--	--	--	--	--	6.76	2.75	--	--	--	--	--	--	--	--	--	--	--	--	
VP-5/MW-5	06/13/00	--	--	--	--	--	--	--	3.75	2.66	--	--	--	--	--	--	--	--	--	--	--	--	
VP-5/MW-5	10/17-18/02	--	--	--	--	--	--	--	<300[1]	2.29	--	--	--	--	--	--	--	--	--	--	--	--	
VP-5/MW-5	10/01-02/03	--	--	--	--	--	--	--	--	2.4	--	--	--	--	--	--	--	--	--	--	--	--	
VP-5/MW-5	01/21-23/04	--	--	--	--	--	--	--	--	1.7	--	--	--	--	--	--	--	--	--	--	--	--	
VP-5/MW-5	04/29-30/04	--	--	--	--	--	--	--	--	<0.99	--	--	--	--	--	--	--	--	--	--	--	--	
VP-5/MW-5	07/15-16/04	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
VP-7/MW-3	03/26-28/91	**92**	250	13	100,000	77	180	50,000	--	**74 J**	66,000	8,600	0.55	7,400	--	69,000	<10	37,000	170	--	<0.010	--	
VP-7/MW-3	07/07/93	--	--	--	--	4.0	--	--	8.0	--	--	--	--	--	--	--	--	--	--	--	--	--	
VP-7/MW-3	10/95	--	--	--	--	--	--	--	5.6 P	--	--	--	--	--	--	--	--	--	--	--	--	--	
VP-7/MW-3	01/97	--	--	--	--	--	--	--	9.9	--	--	--	--	--	--	--	--	--	--	--	--	--	
VP-7/MW-3	04/97	--	--	--	--	--	--	--	3.4	--	--	--	--	--	--	--	--	--	--	--	--	--	
VP-7/MW-3	07/97	--	--	--	--	--	--	--	4.3 J	--	--	--	--	--	--	--	--	--	--	--	--	--	
VP-7/MW-3	11/97	--	--	--	--	--	--	--	5	--	--	--	--	--	--	--	--	--	--	--	--	--	
VP-7/MW-3	12/14/99	--	--	--	--	--	--	--	5.91	2.11	--	7.76	--	--	--	--	--	--	--	11.7	<0.10	13.4	
VP-7/MW-3	06/14/00	--	--	--	--	--	--	--	--	2.13	--	--	--	--	--	--	--	--	--	--	--	--	
VP-7/MW-3	07/24/02	**97.3**	33.6	<0.080	--	2.2	--	--	--	**25.0**	--	--	<0.079	--	<1.1	--	0.068	--	--	--	--	--	
VP-7/MW-3	10/17-18/02	--	--	--	--	--	--	--	--	2.40	--	--	--	--	--	--	--	--	--	--	--	--	
VP-7/MW-3	01/21/03	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
VP-7/MW-3	10/01-02/03	--	--	--	--	--	--	--	--	1.8	--	--	--	--	--	--	--	--	--	--	--	--	
VP-7/MW-3	01/21-23/04	--	--	--	--	--	--	--	--	<1.2	--	--	--	--	--	--	--	--	--	--	--	--	
VP-7/MW-3	04/29-30/04	--	--	--	--	--	--	--	--	<0.99	--	--	--	--	--	--	--	--	--	--	--	--	
VP-7/MW-3	07/15-16/04	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
VP-8/MW-7	07/07/93	--	--	--	--	3.0	--	--	8.0	--	--	--	--	--	--	--	--	--	--	--	--	--	
VP-8/MW-7	10/95	--	--	--	--	--	--	--	3.4 P	--	--	--	--	--	--	--	--	--	--	--	--	--	
VP-8/MW-7	01/97	--	--	--	--	--	--	--	**37**	--	--	--	--	--	--	--	--	--	--	--	--	--	
VP-8/MW-7	04/97	--	--	--	--	--	--	--	**24.6**	--	--	--	--	--	--	--	--	--	--	--	--	--	
VP-8/MW-7	07/97	--	--	--	--	--	--	--	**23**	--	--	--	--	--	--	--	--	--	--	--	--	--	
VP-8/MW-7	11/97	--	--	--	--	--	--	--	12.7	--	--	--	--	--	--	--	--	--	--	--	--	--	
VP-8/MW-7	12/15/99	--	--	--	--	--	--	--	**40.6**	5.02	--	--	--	--	--	--	--	--	--	--	--	--	
VP-8/MW-7	06/13/00	--	--	--	--	--	--	--	**17.7**	7.95	--	--	--	--	--	--	--	--	--	--	--	--	
VP-8/MW-7	07/24/02	2.1	49.6	0.13	--	0.82	--	--	--	11.4	--	--	<0.079	--	<1.1	--	<0.050	--	--	--	--	--	
VP-8/MW-7	04/23-24/03	--	--	--	--	--	--	--	--	3.73	--	--	--	--	--	--	--	--	--	--	--	--	
VP-8/MW-7	06/30-07/01/03	--	--	--	--	--	--	--	--	2.06	--	--	--	--	--	--	--	--	--	--	--	--	
VP-8/MW-7	10/01-02/03	--	--	--	--	--	--	--	--	2.4	--	--	--	--	--	--	--	--	--	--	--	--	
VP-8/MW-7	01/21-23/04	--	--	--	--	--	--	--	--	3.2	--	--	--	--	--	--	--	--	--	--	--	--	
VP-8/MW-7	04/29-30/04	--	--	--	--	--	--	--	--	<0.99	--	--	--	--	--	--	--	--	--	--	--	--	
VP-8/MW-7	07/15-16/04	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
VP-9	12/15/99	--	--	--	--	--	--	--	5.72	<1.00	--	420	--	--	--	--	--	--	--	9,400	9,200	34,000	

Table 4-11
Dissolved Metals and Inorganic Compounds
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Well Identification	Sample Date	Arsenic (ppb)	Barium (ppb)	Cadmium (ppb)	Calcium (ppb)	Chromium (ppb)	Copper (ppb)	Iron (ppb)	Lead (total) (ppb)	Lead (dissolved) (ppb)	Magnesium (ppb)	Manganese (ppb)	Mercury (ppb)	Potassium (ppb)	Selenium (ppb)	Silicon (ppb)	Silver (ppb)	Sodium (ppb)	Zinc (ppb)	Ferrous Iron (mg/L)	Nitrate-Nitrogen (mg/L)	Sulfate (mg/L)	Comments
VP-9	06/14/00	--	--	--	--	--	--	--	**15.2**	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
VP-9	10/17-18/02	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
VP-9	04/23-24/03	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
VP-9	06/30-07/01/03	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
VP-9	04/29-30/04	--	--	--	--	--	--	--	--	<0.99	--	--	--	--	--	--	--	--	--	--	--	--	
VP-9	07/15-16/04	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	10/95	--	--	--	--	--	--	--	**30.6**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	01/97	--	--	--	--	--	--	--	**36.5**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	04/97	--	--	--	--	--	--	--	**20.7**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	07/97	--	--	--	--	--	--	--	**19.5**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	11/97	--	--	--	--	--	--	--	**16.2**	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	12/15/99	--	--	--	--	--	--	--	**19.8**	9.86	--	10.5	--	--	--	--	--	--	--	6.15	<0.10	<0.20	
MW-4	06/14/00	--	--	--	--	--	--	--	**21.4**	9.72	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	07/24/02	**31.0**	63.8	<0.080	--	<0.28	--	--	--	**15.5**	--	--	<0.079	--	<1.1	--	<0.050	--	--	--	--	--	
MW-4	10/17-18/02	--	--	--	--	--	--	--	<300[1]	10.7	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	10/17-18/02	--	--	--	--	--	--	--	--	9.61	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	01/21/03	--	--	--	--	--	--	--	--	14.5	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	04/23-24/03	--	--	--	--	--	--	--	--	5.74	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	06/30-07/01/03	--	--	--	--	--	--	--	--	7.85	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	10/01-02/03	--	--	--	--	--	--	--	--	7.1	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	01/21-23/04	--	--	--	--	--	--	--	--	6.7	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	04/29-30/04	--	--	--	--	--	--	--	--	14.3	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	07/15-16/04	--	--	--	--	--	--	--	--	9.06	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	10/95	--	--	--	--	--	--	--	--	**33.3**	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	01/97	--	--	--	--	--	--	--	--	**61.9**	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	07/24/02	--	--	--	--	--	--	--	--	5.1	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	07/15-16/04	--	--	--	--	--	--	--	--	1.69	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	10/95	--	--	--	--	--	--	--	4.6 P	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	04/97	--	--	--	--	--	--	--	6.8	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	07/97	--	--	--	--	--	--	--	8.6 J	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	11/97	--	--	--	--	--	--	--	3.3	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	12/15/99	--	--	--	--	--	--	--	**15.0**	1.03	--	10.5	--	--	--	--	--	--	--	6.15	--	--	
MW-9	06/14/00	--	--	--	--	--	--	--	7.86	1.59	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	10/17-18/02	--	--	--	--	--	--	--	--	2.66	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	04/23-24/03	--	--	--	--	--	--	--	--	1.31	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	10/01-02/03	--	--	--	--	--	--	--	--	3.9	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	01/21-23/04	--	--	--	--	--	--	--	--	5.5	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	04/29-30/04	--	--	--	--	--	--	--	--	4.8	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	07/15-16/04	--	--	--	--	--	--	--	--	2.54	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	03/26-28/91	**21**	98	<5.0	120,000	17	16	15,000	--	12 J	46,000	3,200	<0.20	6,400	--	23,000	<10	63,000	80	--	0.243	--	
MW-10	03/26-28/91	<5.0	88	<5.0	120,000	<10	13	10,000	--	<5	44,000	3,400	<0.20	6,400	--	22,000	<10	65,000	72	--	0.243	--	Duplicate sample
MW-10	07/07/93	--	--	--	--	<1.0	--	--	8.0	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	10/95	--	--	--	--	--	--	--	<1	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	04/97	--	--	--	--	--	--	--	<1	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	07/97	--	--	--	--	--	--	--	1.2 J	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	11/97	--	--	--	--	--	--	--	4.9	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	12/15/99	--	--	--	--	--	--	--	<1.00	<1.00	--	5.12	--	--	--	--	--	--	--	<2.00	0.72	70.6	
MW-10	06/14/00	--	--	--	--	--	--	--	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	07/24/02	4.1	52.1	0.17	--	0.38	--	--	--	1.3	--	--	<0.079	--	<1.1	--	<0.050	--	--	--	--	--	
MW-10	10/17-18/02	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	01/21/03	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	04/23-24/03	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	06/30-07/01/03	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	10/01-02/03	--	--	--	--	--	--	--	--	<1.2	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	01/21-23/04	--	--	--	--	--	--	--	--	<1.2	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	04/29-30/04	--	--	--	--	--	--	--	--	<0.99	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	07/15-16/04	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-11	03/26-28/91	--	--	--	--	--	--	--	--	11 J	--	--	--	--	--	--	--	--	--	--	--	--	
MW-11	07/24/02	--	--	--	--	--	--	--	--	<1.2	--	--	--	--	--	--	--	--	--	--	--	--	
MW-11	10/17-18/02	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-11	01/21/03	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	

Table 4-11
Dissolved Metals and Inorganic Compounds
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Well Identification	Sample Date	Arsenic (ppb)	Barium (ppb)	Cadmium (ppb)	Calcium (ppb)	Chromium (ppb)	Copper (ppb)	Iron (ppb)	Lead (total) (ppb)	Lead (dissolved) (ppb)	Magnesium (ppb)	Manganese (ppb)	Mercury (ppb)	Potassium (ppb)	Selenium (ppb)	Silicon (ppb)	Silver (ppb)	Sodium (ppb)	Zinc (ppb)	Ferrous Iron (mg/L)	Nitrate-Nitrogen (mg/L)	Sulfate (mg/L)	Comments
MW-11	04/23-24/03	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-11	06/30-07/01/03	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-11	10/01-02/03	--	--	--	--	--	--	--	--	<1.2	--	--	--	--	--	--	--	--	--	--	--	--	
MW-11	01/21-23/04	--	--	--	--	--	--	--	--	<1.2	--	--	--	--	--	--	--	--	--	--	--	--	
MW-11	04/29-30/04	--	--	--	--	--	--	--	--	<0.99	--	--	--	--	--	--	--	--	--	--	--	--	
MW-11	07/15-16/04	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-12	01/21/03	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-12	04/23-24/03	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-12	06/30-07/01/03	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-12	10/01-02/03	--	--	--	--	--	--	--	--	<1.2	--	--	--	--	--	--	--	--	--	--	--	--	
MW-12	01/21-23/04	--	--	--	--	--	--	--	--	<1.2	--	--	--	--	--	--	--	--	--	--	--	--	
MW-12	04/29-30/04	--	--	--	--	--	--	--	--	<0.99	--	--	--	--	--	--	--	--	--	--	--	--	
MW-12	07/15-16/04	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-14	11/14/02	**17.0**	18.4	<1.00	--	<1.00	--	--	--	1.82	--	--	<1.00	--	1.48	--	<1.00	--	--	--	--	--	
MW-14	04/29-30/04	--	--	--	--	--	--	--	--	<0.99	--	--	--	--	--	--	--	--	--	--	--	--	
MW-14	07/15-16/04	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-15	11/14/02	1.33	<10.0	<1.00	--	<1.00	--	--	--	1.04	--	--	<1.00	--	<1.00	--	<1.00	--	--	--	--	--	
MW-15	01/21/03	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-15	10/01-02/03	--	--	--	--	--	--	--	--	<1.2	--	--	--	--	--	--	--	--	--	--	--	--	
MW-15	01/21-23/04	--	--	--	--	--	--	--	--	<1.2	--	--	--	--	--	--	--	--	--	--	--	--	
MW-15	04/29-30/04	--	--	--	--	--	--	--	--	<0.99	--	--	--	--	--	--	--	--	--	--	--	--	
MW-16	11/14/02	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-16	01/21/03	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-16	07/15-16/04	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-17	11/14/02	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-17	01/21/03	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
MW-17	10/01-02/03	--	--	--	--	--	--	--	--	<1.2	--	--	--	--	--	--	--	--	--	--	--	--	
MW-17	01/21-23/04	--	--	--	--	--	--	--	--	<1.2	--	--	--	--	--	--	--	--	--	--	--	--	
MW-17	07/15-16/04	--	--	--	--	--	--	--	--	**23.7**	--	--	--	--	--	--	--	--	--	--	--	--	
MW-18	04/29-30/04	--	--	--	--	--	--	--	--	<0.99	--	--	--	--	--	--	--	--	--	--	--	--	
MW-19	04/29-30/04	--	--	--	--	--	--	--	--	<0.99	--	--	--	--	--	--	--	--	--	--	--	--	
RW-2	01/97	--	--	--	--	--	--	--	--	11	--	--	--	--	--	--	--	--	--	--	--	--	
RW-2	04/97	--	--	--	--	--	--	--	--	**18.2**	--	--	--	--	--	--	--	--	--	--	--	--	
RW-2	07/97	--	--	--	--	--	--	--	--	**47.2**	--	--	--	--	--	--	--	--	--	--	--	--	
RW-2	11/97	--	--	--	--	--	--	--	--	**15.4**	--	--	--	--	--	--	--	--	--	--	--	--	
RW-2	10/17-18/02	--	--	--	--	--	--	--	--	2.23	--	--	--	--	--	--	--	--	--	--	--	--	
RW-2	01/21/03	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
RW-2	04/23-24/03	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
RW-2	06/30-07/01/03	--	--	--	--	--	--	--	--	1.43	--	--	--	--	--	--	--	--	--	--	--	--	
RW-2	10/01-02/03	--	--	--	--	--	--	--	--	4.9	--	--	--	--	--	--	--	--	--	--	--	--	
RW-2	01/21-23/04	--	--	--	--	--	--	--	--	<1.2	--	--	--	--	--	--	--	--	--	--	--	--	
RW-2	04/29-30/04	--	--	--	--	--	--	--	--	<0.99	--	--	--	--	--	--	--	--	--	--	--	--	
RW-2	07/15-16/04	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
RW-3	01/21-23/04	--	--	--	--	--	--	--	--	12.0	--	--	--	--	--	--	--	--	--	--	--	--	
RW-3	04/29-30/04	--	--	--	--	--	--	--	--	10.6	--	--	--	--	--	--	--	--	--	--	--	--	
RW-3	07/15-16/04	--	--	--	--	--	--	--	--	2.32	--	--	--	--	--	--	--	--	--	--	--	--	
RW-4	07/07/93	--	--	--	--	4.0	--	--	**45**	--	--	--	--	--	--	--	--	--	--	--	--	--	
RW-4	07/24/02	**6.1**	66.9	<0.080	--	1.2	--	--	--	3.3	--	--	<0.079	--	<1.1	--	<0.050	--	--	--	--	--	
RW-4	10/17-18/02	--	--	--	--	--	--	--	--	1.23	--	--	--	--	--	--	--	--	--	--	--	--	
RW-4	01/21/03	--	--	--	--	--	--	--	--	<1.00	--	--	--	--	--	--	--	--	--	--	--	--	
RW-5	10/17-18/02	--	--	--	--	--	--	--	--	3.91	--	--	--	--	--	--	--	--	--	--	--	--	
RW-5	01/21/03	--	--	--	--	--	--	--	--	13.3	--	--	--	--	--	--	--	--	--	--	--	--	
RW-5	04/23-24/03	--	--	--	--	--	--	--	--	7.31	--	--	--	--	--	--	--	--	--	--	--	--	
RW-5	06/30-07/01/03	--	--	--	--	--	--	--	--	**19.8**	--	--	--	--	--	--	--	--	--	--	--	--	
RW-5	01/21-23/04	--	--	--	--	--	--	--	--	1.6	--	--	--	--	--	--	--	--	--	--	--	--	

Table 4-11
Dissolved Metals and Inorganic Compounds
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Well Identification	Sample Date	Arsenic (ppb)	Barium (ppb)	Cadmium (ppb)	Calcium (ppb)	Chromium (ppb)	Copper (ppb)	Iron (ppb)	Lead (total) (ppb)	Lead (dissolved) (ppb)	Magnesium (ppb)	Manganese (ppb)	Mercury (ppb)	Potassium (ppb)	Selenium (ppb)	Silicon (ppb)	Silver (ppb)	Sodium (ppb)	Zinc (ppb)	Ferrous Iron (mg/L)	Nitrate-Nitrogen (mg/L)	Sulfate (mg/L)	Comments
MTCA Method A Cleanup Levels:		5	NA	5	NA	50	NA	NA	15	15	NA	NA	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	

Notes:
All analytes analyzed by U.S. Environmental Protection Agency (EPA) 6000/7000 Series Methods.
(ppb) = Parts per billion
(mg/L) = milligrams per liter
-- = Sample not analyzed.
J = Anatyle was positively identified. The associated numerical result is an estimate.
P = The analyte was detected above the instrument detection limit but below the established minimum quantitation limit.
< = Analyte not detected at or above the laboratory reporting limit. Number represents reporting limit
ND = Not detected and reporting limit not available.
[1] = Organic lead by Method DHS LUFT
NA = Not applicable
MTCA = Model Toxics Control Act Cleanup Regulations [WAC 173-340-720(2)(a)(I), as amended 02/01].
Bold results exceed MTCA Method A Cleanup Levels.

Table 4-12
Soil Vapor Analytical Results - Monterey Apartments
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

SAMPLE LOCATION		DVP-1									
Sample Identification		SUMMA 0132		B4F0413-01		B4G0476-01		B4H0801-01		B4J0947-01	
Sample Date		10/03/02[1]		06/14/04[2]		07/20/04[2]		08/31/04[2]		10/27/04[2]	
COMPOUND	Molecular Weight	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
Benzene	78.1	13	43,702	<0.0308	<104	0.0585	197	0.0331	111	<0.0308	<104
Toluene	92.1	110	436,071	<0.0261	<103	<0.0261	<103	<0.0261	<103	<0.0261	<103
Ethylbenzene	106.2	55	251,416	<0.0227	<104	<0.0227	<104	<0.0227	<104	<0.0227	<104
Total Xylenes	106.17	--	--	0.0454	207	<0.0454	<207	<0.0454	<207	<0.0454	<207
m,p-Xylene	106.17	360	1,645,164	<0.00088	<4.0	--	--	<0.00088	<4.0	--	--
o-Xylene	106.17	140	639,786	<0.00044	<2.0	--	--	<0.00044	<2.0	--	--
Tetrachloroethene (PCE)	165.83	6.2	44,255	<0.00028	<2.0	--	--	<0.00028	<2.0	--	--
Trichloroethene (TCE)	131.39	<1.5	<8,483	<0.00035	<2.0	--	--	<0.00035	<2.0	--	--
cis-1,2-Dichloroethene	96.94	<1.50	<6,259	<0.00048	<2.0	--	--	<0.00048	<2.0	--	--
Vinyl chloride	62.5	<1.50	<4,035	<0.00074	<2.0	--	--	<0.00074	<2.0	--	--
4-Ethyltoluene	120.19	100	517,337	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	120.19	64	331,095	<0.00039	<2.0	--	--	<0.00039	<2.0	--	--
1,2,4-Trimethylbenzene	120.19	110	569,070	<0.00039	<2.0	--	--	<0.00039	<2.0	--	--
1,2,4-Trichlorobenzene	181.45	<7.50	<58, 576	<0.00026	<2.0	--	--	<0.00026	<2.0	--	--
Dichlorodifluoromethane	120.91	<1.50	<7,807	<0.00038	<2.0	--	--	<0.00038	<2.0	--	--
Freon 114	170.92	<1.50	<11,035	--	--	--	--	--	--	--	--
Chloromethane	50.49	<1.50	<3,260	<0.0023	<5.0	--	--	<0.0023	<5.0	--	--
Bromomethane	94.94	<1.50	<6,130	<0.00049	<2.0	--	--	<0.00049	<2.0	--	--
Chloroethane	64.52	<1.50	<4,166	<0.00072	<2.0	--	--	<0.00072	<2.0	--	--
Trichlorofluoromethane	137.37	<1.50	<8,869	<0.00034	<2.0	--	--	<0.00034	<2.0	--	--
1,1-Dichloroethene	96.94	<1.50	<6,259	<0.00048	<2.0	--	--	<0.00048	<2.0	--	--
Freon 113	187.37	<3.80	<30,647	--	--	--	--	--	--	--	--
3-Chloropropene	76.52	<3.80	<12,516	--	--	--	--	--	--	--	--
Methylene chloride	84.93	<3.80	<13,892	<0.0027	<9.87	--	--	<0.0027	<9.87	--	--
1,1-Dichloroethane	98.96	<1.50	<6,389	<0.00047	<2.0	--	--	<0.00047	<2.0	--	--
Chloroform	119.38	<1.50	<7,708	<0.00039	<2.0	--	--	<0.00039	<2.0	--	--
1,1,1-Trichloroethane	133.41	<1.50	<8,614	<0.00035	<2.0	--	--	<0.00035	<2.0	--	--
Carbon tetrachloride	153.82	<1.50	<9,931	<0.0003	<2.0	--	--	<0.0003	<2.0	--	--

Table 4-12
Soil Vapor Analytical Results - Monterey Apartments
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

SAMPLE LOCATION		DVP-1									
Sample Identification		SUMMA 0132		B4F0413-01		B4G0476-01		B4H0801-01		B4J0947-01	
Sample Date		10/03/02[1]		06/14/04[2]		07/20/04[2]		08/31/04[2]		10/27/04[2]	
COMPOUND	Molecular Weight	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³	ppmv	µg/m³
1,2-Dichloroethane (EDC)	98.96	<1.50	<6,389	<0.00047	<2.0	--	--	<0.00047	<2.0	--	--
1,2-Dichloropropane	112.99	<1.50	<7,295	<0.00041	<2.0	--	--	<0.00041	<2.0	--	--
cis-1,3-Dichloropropene	110.97	<1.50	<7,165	<0.00042	<2.0	--	--	<0.00042	<2.0	--	--
trans-1,3-Dichloropropene	110.97	<1.50	<7,165	<0.00042	<2.0	--	--	<0.00042	<2.0	--	--
1,1,2-Trichloroethane	133.41	<1.50	<8,614	<0.00035	<2.0	--	--	<0.00035	<2.0	--	--
1,2-Dibromoethane (EDB)	187.87	<1.50	<12,130	<0.00028	<2.3	--	--	<0.00028	<2.3	--	--
Chlorobenzene	112.56	<1.50	<7,267	<0.00041	<2.0	--	--	<0.00041	<2.0	--	--
Styrene	104.16	<1.50	<6,725	<0.00045	<2.0	--	--	<0.00045	<2.0	--	--
1,1,2,2-Tetrachloroethane	167.85	<1.50	<10,837	<0.00028	<2.0	--	--	<0.00028	<2.0	--	--
1,3-Dichlorobenzene	147.01	<3.80	<24,046	<0.00032	<2.0	--	--	<0.00032	<2.0	--	--
1,4-Dichlorobenzene	147.01	<3.80	<24,046	<0.00032	<2.0	--	--	<0.00032	<2.0	--	--
Benzyl chloride	126.58	<1.50	<8,173	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	147.01	<3.80	<24,046	<0.00032	<2.0	--	--	<0.00032	<2.0	--	--
Hexachlorobutadiene	260.76	<3.80	<42,651	<0.00018	<2.0	--	--	<0.00018	<2.0	--	--
Acetone	58.08	--	--	<0.008	<20.0	--	--	<0.008	<20.0	--	--
Bromobenzene	157.01	--	--	<0.0003	<2.0	--	--	<0.0003	<2.0	--	--
Bromochloromethane	129.38	--	--	<0.00036	<2.0	--	--	<0.00036	<2.0	--	--
Bromodichloromethane	163.83	--	--	<0.00028	<2.0	--	--	<0.00028	<2.0	--	--
Bromoform	252.75	--	--	<0.00018	<2.0	--	--	<0.00018	<2.0	--	--
2-Butanone	72.11	--	--	<0.0064	<19.9	--	--	<0.0064	<19.9	--	--
n-Butylbenzene	134.22	--	--	<0.00035	<2.0	--	--	<0.00035	<2.0	--	--
sec-Butylbenzene	134.22	--	--	<0.00035	<2.0	--	--	<0.00035	<2.0	--	--
tert-Butylbenzene	134.22	--	--	<0.00035	<2.0	--	--	<0.00035	<2.0	--	--
Carbon disulfide	76.14	--	--	<0.00061	<2.0	--	--	<0.00061	<2.0	--	--
2-Chlorotoluene	126.58	--	--	<0.00037	<2.0	--	--	<0.00037	<2.0	--	--
4-Chlorotoluene	126.58	--	--	<0.00037	<2.0	--	--	<0.00037	<2.0	--	--
Dibromochloromethane	208.28	--	--	<0.00022	<2.0	--	--	<0.00022	<2.0	--	--
1,2-Dibromo-3-chloropropane	236.33	--	--	<0.00098	<10.0	--	--	<0.00098	<10.0	--	--

Table 4-12
Soil Vapor Analytical Results - Monterey Apartments
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

SAMPLE LOCATION		DVP-1									
Sample Identification		SUMMA 0132		B4F0413-01		B4G0476-01		B4H0801-01		B4J0947-01	
Sample Date		10/03/02[1]		06/14/04[2]		07/20/04[2]		08/31/04[2]		10/27/04[2]	
COMPOUND	Molecular Weight	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3
Dibromomethane	173.83	--	--	<0.00027	<2.0	--	--	<0.00027	<2.0	--	--
trans-1,2-Dichloroethene	96.94	--	--	<0.00048	<2.0	--	--	<0.00048	<2.0	--	--
1,3-Dichloropropane	112.99	--	--	<0.00041	<2.0	--	--	<0.00041	<2.0	--	--
2,2-Dichloropropane	112.99	--	--	<0.00041	<2.0	--	--	<0.00041	<2.0	--	--
1,1-Dichloropropene	110.97	--	--	<0.00042	<2.0	--	--	<0.00042	<2.0	--	--
2-Hexanone (MBR)	100.16	--	--	<0.0046	<19.8	--	--	<0.0046	<19.8	--	--
Isopropylbenzene	120.19	--	--	<0.00039	<2.0	--	--	<0.00039	<2.0	--	--
p-Isopropyltoluene	134.22	--	--	<0.00035	<2.0	--	--	<0.00035	<2.0	--	--
4-Methyl-2-pentanone	100.16	--	--	<0.0046	<19.8	--	--	<0.0046	<19.8	--	--
Naphthalene	126.12	--	--	<0.00037	<2.0	--	--	<0.00037	<2.0	--	--
n-Propylbenzene	120.19	--	--	<0.00039	<2.0	--	--	<0.00039	<2.0	--	--
1,2,3-Trichlorobenzene	181.45	--	--	<0.00026	<2.0	--	--	<0.00026	<2.0	--	--
1,1,1,2-Tetrachloroethane	167.85	--	--	<0.00028	<2.0	--	--	<0.00028	<2.0	--	--
1,2,3-Trichloropropane	147.43	--	--	<0.00032	<2.0	--	--	<0.00032	<2.0	--	--
Methane	16.043	25,000	17,263,563	--	--	--	--	--	--	--	--
>C4-C10 Hydrocarbons	--	8,600	--	<2.36	--	4.05	--	4.16	--	<2.36	--

Table 4-12
Soil Vapor Analytical Results - Monterey Apartments
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

SAMPLE LOCATION		DVP-2									
Sample Identification		SUMMA 0101		B4F0413-02		B4G0476-02		B4I0056-01		B4J0974-01	
Sample Date		10/03/02[1]		06/14/04[2]		07/20/04[2]		09/02/04[2]		10/27/04[2]	
COMPOUND	Molecular Weight	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m3
Benzene	78.1	0.006	20	<0.0308	<104	<0.0308	<104	<0.0308	<104	<0.0308	<104
Toluene	92.1	0.035	139	<0.0261	<103	<0.0261	<103	<0.0261	<103	<0.0261	<103
Ethylbenzene	106.2	0.010	46	<0.0227	<104	<0.0227	<104	<0.0227	<104	<0.0227	<104
Total Xylenes	106.17	--	--	<0.0454	<207	<0.0454	<207	<0.0454	<207	<0.0454	<207
m,p-Xylene	106.17	0.062	283	<0.00088	<4.0	--	--	<0.00088	<4.0	--	--
o-Xylene	106.17	0.026	119	<0.00044	<2.0	--	--	<0.00044	<2.0	--	--
Tetrachloroethene (PCE)	165.83	<0.0005	<4.0	<0.00028	<2.0	--	--	<0.00028	<2.0	--	--
Trichloroethene (TCE)	131.39	<0.0002	<1.0	<0.00035	<2.0	--	--	<0.00035	<2.0	--	--
cis-1,2-Dichloroethene	96.94	<1.50	<1.0	<0.00048	<2.0	--	--	<0.00048	<2.0	--	--
Vinyl chloride	62.5	<0.0002	<1.0	<0.00074	< 2.0	--	--	<0.00074	<2.0	--	--
4-Ethyltoluene	120.19	0.016	83	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	120.19	0.011	57	<0.00039	<2.0	--	--	<0.00039	<2.0	--	--
1,2,4-Trimethylbenzene	120.19	0.018	93	<0.00039	<2.0	--	--	<0.00039	<2.0	--	--
1,2,4-Trichlorobenzene	181.45	0.001	8	<0.00026	<2.0	--	--	<0.00026	<2.0	--	--
Dichlorodifluoromethane	120.91	<0.0002	<1.0	<0.00038	<2.0	--	--	<0.00038	<2.0	--	--
Freon 114	170.92	<0.0002	<1.0	--	--	--	--	--	--	--	--
Chloromethane	50.49	<0.0002	<0.4	<0.0023	<5.0	--	--	<0.0023	<5.0	--	--
Bromomethane	94.94	<0.0002	<1.0	<0.00049	<2.0	--	--	<0.00049	<2.0	--	--
Chloroethane	64.52	<0.0002	<1.0	<0.00072	<2.0	--	--	<0.00072	<2.0	--	--
Trichlorofluoromethane	137.37	<0.0002	<1.0	<0.00034	<2.0	--	--	<0.00034	<2.0	--	--
1,1-Dichloroethene	96.94	<0.0002	<1.0	<0.00048	<2.0	--	--	<0.00048	<2.0	--	--
Freon 113	187.37	<0.0005	<4.0	--	--	--	--	--	--	--	--
3-Chloropropene	76.52	<0.0005	<2.0	--	--	--	--	--	--	--	--
Methylene chloride	84.93	<0.0005	<2.0	<0.0027	<9.87	--	--	<0.0027	<9.87	--	--
1,1-Dichloroethane	98.96	<0.0002	<1.0	<0.00047	<2.0	--	--	<0.00047	<2.0	--	--
Chloroform	119.38	<0.0002	<1.0	<0.00039	<2.0	--	--	<0.00039	<2.0	--	--
1,1,1-Trichloroethane	133.41	<0.0002	<1.0	<0.00035	<2.0	--	--	<0.00035	<2.0	--	--
Carbon tetrachloride	153.82	<0.0002	<1.0	<0.0003	<2.0	--	--	<0.0003	<2.0	--	--

Table 4-12
Soil Vapor Analytical Results - Monterey Apartments
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

SAMPLE LOCATION		DVP-2									
Sample Identification		SUMMA 0101		B4F0413-02		B4G0476-02		B4I0056-01		B4J0974-01	
Sample Date		10/03/02[1]		06/14/04[2]		07/20/04[2]		09/02/04[2]		10/27/04[2]	
COMPOUND	Molecular Weight	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m3
1,2-Dichloroethane (EDC)	98.96	<0.0002	<1.0	<0.00047	<2.0	--	--	<0.00047	<2.0	--	--
1,2-Dichloropropane	112.99	<0.0002	<1.0	<0.00041	<2.0	--	--	<0.00041	<2.0	--	--
cis-1,3-Dichloropropene	110.97	<0.0002	<1.0	<0.00042	<2.0	--	--	<0.00042	<2.0	--	--
trans-1,3-Dichloropropene	110.97	<0.0002	<1.0	<0.00042	<2.0	--	--	<0.00042	<2.0	--	--
1,1,2-Trichloroethane	133.41	<0.0002	<1.0	<0.00035	<2.0	--	--	<0.00035	<2.0	--	--
1,2-Dibromoethane (EDB)	187.87	<0.0002	<2.0	<0.00028	<2.3	--	--	<0.00028	<2.3	--	--
Chlorobenzene	112.56	<0.0002	<1.0	<0.00041	<2.0	--	--	<0.00041	<2.0	--	--
Styrene	104.16	<0.0002	<1.0	<0.00045	<2.0	--	--	<0.00045	<2.0	--	--
1,1,2,2-Tetrachloroethane	167.85	<0.0002	<1.0	<0.00028	<2.0	--	--	<0.00028	<2.0	--	--
1,3-Dichlorobenzene	147.01	<0.0005	<3.0	<0.00032	<2.0	--	--	<0.00032	<2.0	--	--
1,4-Dichlorobenzene	147.01	<0.0005	<3.0	<0.00032	<2.0	--	--	<0.00032	<2.0	--	--
Benzyl chloride	126.58	<0.0002	<1.0	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	147.01	<0.0005	<3.0	<0.00032	<2.0	--	--	<0.00032	<2.0	--	--
Hexachlorobutadiene	260.76	<0.0005	<6.0	<0.00018	<2.0	--	--	<0.00018	<2.0	--	--
Acetone	58.08	--	--	<0.008	<20.0	--	--	<0.008	<20.0	--	--
Bromobenzene	157.01	--	--	<0.0003	<2.0	--	--	<0.0003	<2.0	--	--
Bromochloromethane	129.38	--	--	<0.00036	<2.0	--	--	<0.00036	<2.0	--	--
Bromodichloromethane	163.83	--	--	<0.00028	<2.0	--	--	<0.00028	<2.0	--	--
Bromoform	252.75	--	--	<0.00018	<2.0	--	--	<0.00018	<2.0	--	--
2-Butanone	72.11	--	--	<0.0064	<19.9	--	--	<0.0064	<19.9	--	--
n-Butylbenzene	134.22	--	--	<0.00035	<2.0	--	--	<0.00035	<2.0	--	--
sec-Butylbenzene	134.22	--	--	<0.00035	<2.0	--	--	<0.00035	<2.0	--	--
tert-Butylbenzene	134.22	--	--	<0.00035	<2.0	--	--	<0.00035	<2.0	--	--
Carbon disulfide	76.14	--	--	<0.00061	<2.0	--	--	<0.00061	<2.0	--	--
2-Chlorotoluene	126.58	--	--	<0.00037	<2.0	--	--	<0.00037	<2.0	--	--
4-Chlorotoluene	126.58	--	--	<0.00037	<2.0	--	--	<0.00037	<2.0	--	--
Dibromochloromethane	208.28	--	--	<0.00022	<2.0	--	--	<0.00022	<2.0	--	--
1,2-Dibromo-3-chloropropane	236.33	--	--	<0.00098	<10	--	--	<0.00098	<10	--	--

Table 4-12
Soil Vapor Analytical Results - Monterey Apartments
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

SAMPLE LOCATION		DVP-2									
Sample Identification		SUMMA 0101		B4F0413-02		B4G0476-02		B4I0056-01		B4J0974-01	
Sample Date		10/03/02[1]		06/14/04[2]		07/20/04[2]		09/02/04[2]		10/27/04[2]	
COMPOUND	Molecular Weight	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m^3	ppmv	µg/m3
Dibromomethane	173.83	--	--	<0.00027	<2.0	--	--	<0.00027	<2.0	--	--
trans-1,2-Dichloroethene	96.94	--	--	<0.00048	<2.0	--	--	<0.00048	<2.0	--	--
1,3-Dichloropropane	112.99	--	--	<0.00041	<2.0	--	--	<0.00041	<2.0	--	--
2,2-Dichloropropane	112.99	--	--	<0.00041	<2.0	--	--	<0.00041	<2.0	--	--
1,1-Dichloropropene	110.97	--	--	<0.00042	<2.0	--	--	<0.00042	<2.0	--	--
2-Hexanone (MBR)	100.16	--	--	<0.0046	<19.8	--	--	<0.0046	<19.8	--	--
Isopropylbenzene	120.19	--	--	<0.00039	<2.0	--	--	<0.00039	<2.0	--	--
p-Isopropyltoluene	134.22	--	--	<0.00035	<2.0	--	--	<0.00035	<2.0	--	--
4-Methyl-2-pentanone	100.16	--	--	<0.0046	<19.8	--	--	<0.0046	<19.8	--	--
Naphthalene	126.12	--	--	<0.00037	<2.0	--	--	<0.00037	<2.0	--	--
n-Propylbenzene	120.19	--	--	<0.00039	<2.0	--	--	<0.00039	<2.0	--	--
1,2,3-Trichlorobenzene	181.45	--	--	<0.00026	<2.0	--	--	<0.00026	<2.0	--	--
1,1,1,2-Tetrachloroethane	167.85	--	--	<0.00028	<2.0	--	--	<0.00028	<2.0	--	--
1,2,3-Trichloropropane	147.43	--	--	<0.00032	<2.0	--	--	<0.00032	<2.0	--	--
Methane	16.043	350	241,690	--	--	--	--	--	--	--	--
>C4-C10 Hydrocarbons	--	3,800	--	<2.36	--	<2.36	--	<2.36	--	<2.36	--

Table 4-12
Soil Vapor Analytical Results - Monterey Apartments
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Notes:
1 = samples collected by SUMMA canister, and analyzed for gasoline hydrocarbons and methane by Environmental Protection Agency (EPA) Methods TO-18 and TO-25, all other compounds analyzed by EPA Method TO-14.
2 = samples collected by Tedlar bag and analyzed for gasoline hydrocarbons and BTEX in Air by NWTPH-G and EPA 8021B
ppmv = parts per million by volume
$\mu g/m^3$ = micrograms per cubic meter
Conversion from ppmv to $\mu g/m^3$ calculated by: µg/m3 = (ppmv * MW)/(R * T)
R = gas constant (8.205E-5 atm-m3/mol-K)
T = System temperature Kelvin
MW = Molecular weight of compound
< = Not detected at or above the laboratory reporting limit. Number represents reporting limit.
-- = Not analyzed
NA = Not applicable
Vapor samples collected on October 3, 2002 were collected by summa canister prior to installation and startup of the former SVE system.
Vapor samples collected on June 14, 2004 were collected by Tedlar bag approximately 1.5 hours after the SVE system had been temporarily shut down.
Vapor samples collected on July 20, 2004 following SVE system shutdown of at least 12 days for maintenance and groundwater monitoring.
Vapor samples were collected from DVP-1 on August 31 and from DVP-2 on September 2 approximately 1.25 to 1.5 hours after the SVE system was temporarily shut down.
Vapor samples collected on October 27, 2004 were collected approximately 1.5 hours after the SVE system had been temporarily shut down.

Table 4-13
Soil Vapor Analytical Results - U-Park Lot
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Sample Location	NV-1					
Sample Identification	NV-1-5		NV-1-8		NV-1-8 (DUP)	
Sample Date	08/12/05	04/07/06	08/12/05	04/07/06	08/12/05	04/07/06
Analyte	µg/m³		µg/m³		µg/m³	
Benzene	<0.42	<0.38	<0.42	<0.41	<0.42	<0.40
Toluene	34	0.63	41	1.4	40	1.6
Ethylbenzene	0.69	<0.52	<0.57	<0.56	<0.57	<0.55
m,p-Xylene	3.4	<0.52	1.4	<0.56	1.3	<0.55
o-Xylene	0.97	<0.52	<0.57	<0.56	<0.57	<0.55
Tetrachloroethene (PCE)	2.0	<0.81	<0.89	<0.88	5.7	<0.85
Trichloroethene (TCE)	<0.70	<0.64	<0.70	<0.69	0.84	<0.68
1,2,4-Trimethylbenzene	<0.64	<0.59	<0.64	0.67	<0.64	<0.62
Chloromethane	0.50	0.40	0.38	0.48	0.36	0.54
Bromomethane	<0.51	<0.47	<0.51	0.68	<0.51	<0.49
Chloroform	2.9	<0.58	1.5	<0.63	1.9	<0.62
1,1,1-Trichloroethane	<0.71	<0.65	<0.71	<0.70	<0.71	<0.69
Carbon Tetrachloride	<0.82	<0.76	0.83	<0.81	0.86	<0.79
Acetone	7.4	53	5.7	76	8.1	60
2-Butanone (MEK)	9.9	<1.8	12	3.7	12	<1.8
Carbon Disulfide	15	<1.9	6.9	<2.0	6.7	<2.0
Freon 12	1.4	1.5	0.96	0.95	1.1	1.1
Freon 11	1.9	1.5	2.4	1.7	2.5	1.9
2-Propanol [1]	2.1	1,500 E	56	1,800 E	41	1,700 E
Hexane	<2.3	<2.1	<2.3	<2.3	<2.3	<2.2
Cyclohexane	<2.2	<2.1	<2.2	<2.2	<2.2	<2.2
Ethanol	2.2	2.4	2.6	2.6	1.7	1.8
Heptane	<2.7	<2.4	<2.7	<2.6	<2.7	<2.6
1,3-Butadiene	<1.4	<1.3	<1.4	<1.4	<1.4	<1.4
Oxygen (%)	18	21	16	18	16	18
Carbon Dioxide (%)	2.5	1.4	3.4	2.5	3.4	2.4

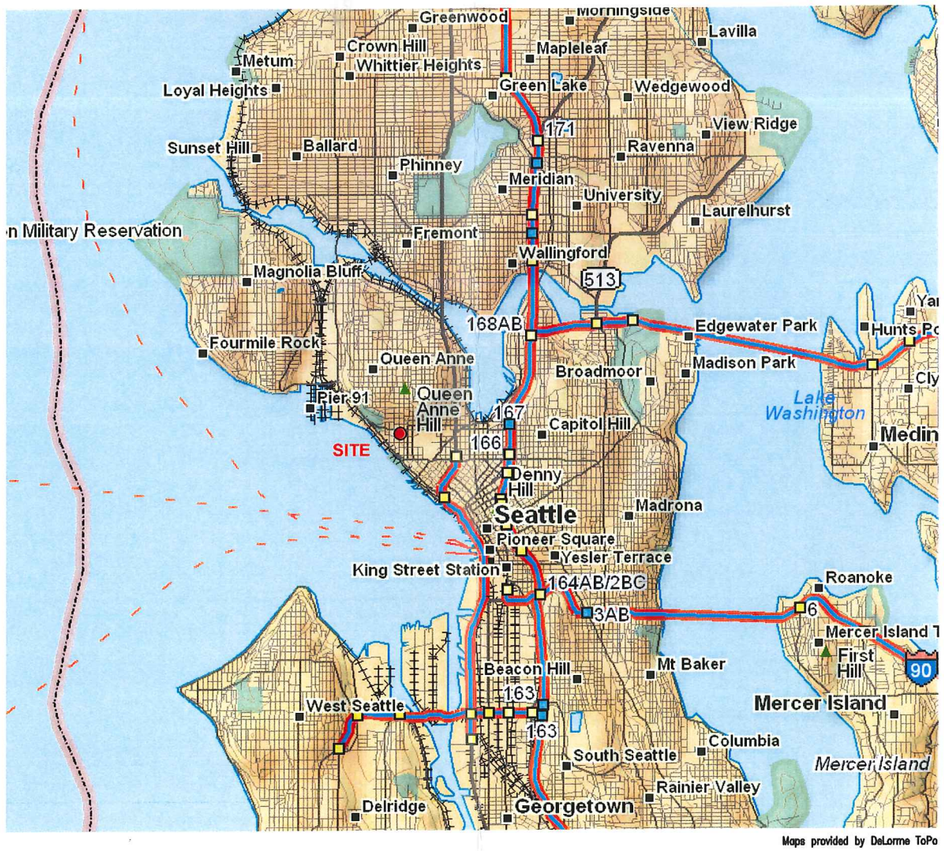
Table 4-13
Soil Vapor Analytical Results - U-Park Lot
Former Texaco Service Station / Chevron Site No. 211577
631 Queen Anne Avenue North
Seattle, Washington

Sample Location	NV-2									
Sample Identification	NV-2-5		NV-2-10		NV-2-10 (L DUP)	NV-2-15		NV-2-15 (DUP)		NV-2-15 (L DUP)
Sample Date	08/12/05	04/07/06	08/12/05	04/07/06	04/07/06	08/12/05	04/07/06	08/12/05	04/07/06	08/12/05
Analyte	µg/m³		µg/m³		µg/m³	µg/m³		µg/m³		µg/m³
Benzene	<0.41	<7.7	<0.41	<6.3	<3.8	0.49	<2.7	0.74	<2.6	0.82
Toluene	8.3	<9.0	11	<7.4	<4.4	16	<3.2	17	10	16
Ethylbenzene	<0.56	<10	<0.56	<8.6	<5.1	<0.56	<3.7	<0.56	<3.5	<0.56
m,p-Xylene	<0.56	<10	<0.56	<8.6	<5.1	0.75	<3.7	0.95	<3.5	0.92
o-Xylene	<0.56	<10	<0.56	<8.6	<5.1	<0.56	<3.7	<0.56	<3.5	<0.56
Tetrachloroethene (PCE)	1.6	<16	0.99	<13	<8.0	1.5	<5.8	1.7	<5.4	1.6
Trichloroethene (TCE)	<0.69	<13	<0.69	<10	<6.3	<0.69	<4.6	<0.69	<4.3	<0.69
1,2,4-Trimethylbenzene	<0.63	<12	<0.63	<9.7	<5.8	<0.63	<4.2	<0.63	<3.9	<0.63
Chloromethane	0.28	<5.0	0.64	<4.1	<2.4	0.27	<1.8	<0.27	<1.6	<0.27
Bromomethane	< 0.50	<9.3	<0.50	<7.6	<4.6	<0.50	<3.3	<0.50	<3.1	<0.50
Chloroform	2.6	<12	<0.63	<9.6	<5.8	<0.63	<4.2	<0.63	<3.9	<0.63
1,1,1-Trichloroethane	<0.70	<13	1.1	<11	<6.4	1.2	<4.7	1.2	5.3	1.2
Carbon Tetrachloride	<0.81	<15	1.1	<12	<7.4	1.6	<5.4	1.7	<5.0	1.5
Acetone	12	1,800	10	230	250	17	540	12	450	12
2-Butanone (MEK)	7.8	<35	9.0	<29	<17	11	<13	10	<12	10
Carbon Disulfide	36	<37	52	<31	<18	10	<13	9.6	<12	7.7
Freon 12	0.98	<12	1.2	<9.7	<5.8	1.5	6.5	1.2	6.2	0.68
Freon 11	2.8	<13	3.6	<11	<6.6	3.4	<4.8	3.4	12	3.3
2-Propanol [1]	<1.6	4,200 E	1.6	3,300 E	3,800 E	1.7	<10	120	1,600 E	120
Hexane	2.3	<42	5.7	<35	<21	3.5	<15	3.6	<14	3.4
Cyclohexane	<2.2	<41	3.9	<34	<20	<2.2	<15	<2.2	<14	<2.2
Ethanol	2.0	<23	1.8	<18	12	3.1	<8.1	4.4	24	4.2
Heptane	<2.6	<49	<2.6	<40	<24	<2.6	<18	<2.6	<16	2.7
1,3-Butadiene	<1.4	<26	<1.4	<22	<13	<1.4	11	<1.4	<8.8	<1.4
Oxygen (%)	16	18	11	15	--	6.7	3.7	6.7	8.4	6.7
Carbon Dioxide (%)	5.5	3.4	4.6	3.8	--	5.4	5.0	5.4	3.7	5.4

Notes:
Volatile organic compounds analyzed by Modified U.S. Environmental Protection Agency (EPA) Method TO-15.
Oxygen and Carbon Dioxide analyzed by ASTM D-1946
µg/m³ = micrograms per cubic meter
< = not detected at or above the laboratory method detection limit, number represents detection limit.
E = Exceeds instrument calibration range, result is approximate
-- = Not analyzed
NA = Not applicable
[1] = 2-Propanol (Isopropyl Alcohol) was used as leak test compound and its presence at elevated concentrations may represent sample dilution.
Container Type: 6 Liter Summa Canister (SIM Certified)

FIGURES

N



Maps provided by DeLorme ToPo

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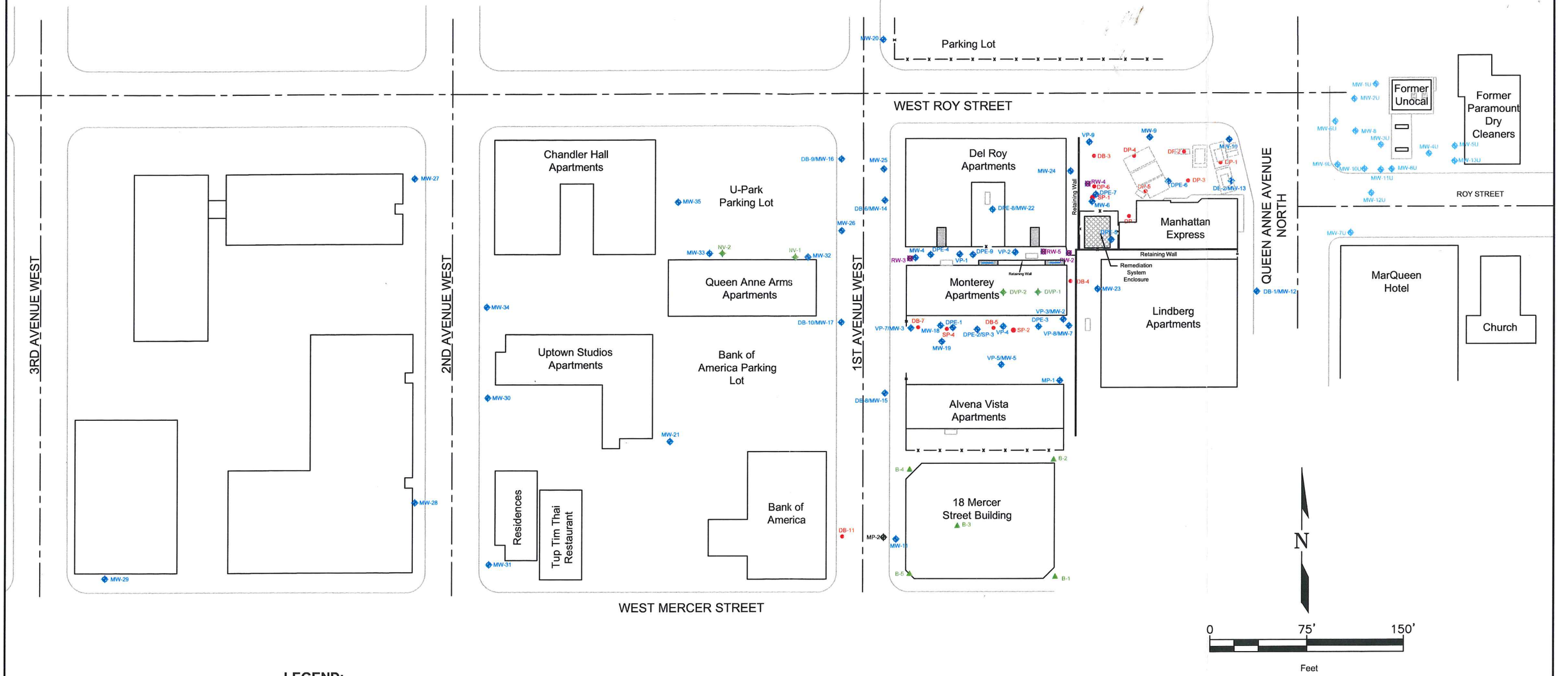
FIGURE 1-1
SITE LOCATION MAP

FILE NAME: 211577_RI VM.dwg

DATE: 07/23/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL	DB, SP & DP	SOIL BORING
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL	B-5	OFFSITE SOIL BORING
DVP-1	¼" DIAMETER VAPOR PROBE		UNDERGROUND STORAGE TANKS
RW-2	6" OR 8" DIAMETER RECOVERY WELL	—— x ——	FENCE
MP-2	DEEP MONITORING WELL	—— – ——	STREET CENTER LINE
MW-9U	UNOCAL WELL		

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FIGURE 1-2
SITE VICINITY MAP

FILE NAME: 211577_RI Misc Clay Map.dwg

DATE: 08/10/2007

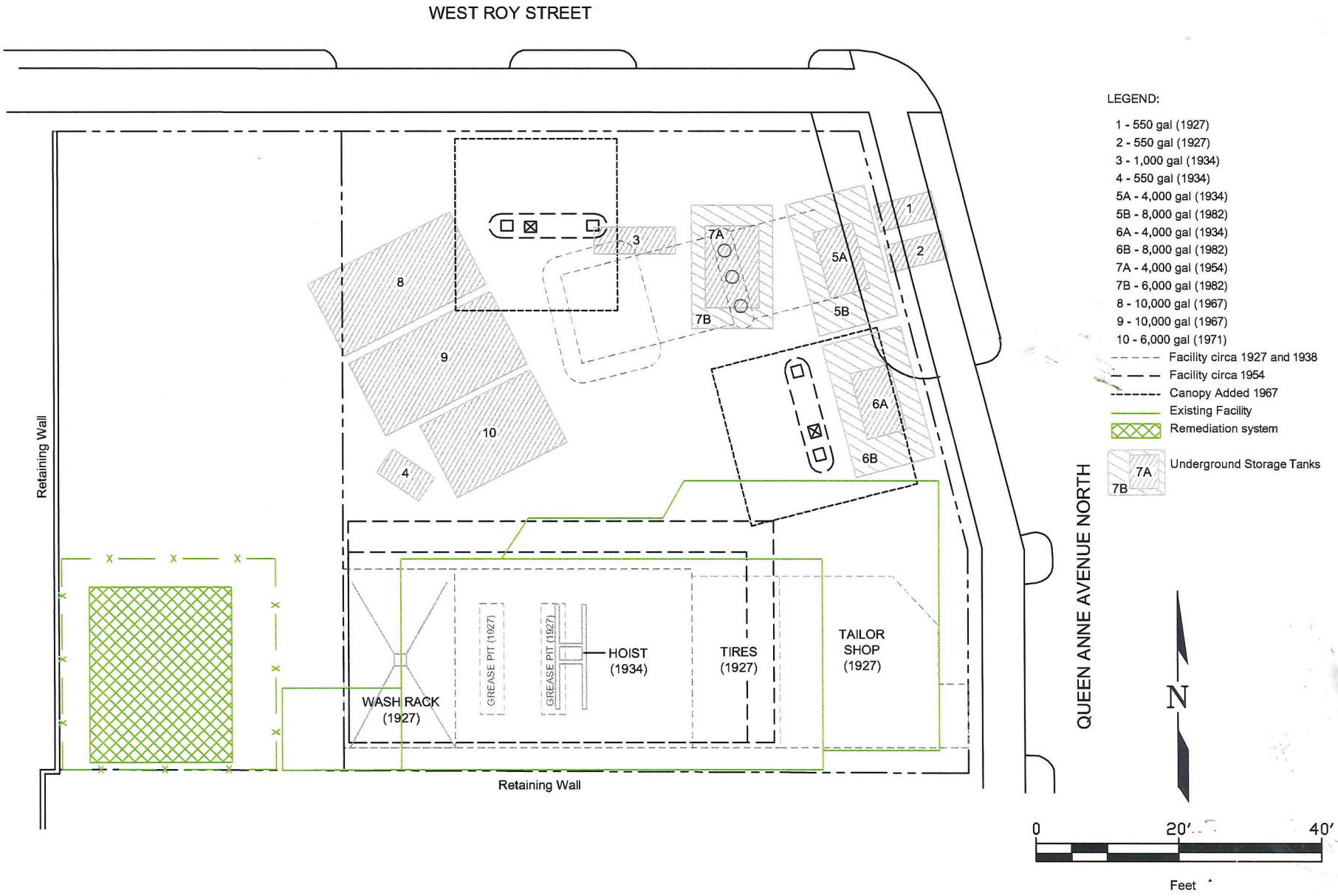

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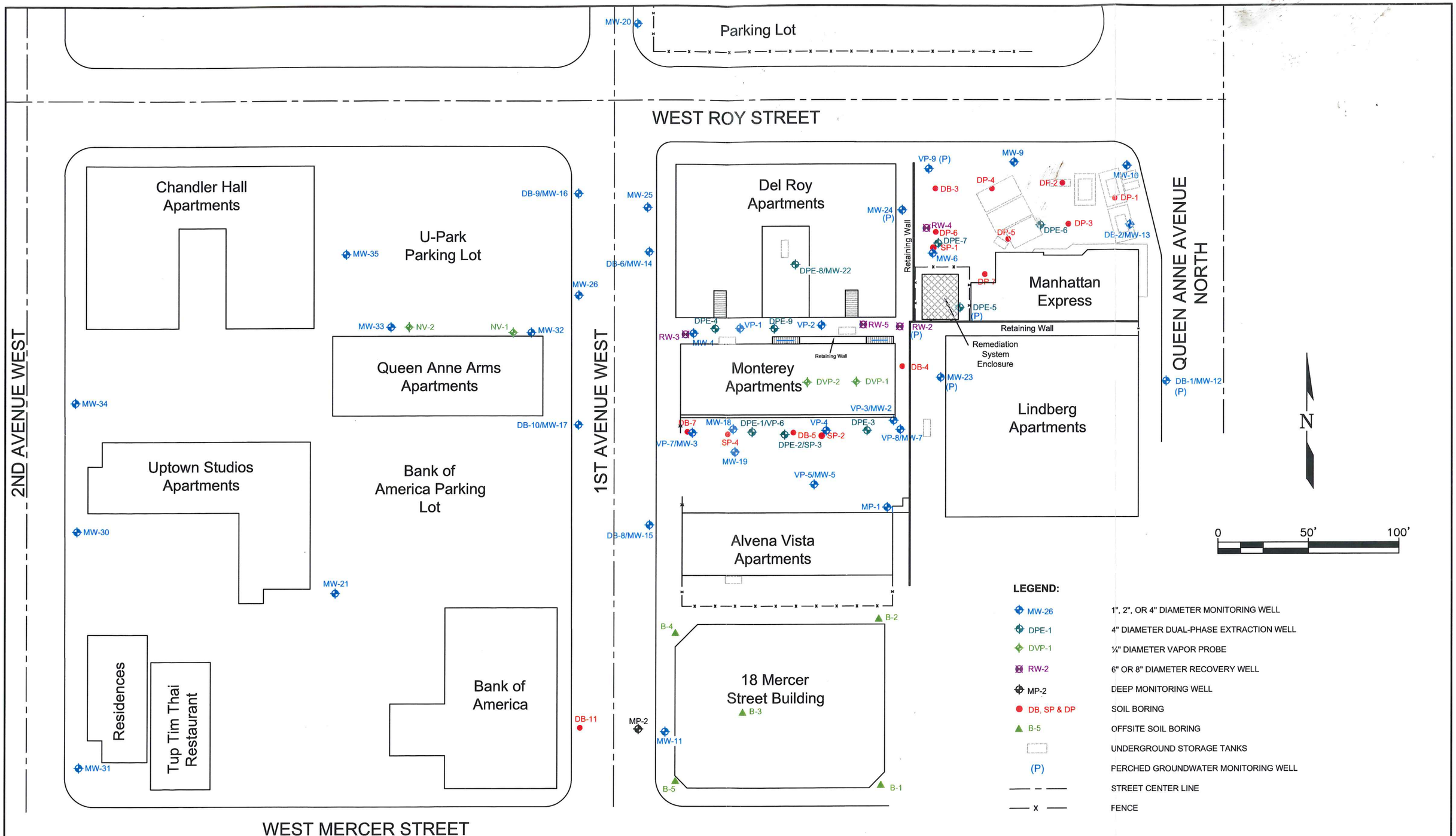
FIGURE 1-3
FORMER TEXACO SERVICE STATION
HISTORICAL STATION CONFIGURATIONS

FILE NAME:	DATE:
211577_Historical_rev1.dwg	07/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
DB, SP & DP	SOIL BORING
B-5	OFFSITE SOIL BORING
	UNDERGROUND STORAGE TANKS
(P)	PERCHED GROUNDWATER MONITORING WELL
— – —	STREET CENTER LINE
— x —	FENCE

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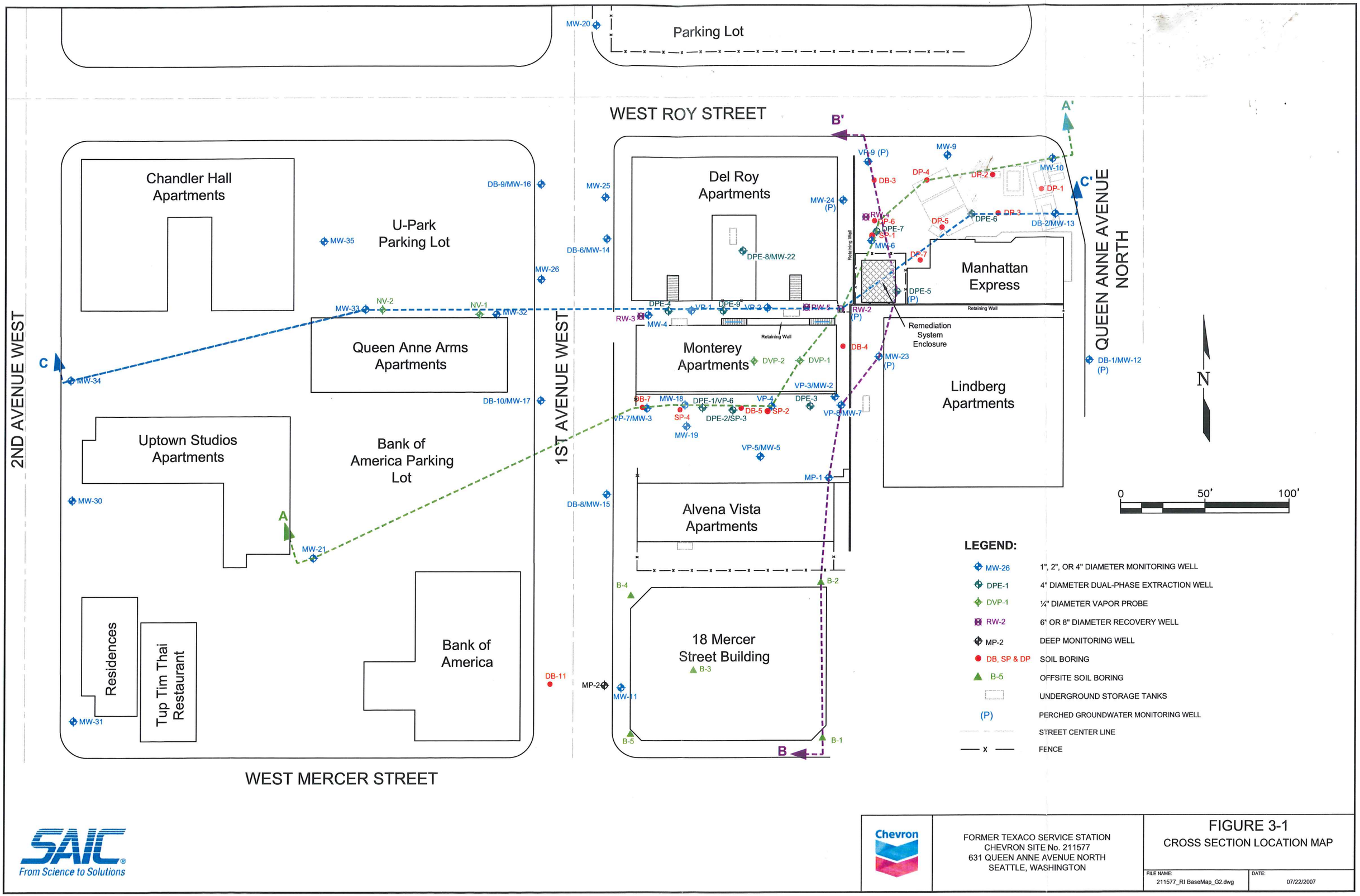
FIGURE 2-1
SITE MAP

FILE NAME: 211577_RI Site map 2007.dwg

DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
DB, SP & DP	SOIL BORING
B-5	OFFSITE SOIL BORING
	UNDERGROUND STORAGE TANKS
(P)	PERCHED GROUNDWATER MONITORING WELL
	STREET CENTER LINE
—— x ——	FENCE

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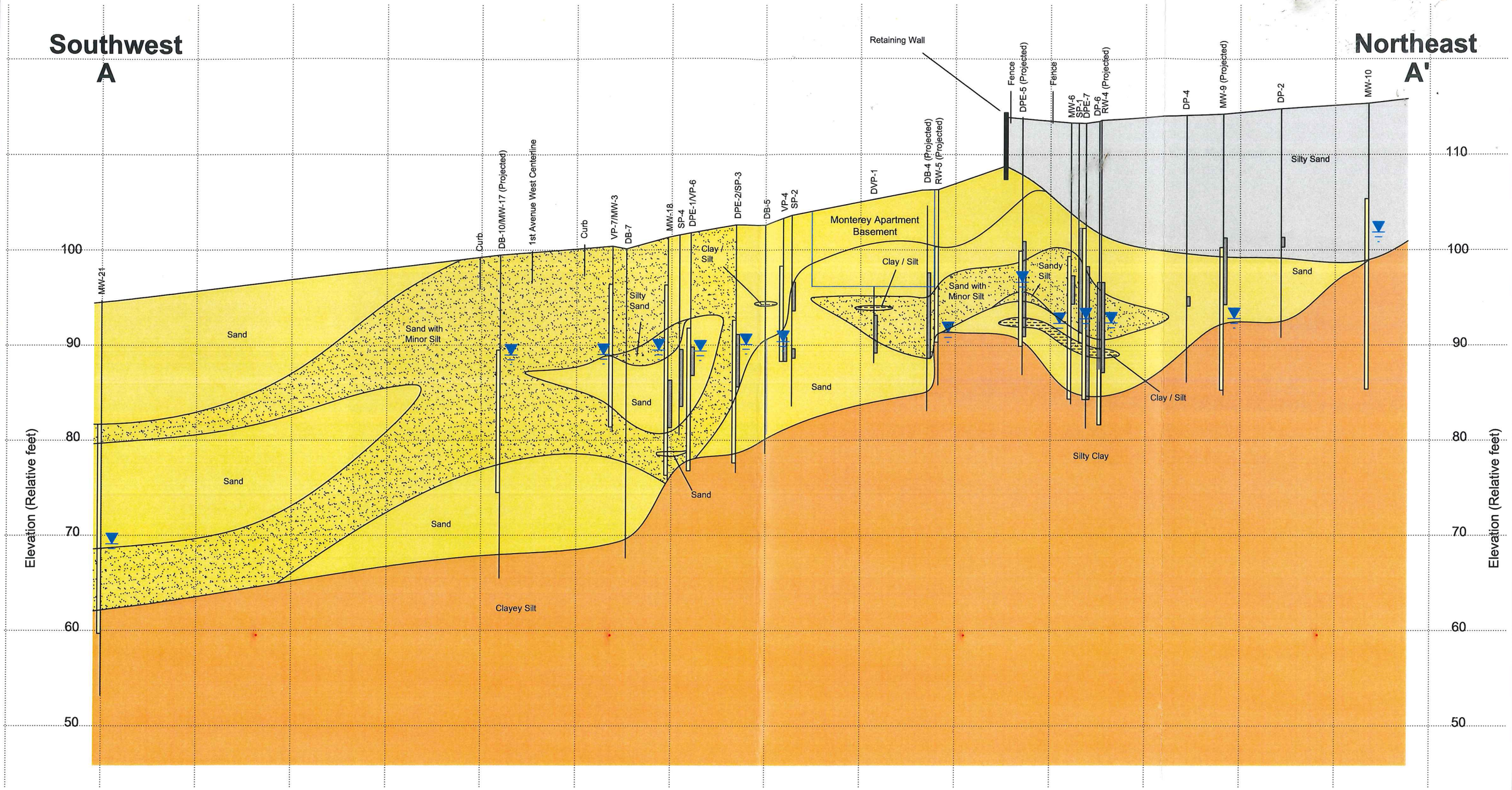
FIGURE 3-1
CROSS SECTION LOCATION MAP

FILE NAME: 211577_RI BaseMap_G2.dwg

DATE: 07/22/2007

Southwest A — Northeast A'



Legend

- Boring
- Screen
- Approximate Zone of Contamination above MTCA Method A
- Water Level in Well November 2005

- Vashon Till and Fill (silty sand)
- Esperance Sand (sand)
- Esperance Sand (sand with minor silt to silty sand)
- Esperance Sand (clay/silt lenses)
- Lawton Clay (clayey silt to silty clay)

NOTE: Elevation is referenced to an arbitrary site datum.

0 10 20 40 80

HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

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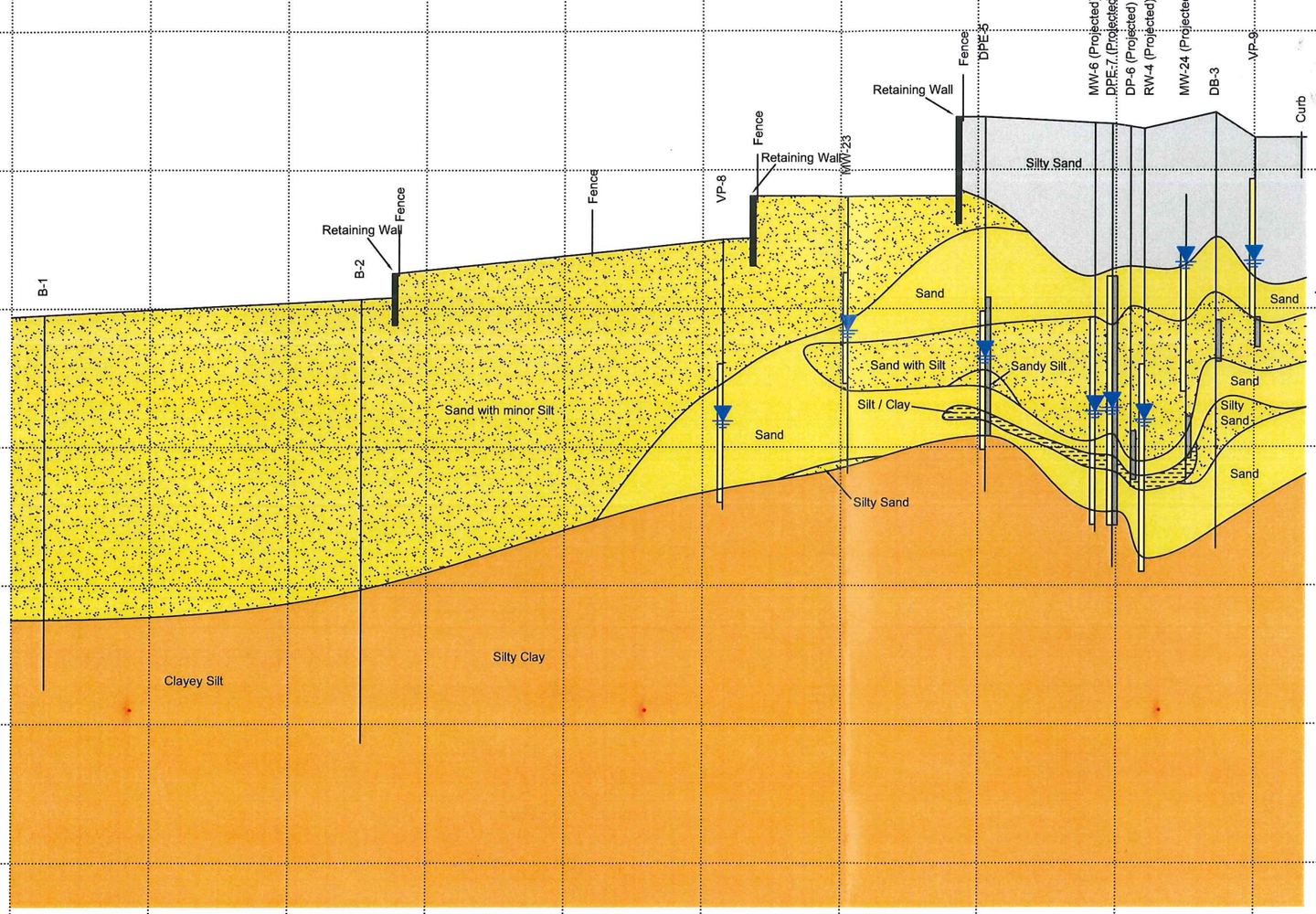
FIGURE 3-2
CROSS SECTION A - A'

FILE NAME: 211577-SectionA.dwg
DATE: 08/10/2007

South
B

North
B'



Legend

- Boring
- Screen
- Approximate Zone of Contamination above MTCA Method A
- Water Level in Well November 2005

- Vashon Till and Fill (silty sand)
- Esperance Sand (sand)
- Esperance Sand (sand with minor silt to silty sand)
- Esperance Sand (clay/silt lenses)
- Lawton Clay (clayey silt to silty clay)

NOTE: Elevation is referenced to an arbitrary site datum.

0 10 20 40 80

HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

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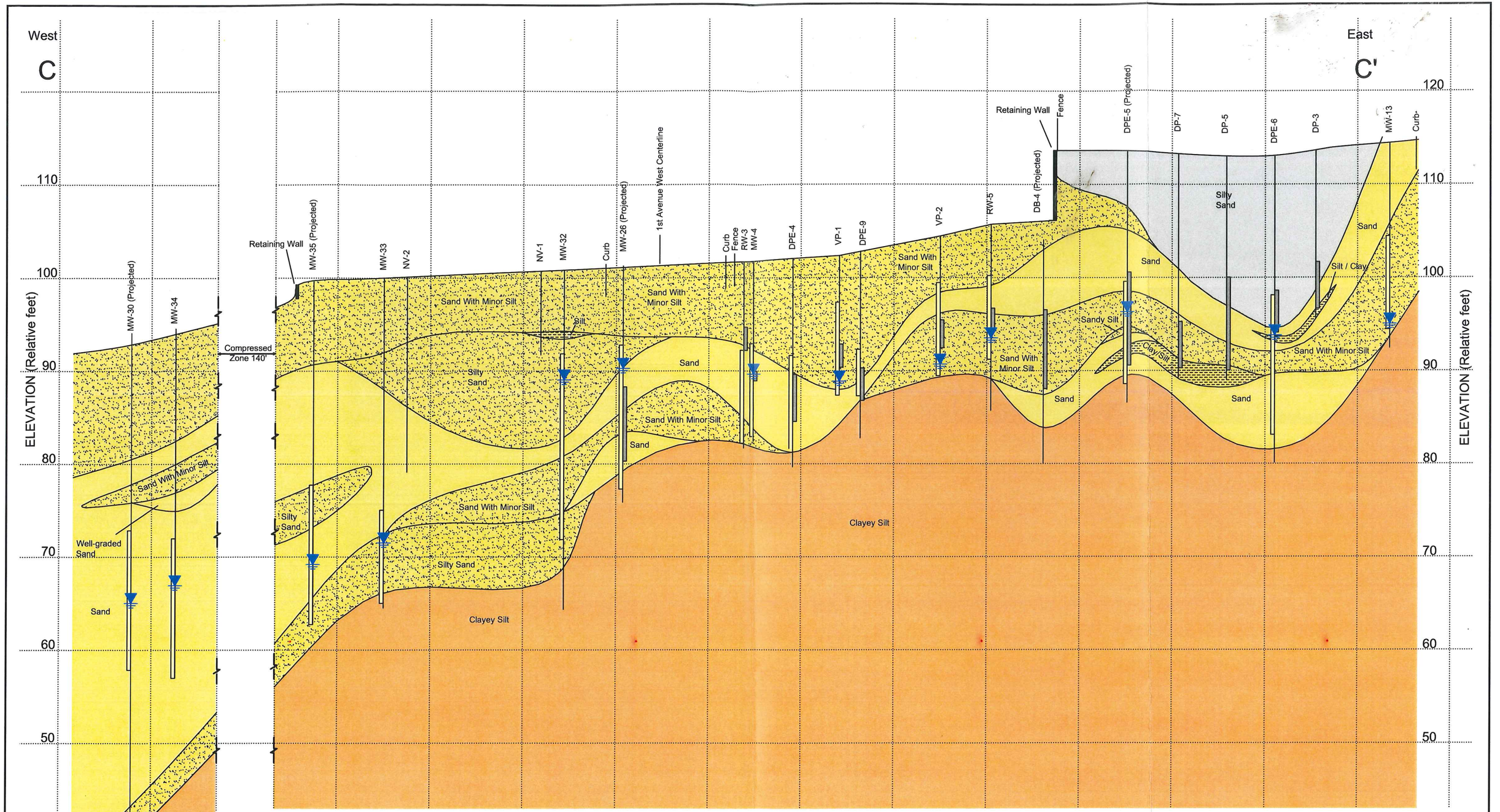
FIGURE 3-3
CROSS SECTION B - B'

FILE NAME:	DATE:
211577-SectionB-revised.dwg	08/10/2007



NOTE: Elevation is referenced to an arbitrary site datum.

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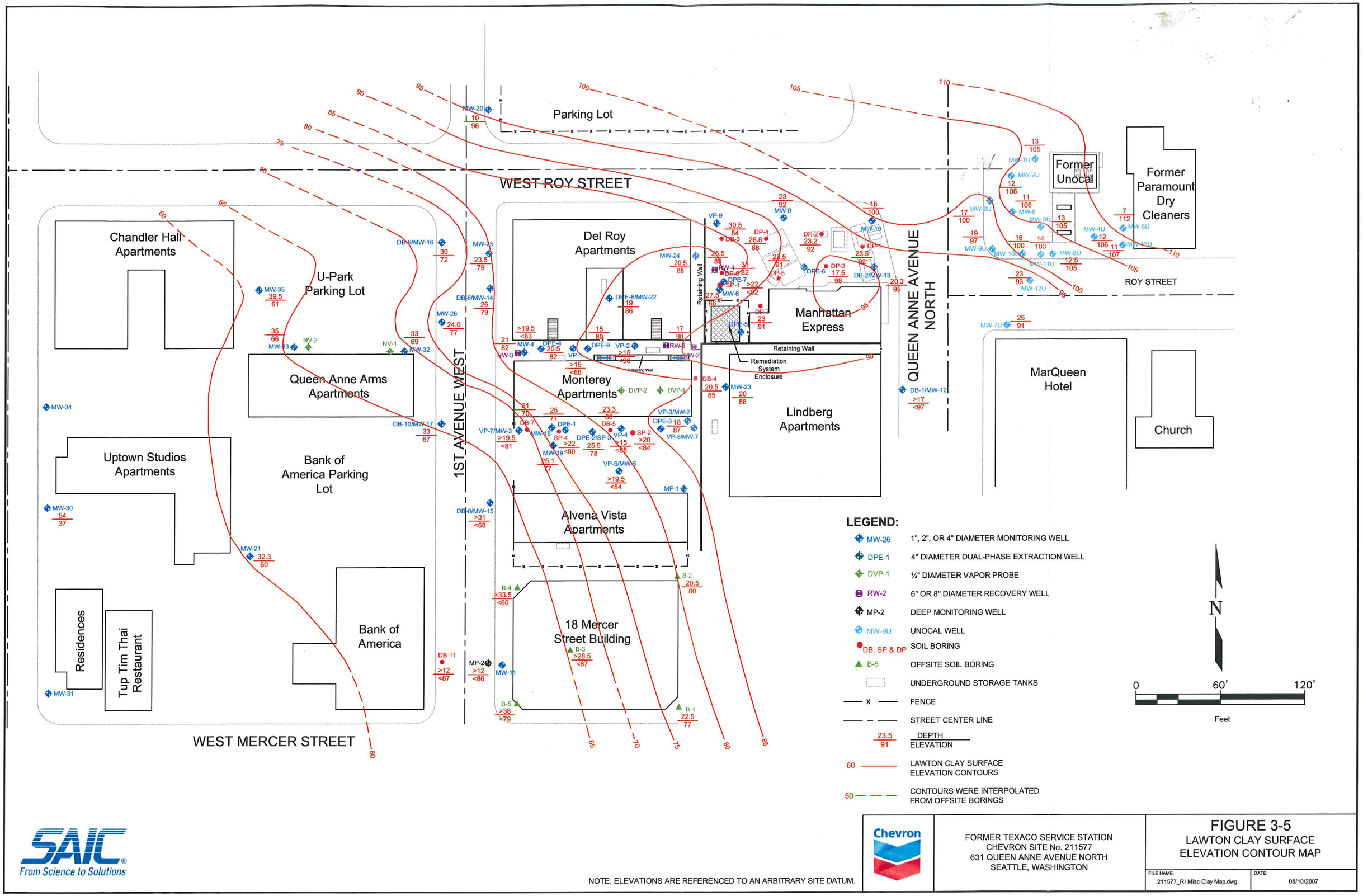
FIGURE 3-4
CROSS SECTION C - C'

FILE NAME: 211577-SectionC.dwg

DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
MW-9U	UNOCAL WELL
DB, SP & DP	SOIL BORING
B-5	OFFSITE SOIL BORING
	UNDERGROUND STORAGE TANKS
x	FENCE
	STREET CENTER LINE
23.5 / 91	DEPTH / ELEVATION
60	LAWTON CLAY SURFACE ELEVATION CONTOURS
50	CONTOURS WERE INTERPOLATED FROM OFFSITE BORINGS

N

0 60' 120'

Feet

NOTE: ELEVATIONS ARE REFERENCED TO AN ARBITRARY SITE DATUM.

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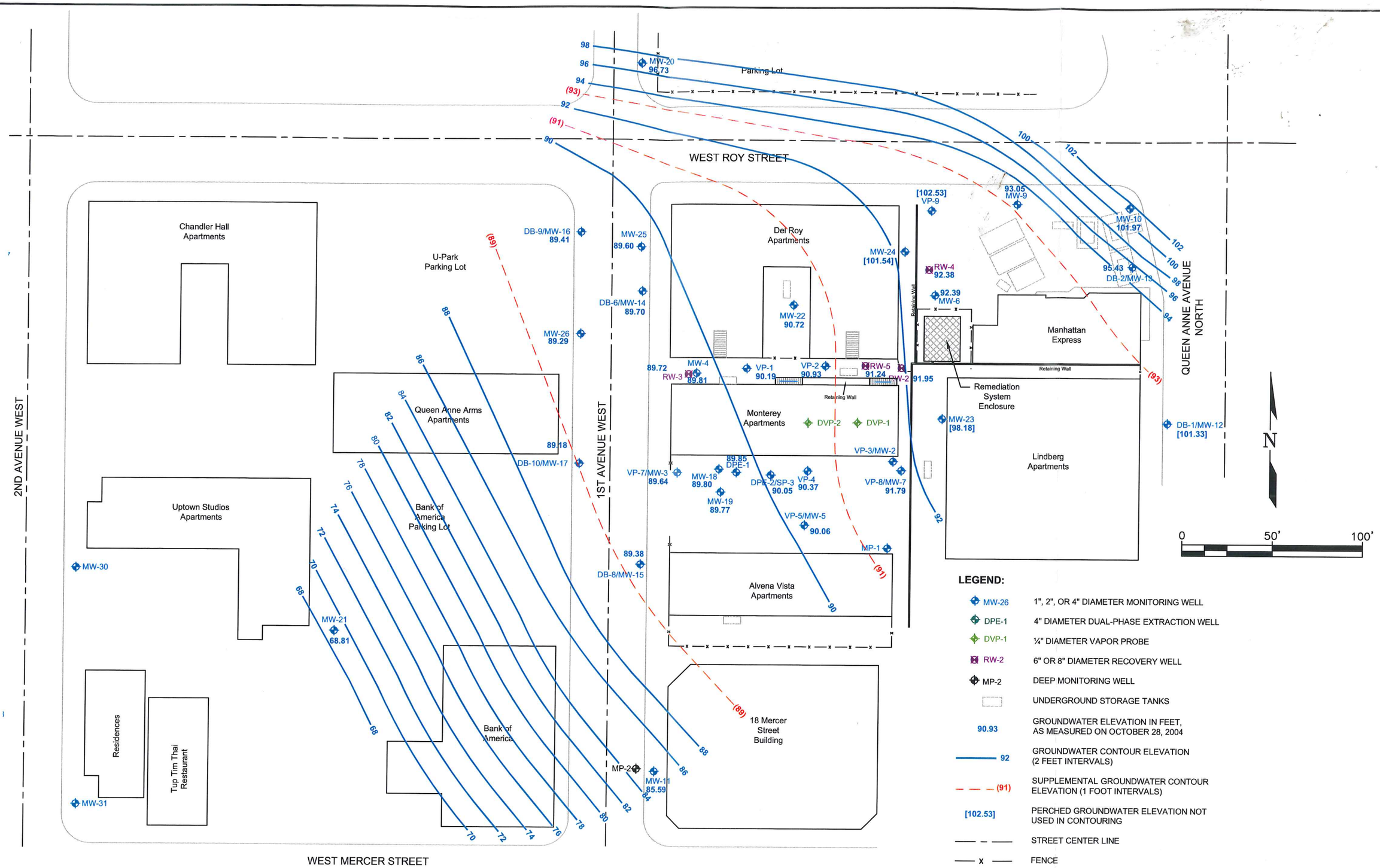
SEATTLE, WASHINGTON

FIGURE 3-5
LAWTON CLAY SURFACE ELEVATION CONTOUR MAP

FILE NAME: 211577_RI Misc Clay Map.dwg

DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
90.93	GROUNDWATER ELEVATION IN FEET, AS MEASURED ON OCTOBER 28, 2004
92	GROUNDWATER CONTOUR ELEVATION (2 FEET INTERVALS)
(91)	SUPPLEMENTAL GROUNDWATER CONTOUR ELEVATION (1 FOOT INTERVALS)
[102.53]	PERCHED GROUNDWATER ELEVATION NOT USED IN CONTOURING
	STREET CENTER LINE
x	FENCE

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NOTE: GROUNDWATER ELEVATIONS ARE REFERENCED TO AN ARBITRARY SITE DATUM

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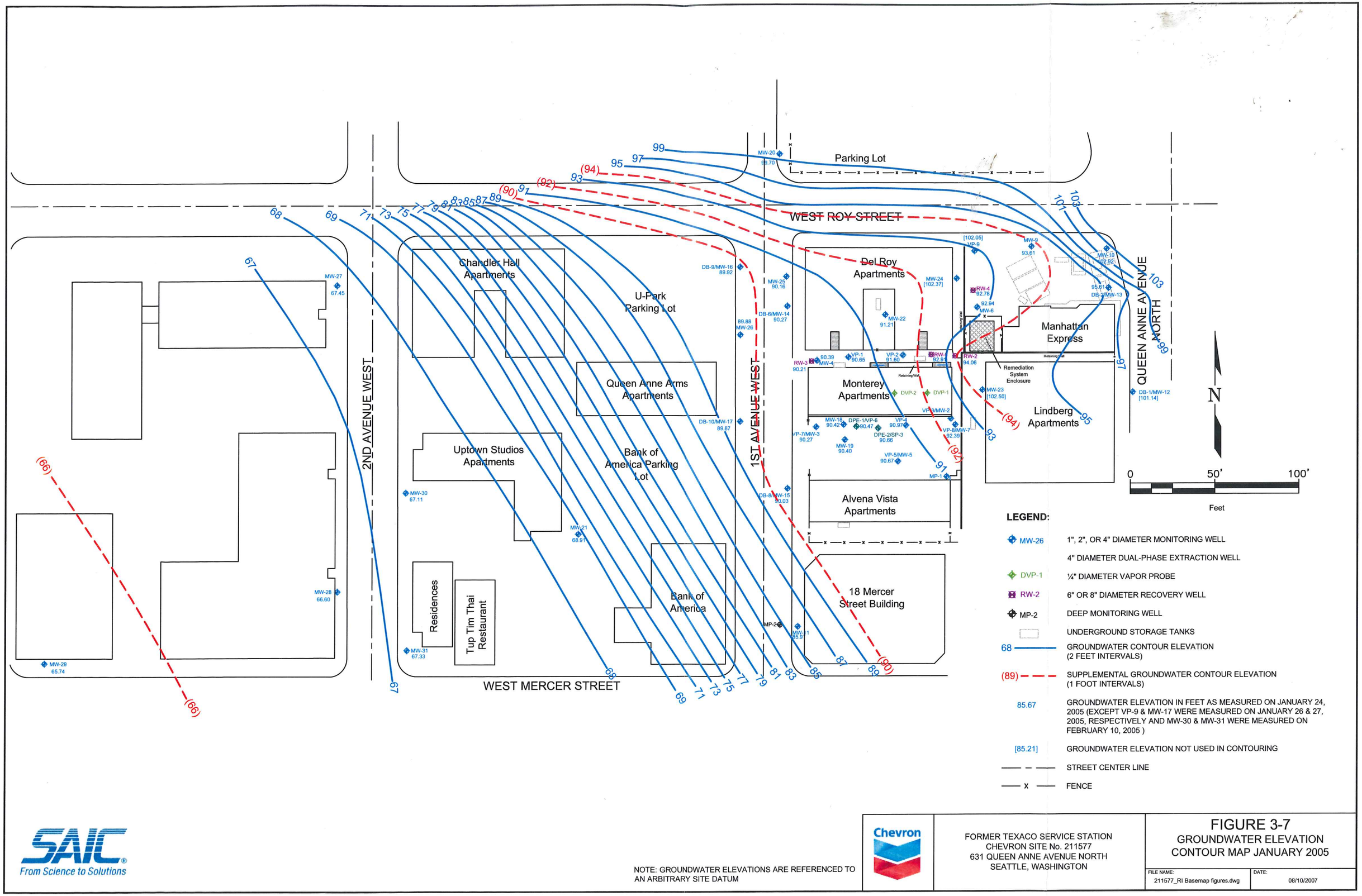
FIGURE 3-6
GROUNDWATER ELEVATION CONTOUR MAP OCTOBER 2004

FILE NAME: 211577_GW.dwg

DATE: 07/23/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
68	GROUNDWATER CONTOUR ELEVATION (2 FEET INTERVALS)
(89)	SUPPLEMENTAL GROUNDWATER CONTOUR ELEVATION (1 FOOT INTERVALS)
85.67	GROUNDWATER ELEVATION IN FEET AS MEASURED ON JANUARY 24, 2005 (EXCEPT VP-9 & MW-17 WERE MEASURED ON JANUARY 26 & 27, 2005, RESPECTIVELY AND MW-30 & MW-31 WERE MEASURED ON FEBRUARY 10, 2005)
[85.21]	GROUNDWATER ELEVATION NOT USED IN CONTOURING
	STREET CENTER LINE
x	FENCE

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NOTE: GROUNDWATER ELEVATIONS ARE REFERENCED TO AN ARBITRARY SITE DATUM

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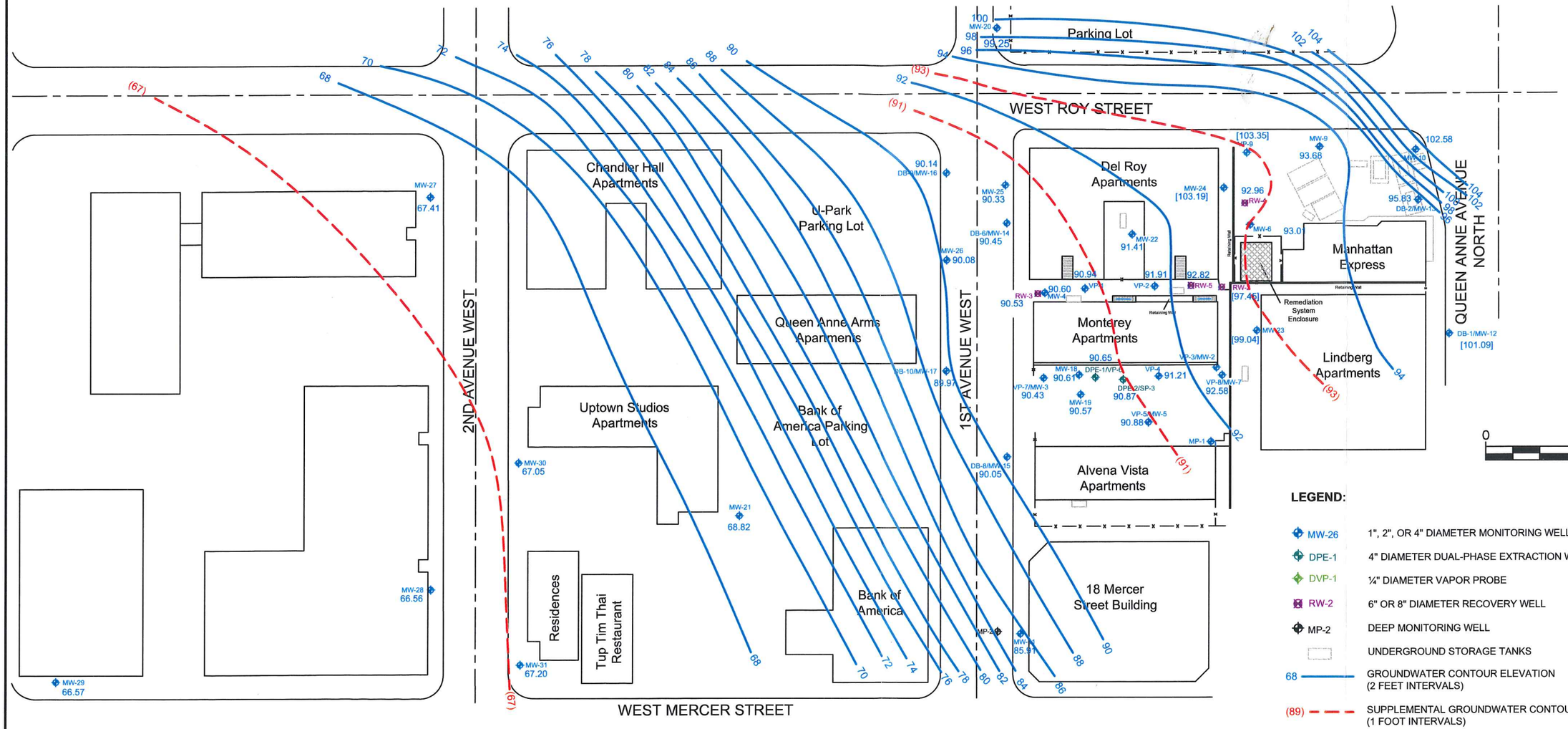
FIGURE 3-7
GROUNDWATER ELEVATION CONTOUR MAP JANUARY 2005

FILE NAME: 211577_RI Basemap figures.dwg

DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
68	GROUNDWATER CONTOUR ELEVATION (2 FEET INTERVALS)
(89)	SUPPLEMENTAL GROUNDWATER CONTOUR ELEVATION (1 FOOT INTERVALS)
85.67	GROUNDWATER ELEVATION IN FEET AS MEASURED ON APRIL 18, 2005 (EXCEPT MW-22, MW-14, MW-15, AND VP-9 WERE MEASURED ON APRIL 19, 2005)
[85.21]	GROUNDWATER ELEVATION NOT USED IN CONTOURING
—— – ——	STREET CENTER LINE
—— x ——	FENCE

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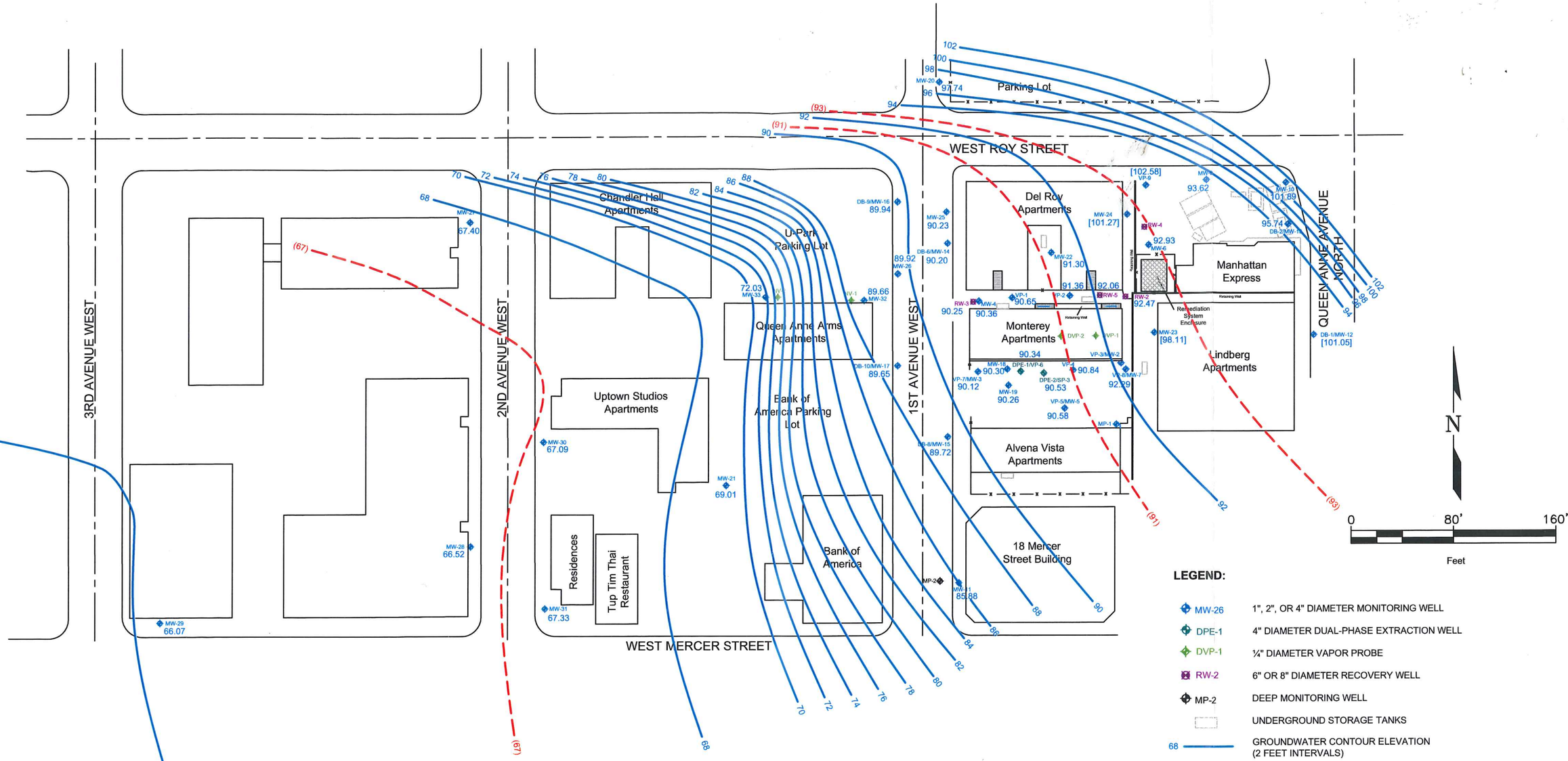
FIGURE 3-8
GROUNDWATER ELEVATION CONTOUR MAP APRIL 2005

FILE NAME: 211577_RI Basemap figures.dwg

DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
68	GROUNDWATER CONTOUR ELEVATION (2 FEET INTERVALS)
(67)	SUPPLEMENTAL GROUNDWATER CONTOUR ELEVATION (1 FOOT INTERVALS)
85.67	GROUNDWATER ELEVATION IN FEET AS MEASURED ON JULY 27, 2005
[85.21]	GROUNDWATER ELEVATION NOT USED IN CONTOURING
	STREET CENTER LINE
x	FENCE

NOTE: GROUNDWATER ELEVATIONS ARE REFERENCED TO AN ARBITRARY SITE DATUM

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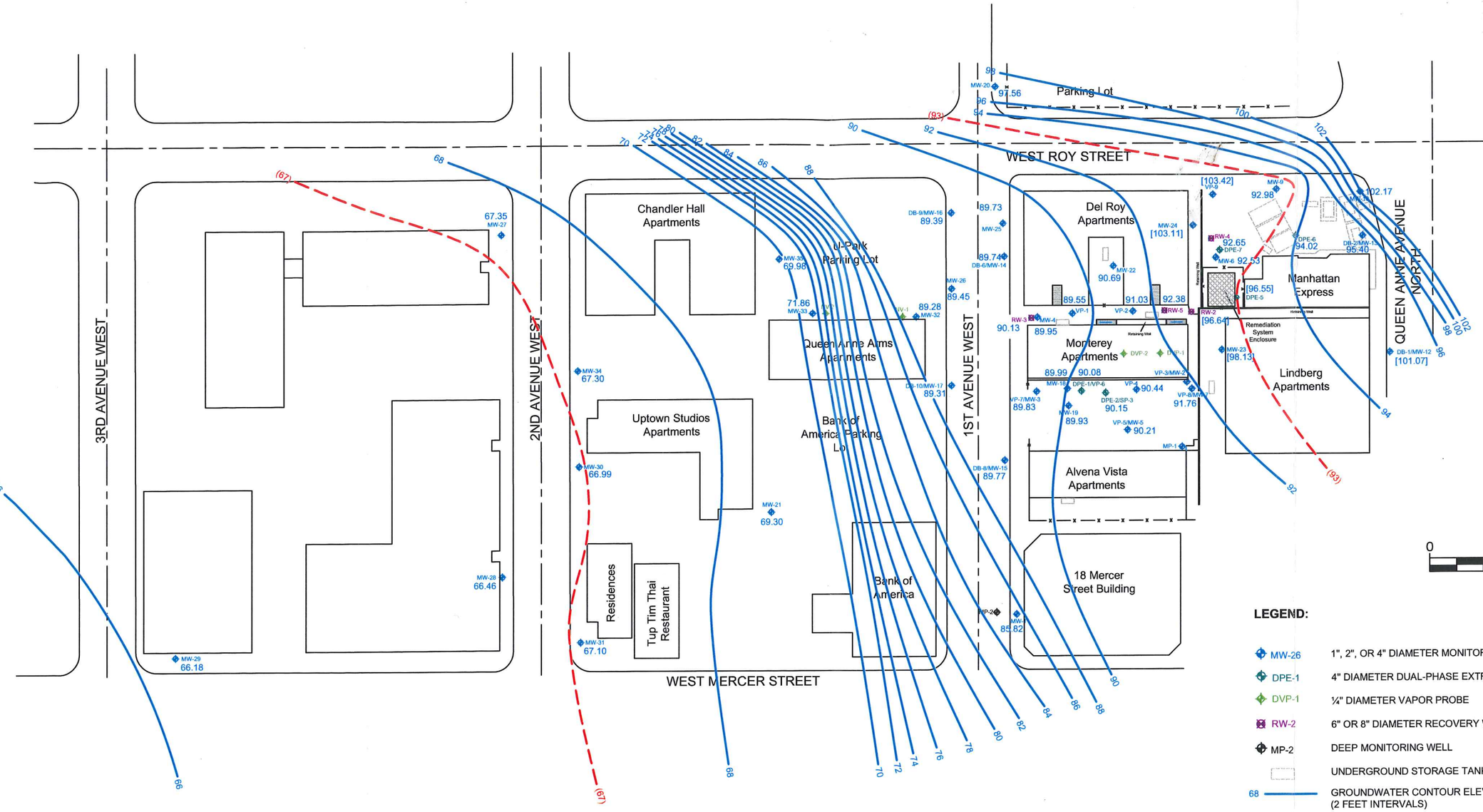
FIGURE 3-9
GROUNDWATER ELEVATION CONTOUR MAP JULY 2005

FILE NAME: 211577_RI Basemap figures.dwg

DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
68	GROUNDWATER CONTOUR ELEVATION (2 FEET INTERVALS)
(67)	SUPPLEMENTAL GROUNDWATER CONTOUR ELEVATION (1 FOOT INTERVALS)
85.67	GROUNDWATER ELEVATION IN FEET AS MEASURED ON NOVEMBER 8, 2005 (EXCEPT DPE-5, DPE-6, DPE-7, VP-9, MW-34, AND MW-35 WERE MEASURED ON NOVEMBER 28, 2005)
[85.21]	GROUNDWATER ELEVATION NOT USED IN CONTOURING
	STREET CENTER LINE
x	FENCE

NOTE: GROUNDWATER ELEVATIONS ARE REFERENCED TO AN ARBITRARY SITE DATUM

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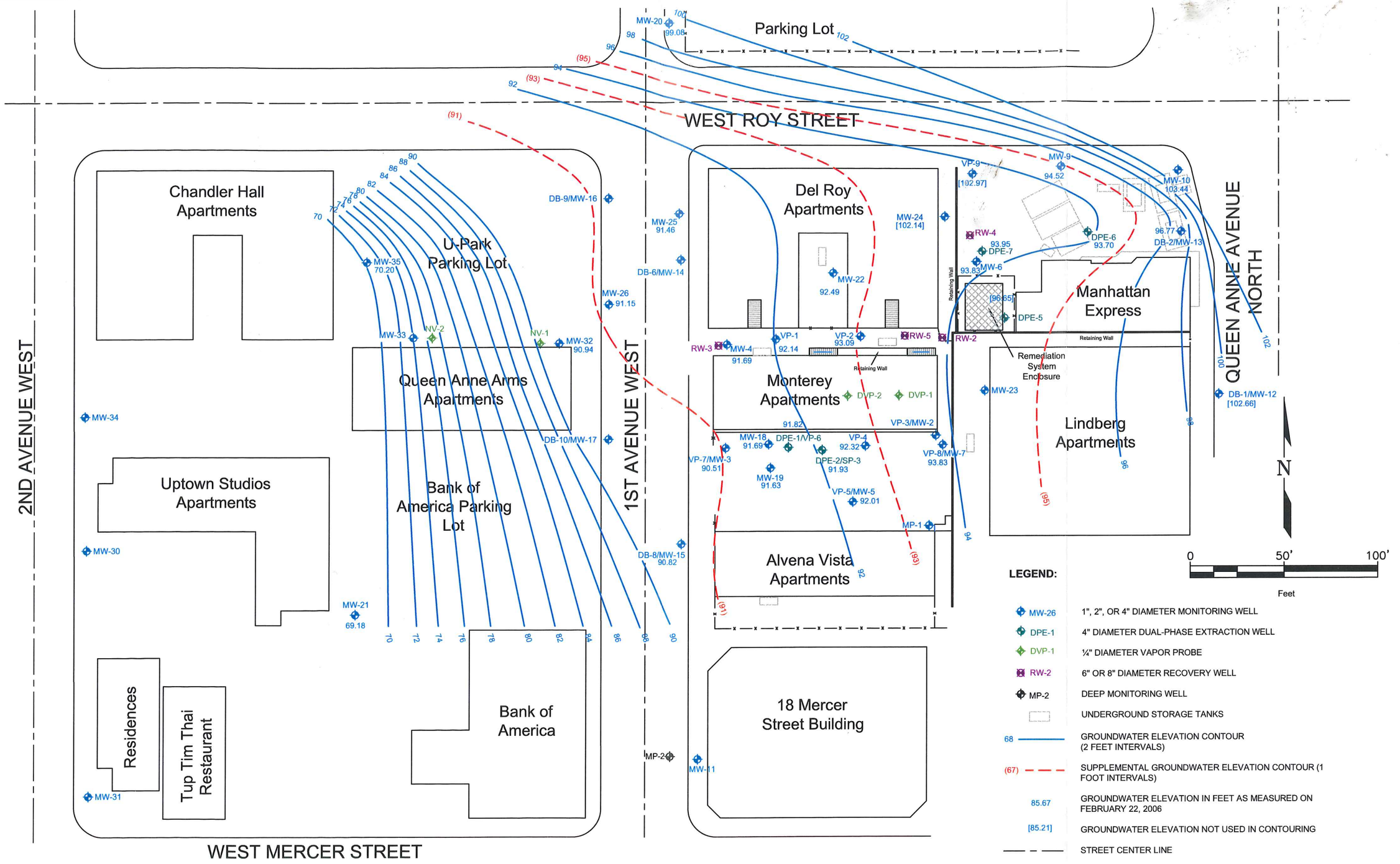
FIGURE 3-10
GROUNDWATER ELEVATION CONTOUR MAP NOVEMBER 2005

FILE NAME: 211577_RI Basemap figures.dwg

DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
68	GROUNDWATER ELEVATION CONTOUR (2 FEET INTERVALS)
(67)	SUPPLEMENTAL GROUNDWATER ELEVATION CONTOUR (1 FOOT INTERVALS)
85.67	GROUNDWATER ELEVATION IN FEET AS MEASURED ON FEBRUARY 22, 2006
[85.21]	GROUNDWATER ELEVATION NOT USED IN CONTOURING
	STREET CENTER LINE
x	FENCE

NOTE: GROUNDWATER ELEVATIONS ARE REFERENCED TO AN ARBITRARY SITE DATUM.

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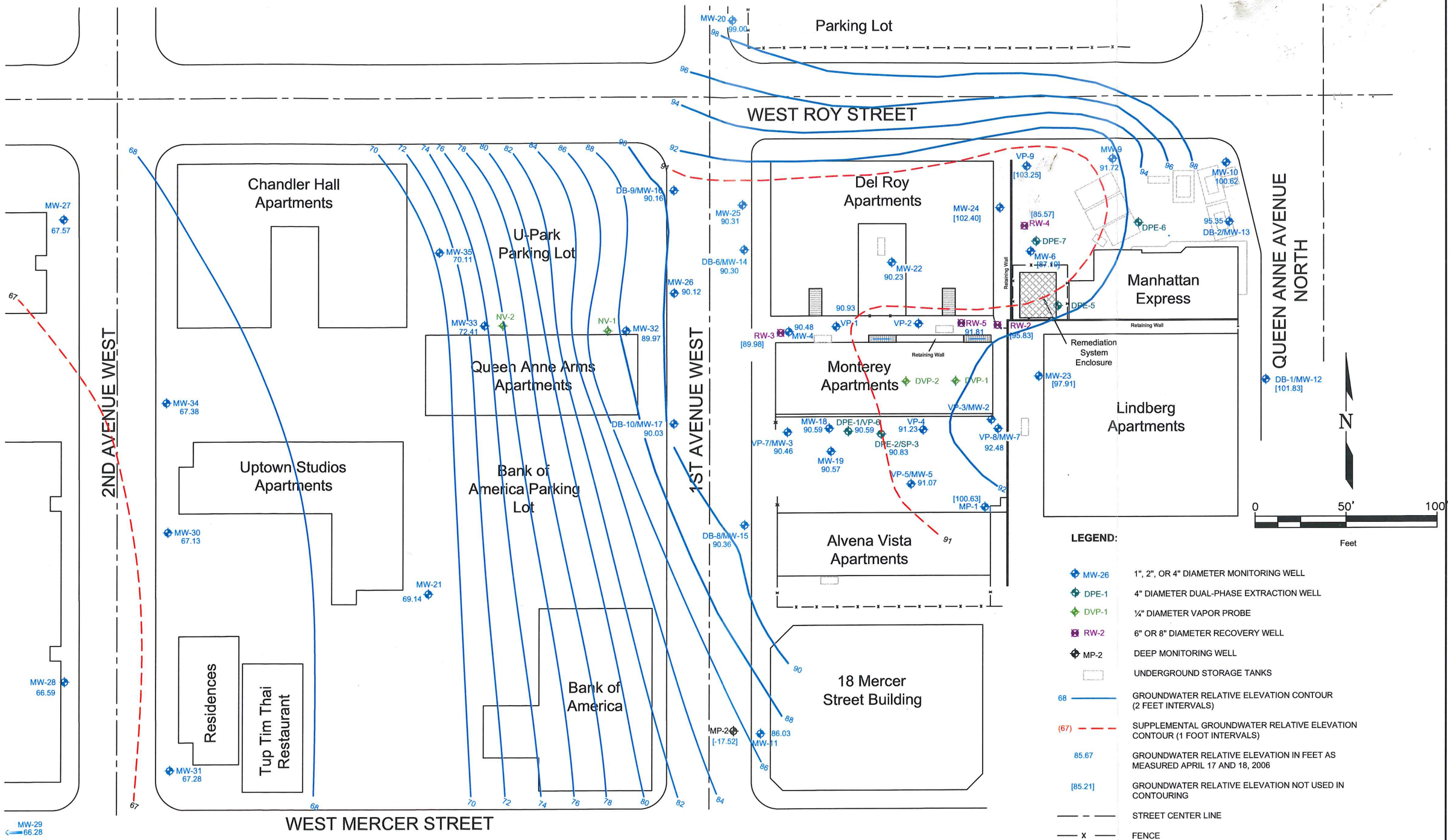
FIGURE 3-11
GROUNDWATER ELEVATION CONTOUR MAP FEBRUARY 2006

FILE NAME: 211577_RI Basemap figures.dwg

DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
68	GROUNDWATER RELATIVE ELEVATION CONTOUR (2 FEET INTERVALS)
(67)	SUPPLEMENTAL GROUNDWATER RELATIVE ELEVATION CONTOUR (1 FOOT INTERVALS)
85.67	GROUNDWATER RELATIVE ELEVATION IN FEET AS MEASURED APRIL 17 AND 18, 2006
[85.21]	GROUNDWATER RELATIVE ELEVATION NOT USED IN CONTOURING
	STREET CENTER LINE
x	FENCE

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NOTE: GROUNDWATER ELEVATIONS ARE REFERENCED TO AN ARBITRARY SITE DATUM

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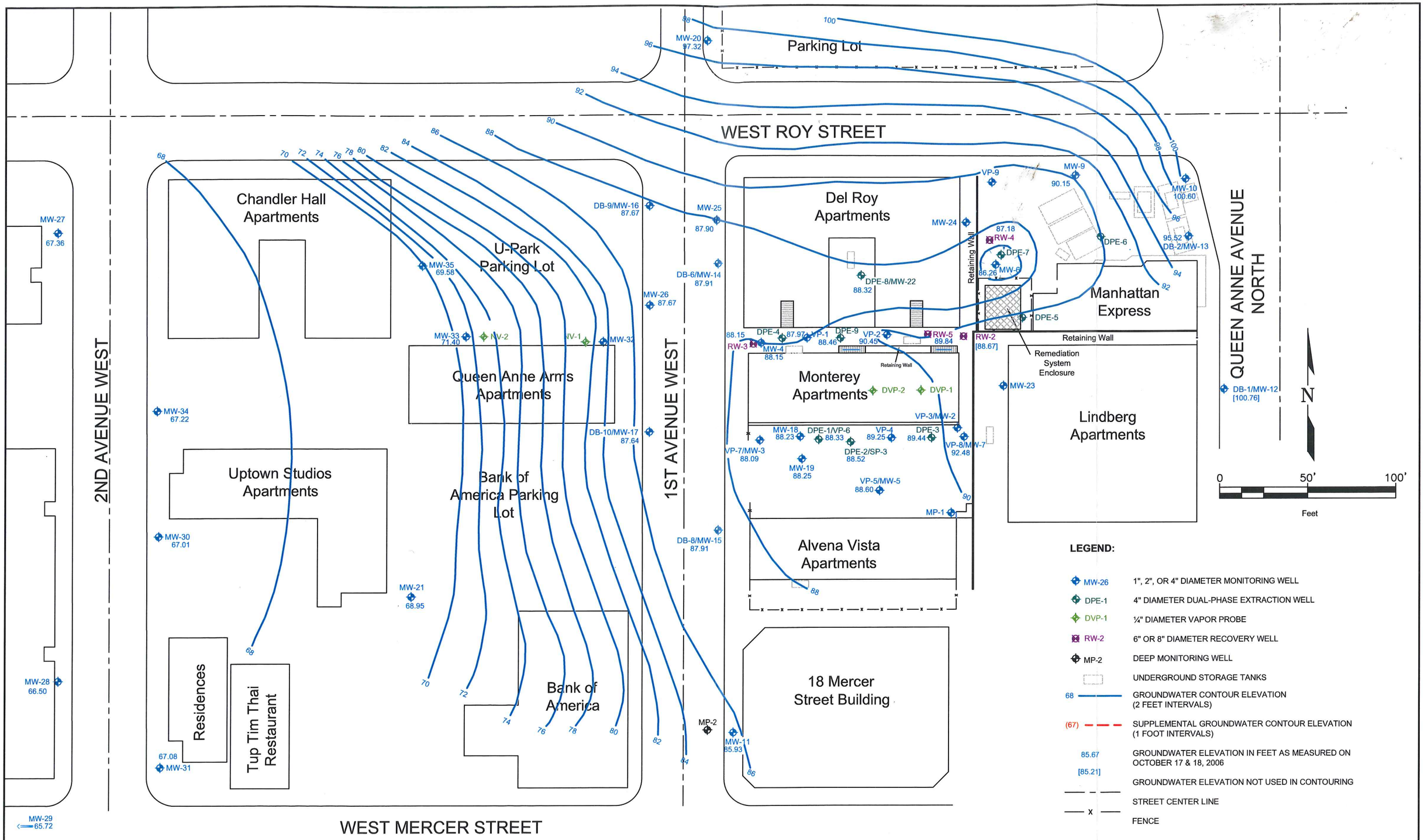
FIGURE 3-12
GROUNDWATER ELEVATION CONTOUR MAP APRIL 2006

FILE NAME: 211577_RI Basemap figures.dwg

DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
68	GROUNDWATER CONTOUR ELEVATION (2 FEET INTERVALS)
(67)	SUPPLEMENTAL GROUNDWATER CONTOUR ELEVATION (1 FOOT INTERVALS)
85.67	GROUNDWATER ELEVATION IN FEET AS MEASURED ON OCTOBER 17 & 18, 2006
[85.21]	GROUNDWATER ELEVATION NOT USED IN CONTOURING
	STREET CENTER LINE
x	FENCE

NOTE: GROUNDWATER ELEVATIONS ARE REFERENCED TO AN ARBITRARY SITE DATUM

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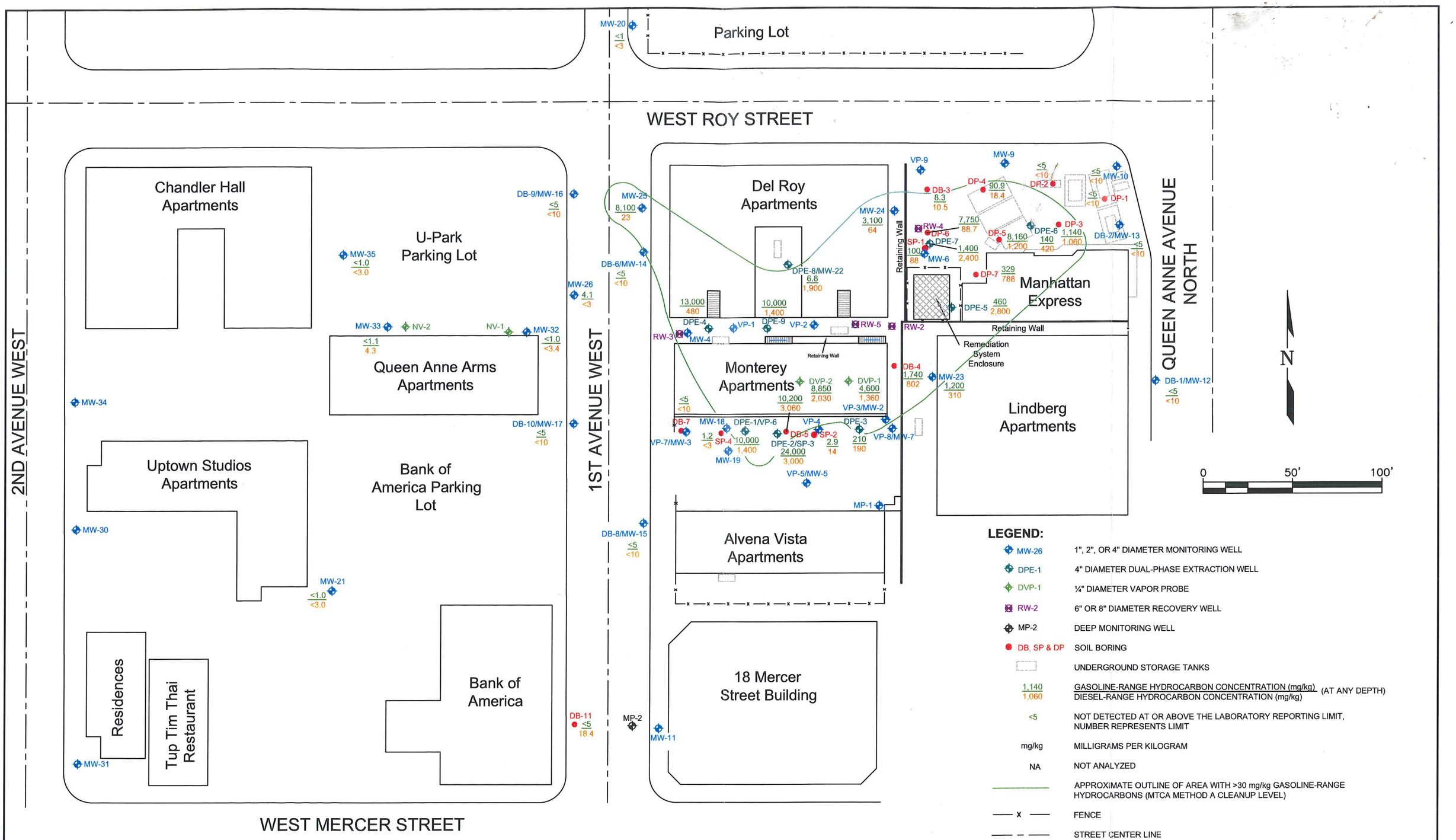
FIGURE 3-13
GROUNDWATER ELEVATION CONTOUR MAP OCTOBER 2006

FILE NAME: 211577_BaseMap_2007.dwg

DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
DB, SP & DP	SOIL BORING
	UNDERGROUND STORAGE TANKS
1,140 / 1,060	GASOLINE-RANGE HYDROCARBON CONCENTRATION (mg/kg) / DIESEL-RANGE HYDROCARBON CONCENTRATION (mg/kg) (AT ANY DEPTH)
<5	NOT DETECTED AT OR ABOVE THE LABORATORY REPORTING LIMIT, NUMBER REPRESENTS LIMIT
mg/kg	MILLIGRAMS PER KILOGRAM
NA	NOT ANALYZED
	APPROXIMATE OUTLINE OF AREA WITH >30 mg/kg GASOLINE-RANGE HYDROCARBONS (MTCA METHOD A CLEANUP LEVEL)
—— x ——	FENCE
—— – ——	STREET CENTER LINE

NOTE: CONTAMINANT CONCENTRATIONS NEAR THE MONTEREY APARTMENTS HAVE BEEN EFFECTED BY THE SVE SYSTEM

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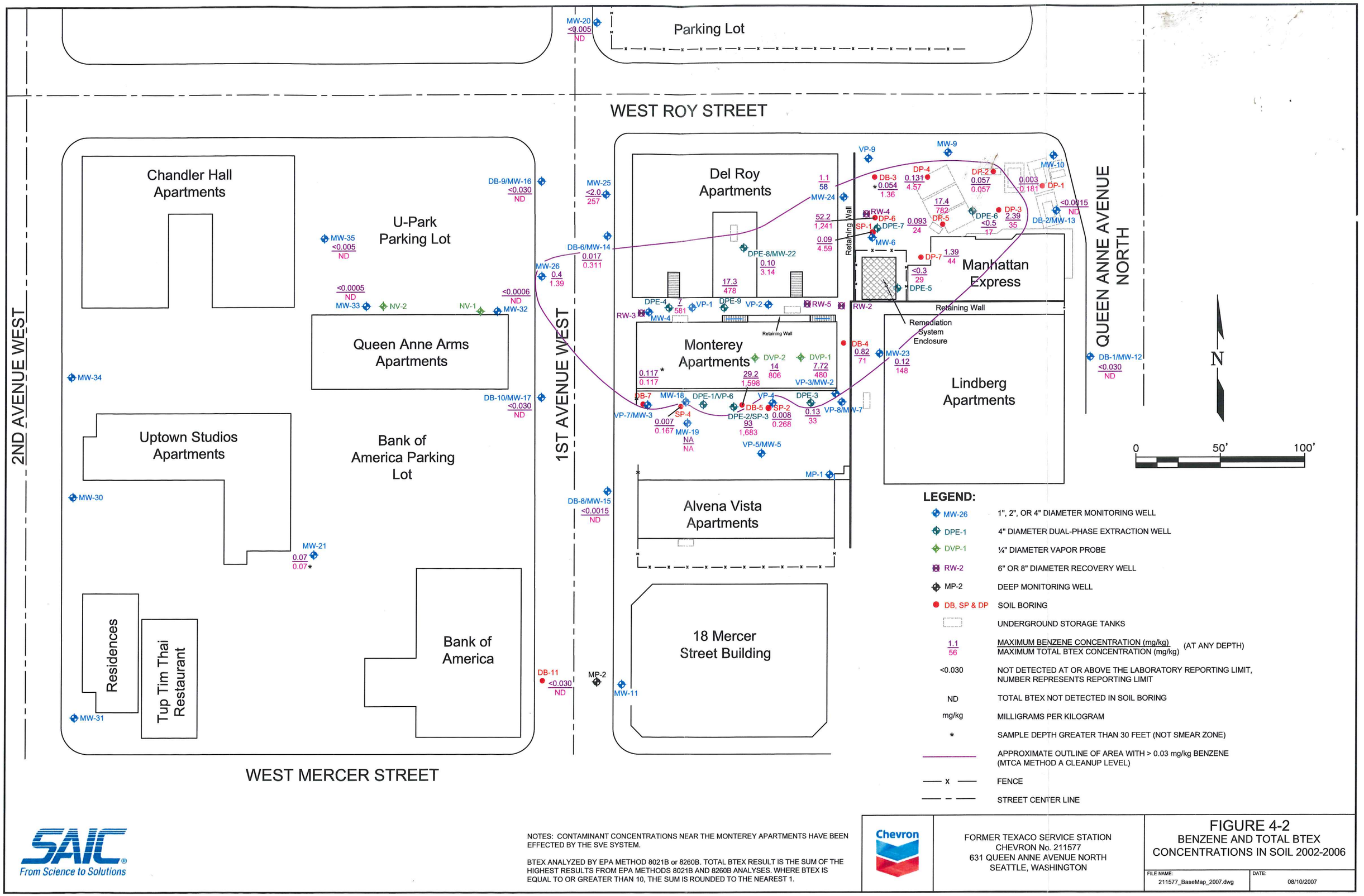
FIGURE 4-1
GASOLINE- AND DIESEL-RANGE HYDROCARBON CONCENTRATIONS IN SOIL 2002-2006

FILE NAME: 211577_BaseMap_2007.dwg
DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
DB, SP & DP	SOIL BORING
	UNDERGROUND STORAGE TANKS
1.1 / 56	MAXIMUM BENZENE CONCENTRATION (mg/kg) / MAXIMUM TOTAL BTEX CONCENTRATION (mg/kg) (AT ANY DEPTH)
<0.030	NOT DETECTED AT OR ABOVE THE LABORATORY REPORTING LIMIT, NUMBER REPRESENTS REPORTING LIMIT
ND	TOTAL BTEX NOT DETECTED IN SOIL BORING
mg/kg	MILLIGRAMS PER KILOGRAM
*	SAMPLE DEPTH GREATER THAN 30 FEET (NOT SMEAR ZONE)
	APPROXIMATE OUTLINE OF AREA WITH > 0.03 mg/kg BENZENE (MTCA METHOD A CLEANUP LEVEL)
— x —	FENCE
— – —	STREET CENTER LINE

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NOTES: CONTAMINANT CONCENTRATIONS NEAR THE MONTEREY APARTMENTS HAVE BEEN EFFECTED BY THE SVE SYSTEM.

BTEX ANALYZED BY EPA METHOD 8021B or 8260B. TOTAL BTEX RESULT IS THE SUM OF THE HIGHEST RESULTS FROM EPA METHODS 8021B AND 8260B ANALYSES. WHERE BTEX IS EQUAL TO OR GREATER THAN 10, THE SUM IS ROUNDED TO THE NEAREST 1.

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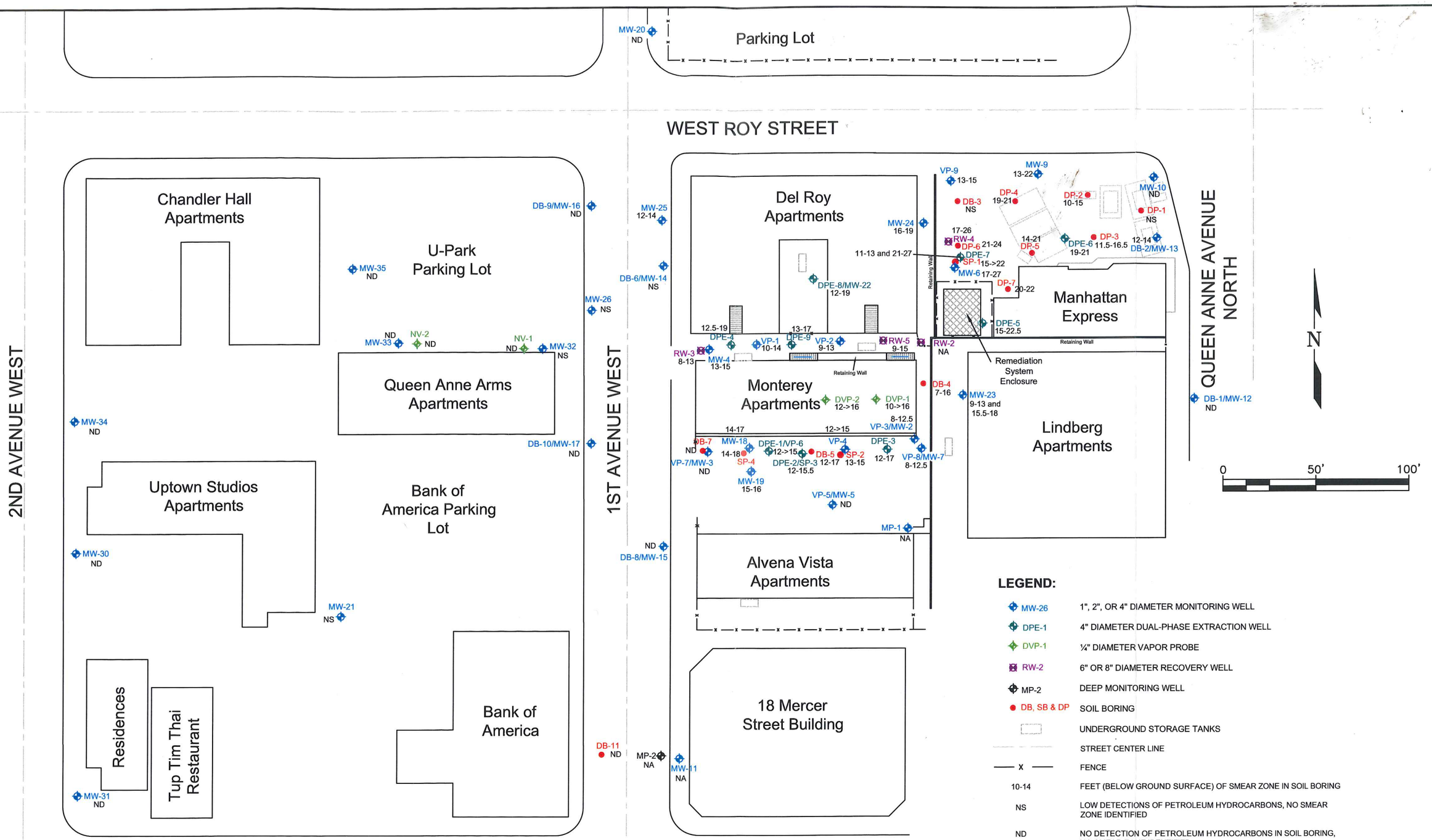
FIGURE 4-2
BENZENE AND TOTAL BTEX CONCENTRATIONS IN SOIL 2002-2006

FILE NAME: 211577_BaseMap_2007.dwg

DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
DB, SB & DP	SOIL BORING
	UNDERGROUND STORAGE TANKS
	STREET CENTER LINE
— X —	FENCE
10-14	FEET (BELOW GROUND SURFACE) OF SMEAR ZONE IN SOIL BORING
NS	LOW DETECTIONS OF PETROLEUM HYDROCARBONS, NO SMEAR ZONE IDENTIFIED
ND	NO DETECTION OF PETROLEUM HYDROCARBONS IN SOIL BORING, NO SMEAR ZONE IDENTIFIED
NA	SOIL SAMPLES NOT ANALYZED, NO PETROLEUM HYDROCARBON ODORS OR PID READINGS REPORTED, NO SMEAR ZONE IDENTIFIED

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NOTE: ELEVATIONS ARE REFERENCED TO AN ARBITRARY SITE DATUM

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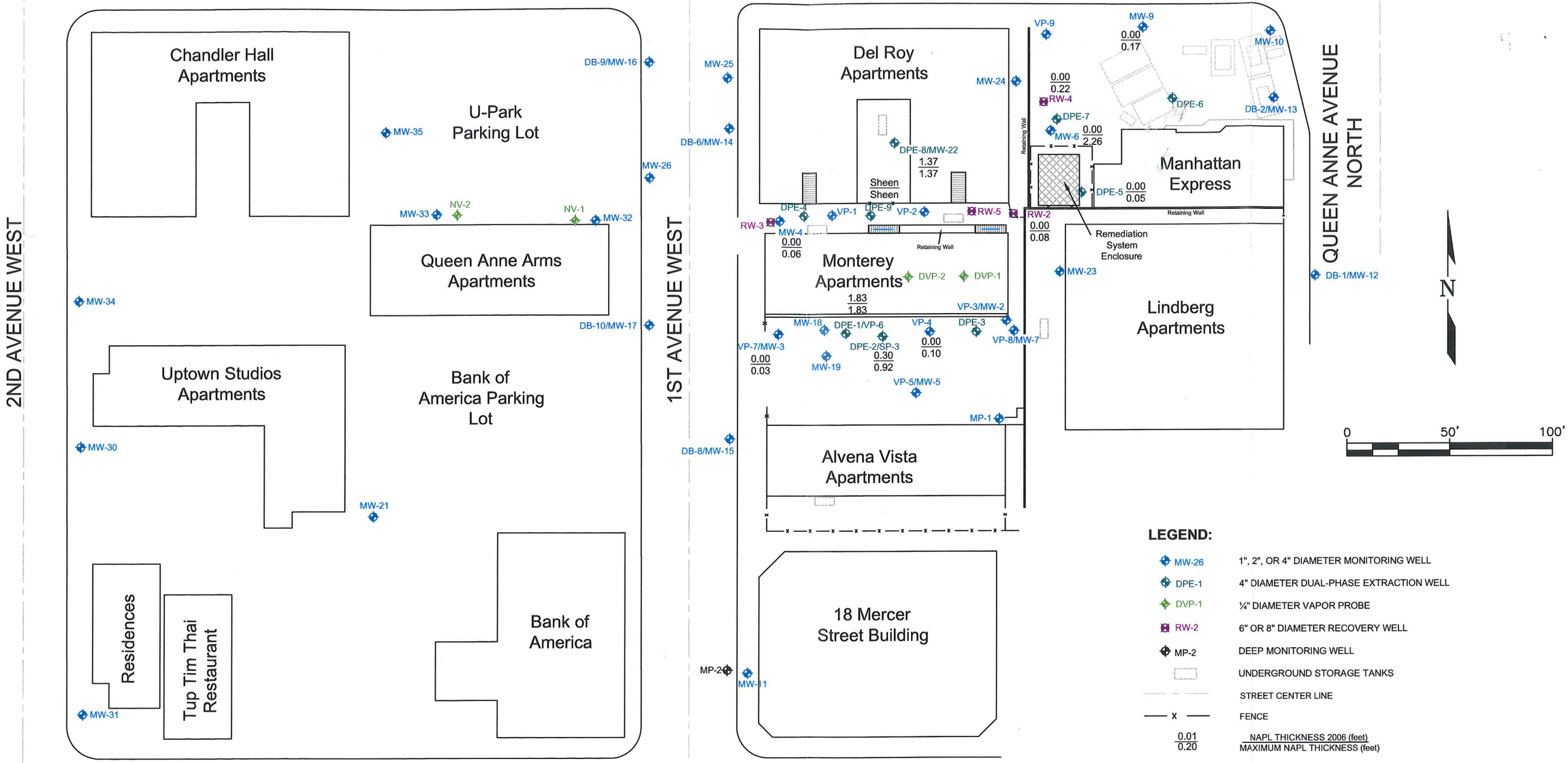
FIGURE 4-3
APPROXIMATE DEPTH OF SMEAR ZONE

FILE NAME: 211577_RI BaseMap_G2.dwg

DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
	STREET CENTER LINE
— x —	FENCE
0.01 / 0.20	NAPL THICKNESS 2006 (feet) / MAXIMUM NAPL THICKNESS (feet)

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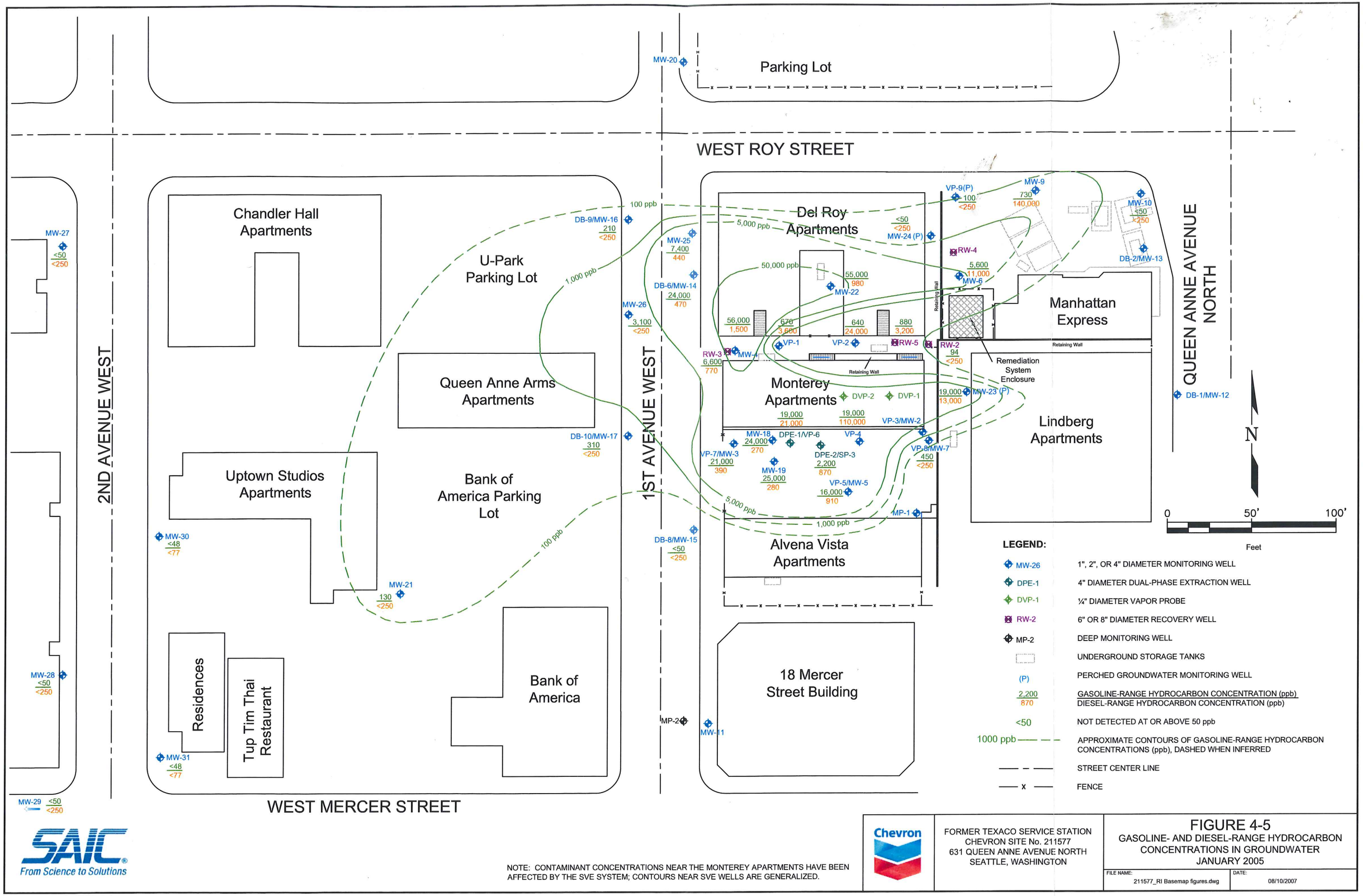
FIGURE 4-4
EXTENT OF NAPL PLUME

FILE NAME: 211577_RI BaseMap_G2.dwg

DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
(P)	PERCHED GROUNDWATER MONITORING WELL
2,200 / 870	GASOLINE-RANGE HYDROCARBON CONCENTRATION (ppb) / DIESEL-RANGE HYDROCARBON CONCENTRATION (ppb)
<50	NOT DETECTED AT OR ABOVE 50 ppb
1000 ppb	APPROXIMATE CONTOURS OF GASOLINE-RANGE HYDROCARBON CONCENTRATIONS (ppb), DASHED WHEN INFERRED
	STREET CENTER LINE
x	FENCE

NOTE: CONTAMINANT CONCENTRATIONS NEAR THE MONTEREY APARTMENTS HAVE BEEN AFFECTED BY THE SVE SYSTEM; CONTOURS NEAR SVE WELLS ARE GENERALIZED.

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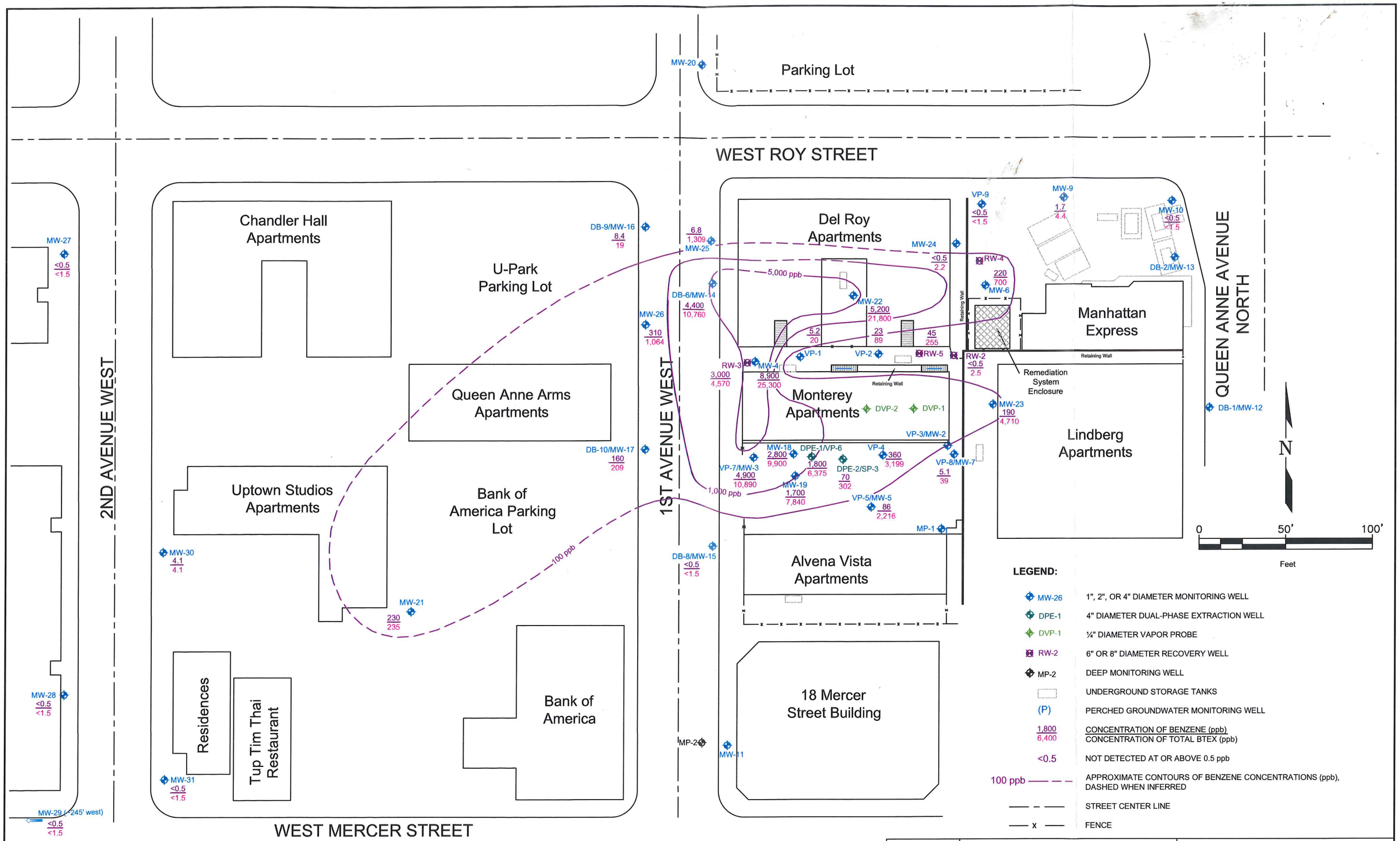
FIGURE 4-5
GASOLINE- AND DIESEL-RANGE HYDROCARBON CONCENTRATIONS IN GROUNDWATER
JANUARY 2005

FILE NAME: 211577_RI Basemap figures.dwg
DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
(P)	PERCHED GROUNDWATER MONITORING WELL
1,800 / 6,400	CONCENTRATION OF BENZENE (ppb) / CONCENTRATION OF TOTAL BTEX (ppb)
<0.5	NOT DETECTED AT OR ABOVE 0.5 ppb
100 ppb	APPROXIMATE CONTOURS OF BENZENE CONCENTRATIONS (ppb), DASHED WHEN INFERRED
	STREET CENTER LINE
x	FENCE

NOTES: CONTAMINANT CONCENTRATIONS NEAR THE MONTEREY APARTMENTS HAVE BEEN AFFECTED BY THE SVE SYSTEM; CONTOURS NEAR SVE WELLS ARE GENERALIZED.

THE TOTAL BTEX VALUE IS THE SUM OF BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES CONCENTRATIONS. WHERE TOTAL BTEX IS EQUAL TO OR GREATER THAN 10, THE SUM IS ROUNDED TO THE NEAREST 1.

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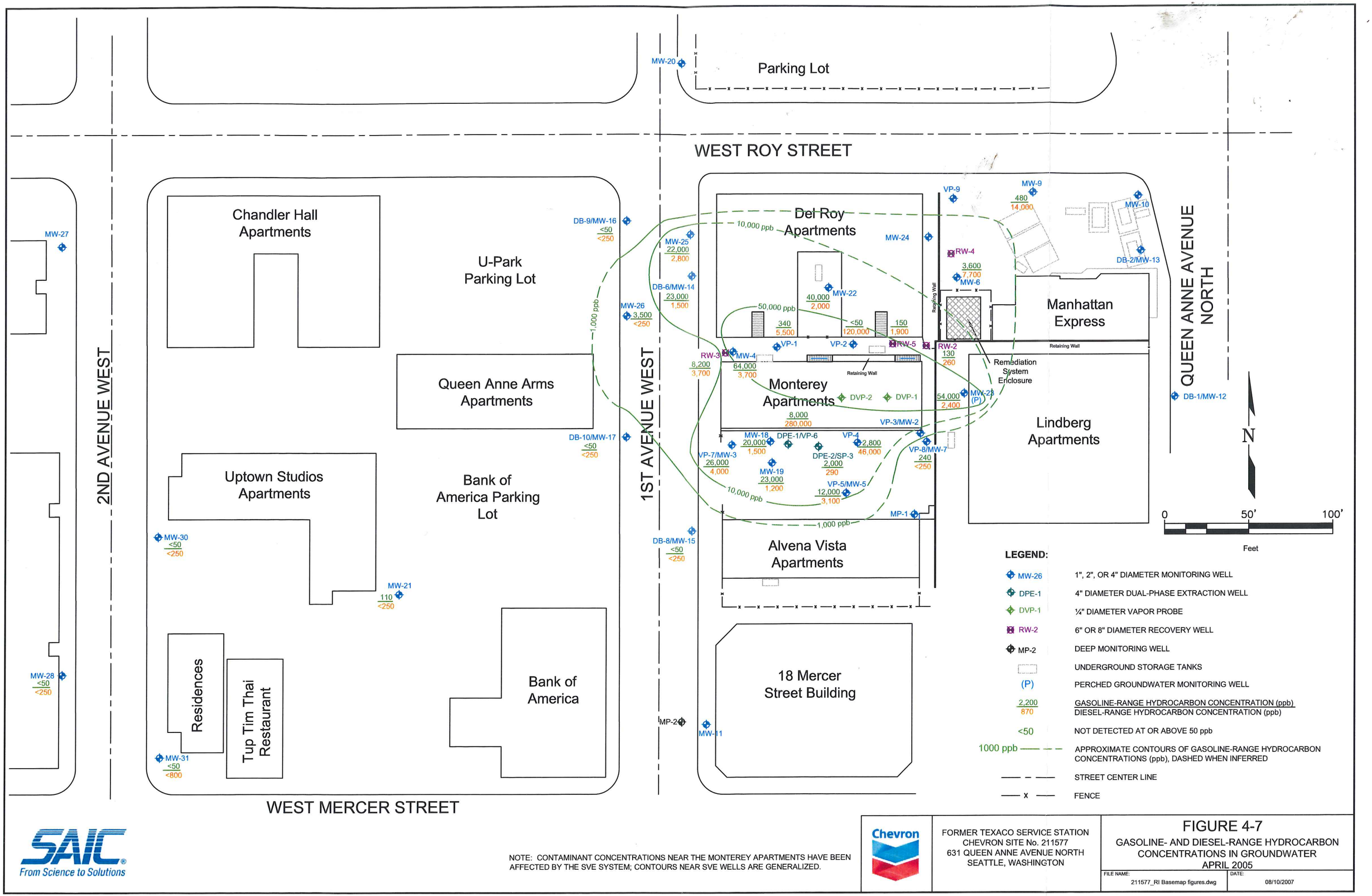
FIGURE 4-6
BENZENE AND TOTAL BTEX CONCENTRATIONS IN GROUNDWATER JANUARY 2005

FILE NAME: 211577_RI Basemap figures.dwg

DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
(P)	PERCHED GROUNDWATER MONITORING WELL
2,200 / 870	GASOLINE-RANGE HYDROCARBON CONCENTRATION (ppb) / DIESEL-RANGE HYDROCARBON CONCENTRATION (ppb)
<50	NOT DETECTED AT OR ABOVE 50 ppb
1000 ppb	APPROXIMATE CONTOURS OF GASOLINE-RANGE HYDROCARBON CONCENTRATIONS (ppb), DASHED WHEN INFERRED
	STREET CENTER LINE
x	FENCE

NOTE: CONTAMINANT CONCENTRATIONS NEAR THE MONTEREY APARTMENTS HAVE BEEN AFFECTED BY THE SVE SYSTEM; CONTOURS NEAR SVE WELLS ARE GENERALIZED.

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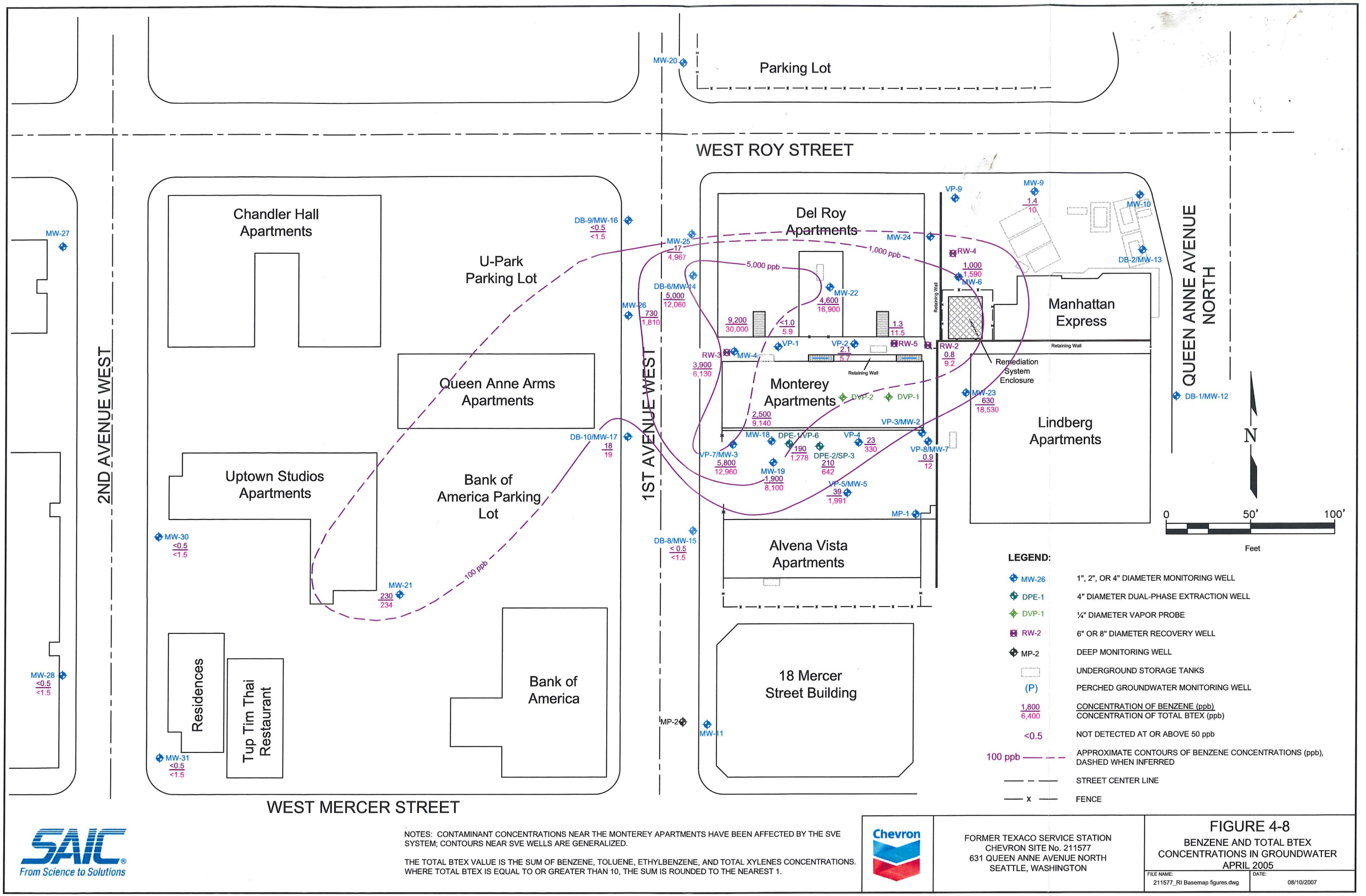
FIGURE 4-7

GASOLINE- AND DIESEL-RANGE HYDROCARBON CONCENTRATIONS IN GROUNDWATER
APRIL 2005

FILE NAME: 211577_RI Basemap figures.dwg

DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
(P)	PERCHED GROUNDWATER MONITORING WELL
1,800 / 6,400	CONCENTRATION OF BENZENE (ppb) / CONCENTRATION OF TOTAL BTEX (ppb)
<0.5	NOT DETECTED AT OR ABOVE 50 ppb
100 ppb	APPROXIMATE CONTOURS OF BENZENE CONCENTRATIONS (ppb), DASHED WHEN INFERRED
	STREET CENTER LINE
x	FENCE

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NOTES: CONTAMINANT CONCENTRATIONS NEAR THE MONTEREY APARTMENTS HAVE BEEN AFFECTED BY THE SVE SYSTEM; CONTOURS NEAR SVE WELLS ARE GENERALIZED.

THE TOTAL BTEX VALUE IS THE SUM OF BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES CONCENTRATIONS. WHERE TOTAL BTEX IS EQUAL TO OR GREATER THAN 10, THE SUM IS ROUNDED TO THE NEAREST 1.

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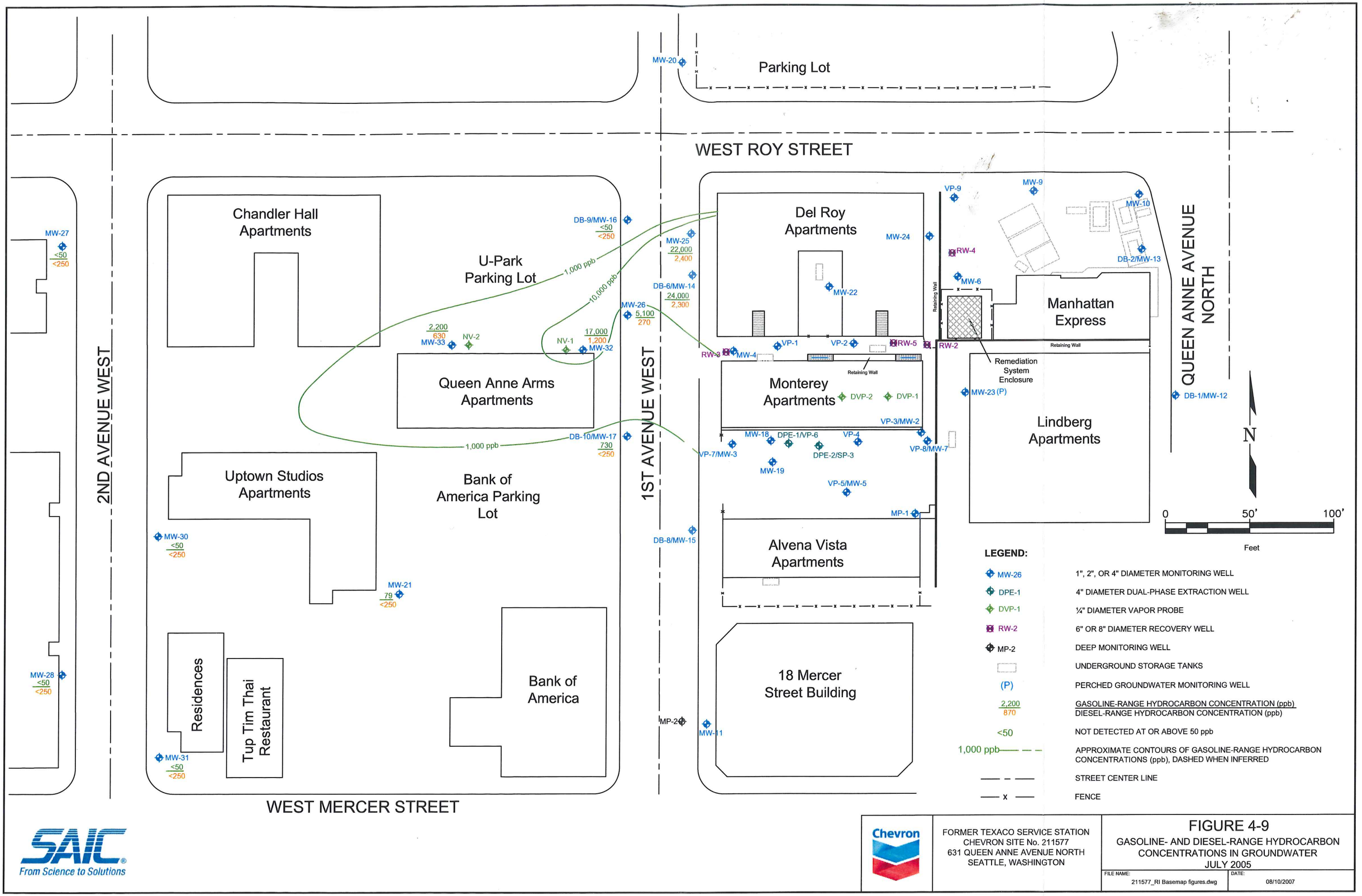
FIGURE 4-8

BENZENE AND TOTAL BTEX CONCENTRATIONS IN GROUNDWATER APRIL 2005

FILE NAME: 211577_RI Basemap figures.dwg

DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
(P)	PERCHED GROUNDWATER MONITORING WELL
2,200 / 870	GASOLINE-RANGE HYDROCARBON CONCENTRATION (ppb) / DIESEL-RANGE HYDROCARBON CONCENTRATION (ppb)
<50	NOT DETECTED AT OR ABOVE 50 ppb
1,000 ppb	APPROXIMATE CONTOURS OF GASOLINE-RANGE HYDROCARBON CONCENTRATIONS (ppb), DASHED WHEN INFERRED
	STREET CENTER LINE
	FENCE

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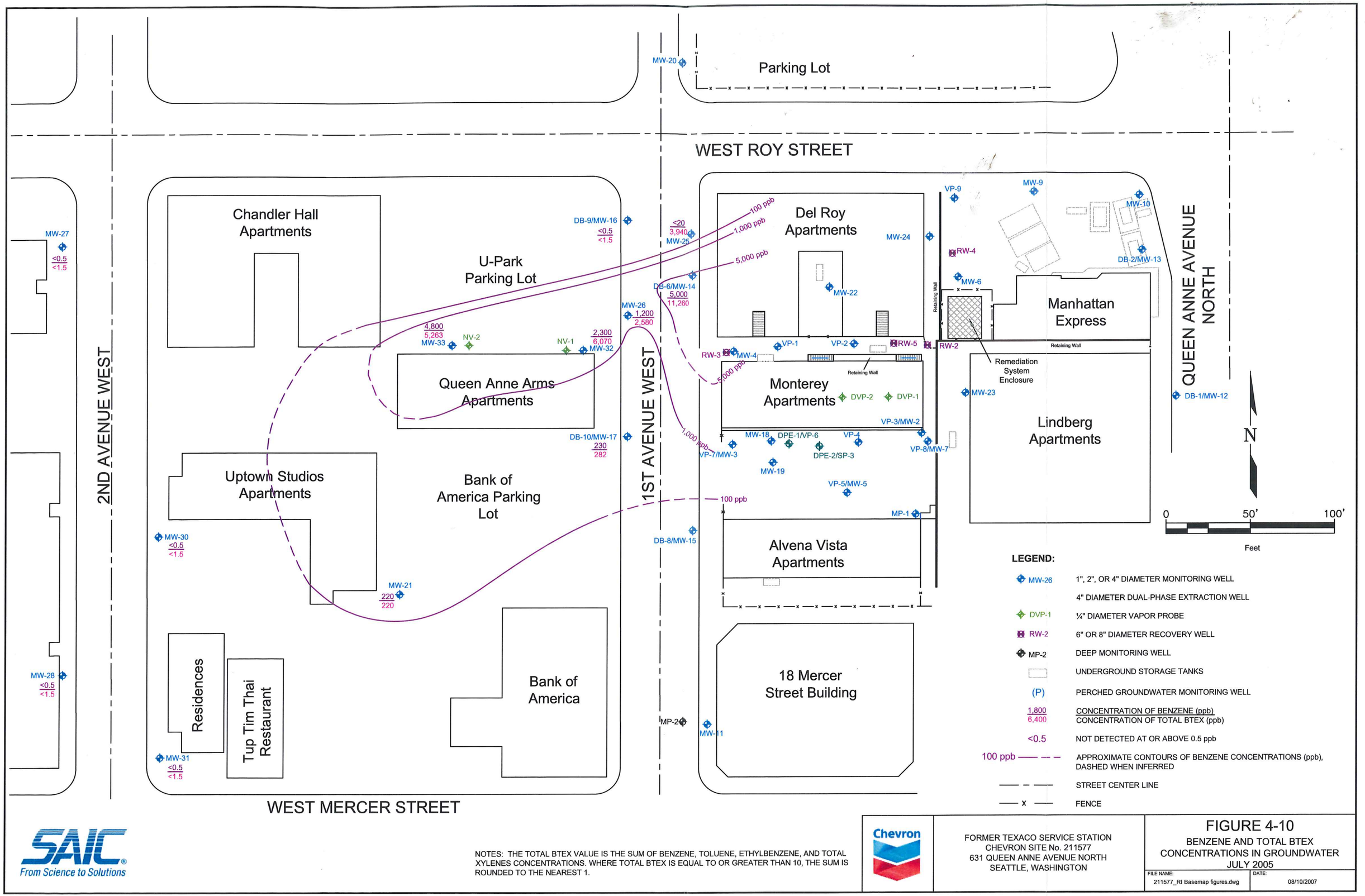
FIGURE 4-9

GASOLINE- AND DIESEL-RANGE HYDROCARBON CONCENTRATIONS IN GROUNDWATER
JULY 2005

FILE NAME:	DATE:
211577_RI Basemap figures.dwg	08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
(P)	PERCHED GROUNDWATER MONITORING WELL
1,800 / 6,400	CONCENTRATION OF BENZENE (ppb) / CONCENTRATION OF TOTAL BTEX (ppb)
<0.5	NOT DETECTED AT OR ABOVE 0.5 ppb
100 ppb	APPROXIMATE CONTOURS OF BENZENE CONCENTRATIONS (ppb), DASHED WHEN INFERRED
	STREET CENTER LINE
x	FENCE

NOTES: THE TOTAL BTEX VALUE IS THE SUM OF BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES CONCENTRATIONS. WHERE TOTAL BTEX IS EQUAL TO OR GREATER THAN 10, THE SUM IS ROUNDED TO THE NEAREST 1.

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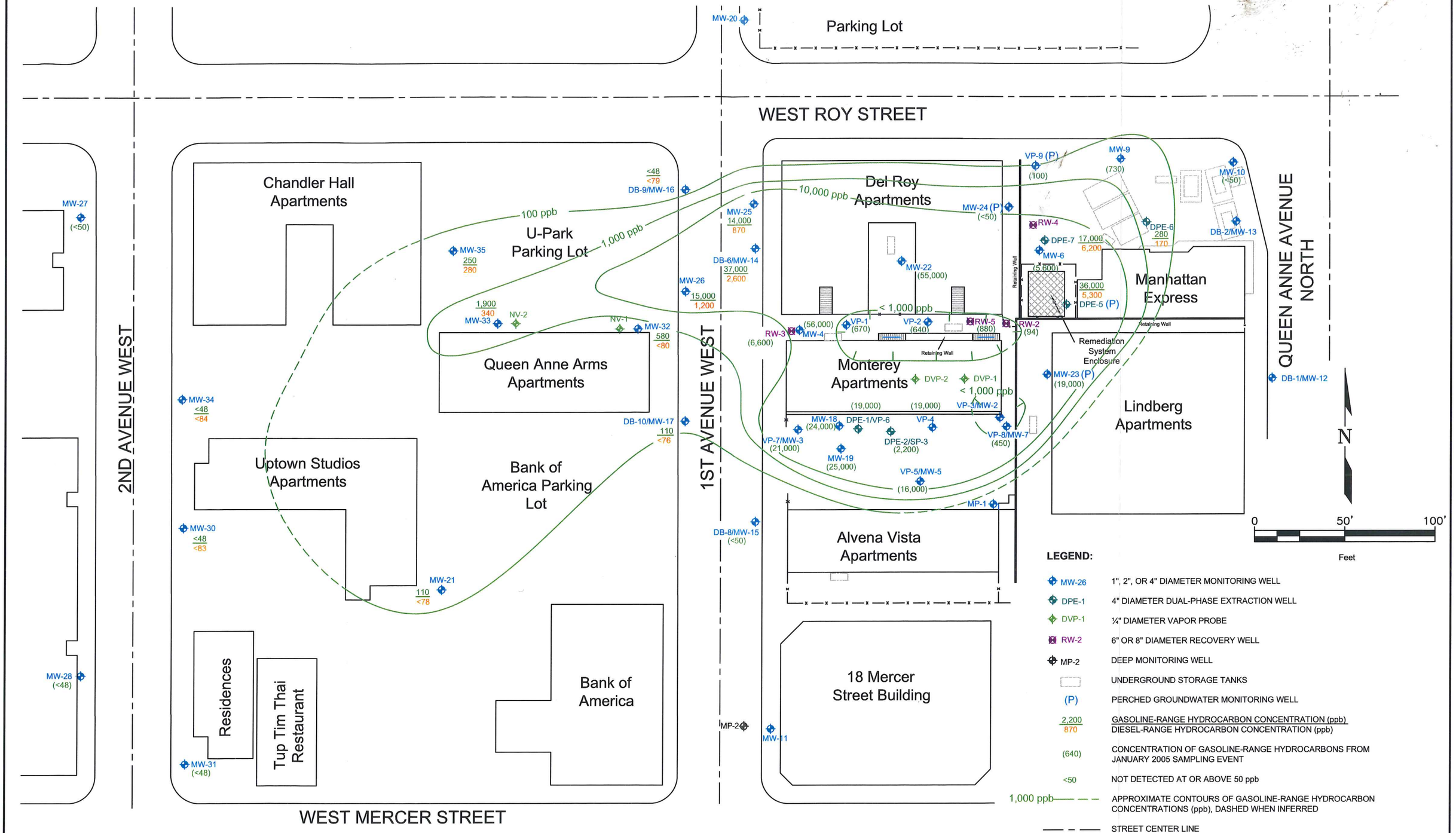
FIGURE 4-10
BENZENE AND TOTAL BTEX CONCENTRATIONS IN GROUNDWATER
JULY 2005

FILE NAME: 211577_RI Basemap figures.dwg
DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
(P)	PERCHED GROUNDWATER MONITORING WELL
2,200 / 870	GASOLINE-RANGE HYDROCARBON CONCENTRATION (ppb) / DIESEL-RANGE HYDROCARBON CONCENTRATION (ppb)
(640)	CONCENTRATION OF GASOLINE-RANGE HYDROCARBONS FROM JANUARY 2005 SAMPLING EVENT
<50	NOT DETECTED AT OR ABOVE 50 ppb
1,000 ppb	APPROXIMATE CONTOURS OF GASOLINE-RANGE HYDROCARBON CONCENTRATIONS (ppb), DASHED WHEN INFERRED
	STREET CENTER LINE
	FENCE

NOTE: CONTAMINANT CONCENTRATIONS NEAR THE MONTEREY APARTMENTS HAVE BEEN AFFECTED BY THE SVE SYSTEM; CONTOURS NEAR SVE WELLS ARE GENERALIZED.

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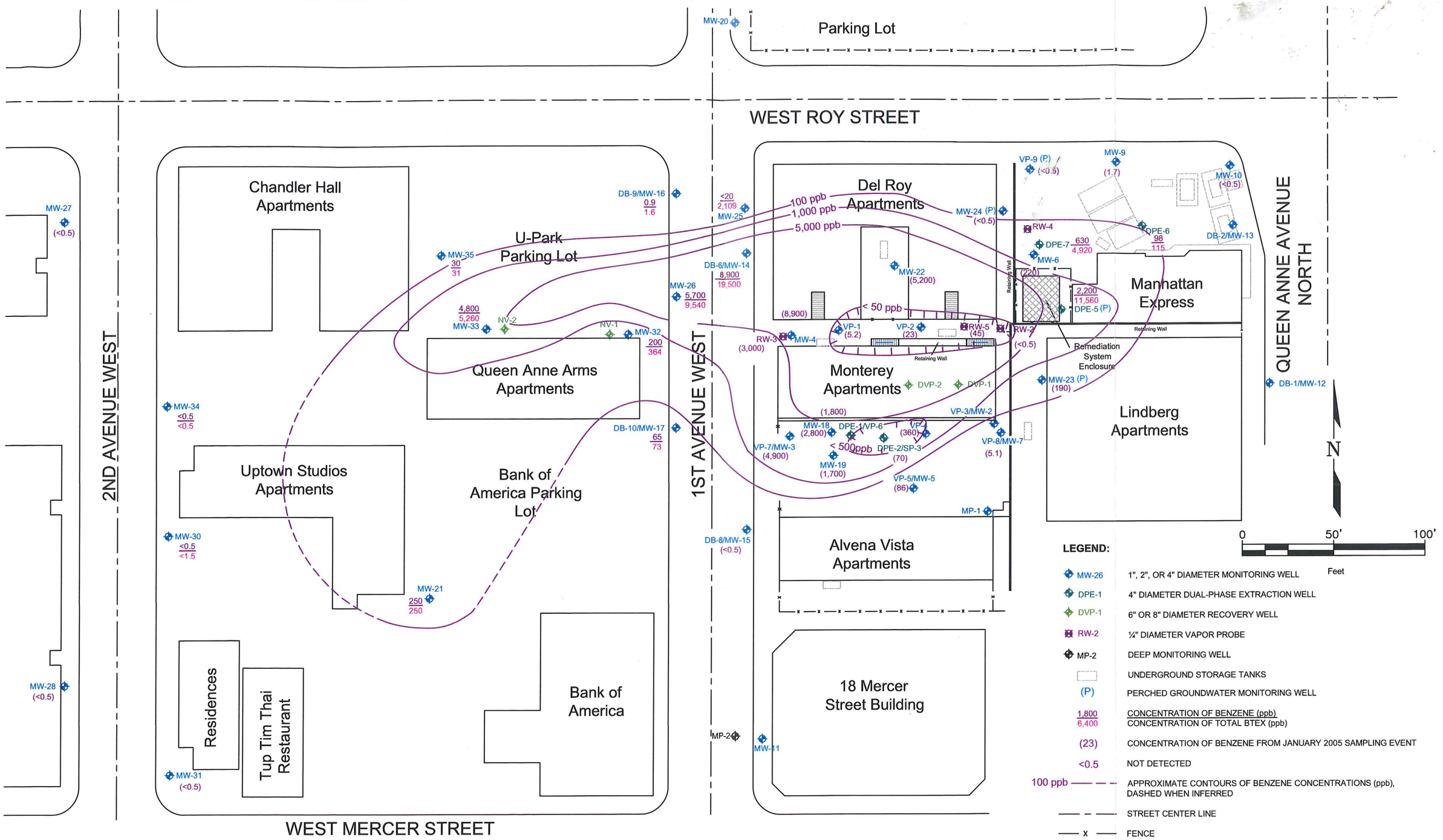
FIGURE 4-11
GASOLINE- AND DIESEL-RANGE HYDROCARBON CONCENTRATIONS IN GROUNDWATER
NOVEMBER 2005

FILE NAME: 211577_RI Basemap figures.dwg
DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	6" OR 8" DIAMETER RECOVERY WELL
RW-2	¼" DIAMETER VAPOR PROBE
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
(P)	PERCHED GROUNDWATER MONITORING WELL
1,800 / 6,400	CONCENTRATION OF BENZENE (ppb) / CONCENTRATION OF TOTAL BTEX (ppb)
(23)	CONCENTRATION OF BENZENE FROM JANUARY 2005 SAMPLING EVENT
<0.5	NOT DETECTED
100 ppb	APPROXIMATE CONTOURS OF BENZENE CONCENTRATIONS (ppb), DASHED WHEN INFERRED
	STREET CENTER LINE
x	FENCE

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NOTES: CONTAMINANT CONCENTRATIONS NEAR THE MONTEREY APARTMENTS HAVE BEEN AFFECTED BY THE SVE SYSTEM; CONTOURS NEAR SVE WELLS ARE GENERALIZED.

THE TOTAL BTEX VALUE IS THE SUM OF BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES CONCENTRATIONS. WHERE TOTAL BTEX IS EQUAL TO OR GREATER THAN 10, THE SUM IS ROUNDED TO THE NEAREST 1.

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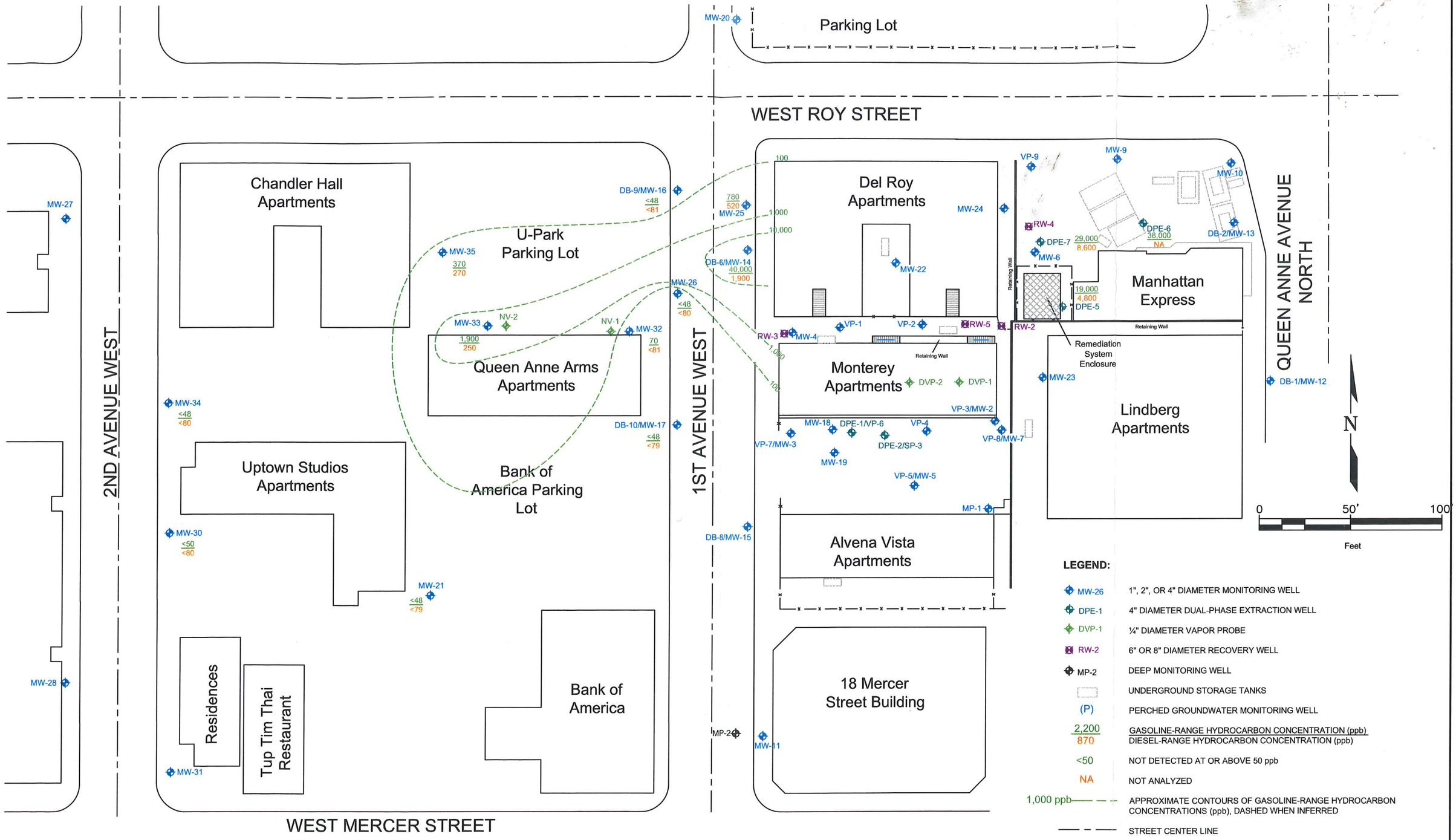
FIGURE 4-12
BENZENE AND TOTAL BTEX CONCENTRATIONS IN GROUNDWATER
NOVEMBER 2005

FILE NAME: 211577_RI Basemap figures.dwg

DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
(P)	PERCHED GROUNDWATER MONITORING WELL
2,200 / 870	GASOLINE-RANGE HYDROCARBON CONCENTRATION (ppb) / DIESEL-RANGE HYDROCARBON CONCENTRATION (ppb)
<50	NOT DETECTED AT OR ABOVE 50 ppb
NA	NOT ANALYZED
1,000 ppb	APPROXIMATE CONTOURS OF GASOLINE-RANGE HYDROCARBON CONCENTRATIONS (ppb), DASHED WHEN INFERRED
	STREET CENTER LINE
x	FENCE

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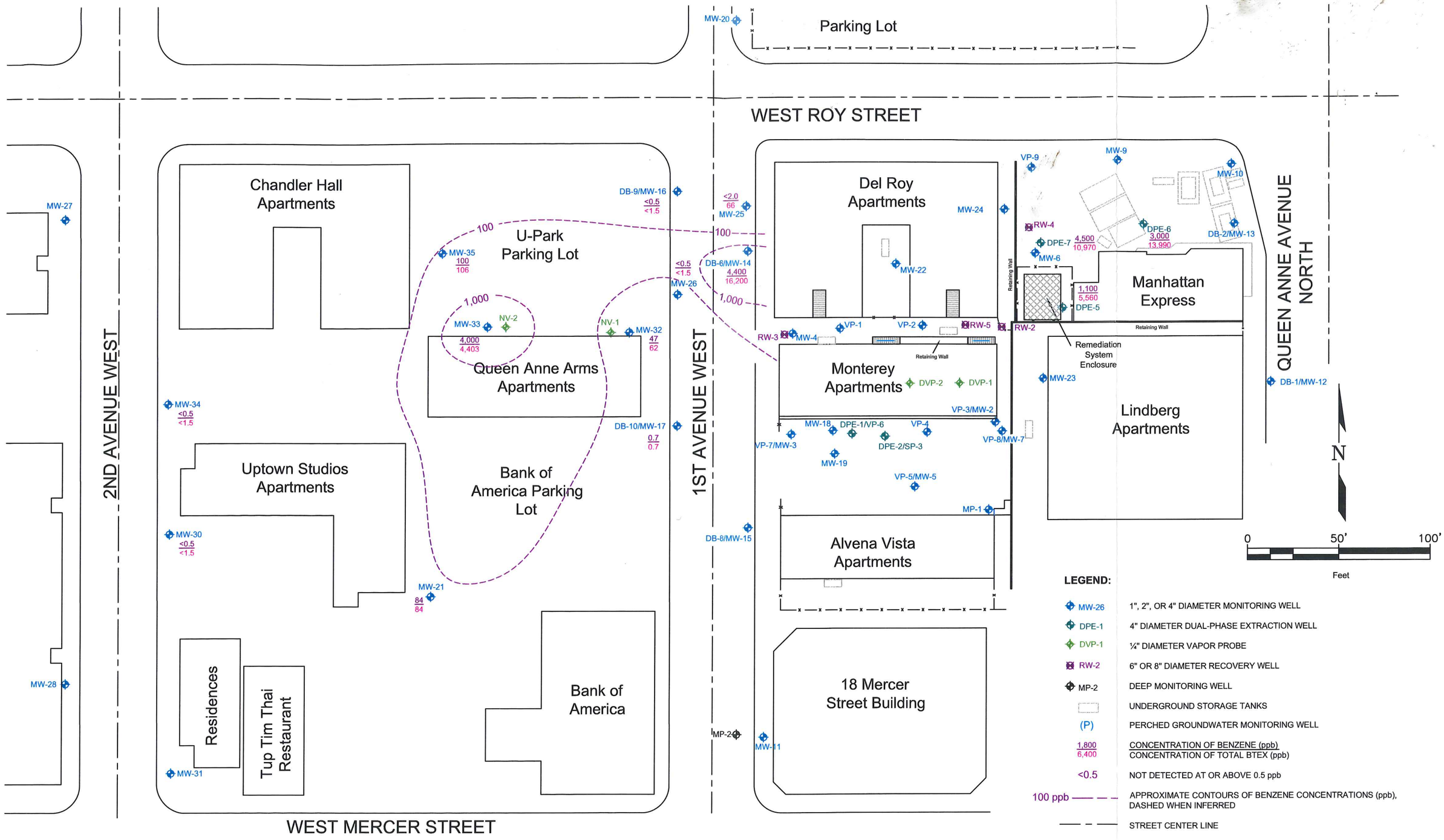
FIGURE 4-13
GASOLINE- AND DIESEL-RANGE HYDROCARBON CONCENTRATIONS IN GROUNDWATER
APRIL 2006

FILE NAME: 211577_RI Basemap figures.dwg
DATE: 08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
(P)	PERCHED GROUNDWATER MONITORING WELL
1,800 / 6,400	CONCENTRATION OF BENZENE (ppb) / CONCENTRATION OF TOTAL BTEX (ppb)
<0.5	NOT DETECTED AT OR ABOVE 0.5 ppb
100 ppb	APPROXIMATE CONTOURS OF BENZENE CONCENTRATIONS (ppb), DASHED WHEN INFERRED
	STREET CENTER LINE
x	FENCE

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NOTES: CONTAMINANT CONCENTRATIONS NEAR THE MONTEREY APARTMENTS HAVE BEEN AFFECTED BY THE SVE SYSTEM; CONTOURS NEAR SVE WELLS ARE GENERALIZED.

THE TOTAL BTEX VALUE IS THE SUM OF BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES CONCENTRATIONS. WHERE TOTAL BTEX IS EQUAL TO OR GREATER THAN 10, THE SUM IS ROUNDED TO THE NEAREST 1.

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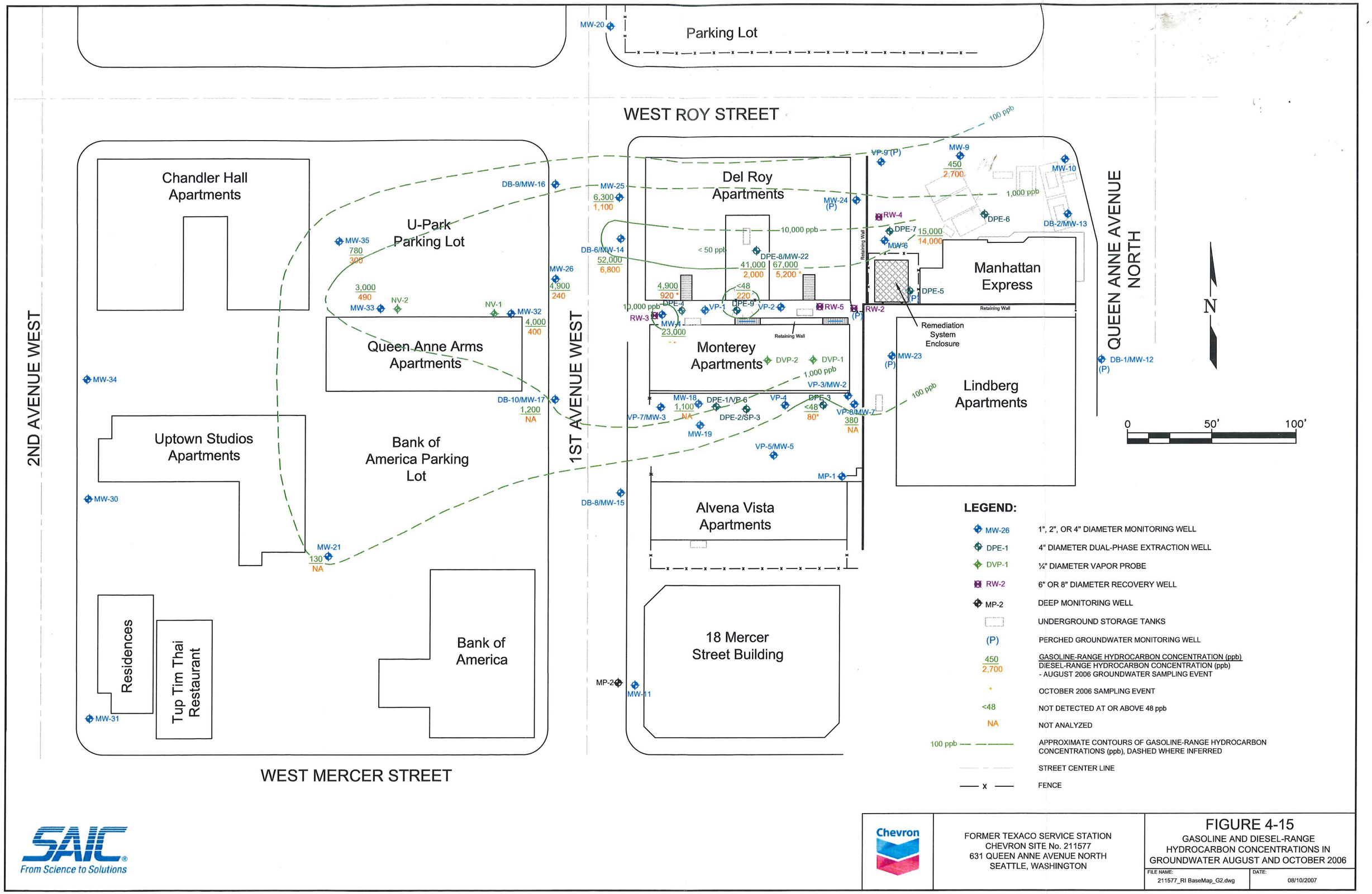
FIGURE 4-14
BENZENE AND TOTAL BTEX CONCENTRATIONS IN GROUNDWATER APRIL 2006

FILE NAME: 211577_RI Basemap figures.dwg

DATE: 8/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
(P)	PERCHED GROUNDWATER MONITORING WELL
450 / 2,700	GASOLINE-RANGE HYDROCARBON CONCENTRATION (ppb) / DIESEL-RANGE HYDROCARBON CONCENTRATION (ppb) - AUGUST 2006 GROUNDWATER SAMPLING EVENT
*	OCTOBER 2006 SAMPLING EVENT
<48	NOT DETECTED AT OR ABOVE 48 ppb
NA	NOT ANALYZED
100 ppb	APPROXIMATE CONTOURS OF GASOLINE-RANGE HYDROCARBON CONCENTRATIONS (ppb), DASHED WHERE INFERRED
	STREET CENTER LINE
x	FENCE

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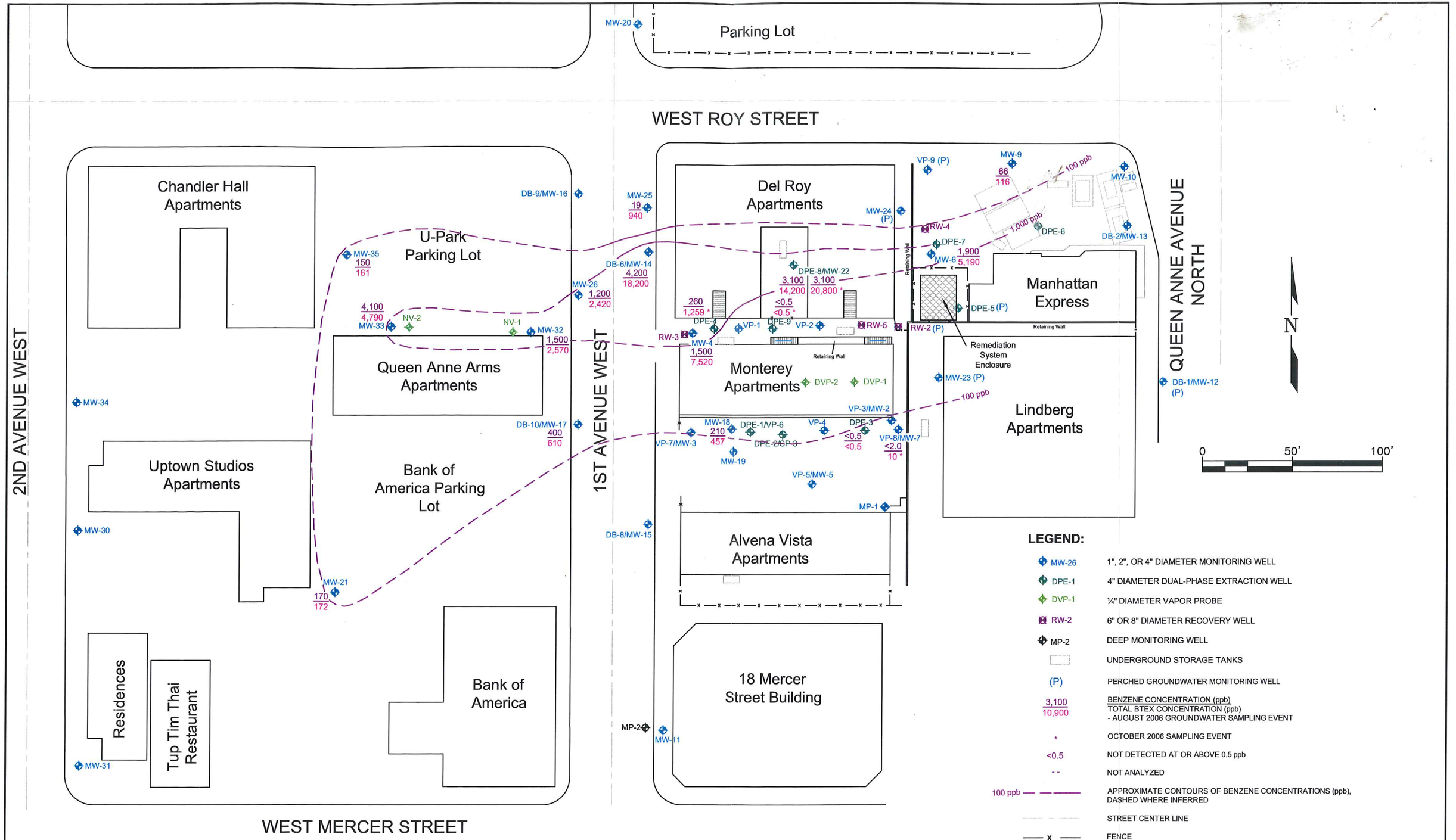
FIGURE 4-15

GASOLINE AND DIESEL-RANGE HYDROCARBON CONCENTRATIONS IN GROUNDWATER AUGUST AND OCTOBER 2006

FILE NAME:	DATE:
211577_RI BaseMap_G2.dwg	08/10/2007



LEGEND:

MW-26	1", 2", OR 4" DIAMETER MONITORING WELL
DPE-1	4" DIAMETER DUAL-PHASE EXTRACTION WELL
DVP-1	¼" DIAMETER VAPOR PROBE
RW-2	6" OR 8" DIAMETER RECOVERY WELL
MP-2	DEEP MONITORING WELL
	UNDERGROUND STORAGE TANKS
(P)	PERCHED GROUNDWATER MONITORING WELL
3,100 / 10,900	BENZENE CONCENTRATION (ppb) / TOTAL BTEX CONCENTRATION (ppb) - AUGUST 2006 GROUNDWATER SAMPLING EVENT
*	OCTOBER 2006 SAMPLING EVENT
<0.5	NOT DETECTED AT OR ABOVE 0.5 ppb
- -	NOT ANALYZED
100 ppb	APPROXIMATE CONTOURS OF BENZENE CONCENTRATIONS (ppb), DASHED WHERE INFERRED
	STREET CENTER LINE
x	FENCE

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NOTES: CONTAMINANT CONCENTRATIONS NEAR THE MONTEREY APARTMENTS HAVE BEEN AFFECTED BY THE SVE SYSTEM; CONTOURS NEAR SVE WELLS ARE GENERALIZED.

THE TOTAL BTEX VALUE IS THE SUM OF BENZENE, TOLUENE, ETHYLBENZENE, AND TOTAL XYLENES CONCENTRATIONS. WHERE TOTAL BTEX IS EQUAL TO OR GREATER THAN 10, THE SUM IS ROUNDED TO THE NEAREST 1.

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FIGURE 4-16

BENZENE AND TOTAL BTEX CONCENTRATIONS IN GROUNDWATER AUGUST AND OCTOBER 2006

FILE NAME:	DATE:
211577_RI BaseMap_G2.dwg	08/10/2007

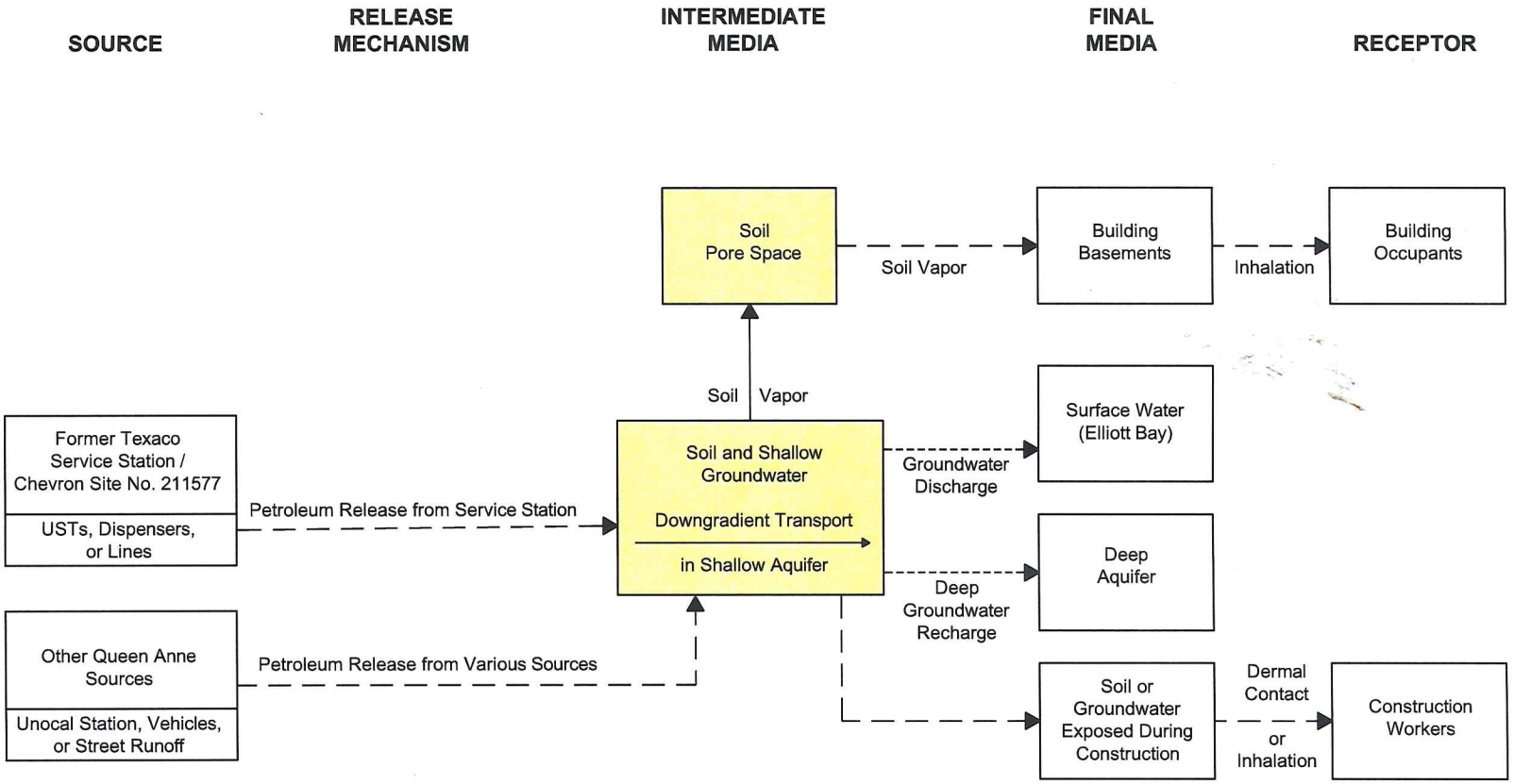

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FIGURE 5-1
CONCEPTUAL SITE MODEL

FILE NAME:	DATE:
Conceptual Site Model.dwg	08/10/2007