



**PROPOSED LEAKING UNDERGROUND STORAGE TANK  
(LUST) RELEASE CASE CLOSURE EVALUATION SUMMARY**

**LUST Case File # 4367.01-.04  
Facility ID # 0-005032  
Navajo County**

**Thompson's Muffler  
404 West Hopi Drive  
Holbrook, Arizona 86025**

*Background:*

The site is located at the northwest corner of West Hopi Drive and North 3<sup>rd</sup> Avenue in Holbrook. The site is currently an active automotive repair business. The site was formerly a retail gas station between 1967 and 1984 with four USTs, and one used oil UST. Given the age of the retail gas station, the USTs likely contained leaded gasoline. The USTs were no longer used after 1984, when the site began operating as Thompson's Muffler. The USTs were reportedly removed in 1990, but there is no soil data in the LUST file. In 1999 and 2000, the site was redeveloped to include the construction of the automotive service bays currently overlying the former gasoline UST basin.

On August 15, 1995, the 500-gallon used oil UST reportedly was overfilled and was reported to ADEQ on February 27, 1996. ADEQ assigned LUST File No. 4367.01 to the 500-gallon used oil UST. The used oil UST was reportedly not used between April 1996 and November 1998, when this UST was removed.

In August 1998, Tierra Dynamic Incorporated (TDI) [consultant for the UST owner/operator] collected soil samples at the locations of the gasoline UST basin, north gasoline product piping and south gasoline product piping. Laboratory analytical results of those soil samples prompted ADEQ to assign LUST File Nos. 4367.02, 4367.03 and 4367.04 to those respective locations of the former UST system. Between November 1998 and August 2009, TDI advanced a total of 45 soil borings, collected soil samples, installed 19 onsite and offsite groundwater monitor and/or remediation wells and collected groundwater samples. Both soil and groundwater samples indicated contamination associated with petroleum hydrocarbons at concentrations that exceeded applicable regulatory standards. The *Site Characterization Report* was approved in July 1999. TDI designed and installed the vapor extraction (VE) remediation system and operated VE and multi-phase extraction (MPE) equipment between January 2008 and June 2010, until the State Assurance Fund ended.

Active remediation was conducted by the State Lead Unit and its contractor ATC, between 2015 and 2017. The work is summarized later in this document.

### *Characterization of the groundwater plume:*

Groundwater underlying Holbrook is contaminated with petroleum hydrocarbons at concentrations that exceed applicable regulatory standards. Multiple LUST sites have contributed to the area wide contamination, so plume definition by individual LUST sites is limited.

Based on laboratory analytical results, the chemicals of concern (COCs), defined as those compounds detected at concentrations exceeding their respective ADEQ established Aquifer Water Quality Standard (AWQS) are benzene and 1,2-dichloroethane (1,2-DCA) in groundwater.

Groundwater elevation data collected on 20 occasions between September 30, 2004 and January 24, 2019 indicate that the average flow direction beneath the site is at a bearing of 154 degrees (south-southeast) under an average calculated gradient of 0.0103 foot per foot. Since August 1999, the depth to groundwater at the location of LUST File Nos. 4367.01-.04 has ranged between approximately seven and 19 feet below ground surface (bgs). Depth to groundwater has varied between 7.06 (well SMP-1; February 24, 2009) and 19.90 (well TDI-3; February 12, 2010) feet below top of well casing and phase-separated hydrocarbons (PSH) have reportedly been observed at 10 wells (TDI-1, TDI-3, TDI-20, TDI-21, TDI-24, TDI-25, TDI-26, TDI-27, TDI-28 and SMP-1) at a maximum thicknesses of 5.43 feet at TDI-3 on December 11, 2014. ATC collected PSH samples at wells TDI-3 and TDI-21 in December 2014 for laboratory analysis of Volatile Organic Compounds (VOCs) using EPA Method 8260B. Low ratios of lighter end hydrocarbons (benzene and toluene) to heavier-end hydrocarbons (ethylbenzene and total xylenes) were noted at wells TDI-3 (0.014) and TDI-21 (0.002), indicating low volatility and an apparent advanced degree of PSH degradation. Measureable PSH has not been observed at site wells since November 15, 2016.

Groundwater samples collected by ATC in December 2014 and thereafter were collected after measuring depth to groundwater and purging in accordance with ATC's Standard Operating Procedure for low-flow groundwater sampling using a pneumatic submersible pump with dedicated tubing. During purging, physical water quality parameters (oxidation-reduction potential, conductivity, pH, temperature and dissolved oxygen) were recorded at regular intervals. Groundwater samples were collected from the discharge tubing upon reaching water quality parameter stabilization and prepared for laboratory analysis of VOCs. The groundwater samples collected at wells TDI-3 and TDI-21 on December 10 and 11, 2014, May 14, 2015 and November 15, 2016 were prepared for additional laboratory analysis of dissolved phase ethylene dibromide using EPA Method 504.1 or EPA Method 8011. Groundwater samples collected December 10 and 11, 2014 and/or November 14 and 15, 2016 at the same wells were analyzed for polynuclear aromatic hydrocarbons (PAH) using EPA Method 8270C SIM and tetraethyl lead (TEL) using the McCampbell Analytical Inc. (MAI) Organic Pb Method.

Historically and recently (since November 2016) the presence of dissolved phase compounds exceeding their respective ADEQ established AWQS has been limited to benzene and/or 1,2-DCA at wells TDI-3 and TDI-21. Historically detected concentrations of additional regulated compounds at concentrations above an ADEQ established AWQS have been followed by

groundwater sampling results below their respective ADEQ AWQS on at least one occasion. As of February 2019, benzene and 1,2-DCA are the only VOCs with contamination over AWQS.

*Groundwater plume stability:*

In order to evaluate the dissolved phase benzene and/or 1,2-DCA plume stabilities at groundwater monitor wells TDI-3 and TDI-21, ATC analyzed the data collected during up to 20 groundwater monitoring and sampling events conducted between August 1999 and January 2019 using the Mann-Kendall Statistical Method. The Mann-Kendall analysis was run using an applied Microsoft Excel spreadsheet developed by GSI Environmental Inc. which utilizes up to 40 data inputs to generate an output trend. The trend is categorized as “Increasing”, “Probably Increasing”, “Decreasing”, “Probably Decreasing”, “Stable” or “No Trend”. ATC used a concentration of 0.01 micrograms per liter ( $\mu\text{g/L}$ ) for non-detect values reported by the laboratory for this analysis. Recently (since November 2016), benzene and/or 1,2-DCA have been detected at concentrations exceeding their ADEQ established AWQS at the locations of groundwater monitor wells TDI-3 and TDI-21. The Mann-Kendall Statistical Method analysis indicates that the concentration of dissolved phase benzene is “Decreasing” (TDI-3) or exhibits “No Trend” (TDI-21) at these wells. The 1,2-DCA trend at well TDI-21 is characterized as “Stable”.

*Natural Attenuation:*

Natural attenuation processes include diffusion, dispersion, sorption, volatilization, and biodegradation. A decreasing trend in VOC concentrations in groundwater has been established, which supports that natural attenuation is occurring. Hydrologic and geochemical data can be used to indirectly demonstrate the type(s) of natural attenuation processes.

ATC analyzed the biodegradation and transport of dissolved phase benzene and/or 1,2-DCA down gradient of wells TDI-3 and TDI-21 using BIOSCREEN Version 1.4. The software is programmed into a Microsoft Excel workbook and was developed for the Air Force Center for Environmental Excellence. The BIOSCREEN software uses a combination of site-specific data and assumed values to simulate contaminant transport and attenuation through biodegradation. The software allows the user to analyze a groundwater plume under one of three assumptions regarding the rate of natural attenuation: No Decay, First-Order Decay or Instantaneous Decay. According to the EPA BIOSCREEN Natural Attenuation Decision Support System User’s Manual, the First-Order Decay Model is most appropriate for petroleum hydrocarbon contamination. ATC utilized the BIOSCREEN Model to determine the maximum theoretical extent of the dissolved phase benzene and 1,2-DCA plumes relative to wells TDI-3 and TDI-21. These wells were treated as the release source area and it was assumed that the source concentration of each analyte is equal to the average (benzene at wells TDI-3 and TDI-21) or actual (1,2-DCA at TDI-21) dissolved phase concentrations reported at each well during the most recent (January 2019) groundwater sampling event. Using the first-order decay rate assumption, the model predicts that 1,2-DCA will be detected the furthest distance down gradient at concentrations exceeding its ADEQ established AWQS of  $5 \mu\text{g/L}$  approximately 90 feet in about 30 years. The model also predicts benzene will be detected at concentrations exceeding its ADEQ established AWQS of  $5 \mu\text{g/L}$  70 feet down gradient in 30 years.

*Threatened or impacted drinking water wells:*

On February 12, 2019, ATC conducted a search of the Arizona Department of Water Resources (ADWR) electronic database for registered wells within an approximate one-half mile radius of the site and ADEQ LUST File Nos. 4367.01-.04. The results of the search indicate that there are 478 registered wells within the search area. A review of the results does not indicate the presence of groundwater supply wells, including those for municipal, domestic or irrigation water use.

ADWR records identified three ADWR-registered wells owned by the City of Holbrook in the vicinity of McLaws Road and located approximately 1.4 miles southwest (or up gradient) of the site. According to the Consumer Confidence Report for Calendar Year 2018 prepared by the City of Holbrook (2019) utilizing the ADEQ template, the City of Holbrook provides municipal potable water extracted from three wells located on McLaws Road.

Based on laboratory analytical results of groundwater samples collected by ATC since December 2014, the lateral extent of dissolved phase benzene and 1,2-DCA is consistently limited to the immediate vicinity of wells TDI-3 and TDI-2 (on-site). Results of the BIOSCREEN Model indicate limited benzene and 1,2-DCA dissolved phase extents at wells TDI-3 and TDI-21 (70 to 90 lateral feet, respectively).

According to ADWR rules, any new or replacement well located at or near the LUST site would need to meet the criteria of A.A.C. R12-15-1302 (B) (3).

*Other exposure pathways:*

ATC advanced progress soil borings (CB-1 through CB-4) in February 2017 at the locations of LUST File Nos. 4367.01-.04. A soil sample collected at approximately 10 feet bgs at soil boring CB-2 (ADEQ LUST File No. 4367.04) contained a concentration of tetraethyl lead (TEL; 0.79 milligrams per kilogram [mg/kg]) above the ADEQ established Residential Soil Remediation Level (rSRL) of 0.0061 mg/kg. The Tier 1 exceedances were subject to evaluation of the ingestion and dermal contact exposure pathways due to their shallow depth. The evaluation was performed utilizing the appropriate equations for child and adult resident exposure scenarios as presented in the EPA Risk Assessment Guidance for Superfund (RAGS): Part B, Chapter 3 Calculation of Risk-Based Preliminary Remediation Goals, December 1991 and EPA RAGS Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment), July 2004, respectively. While the model outputs for the ingestion and dermal exposure pathways indicate failures, it is noted that these exposure pathways are incomplete as the impacted soil is present at depths of 10 to 15 feet bgs under concrete surface cover and is therefore inaccessible. However, the TEL exceedance prompted ADEQ to request excavation of TEL-impacted soil to the extent practicable at this location.

Results of confirmation soil samples collected at the locations of soil borings CB-4 and CB-6 (ADEQ LUST File No. 4367.01) and CB-1 (LUST File No. 4367.03) in February 2017 did not indicate concentrations of VOCs, PAHs, TEL or Resource Conservation and Recovery Act Metals at concentrations above their respective, if established, ADEQ rSRL.

Based on laboratory analytical results, the COC, defined as those compounds detected at concentrations exceeding their respective ADEQ established rSRL are benzene, 1,3,5-trimethylbenzene and TEL in soil.

Concurrent with the progress soil sampling conducted February 13 and 14, 2018, ATC supervised the installation of eight permanent soil vapor probes adjacent to the progress soil boring locations. Based on the soil sample laboratory analytical results which indicated Tier 1 VOC exceedances at soil borings CB-2 and CB-3, the soil vapor samples collected at the corresponding soil vapor probes, SV-2 and SV-3, and the QA/QC samples, were analyzed for VOC using EPA Method TO-15. These data were utilized to evaluate the inhalation pathway and vapor intrusion potential into current or hypothetical site buildings using the EPA on-line version of the Johnson and Ettinger (J&E) Model to perform a Tier 3 Risk Assessment. The Tier 3 Risk Assessment evaluation using the J&E Model indicates (for the chemicals evaluated) a “best fit” Excess Lifetime Cancer Risk (ELCR) of  $5.063 \times 10^{-7}$  and a Hazard Index (HI) of  $5.104 \times 10^{-2}$ . These calculated values are below the target ELCR of  $1 \times 10^{-6}$  and HI of 1, and indicate an acceptable level of vapor intrusion risk into hypothetical, concrete slab on-grade onsite buildings used for residential use. It is noted that the property is utilized for industrial purposes (auto repair services) with low potential for residential use in the foreseeable future. Therefore, the Tier 3 Risk Assessment represents a reasonable and conservative exposure scenario.

The nearest residential properties are single family homes located approximately 150 feet northeast of the site. Three schools, two day care facilities and one senior care center are located between 750 feet and one-half mile of the site. No additional schools, daycare facilities, hospitals or nursing homes were observed within a one-half mile radius of the site. The subsurface soil and groundwater contamination is limited to on-site and will not impact any sensitive receptors.

*Removal or control of the source of contamination:*

Previous site remediation efforts included VE system (thermal mode) operations utilizing ten (10) extraction wells, between January 2008 and June 2010, which reportedly recovered approximately 88,154 pounds of volatile fuel hydrocarbons (VFH). ATC also operated the VE system (thermal mode) between February 2015 and November 2016. Due to a decreasing trend in the influent VFH concentration the system was reconfigured and a catalyst bed was installed. The system was restarted in catalytic mode, and operated until March 2017. The system processed approximately 41,968 pounds of VFH, for a cumulative total of 130,122 pounds VFH (equivalent to approximately 20,800 gallons of gasoline) over 34,101 hours of operation. VE operations were terminated due to low mass removal rates.

On October 24, 2019, ATC supervised the excavation of petroleum impacted soil at the location of LUST File No. 4367.04. A total of 103 tons of excavated soil was transported under manifest to the Waste Management Painted Desert Landfill in Joseph City, Arizona.

The excavation measured approximately 15 feet wide and 15 feet long and was advanced to a depth of approximately 12 to 14 feet bgs, or just above static groundwater depth as measured at onsite groundwater monitor wells. A total of 10 soil samples were collected at the base, corners and sidewalls of the excavation and prepared for laboratory analysis of TEL using EPA Method

8270C-SIM. Laboratory analytical results did not indicate the presence of TEL at concentrations above its minimum laboratory method detection limit (MDL) in eight of the 10 soil samples, however, the concentrations were below the rSRL. The concentration at the east sidewall exceeds the rSRL but is below the nr-SRL. Additional excavation to the east was not feasible due to the presence of a nearby vehicle hydraulic lift utilized by the site tenant. The contaminated soil is not accessible for dermal contact or ingestion.

*Requirements of A.R.S. §49-1005(D) and (E):*

The results of the corrective action completed at the site assure protection of public health, welfare and the environment, to the extent practicable, the clean-up activities completed at this site allow for the maximum beneficial use of the site, while being reasonable, necessary and cost effective.

*Other information that is pertinent to the LUST case closure approval:*

The facility and LUST files were reviewed for information regarding prior cleanup activities, prior site uses and operational history of the UST system prior to removal.

Groundwater data tables:

TDI-1 (LUST release 4367.01- waste oil tank)

Total Depth: 31.3 feet. Screened 8-28 feet.

<b>Date</b>	<b>Benzene AWQS is 5.0 ug/L</b>	<b>1,2-DCA AWQS is 5.0 ug/L</b>	<b>Depth to Water (feet)</b>
August 1999	<b>89</b>	<0.50	12.77
June 2000	<b>1,300</b>	<b>10</b>	11.91
September 2000	<b>940</b>	<b>&lt;10</b>	12.40
December 2000	<b>350</b>	<b>5.6</b>	12.25
March 2001	<b>120</b>	2.1	11.95
April 2001- August 2004	Not sampled	Not sampled	various
September 2004	<b>400</b>	4.2	13.35
March 2005	<b>1,100</b>	<b>&lt;10</b>	12.91
April 2005- November 2014	Not sampled	Not sampled	various
SVE start (11/08)			
SVE stop (6/10)			
December 2014	<1.0	<1.0	15.44
SVE start (2/15)			
December 2015	<1.66	<5.00	15.45
May 2016	<1.00	<1.00	15.35
November 2016	<1.00	<1.00	15.87
SVE stop (3/18)			

April 2018	<1.00	<1.00	16.21
January 2019	<1.00	<1.00	16.15

TDI-2 (LUST release 4367.02- gasoline USTs)  
Total depth of well 32 feet. Screened 8-28 feet.

Date	Benzene AWQS is 5.0 ug/L	1,2-DCA AWQS is 5.0 ug/L	Depth to Water (feet)
August 1999	2,200	49	12.48
June 2000	4,500	110	11.23
September 2000	5,600	130	11.73
December 2000	4,600	95	11.77
December 2001	10,000	150	11.95
September 2004	7,100	64	12.75
March 2005	4,500	31	12.23
October 2007	8,400	<25	12.77
SVE start (11/08)			
November 2008	7,000	30	12.65
November 2009	8,780	<100	13.34
May 2010	290	<5.0	13.06
SVE stop (6/10)			
December 2014	52	4.7	14.62
SVE start (02/15)			
December 2015	198	2.89	14.60
November 2016	<1.00	<1.00	15.07
SVE stop (3/17)			
April 2018	<1.00	<1.00	15.41
January 2019	<5.00	<5.00	15.30

TDI-3 (LUST release 4367.03- dispenser island)  
Total Depth: 32 feet. Screened 8-28 feet.

Date	Benzene AWQS is 5.0 ug/L	1,2-DCA AWQS is 5.0 ug/L	Depth to Water (feet)
August 1999	240	7.2	12.28
June 2000	3,800	280	11.57
September 2000	7,100	400	12.08
December 2000	2,300	150	11.91
December 2001	13,000	400	12.28
September 2004	16,000	39	13.10
March 2005	14,000	270	12.52
October 2007	12,000	340	13.00
SVE start (11/08)			
November 2008	5,800	130	11.55
November 2009	Not sampled		

May 2010	Not sampled		
SVE stop (6/10)			
December 2014	<b>88</b>	3.7	13.72
SVE start (02/15)			
December 2015	<b>30.4/29.2</b>	<b>&lt;25/&lt;25</b>	14.78
November 2016	<b>15.8/15.7</b>	<5.00/<5.00	15.28
SVE stop (3/17)			
April 2018	<b>19.8/20.4</b>	<1.00/<1.00	15.60
January 2019	<b>23.4/&lt;1.00</b>	<5.00/3.77	15.50

TDI-4 (cross gradient)  
Total Depth: 32 feet. Screened 8-28 feet.

Date	Benzene AWQS is 5.0 ug/L	1,2-DCA AWQS is 5.0 ug/L	Depth to Water (feet)
August 1999	3.3	<0.50	11.32
June 2000	<0.50	<0.50	10.48
September 2000	<0.50	<0.50	11.01
December 2000	<0.50	<0.50	10.82
December 2001	<0.50	<1.0	11.18
September 2004	<0.50	<1.0	12.02
March 2005	<0.50	<1.0	11.45
October 2007	<1.0	<1.0	12.00
SVE start (11/08)			
November 2008	<1.0	<1.0	11.92
November 2009	<1.0	<1.0	12.62
May 2010	<1.0	<1.0	12.33
SVE stop (6/10)			
December 2014	<1.0	<1.0	13.82
SVE start (02/15)			
December 2015	<1.00	<1.00	13.85
November 2016	<1.00	<1.00	14.32
SVE stop (3/17)			
April 2018	<1.00	<1.00	14.65
January 2019	<1.00	<1.00	14.54

TDI-5 (down gradient)  
Total Depth 32 feet. Screened 8-28 feet.

Date	Benzene AWQS is 5.0 ug/L	1,2-DCA AWQS is 5.0 ug/L	Depth to Water (feet)
August 1999	3.7	<0.50	11.53
June 2000	<b>15</b>	<0.50	10.62



September 2000	1.4	<0.50	11.79
December 2000	<0.5	<0.50	10.92
December 2001	1.5	<0.5	11.31
September 2004	<0.5	<1.0	12.15
March 2005	<b>14</b>	1.7	11.56
October 2007	<b>160</b>	<1.0	12.11
SVE start (11/08)			
November 2008	<1.0	<1.0	12.04
November 2009	<1.0	<1.0	12.75
May 2010	<1.0	<1.0	12.40
SVE stop (6/10)			
December 2014	<1.0	<1.0	13.96
SVE start (02/15)			
December 2015	<1.00	<1.00	14.00
November 2016	<1.00	<1.00	14.42
SVE stop (3/17)			
April 2018	<1.00	<1.00	14.73
January 2019	<1.00	<1.00	14.61

TDI-17 (up gradient off-site)  
Total Depth 33.2 feet. Screened 8-28 feet.

Date	Benzene AWQS is 5.0 ug/L	1,2-DCA AWQS is 5.0 ug/L	Depth to Water (feet)
June 2000	<0.5	<b>35</b>	9.51
September 2000	<0.5	<b>40</b>	10.05
December 2000	<0.5	<b>71</b>	9.88
December 2001	<0.5	<b>70</b>	10.24
September 2004	<0.5	<b>45</b>	11.10
March 2005	<0.5	<b>33</b>	10.54
October 2007	<1.0	<b>30</b>	11.10
SVE start (11/08)			
November 2008	<1.0	<b>33</b>	11.01
November 2009	<1.0	<b>24.2</b>	11.70
May 2010	<1.0	<1.0	11.46
SVE stop (6/10)			
December 2014			Obstruction at 12.75

TDI-20 (down gradient)  
Total Depth: 28 feet. Screened 8-23 feet.

Date	Benzene AWQS is 5.0 ug/L	1,2-DCA AWQS is 5.0 ug/L	Depth to Water (feet)
------	-----------------------------	-----------------------------	--------------------------

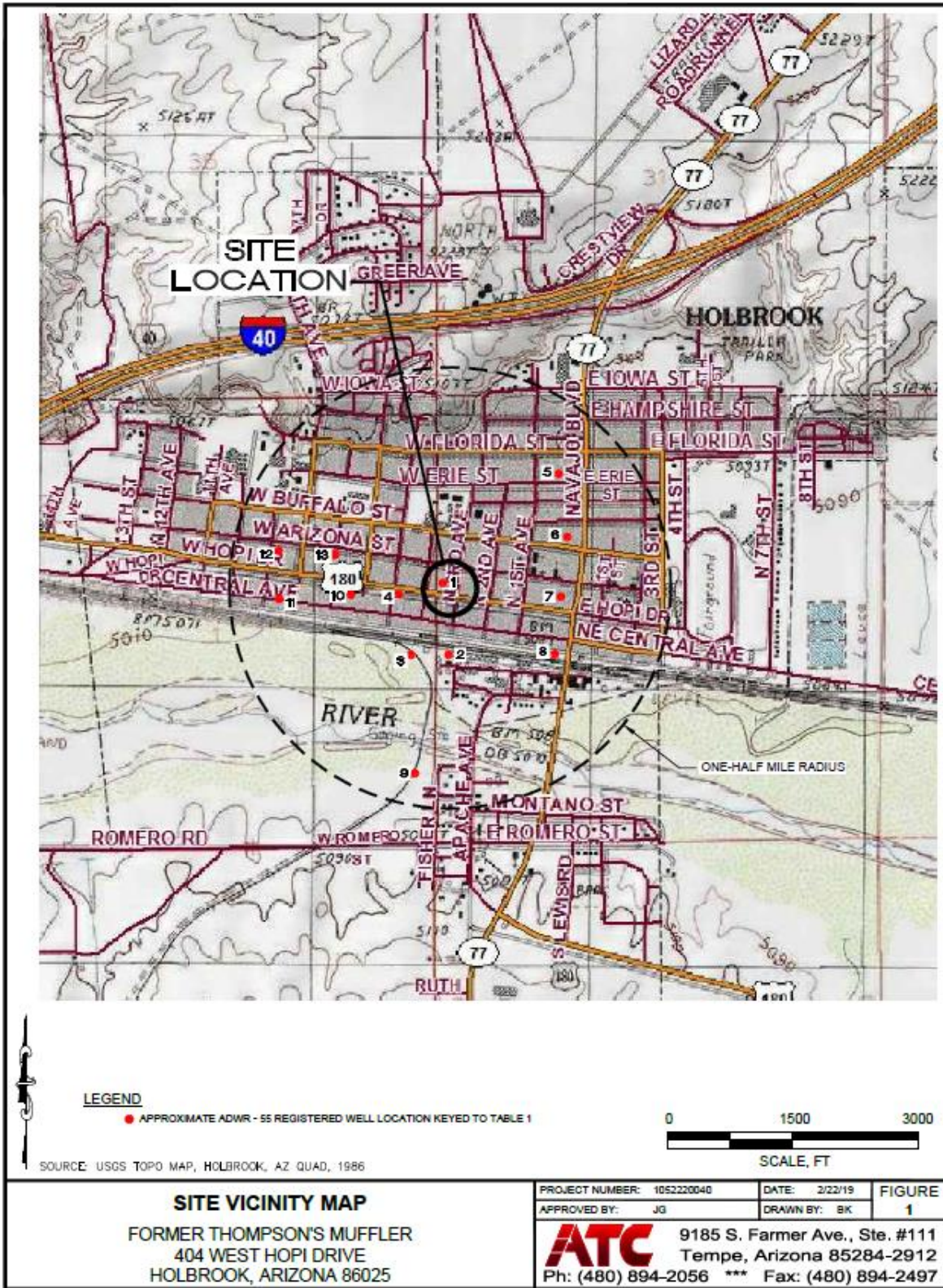
November 2002	<b>2,100</b>	<b>5.3</b>	11.83
September 2004	<0.50	<1.0	13.14
March 2005	<0.50	<1.0	13.68
October 2007	<1.0	<1.0	13.04
SVE start (11/08)			
November 2008	<1.0	<1.0	12.30
November 2009	<1.0	<1.0	12.97
May 2010	<1.0	<1.0	12.70
SVE stop (6/10)			
December 2014	<5.0/<5.0	<5.0/<5.0	14.25
SVE start (02/15)			
December 2015	3.25	<1.00	14.23
November 2016	2.58	<1.00	14.70
SVE stop (3/17)			
April 2018	<1.00	<1.00	15.03
January 2019	<1.00	<1.00	14.93

TDI-21 (LUST 4367.03) cross gradient on-site  
Total Depth: 28 feet. Screened 8-23 feet.

<b>Date</b>	<b>Benzene AWQS is 5.0 ug/L</b>	<b>1,2-DCA AWQS is 5.0 ug/L</b>	<b>Depth to Water (feet)</b>
November 2002	<b>98</b>	61	12.65
September 2004	<b>280</b>	<b>130</b>	13.25
March 2005	<b>Not Sampled</b>	<b>Not Sampled</b>	<b>Not Measured</b>
October 2007	<b>130</b>	<b>59</b>	12.31
SVE start (11/08)			
November 2008	<b>410</b>	<b>75</b>	11.08
August 2009	<b>38,000</b>	<b>&lt;10,000</b>	11.20
May 2010	<b>Not Sampled</b>	<b>Not Sampled</b>	15.65 (2.0 feet FP)
SVE stop (6/10)			
December 2014	<3.3	<b>40</b>	14.05
SVE start (02/15)			
May 2015	<b>&lt;8.28</b>	<b>46.6</b>	13.76
December 2015	<b>&lt;16.6</b>	<b>&lt;18.1</b>	14.10
May 2016	<b>6.28</b>	<b>20.0</b>	14.05
November 2016	<b>12.3</b>	<b>63.1</b>	14.62
SVE stop (3/17)			
April 2018	<b>21.5</b>	<b>50.3</b>	14.90
January 2019	<b>6.52</b>	<b>40.2</b>	14.80

SMP-1 (near TDI-3)  
Total depth 24 feet. Screened 8-23 feet.

<b>Date</b>	<b>Benzene AWQS is 5.0 ug/L</b>	<b>1,2-DCA AWQS is 5.0 ug/L</b>	<b>Depth to Water (feet)</b>
September 2001- November 2008	<b>Not sampled</b>	<b>Not sampled</b>	<b>Various/various levels of Free Product</b>
SVE start (11/08)			
August 2009	965	42.6	13.06
May 2010	860	23.1	13.28
SVE stop (6/10)			
December 2014	<b>Not sampled</b>	<b>Not sampled</b>	14.84 (0.04 feet FP)
SVE start (02/15)			
May 2015	32.3	<5.00	14.48
December 2015	60.7	<1.00	14.85
May 2016	4.28	<1.00	14.76
November 2016	<1.00	<1.00	15.29
SVE stop (3/17)			
April 2018	2.42	1.42	15.65
January 2019	1.38	0.814	16.55



S:\Pro\pca\851\Map\0105220040 Thompson's Muffler (2018-06-06)\CAD\0019\0015\_VICIN.dwg



