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March 28, 2018

Environmental Services Department
City of San Jose
200 E. Santa Clara Street
San Jose, California 95113

Subject: **Hazardous Materials Study**
ARCO Service Station No. 2187
2375 Quimby Road
San Jose, California 95122 USA

Dear Sir or Madam,

On behalf of Atlantic Richfield Company (ARC), Antea Group has prepared this Hazardous Materials Study for ARCO Service Station No. 2187, located at 2375 Quimby Road, San Jose, California (the Site) as requested by the City of San Jose, Environmental Services Department. The City requested this review to evaluate whether residual contamination may be encountered during planned construction on the Site.

SITE BACKGROUND

The Site is currently an active, ARC operated retail convenience store and fuel dispensing facility located at the northwest corner of Quimby Road and Capitol Expressway in San Jose, California (**Figure 1**). Site facilities include a station building, four dispenser islands, and three gasoline underground storage tanks (USTs). The areas north, west, and south of the site are developed for commercial use, and the area east of the site is developed for residential use. Please refer to **Figure 2** for a site plan of the existing Site features and the areas of the proposed construction.

Environmental investigations at the Site began in February 1985 in response to a gasoline-inventory discrepancy in the underground fuel storage and dispenser system. On February 27, 1985, an estimated loss of 500 to 1,000 gallons of gasoline was reported at the site. On March 1, 1985, soil borings A-1 through A-4 were advanced. Soil boring A-1 through A-3 were abandoned and boring A-4 was completed as a groundwater monitoring well. On March 11, 1985, seven additional groundwater monitoring wells (A-5 through A-11) were installed around the site to further evaluate the groundwater conditions (**GeoStrategies Inc. 1990**). Additionally, in March 1985, the three 8,000-gallon capacity USTs were removed and replaced with three new USTs in the same location, and an

unknown volume of contaminated soil was excavated, stockpiled, and aerated on site. The stockpile continued to be aerated until September 3, 1985 and was eventually hauled to a sanitary landfill for disposal (**GeoStrategies Inc., 1994**). The Site was added to the Leaking Underground Storage Tank Program as Case No. 01-045. Following this investigation continued groundwater monitoring was performed at the site (**Leaking Underground Storage Tank Oversight Program, 1995**).

On June 4, 1992, the oil-water separator/clarifier sump associated with the station's automotive service bays was removed. Prior to the removal, an investigation was conducted to assess the subsurface soil conditions below the separator. Soil contaminated with total recoverable petroleum hydrocarbons (TRPHs) at 0 and 2 feet below the separator (SB-1-0 and SB-1-2) was encountered. The sample collected at 5 feet below the separator was non-detect for TRPHs. After the investigation, the separator was removed; however, contaminated soil was not over-excavated and remained in place (**EA Engineering, Science, and Technology, 1992**). Since the contamination was limited to a small area, Santa Clara Valley Water District's staff believed that the residual TRPHs affiliated with the separator did not present a significate risk to the groundwater at the site (**Leaking Underground Storage Tank Oversight Program, 1995**).

On October 3, 1995, the Leaking Underground Storage Tank Oversight Program closed Case No. 01-045 and authorized that "no further action related to the underground storage tank release was required" (**Leaking Underground Storage Tank Oversight Program, 1995**).

On November 7, 2000, the California Regional Water Quality Control Board – San Francisco Bay Region *(CRWQCB – SFBR)* requested a work plan "to determine if Methyl Tertiary Butyl Ether (MTBE) or other fuel oxygenates have impacted soil and groundwater as a result of fuel storage and dispensing operations at the site" **(California Regional Water Quality Control Board, 2000**).

Following the CRWQCB-SFBR request, a work plan was submitted and approved. In March 2001, a subsurface investigation to advance four soil borings (B-1 through B-4) was conducted at the site. Concentrations of MTBE in soil were detected in borings B-2 and B-3. Boring B-2 was completed near the former oil-water separator and boring B-3 was completed north of the UST complex. Following this investigation, groundwater samples were collected to analyze for the presence of MTBE. Concentrations of MTBE were detected in five of the eight groundwater monitoring wells (A-4 and A-8 through A-11) (**SECOR, 2001a**). On March 30, 2001, the Site was added to the Leaking Underground Storage Tank Program as Case No. 14-624.

Further delineation of the MTBE plume was warranted after detections were found in soil and groundwater. On July 23 and 24, 2001, five groundwater monitoring wells (A-12 through A-16) were installed at the site. Concentrations of TPH-g, benzene, and MTBE were detected in soil samples collected at well A-16, located southwest of the UST complex. Concentrations of MTBE were also detected in soil samples collected at well A-14,

located on the northern property boundary. Subsequent groundwater monitoring on August 1, 2001, indicated that MTBE was detected in all but two wells sampled (A-5 and A-12) (**SECOR, 2001b**).

In October 2002, nine Cone Penetrometer Testing (CPT) borings were completed to collect soil and groundwater samples (CPT-1 through CPT-9). Soil and groundwater concentrations of TPH-g and benzene were not detected in any CPT samples. Concentration of MTBE in soil were detected in four of the nine borings. Concentrations of MTBE in groundwater were detected in five of the nine borings. In addition to the CPT borings, eight groundwater monitoring wells were installed off site (shallow: A-17a, A-18A, A-19A, A-20A; and deep: A-17B, A18B, A-19B, A-20B). Soil concentrations of TPH-g, benzene, and MTBE were not detected in any samples collected; however, it should be noted that the reporting limits (RLs) were higher than the CRWQCB – SFBR *Groundwater Tier 1 Environmental Screening Levels (ESLs)* in many instances. Concentrations of MTBE in groundwater were detected in five of the eight off-site monitoring wells (**URS, 2003a**).

In March 2003, the product piping and associated product dispensers were replaced, and the waste oil piping was removed without replacement. Over-excavation was performed between the fuel dispenser locations due to field observations of staining and petroleum hydrocarbon odor (**URS, 2003b**).

From June 24 to November 14, 2003, Precision Sampling conducted eight hydrogen peroxide injection remediation events. Each event included injecting approximately ten gallons of 7.5% hydrogen peroxide solution into each of the five injection wells, A-10, A-11, A-13, A-14, and A-15 (URS, 2004). Groundwater at the Site responded well to the hydrogen peroxide injections, and contaminant concentrations decreased significantly over the next five years of groundwater monitoring and continued to decrease with the last groundwater sampling event at the Site occurring in 2008.

On May 27, 2011, the County of Santa Clara Department of Environmental Health, in collaboration with the CRWQCB – SFBR, closed Case No. 14-624 and authorized that "no further action related to the petroleum release(s) at the site is required" (**County of Santa Clara – Department of Health, 2011**).

CONSTRUCTION PLANS

The proposed demolition plans include removing the existing station building, waste oil tank, product USTs, product dispensers, and product piping. The proposed construction plans include an excavation to accommodate a new UST basin in the southernmost area of the Site and an excavation north of the new UST basin to accommodate new canopy supports, product piping, and dispensers. The new UST basin will be excavated to approximately 17 feet below ground surface (bgs) and the area north of the new UST basin will be excavated to approximately 4 feet bgs to accommodate the new canopy supports, product piping, and dispensers. A new station

building and carwash is proposed to be constructed in the northern half of the Site and will be re-graded to approximately 2.5 feet bgs. The proposed construction plans are presented on **Figure 2.**

GROUNDWATER

Historically, shallow groundwater at the Site was observed between approximately 6 and 17 feet bgs (**County of Santa Clara – Department of Health, 2011**). The last groundwater monitoring and sampling at the Site occurred in 2008 and included gauging and sampling groundwater from thirteen on-site monitoring wells, eight off-site monitoring wells, and two on-site observation wells (**County of Santa Clara – Department of Health, 2011**). The monitoring wells were destroyed in 2011 at the request of the Santa Clara County Department of Health and under the supervision of a Santa Clara Valley Water District Inspector (**Stantec, 2011**). **Figures 2 and 3** show the locations of the former groundwater monitoring wells at the Site. Please refer to **Table 1** and **Figure 3** for a summary of the last groundwater monitoring and sampling results from the historical groundwater monitoring wells.

The analytical data from the 2008 groundwater sampling event at the Site included MTBE concentrations above the CRWQCB – SFBR *Groundwater Tier 1 Environmental Screening Levels (ESLs)* in on-site monitoring wells A-11 and A-16, and a tert-Butyl alcohol (TBA) concentration above the *Groundwater Tier 1 ESL* in monitoring well A-16 (**County of Santa Clara – Department of Health, 2011**). It should be noted that the concentrations found in the wells immediately surrounding the current UST complex (A-4 and OB-1) were non-detect for MTBE and TBA.

The existing UST pit is approximately 17 feet northeast of monitoring well A-16 and the proposed UST basin will be approximately 30 feet southwest of monitoring well A-16. Based on the construction plans, groundwater may be encountered during the removal of the existing USTs and the installation of the proposed USTs. Although MTBE and TBA were detected above screening levels in monitoring well A-16 in 2008, the natural attenuation at A-16, as evidenced by the steady decrease in MTBE from 610 micrograms per liter (ug/L) in 2001 to 9.6 ug/L in 2008, has likely continued. Additionally, the same logic can be applied to the TBA detections observed in this well. Groundwater encountered and removed during the removal of the existing USTs and the installation of the proposed USTs is not likely to exceed the *Groundwater Tier 1 ESLs* that would warrant treatment and special disposal requirements. However, if groundwater is encountered during these activities, waste characterization samples will be collected and the groundwater will be properly stored and disposed and/or removed from the site.

SOIL

Historical soil investigations have been conducted in proximity of the existing product piping and dispensers, existing product USTs, existing waste oil tank, former waste oil piping, former oil-water separator and clarifier sump, and the parking lot north of the existing station building. **Figures 4A and 4B** show the locations of historical soil investigations at the site. Please refer to **Table 2** for a summary of historical soil analytical data.

Soil samples were collected below the product dispensers and associated piping in 2003 (**URS, 2003b**). Eight soil samples were collected from below the product dispensers at a depth of 3 feet bgs (D-1 through D-8), and four soil samples were collected from below the product dispensers at a depth of 8 feet bgs (D-9 through D-12). Nine soil samples were collected from below the product piping at a depth of 3 feet bgs (P-1 through P-9). Of the 21 soil samples collected below the product dispensers and associated piping:

- Eighteen (18) soil samples had reported concentrations of hydrocarbon contaminants above the CRWQCB – SFBR *ESL – Soil Tier 1*;
- Two (2) soil samples (D-8 at 3 feet bgs and D-12 at 8 feet bgs) had reported concentrations of ethylbenzene above the CRWQCB – SFBR*'s ESL* for *Direct Exposure Human Health Risk Levels, Commercial/Industrial: Shallow Soil Exposure*; and
- One (1) soil sample (D-12 at 8 feet bgs) had a reported concentration of Total Petroleum Hydrocarbons as gasoline (TPH-g) above the CRWQCB – SFBR*'s ESL* for *Direct Exposure Human Health Risk Levels, Any Land Use / Any Depth Soil Exposure: Construction Worker*.

The soil samples noted above were collected in the area of the proposed UST complex and dispenser island locations; therefore, residual contamination that could potentially be encountered in these locations will be removed during the construction process.

Prior to the UST replacement in 1985, soil samples were collected immediately adjacent to the former USTs at varying depths between 15 and 20 feet bgs (A-1 through A-3). Two soil samples, A-1 and A-2, collected from 15 feet bgs along the southern and eastern sides of the former USTs, had reported concentrations of TPH-g, benzene, toluene, and total xylenes above at least one CRWQCB – SFBR *ESL.* Available documentation indicated that the UST replacement excavation was over-excavated by an unknown volume to include contaminated soil removal; however, no confirmation soil samples were collected. Additional soil samples were collected around the existing USTs in 2001 and 2002 (**URS, 2003a**). One soil sample was collected from boring B-3 at a depth of 4.5 feet bgs, and three soil samples were collected per boring in CPT-1, CPT-2, and A-16 at various depths between 10 to 43 feet bgs. Soil samples from A-16 at 10 feet bgs, B-3 at 4.5 feet bgs, and CPT-2 at 11 feet bgs had reported concentrations of MTBE above the CRWQCB – SFBR*'s Soil Tier 1 ESL*. The localized contamination in the vicinity of A1, A2, B-3 and CPT-2 will most likely be removed during the removal the USTs as part of the construction plans.

Two soil samples, V-1 and V-2, were collected below the existing waste oil tank piping in 2003, at depths of 3 feet bgs and 2.5 feet bgs, respectively (**URS, 2003b**). The soil samples from V-1 and V-2 had detections of total xylenes above the CWBSFBRWQCB's *Soil Tier 1 ESL*. Based on the construction plans, the soil around the former waste oil tank piping may be encountered. If encountered, contaminated soil around the waste oil tank will be excavated during the waste oil tank removal and/or site regrading.

A total of 25 soil samples were collected at on-site locations north of the existing station building and existing waste oil tank from July 2001 to October 2002 (**URS, 2003a**). These soil samples were collected from borings CPT-3 through CPT-8 and A-12 through A-15 at depths ranging from 10 to 47 feet bgs. Seven of these soil samples had

detections of MTBE above the *CWBSFBRWQCB's Soil Tier 1 ESL*. Construction plans indicate that this area will be re-graded to approximately 2.5 feet bgs. Soil with residual concentrations in this area is unlikely to be encountered during the construction of the proposed station building and carwash. However, as evidenced by the groundwater concentrations in this area, the residual soil contamination below the average depth to groundwater has attenuated to concentrations below *ESLs.*

As noted above, any areas with residual localized soil contamination that will be encountered as part of the construction plans will be excavated and removed. However, if evidence of contamination is encountered (i.e.: sheen, staining, odor, or elevated photoionization detector (PID) readings), contaminated soil will be segregated into a separate stockpile. Suspected contaminated stockpiles will be placed on and covered with plastic sheeting and the perimeter will be lined with sand bags to prevent cross contamination. Waste characterization samples will be collected and the stockpile will be disposed of at an appropriate BP approved facility. If waste characterization samples indicate concentrations above *CWBSFBRWQCB's Soil Tier 1 ESL, CRWQCB-SFBR* will be notified and the appropriate measures taken.

CONCLUSION

Based on the construction plans and the historical site data available for review, residual concentrations of contaminants may be encountered in soil and groundwater. Soil with any residual concentration of contaminants at the Site will be removed if encountered, or remain undisturbed if it is not encountered. In addition, this site meets the Low-Threat UST Case Closure Policy implemented in 2012. In order to meet this policy, the site must satisfy the following criteria:

A. The unauthorized release is located within the service area of a public water system;
B. The unauthorized release consists of only petroleum;
C. The unauthorized ("primary") release form the UST system has been stopped;
D. Free product has been removed to the maximum extent practicable;
E. A conceptual site model that assesses the nature, extent, and mobility of the release has been developed;
F. Secondary source has been removed to the extent practicable;
G. Soil or groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code section 25296.15; and
H. Nuisance as defined by Water Code section 13050 does not exist at the site.

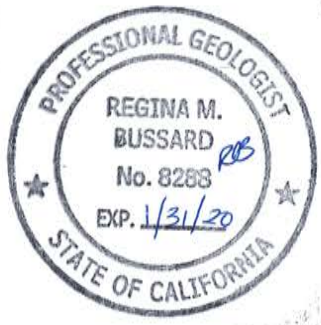
The site has met all the criteria from A through F, and H. For criteria G, soil collected from 0 to 10 bgs did not have concentrations of MTBE that exceeded CRWQCB – SFBR*'s ESL* for *Direct Exposure Human Health Risk Levels, Any Land Use / Any Depth Soil Exposure: Construction Worker.* Concentrations of MTBE in groundwater has most likely attenuated to below *Groundwater Tier 1 ESLs* following hydrogen peroxide injection remediation events conducted

in 2003 as evidence by the steady decrease in MTBE from 610 micrograms per liter (ug/L) in 2001 to 9.6 ug/L in 2008 in monitoring well A-16. Because the site meets the Low-Threat UST Case Closure Policy, it is unlikely that any residual concentrations that may be encountered will warrant special treatment or disposal requirements.

Please contact Mackie Stock or Regina Bussard if you need additional information regarding the Hazardous Materials Study for ARCO Service Station No. 2187.

Sincerely,

Tony Banks
Staff Professional
Antea Group



Reviewed by:

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Antea Group

REFERENCES

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Enclosure

Tables

Figures

Tables

TABLE 1
MOST RECENT GROUNDWATER GAUGING AND ANALYTICAL DATA
ARCO SERVICE STATION No. 2187
2375 QUIMBY ROAD
SAN JOSE, CA

			GROUNDWATER ELEVATION DATA				GROUNDWATER ANALYTICAL DATA												
Well I.D.	Date	Notes	TOC Elevation (ft)	Water Level Depth (ft)	Measured SPH Thickness (ft)	Calculated Water Level Elevation (ft-MSL)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylene (Total) (ug/L)	MTBE (ug/L)	TBA (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	Ethanol (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Comments
Tier 1 ESL: Groundwater							100	1.0	40	13	20	5.0	12	--	--	--	--	0.5	0.05	
A-4	9/2/2008	MD	144.99	14.70	0.00	130.29	--	--	--	--	--	--	--	--	--	--	--	--	--	On-site Well
	9/3/2008			--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	
A-5	9/2/2008	MD	144.94	14.83	0.00	130.11	--	--	--	--	--	--	--	--	--	--	--	--	--	On-site Well
	9/3/2008			--	--	--	<50	<0.50	<0.50	<0.50	<0.50	0.54	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	
A-6	6/2/2008		144.24	13.53	0.00	130.71	--	--	--	--	--	--	--	--	--	--	--	--	--	On-site Well
	6/3/2008			--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	
A-7	6/3/2004		144.16	14.02	0.00	130.14	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<100	<0.50	<0.50	On-site Well
A-8	6/2/2008		144.26	13.48	0.00	130.77	--	--	--	--	--	--	--	--	--	--	--	--	--	On-site Well
	6/3/2008			--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	
A-9	9/2/2008	MD	143.96	13.82	0.00	130.14	--	--	--	--	--	--	--	--	--	--	--	--	--	On-site Well
	9/3/2008			--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	
A-10	9/2/2008	MD	143.32	13.56	0.00	129.76	--	--	--	--	--	--	--	--	--	--	--	--	--	On-site Well
	9/3/2008			--	--	--	<50	<0.50	<0.50	<0.50	<0.50	1.1	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	
A-11	9/2/2008	MD	144.26	14.56	0.00	129.70	--	--	--	--	--	--	--	--	--	--	--	--	--	On-site Well
	9/3/2008			--	--	--	<50	<0.50	<0.50	<0.50	<0.50	**7.5**	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	
A-12	9/2/2008	MD, NP	143.98	14.28	0.00	129.70	--	--	--	--	--	--	--	--	--	--	--	--	--	On-site Well
	9/3/2008			--	--	--	<50	<0.50	<0.50	<0.50	<0.50	2.4	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	
A-13	9/2/2008	MD, NP	144.81	15.27	0.00	129.54	--	--	--	--	--	--	--	--	--	--	--	--	--	On-site Well
	9/3/2008			--	--	--	<50	<0.50	<0.50	<0.50	<0.50	1.8	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	
A-14	6/2/2008	NP	144.27	14.40	0.00	129.87	<50	<0.50	<0.50	<0.50	<0.50	1.2	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	On-site Well
A-15	6/2/2008	NP	143.76	14.15	0.00	129.61	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	On-site Well
A-16	9/2/2008	MD, NP	144.96	14.33	0.00	130.63	--	--	--	--	--	--	--	--	--	--	--	--	--	On-site Well
	9/3/2008			--	--	--	<50	<0.50	<0.50	<0.50	<0.50	**9.6**	**16**	<0.50	<0.50	<0.50	<300	<0.50	<0.50	
A-17A	6/2/2008		139.78	10.6	0.00	129.18	--	--	--	--	--	--	--	--	--	--	--	--	--	Off-site Well
	6/3/2008			--	--	--	<50	<0.50	<0.50	<0.50	<0.50	**7.5**	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	
A-17B	6/2/2008		139.78	10.17	0.00	129.61	--	--	--	--	--	--	--	--	--	--	--	--	--	Off-site Well
	6/3/2008			--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	
A-18A	6/2/2008		143.53	13.56	0.00	129.97	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	Off-site Well
A-18B	6/2/2008		143.32	13.33	0.00	129.99	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	Off-site Well
A-19A	3/28/2007		141.97	13.28	0.00	128.69	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<300	<0.50	<0.50	Off-site Well
A-19B	6/2/2008		142.39	12.30	0.00	130.09	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	Off-site Well
A-20A	6/2/2008		143.73	14.40	0.00	129.33	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	Off-site Well

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Well I.D.	Date	Notes	TOC Elevation (ft)	Water Level Depth (ft)	Measured SPH Thickness (ft)	Calculated Water Level Elevation (ft-MSL)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylene (Total) (ug/L)	MTBE (ug/L)	TBA (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	Ethanol (ug/L)	1,2-DCA (ug/L)	EDB (ug/L)	Comments
Tier 1 ESL: Groundwater							**100**	**1.0**	**40**	**13**	**20**	**5.0**	**12**	**--**	**--**	**--**	**--**	**0.5**	**0.05**	
A-20B	6/2/2008		143.82	14.02	0.00	129.80	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<0.50	<0.50	<0.50	<300	<0.50	<0.50	Off-site Well
OB-1	6/25/2007		144.53	13.99	0.00	130.54	--	--	--	--	--	--	--	--	--	--	--	--	--	On-site Well
	6/26/2007	NP		--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<20	<0.50	<0.50	<0.50	<300	<0.50	<0.50	
OB-2	9/2/2008	DRY, NSP	144.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	On-site Well

Notes:
ft bgs = feet below ground surface
ft MSL = feet above mean sea level
ug/L = Micrograms per kilogram
SPH = Separate-phase hydrocarbons
TOC = Top of casing (surveyed)
GRO = Gasoline range organics
MTBE = Methyl tert-butyl ether
TBA = Tert-butyl alcohol
DIPE = Di-isopropyl ether
ETBE = Ethyl tert-butyl ether
TAME = Tert-amyl methyl ether
1,2-DCA = 1,2-Dichloroethane
EDB = 1,2-Dibromoethane
MD = Sampling & gauging preformed over multiple days during this event
NP = Well not purged prior to sampling
DRY = Well dry during gauging or purging; not sampled
NSP = Well not sampled this event, in accordance with groundwater sampling schedule
Tier 1 ESL = San Francisco Bay Regional Water Quality Control Board Tier 1 Environmental Screening Levels- Groundwater
Bold Text = Concentration is greater than the SFBRWQCB Tier 1 ESL

TABLE 2
HISTORICAL ANALYTICAL SOIL DATA
ARCO SERVICE STATION No. 2187
2375 QUIMBY ROAD
SAN JOSE, CA

Field Point Name	Sample Depth (ft below grade)	Date	TPH-g (mg/kg)	TPH-m (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (Total) (mg/kg)	Methyl-tertiary-butyl ether (mg/kg)	Lead Total (mg/kg)	Cadmium (mg/kg)	Total Chromium (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)
SFBRWQCB ESLs	Tier 1 ESL: Soil		**100**	**5,100**	**0.044**	**2.9**	**1.4**	**2.3**	**0.023**	**80**	**39**	**--**	**86**	**23,000**
	Commercial/Industrial: Shallow Soil Exposure		**3,900**	**140,000**	**1.0**	**4,600**	**22**	**2,400**	**180**	**320**	**580**	**--**	**11,000**	**350,000**
	Any Land Use / Any Depth Soil Exposure: Construction Worker		**2,800**	**32,000**	**24**	**4,100**	**480**	**2,400**	**3,700**	**160**	**43**	**--**	**86**	**110,000**
Soil Borings														
A-1	15	3/1/1985	**6,800 T1, SSE, CW**	--	**55 T1, SSE, CW**	**200 T1**	--	**1000 T1**	--	--	--	--	--	--
A-1	20	3/1/1985	50	--	**0.7 T1**	0.5	--	**10 T1**	--	--	--	--	--	--
A-2	15	3/1/1985	**1800 T1**	--	**6.3 T1, SSE**	**19 T1**	--	**180 T1**	--	--	--	--	--	--
A-2	20	3/1/1985	24	--	**0.9 T1**	0.2	--	**4.0 T1**	--	--	--	--	--	--
A-3	15	3/1/1985	17	--	**0.6 T1**	0.1	--	**2.5 T1**	--	--	--	--	--	--
A-3	20	3/1/1985	1	--	<1.0	0.1	--	<0.4	--	--	--	--	--	--
B-1	3.5	3/30/2001	0.0149	--	0.0152	0.0074	0.0297	<0.050	*<0.100*	21	--	--	--	--
B-2	3.5	3/30/2001	<0.0250	--	<0.0250	<0.0250	<0.0250	<0.250	**0.133 T1**	**127* T1**	--	--	--	--
B-3	4.5	3/30/2001	0.0059	--	0.0055	<0.0050	0.0087	0.103	**0.181 T1**	<25.0	--	--	--	--
B-4	3.5	3/30/2001	<0.0050	--	<0.0050	<0.0050	<0.0050	<0.050	*<0.100*	<25.0	--	--	--	--
CPT-1	11	10/4/2002	<2.1	--	<0.021	<0.021	<0.021	<0.021	<0.021	--	--	--	--	--
CPT-1	22	10/4/2002	<2.0	--	<0.020	<0.020	<0.020	<0.020	<0.020	--	--	--	--	--
CPT-1	43	10/4/2002	<2.1	--	<0.021	<0.021	<0.021	<0.021	<0.021	--	--	--	--	--
CPT-2	11	10/4/2002	<2.2	--	<0.022	<0.022	<0.022	<0.022	**1.5 T1**	--	--	--	--	--
CPT-2	30	10/4/2002	<1.6	--	<0.016	<0.016	<0.016	<0.016	0.016	--	--	--	--	--
CPT-2	43	10/4/2002	<2.0	--	<0.020	<0.020	<0.020	<0.020	<0.020	--	--	--	--	--
CPT-3	11	10/3/2002	<1.5	--	<0.015	<0.015	<0.015	<0.015	**0.14 T1**	--	--	--	--	--
CPT-3	22	10/3/2002	<1.8	--	<0.018	<0.018	<0.018	<0.018	**0.027 T1**	--	--	--	--	--
CPT-3	43	10/3/2002	<1.4	--	<0.014	<0.014	<0.014	<0.014	<0.014	--	--	--	--	--
CPT-4	11	10/2/2002	<1.6	--	<0.016	<0.016	<0.016	<0.016	<0.016	--	--	--	--	--
CPT-4	22	10/2/2002	<1.6	--	<0.016	<0.016	<0.016	<0.016	<0.016	--	--	--	--	--
CPT-4	43	10/2/2002	<2.0	--	<0.020	<0.020	<0.020	<0.020	<0.020	--	--	--	--	--
CPT-5	11	10/2/2002	<1.5	--	<0.015	<0.015	<0.015	<0.015	**0.024 T1**	--	--	--	--	--
CPT-5	22	10/2/2002	<1.4	--	<0.014	<0.014	<0.014	<0.014	<0.014	--	--	--	--	--
CPT-5	47	10/2/2002	<1.3	--	<0.013	<0.013	<0.013	<0.013	<0.013	--	--	--	--	--
CPT-6	11	10/3/2002	<2.0	--	<0.020	<0.020	<0.020	<0.020	<0.020	--	--	--	--	--
CPT-6	22	10/3/2002	<1.5	--	<0.015	<0.015	<0.015	<0.015	**0.053 T1**	--	--	--	--	--
CPT-6	43	10/3/2002	<2.1	--	<0.021	<0.021	<0.021	<0.021	<0.021	--	--	--	--	--
CPT-7	11	10/4/2002	<0.78	--	<0.0078	<0.0078	<0.0078	<0.0078	<0.0078	--	--	--	--	--
CPT-7	20	10/4/2002	<2.3	--	<0.023	<0.023	<0.023	<0.023	<0.023	--	--	--	--	--
CPT-7	40	10/4/2002	<2.0	--	<0.020	<0.020	<0.020	<0.020	<0.020	--	--	--	--	--
CPT-8	11	10/3/2002	<1.4	--	<0.014	<0.014	<0.014	<0.014	<0.014	--	--	--	--	--
CPT-8	22	10/3/2002	<1.4	--	<0.014	<0.014	<0.014	<0.014	<0.014	--	--	--	--	--
CPT-8	43	10/3/2002	<1.4	--	<0.014	<0.014	<0.014	<0.014	<0.014	--	--	--	--	--
CPT-9	11	10/3/2002	<2.1	--	<0.021	<0.021	<0.021	<0.021	<0.021	--	--	--	--	--
CPT-9	22	10/3/2002	<1.7	--	<0.017	<0.017	<0.017	<0.017	<0.017	--	--	--	--	--
CPT-9	43	10/3/2002	<1.7	--	<0.017	<0.017	<0.017	<0.017	<0.017	--	--	--	--	--

TABLE 2
HISTORICAL ANALYTICAL SOIL DATA
ARCO SERVICE STATION No. 2187
2375 QUIMBY ROAD
SAN JOSE, CA

Field Point Name	Sample Depth (ft below grade)	Date	TPH-g (mg/kg)	TPH-m (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (Total) (mg/kg)	Methyl-tertiary-butyl ether (mg/kg)	Lead Total (mg/kg)	Cadmium (mg/kg)	Total Chromium (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)
SFBRWQCB ESLs	Tier 1 ESL: Soil		**100**	**5,100**	**0.044**	**2.9**	**1.4**	**2.3**	**0.023**	**80**	**39**	**--**	**86**	**23,000**
	Commercial/Industrial: Shallow Soil Exposure		**3,900**	**140,000**	**1.0**	**4,600**	**22**	**2,400**	**180**	**320**	**580**	**--**	**11,000**	**350,000**
	Any Land Use / Any Depth Soil Exposure: Construction Worker		**2,800**	**32,000**	**24**	**4,100**	**480**	**2,400**	**3,700**	**160**	**43**	**--**	**86**	**110,000**
Monitoring Wells														
A-12	10	7/23/2001	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.1	5.2	--	--	--	--
A-13	10	7/23/2001	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.1	6.3	--	--	--	--
A-14	10	7/23/2001	<1.0	--	<0.005	<0.005	<0.005	<0.005	**4.3 T1**	8.6	--	--	--	--
A-14	14	7/23/2001	<1.0	--	<0.005	<0.005	<0.005	<0.005	**3.3 T1**	--	--	--	--	--
A-14	20	7/23/2001	<1.0	--	<0.005	<0.005	<0.005	<0.005	**2.3 T1**	--	--	--	--	--
A-15	10	7/24/2001	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.1	7.6	--	--	--	--
A-16	10	7/24/2001	2.2	--	0.0097	<0.005	0.0069	0.0058	**0.41 T1**	6.6	--	--	--	--
A-16	14	7/24/2001	3.1	--	<0.005	<0.005	0.0082	0.0061	<0.1	--	--	--	--	--
A-16	20	7/24/2001	<1.0	--	<0.005	<0.005	<0.005	<0.005	<0.1	--	--	--	--	--
A-17B (A-17)	4.5	10/11/2002	<1.6	--	<0.016	<0.016	<0.016	<0.016	<0.016	--	--	--	--	--
A-17B (A-17)	9.5	10/11/2002	<2.0	--	<0.020	<0.020	<0.020	<0.020	<0.020	--	--	--	--	--
A-18B (A-19)	6	10/14/2002	<1.9	--	<0.019	<0.019	<0.019	<0.019	<0.019	--	--	--	--	--
A-18B (A-19)	10	10/14/2002	<1.9	--	<0.019	<0.019	<0.019	<0.019	<0.019	--	--	--	--	--
A-19B (A-20)	5.5	10/10/2017	<1.3	--	<0.013	<0.013	<0.013	<0.013	<0.013	--	--	--	--	--
A-19B (A-20)	9.5	10/10/2017	<1.4	--	<0.014	<0.014	<0.014	<0.014	<0.014	--	--	--	--	--
A-20B (A-22)	5.5	10/9/2002	<1.8	--	<0.018	<0.018	<0.018	<0.018	<0.018	--	--	--	--	--
A-20B (A-22)	9.5	10/9/2017	<2.1	--	<0.021	<0.021	<0.021	<0.021	<0.021	--	--	--	--	--

TABLE 2
HISTORICAL ANALYTICAL SOIL DATA
ARCO SERVICE STATION No. 2187
2375 QUIMBY ROAD
SAN JOSE, CA

Field Point Name	Sample Depth (ft below grade)	Date	TPH-g (mg/kg)	TPH-m (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (Total) (mg/kg)	Methyl-tertiary-butyl ether (mg/kg)	Lead Total (mg/kg)	Cadmium (mg/kg)	Total Chromium (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)
SFBRWQCB ESLs	Tier 1 ESL: Soil		**100**	**5,100**	**0.044**	**2.9**	**1.4**	**2.3**	**0.023**	**80**	**39**	**--**	**86**	**23,000**
	Commercial/Industrial: Shallow Soil Exposure		**3,900**	**140,000**	**1.0**	**4,600**	**22**	**2,400**	**180**	**320**	**580**	**--**	**11,000**	**350,000**
	Any Land Use / Any Depth Soil Exposure: Construction Worker		**2,800**	**32,000**	**24**	**4,100**	**480**	**2,400**	**3,700**	**160**	**43**	**--**	**86**	**110,000**
Product Line / Dispenser														
D-1	3	3/7/2003	52	--	*<0.050*	0.088	0.29	**2.5 T1**	**0.67 T1**	18	--	--	--	--
D-2	3	3/7/2003	8.0	--	*<0.050*	<0.050	0.086	0.36	**0.20 T1**	16	--	--	--	--
D-3	3	3/7/2003	6.6	--	*<0.050*	<0.050	0.15	0.58	**0.078 T1**	11	--	--	--	--
D-4	3	3/7/2003	**440 T1**	--	*<1.0*	<1.0	**6.9 T1**	**30 T1**	*<0.50*	<10	--	--	--	--
D-5	3	3/7/2003	**110 T1**	--	*<0.50*	<0.50	**1.8 T1**	**5.3 T1**	*<0.25*	<10	--	--	--	--
D-6	3	3/7/2003	80	--	*<0.050*	<0.050	**1.4 T1**	**5.4 T1**	**0.044 T1**	39	--	--	--	--
D-7	3	3/7/2003	**380 T1**	--	*<0.50*	<0.50	**9 T1**	**45 T1**	*<0.25*	26	--	--	--	--
D-8	3	3/7/2003	**1500 T1**	--	*<5.0*	*<5.0*	**29 T1, SSE**	**220 T1**	*<2.5*	47	--	--	--	--
D-9	8	3/7/2003	<5.0	--	*<0.050*	<0.050	<0.050	0.11	**0.30 T1**	<10	--	--	--	--
D-10	8	3/7/2003	20	--	*<0.050*	<0.050	0.30	1.0	**0.19 T1**	18	--	--	--	--
D-11	8	3/7/2003	*<500*	--	*<5.0*	*<5.0*	*<5.0*	**20 T1**	*<2.5*	12	--	--	--	--
D-12	8	3/7/2003	**3400 T1, CW**	--	*<5.0*	*<5.0*	**57 T1, SSE**	**330 T1**	*<2.5*	13	--	--	--	--
P-1	3	3/7/2003	8.9	--	*<0.050*	<0.050	0.076	0.49	**1.3 T1**	11	--	--	--	--
P-2	3	3/7/2003	**220 T1**	--	*<0.50*	<0.50	**3.7 T1**	**16 T1**	*<0.25*	16	--	--	--	--
P-3	3	3/7/2003	8.5	--	*<0.050*	<0.050	0.30	0.13	**0.051 T1**	30	--	--	--	--
P-4	3	3/7/2003	<5.0	--	*<0.050*	<0.050	<0.050	0.11	*<0.025*	16	--	--	--	--
P-5	3	3/7/2003	**860 T1**	--	*<1.0*	<1.0	**15 T1**	**59 T1**	*<0.50*	32	--	--	--	--
P-6	3	3/7/2003	9.3	--	*<0.050*	<0.050	0.73	0.076	**0.099 T1**	13	--	--	--	--
P-7	3	3/7/2003	<5.0	--	*<0.050*	<0.050	<0.050	<0.050	**0.061 T1**	31	--	--	--	--
P-8	3	3/7/2003	<5.0	--	*<0.050*	<0.050	<0.050	<0.050	*<0.025*	9.5	--	--	--	--
P-9	3	3/7/2003	<5.0	--	*<0.050*	<0.050	<0.050	<0.050	*<0.025*	10	--	--	--	--

TABLE 2
HISTORICAL ANALYTICAL SOIL DATA
ARCO SERVICE STATION No. 2187
2375 QUIMBY ROAD
SAN JOSE, CA

Field Point Name	Sample Depth (ft below grade)	Date	TPH-g (mg/kg)	TPH-m (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (Total) (mg/kg)	Methyl-tertiary-butyl ether (mg/kg)	Lead Total (mg/kg)	Cadmium (mg/kg)	Total Chromium (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)
SFBRWQCB ESLs	Tier 1 ESL: Soil		**100**	**5,100**	**0.044**	**2.9**	**1.4**	**2.3**	**0.023**	**80**	**39**	**--**	**86**	**23,000**
	Commercial/Industrial: Shallow Soil Exposure		**3,900**	**140,000**	**1.0**	**4,600**	**22**	**2,400**	**180**	**320**	**580**	**--**	**11,000**	**350,000**
	Any Land Use / Any Depth Soil Exposure: Construction Worker		**2,800**	**32,000**	**24**	**4,100**	**480**	**2,400**	**3,700**	**160**	**43**	**--**	**86**	**110,000**
Oil/Water Seperator														
SB1-0	0***	4/4/1992	--	**9,900 T1**	--	0.69	**1.4 T1**	**11 T1**	--	--	--	--	--	--
SB1-2	2***	4/4/1992	--	**8,000 T1**	--	<0.10	<0.10	<0.10	--	--	--	--	--	--
SB1-5	5***	4/4/1992	--	<10	--	<0.10	<0.10	<0.10	--	--	--	--	--	--

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ARCO SERVICE STATION No. 2187
2375 QUIMBY ROAD
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Field Point Name	Sample Depth (ft below grade)	Date	TPH-g (mg/kg)	TPH-m (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (Total) (mg/kg)	Methyl-tertiary-butyl ether (mg/kg)	Lead Total (mg/kg)	Cadmium (mg/kg)	Total Chromium (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)
SFBRWQCB ESLs	Tier 1 ESL: Soil		**100**	**5,100**	**0.044**	**2.9**	**1.4**	**2.3**	**0.023**	**80**	**39**	**--**	**86**	**23,000**
	Commercial/Industrial: Shallow Soil Exposure		**3,900**	**140,000**	**1.0**	**4,600**	**22**	**2,400**	**180**	**320**	**580**	**--**	**11,000**	**350,000**
	Any Land Use / Any Depth Soil Exposure: Construction Worker		**2,800**	**32,000**	**24**	**4,100**	**480**	**2,400**	**3,700**	**160**	**43**	**--**	**86**	**110,000**
Waste Oil Piping														
V-1	3	3/24/2003	--	1,700	*<0.1*	<0.1	0.60	**2.3 T1**	*<0.050*	53	0.46	44	64	530
V-2	2.5	3/24/2003	--	4,600	*<0.1*	<0.1	**1.4 T1**	**6.5 T1**	*<0.050*	29	<0.20	46	64	66

Figures

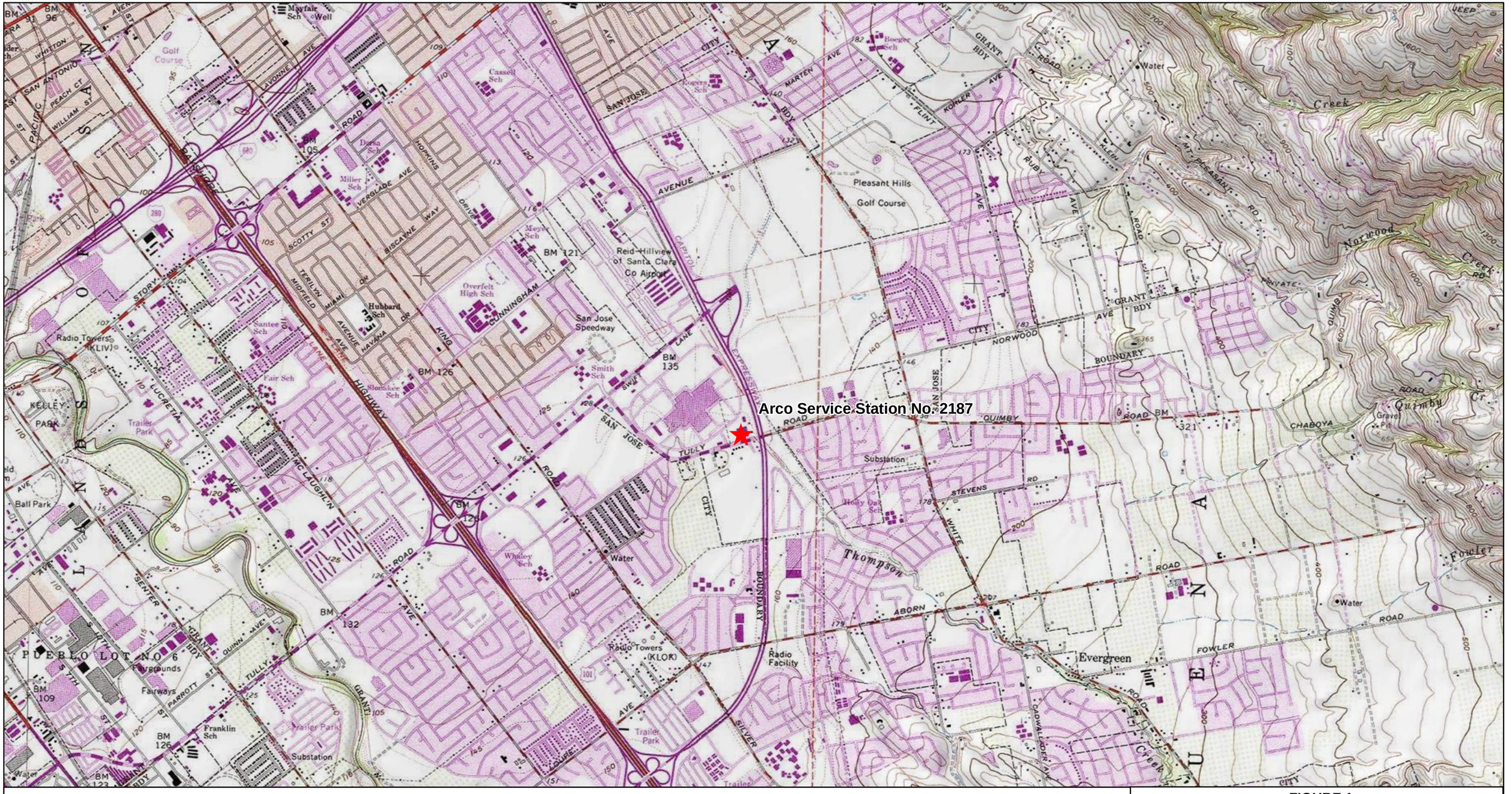

FIGURE 1

Site Location Map
Arco Service Station No. 2187
2375 Quimby Road
San Jose, California

PROJECT NO.	PREPARED BY	REF SCALE	
BPENVSMPSJ	*SAA*	*1:24,000*	antea group
DATE	REVIEWED BY	MAP SCALE	
11/9/2017		*1 inch = 2,000 feet*	

\\gis-s3\GIS_Data\Sandbox\!Projects\A-E\BP_CA\2187\Project Number\Layout\Fig 1- Site Location Map.mxd

Legend

- Boring Location
- Over-Excavation Soil Sampling Location
- Fuel Line Sampling Location
- Fuel Dispenser/Sump Sampling Location
- Soil Boring
- Vent Line at Waste Oil Tank
- Former Monitoring Well Location
- Product Line
- Return Vapor Line
- Approximate Location of Proposed Station Building
- Approximate Location of Proposed Product Dispensers and Piping
- Approximate Location of Proposed USTs
- Existing USTs
- Existing Buildings

N

0 10 20 40 60 80 Feet

FIGURE 2

Site Plan with Approximate Location of Proposed Construction
Arco Service Station No. 2187
2375 Quimby Road
San Jose, California

PROJECT NO.	PREPARED BY	REF SCALE
BPENVSMPSJ	SAA/JH	1:480
DATE	REVIEWED BY	MAP SCALE
1/18/2018		1 inch = 40 feet

antea group

\\gis-s3\GIS_Data\Sandbox\!Projects\A-E\BP_CA\2187\Project Number\Layout\Fig 2- Site Plan.mxd

A-19A 3/28/2007	
WLD:	13.28
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	<0.50
TBA:	<20

A-19B 6/2/2008	
WLD:	12.30
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	<0.50
TBA:	<10

A-17B 6/2-6/3/2008	
WLD:	10.17
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	<0.50
TBA:	<10

A-17A 6/2-6/3/2008	
WLD:	10.6
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	**7.5**
TBA:	<10

A-14 6/2/2008	
WLD:	14.40
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	1.2
TBA:	<10

A-13 9/2-9/3/2008	
WLD:	15.27
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	1.8
TBA:	<10

A-20A 6/2/2008	
WLD:	14.40
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	<0.50
TBA:	<10

A-11 9/2-9/3/2008	
WLD:	14.56
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	**7.5**
TBA:	<10

A-20B 6/2/2008	
WLD:	14.02
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	<0.50
TBA:	<10

A-5 9/2-9/3/2008	
WLD:	14.83
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	0.54
TBA:	<10

A-12 9/2-9/3/2008	
WLD:	14.28
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	2.4
TBA:	<10

A-15 6/2/2008	
WLD:	14.15
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	<0.50
TBA:	<10

A-10 9/2-9/3/2008	
WLD:	13.56
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	1.1
TBA:	<10

OB-1 6/25-6/26/2007	
WLD:	13.99
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	<0.50
TBA:	<20

A-18B 6/2/2008	
WLD:	13.33
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	<0.50
TBA:	<10

A-18A 6/2/2008	
WLD:	13.56
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	<0.50
TBA:	<10

A-9 9/2-9/3/2008	
WLD:	13.82
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	<0.50
TBA:	<10

A-4 9/2-9/3/2008	
WLD:	14.70
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	<0.50
TBA:	<10

OB-2 9/2/2008	
WLD:	DRY
GRO:	--
B:	--
E:	--
MTBE:	--
TBA:	--

A-6 6/2-6/3/2008	
WLD:	13.53
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	<0.50
TBA:	<10

A-8 6/2-6/3/2008	
WLD:	13.48
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	<0.50
TBA:	<10

A-7 6/3/2004	
WLD:	14.02
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	<0.50
TBA:	<20

A-16 9/2-9/3/2008	
WLD:	14.33
GRO:	<50
B:	<0.50
E:	<0.50
MTBE:	**9.6**
TBA:	**16**

Capitol Expressway

Quimby Road

Station Building

Canopy

Existing USTs

Waste Oil Tank

Legend

- Boring Location
- Over-Excavation Soil Sampling Location
- Fuel Line Sampling Location
- Fuel Dispenser/Sump Sampling Location
- Soil Boring
- Vent Line at Waste Oil Tank
- Former Monitoring Well Location
- Product Line
- Return Vapor Line
- Approximate Location of Proposed Station Building
- Approximate Location of Proposed Product Dispensers and Piping
- Approximate Location of Proposed USTs
- Existing USTs
- Existing Buildings
- Exceeds Detection Limit

Table Legend:

WLD: Water Level Depth in feet below ground surface
GRO: Gasoline Range Organics
B: Benzene
E: Ethylbenzene
MTBE: Methyl Tertiary Butyl Ether
TBA: Tertiary Butyl Alcohol
<: Less than laboratory reporting limits

Concentrations in micrograms per liter (µg/L).

Notes:

SFBRWQCB: San Francisco Bay Region Water Quality Control Board Concentration

BOLD: exceeds SFBRWQCB Tier 1 Environmental Screening Level (ESL): Groundwater

N

0 10 20 40 60 80 Feet

FIGURE 3

Site Plan with Approximate Location of Proposed Construction and Groundwater Analytical Data- Most Recent Groundwater Analytical Data
Arco Service Station No. 2187
2375 Quimby Road
San Jose, California

PROJECT NO.	PREPARED BY	REF SCALE	antea group
BPENVSMPSJ	*SAA*	*1:480*	
DATE	REVIEWED BY	MAP SCALE	
1/18/2018		*1 inch = 40 feet*	

\\gis-s3\GIS_Data\Sandbox\!Projects\A-E\BP_CA\2187\Project Number\Layout\Fig 3- GW Analytical_ed.mxd

SB-1 4/4/1992			
Dp***:	0	2	5
TPH-m:	**9900 T1**	**8100 T1**	<10
B:	--	--	--
E:	**1.4 T1**	<0.10	<0.10
MTBE:	--	--	--

B-2 3/30/2001	
Dp:	3.5
TPH-g:	<0.0250
B:	<0.0250
E:	<0.0250
MTBE:	**0.133 T1**

A-16 7/24/2001			
Dp:	10	14	20
TPH-g:	2.2	3.1	<1.0
B:	0.0097	<0.005	<0.005
E:	0.0069	0.0082	<0.005
MTBE:	**0.41 T1**	<0.1	<0.1

A-3 3/1/1985		
Dp:	**15**	20
TPH-g:	**17**	**1**
B:	**0.6 T1**	<1.0
E:	--	--
MTBE:	--	--

P-9 3/7/2003	
Dp:	3
TPH-g:	<5.0
B:	*<0.050*
E:	<0.050
MTBE:	*<0.025*

A-2 3/1/1985		
Dp:	15	20
TPH-g:	**1800 T1**	**24**
B:	**6.3T1,SSE**	**0.9 T1**
E:	--	--
MTBE:	--	--

D-7 3/7/2003	
Dp:	3
TPH-g:	**380 T1**
B:	*<0.50*
E:	**9 T1**
MTBE:	*<0.25*

P-6 3/7/2003	
Dp:	3
TPH-g:	9.3
B:	*<0.050*
E:	0.73
MTBE:	**0.099 T1**

D-12 3/7/2003	
Dp:	8
TPH-g:	**3400 T1,CW**
B:	*<5.0*
E:	**57 T1,SSE**
MTBE:	*<2.5*

D-8 3/7/2003	
Dp:	3
TPH-g:	**1500 T1**
B:	*<5.0*
E:	**29 T1,SSE**
MTBE:	*<2.5*

A-1 3/1/1985		
Dp:	15	20
TPH-g:	**6800 T1,SSE,CW**	50
B:	**55 T1,SSE,CW**	**0.7 T1**
E:	--	--
MTBE:	--	--

CPT-9 10/3/2002			
Dp:	11	22	43
TPH-g:	<2.1	<1.7	<1.7
B:	<0.021	<0.017	<0.017
E:	<0.021	<0.017	<0.017
MTBE:	<0.021	<0.017	<0.017

CPT-1 10/4/2002			
Dp:	11	22	43
TPH-g:	<2.1	<2.0	<2.1
B:	<0.021	<0.020	<0.021
E:	<0.021	<0.020	<0.021
MTBE:	<0.021	<0.020	<0.021

D-11 3/7/2003	
Dp:	8
TPH-g:	*<500*
B:	*<5.0*
E:	*<5.0*
MTBE:	*<2.5*

D-6 3/7/2003	
Dp:	3
TPH-g:	80
B:	*<0.050*
E:	**1.4 T1**
MTBE:	**0.044 T1**

P-8 3/7/2003	
Dp:	3
TPH-g:	<5.0
B:	*<0.050*
E:	<0.050
MTBE:	*<0.025*

D-5 3/7/2003	
Dp:	3
TPH-g:	**110 T1**
B:	*<0.50*
E:	**1.8 T1**
MTBE:	*<0.25*

P-5 3/7/2003	
Dp:	3
TPH-g:	**860 T1**
B:	*<1.0*
E:	**15 T1**
MTBE:	*<0.50*

P-7 3/7/2003	
Dp:	3
TPH-g:	<5.0
B:	*<0.050*
E:	<0.050
MTBE:	**0.061 T1**

D-1 3/7/2003	
Dp:	3
TPH-g:	52
B:	*<0.050*
E:	0.29
MTBE:	**0.67 T1**

B-1 3/30/2001	
Dp:	3.5
TPH-g:	0.0149
B:	0.0152
E:	0.0297
MTBE:	*<0.100*

D-9 3/7/2003	
Dp:	8
TPH-g:	<5.0
B:	*<0.050*
E:	<0.050
MTBE:	**0.30 T1**

P-1 3/7/2003	
Dp:	3
TPH-g:	8.9
B:	*<0.050*
E:	0.076
MTBE:	**1.3 T1**

D-2 3/7/2003	
Dp:	3
TPH-g:	8.0
B:	*<0.050*
E:	0.086
MTBE:	**0.20 T1**

D-3 3/7/2003	
Dp:	3
TPH-g:	6.6
B:	*<0.050*
E:	0.15
MTBE:	**0.078 T1**

D-10 3/7/2003	
Dp:	8
TPH-g:	20
B:	*<0.050*
E:	0.30
MTBE:	**0.19 T1**

D-4 3/7/2003	
Dp:	3
TPH-g:	**440 T1**
B:	*<1.0*
E:	**6.9 T1**
MTBE:	*<0.50*

P-2 3/7/2003	
Dp:	3
TPH-g:	**220 T1**
B:	*<0.50*
E:	**3.7 T1**
MTBE:	*<0.25*

P-3 3/7/2003	
Dp:	3
TPH-g:	8.5
B:	*<0.050*
E:	0.30
MTBE:	**0.051 T1**

B-4 3/30/2001	
Dp:	3.5
TPH-g:	<0.0050
B:	<0.0050
E:	<0.0050
MTBE:	*<0.100*

P-4 3/7/2003	
Dp:	3
TPH-g:	<5.0
B:	*<0.050*
E:	<0.050
MTBE:	*<0.025*

Legend

- Boring Location
- Over-Excavation Soil Sampling Location
- Fuel Line Sampling Location
- Fuel Dispenser/Sump Sampling Location
- Soil Boring
- Vent Line at Waste Oil Tank
- Former Monitoring Well Location
- Product Line
- Return Vapor Line
- Approximate Location of Proposed Station Building
- Approximate Location of Proposed Product Dispensers and Piping
- Approximate Location of Proposed USTs
- Existing USTs
- Existing Buildings
- Exceeds Detection Limit

Table Legend:

Dp: Depth in feet below ground surface
***: Depth of sample is feet below the bottom of the oil-water separator sump
TPH-g: Total Petroleum Hydrocarbons as gasoline
TPH-m: Total Petroleum Hydrocarbons as motor oil
B: Benzene
E: Ethylbenzene
MTBE: Methyl Tertiary Butyl Ether
-- : Not Sampled for Analyte
<: Less than laboratory reporting limits

Concentrations in milligrams per kilogram (mg/kg).

SFBRWQCB ESL:
BOLD:
ITALIC:
-T1:
-SSE:
-CW:

Notes:

San Francisco Bay Region Water Quality Control Board Concentration Environmental Screening Level
Detection is greater than at least SFBRQWCB ESL
Reporting limit is greater than at least one SFBRWQCB ESL exceeds SFBRWQCB's Tier 1 ESL - Soil
exceeds SFBRWQCB's Commercial/Industrial: Shallow Soil Exposure ESL
exceeds SFBRWQCB's Any Land Use / Any Depth Soil Exposure: Construction Worker ESL

N

0 4.75 9.5 19 28.5 38 Feet

FIGURE 4A

Site Plan with Approximate Location of Proposed Construction and Historical Soil Analytical Data- Southern Samples
Arco Service Station No. 2187
2375 Quimby Road
San Jose, California

PROJECT NO.	PREPARED BY	REF SCALE
BPENVSMPSJ	*SAA/JH*	*1:240*
DATE	**REVIEWED BY**	**MAP SCALE**
1/18/2018		*1 inch = 20 feet*

antea group

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A-14 7/23/2001			
Dp:	10	14	20
TPH-g:	<1.0	<1.0	<1.0
B:	<0.005	<0.005	<0.005
E:	<0.005	<0.005	<0.005
MTBE:	**4.3 T1**	**3.3 T1**	**2.3 T1**

CPT-5 10/2/2002			
Dp:	11	22	47
TPH-g:	<1.5	<1.4	<1.3
B:	<0.015	<0.014	<0.013
E:	<0.015	<0.014	<0.013
MTBE:	**0.024 T1**	<0.014	<0.013

A-13 7/23/2001	
Dp:	10
TPH-g:	<1.0
B:	<0.005
E:	<0.005
MTBE:	<0.1

CPT-6 10/3/2002			
Dp:	11	22	43
TPH-g:	<2.0	<1.5	<2.1
B:	<0.020	<0.015	<0.021
E:	<0.020	<0.015	<0.021
MTBE:	<0.020	**0.053 T1**	<0.021

CPT-4 10/2/2002			
Dp:	11	22	43
TPH-g:	<1.6	<1.6	<2.0
B:	<0.016	<0.016	<0.020
E:	<0.016	<0.016	<0.020
MTBE:	<0.016	<0.016	<0.020

A-12 7/23/2001	
Dp:	10
TPH-g:	<1.0
B:	<0.005
E:	<0.005
MTBE:	<0.1

CPT-7 10/4/2002			
Dp:	11	20	40
TPH-g:	<0.78	<2.3	<2.0
B:	<0.0078	<0.023	<0.020
E:	<0.0078	<0.023	<0.020
MTBE:	<0.0078	<0.023	<0.020

CPT-3 10/3/2002			
Dp:	11	22	43
TPH-g:	<1.5	<1.8	<1.4
B:	<0.015	<0.018	<0.014
E:	<0.015	<0.018	<0.014
MTBE:	**0.14 T1**	**0.027 T1**	<0.014

CPT-8 10/3/2002			
Dp:	11	22	43
TPH-g:	<1.4	<1.4	<1.4
B:	<0.014	<0.014	<0.014
E:	<0.014	<0.014	<0.014
MTBE:	<0.014	<0.014	<0.014

CPT-2 10/4/2002			
Dp:	11	30	43
TPH-g:	<2.2	<1.6	<2.0
B:	<0.022	<0.016	<0.020
E:	<0.022	<0.016	<0.020
MTBE:	**1.5 T1**	0.016	<0.020

B-3 3/30/2001	
Dp:	4.5
TPH-g:	0.0059
B:	0.0055
E:	0.0087
MTBE:	**0.181 T1**

A-18B (A-19) 10/14/2002		
Dp:	6	10
TPH-g:	<1.9	<1.9
B:	<0.019	<0.019
E:	<0.019	<0.019
MTBE:	<0.019	<0.019

V-2 3/24/2003	
Dp:	2.5
TPH-m:	4600
B:	*<0.1*
E:	**1.4 T1**
MTBE:	*<0.050*

V-1 3/24/2003	
Dp:	3
TPH-m:	1700
B:	*<0.1*
E:	0.60
MTBE:	*<0.050*

Waste Oil Tank

Station Building

Existing USTs

Capitol Expressway

Legend

- Boring Location
- Over-Excavation Soil Sampling Location
- Fuel Line Sampling Location
- Fuel Dispenser/Sump Sampling Location
- Soil Boring
- Vent Line at Waste Oil Tank
- Former Monitoring Well Location
- Product Line
- Return Vapor Line
- Approximate Location of Proposed Station Building
- Approximate Location of Proposed Product Dispensers and Piping
- Approximate Location of Proposed USTs
- Existing USTs
- Existing Buildings
- Exceeds Detection Limit

Table Legend:

Dp: Depth in feet below ground surface
TPH-g: Total Petroleum Hydrocarbons as gasoline
TPH-m: Total Petroleum Hydrocarbons as motor oil
B: Benzene
E: Ethylbenzene
MTBE: Methyl Tertiary Butyl Ether
-- : Not Sampled for Analyte
<: Less than laboratory reporting limits

Concentrations in milligrams per kilogram (mg/kg).

SFBRWQCB ESL:
BOLD:
ITALIC:
-T1:
-SSE:
-CW:

Notes:

San Francisco Bay Region Water Quality Control Board Concentration Environmental Screening Level
Detection is greater than at least SFBRQWCB ESL
Reporting limit is greater than at least one SFBRWQCB ESL exceeds SFBRWQCB's Tier 1 ESL - Soil
exceeds SFBRWQCB's Commercial/Industrial: Shallow Soil Exposure ESL
exceeds SFBRWQCB's Any Land Use / Any Depth Soil Exposure: Construction Worker ESL

N

0 5 10 20 30 40 Feet

FIGURE 4B

Site Plan with Approximate Location of Proposed Construction and Historical Soil Analytical Data- Northern Samples
Arco Service Station No. 2187
2375 Quimby Road
San Jose, California

PROJECT NO.	PREPARED BY	REF SCALE
BPENVSMPSJ	*JH*	*1:248*
DATE	REVIEWED BY	MAP SCALE
1/18/2018		*1 inch = 21 feet*

antea group

\\gis-s3\GIS_Data\Sandbox\!Projects\A-E\BP_CA\2187\Project Number\Layout\Fig 4B- SoilAnalytical_Northarea_ed.mxd