Site Characterization Results Report

Shay Oil Chevron
280 E. Main Street
Quartzsite, AZ 85346
Apex Project No.: SHA04.001
Account Number B2068245
VRP Site Code 150004-02

April 24, 2023

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EXECUTIVE SUMMARY

During the weeks of March 28th, 2022, and August 1st, 2022, Apex completed five additional soil borings (QB-3 through QB-7) and converted two of those into monitoring wells (QS-19 and QS-20). Grab water samples were collected from each soil boring. The work was being completed to address three interim site characterization goals as discussed below. All of which were completed during these mobilizations.

Initial Site Characterization Goals and Results

1. Characterize the source area vertically for groundwater (completed).

QB-1 was completed near the point of the release and completed as groundwater monitoring well QS-18. The data observed in the field documented an aquitard is present at this location and at QB-2. Consistent at both locations, the perched aquifer was found between 65'-75'bgs, below 75' transitioning to a dry, dense, reddish brown clay with minor silt and gravel component to the total drilled depth of 95' bgs. This indicates that the wells previously installed on-site are properly screened to monitor the perched aquifer and consistent with the definition of the aquitard in QS-17 and QS-18.

2. Characterize the source area vertically for soil (completed).

The soil vapor sampling methodology used during this phase of investigation in addition to previously generated sampling data has adequately defined the source area soil. Four of the nine downhole vapor samples, collected in summa canisters, contained enough volume to be analyzed. The three-phase partitioning calculations on the soil vapor samples collected show the soil is adequately characterized and below residential soil remedial levels (R-SRLs) and groundwater protection levels (GPLs). These defined levels in the soil make the previously requested Declaration of Environmental Use Restriction (DUER) unnecessary.

3. Characterize the southeastern lateral extent of the groundwater plume (completed).

MTBE and benzene are the two COCs present in groundwater at the Site exceeding Arizona Water Quality Standards (AWQSs). The groundwater plume is delineated to the AWQS by QS-10 to the north, QS-20 to the northeast, QS-19 to the east, QD-2 to the south, to the west by QS-1, and by QS-11 to the northwest.

Groundwater Data

In November 2022, groundwater was sampled from all on-site and off-site wells, except for QS-12 (lost) and QS-7 (damaged, inaccessible). The extent of the benzene and MtBE plumes are delineated.

Modified Conceptual Site Model

The results of the work performed to date require modifications to the previous CSM; specifically, that the southeastern extent of the plume is further off-site in this direction than previously realized. The drinking water well survey underway for the project will be used to identify any wells that may be in use or have been used for domestic use or otherwise in the potential path of the plume in the east and southeast direction.

1.0 INTRODUCTION

Groundwater sampling, site characterization, and remediation activities have been conducted at the Site since 1992. The purpose for this report is to provide data collected during the site characterization activities performed since May 2021 to the Arizona Department of Environmental Quality Voluntary Remediation Program (ADEQ VRP). Inclusion in the VRP is the result of a 1992 release from a former above ground storage tank (AST) and not associated with the past or current UST operations.

2.0 MODIFIED CONCEPTUAL SITE MODEL (CSM)

Beginning in 1992, an estimated minimum 8,500-12,000 gallons of unleaded regular gasoline in the source area impacted the groundwater as LNAPL and soluble components in the monitoring wells. No LNAPL has reappeared since 2005. However, dissolved benzene and MtBE concentrations continue to be detected in groundwater above ADEQ remediation standards. After multiple remedial events, the distal extent of the groundwater plume is limited to the east adjoining property, the north half of the adjoining south highway, the subject property, and the extreme southeast and southwest corners of the adjoining north properties. After completion of the two monitoring wells QS-19 and QS-20 and subsequent groundwater sampling event, the following conditions were observed:

- MTBE and benzene are the two COCs present in groundwater at the Site exceeding AWQSs. MTBE in groundwater is delineated to the AWQS by QS-10 to the north, QS-20 to the northeast, QS-19 to the east, QD-2 to the south, to the west by QS-1, and by QS-11 to the northwest. Benzene in groundwater is delineated to the AWQS by QS-10 to the north, QS-20 to the northeast, QS-19 to the east, QD-2 to the south, QS-1 and QS-3 to the west, and QS-11 to the northwest.

2.1 SITE CHARACTERISTICS

2.1.1 Physical Location

The Site occupies approximately 0.7 acres in a mixed commercial and residential area. The land to the west is a beauty shop and to the east of the site a residential property that currently is occupied seasonally. The Lutheran Church of Quartzsite occupies the land north of the site across Cowell Avenue. Approximately 300 feet to the south across Business I-10/Main Street is RV parking.

The Site has been a retail motor fuels station since the early 1990s. Shay Oil discovered the release in April 1992, based on station inventory reconciliation from November 1991 to April 1992. The loss of product was identified, and the station suspended operations until repairs were completed later in September 1992. Original estimates were that between 8,500 and 12,500 gallons of regular unleaded gasoline was released. Repairs included the excavation and replacement of product lines from the regular unleaded 10,000-gallon AST.

2.1.2 Land and Water Use Survey

Please refer to the Land and Water Use Survey dated April 24, 2023.

2.1.3 Facility Structures

At the time of the release, the station consisted of a single canopy and dispenser island, a small store/office building, and one underground and two aboveground fuel storage tanks. These tanks included:

- One 5,000-gallon, single-walled fiberglass underground storage tank (UST), containing super-unleaded gasoline.
- One 10,000-gallon, vertical, single-walled steel aboveground tank (AST), containing plus-unleaded gasoline; and,
- One, horizontal AST, single-walled steel tank, divided into 8,277-gallon and 5,677-gallon sections, both containing regular unleaded gasoline.

In 2003, the Site was leveled, all original ASTs and USTs were removed, and a complete re-build was initiated, including underground storage tank (UST) installation and construction of a new convenience store. The Shay Oil Quartzite facility currently includes two 10,000-gallon double walled fiberglass USTs containing diesel and premium gasoline and two 12,000-gallon USTs containing regular gasoline. Six dispensers occupy the area beneath a single canopy placed diagonally on the site. The convenience store occupies the northwest corner of the property (Figure 2).

2.1.4 Historical Land Use

The Site has been a retail motor fuels station since the early 1990s.

2.1.5 Current Land Use

The Shay Oil Quartzite facility currently includes two 10,000-gallon double walled fiberglass USTs containing diesel and premium gasoline, and two 12,000-gallon USTs containing regular gasoline. Six dispensers occupy the area beneath a single canopy placed diagonally on the site. The convenience store occupies the northwest corner of the property.

2.1.6 Active Management Area/Water Provider

Starting in the year 1994, the Town began to supply water from well 55-550647, located approximately 1.25 miles to the west-northwest from the Site. In the year 2004 a second public well (55-204271), located approximately 1 mile to the north-northeast of the site, was added. The wells are 1,280 & 1,260 feet in depth, respectively.

The Town municipal wells have the capacity to serve the needs of the current population and the needs for future potential growth of the Town based on the population growth projection. From the year 2000 to 2010, the population of Quartzsite increased by 9% and is expected to increase by approximately 30% from the year 2015 to 2030, according to the General Plan.

2.1.7 Topography

The site is located near the center of the La Posa Plain in southwestern Arizona. The La Posa Plain is an elongated alluvial valley typical of the Basin and Range Province. The Plain is bounded by the Dome Rock Mountains on the west and the Polmosa Mountains on the east. The Plain is traversed by the north flowing Tyson Wash, a small to moderate size ephemeral wash located approximately 1/2 mile west of the site (Ross et al., 1991).

2.1.8 Stratigraphy and Hydrology

The subsurface in the study area consists of an upper unit of alluvium overlying the Bouse Formation that, in turn, overlies fanglomerate and bedrock (Metzger, et al., 1973). In the area of the Site, the subsurface is mostly clay or silty clay. An upper perched aquifer (impacted by the Shay Oil release) in the vicinity of the Site is encountered at approximately 50 feet and is not saturated below approximately 70 below ground surface (bgs). A deeper aquifer is found throughout the Quartzsite study area separated from the perched aquifer by a thick sequence of clays and limestones and is typically found at approximately 400 feet bgs. The upper aquifer, impacted at the site, is characterized (Ross et al., 1991) as follows:

"The upper perched aquifer is found from 30 to 100 feet bgs. The saturated thickness is generally less than 30 feet. According to Metzger, et al (1973), the extent of this aquifer is limited to an area around Quartzsite and north approximately 5 miles and is restricted to the vicinity of Tyson Wash. Flow direction for the upper aquifer is estimated to be northward along the wash based on limited water level data reviewed by the ADEQ. Although no quantitative information is available for the transmissivity of the upper aquifer; it is apparently exceptionally low. Most shallow wells in the study area produce less than 1 gallon per minute and generally can pump only 5-10 minutes before specially installed automatic pump switches turn off the pumps due to dropping water levels in the wells. The perched aquifer in the vicinity of Quartzsite is documented to have been impacted by private septic systems. The lower aquifer has not been affected to such an extent as the upper aquifer."

2.2 Surrounding Land Use and Populations

The surrounding area is retail, residential and light industrial. A full-time population exists year-round but increases in the winter months. Figure 6 demonstrates the uses of the surrounding properties, which include residences to the northeast and east, an RV park and vacant lot across the highway to the south, a beauty salon to the west, and an empty lot to the northwest.

2.3 Contaminants of Concern

The contaminants of concern (COCs) are those typically associated with a gasoline release: benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tert-butyl ether (MTBE), naphthalene and total petroleum hydrocarbons-gasoline range (TPH-GRO). LNAPL was removed from the site by 2005, with soluble components benzene and MtBE remaining in groundwater in the perched aquifer and entrained in the clay soil types.

2.4 Impacted Media

Groundwater, soil, and soil vapor constitute the affected media at the site.

2.5 APPLICABLE STATE REGULATORY LEVELS

Regulatory Level	Regulatory Citation
Residential Soil Remediation Levels (RSRLs)	A.A.C. R18-7-203; R18-7-205; A.A.C. Title 18, Chapter 7, Appendix A
Groundwater Protection Levels (GPLs)	A.A.C. R18-7-203(B)(1); ADEQ GPL Guidance: http://www.azdeq.gov/environ/waste/sps/
EPA Resident Vapor Intrusion Screening Levels (VISLs)	A.A.C. R18-11-405
EPA Non-resident VISLs	A.A.C. R18-11-405

2.6 EXPOSURE/RECEPTOR ASSESSMENT

2.6.1 Exposure Pathways

2.6.1.1 Source

Circa 1992, gasoline product was released to the environment from previous leaking AST underground product lines located just west of the former store, east of the former UST, and north of the canopy and dispenser island. See Figure 7 for the Historic Site Layout.

2.6.1.2 Environmental Media/Fate & Transport

A source area soil study requested by the VRP in 2000 was completed by Apex that included three soil borings (PL-1, PL-2, and PL-3) in and around the source of the release near QS-6. Results infer the release traveled vertically in the soil beneath the leaking product lines until reaching the perched aquifer then being carried downgradient to the northeast, east and southeast. Analytical results showed residual petroleum below the non-residential screening levels in all soil samples collected in the source area soil.

Site characterization activities indicate that the groundwater plume delineated to drinking water standards extends less than ¼ mile from the site boundaries to the north, northeast, east, and southeast.

The results of recent site characterization activities indicate that the following media are, or are potentially, impacted with concentrations exceeding the lowest regulatory target levels:

- Groundwater
  - Onsite.
  - Adjoining north, northeast, and east properties.
- Soil vapor
  - Onsite
  - Adjoining east property

2.6.1.3 Exposure Point & Route

The following table demonstrates the potential exposure points and routes for the impacted media documented in 2.6.1.2:

Media Type	Potential Exposure Points & Route
Groundwater	• Onsite Private well. • East, North, Northeast Private wells
Soil Vapor	• Onsite commercial inhalation via volatilization from groundwater • East adjacent residential inhalation via volatilization from groundwater

2.6.1.4 Receptor Population & Complete Pathways

A review of land and natural resources was performed as part of the Land and Water Use Survey (LWUS) dated April 24, 2023. As part of the LWUS Apex contacted north, northeast, and east adjacent property owners to determine if any private wells were present on the properties. There are no private wells remaining and/or in use on these adjacent properties. In addition, there is no longer a private well on the Site. Based on this, the drinking water pathway *is not complete.*

Soil vapor samples were collected in the source area (QS-18) in April 2021, please refer to Table 4 for those results. The 10' bgs soil vapor sample contained benzene at a concentration below the EPA Vapor Intrusion Screening Level (VISL) for Commercial Subslab and Near Source Concentration of 52.4 ug/m^3 (see Appendix C for the VISL output); therefore, the Onsite Commercial Inhalation pathway *is not complete.*

For the east adjacent residential property Apex compared the groundwater concentrations from QS-17 of 34 ug/L for benzene and 4,600 ug/L for MtBE to the Target Groundwater Concentrations of 1.59 ug/L for benzene and 450 ug/L for MtBE as determined by the VISL output (See Appendix C); therefore, the East Adjacent Resident Inhalation pathway is complete.

Based on the above, the following exposure points and routes have an impacted or potentially impacted receptor (complete pathway):

Media Type	Complete Pathways
Soil Vapor	• East Adjacent Resident Indoor Air

3.0 PREVIOUS INVESTIGATIONS

Groundwater monitoring and remediation activities resulting from the AST product line release described above date back to 1992. Table 3 includes a summary of groundwater analytical data collected to date. Currently, there are two analytes that exceed remediation levels: benzene and MtBE.

The source of the release was traced to leaking AST underground product lines which were located just west of the former store near the UST and north of the canopy and dispenser island. The historic site layout is shown on Figure 7. A source area soil study requested by the VRP in 2000 was completed by Apex that included three soil borings (PL-1, PL-2, and PL-3) in and around the source of the release near QS-6. Results infer the release traveled vertically in the soil beneath the leaking product lines until reaching the perched aquifer then being carried downgradient to the

northeast, east and southeast. Analytical results showed residual petroleum below the non-residential screening levels in all soil samples collected in the source area soil.

Apex conducted additional site characterization activities in March 2021 which included drilling two soil borings (QB-1 and QB-2), collection of soil vapor samples from the soil borings (converted to soil data via 3-phase portioning) and converting the two soil borings into monitoring wells (QS-18 and QS-17, respectively). The data observed in the field documented an aquitard is present at the site starting around 75' bgs. Based on the soil vapor sample results, the source area soil has been defined laterally and vertically. However, the report concluded that the groundwater plume extended farther off site to the east and southeast of the release. Additional wells were recommended to delineate the extent of the groundwater plume in these directions. Please see Tables 4 and 5 for soil vapor and 3-Phase portioning soil data

4.0 SITE CHARACTERIZATION ACTIVITIES

4.1 CHARACTERIZATION OBJECTIVES

1. Characterize the east and southeastern lateral extent of the groundwater plume (complete).

MTBE and benzene are the two COCs present in groundwater at the Site exceeding AWQSs and are delineated to the AWQS by QS-10 to the north, QS-20 to the northeast, QS-19 to the east, QD-2 to the south, to the west by QS-1, and by QS-11 to the northwest. Figures 4 and 5 demonstrate the delineation of the plumes as of the November 2022 sampling.

4.2 COMMUNITY INVOLVEMENT

Signage was prepared and displayed at the site prior to drilling activities.

4.3 FIELD PREPARATION

4.3.1 Health and Safety Plan

A Site Health and Safety Plan was prepared for the Site and was provided as an attachment to the Limited Site Characterization Work Plan dated February 1, 2021.

4.3.2 Permits

No permits were required.

4.3.3 Utility Clearance

Public and private locates were conducted prior to the drilling events.

4.3.4 Equipment Maintenance and Calibration

The rental equipment utilized during field activities was calibrated by the rental company prior to onsite use.

4.3.5 Field Documentation

Field documentation is provided in Appendices A and B.

4.4 GROUNDWATER INVESTIGATION

During two drilling events, which occurred on March 28 through 31, 2022 and August 1 through 4, 2022, Apex conducted the advancement of seven (7) soil borings (QD-1 through QD-7) for the collection of grab water samples. Two of the soil boring locations (QD-3 and QD-7) were selected for monitoring well installation (QS-19 and QS-20, respectively). The following sections further discuss these activities.

4.4.1 Soil Boring Advancement and Grab Groundwater Sampling

Borings QD-1 through QD-5 were advanced in March 2022 utilizing a CME 75 HD drill rig with 4 ¼" augers. Borings QD-6 and QD-7 were advanced in August 2022 utilizing the same rig and augers. The locations are shown on Figure 2.

The soil borings were each augered to 75' below ground surface (bgs) where a 2" temporary PVC well with a 10' pre-pack screen was placed. The borings were logged from soil cuttings and PID readings were collected approximately every 5'. The lithology and PID readings were recorded on boring logs, which are provided in Appendix A.

After a minimum of 12 hours after setting the temporary wells, grab water samples were collected via disposable bailers. The water was then placed into clean, laboratory provided sample containers. Between March 29 and 31, 2022, the grab groundwater samples were collected from temporary wells QD-1 through QD-5. Grab groundwater samples were collected from temporary wells QD-6 and QD-7 between August 2 and 3, 2022.

The water samples were submitted to Orange Coast Analytical in Phoenix, AZ for analysis of the ADEQ Target List with TICs by EPA Method 8260B. The laboratory reports and chains of custody are provided in Appendix B.

The temporary well materials were removed, and the soil borings were grouted after the grab groundwater samples were collected. Soil cuttings were placed into drums and stored onsite pending disposal approval. One composite soil disposal sample was collected for analysis. Water generated during decontamination was placed into drums and stored onsite pending disposal approval.

4.4.2 Well Installation

On August 3, 2022, well QS-19 was installed at soil boring location QD-3. This well was augered to 75' bgs and a 2" PVC well with screen from 65-75' bgs was set. The static water level in the well was measured at 58.87' in November 2022.

On August 3, 2022, well QS-20 was installed at soil boring location QD-7. This well was augered to 75' bgs and a 2" PVC wells with screen from 65' to 75' bgs was set. The static water level in the well was measured at 60.73' bgs in November 2022.

Boring logs and construction logs are found in Appendix A.

4.4.2 Well Survey

A well survey was performed at the Site and the elevations of QS-19 and QS-20 were measured. Groundwater elevations were plotted for the November 2022 sampling event which indicated a northeasterly groundwater flow direction. Groundwater elevations are provided on Table 1. See Figure 3 Potentiometric Map.

4.4.3 Groundwater Sampling Methodology

Between November 7 and 9, 2022, the new monitoring wells were developed, groundwater elevations were recorded, and wells QS-1, QS-3, QS-4, QS-5, QS-6, QS-8, QS-9, QS-10, QS-11, QS-16, QS-17 and QS-18, QS-19, and QS-20 were sampled. The wells were purged prior to sampling by removing 5-7 gallons of water per well. Purge water was returned to the well after the sample was collected. None of the monitoring wells contained floating liquid hydrocarbon (FLH).

The extent of the benzene and MtBE plumes are delineated to AWQS in all directions.

The depth to water information is provided in Table 1. Field sheets generated during the sampling event are provided in Appendix B.

4.4.4 Groundwater Analytical Results

Based on laboratory analytical data, benzene concentrations exceed the AWQS of 5µg/l at wells QS-6, QS-9, and QS-18 and MtBE concentrations exceed the AWQS of 20 µg/l at wells QS-1, QS-4 through QS-9, QS-17, and QS-18.

Compared with the May 2021 groundwater sampling event, benzene concentrations increased in wells QS-1, QS-3, and QS-6. Benzene concentrations decreased in wells QS-9 and QS-18. All other wells were below detection limits for benzene.

Compared with the May 2021 groundwater sampling event, MTBE concentrations increased in wells QS-1, QS-6, and QS-8, and remained the same in QS-9. MBTE concentrations decreased in QS-4, QS-5, QS-17, and QS-18. The results were below detection limits in QS-10, QS-11, QS-16, QS-19, and QS-20.

A summary of the current groundwater analytical results is provided in Table 2. Groundwater concentration maps (Figures 4 and 5) depict the benzene and MtBE values at the site. Laboratory analytical reports are included in Appendix B.

5.0 INVESTIGATION DERIVED WASTE

Composite samples ("Soil Disposal") were collected from soil cuttings generated during the March and August 2022 drilling events. The samples were analyzed for RCRA 8 Metals, PAHs, and BTEX & MtBE. Analytical results indicated that no contaminants of concern were found in the soil cuttings above lab detection limits and the soil was disposed of offsite as clean fill material.

6.0 QUALITY ASSURANCE

6.1 SAMPLE HANDLING

All samples were collected in precleaned sample jars while wearing new, sterile, nitrile gloves to reduce or eliminate the chance for cross contamination from previous samples. After labeling, the jars were then placed in an iced cooler and delivered to the laboratory under proper chain-of-custody.

6.2 FIELD QUALITY ASSURANCE/QUALITY CONTROL

A Field Blank and a duplicate sample were collected during the November 2022 groundwater sampling event. In addition, a laboratory supplied Trip Blank was submitted with the groundwater samples.

7.0 CONCLUSIONS

MTBE and benzene are the two COCs present in groundwater at the Site exceeding AWQSs. MTBE and benzene in groundwater are delineated to the AWQS by QS-10 to the north, QS-20 to the northeast, QS-19 to the east, QD-2 to the south, to the west by QS-1, and by QS-11 to the northwest.

The CSM was updated and revised to include the information collected to date. This revised CSM concluded that the following exposure points and routes have an impacted or potentially impacted receptor (complete pathway):

Media Type	Complete Pathways
Soil Vapor	• East adjacent Resident Indoor Air

The only complete pathway presented that is not likely amenable to remediation using some form of environmental use control (EUC) is that to the indoor inhalation of soil vapor emissions at the east adjoining property. Apex recommends that a limited indoor air quality investigation be conducted at the east adjoining residence to determine if the risk is indeed present, as the pathway is complete based on predicted indoor air concentrations from measured soil vapor concentrations.

8.0 SIGNATURES

This report is based on available information and was prepared in accordance with currently accepted geologic, hydrogeologic and engineering practice. No other warranty is implied or intended. This report has been prepared for the sole use of Shay Oil Company, Inc. and the Arizona Department of Environmental Quality (ADEQ), Voluntary Remediation Program (VRP) and applies to the subject site only. Use of this report by third parties shall be at such parties' sole risk.

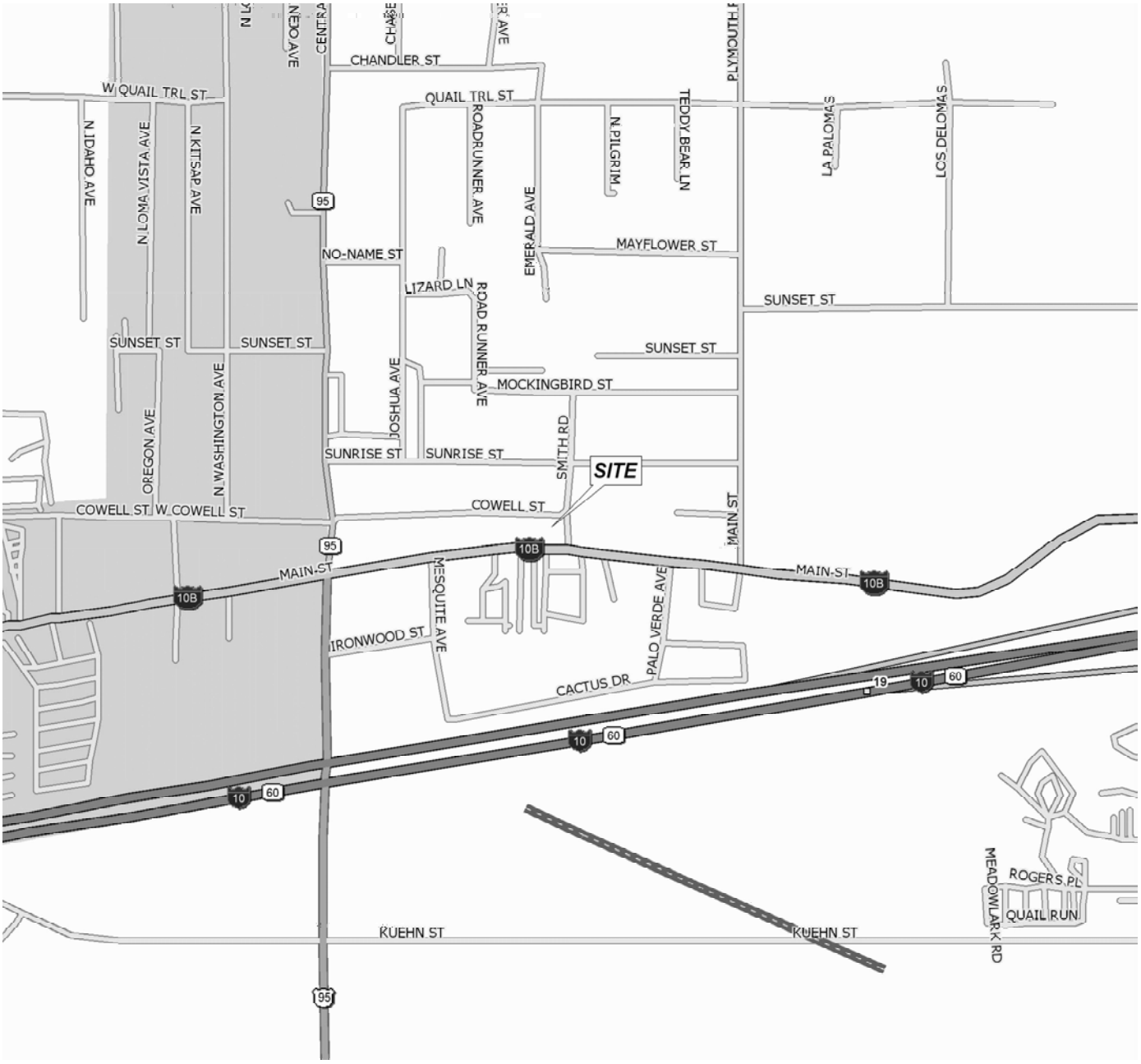
Sincerely,

APEX ENVIROTECH, INC.

Patty Small
AZ RG #63299
Project Geologist

Thomas E. Paul
Sr.V.P., Principal
Apex QA Manager

FIGURES



NORTH

0 1,000 2,000

Approximate Scale 1 inch = 1,000 feet

APEX ENVIROTECH, INC.

DRAWN BY:	N. Rouillard
DATE:	8/3/22
REVISIONS	

SITE VICINITY MAP

Shay Oil Company, Inc.
Business Loop I–10
Quartzsite, Arizona

FIGURE
1

PROJECT NUMBER:
SHA04.001

NORTH

0 100 200

Approximate Scale
1 inch = 100 feet

LEGEND

- Soil Boring/Grab Water Sample Locations
- Current Monitoring Well Locations

SITE MAP

Shay Oil Company, Inc.
Business Loop I–10
Quartzsite, Arizona

FIGURE **2**

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DATE: 11/22/22

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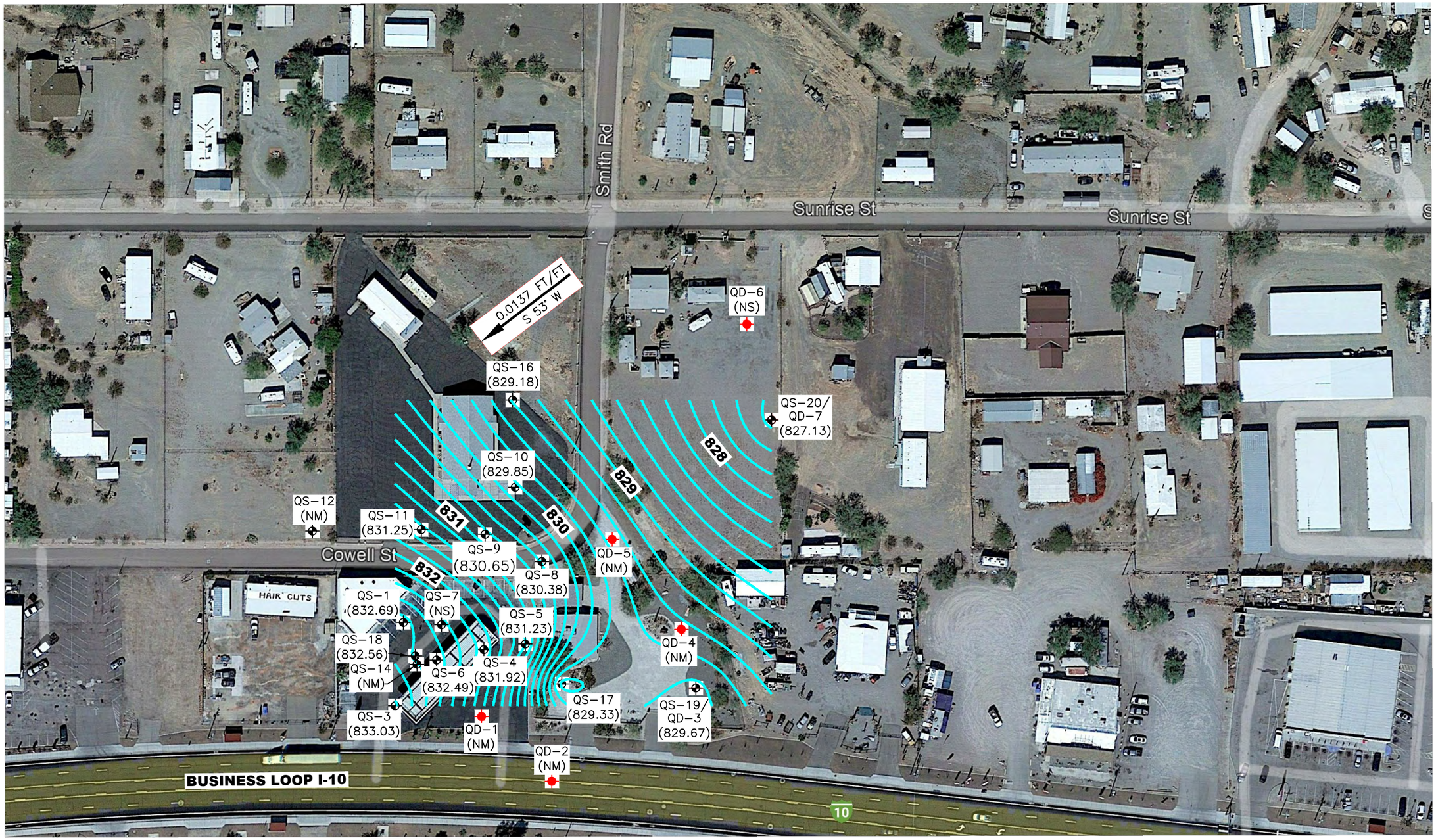

NORTH

0 100 200

Approximate Scale
1 inch = 100 feet

LEGEND

- Soil Boring/Grab Water Sample Locations
- Current Monitoring Well Locations
- Groundwater Contour Line (Contour Interval = 2 ft.)
- 0.0137 FT/FT, S 53° W — Approximate Groundwater Gradient And Flow Direction
- (NM) Not Measured

POTENTIOMETRIC MAP

Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

FIGURE 3

PROJECT NUMBER: SHA04.001

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DATE: 3/24/23

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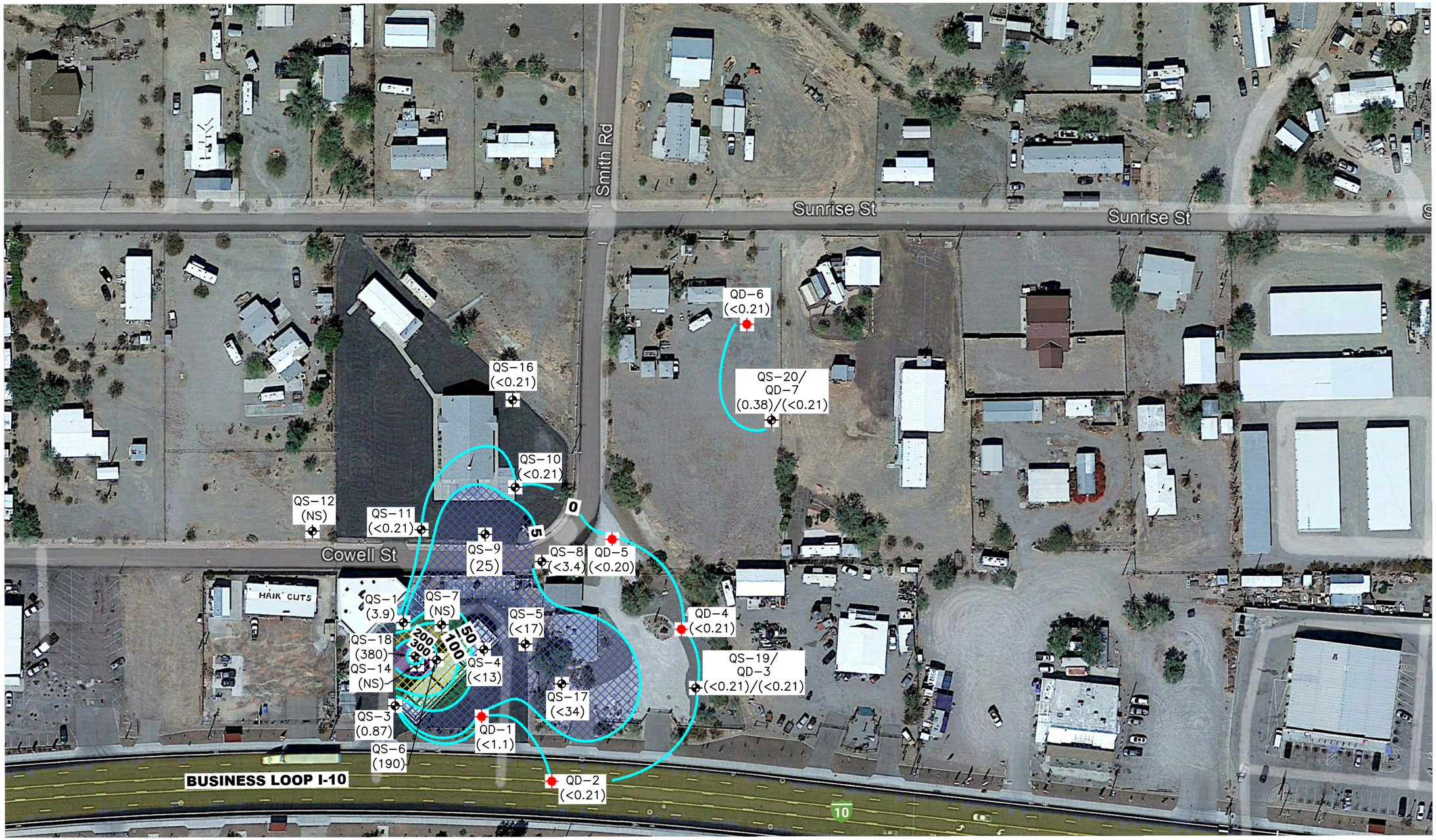

NORTH

0 100 200

Approximate Scale
1 inch = 100 feet

LEGEND

- Soil Boring/Grab Water Sample Locations
- Current Monitoring Well Locations
- (380) Concentration Of Benzene In Groundwater Measured In µg/L
- Line Of Equal Concentration Of Benzene In Groundwater Measured In µg/L
- (NS) Not Sampled

FIGURE **4**

PROJECT NUMBER: SHA04.001

MAP OF BENZENE IN GROUNDWATER

Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

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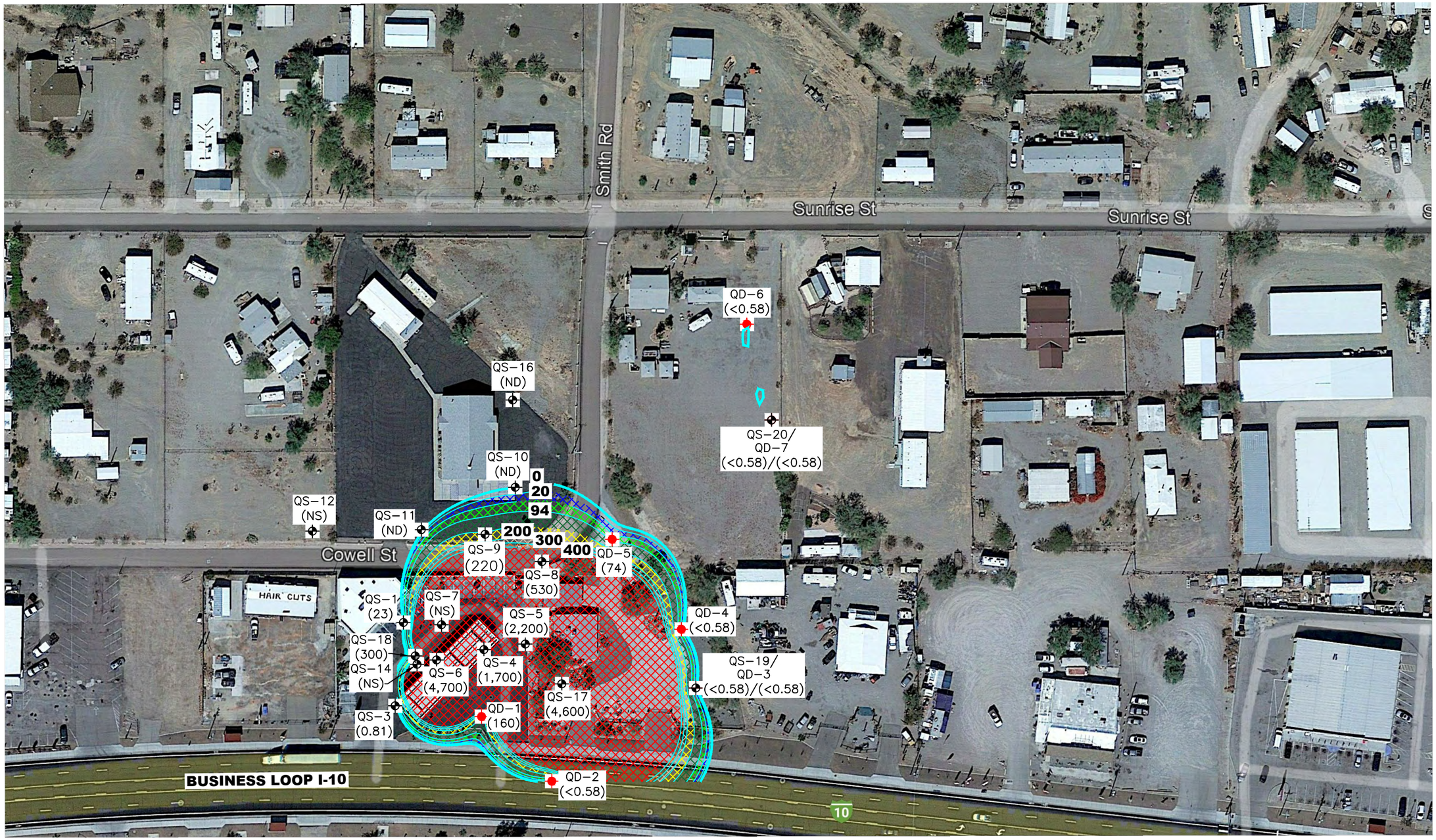


NORTH

0 100 200

Approximate Scale
1 inch = 100 feet

LEGEND

- Soil Boring/Grab Water Sample Locations
- Current Monitoring Well Locations
- (4,700) Concentration Of MTBE In Groundwater Measured In µg/L
- Line Of Equal Concentration Of MTBE In Groundwater Measured In µg/L
- (ND) Not Detected
- (NS) Not Sampled

FIGURE **5**

PROJECT NUMBER: SHA04.001

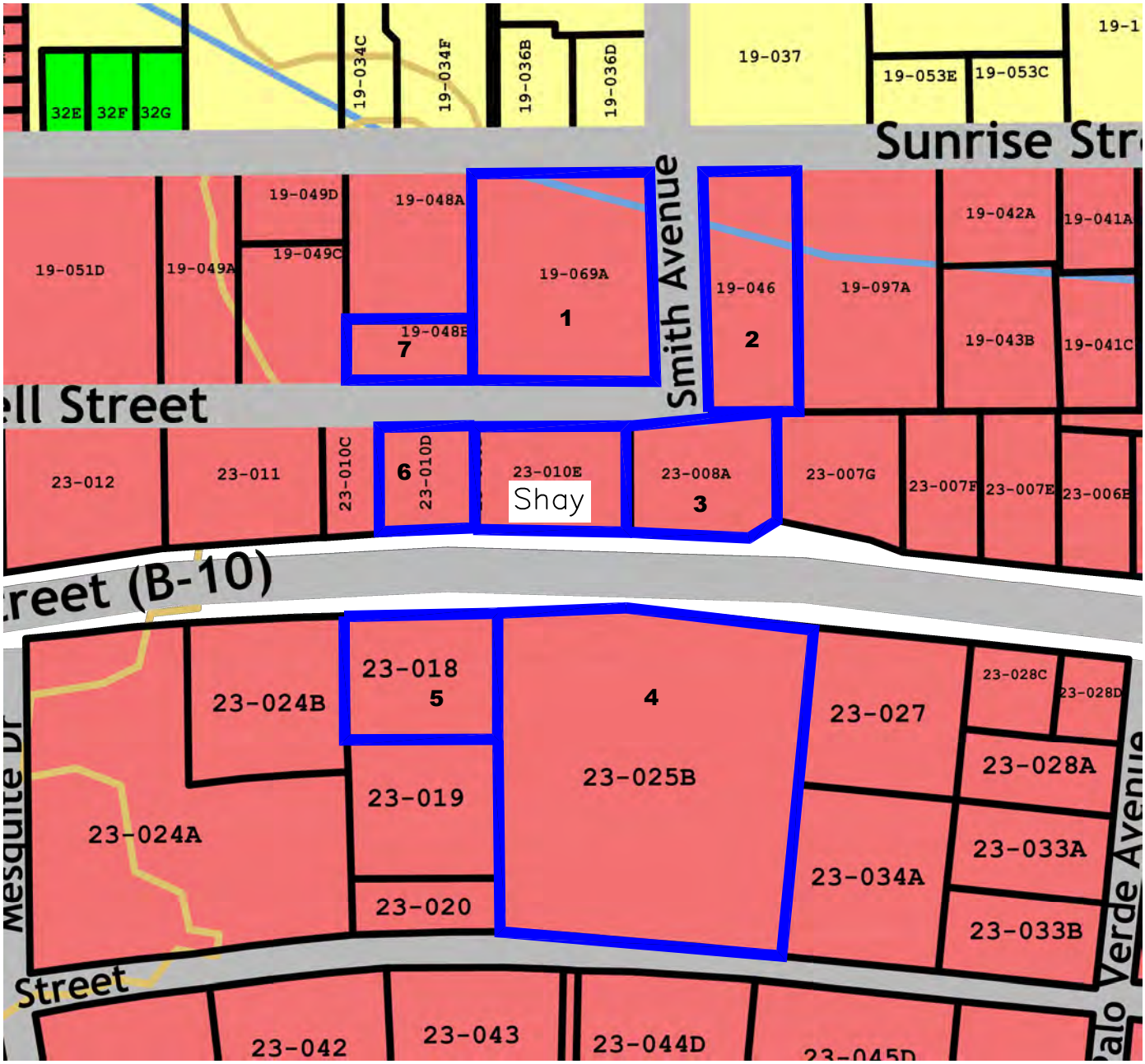
MAP OF MTBE IN GROUNDWATER

Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

DRAWN BY: N. Rouillard
DATE: 3/24/23

REVISIONS

APEX ENVIROTECH, INC.



LEGEND

1. Covenant Lutheran Church - 270 E Cowell St
2. Residence - 55 N Smith Ave
3. Residence - 310 E Main St
4. Crawford's RV Park - 315 E Main St
5. Vacant Lot - 235 E Main St
6. Quartzsite Beauty Salon - 250 E Main St
7. Vacant - 250 E Cowell St

APEX ENVIROTECH, INC.

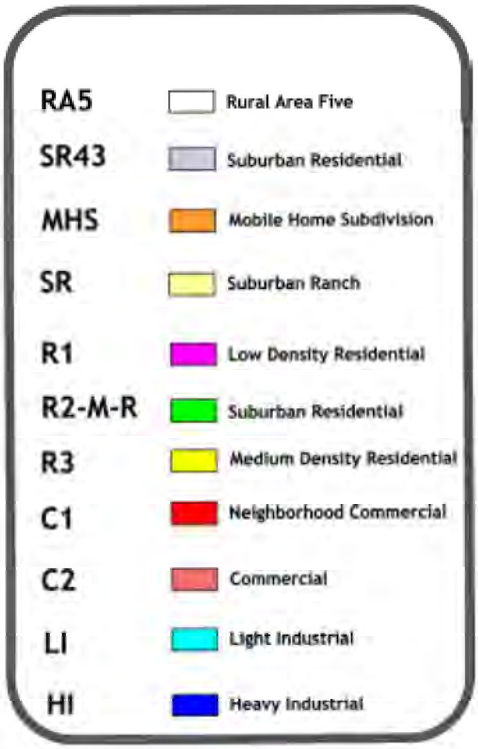
DRAWN BY: N. Rouillard
DATE: 3/24/23
REVISIONS

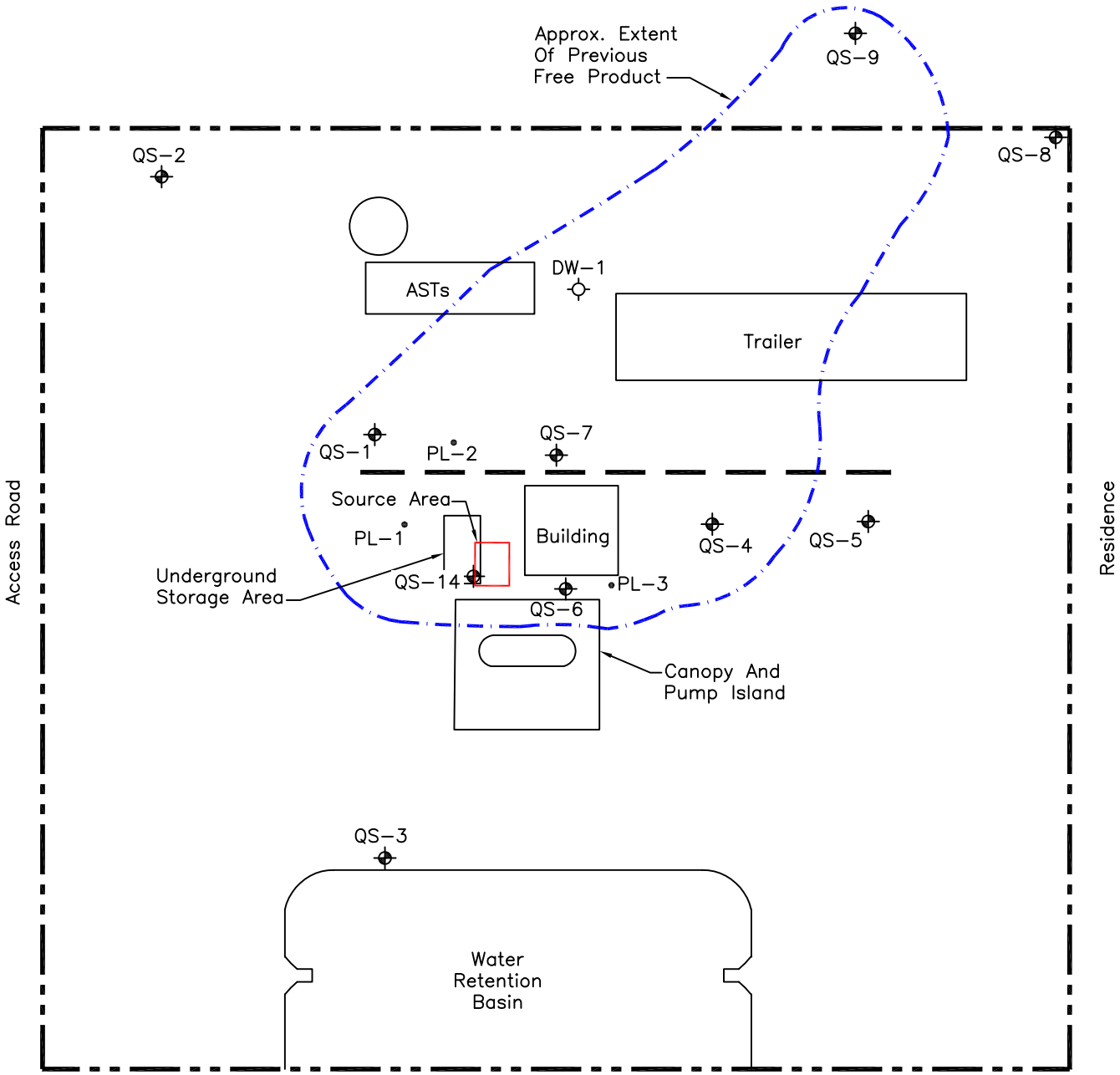
CURRENT SITE SPECIFIC LAND USE

Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

FIGURE
6

PROJECT NUMBER:
SHA04.001


RA5
Rural Area Five
SR43
Suburban Residential
MHS
Mobile Home Subdivision
SR
Suburban Ranch
R1
Low Density Residential
R2-M-R
Suburban Residential
R3
Medium Density Residential
C1
Neighborhood Commercial
C2
Commercial
LI
Light Industrial
HI
Heavy Industrial



APEX ENVIROTECH, INC.	DRAWN BY: N. Rouillard DATE: 3/24/23 REVISIONS	**HISTORIC SITE LAYOUT WITH LNAPL PLUME** Shay Oil Company, Inc. Business Loop I–10 Quartzsite, Arizona	FIGURE **7** PROJECT NUMBER: SHA04.001

TABLES

TABLE 1
GROUNDWATER ELEVATION DATA
Shay Oil Company Inc.
Business Loop I-10
Quartzsite, Arizona
(All measurements in feet)

Well #	Date	Reference Elevation*	Depth to Groundwater	Depth to FLH	FLH Thickness	Groundwater Elevation	Well Depth
QS-1	07/22/92	883.81	60.45	---	---	823.36	---
	08/04/92		60.22	---	---	823.59	---
	08/20/92		60.23	---	---	823.58	---
	09/17/92		60.33	---	---	823.48	---
	10/07/92		59.99	---	---	823.82	---
	10/14/92		60.04	---	---	823.77	---
	11/20/92		59.82	59.80	0.02	824.01	---
	02/01/93		59.72	59.71	0.01	824.10	---
	02/19/93		59.56	59.54	0.02	824.27	---
	03/11/93		59.53	59.50	0.03	824.30	---
	06/17/93		59.00	58.90	0.10	824.89	78.00
	09/09/93		59.05	58.85	0.20	824.91	---
	12/09/93		59.09	58.75	0.34	824.97	---
	3/17/94		57.15	---	---	826.66	---
	6/23/94		58.36	---	---	825.45	---
	9/20/94		58.24	---	---	825.57	73.00
	12/9/94		61.11	---	---	822.70	---
	3/1/95		Not measured due to Bioremediation in progress				---
	6/12/95		55.50	---	---	828.31	---
	9/29/95		57.10	---	---	826.71	80.40
	12/29/95		54.49	---	---	829.32	71.82
	3/22/96		57.48	---	---	826.33	74.90
	6/21/96		57.35	---	---	826.46	75.80
	10/18/96		57.60	---	---	826.21	78.43
	2/3/97		---	---	---	---	---
	4/11/97		---	---	---	---	---
	7/9/97		---	---	---	---	---
	10/24/97		---	---	---	---	---
	1/19/98		---	---	---	---	---
	1/11/01		59.05	---	---	824.76	---
	1/22/02		---	---	---	---	---
	3/21/02		59.50			824.31	68.90
	2/18/03		---	---	---	---	---
	1/6/04	886.50	60.69	---	---	825.81	62.33
	9/2/04		60.59	---	---	826.00	---
	1/19/05		60.65	---	---	825.94	62.46
	12/28/05		58.30	---	---	828.29	62.63
	7/5/06		57.72	---	---	828.87	67.10
	12/29/06		57.01	---	---	829.58	62.62
	6/29/07		56.75	---	---	829.84	62.63
	1/3/08		57.35	---	---	829.24	62.60
	6/17/08		56.40	---	---	830.19	62.41
	12/18/08		57.00	---	---	829.59	62.54
	1/28/10	886.59	51.27			835.32	62.37
	4/16/11		46.60	---	---	839.99	---
	1/17/13		50.08	---	---	836.51	---
	1/30/14		52.89	---	---	833.70	
	1/8/15		54.77	---	---	831.82	
	12/9/15		53.78	---	---	832.81	
	11/19/16		52.59	---	---	834.00	
	12/9/17		52.27	---	---	834.32	
	4/27/19		52.83	---	---	833.76	
	5/1/21		52.34	---	---	834.25	
	11/8/22		53.90	---	---	832.69	

TABLE 1
GROUNDWATER ELEVATION DATA
Shay Oil Company Inc.
Business Loop I-10
Quartzsite, Arizona
(All measurements in feet)

Well #	Date	Reference Elevation*	Depth to Groundwater	Depth to FLH	FLH Thickness	Groundwater Elevation	Well Depth
QS-2	07/22/92	883.13	59.99	---	---	823.14	---
	08/04/92		59.92	---	---	823.21	---
	08/20/92		59.94	---	---	823.19	---
	09/17/92		59.96	---	---	823.17	---
	10/07/92		59.61	---	---	823.52	---
	10/14/92		59.62	---	---	823.51	---
	11/20/92		59.46	---	---	823.67	74.80
	02/01/93		59.20	---	---	823.93	---
	02/19/93		59.19	---	---	823.94	---
	03/11/93		59.13	---	---	824.00	---
	06/17/93		58.85	---	---	824.28	80.00
	09/09/93		58.44	---	---	824.69	75.20
	12/09/93		58.32	---	---	824.81	---
	3/17/94		56.70	---	---	826.43	---
	6/23/94		57.74	---	---	825.39	---
	9/20/94		57.48	---	---	825.65	78.90
	12/9/94		55.85	---	---	827.28	---
	3/1/95		Not measured due to Bioremediation in progress				---
	6/12/95		52.73	---	---	830.40	71.00
	9/29/95		56.91	---	---	826.22	77.60
	12/29/95		56.91	---	---	826.22	83.89
	3/22/96		56.77	---	---	826.36	85.51
	6/21/96		56.23	---	---	826.90	82.40
	10/18/96		56.78	---	---	826.35	81.63
	2/3/97		---	---	---	---	---
	4/11/97		---	---	---	---	---
	7/9/97		---	---	---	---	---
	10/24/97		---	---	---	---	---
	1/19/98		---	---	---	---	---
	1/11/01		58.48	---	---	824.65	---
	1/22/02		---	---	---	---	---
	3/21/02		58.81			824.32	74.72
	2/18/03		---	---	---	---	---
	1/6/04		Abandoned March 20, 2003				

TABLE 1
GROUNDWATER ELEVATION DATA
Shay Oil Company Inc.
Business Loop I-10
Quartzsite, Arizona
(All measurements in feet)

Well #	Date	Reference Elevation*	Depth to Groundwater	Depth to FLH	FLH Thickness	Groundwater Elevation	Well Depth
QS-3	07/22/92	884.19	59.75	---	---	824.44	---
	08/04/92		59.54	---	---	824.65	---
	08/20/92		59.57	---	---	824.62	---
	09/17/92		59.68	---	---	824.51	---
	10/07/92		59.36	---	---	824.83	---
	10/14/92		59.37	---	---	824.82	---
	11/20/92		59.23	---	---	824.96	76.50
	02/01/93		59.10	---	---	825.09	---
	02/19/93		59.04	---	---	825.15	---
	03/11/93		58.93	---	---	825.26	---
	06/17/93		58.25	---	---	825.94	80.00
	09/09/93		57.89	---	---	826.30	76.20
	12/09/93		57.77	---	---	826.42	---
	3/17/94		57.57	---	---	826.62	---
	6/23/94		57.26	---	---	829.35	---
	9/20/94		56.93	---	---	829.68	76.00
	12/9/94		57.44	---	---	829.17	---
	3/1/95		Not measured due to Bioremediation in progress				---
	6/12/95		56.12	---	---	830.49	68.40
	9/29/95		56.22	---	---	830.39	61.00
	12/29/95		57.00	---	---	827.19	82.60
	3/22/96		56.85	---	---	827.34	84.88
	6/21/96		56.62	---	---	827.57	83.00
	10/18/96		56.80	---	---	827.39	86.23
	2/3/97		---	---	---	---	---
	4/11/97		---	---	---	---	---
	7/9/97		---	---	---	---	---
	10/24/97		---	---	---	---	---
	1/19/98		---	---	---	---	---
	1/11/01		58.61	---	---	825.58	---
	1/22/02		---	---	---	---	---
	3/21/02		59.03			825.16	74.82
	2/18/03		---	---	---	---	---
	1/6/04	886.61	60.16	---	---	826.45	75.00
	9/2/04		60.16	---	---	826.56	---
	1/19/05		60.42	---	---	826.30	75.00
	12/28/05		58.22	---	---	828.50	75.20
	7/5/06		57.28	---	---	829.44	79.80
	12/29/06		56.95	---	---	829.77	74.91
	6/29/07		56.81	---	---	829.91	75.11
	1/3/08		57.00	---	---	829.72	75.00
	6/17/08		57.15	---	---	829.57	75.51
	12/18/08		57.23	---	---	829.49	74.60
	1/28/10	886.72	50.23	---	---	836.49	75.30
	4/16/11		44.67	---	---	842.05	---
	1/17/13		50.01	---	---	836.71	---
	1/30/14		53.06			833.66	
	1/8/15		54.87	---	---	831.85	---
	12/9/15		54.36	--	--	832.36	75.55
	11/19/16		53.29			833.43	
	12/9/17		53.87	---	---	832.85	
	4/27/19		53.61	---	---	833.11	
	5/1/21		52.4	---	---	834.32	
	11/8/22		53.69	---	---	833.03	

TABLE 1
GROUNDWATER ELEVATION DATA
Shay Oil Company Inc.
Business Loop I-10
Quartzsite, Arizona
(All measurements in feet)

Well #	Date	Reference Elevation*	Depth to Groundwater	Depth to FLH	FLH Thickness	Groundwater Elevation	Well Depth
QS-4	07/22/92	---	61.50	61.03	0.47	---	---
	08/04/92		61.34	61.16	0.18	---	---
	08/20/92		61.64	61.54	0.10	---	---
	09/17/92		61.93	60.40	1.53	---	---
	10/07/92		---	---	---	---	---
	10/14/92		---	---	---	---	---
	11/20/92		60.41	60.40	0.01	---	---
	02/01/93		---	---	---	---	---
	02/19/93		61.60	60.23	1.37	---	---
	03/11/93		61.50	61.20	0.30	---	---
	06/17/93		59.80	59.40	0.40	---	80.00
	09/09/93		59.58	59.43	0.15	---	---
	12/09/93		59.76	59.50	0.26	---	---
	3/17/94		58.43	---	---	---	---
	6/23/94		58.93	---	---	---	---
	9/20/94		58.86	---	---	---	79.70
	12/9/94		---	---	---	---	---
	3/1/95		Not measured due to Bioremediation in progress				---
	6/12/95		51.00	---	---	---	71.80
	9/29/95		57.20	---	---	---	77.65
	12/29/95		56.35	---	---	---	76.82
	3/22/96		57.79	---	---	---	88.73
	6/21/96		58.55	---	---	---	83.30
	10/18/96		58.56	---	---	---	81.45
	2/3/97		---	---	---	---	---
	4/11/97		---	---	---	---	---
	7/9/97		---	---	---	---	---
	10/24/97		---	---	---	---	---
	1/19/98		---	---	---	---	---
	1/11/01		60.15	---	---	---	---
	1/22/02		---	---	---	---	---
	3/21/02		57.54			---	60.70
	2/18/03		---	---	---	---	---
	1/6/04	886.42	60.84	---	---	825.58	74.00
	9/2/04		61.96	60.86	1.10	825.39	---
	1/19/05		61.23	60.88	0.35	825.55	---
	12/28/05		58.26	---	---	828.26	74.35
	7/5/06		57.23	---	---	829.29	78.80
	12/29/06		56.66	---	---	829.86	74.66
	6/29/07		57.09	---	---	829.43	74.74
	1/3/08		58.71	---	---	827.81	74.60
	6/17/08		57.80	---	---	828.72	74.89
	12/18/08		57.40	---	---	829.12	74.50
	1/28/10		55.91	---	---	830.61	72.32
	4/16/11	886.52	48.27	---	---	838.25	---
	1/17/13		50.82	---	---	835.70	---
	1/30/14		NR			NR	
	1/8/15		55.13	---	---	831.39	---
	12/9/16		54.80	---	---	831.72	75.82
	11/19/16		54.59	--	--	831.93	
	3/18/17		53.12			833.40	
	12/9/17		53.51	---	---	833.01	75.82
	4/27/19		53.79	---	---	832.73	
	5/1/21		53.10	---	---	833.42	
	11/8/22		54.60	---	---	831.92	

TABLE 1
GROUNDWATER ELEVATION DATA
Shay Oil Company Inc.
Business Loop I-10
Quartzsite, Arizona
(All measurements in feet)

Well #	Date	Reference Elevation*	Depth to Groundwater	Depth to FLH	FLH Thickness	Groundwater Elevation	Well Depth
QS-5	10/07/92	885.11	61.64	---	---	823.47	---
	10/14/92		61.66	---	---	823.45	---
	11/20/92		61.52	---	---	823.59	73.65
	02/01/93		61.50	---	---	823.61	---
	02/19/93		61.36	---	---	823.75	---
	03/11/93		61.24	---	---	823.87	---
	06/17/93		60.77	---	---	824.34	76.00
	09/09/93		60.91	---	---	824.20	73.90
	12/09/93		60.84	---	---	824.27	---
	3/17/94		59.89	---	---	825.22	---
	6/23/94		60.37	---	---	824.74	---
	9/20/94		60.15	---	---	824.96	74.00
	12/9/94		59.76	---	---	825.35	---
	3/1/95		Not measured due to Bioremediation in progress				---
	6/12/95		57.45	---	---	827.66	73.40
	9/29/95		59.92	---	---	825.19	63.90
	12/29/95		60.15	---	---	824.96	76.20
	3/22/96		60.02	---	---	825.09	83.93
	6/21/96		59.88	---	---	825.23	77.97
	10/18/96		60.13	---	---	824.98	81.92
	2/3/97		---	---	---	---	---
	4/11/97		---	---	---	---	---
	7/9/97		---	---	---	---	---
	10/24/97		---	---	---	---	---
	1/19/98		---	---	---	---	---
	1/11/01		61.17	---	---	823.94	---
	1/22/02		61.70	---	---	823.41	76.03
	3/21/02		61.73	---	---	823.38	73.60
	2/18/03		62.40	---	---	822.71	73.45
	1/6/04	886.42	62.40	---	---	824.02	71.98
	9/2/04		62.40	---	---	825.23	---
	1/19/05		62.73	---	---	824.90	72.29
	12/28/05		59.90	---	---	827.73	72.40
	7/5/06		58.49	---	---	829.14	76.75
	12/29/06		58.34	---	---	829.29	72.44
	6/29/07		58.07	---	---	829.56	72.55
	1/3/08		58.50	---	---	829.13	72.45
	6/17/08		59.60	---	---	828.03	72.40
	12/18/08		59.65	---	---	827.98	72.40
	1/28/10		52.50	---	---	835.13	74.89
	4/16/11	887.63	51.76	---	---	835.87	---
	1/17/13		52.58	---	---	835.05	---
	1/30/14		NR	---	---	NR	
	1/8/15		57.07	---	---	830.56	---
	12/9/15		57.16	---	---	830.47	73.31
	11/19/16		57.06	---	---	830.57	
	3/18/17		55.99	---	---	831.64	
	12/9/17		55.67	---	---	831.96	
	4/27/19		55.90	---	---	831.73	
	5/1/21		55.10	---	---	832.53	
	11/7/22		56.40	---	---	831.23	

TABLE 1
GROUNDWATER ELEVATION DATA
Shay Oil Company Inc.
Business Loop I-10
Quartzsite, Arizona
(All measurements in feet)

Well #	Date	Reference Elevation*	Depth to Groundwater	Depth to FLH	FLH Thickness	Groundwater Elevation	Well Depth
QS-6							
	10/07/92	884.73	60.46	---	---	824.27	---
	10/14/92		61.48	60.59	0.89	823.92	---
	11/20/92		60.49	60.48	0.01	824.25	---
	02/01/93		61.05	60.42	0.63	824.15	---
	02/19/93		60.83	60.25	0.58	824.34	---
	03/11/93		60.82	60.32	0.50	824.29	---
	06/17/93		60.25	59.83	0.42	824.80	75.00
	09/09/93		59.53	59.35	0.18	825.34	---
	12/09/93		59.49	59.26	0.23	825.41	---
	3/17/94		59.92	58.82	1.10	825.64	---
	6/23/94		56.45	56.05	0.40	828.58	---
	9/20/94		57.38	56.05	1.33	828.35	73.60
	12/9/94		60.76	---	---	823.97	---
	3/1/95		Not measured due to Bioremediation in progress				---
	6/12/95		54.40	---	---	830.33	57.80
	9/29/95		58.10	---	---	826.63	81.50
	12/29/95		57.64	---	---	827.09	68.89
	3/22/96		57.97	---	---	826.76	69.00
	6/21/96		58.45	---	---	826.28	68.25
	10/18/96		58.04	---	---	826.69	75.83
	2/3/97		---	---	---	---	---
	4/11/97		---	---	---	---	---
	7/9/97		---	---	---	---	---
	10/24/97		---	---	---	---	---
	1/19/98		---	---	---	---	---
	1/11/01		59.80	---	---	824.93	---
	1/22/02		60.33	---	---	824.40	72.22
	3/21/02		60.31	---	---	824.42	71.70
	2/18/03		60.93	---	---	823.80	72.40
	1/6/04	886.68	Filled with pea gravel	---	---	---	---
	9/2/04		61.02	---	---	825.75	68.56
	1/19/05		60.93	---	---	825.84	73.34
	12/28/05		58.47	---	---	828.30	73.52
	7/5/06		57.71	---	---	829.06	78.00
	12/29/06		57.03	---	---	829.74	73.44
	6/29/07		57.11	---	---	829.66	73.37
	1/3/08		57.36	---	---	829.41	73.50
	6/17/08		57.82	---	---	828.95	73.30
	12/18/08		57.30	---	---	829.47	73.20
	1/28/10		54.62	---	---	832.15	73.13
	4/16/11	886.77	47.23	---	---	839.54	---
	1/17/13		50.15	---	---	836.62	---
	1/30/14		NR	---	---	NR	
	1/8/15		54.16	---	---	832.61	---
	12/9/16		53.02	---	---	833.75	50.10
	11/19/16		53.42	---	---	833.35	
	3/18/17		52.19	---	---	834.58	
	12/9/17		52.36	---	---	834.41	
	4/27/19		53.74	---	---	833.03	
	5/1/21		52.77	---	---	834.00	
	11/8/22		54.28	---	---	832.49	

TABLE 1
GROUNDWATER ELEVATION DATA
Shay Oil Company Inc.
Business Loop I-10
Quartzsite, Arizona
(All measurements in feet)

Well #	Date	Reference Elevation*	Depth to Groundwater	Depth to FLH	FLH Thickness	Groundwater Elevation	Well Depth
QS-7	10/07/92	884.46	60.76	---	---	823.70	---
	10/14/92		60.79	60.39	0.40	823.97	---
	11/20/92		60.42	---	---	824.04	75.10
	02/01/93		60.45	60.35	0.10	824.09	---
	02/19/93		60.25	60.20	0.05	824.25	---
	03/11/93		60.25	60.17	0.08	824.27	---
	06/17/93		---	---	---	---	---
	09/09/93		60.68	59.46	1.22	824.70	---
	12/09/93		60.60	59.43	1.17	824.70	---
	3/17/94		58.74	---	---	825.72	---
	6/23/94		57.37	---	---	827.09	---
	9/20/94		58.02	---	---	826.44	74.80
	12/9/94		---	---	---	---	---
	3/1/95		Not measured due to Bioremediation in progress				---
	6/12/95		55.57	---	---	828.89	66.60
	9/29/95		57.95	---	---	826.51	77.60
	12/29/95		---	---	---	---	---
	3/22/96		57.92	---	---	826.54	---
	6/21/96		57.83	---	---	826.63	82.57
	10/18/96		57.88	---	---	826.58	86.04
	2/3/97		58.10	---	---	826.36	80.20
	4/11/97		58.01	---	---	826.45	78.50
	7/9/97		57.10	---	---	827.36	81.49
	10/24/97		59.11	---	---	825.35	78.00
	1/19/98		58.20	---	---	826.26	78.42
	1/11/01		59.42	---	---	825.04	---
	1/22/02		59.90	---	---	824.56	77.80
	3/21/02		59.92	---	---	824.54	74.49
	2/18/03		60.55	---	---	823.91	74.50
	1/6/04	886.42	60.69	---	---	825.73	65.30
	9/2/04	886.42	60.69	---	---	823.77	---
	1/19/05		60.65	---	---	823.81	65.78
	12/28/05		58.07	---	---	827.26	65.88
	7/5/06		57.20	---	---	829.22	69.80
	12/29/06		56.66	---	---	829.76	65.99
	6/29/07		56.38	---	---	830.04	65.84
	1/3/08		56.75	---	---	829.67	65.95
	6/17/08		56.30	---	---	830.12	63.90
	12/18/08		57.00	---	---	829.42	65.77
	1/28/10		51.35	---	---	835.07	62.71
	4/16/11		47.11	---	---	839.31	---
	1/17/13		49.75	---	---	836.67	---
	1/30/14		NR			NR	
	1/8/15		54.71	---	---	831.71	---
	12/9/16		NR			NR	
	11/19/16		52.90			833.52	
	12/9/17		NR	---	---	NR	
	4/27/19		Obstruction in the well above water level				
	5/1/21		NR			NR	
	11/7/22		Obstruction in the well above water level				

TABLE 1
GROUNDWATER ELEVATION DATA
Shay Oil Company Inc.
Business Loop I-10
Quartzsite, Arizona
(All measurements in feet)

Well #	Date	Reference Elevation*	Depth to Groundwater	Depth to FLH	FLH Thickness	Groundwater Elevation	Well Depth
QS-8	10/07/92	884.63	65.46	---	---	819.17	---
	10/14/92		65.40	---	---	819.23	---
	11/20/92		65.25	---	---	819.38	74.80
	02/01/93		65.10	---	---	819.53	---
	02/19/93		64.03	---	---	820.60	---
	03/11/93		65.00	---	---	819.63	---
	06/17/93		64.70	---	---	819.93	76.00
	09/09/93		64.24	---	---	820.39	74.80
	12/09/93		64.06	---	---	820.57	---
	3/17/94		63.80	---	---	820.83	---
	6/23/94		63.56	---	---	823.25	---
	9/20/94		63.33	---	---	821.30	74.50
	12/9/94		63.80	---	---	820.83	---
	3/1/95		Not measured due to Bioremediation in progress				---
	6/12/95		61.85	---	---	822.78	---
	9/29/95		62.35	---	---	822.28	79.60
	12/29/95		62.68	---	---	821.95	85.22
	3/22/96		62.58	---	---	822.05	86.00
	6/21/96		62.63	---	---	822.31	81.45
	10/18/96		62.53	---	---	822.10	88.68
	2/3/97		62.30	---	---	822.33	80.50
	4/11/97		62.05	---	---	822.58	78.47
	7/9/97		62.01	---	---	822.62	90.68
	10/24/97		62.10	---	---	822.53	76.54
	1/19/98		61.98	---	---	822.65	79.31
	1/11/01		---	---	---	---	---
	1/22/02		63.05	---	---	821.58	76.30
	3/21/02		63.00	---	---	821.63	74.80
	2/18/03		63.49	---	---	821.14	74.84
	1/6/04	886.81	63.63	---	---	823.18	74.90
	9/2/04		63.63	---	---	823.31	---
	1/19/05		63.48	---	---	823.46	74.86
	12/28/05		62.06	---	---	824.88	74.95
	7/5/06		61.65	---	---	825.29	80.65
	12/29/06		61.19	---	---	825.75	75.13
	6/29/07		60.78	---	---	826.16	74.97
	1/3/08		61.34	---	---	825.60	75.50
	6/17/08		59.95	---	---	826.99	74.80
	12/18/08		60.61	---	---	826.33	74.65
	1/28/10	886.94	58.13	---	---	828.81	74.74
	4/16/11		54.36	---	---	832.58	---
	1/17/13		54.39	---	---	832.55	---
	1/30/14		56.08			830.86	
	1/8/15		57.81	---	---	829.13	---
	12/9/15		57.70	---	---	829.24	75.25
	11/19/16		55.52	---	---	831.42	
	12/9/17		54.16	---	---	832.78	
	4/27/19		55.34	---	---	831.47	
	5/1/21		55.20	---	---	831.74	80.10
	11/7/22		56.56	---	---	830.38	

TABLE 1
GROUNDWATER ELEVATION DATA
Shay Oil Company Inc.
Business Loop I-10
Quartzsite, Arizona
(All measurements in feet)

Well #	Date	Reference Elevation*	Depth to Groundwater	Depth to FLH	FLH Thickness	Groundwater Elevation	Well Depth
QS-9	10/07/92	884.23	65.42	---	---	818.81	---
	10/14/92		65.41	---	---	818.82	---
	11/20/92		64.89	---	---	819.34	75.00
	02/01/93		66.19	65.14	1.05	818.83	---
	02/19/93		67.03	64.51	2.52	819.09	---
	03/11/93		66.30	64.80	1.50	819.06	---
	06/17/93		65.52	64.74	0.78	819.30	76.00
	09/09/93		64.80	64.51	0.29	819.65	---
	12/09/93		66.10	64.10	2.00	819.63	---
	3/17/94		64.04	62.45	1.59	821.38	---
	6/23/94		64.03	63.63	0.40	820.50	---
	9/20/94		62.38	---	---	821.85	75.30
	12/9/94		---	---	---	---	---
	3/1/95		Not measured due to Bioremediation in progress				---
	6/12/95		59.65	---	---	824.58	---
	9/29/95		62.40	---	---	821.83	80.20
	12/29/95		62.73	---	---	821.50	82.00
	3/22/96		62.89	---	---	821.34	83.54
	6/21/96		62.76	---	---	821.47	82.50
	10/18/96		62.67	---	---	821.56	82.90
	2/3/97		---	---	---	---	---
	4/11/97		---	---	---	---	---
	7/9/97		---	---	---	---	---
	10/24/97		---	---	---	---	---
	1/19/98		---	---	---	---	---
	1/11/01		62.90	---	---	821.33	---
	1/22/02		---	---	---	---	---
	3/21/02		62.67	---	---	821.56	74.69
	2/18/03		63.46	---	---	820.77	75.45
	1/6/04[1]	886.93	64.25	63.78	0.47	823.03	---
	9/2/04		64.25	63.78	0.47	822.41	---
	1/19/05		63.41	---	---	822.90	75.55
	12/28/05		62.14	---	---	824.17	75.72
	7/5/06		61.78	---	---	824.53	80.50
	12/29/06		61.35	---	---	824.96	75.61
	6/29/07		61.49	---	---	824.82	80.00
	1/3/08		61.42	---	---	824.89	75.60
	6/17/08		60.51	---	---	825.80	75.64
	12/18/08		61.49	---	---	824.82	75.55
	1/28/10		58.25	---	---	828.06	74.85
	4/16/11	886.31	54.63	---	---	831.68	---
	1/17/13		54.62	---	---	831.69	---
	1/30/14		55.18	---	---	831.13	
	1/8/15		57.20	---	---	829.11	---
	12/9/16		56.92	---	---	829.39	75.15
	11/16/16		53.37	---	---	832.94	
	3/18/17		51.37	---	---	834.94	
	12/9/17		52.80	---	---	833.51	
	4/27/19		54.42	---	---	832.51	
	5/1/21		54.30	---	---	832.01	78.60
	11/7/22		55.66	---	---	830.65	

TABLE 1
GROUNDWATER ELEVATION DATA
Shay Oil Company Inc.
Business Loop I-10
Quartzsite, Arizona
(All measurements in feet)

Well #	Date	Reference Elevation*	Depth to Groundwater	Depth to FLH	FLH Thickness	Groundwater Elevation	Well Depth
QS-10	02/01/93	884.16	66.40	---	---	817.76	---
	02/19/93		66.23	---	---	817.93	85.25
	03/11/93		66.15	---	---	818.01	---
	06/17/93		65.85	---	---	818.31	85.00
	09/09/93		65.19	---	---	818.97	85.20
	12/09/93		65.06	---	---	819.10	---
	3/17/94		64.76	---	---	819.40	---
	6/23/94		64.44	---	---	819.72	---
	9/20/94		64.12	---	---	820.04	85.00
	12/9/94		64.52	---	---	819.64	---
	3/1/95		Not measured due to Bioremediation in progress				---
	6/12/95		62.80	---	---	821.36	91.90
	9/29/95		63.02	---	---	821.14	90.30
	12/29/95		63.45	---	---	820.71	90.97
	3/22/96		63.30	---	---	820.86	98.95
	6/21/96		63.30	---	---	820.86	95.60
	10/18/96		63.15	---	---	821.01	97.99
	2/3/97		62.10	---	---	822.06	90.40
	4/11/97		62.90	---	---	821.26	91.15
	7/9/97		62.90	---	---	821.26	93.34
	10/24/97		63.18	---	---	820.98	87.75
	1/19/98		62.80	---	---	821.36	90.13
	1/11/01		63.10	---	---	821.06	---
	1/22/02		---	---	---	---	---
	3/21/02		63.45			820.71	85.11
	2/18/03		63.81	---	---	820.35	85.25
	1/6/04	886.33	64.00	---	---	822.33	90.50
	9/2/04		64.11	---	---	822.37	---
	1/19/05		63.61	---	---	822.87	85.10
	12/28/05		62.76	---	---	823.72	85.22
	7/5/06		62.51	---	---	823.97	88.85
	12/29/06		62.24	---	---	824.24	85.45
	6/29/07		61.66	---	---	824.82	91.00
	1/3/08		62.30	---	---	824.18	85.42
	6/17/08		60.90	---	---	825.58	89.95
	12/18/08		61.20	---	---	825.28	85.40
	1/28/10	886.48	59.49	---	---	826.99	84.90
	4/16/11		55.89	---	---	830.59	---
	1/17/13		55.21	---	---	831.27	---
	1/30/14		56.49	---	---	829.99	
	1/8/15		58.15	---	---	828.33	---
	12/9/16		58.17	---	---	828.31	88.35
	11/19/16		53.25	---	---	833.23	
	12/9/17		53.02	---	---	833.46	
	4/27/19		55.36	---	---	832.51	
	5/1/21		55.25	---	---	831.23	90.00
	11/9/22		56.63	---	---	829.85	

TABLE 1
GROUNDWATER ELEVATION DATA
Shay Oil Company Inc.
Business Loop I-10
Quartzsite, Arizona
(All measurements in feet)

Well #	Date	Reference Elevation*	Depth to Groundwater	Depth to FLH	FLH Thickness	Groundwater Elevation	Well Depth
QS-11	02/01/93	883.66	64.10	---	---	819.56	---
	02/19/93		63.80	---	---	819.86	75.58
	03/11/93		63.67	---	---	819.99	---
	06/17/93		63.21	---	---	820.45	75.00
	09/09/93		62.55	---	---	821.11	75.60
	12/09/93		62.33	---	---	821.33	---
	3/17/94		61.95	---	---	821.71	---
	6/23/94		61.61	---	---	822.05	---
	9/20/94		Not measured: Packer in the way				
	12/9/94		---	---	---	---	---
	3/1/95		Not measured due to Bioremediation in progress				---
	6/12/95		59.40	---	---	824.26	---
	9/29/95		61.80	---	---	821.86	71.90
	12/29/95		60.67	---	---	822.99	76.60
	3/22/96		60.59	---	---	823.07	86.98
	6/21/96		60.45	---	---	823.21	80.00
	10/18/96		62.90	---	---	820.76	103.41
	2/3/97		60.50	---	---	825.37	70.90
	4/11/97		62.77	---	---	823.10	65.65
	7/9/97		60.30	---	---	825.57	86.70
	10/24/97		60.88	---	---	824.99	70.18
	1/19/98		61.34	---	---	824.53	70.75
	1/11/01		61.15	---	---	824.72	---
	1/22/02		---	---	---	---	---
	3/21/02		61.70	---	---	824.17	66.30
	2/18/03		62.00	---	---	823.87	67.35
	1/6/04	885.87	62.17	---	---	823.70	66.49
	9/2/04		62.12	---	---	823.89	---
	1/19/05		61.65	---	---	824.36	66.45
	12/28/05		60.31	---	---	825.70	66.65
	7/5/06		62.25	---	---	823.76	70.85
	12/29/06		59.66	---	---	826.35	66.64
	6/29/07		59.03	---	---	826.98	66.56
	1/3/08		59.73	---	---	826.28	66.63
	6/17/08		57.95	---	---	828.06	66.35
	12/18/08		58.32	---	---	827.69	66.50
	1/28/10	886.01	54.75	---	---	831.26	66.19
	4/16/11		51.02	---	---	834.99	---
	1/17/13		52.81	---	---	833.20	---
	1/30/14		54.56	---	---	831.45	
	1/8/15		56.29	---	---	829.72	---
	12/9/16		55.97	---	---	830.04	66.97
	11/16/16		51.64	---	---	834.37	
	12/9/17		51.84	---	---	834.17	
	4/27/19		53.54	---	---	832.33	
	5/1/21		53.45	---	---	832.56	71.20
	11/7/22		54.76	---	---	831.25	

TABLE 1
GROUNDWATER ELEVATION DATA
Shay Oil Company Inc.
Business Loop I-10
Quartzsite, Arizona
(All measurements in feet)

Well #	Date	Reference Elevation*	Depth to Groundwater	Depth to FLH	FLH Thickness	Groundwater Elevation	Well Depth
QS-12	02/01/93	882.56	60.80	---	---	821.76	---
	02/19/93		60.44	---	---	822.12	75.33
	03/11/93		60.34	---	---	822.22	---
	06/17/93		59.67	---	---	822.89	75.00
	09/09/93		58.96	---	---	823.60	75.40
	12/09/93		58.95	---	---	823.61	---
	3/17/94		58.73	---	---	823.83	---
	6/23/94		58.26	---	---	824.30	---
	9/20/94		58.04	---	---	824.52	75.70
	12/9/94		58.65	---	---	823.91	---
	3/1/95		Not measured due to Bioremediation in progress				---
	6/12/95		57.20	---	---	825.36	---
	9/29/95		57.18	---	---	825.38	81.70
	12/29/95		57.98	---	---	824.58	80.25
	3/22/96		57.90	---	---	824.66	92.99
	6/21/96		57.75	---	---	824.81	80.09
	10/18/96		57.66	---	---	824.90	95.88
	2/3/97		---	---	---	---	---
	4/11/97		---	---	---	---	---
	7/9/97		---	---	---	---	---
	10/24/97		---	---	---	---	---
	1/19/98		---	---	---	---	---
	1/11/01		58.91	---	---	823.65	---
	1/22/02		59.50	---	---	823.06	77.31
	3/21/02		59.51	---	---	823.05	75.11
	2/18/03		59.87	---	---	822.69	75.22
	1/6/04	884.75	60.40	---	---	824.35	75.40
	9/2/04	884.75	60.41	---	---	824.34	---
	1/19/05		59.73	---	---	825.02	75.25
	12/28/05		58.30	---	---	826.45	75.39
	7/5/06		58.06	---	---	826.69	80.25
	12/29/06		57.50	---	---	827.25	75.35
	6/29/07		56.97	---	---	827.78	75.25
	1/3/08		58.01	---	---	826.74	75.40
	6/17/08		58.10	---	---	826.65	75.41
	12/18/08		56.68	---	---	828.07	75.00
	1/28/10		52.29			832.46	74.90
	4/16/11		48.31	---	---	836.44	---
	1/17/13		---	---	---	---	---
	11/19/16		---				
	12/9/17		---	---	---	---	---
	5/1/21		Could not be Located				
	11/7/22		Could not be Located				

TABLE 1
GROUNDWATER ELEVATION DATA
Shay Oil Company Inc.
Business Loop I-10
Quartzsite, Arizona
(All measurements in feet)

Well #	Date	Reference Elevation*	Depth to Groundwater	Depth to FLH	FLH Thickness	Groundwater Elevation	Well Depth
QS-13	02/01/93	883.55	59.60	---	---	823.95	---
	02/19/93		59.04	---	---	824.51	75.50
	03/11/93		59.25	---	---	824.30	---
	06/17/93		58.70	---	---	824.85	75.00
	09/09/93		58.30	---	---	825.25	75.50
	12/09/93		58.13	---	---	825.42	---
	3/17/94		57.94	---	---	825.61	---
	6/23/94		57.59	---	---	825.96	---
	9/20/94		57.34	---	---	826.21	75.30
	12/9/94		57.64	---	---	825.91	---
	3/1/95		Not measured due to Bioremediation in progress				---
	6/12/95		56.49	---	---	827.06	---
	9/29/95		56.66	---	---	826.89	85.90
	12/29/95		56.82	---	---	826.73	79.34
			Abandoned well March 20, 2003				
QS-14	3/1/95		Not measured due to Bioremediation in progress				---
	6/12/95		17.00	---	---	---	---
	9/29/95		---	---	---	---	---
	12/29/95		---	---	---	---	---
	3/22/96		---	---	---	---	---
	6/21/96		---	---	---	---	---
	10/18/96		---	---	---	---	---
	2/3/97		---	---	---	---	---
	4/11/97		---	---	---	---	---
	7/9/97		---	---	---	---	---
	10/24/97		---	---	---	---	---
	1/19/98		---	---	---	---	---
	1/11/01		---	---	---	---	---
	3/20/03		Abandoned March 20, 2003				
QS-15	3/1/95		Not measured due to Bioremediation in progress				---
	6/12/95		56.59	---	---	---	---
	9/29/95		---	---	---	---	---
	12/29/95		57.21	---	---	---	---
	3/22/96		57.25	---	---	---	---
	6/21/96		57.14	---	---	---	77.91
	10/18/96		57.25	---	---	---	77.20
	2/3/97		---	---	---	---	---
	4/11/97		---	---	---	---	---
	7/9/97		---	---	---	---	---
	10/24/97		---	---	---	---	---
	1/19/98		---	---	---	---	---
	1/11/01		Well destroyed 1998	---	---	---	---

TABLE 1
GROUNDWATER ELEVATION DATA
Shay Oil Company Inc.
Business Loop I-10
Quartzsite, Arizona
(All measurements in feet)

Well #	Date	Reference Elevation*	Depth to Groundwater	Depth to FLH	FLH Thickness	Groundwater Elevation	Well Depth
QS-16	3/1/95		Not measured due to Bioremediation in progress				---
	6/12/95		68.55	---	---	---	75.80
	9/29/95		66.30	---	---	---	75.00
	12/29/95		66.40	---	---	---	76.25
	3/22/96		66.35	---	---	---	76.25
	6/21/96		68.21	---	---	---	76.25
	10/18/96		65.78	---	---	---	77.89
	2/3/97		65.90	---	---	---	75.40
	4/11/97		65.85	---	---	---	77.72
	7/9/97		65.65	---	---	---	76.79
	10/24/97		65.64	---	---	---	74.94
	1/19/98		65.42	---	---	---	75.44
	1/11/01		64.82	---	---	---	---
	1/22/02		---	---	---	---	---
	3/21/02		65.05	---	---	---	74.04
	2/18/03		65.27	---	---	---	74.12
	1/6/04		Unable to locate	---	---		---
	9/2/04		64.20	---	---	821.58	---
	1/19/05		64.97	---	---	820.81	74.23
	12/28/05		64.47	---	---	821.31	74.25
	7/5/06		64.29	---	---	821.49	76.00
	12/29/06		64.15	---	---	821.63	74.39
	6/29/07		63.68	---	---	822.10	74.39
	1/3/08		64.21	---	---	821.57	74.00
	6/17/08		62.95	---	---	822.83	74.32
	12/18/08		63.00	---	---	822.78	74.20
	1/28/10	885.78	61.45	---	---	824.33	74.10
	4/16/11		57.18	---	---	828.60	---
	1/17/13		56.17	---	---	829.61	---
	1/30/14		56.98	---	---	828.80	
	1/8/15		58.54	---	---	827.24	---
	12/9/15		58.72	---	---	827.06	74.52
	11/19/16		51.85	---	---	833.93	
	12/9/17		52.92	---	---	832.86	
	4/27/19		55.25	---	---	830.30	
	5/1/21		55.32	---	---	830.46	75.60
	11/9/22		56.60	---	---	829.18	
QS-17	5/1/21	888.2	55.50	---	---	832.70	76.50
	11/7/22		58.87	---	---	829.33	
QS-18	5/1/21	886.34	52.20	---	---	834.14	80.22
	11/7/22		53.78	---	---	832.56	
QS-19	11/8/22	888.54	58.87	---	---	829.67	
QS-20	11/8/22	887.86	60.73	---	---	827.13	

Notes:

* Depth to measurements taken from notch/mark at top north side of well casing.

Groundwater Elevation referenced to mean sea level.

[1] -Groundwater elevation was corrected for free product using TPHg denisity of 0.739

Well Depth = Measured from top of casing to bottom of well

--- Not measured/observed

Reference Elevation by Delta Environmental Consultants, Inc. (Delta), of Phoenix, Arizona.

Measurements prior to and including 10/14/92 collected by Delta.

Measurements for 11/20/92 to 03/11/93 collected by Aegis Environmental, Inc., of Roseville, California.

NR - Not recorded

TABLE 2
CURRENT GROUNDWATER ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	Naphthalene	n-Propyl-benzene	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
AWQS		**NE**	**5**	**1,000**	**700**	**10,000**	**20/94****	**140**	**NE**	**70**	**NE**
QD-1*	3/31/2022	---	<1.1	<1.9	<1.3	<2.0	**160**	<1.6	<1.5	<1.1	<1.3
QD-2*	3/30/2022	---	<0.21	<0.37	<0.25	<0.39	<0.58	<0.31	<0.29	<0.22	<0.26
QD-3*	3/29/2022	---	<0.21	<0.37	<0.25	<0.39	<0.58	<0.31	<0.29	<0.22	<0.26
QD-4*	3/30/2022	---	<0.21	<0.37	<0.25	<0.39	<0.58	<0.31	<0.29	<0.22	<0.26
QD-5*	3/31/2022	---	<0.21	<0.37	<0.25	0.54	**74**	<0.31	<0.29	<0.22	<0.26
QD-6*	8/3/2022	---	<0.21	<0.37	<0.25	<0.39	<0.58	<0.31	<0.29	<0.22	<0.26
QD-7*	8/2/2022	---	<0.21	<0.37	<0.25	<0.39	<0.58	<1.6	<1.5	<1.1	<1.3
QS-1	11/8/2022	---	**3.9**	**1.5**	**40**	**3.6**	**23**	**7.5**	**5.2**	**1.4**	**0.35**
QS-3	11/8/2022	---	**0.87**	**0.51**	**2.4**	**0.35**	**0.81**	**0.62**	<0.29	**0.27**	<0.26
QS-4	11/8/2022	---	**<13**	<24	**46**	<25	**1700**	<20	<19	<14	<17
QS-5	11/7/2022	---	**<17**	<30	<20	<31	**2200**	<25	<23	<18	<21
QS-6	11/8/2022	---	**190**	<37	**330**	<39	**4700**	**81**	**31**	<22	<26
QS-8	11/7/2022	---	<3.4	<5.9	<4.0	<6.2	**530**	<5.0	<4.6	<3.5	<4.2
QS-9	11/7/2022	---	**25**	<3.0	**12**	<3.1	**220**	**3.7**	**<2.3**	**2.1**	<2.1
QS-10	11/9/2022	---	<0.21	<0.37	**0.46**	<0.39	<0.58	<0.31	<0.29	<0.22	<0.26
QS-11	11/7/2022	---	<0.21	<0.37	<0.25	<0.39	<0.58	<0.31	<0.29	<0.22	<0.26
QS-16	11/9/2022	---	<0.21	**0.47**	**0.35**	<0.39	<0.58	<0.31	<0.29	<0.22	<0.26
QS-17	11/8/2022	---	**<34**	<59	<40	<62	**4600**	<50	<46	<35	<42
	11/8/2022 (Dup A)	---	**<21**	<37	<25	<39	**4100**	<31	<29	<22	<26
QS-18	11/8/2022	---	**380**	**100**	**59**	**114**	**300**	**19**	**6.4**	**52**	**13**
QS-19	11/8/2022	---	<0.21	<0.37	<0.25	<0.39	<0.58	<0.31	<0.29	<0.22	<0.26
QS-20	11/8/2022	---	**0.38**	**0.43**	**0.93**	<0.39	<0.58	<0.31	<0.29	<0.22	<0.26

Notes:

TPH = Total petroleum hydrocarbons (as gasoline)

--- = Not sampled

< = Less than indicated laboratory method detection/reporting limit

NE = AWGS does not exist

* = Grab Water Sample

µg/L = -micrograms per liter

BOLD = Exceeds the Method Detection Limit

BOLD = Exceeds the AWQS

**= AWQS drinking water/non-drinking water

TABLE 3
HISTORICAL GROUNDWATER ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline (µg/L)	Aromatic Volatile Organics				MTBE (8260) (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Dissolved Oxygen (mg/L)	Naphthalene (µg/L)	n-Propylbenze (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzen (µg/L)
			Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)									
AWQS		**NE**	**5**	**1,000**	**700**	**10,000**	**20**		**4**	**NE**	**NE**	**140**	**NE**	**70**	**NE**
(MW-1)	07/22/92	<5000	**1,881**	4,102	482	2,667									
	08/04/92	---	---	---	---	---									
	09/17/92	---	---	---	---	---									
	10/23/92	---	---	---	---	---									
	01/26/93	---	---	---	---	---									
	02/01/93	---	---	---	---	---									
	03/12/93	---	---	---	---	---									
QS-1	06/17/93	---	---	---	---	---									
	09/13/93	---	---	---	---	---									
	12/09/93	---	---	---	---	---									
	3/17/94	75,000	**5,700**	**16,000**	260	**19,000**									
	6/23/94	---	---	---	---	---									
	9/20/94	250,000	**5,000**	**19,000**	**2,900**	**23,000**									
	12/9/94	---	---	---	---	---									
	2/28/95	---	---	---	---	---									
	6/12/95	---	---	---	---	---									
	9/29/95	11,000	**260**	260	110	980									
	12/29/95	14,000	**77**	110	61	710									
	3/22/96	4,400	**46**	19	36	270									
	6/21/96	3,500	**100**	16	65	430									
	10/18/96	3,300	**100**	2.0	14	340									
	2/3/97	---	---	---	---	---									
	4/11/97	---	---	---	---	---									
	7/9/97	---	---	---	---	---									
	10/24/97	---	---	---	---	---									
	1/19/98	---	---	---	---	---									
	1/11/01	---	---	---	---	---									
	1/22/02	---	---	---	---	---									
	3/21/02	---	---	---	---	---									
	2/18/03	---	---	---	---	---									
	1/6/04	---	**190**	<2.0	180	13	18	---	---	---	---				
	1/19/05	---	**990**	25	370	600	<50	---	---	---	---				
	12/28/05	---	**150**	2.9	350	20	**49**	---	---	---	---				
	12/29/06	---	3.7	<2.0	280	<10	**38**	---	---	---	---				
	1/3/08	---	**6.2**	<20	350	<100	<50	---	---	---	---				
	12/18/08	---	**120**	<2.0	35	17	19	---	---	---	---				
	1/28/10	---	**26**	<2.0	<2.0	<10.0	12	---	---	---	---				
	4/16/11	---	**140**	<25	250	81	**83**	---	---	---	---				
	1/17/13	---	<1.0	<5.0	<1.0	<3.0	**26**	---	---	---	---				
	1/30/14	--	<1.0	<5.0	<1.0	<3.0	8.2	---	---	---	---				
	1/8/15	--	<1.0	<5.0	<1.0	<3.0	6.4	---	---	---	---				
	12/9/15	<100	<1.0	<5.0	<1.0	<3.0	5.7	---	---	---	---				
	11/19/16	<100	<1.0	<5.0	<1.0	<3.0	12.6	---	---	---	---				
	12/9/17	<500	<1.0	<1.0	<1.0	<3.0	2.75	---	---	---	---				
	4/27/19	---	<1.0	<1.0	4.5	<1.0	30.20	---	---	---	---				
	5/1/21	---	<0.50	<1.0	<1.0	<1.5	15	---	---	---	---	<3.0	<1.0	<1.0	<1.0
	11/8/22	---	3.9	1.5	40	3.6	**23**	---	---	---	---	7.5	5.2	1.4	0.35

TABLE 3
HISTORICAL GROUNDWATER ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline (µg/L)	Aromatic Volatile Organics				MTBE (8260) (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Dissolved Oxygen (mg/L)	Naphthalene (µg/L)	n-Propylbenze (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzen (µg/L)
			Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)									
AWQS		**NE**	**5**	**1,000**	**700**	**10,000**	**20**		**4**	**NE**	**NE**	**140**	**NE**	**70**	**NE**
(MW-2)	07/22/92	<5000	2.0	9.0	1.0	6.0									
	08/04/92	---	---	---	---	---									
	09/17/92	---	---	---	---	---									
	10/23/92	---	---	---	---	---									
	01/26/93	---	---	---	---	---									
	02/01/93	---	---	---	---	---									
	03/12/93	350	2.2	<0.5	<0.5	<1.5									
QS-2	06/17/93	30	<0.5	<0.5	<0.5	<1.5									
	09/13/93	<10	<0.5	<0.5	<0.5	<1.5									
	12/09/93	14	<0.5	<0.5	<0.5	2.6									
	3/17/94	<10	<0.5	<0.5	<0.5	<1.5									
	6/23/94	<10	<0.5	<0.5	<0.5	<1.5									
	9/20/94	<10	<0.5	0.5	<0.5	<1.5									
	12/9/94	<10	<0.5	<0.5	<0.5	<1.5									
	2/28/95	<10	<0.5	<0.5	<0.5	<1.5									
	6/12/95	---	---	---	---	---									
	9/29/95	60	<0.5	1.1	<0.5	2.2									
	12/29/95	76	0.8	1.3	<0.5	3.0									
	3/22/96	38	<0.5	0.6	<0.5	<1.5									
	6/21/96	18	<0.05	0.6	<0.5	<1.5									
	10/18/96	<10	<0.5	<0.5	<0.5	<1.5									
	2/3/97	---	---	---	---	---									
	4/11/97	---	---	---	---	---									
	7/9/97	---	---	---	---	---									
	10/24/97	---	---	---	---	---									
	1/19/98	---	---	---	---	---									
	1/11/01	---	---	---	---	---									
	1/22/02	---	---	---	---	---									
	3/21/02	---	---	---	---	---									
	2/18/03	---	---	---	---	---									
	1/6/04	Abandoned March 20, 2003													

TABLE 3
HISTORICAL GROUNDWATER ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline (µg/L)	Aromatic Volatile Organics				MTBE (8260) (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Dissolved Oxygen (mg/L)	Naphthalene (µg/L)	n-Propylbenze (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzen (µg/L)
			Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)									
AWQS		**NE**	**5**	**1,000**	**700**	**10,000**	**20**		**4**	**NE**	**NE**	**140**	**NE**	**70**	**NE**
(MW-3)	07/22/92	<5000	<0.2	2.0	<0.2	<0.2									
	08/04/92	---	---	---	---	---									
	09/17/92	---	---	---	---	---									
	10/23/92	---	---	---	---	---									
	01/26/93	---	---	---	---	---									
	02/01/93	---	---	---	---	---									
	03/12/93	240	**46**	13	<0.5	9.2									
QS-3	06/17/93	580	**120**	37	<0.5	2.6									
	09/14/93	1,100	**140**	110	0.5	82									
	12/09/93	650	**61**	1.0	<0.5	75									
	3/17/94	420	**82**	1.1	0.6	16									
	6/23/94	160	**19**	1.1	<0.5	4.6									
	9/20/94	190	**40**	8.7	<0.5	1.4									
	12/9/94	480	**31**	10.0	1.1	39									
	2/28/95	724	**150**	40.0	2.9	110									
	6/12/95	120	4.5	3.0	0.5	6.5									
	9/29/95	170	<0.5	<0.5	13	18									
	12/29/95	<10	<0.5	<0.5	<0.5	<1.5									
	3/22/96	17	1.3	1.5	<0.5	<1.5									
	6/21/96	22	1.6	6.5	<0.5	<1.5									
	10/18/96	47	0.8	0.6	<0.5	2.3									
	2/3/97	---	---	---	---	---									
	4/11/97	---	---	---	---	---									
	7/9/97	---	---	---	---	---									
	10/24/97	---	---	---	---	---									
	1/19/98	---	---	---	---	---									
	1/11/01	---	---	---	---	---									
	1/22/02	---	---	---	---	---									
	3/21/02	---	---	---	---	---									
	2/18/03	---	---	---	---	---									
	1/6/04	---	<1.0	<2.0	<2.0	<3.0	<5.0	---	---	---	---				
	1/19/05	---	2.3	<2.0	<2.0	<3.0	<5.0	---	---	---	---				
	12/28/05	---	<2.0	<2.0	<2.0	<10	<5.0	---	---	---	---				
	12/29/06	---	<2.0	<2.0	<2.0	<10	<5.0	---	---	---	---				
	1/3/08	---	<2.0	<2.0	<2.0	<10	<5.0	---	---	---	---				
	12/18/08	---	<1.0	<2.0	<2.0	<3.0	5.2	---	---	---	---				
	1/28/10	---	<2.0	<2.0	<2.0	<10.0	<5.0	---	---	---	---				
	4/16/11	---	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	1/17/13	---	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	1/30/14	---	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	1/8/15	---	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	12/9/15	<100	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	11/19/16	<500	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	12/9/17	<500	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	4/27/19		<1.0	<1.0	<1.0	<3.0	<1.0								
	5/1/21	---	<0.50	<1.0	<1.0	<1.5	<1.0	---	---	---	---	<3.0	<1.0	<1.0	<1.0
	11/8/22	---	0.9	0.5	2.4	0.4	0.8	---	---	---	---	0.62	<0.29	0.27	<0.26

TABLE 3
HISTORICAL GROUNDWATER ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline (µg/L)	Aromatic Volatile Organics				MTBE (8260) (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Dissolved Oxygen (mg/L)	Naphthalene (µg/L)	n-Propylbenze (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzen (µg/L)
			Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)									
AWQS		**NE**	**5**	**1,000**	**700**	**10,000**	**20**		**4**	**NE**	**NE**	**140**	**NE**	**70**	**NE**
(MW-4)	07/22/92	---	---	---	---	---									
	08/04/92	---	---	---	---	---									
	09/17/92	---	---	---	---	---									
	10/23/92	---	---	---	---	---									
	01/26/93	---	---	---	---	---									
	02/01/93	---	---	---	---	---									
	03/12/93	---	---	---	---	---									
QS-4	06/17/93	---	---	---	---	---									
	09/13/93	---	---	---	---	---									
	12/09/93	---	---	---	---	---									
	3/17/94	17,000	**760**	**2,700**	200	4,300									
	6/23/94	---	---	---	---	---									
	9/20/94	22,000	**2,400**	**4,000**	250	5,900									
	12/9/94	---	---	---	---	---									
	2/28/95	19,000	**2,600**	**3,900**	320	4,800									
	6/12/95	12,000	**120**	400	250	2,500									
	9/29/95	30,000	**88**	290	190	2,600									
	12/29/95	23,000	**110**	140	110	2,000									
	3/22/96	13,000	**110**	120	74	950									
	6/21/96	15,000	**330**	240	79	1,800									
	10/18/96	6,000	**11**	1.2	5.2	250									
	2/3/97	---	---	---	---	---									
	4/11/97	---	---	---	---	---									
	7/9/97	---	---	---	---	---									
	10/24/97	---	---	---	---	---									
	1/19/98	---	---	---	---	---									
	1/11/01	---	---	---	---	---									
	1/22/02	---	---	---	---	---									
	3/21/02	---	---	---	---	---									
	2/18/03	---	---	---	---	---									
	1/6/04	---	**5,800**	540	520	770	**4,000**	---	---	---	---				
	1/19/05		**FLH**												
	12/28/05	---	**5,300**	120	**1,200**	2,500	**2,700**	---	---	---	---				
	12/29/06	---	**2,400**	220	**1,200**	3,200	**1,300**	---	---	---	---				
	1/3/08	---	**110**	77	58	380	**400**	---	---	---	---				
	12/18/08	---	**1,400**	690	240	2,200	**4,600**	---	---	---	---				
	1/28/10	---	**2,200**	**1,500**	500	4,000	**6,400**	---	---	---	---				
	4/16/11	---	**2,600**	910	440	1,700	**7,700**	---	---	---	---				
	1/17/13	---	**2,300**	<250	380	880	**7,900**	---	---	---	---				
	1/30/14	---	**1,600**	<500	170	<300	**7,900**	---	---	---	---				
	1/8/15	---	**230**	<100	22	<60	**1,000**	---	---	---	---				
	12/9/15	1,770	**378**	<100	364	419	**921**	---	---	---	---				
	11/19/16	6,960	**607**	<5.0	191	16.9	**7,750**	--	--	--	--				
	3/18/17	16,900	**1,870**	<20	446	75.4	**10,100**	---	---	---	---				
	12/9/17	<10,000	**149**	<20	431	<60	**6,330**	---	---	---	---				
	4/27/19	---	<200	<200	<200	<600	**5,320**								
	5/1/21	---	<32	<64	260	<96	**2,500**	---	---	---	---	<190	<64	<64	<64
	11/8/22	---	<13	<24	46	<25	**1,700**	---	---	---	---	<20	<19	<14	<17

TABLE 3
HISTORICAL GROUNDWATER ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline (µg/L)	Aromatic Volatile Organics				MTBE (8260) (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Dissolved Oxygen (mg/L)	Naphthalene (µg/L)	n-Propylbenze (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzen (µg/L)
			Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)									
AWQS		**NE**	**5**	**1,000**	**700**	**10,000**	**20**		**4**	**NE**	**NE**	**140**	**NE**	**70**	**NE**
(MW-5)	07/22/92	---	---	---	---	---									
	08/04/92	---	---	---	---	---									
	09/17/92	---	---	---	---	---									
	10/23/92	---	---	---	---	---									
	01/26/93	---	---	---	---	---									
	02/01/93	---	---	---	---	---									
	03/12/93	260	**89**	6.1	<0.5	1.9									
QS-5	06/17/93	640	**17**	0.7	<0.5	94									
	09/13/93	1,400	**89**	200	33	230									
	12/09/93	700	**110**	71.0	5.0	77									
	3/17/94	630	**210**	28	<0.5	150									
	6/23/94	700	**320**	2.8	0.8	40									
	9/20/94	1,500	**700**	8.8	<0.5	130									
	12/9/94	230	**100**	<0.5	<0.5	7.6									
	2/28/95	330	**130**	0.5	<0.5	14									
	6/12/95	400	4.7	1.9	1.8	2.3									
	9/29/95	15,000	<0.5	410	250	200									
	12/29/95	6,800	**5.5**	2.4	<0.5	3.8									
	3/22/96	240	3.2	0.7	<0.5	2.1									
	6/21/96	23	3.2	1.0	<0.5	2.3									
	10/18/96	100	2.1	1.0	<0.5	2.6									
	2/3/97	---	---	---	---	---									
	4/11/97	---	---	---	---	---									
	7/9/97	---	---	---	---	---									
	10/24/97	---	---	---	---	---									
	1/19/98	---	---	---	---	---									
	1/11/01	---	<5	<5	<5	<10	15								
	1/22/02	---	<2	<2	<2	<4	**36**								
	2/18/03	---	<2.0	<2.0	<2.0	<4.0	**50**	<2.0	<0.10	<0.15[H]	2.09				
	1/6/04	---	**220**	3.8	71	220	**62**	---	---	---	---				
	1/19/05	---	**4,700**	**3,700**	**1,400**	4,100	<5,000	---	---	---	---				
	12/28/05	---	**4,900**	310	**2,200**	2,800	**280**	---	---	---	---				
	12/29/06	---	**720**	19	**1,800**	460	**130**	---	---	---	---				
	1/3/08	---	**29**	3	110	140	**33**	---	---	---	---				
	12/18/08	---	**410**	330	350	1,900	**250**	---	---	---	---				
	1/28/10	---	**1,200**	270	450	2,200	**540**	---	---	---	---				
	4/16/11	---	**720**	130	210	360	**2,600**	---	---	---	---				
	1/17/13	---	**440**	<120	500	180	**5,500**	---	---	---	---				
	1/30/14	---	<100	<500	<100	<300	**2,400**	---	---	---	---				
	1/8/15	---	<25	<120	<25	<75	**1,800**	---	---	---	---				
	12/9/15	403	1.4	<5.0	1.2	<3.0	**934**	---	---	---	---				
	11/19/16	5,340	**17.4**	<5.0	53.7	4.9	**3,280**	---	---	---	---				
	3/18/17	11,800	**165**	<10	221	<30	**5,640**	---	---	---	---				
	12/9/17	3,130	3.62	<1.0	3.17	<3.0	**2,270**	---	---	---	---				
	4/27/19	---	<50	<50	<50	<150	**2,270**								
	5/1/21	---	<40	<80	82	<120	**3,900**	---	---	---	---	<240	<80	<80	<80
	11/7/22	---	<17	<30	<20	<31	**2,200**	---	---	---	---	<25	<23	<18	<21

TABLE 3
HISTORICAL GROUNDWATER ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline (µg/L)	Aromatic Volatile Organics				MTBE (8260) (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Dissolved Oxygen (mg/L)	Naphthalene (µg/L)	n-Propylbenze (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzen (µg/L)
			Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)									
AWQS		**NE**	**5**	**1,000**	**700**	**10,000**	**20**		**4**	**NE**	**NE**	**140**	**NE**	**70**	**NE**
(MW-6)	07/22/92	---	---	---	---	---									
	08/04/92	---	---	---	---	---									
	09/17/92	---	---	---	---	---									
	10/23/92	---	---	---	---	---									
	01/26/93	---	---	---	---	---									
	02/01/93	---	---	---	---	---									
	03/12/93	---	---	---	---	---									
QS-6	06/17/93	---	---	---	---	---									
	09/13/93	---	---	---	---	---									
	12/09/93	---	---	---	---	---									
	3/17/94	---	---	---	---	---									
	6/23/94	---	---	---	---	---									
	9/20/94	350,000	**15,000**	**31,000**	**2,600**	**26,000**									
	12/9/94	---	---	---	---	---									
	2/28/95	---	---	---	---	---									
	6/12/95	---	---	---	---	---									
	9/29/95	50,000	**2,200**	**3,100**	520	4,300									
	12/29/95	150,000	**1,300**	**4,000**	**1,500**	**11,000**									
	3/22/96	49,000	**620**	**2,400**	660	4,400									
	6/21/96	65,000	**850**	**2,900**	**1,100**	7,800									
	10/18/96	176,000	**1,400**	**4,600**	**1,500**	**13,000**									
	2/3/97	---	---	---	---	---									
	4/11/97	---	---	---	---	---									
	7/9/97	---	---	---	---	---									
	10/24/97	---	---	---	---	---									
	1/19/98	---	---	---	---	---									
	1/11/01	---	**4,600**	89	**1,500**	5,900	**20,000**								
	1/22/02	---	**7,100**	120	**1,900**	190	**25,000**								
	2/18/03	---	**7,300**	<200	**1,400**	<400	**33,000**	<0.10	0.83	<0.15[H]	1.68				
	1/6/04		Inaccessible												
	1/19/05	---	**6,400**	**5,800**	**1,800**	6,100	**13,000**	---	---	---	---				
	12/28/05	---	**11,000**	**14,000**	**1,900**	2,200	**26,000**	---	---	---	---				
	12/29/06	---	**5,800**	**7,300**	**930**	8,000	**20,000**	---	---	---	---				
	1/3/08	---	**1,900**	**1,100**	440	2,900	**12,000**	---	---	---	---				
	12/18/08	---	**3,700**	**3,200**	600	4,200	**21,000**	---	---	---	---				
	1/28/10	---	**4,500**	**5,000**	660	5,000	**20,000**	---	---	---	---				
	4/16/11	---	**17,000**	**11,000**	**1,800**	**14,000**	**20,000**	---	---	---	---				
	1/17/13	---	**4,600**	<1,000	630	2,100	**10,000**	---	---	---	---				
	1/30/14	---	**1,400**	<1,000	<200	1,200	**4,800**	---	---	---	---				
	1/8/15	---	**420**	<250	92	540	**2,500**	---	---	---	---				
	12/9/15	4,610	<50.0	<250	<50.0	<150	**1,960**	---	---	---	---				
	11/19/16	7,490	**265**	91.7	194	537	**4,330**	--	--	--	--				
	3/18/17	7,340	**167**	92.5	163	421	**3,420**	---	---	---	---				
	12/9/17	<25,000	**89.9**	99.9	88.5	911	**2,070**	---	---	---	---				
	4/27/19	---	<50	<50	<50	585	**1,430**								
	5/1/21	---	**100**	<80	510	<120	**3,400**	---	---	---	---	<240	<80	<80	<80
	11/8/22	---	**190**	<37	330	<39	**4,700**	---	---	---	---	81	31	<22	<26

TABLE 3
HISTORICAL GROUNDWATER ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline (µg/L)	Aromatic Volatile Organics				MTBE (8260) (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Dissolved Oxygen (mg/L)	Naphthalene (µg/L)	n-Propylbenze (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzen (µg/L)
			Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)									
AWQS		**NE**	**5**	**1,000**	**700**	**10,000**	**20**		**4**	**NE**	**NE**	**140**	**NE**	**70**	**NE**
(MW-7)	07/22/92	---	---	---	---	---									
	08/04/92	---	---	---	---	---									
	09/17/92	---	---	---	---	---									
	10/23/92	---	---	---	---	---									
	01/26/93	---	---	---	---	---									
	02/01/93	---	---	---	---	---									
	03/12/93	---	---	---	---	---									
QS-7	06/17/93	---	---	---	---	---									
	9/14/93	1,100,000	**31,000**	**57,000**	**13,000**	**150,000**									
	12/9/93	---	---	---	---	---									
	3/17/94	300,000	**2,400**	**6,500**	**1,900**	**15,000**									
	6/23/94	---	---	---	---	---									
	9/20/94	1,190,000	**6,900**	**20,000**	**5,600**	**46,000**									
	12/9/94	---	---	---	---	---									
	2/28/95	---	---	---	---	---									
	6/12/95	270,000	**280**	**1,200**	480	4,100									
	9/29/95	75,000	**540**	**2,500**	800	7,400									
	12/29/95	---	---	---	---	---									
	3/22/96	83,000	0.8	**3200**	**1000**	7.1									
	6/21/96	77,000	**1,200**	**4,600**	**1,400**	**10,000**									
	10/18/96	210,000	**1,600**	**6,000**	**1,800**	**16,000**									
	2/3/97	65,000	**1,400**	**3,800**	**1,000**	8,800									
	4/11/97	58,000	**1,200**	**3,200**	840	6,800									
	7/9/97	60,000	**1,600**	**3,500**	990	7,800									
	10/24/97	---	**1,700**	**3,400**	**1,500**	**11,200**									
	1/19/98	110,000	**1,700**	**3,200**	**1,300**	9,300									
	1/11/01	---	**2,500**	20	**1,100**	5,600	**3,200**								
	1/22/02	---	**4,100**	72	**1,200**	2,800	**5,400**								
	2/18/03	---	**4,800**	370	**2,200**	2,300	**10,000**	<0.10	0.83	<0.15[H]	1.86				
	1/6/04	---	**6,200**	150	**1,200**	2,500	**6,500**	---	---	---	---				
	1/19/05	---	**7,600**	<2,000	**1,000**	4,300	**11,000**	---	---	---	---				
	12/28/05	---	**5,400**	57	850	1,300	**9,600**	---	---	---	---				
	12/29/06	---	**4,800**	65	**1,100**	110	**6,800**	---	---	---	---				
	1/3/08	---	**2,600**	63	260	250	**3,700**	---	---	---	---				
	12/18/08	---	**3,500**	720	450	2,800	**7,600**	---	---	---	---				
	1/28/10	---	**87**	<2.0	<2.0	59	**240**	---	---	---	---				
	4/16/11	---	**8,100**	**1,700**	290	1,900	**9,300**	---	---	---	---				
	1/17/13	---	**2,100**	<250	270	200	**3,300**	---	---	---	---				
	1/30/14	---	<50	<250	<50	<150	**420**	---	---	---	---				
	1/8/15	---	**91**	<50	26	<30	**560**	---	---	---	---				
	12/9/15	Not Sampled - Damaged													
	11/19/16	<500	1.83	<5.0	1.26	<3.0	16.9								
	11/7/22	Not Sampled - Damaged													

TABLE 3
HISTORICAL GROUNDWATER ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline (µg/L)	Aromatic Volatile Organics				MTBE (8260) (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Dissolved Oxygen (mg/L)	Naphthalene (µg/L)	n-Propylbenze (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzen (µg/L)
			Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)									
AWQS		**NE**	**5**	**1,000**	**700**	**10,000**	**20**		**4**	**NE**	**NE**	**140**	**NE**	**70**	**NE**
(MW-8)	07/22/92	---	---	---	---	---									
	08/04/92	---	---	---	---	---									
	09/17/92	---	---	---	---	---									
	10/23/92	---	---	---	---	---									
	01/26/93	---	---	---	---	---									
	02/01/93	---	---	---	---	---									
	03/12/93	<10	<0.5	<0.5	<0.5	<1.5									
QS-8	06/17/93	280	3.9	6.3	<0.5	5.4									
	09/13/93	<10	<0.5	<0.5	<0.5	<1.5									
	12/09/93	64.0	1.4	<0.5	<0.5	<1.5									
	3/17/94	<10	<0.5	<0.5	<0.5	<1.5									
	6/23/94	<10	2.7	<0.5	<0.5	<1.5									
	9/20/94	<10	<0.5	<0.5	<0.5	<1.5									
	12/9/94	<30	<0.5	<0.5	<0.5	<1.5									
	2/28/95	<10	<0.5	<0.5	<0.5	<1.5									
	6/12/95	10.0	<0.5	<0.5	<0.5	<1.5									
	9/29/95	14.0	<0.5	<0.5	<0.5	<1.5									
	12/29/95	21.0	<0.5	<0.5	<0.5	<1.5									
	3/22/96	14.0	<0.5	<0.5	<0.5	<1.5									
	6/21/96	18.0	<0.5	<0.5	<0.5	<1.5									
	10/18/96	<10	<0.5	<0.5	<0.5	<1.5									
	2/3/97	<50	<0.5	<0.5	<0.5	<1.5									
	4/11/97	<50	<0.5	<0.5	<0.5	<1.5									
	7/9/97	<50	<0.5	<0.5	<0.5	<1.5									
	10/24/97	---	<0.5	<0.5	<0.5	<0.5									
	1/19/98	<250	<2.0	<2.0	<2.0	<2.0									
	1/11/01	---	---	---	---	---	---								
	1/22/02	---	<2	<2	<2	<4	<5								
	2/18/03	---	<2.0	<2.0	<2.0	<4.0	<5.0	14	26	<0.15[H]	2.47				
	1/6/04	---	<1.0	<2.0	<2.0	<3.0	<5.0	---	---	---	---				
	1/19/05	---	<1.0	<2.0	<2.0	<3.0	<5.0	---	---	---	---				
	12/28/05	---	<2.0	<2.0	<2.0	<10	<5.0	---	---	---	---				
	12/29/06	---	<2.0	<2.0	<2.0	<10	<5.0	---	---	---	---				
	1/3/08	---	<2.0	<2.0	<2.0	<10	<5.0	---	---	---	---				
	12/18/08	---	<1.0	<2.0	<2.0	<3.0	**29**	---	---	---	---				
	1/28/10	---	<2.0	<2.0	<2.0	<10.0	**96**	---	---	---	---				
	4/16/11	---	<1.0	<5.0	<1.0	<3.0	5.8	---	---	---	---				
	1/17/13	---	<1.0	<5.0	<1.0	<3.0	2.4	---	---	---	---				
	1/30/14	---	<1.0	<5.0	<1.0	<3.0	1.7	---	---	---	---				
	1/8/15	---	<1.0	<5.0	<1.0	<3.0	**32**	---	---	---	---				
	12/9/15	<100	<1.0	<5.0	<1.0	<3.0	**78**	---	---	---	---				
	11/19/16	568	<1.0	<5.0	<1.0	<3.0	**480**	---	---	---	---				
	12/9/17	<500	<1.0	<1.0	<1.0	<3.0	**121**	---	---	---	---				
	4/27/19	---	<1.0	<1.0	<1.0	<3.0	**137**								
	5/1/21	---	<4.0	<8.0	<8.0	<12.0	**270**	---	---	---	---	<24	<8.0	<8.0	<8.0
	11/7/22	---	<3.4	<5.9	<4.0	<6.2	**530**	---	---	---	---	<5.0	<4.6	<3.5	<4.2

TABLE 3
HISTORICAL GROUNDWATER ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline (µg/L)	Aromatic Volatile Organics				MTBE (8260) (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Dissolved Oxygen (mg/L)	Naphthalene (µg/L)	n-Propylbenze (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzen (µg/L)
			Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)									
AWQS		**NE**	**5**	**1,000**	**700**	**10,000**	**20**		**4**	**NE**	**NE**	**140**	**NE**	**70**	**NE**
(MW-9)	07/22/92	---	---	---	---	---									
	08/04/92	---	---	---	---	---									
	09/17/92	---	---	---	---	---									
	10/23/92	---	---	---	---	---									
	01/26/93	---	---	---	---	---									
	02/01/93	---	---	---	---	---									
	03/12/93	---	---	---	---	---									
QS-9	06/17/93	---	---	---	---	---									
	09/13/93	---	---	---	---	---									
	12/09/93	---	---	---	---	---									
	3/17/94	---	---	---	---	---									
	6/23/94	---	---	---	---	---									
	9/20/94	990,000	**1,400**	**14,000**	**7,500**	**68,000**									
	12/9/94	---	---	---	---	---									
	2/28/95	---	---	---	---	---									
	6/12/95	---	---	---	---	---									
	9/29/95	73,000	<0.5	**1,800**	**1,100**	8,900									
	12/29/95	55,000	**100**	660	450	3,300									
	3/22/96	35,000	**130**	730	460	3,200									
	6/21/96	52,000	**250**	**1,100**	660	5,000									
	10/18/96	54,000	**230**	420	400	3,900									
	2/3/97	---	---	---	---	---									
	4/11/97	43,000	**300**	120	400	3,500									
	7/9/97	---	---	---	---	---									
	10/24/97	---	---	---	---	---									
	1/19/98	---	---	---	---	---									
	2/18/03		**FLH**												
	1/6/04		**FLH**												
	1/19/05	---	**5,500**	<2,000	**2,400**	7,600	<5,000	---	---	---	---				
	12/28/05	---	**3,000**	71	**1,600**	2,300	**680**	---	---	---	---				
	12/29/06	---	**1,000**	<20	**1,300**	790	**890**	---	---	---	---				
	1/3/08	---	**370**	<20	**730**	180	**680**	---	---	---	---				
	12/18/08	---	**440**	150	620	1,600	**1,200**	---	---	---	---				
	1/28/10	---	**180**	27	140	210	**1,300**	---	---	---	---				
	4/16/11	---	**180**	55	210	540	**900**	---	---	---	---				
	1/17/13	---	**71**	<25	93	110	**690**	---	---	---	---				
	1/30/14	--	**63**	<5.0	62	110	**290**	---	---	---	---				
	1/8/15	--	**190**	55	180	370	**440**	---	---	---	---				
	12/9/15	2,450	**69**	<50.0	10.7	141	**467**	---	---	---	---				
	11/19/16	3,480	**726**	99	283	399	**713**	--	--	--	--				
	3/18/17	863	**4.59**	<1.0	<1.0	<3.0	**253**	---	---	---	---				
	12/9/17	<2,500	**17.5**	<5.0	<5.0	<15	**218**	---	---	---	---				
	4/27/19	---	**75.5**	10.9	69.9	38.8	**219**								
	5/1/21	---	**270**	<8.0	120	34.1	**220**	---	---	---	---	69	15	14	<8.0
	11/7/22	---	**25**	<3.0	12	<3.1	**220**	---	---	---	---	3.7	<2.3	2.1	<2.1

TABLE 3
HISTORICAL GROUNDWATER ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline (µg/L)	Aromatic Volatile Organics				MTBE (8260) (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Dissolved Oxygen (mg/L)	Naphthalene (µg/L)	n-Propylbenze (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzen (µg/L)
			Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)									
AWQS		**NE**	**5**	**1,000**	**700**	**10,000**	**20**		**4**	**NE**	**NE**	**140**	**NE**	**70**	**NE**
(MW-10)	07/22/92	---	---	---	---	---									
	08/04/92	---	---	---	---	---									
	09/17/92	---	---	---	---	---									
	10/23/92	---	---	---	---	---									
	01/26/93	<50	<0.3	<0.3	<0.3	<0.3									
	02/01/93	---	---	---	---	---									
	03/12/93	<10	<0.5	<0.5	<0.5	<1.5									
QS-10	06/17/93	101	0.7	0.9	<0.5	1.0									
	09/12/93	<10	<0.5	<0.5	<0.5	<1.5									
	12/09/93	<10	<0.5	<0.5	<0.5	<1.5									
	3/17/94	170	**140**	1.2	<0.5	12									
	6/23/94	280	4.0	0.7	<0.5	4.4									
	9/20/94	63	**19**	13	1.3	16									
	12/9/94	1,700	**470**	400	37	220									
	2/28/95	1,500	**370**	400	28	290									
	6/12/95	2,500	**600**	360	100	310									
	9/29/95	100	**18**	16	4.2	18.0									
	12/29/95	2,200	**840**	390	170	300									
	3/22/96	3,100	**840**	480	180	360									
	6/21/96	1,900	**660**	240	110	260									
	10/18/96	320	**110**	1.1	16	25									
	2/3/97	80	**31**	<0.5	2.0	5.4									
	4/11/97	450	**80**	1.3	20	42									
	7/9/97	<50	**12**	<0.5	1.8	4									
	10/24/97	---	**180**	<12.5	43	81									
	1/19/98	440	**120**	<2.0	25	34									
	2/18/03	---	3.4	<2.0	<2.0	<4.0	<5.0	---	---	---	2.16				
	1/6/04	---	2.5	<2.0	<2.0	<3.0	<5.0	---	---	---	---				
	1/19/05	---	**9.9**	<2.0	<2.0	3.6	<5.0	---	---	---	---				
	12/28/05	---	3.3	<2.0	<2.0	<10	<5.0	---	---	---	---				
	12/29/06	---	<2.0	<2.0	<2.0	<10	<5.0	---	---	---	---				
	1/3/08	---	**9.6**	<2.0	15	11	<5.0	---	---	---	---				
	12/18/08	---	<1.0	<2.0	<2.0	<3.0	<5.0	---	---	---	---				
	1/28/10	---	<2.0	<2.0	<2.0	<10.0	<5.0	---	---	---	---				
	4/16/11	---	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	1/17/13	---	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	1/30/14	---	7.5	<5.0	<1.0	19.0	1.5	---	---	---	---				
	1/8/15	---	2.3	<5.0	<1.0	9.3	<1.0	---	---	---	---				
	12/9/15	<100	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	11/19/16	<500	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	12/9/17	<500	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	4/27/19	---	<1.0	<5.0	<1.0	<3.0	<1.0								
	5/1/21	---	<0.50	<1.0	<1.0	<1.5	<1.0	---	---	---	---	<3.0	<1.0	<1.0	<1.0
	11/9/22	---	<0.21	<0.37	0.5	<0.39	<0.58	---	---	---	---	<0.31	<0.29	<0.22	<0.26

TABLE 3
HISTORICAL GROUNDWATER ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline (µg/L)	Aromatic Volatile Organics				MTBE (8260) (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Dissolved Oxygen (mg/L)	Naphthalene (µg/L)	n-Propylbenze (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzen (µg/L)
			Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)									
AWQS		**NE**	**5**	**1,000**	**700**	**10,000**	**20**		**4**	**NE**	**NE**	**140**	**NE**	**70**	**NE**
(MW-11)	07/22/92	---	---	---	---	---									
	08/04/92	---	---	---	---	---									
	09/17/92	---	---	---	---	---									
	10/23/92	---	---	---	---	---									
	01/26/93	---	---	---	---	---									
	2/1/93	1,500	**63**	380	40	82									
	3/12/93	<10	<0.5	<0.5	<0.5	<1.5									
QS-11	6/17/93	9,000	**780**	**1,500**	<0.5	2,900									
	9/12/93	7,600	**610**	560	260	2,400									
	12/9/93	6,300	**410**	180	37	1,500									
	3/17/94	58	**25**	1.7	<0.5	<1.5									
	6/23/94	760	**51**	4.9	1.9	19									
	9/20/94	---	---	---	---	---									
	12/9/94	---	---	---	---	---									
	2/27/95	1,100	**110**	3.3	4.0	48									
	6/12/95	---	---	---	---	---									
	9/29/95	25,000	<0.5	840	500	4,000									
	12/29/95	8,300	**290**	16	<0.5	140									
	3/22/96	290	1.1	1.9	4.0	14									
	6/21/96	360	**19.0**	2.5	5.1	18									
	10/18/96	470	**12.0**	1.0	2.7	8.6									
	2/3/97	270	**8.4**	0.8	3.5	5.6									
	4/11/97	---	---	---	---	---									
	7/9/97	330	**5.5**	<0.5	2.9	3.0									
	10/24/97	---	**5.0**	<2.5	4.3	5.2									
	1/19/98	<250	**5.0**	<2.0	2.0	<2.0									
	2/18/03	---	<2.0	<2.0	<2.0	<4.0	**55**	---	---	---	2.16				
	1/6/04	---	<1.0	<2.0	<2.0	<3.0	**55**	---	---	---	---				
	1/19/05	---	<1.0	<2.0	<2.0	<3.0	<5.0	---	---	---	---				
	12/28/05	---	<2.0	<2.0	<2.0	<10	18	---	---	---	---				
	12/29/06	---	<2.0	<2.0	<2.0	<10	**110**	---	---	---	---				
	1/3/08	---	<2.0	<2.0	<2.0	<10	5.2	---	---	---	---				
	12/18/08	---	<1.0	<2.0	<2.0	<3.0	<5.0	---	---	---	---				
	1/28/10	---	<4.0	<4.0	<4.0	<20.0	<10.0	---	---	---	---				
	4/16/11	---	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	1/17/13	---	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	1/30/14	---	<1.0	<5.0	<1.0	<3.0	1.0	---	---	---	---				
	1/8/15	---	<1.0	<5.0	<1.0	<3.0	3.7	---	---	---	---				
	12/9/15	<1.0	<1.0	<5.0	<1.0	<3.0	4.0	---	---	---	---				
	11/19/16 **	<500	<1.0	<5.0	<1.0	<3.0	3.4	---	---	---	---				
	12/9/17 **	<2,500	<1.0	<1.0	<1.0	<3.0	<1.0	--	--	--	--				
	4/27/19	---	<1.0	<1.0	<1.0	<3.0	<1.0								
	5/1/21	---	<0.5	<1.0	<1.0	<1.5	<1.0	---	---	---	---	<3.0	<1.0	<1.0	<1.0
	11/7/22	---	<0.21	<0.37	<0.25	<0.39	<0.58	---	---	---	---	<0.31	<0.29	<0.22	<0.26

TABLE 3
HISTORICAL GROUNDWATER ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline (µg/L)	Aromatic Volatile Organics				MTBE (8260) (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Dissolved Oxygen (mg/L)	Naphthalene (µg/L)	n-Propylbenze (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzen (µg/L)
			Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)									
AWQS		**NE**	**5**	**1,000**	**700**	**10,000**	**20**		**4**	**NE**	**NE**	**140**	**NE**	**70**	**NE**
(MW-12)	07/22/92	---	---	---	---	---									
	08/04/92	---	---	---	---	---									
	09/17/92	---	---	---	---	---									
	10/23/92	---	---	---	---	---									
	01/26/93	---	---	---	---	---									
	02/01/93	<50	<0.3	<0.3	<0.3	<0.3									
	03/12/93	<10	<0.5	<0.5	<0.5	<1.5									
QS-12	06/17/93	110	2.8	<0.5	<0.5	2.4									
	09/13/93	<10	<0.5	<0.5	<0.5	<1.5									
	12/09/93	<10	<0.5	<0.5	<0.5	<1.5									
	3/17/94	<10	<0.5	<0.5	<0.5	<1.5									
	6/23/94	<10	<0.5	<0.5	<0.5	<1.5									
	9/20/94	<10	<0.5	<0.5	<0.5	<1.5									
	12/9/94	<30	<0.5	<0.5	<0.5	<1.5									
	2/27/95	<10	<0.5	<0.5	<0.5	<1.5									
	6/12/95	<10	<0.5	<0.5	<0.5	<1.5									
	9/27/95	<10	<0.5	<0.5	<0.5	<1.5									
	12/29/95	<10	<0.5	<0.5	<0.5	<1.5									
	3/22/96	<10	<0.5	<0.5	<0.5	<1.5									
	6/21/96	<10	<0.5	<0.5	<0.5	<1.5									
	10/18/96	<10	<0.5	<0.5	<0.5	<1.5									
	2/3/97	---	---	---	---	---									
	4/11/97	---	---	---	---	---									
	7/9/97	---	---	---	---	---									
	10/24/97	---	---	---	---	---									
	1/19/98	---	---	---	---	---									
	1/11/01	---	<5	<5	<5	<10	<5								
	1/22/02	---	<2	<2	<2	<4	<5								
	2/18/03	---	<2.0	<2.0	<2.0	<4.0	<5.0	9.7	7.9	<0.15[H]	2.82				
	1/6/04	---	<1.0	<2.0	<2.0	<3.0	<5.0	---	---	---	---				
	1/19/05	---	<1.0	<2.0	<1.0	<3.0	<5.0	---	---	---	---				
	12/28/05	---	<2.0	<2.0	<2.0	<10	<5.0	---	---	---	---				
	12/29/06	---	<2.0	<2.0	<2.0	<10	<5.0	---	---	---	---				
	1/3/08	---	<2.0	<2.0	<2.0	<10	<5.0	---	---	---	---				
	12/18/08	---	<1.0	<2.0	<2.0	<3.0	<5.0	---	---	---	---				
	1/28/10	---	<2.0	<2.0	<2.0	<10.0	<5.0	---	---	---	---				
	4/16/11	---	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	1/17/13	---	--	--	--	--	--	---	---	---	---				
	1/30/14	Unable to locate well													

TABLE 3
HISTORICAL GROUNDWATER ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline (µg/L)	Aromatic Volatile Organics				MTBE (8260) (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Dissolved Oxygen (mg/L)	Naphthalene (µg/L)	n-Propylbenze (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzen (µg/L)
			Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)									
AWQS		**NE**	**5**	**1,000**	**700**	**10,000**	**20**		**4**	**NE**	**NE**	**140**	**NE**	**70**	**NE**
(MW-13)	07/22/92	---	---	---	---	---									
	08/04/92	---	---	---	---	---									
	09/17/92	---	---	---	---	---									
	10/23/92	---	---	---	---	---									
	01/26/93	---	---	---	---	---									
	02/01/93	<50	<0.3	<0.3	<0.3	<0.3									
	03/12/93	<10	<0.5	<0.5	<0.5	<1.5									
QS-13	06/17/93	40	1.7	<0.5	<0.5	<1.5									
	09/13/93	120	3.1	0.8	<0.5	1.1									
	12/09/93	<10	<0.5	<0.5	<0.5	<1.5									
	3/17/94	<10	<0.5	<0.5	<0.5	<1.5									
	6/23/94	<10	<0.5	<0.5	<0.5	<1.5									
	9/20/94	20	1.2	<0.5	<0.5	<1.5									
	12/9/94	<30	<0.5	<0.5	<0.5	<1.5									
	2/28/95	<10	<0.5	<0.5	<0.5	<1.5									
	6/12/95	<10	<0.5	<0.5	<0.5	<1.5									
	9/29/95	<10	<0.5	<0.5	<0.5	<1.5									
	12/29/95	0.06	2.0	3.9	0.9	3.2									
	3/22/96	<10	<0.5	<0.5	<0.5	<1.5									
	6/21/96	<10	<0.5	<0.5	<0.5	<1.5									
	10/18/96	<10	<0.5	<0.5	<0.5	<1.5									
	2/3/97	---	---	---	---	---									
	4/11/97	---	---	---	---	---									
	7/9/97	---	---	---	---	---									
	10/24/97	---	---	---	---	---									
	1/19/98	---	---	---	---	---									
	1/11/01	---	---	---	---	---	---								
	2/18/03	---	<2.0	<2.0	<2.0	<4.0	<5.0	8.4	11	<0.15[H]	3.6				
	1/6/04	Abandoned March 20, 2003													
QS-15	2/28/95	19	<0.5	<0.5	<0.5	<0.5									
	6/12/95	730	**6.9**	4.0	<0.5	3.4									
	9/29/95	---	---	---	---	---									
	12/29/95	45	4.1	1.7	<0.5	2.0									
	3/22/96	55	<0.5	<0.5	<0.5	1.5									
	6/21/96	100	3.0	0.6	<0.5	<1.5									
	10/18/96	<10	<0.5	<0.5	<0.5	<1.5									
	2/3/97	---	---	---	---	---									
	4/11/97	---	---	---	---	---									
	7/9/97	---	---	---	---	---									
	10/24/97	---	---	---	---	---									
	1/19/98	---	---	---	---	---									
	2/18/03	Destroyed													

TABLE 3
HISTORICAL GROUNDWATER ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline (µg/L)	Aromatic Volatile Organics				MTBE (8260) (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Dissolved Oxygen (mg/L)	Naphthalene (µg/L)	n-Propylbenze (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzen (µg/L)
			Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)									
AWQS		**NE**	**5**	**1,000**	**700**	**10,000**	**20**		**4**	**NE**	**NE**	**140**	**NE**	**70**	**NE**
QS-16	2/27/95	<10	<0.5	1.3	<0.5	<1.5									
	6/12/95	28	<0.5	4.8	<0.5	<1.5									
	9/29/95	51	<0.5	44.0	<0.5	<1.5									
	12/29/95	<10	<0.5	0.7	<0.5	<1.5									
	3/22/96	<10	<0.5	<0.5	<0.5	<1.5									
	6/21/96	<10	<0.5	<0.5	<0.5	<1.5									
	10/18/96	<10	<0.5	<0.5	<0.5	<1.5									
	2/3/97	<50	<0.5	<0.5	<0.5	<1.5									
	4/11/97	<50	<0.5	<0.5	<0.5	<1.5									
	7/9/97	<50	<0.5	<0.5	<0.5	<1.5									
	10/24/97	---	<0.5	<0.5	<0.5	<0.5									
	1/19/98	<250	<2.0	<2.0	<2.0	<2.0									
	1/11/01	---	<5	<5	<5	<10	<5								
	3/21/02	---	**10**	3.1	<2.0	8.2	<5.0								
	2/18/03	---	<2.0	<2.0	<2.0	<4.0	<5.0	12	12	<0.15[H]	5.33				
	1/6/04		Not located												
	1/19/05	---	<1.0	<2.0	<1.0	<3.0	<5.0	---	---	---	---				
	12/28/05	---	<2.0	<2.0	<2.0	<10	<5.0	---	---	---	---				
	12/29/06	---	<2.0	<2.0	<2.0	<10	<5.0	---	---	---	---				
	1/3/08	---	<2.0	<2.0	<2.0	<10	<5.0	---	---	---	---				
	12/18/08	---	<1.0	<2.0	<2.0	<3.0	<5.0	---	---	---	---				
	1/28/10	---	<2.0	<2.0	<2.0	<10.0	<5.0	---	---	---	---				
	4/16/11	---	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	1/17/13	---	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	1/30/14	--	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	1/8/15	---	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	12/9/15	235	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	11/19/16	<500	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				
	12/9/17	<500	<1.0	<1.0	<1.0	<3.0	<1.0	---	---	---	---				
	4/27/19	---	<1.0	<1.0	<1.0	<3.0	<1.0								
	5/2/21	---	<0.5	<1.0	<1.0	<1.5	<1.0	---	---	---	---	<3.0	<1.0	<1.0	<1.0
	11/9/22	---	<0.21	0.5	0.4	<0.39	<0.58	---	---	---	---	<0.31	<0.29	<0.22	<0.26
QS-17	5/2/21	---	<63	<130	<130	<193	**5,900**	---	---	---	---	<380	<130	<130	<130
	11/8/22	---	<34	<59	<40	<96	**4,600**	---	---	---	---	<50	<46	<35	<42
QS-18	5/1/21	---	**1,500**	**4,100**	**1,800**	**11,900**	**1,300**	---	---	---	---	490	250	2,000	880
	5/1/21 (Dup)	---	**1,600**	**4,200**	**1,900**	**12,600**	**1,300**	---	---	---	---	550	290	2,200	920
	11/8/22	---	**380**	100	59	114	**300**	---	---	---	---	19	6.4	52	13
QS-19	11/8/2022	---	<0.21	<0.37	<0.25	<0.39	<0.58	---	---	---	---	<0.31	<0.29	<0.22	<0.26
QS-20	11/8/2022	---	0.38	0.43	0.93	<0.39	<0.58	---	---	---	---	<0.31	<0.29	<0.22	<0.26

TABLE 3
HISTORICAL GROUNDWATER ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline (µg/L)	Aromatic Volatile Organics				MTBE (8260) (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Dissolved Oxygen (mg/L)	Naphthalene (µg/L)	n-Propylbenze (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzen (µg/L)
			Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)									
AWQS		**NE**	**5**	**1,000**	**700**	**10,000**	**20**		**4**	**NE**	**NE**	**140**	**NE**	**70**	**NE**
DW-East	08/04/92	---	<0.001	<0.001	<0.001	<0.001									
DW-1	07/22/92	---	---	---	---	---									
	08/04/92	---	---	---	---	---									
	09/17/92	---	---	---	---	---									
	10/23/92	---	---	---	---	---									
	01/26/93	---	---	---	---	---									
	02/01/93	---	---	---	---	---									
	03/12/93	---	---	---	---	---									
	06/17/93	---	---	---	---	---									
	09/13/93	---	---	---	---	---									
	12/09/93	---	---	---	---	---									
	3/17/94	---	---	---	---	---									
	6/23/94	---	---	---	---	---									
	9/20/94	---	---	---	---	---									
	12/9/94	---	---	---	---	---									
	2/28/95	---	---	---	---	---									
	6/12/95	---	---	---	---	---									
	9/29/95	---	---	---	---	---									
	12/29/95	---	---	---	---	---									
	3/22/96	---	---	---	---	---									
	6/21/96	---	---	---	---	---									
	10/18/96	---	---	---	---	---									
	2/3/97	---	---	---	---	---									
	4/11/97	---	---	---	---	---									
	7/9/97	---	---	---	---	---									
	10/24/97	---	---	---	---	---									
	1/19/98	---	---	---	---	---									
	2/18/03	Destroyed													

TABLE 3
HISTORICAL GROUNDWATER ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline (µg/L)	Aromatic Volatile Organics				MTBE (8260) (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Dissolved Oxygen (mg/L)	Naphthalene (µg/L)	n-Propylbenze (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzen (µg/L)
			Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)									
AWQS		**NE**	**5**	**1,000**	**700**	**10,000**	**20**		**4**	**NE**	**NE**	**140**	**NE**	**70**	**NE**
DW-2	07/22/92	---	---	---	---	---									
	08/04/92	---	---	---	---	---									
	09/17/92	---	<0.2	<0.2	<0.2	<0.2									
	10/23/92	<5000	1.0	<1	<1	<1									
	01/26/93	<50	0.3	<0.3	<0.3	<0.3									
	02/01/93	---	---	---	---	---									
	03/12/93	---	---	---	---	---									
	06/17/93	<10	<0.5	<0.5	<0.5	<1.5									
	09/13/93	---	---	---	---	---									
	12/09/93	---	---	---	---	---									
	3/17/94	<10	<0.5	<0.5	<0.5	<1.5									
	6/23/94	<10	<0.5	<0.5	<0.5	<1.5									
	9/20/94	10	<0.5	<0.5	<0.5	<1.5									
	12/9/94	<30	<0.5	<0.5	<0.5	<1.5									
	3/1/95	<10	<0.5	<0.5	<0.5	<1.5									
	6/12/95	<10	<0.5	<0.5	<0.5	<1.5									
	9/29/95	---	---	---	---	---									
	12/29/95	<10	<0.5	<0.5	<0.5	<1.5									
	3/22/96	<10	<0.5	<0.5	<0.5	<1.5									
	6/21/96	<10	<0.5	<0.5	<0.5	<1.5									
	10/18/96	58	0.9	<0.5	<0.5	1.5									
	2/3/97	---	---	---	---	---									
	4/11/97	---	---	---	---	---									
	7/9/97	---	---	---	---	---									
	10/24/97	---	---	---	---	---									
	1/19/98	---	---	---	---	---									

TABLE 3
HISTORICAL GROUNDWATER ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline (µg/L)	Aromatic Volatile Organics				MTBE (8260) (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Dissolved Oxygen (mg/L)	Naphthalene (µg/L)	n-Propylbenze (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzen (µg/L)
			Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)									
AWQS		**NE**	**5**	**1,000**	**700**	**10,000**	**20**		**4**	**NE**	**NE**	**140**	**NE**	**70**	**NE**
DW-3	07/22/92	---	---	---	---	---									
	08/04/92	---	---	---	---	---									
	09/17/92	---	<0.2	<0.2	<0.2	<0.2									
	10/23/92	<5000	<1	<1	<1	<1									
	01/26/93	<50	<0.3	<0.3	<0.3	<0.3									
	02/01/93	---	---	---	---	---									
	03/12/93	---	---	---	---	---									
	06/17/93	<10	<0.5	<0.5	<0.5	<1.5									
	09/13/93	---	---	---	---	---									
	12/09/93	---	---	---	---	---									
	3/17/94	<10	<0.5	<0.5	<0.5	<1.5									
	6/23/94	---	---	---	---	---									
	9/20/94	---	---	---	---	---									
	12/9/94	<30	<0.5	<0.5	<0.5	<1.5									
	2/28/95	---	---	---	---	---									
	6/12/95	---	---	---	---	---									
	9/29/95	---	---	---	---	---									
	12/29/95	---	---	---	---	---									
	3/22/96	<10	<0.5	<0.5	<0.5	<1.5									
	6/21/96	---	---	---	---	---									
	10/18/96	---	---	---	---	---									
	2/3/97	---	---	---	---	---									
	4/11/97	---	---	---	---	---									
	7/9/97	---	---	---	---	---									
	10/24/97	---	---	---	---	---									
	1/19/98	---	---	---	---	---									
DW-4	3/17/94	<10	<0.5	<0.5	<0.5	<1.5									
	6/23/94	---	---	---	---	---									
	9/20/94	---	---	---	---	---									
	12/9/94	---	---	---	---	---									
	3/1/95	<10	<0.5	<0.5	<0.5	<1.5									
	6/12/95	---	---	---	---	---									
	9/29/95	---	---	---	---	---									
	12/29/95	---	---	---	---	---									
	3/22/96	---	---	---	---	---									
	6/21/96	---	---	---	---	---									
	10/18/96	---	---	---	---	---									
	2/3/97	---	---	---	---	---									
	4/11/97	---	---	---	---	---									
	7/9/97	---	---	---	---	---									
	10/24/97	---	---	---	---	---									
	1/19/98	---	---	---	---	---									
	1/17/13	---	<1.0	<5.0	<1.0	<3.0	<1.0	---	---	---	---				

TABLE 3
HISTORICAL GROUNDWATER ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline (µg/L)	Aromatic Volatile Organics				MTBE (8260) (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Dissolved Oxygen (mg/L)	Naphthalene (µg/L)	n-Propylbenze (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzen (µg/L)
			Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)									
AWQS		**NE**	**5**	**1,000**	**700**	**10,000**	**20**		**4**	**NE**	**NE**	**140**	**NE**	**70**	**NE**
DW-6	07/22/92	---	---	---	---	---									
	08/04/92	---	---	---	---	---									
	09/17/92	---	---	---	---	---									
	10/23/92	---	---	---	---	---									
	01/26/93	<50	<0.3	<0.3	<0.3	<0.3									
	02/01/93	---	---	---	---	---									
	03/12/93	---	---	---	---	---									
	06/17/93	---	---	---	---	---									
	09/13/93	---	---	---	---	---									
	12/09/93	---	---	---	---	---									
	3/17/94	---	---	---	---	---									
	6/23/94	---	---	---	---	---									
	9/20/94	---	---	---	---	---									
	12/9/94	---	---	---	---	---									
	3/1/95	---	---	---	---	---									
	6/12/95	---	---	---	---	---									
	9/29/95	---	---	---	---	---									
	12/29/95	---	---	---	---	---									
	3/22/96	---	---	---	---	---									
	6/21/96	---	---	---	---	---									
	10/18/96	---	---	---	---	---									
	2/3/97	---	---	---	---	---									
	4/11/97	---	---	---	---	---									
	7/9/97	---	---	---	---	---									
	10/24/97	---	---	---	---	---									
	1/19/98	---	---	---	---	---									

TABLE 3
HISTORICAL GROUNDWATER ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline (µg/L)	Aromatic Volatile Organics				MTBE (8260) (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Dissolved Oxygen (mg/L)	Naphthalene (µg/L)	n-Propylbenze (µg/L)	1,2,4-Trimethylbenzene (µg/L)	1,3,5-Trimethylbenzen (µg/L)
			Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)									
AWQS		**NE**	**5**	**1,000**	**700**	**10,000**	**20**		**4**	**NE**	**NE**	**140**	**NE**	**70**	**NE**
DW-7	07/22/92	---	---	---	---	---									
	08/04/92	---	---	---	---	---									
	09/17/92	---	---	---	---	---									
	10/23/92	---	---	---	---	---									
*	01/26/93	<50	<0.3	<0.3	<0.3	<0.3									
	02/01/93	---	---	---	---	---									
	03/12/93	---	---	---	---	---									
	06/17/93	---	---	---	---	---									
	09/13/93	---	---	---	---	---									
	12/09/93	---	---	---	---	---									
	3/17/94	---	---	---	---	---									
	6/23/94	---	---	---	---	---									
	9/20/94	---	---	---	---	---									
	12/9/94	---	---	---	---	---									
	3/1/95	---	---	---	---	---									
	6/12/95	---	---	---	---	---									
	9/29/95	---	---	---	---	---									
	12/29/95	---	---	---	---	---									
	3/22/96	---	---	---	---	---									
	6/21/96	---	---	---	---	---									
	10/18/96	---	---	---	---	---									
	2/3/97	---	---	---	---	---									
	4/11/97	---	---	---	---	---									
	7/9/97	---	---	---	---	---									
	10/24/97	---	---	---	---	---									
	1/19/98	---	---	---	---	---									

Notes:
TPH = Total petroleum hydrocarbons (as gasoline)
--- = Not sampled
< = Less than indicated laboratory method detection/reporting limit
++ = No historical data available for DW-5, DW-8, DW-9, and DW-10
* = Composite sample from DW-7A and DW-7B
µg/L -micrograms per liter
mg/L -milligrams per liter
BOLD Current data above AWQS limit
H -Hold time (see case narrative in analytical report)
** - Sample labeled incorrectly 11/19/16 event
NE = AWGS does not exist

TABLE 4
SOIL VAPOR ANALTYICAL RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Date Collected	TPH as Gasoline ug/m³	Benzene ug/m³	Toluene ug/m³	Ethylbenzene ug/m³	Total Xylenes ug/m³	MTBE ug/m³	Naphthalene ug/m³	2-Propanol (isopropyl alcohol) ug/m³
EPA VISL Sub-Slab		**58,400**	**52.4***	**730,000**	**164**	**14,600**	**NC**	**NC**	**NA**
QB-1 10'	4/6/2021	1,140	19.9	87.4	4.81	24.09	<0.721	<3.30	108
QB-1 20'	4/6/2021	Not enough air volume in summa for analysis							
QB-1 30'	4/6/2021	Not enough air volume in summa for analysis							
QB-1 30' Dup	4/6/2021	176,000	680	6,820	2,350	11,410	52.2	56	5,650
QB-1 40'	4/6/2021	Not enough air volume in summa for analysis							
QB-1 50'	4/6/2021	8,800,000	36,700	595,000	196,000	1,199,000	4,790	<6,600	<6,150
QB-1 60'	4/6/2021	Not enough air volume in summa for analysis							
QB-2 10'	4/8/2021	Not enough air volume in summa for analysis							
QB-2 20'	4/8/2021	Not enough air volume in summa for analysis							
QB-2 40'	4/8/2021	Not enough air volume in summa for analysis							

Notes:

ug/m3 = micrograms per cubic meter

NC = Not Calculated

NA = Not Applicable

EPA Vapor Intrusion Screening Level (VISL) Target Sub-Slab and Near-Source Soil Gas Concentration

TABLE 5
SOIL 3-PHASE
PARTIONING RESULTS
Shay Oil Company, Inc.
Business Loop I-10
Quartzsite, Arizona

Sample ID	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Total Xylenes mg/kg	MTBE mg/kg	Naphthalene mg/kg
GPL	**0.7**	**159**	**82**	**81**	**0.82**	**190**
R-SRL	**0.65**	**650**	**400**	**270**	**320**	**56**
QB-1 10'	0.00	0.00	0.00	0.00	0.00	0.00
QB-1 30' Dup	0.00	0.01	0.00	0.02	0.00	0.00
QB-1 50'	0.04	0.85	0.35	2.59	0.03	0.45

Notes:

mg/kg = milligrams per kilogram

GPL = Groundwater Protection Level

R-SRL = Residential Soil Remediation Level

3-Phase Partitioning Results calculated utilizing the 4/6/21 soil vapor analytical results

APPENDIX A

Boring Logs/Well Construction Logs

APEX ENVIROTECH, INC.

LOG OF BORING

QB-1/QS-18 (Page 3 of 3)

Shay Oil Chevron
280 E Main Street
Quartzsite, AZ 85346
SHA04.001

Date Completed	:	4/5 to 4/8/21	Bore Hole Dia. (in)	:	6 1/4”
Geologist	:	Patty Currier	Depth Drilled (ft)	:	95’
Drilling Company	:	Yellow Jacket Drilling	Ini. Depth to Water (ft)	:	
Driller	:	Sean Carrigan	Stc. Depth to Water (ft)	:	
Method	:	Auger/Split Spoon Sampler			

Sample Legend: Sample location; Sleeve

Groundwater: Static; Initial

Depth in Feet	DESCRIPTION	USCS	GRAPHIC	Sample	% Recovery	PID
80	80-84’ Reddish brown silty clay, stiff, dry with wet pockets, no petroleum odor					10.6
					50	18.8
	84-95’ Reddish brown silty clay, very stiff, dry, no petroleum odor					31.4
85						2.8
						9.3
		GC			25	10.3
						7.1
90	Same as above but more plasticity					3.3
					25	
95	Terminate boring at 95’ bgs					
	Reamed the borehole with 6 1/4” augers to 80’, set a well at 75’ with 40’ of screen—hole from 80-95’ was filled with cuttings from above during reaming—sand was used to fill borehole from 75-80’					
100						
105						
110						
115						
120						

Well Construction Information

WELL CONSTRUCTION

WELL CASING Material	:	PVC
WELL SCREEN Material	:	Slotted PVC
FILTER PACK Material	:	Sand
ANNULUS SEAL Material	:	Bentonite
GROUT Material	:	Surface Concrete

Riser

Screen

Sand

Bentonite

Cement Grout

Soil boring logged from cuttings 0-70’ bgs

10-08-2009 C:\Documents and Settings\dalston\Desktop\Drafting\UNKNOWN MISSOURI JOB (MELISSA)\Soil Borings\mwBASE.bor

APEX ENVIROTECH, INC.

LOG OF BORING

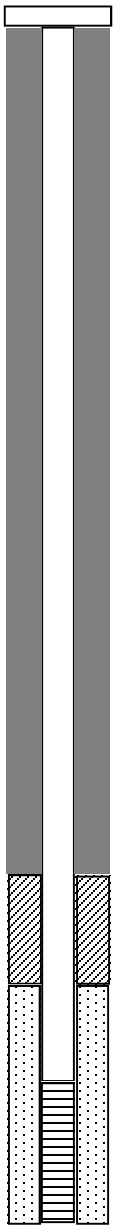
QB-2/QS-17 (Page 1 of 3)

Shay Oil Chevron
280 E Main Street
Quartzsite, AZ 85346
SHA04.001

Date Completed	: 4/8-4/10/21	Bore Hole Dia. (in)	: 6 1/4"
Geologist	: Patty Currier	Depth Drilled (ft)	: 95'
Drilling Company	: Yellow Jacket Drilling	Ini. Depth to Water (ft)	:
Driller	: Sean Carrigan	Stc. Depth to Water (ft)	:
Method	: Auger/Split Spoon Sampler		

Sample Legend: Sample location; Sleeve
Groundwater: Static; Initial

Depth in Feet	DESCRIPTION	USCS	GRAPHIC	Sample	% Recovery	PID
0	0-2' Sand and gravel					
	2-20' Light brown silt and sand, with some gravel, dry					0.0
5						0.9
10		SM		10' 1453		
15	Slight petroleum odor					1.5
20	20-75' Light brown silty clay, cemented layers throughout (caliche), dry, no petroleum odor			20' 1700		1.2
25						0.5
30	Same as above but brown	ML				0.5
35						1.1
40				40' 1821		1.2



Well Construction Information

WELL CONSTRUCTION

WELL CASING Material	: PVC
WELL SCREEN Material	: Slotted PVC
FILTER PACK Material	: Sand
ANNULUS SEAL Material	: Bentonite
GROUT Material	: Surface Concrete

Riser
Screen
Sand
Bentonite
Cement Grout

Soil boring logged from cuttings 0-75' bgs

10-08-2009 C:\Documents and Settings\dalston\Desktop\Drafting\UNKNOWN MISSOURI JOB (MELISSA)\Soil Borings\mwBASE.bor

APEX ENVIROTECH, INC.

LOG OF BORING

QB-2/QS-17 (Page 2 of 3)

Shay Oil Chevron
280 E Main Street
Quartzsite, AZ 85346
SHA04.001

Date Completed	: 4/8 to 4/10/21	Bore Hole Dia. (in)	: 6 1/4"
Geologist	: Patty Currier	Depth Drilled (ft)	: 95'
Drilling Company	: Yellow Jacket Drilling	Ini. Depth to Water (ft)	: 63'
Driller	: Sean Carrigan	Stc. Depth to Water (ft)	:
Method	: Auger/Split Spoon Sampler		

Sample Legend: Sample location; Sleeve
Groundwater: Static; Initial

Depth in Feet	DESCRIPTION	USCS	GRAPHIC	Sample	% Recovery	PID
40	20-75' Light brown silty clay, cemented layers throughout (caliche), dry, no petroleum odor					0.4
45						0.5
50	Moist					0.2
						0.2
55						0.1
						0.3
60	Wet at 63'	ML				0.3
65						0.3
						0.9
70						1.4
75	Begin continuous core at 75'					1.9
	75-80' Reddish brown silty clay, very hard, dry/slightly moist, no petroleum odor				30	0.7
						0.3
80						

Well Construction Information

WELL CONSTRUCTION

WELL CASING Material	: PVC
WELL SCREEN Material	: Slotted PVC
FILTER PACK Material	: Sand
ANNULUS SEAL Material	: Bentonite
GROUT Material	: Surface Concrete

Riser
Screen
Sand
Bentonite
Cement Grout

Soil boring logged from cuttings 0-75' bgs

10-08-2009 C:\Documents and Settings\dalston\Desktop\Drafting\UNKNOWN MISSOURI JOB (MELISSA)\Soil Borings\mwBASE.bor

APEX ENVIROTECH, INC.

LOG OF BORING

QB-2/QS-17 (Page 3 of 3)

Shay Oil Chevron
280 E Main Street
Quartzsite, AZ 85346
SHA04.001

Date Completed	: 4/8 to 4/10/21	Bore Hole Dia. (in)	: 6 1/4"
Geologist	: Patty Currier	Depth Drilled (ft)	: 95'
Drilling Company	: Yellow Jacket Drilling	Ini. Depth to Water (ft)	: 63'
Driller	: Sean Carrigan	Stc. Depth to Water (ft)	:
Method	: Auger/Split Spoon Sampler		

Sample Legend: Sample location; Sleeve
Groundwater: Static; Initial

Depth in Feet	DESCRIPTION	USCS	GRAPHIC	Sample	% Recovery	PID
80	80-87' Reddish brown silty clay, stiff, moist with wet pockets, no petroleum odor, not plastic				100	
85	87-95' Reddish brown silty clay, stiff, dry, no petroleum odor, plastic	GC				
90					100	
95	Terminate boring at 95' bgs Set a well at 75' with 40' of screen—hole from 75-95' was filled with bentonite chips					
100						
105						
110						
115						
120						

Well Construction Information

WELL CONSTRUCTION

WELL CASING Material	: PVC
WELL SCREEN Material	: Slotted PVC
FILTER PACK Material	: Sand
ANNULUS SEAL Material	: Bentonite
GROUT Material	: Surface Concrete

Riser
Screen
Sand
Bentonite
Cement Grout

Soil boring logged from cuttings 0-75' bgs

10-08-2009 C:\Documents and Settings\dalston\Desktop\Drafting\UNKNOWN MISSOURI JOB (MELISSA)\Soil Borings\mwBASE.bor

APEX ENVIROTECH, INC.

LOG OF BORING

QD-1 (Page 1 of 2)

Shay Oil Chevron
280 E Main Street
Quartzsite, AZ 85346
SHA04.001

Date Completed	:	3/30/22	Bore Hole Dia. (in)	:	6 1/4”
Geologist	:	Patty Small	Depth Drilled (ft)	:	75’
Drilling Company	:	GSI	Ini. Depth to Water (ft)	:	60’
Driller	:	Andrew Schafer	Stc. Depth to Water (ft)	:	55.6*
Method	:	HSA			

Sample Legend: Sample location; Sleeve

Groundwater: Static; Initial

Depth in Feet	DESCRIPTION	USCS	GRAPHIC	Sample	% Recovery	PID
0	Surface = asphalt 0-60’ = red-brown silt w/gravel, some clay, moist, no odor	GM				
5						0.0
10	Gravel decreases in size to pea gravel No odor					0.0
15						0.0
20	Some caliche, few gravel No odor Increasing clay content					0.0
25						0.0
30	No odor					0.0
35	No odor					0.0
40	Some caliche layers No odor					0.0

Well Construction Information

WELL CONSTRUCTION

WELL CASING Material	:	PVC
WELL SCREEN Material	:	Slotted PVC
FILTER PACK Material	:	Sand prepack
ANNULUS SEAL Material	:	Bentonite
GROUT Material	:	

Soil boring logged from cuttings 0-75’ bgs

*DTW recorded from temporary well at 0725 on 3/31/22

APEX ENVIROTECH, INC.

LOG OF BORING

QD-1 (Page 2 of 2)

Shay Oil Chevron
280 E Main Street
Quartzsite, AZ 85346
SHA04.001

Date Completed	:	3/30/22	Bore Hole Dia. (in)	:	6 1/4”
Geologist	:	Patty Small	Depth Drilled (ft)	:	75’
Drilling Company	:	GSI	Ini. Depth to Water (ft)	:	60’
Driller	:	Andrew Schafer	Stc. Depth to Water (ft)	:	55.6’
Method	:	HSA			

Sample Legend: Sample location; Sleeve

Groundwater: Static; Initial

Depth in Feet	DESCRIPTION	USCS	GRAPHIC	Sample	% Recovery	PID
40	Increasing clay content, no odor					0.0
	Some caliche layers, moist					
45	No odor					0.0
50	No odor					0.0
55 ▼	No odor					
	~57’-58’= hard caliche layer					0.0
60 ▽	60’-75’ = clay with silt, wet	ML				
65						0.0
70						0.0
75	Terminate boring @ 75’ Set temporary well with 10’ of screen.					0.0
80						

Well Construction Information

WELL CONSTRUCTION

WELL CASING Material	:	PVC
WELL SCREEN Material	:	Slotted PVC
FILTER PACK Material	:	Sand prepack
ANNULUS SEAL Material	:	Bentonite
GROUT Material	:	

Riser
Screen
Sand
Bentonite
Cement Grout

Soil boring logged from cuttings 0-75’ bgs

*DTW recorded from temporary well at 0725 on 3/31/22

APEX ENVIROTECH, INC.

LOG OF BORING

QD-2 (Page 1 of 2)

Shay Oil Chevron
280 E Main Street
Quartzsite, AZ 85346
SHA04.001

Date Completed	:	3/29/22	Bore Hole Dia. (in)	:	6 1/4”
Geologist	:	Patty Small	Depth Drilled (ft)	:	75’
Drilling Company	:	GSI	Ini. Depth to Water (ft)	:	62’
Driller	:	Andrew Schafer	Stc. Depth to Water (ft)	:	59.75’*
Method	:	HSA			

Sample Legend: Sample location; Sleeve
Groundwater: Static; Initial

Depth in Feet	DESCRIPTION	USCS	GRAPHIC	Sample	% Recovery	PID
0	Surface = asphalt					
	0-15’ = red-brown silt w/gravel, some fines, moist, no odor	GM				0.0
						0.0
5						0.0
						0.8
10	Increasing gravel content					1.6
	Gravel becomes pea gravel					
15	15’-30’ = Fine, red-brown silt w/some clay	ML				0.5
	Dry					0.4
20						0.4
	Layers of hard caliche encountered					
	Some clay, moist					0.4
25						0.4
	Hard caliche, moist Increasing clay content					
30						0.4
	30’-75’ = Clayey silt, moist					
35						0.0
40						0.0

Well Construction Information

WELL CONSTRUCTION

WELL CASING Material	:	PVC
WELL SCREEN Material	:	Slotted PVC
FILTER PACK Material	:	Sand prepack
ANNULUS SEAL Material	:	Bentonite
GROUT Material	:	

Riser
Screen
Sand
Bentonite
Cement Grout

Soil boring logged from cuttings 0-75’ bgs

*DTW recorded from temporary well at 0730 on 3/30/22

APEX ENVIROTECH, INC.

LOG OF BORING

QD-2 (Page 2 of 2)

Shay Oil Chevron
280 E Main Street
Quartzsite, AZ 85346
SHA04.001

Date Completed	: 3/29/22		Bore Hole Dia. (in)	: 6 1/4"
Geologist	: Patty Small		Depth Drilled (ft)	: 75'
Drilling Company	: GSI		Ini. Depth to Water (ft)	: 62'
Driller	: Andrew Schafer		Stc. Depth to Water (ft)	: 59.75*
Method	: HSA			

Sample Legend: Sample location; Sleeve

Groundwater: Static; Initial

Depth in Feet	DESCRIPTION	USCS	GRAPHIC	Sample	% Recovery	PID
40		ML				0.0
45						0.0
50						0.0
55						0.0
60 ▼						0.0
▽	62' = water					
65	60'-75' = clay with silt, wet					
70						
75	Terminate boring @ 75'					
	Set temporary well with 10' of screen.					
80						

Well Construction Information

WELL CONSTRUCTION

WELL CASING Material	: PVC
WELL SCREEN Material	: Slotted PVC
FILTER PACK Material	: Sand prepack
ANNULUS SEAL Material	: Bentonite
GROUT Material	:

Soil boring logged from cuttings 0-75' bgs

*DTW recorded from temporary well at 0730 on 3/30/22

APEX ENVIROTECH, INC.

LOG OF BORING

QD-3/QS-19 (Page 1 of 2)

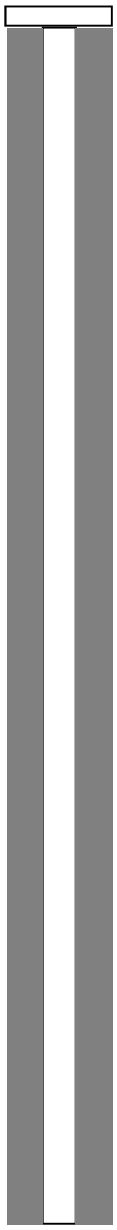
Shay Oil Chevron
280 E Main Street
Quartzsite, AZ 85346
SHA04.001

Date Completed	:	3/28/22	Bore Hole Dia. (in)	:	6 1/4”
Geologist	:	Patty Small	Depth Drilled (ft)	:	75’
Drilling Company	:	GSI	Ini. Depth to Water (ft)	:	62’
Driller	:	Andrew Schafer	Stc. Depth to Water (ft)	:	58.79’*
Method	:	HSA			

Sample Legend: Sample location; Sleeve

Groundwater: Static; Initial

Depth in Feet	DESCRIPTION	USCS	GRAPHIC	Sample	% Recovery	PID
0	Surface = asphalt 0-13’ = gravel w/some fines, dry	GM				0.0
5						
10						
15	13’-75’= fines w/some gravel, dry to semi -moist	ML				
20						
25						
30	Some caliche, moist					
35						
40						



Well Construction Information

WELL CONSTRUCTION

WELL CASING Material	:	PVC
WELL SCREEN Material	:	Slotted PVC
FILTER PACK Material	:	Sand prepack
ANNULUS SEAL Material	:	Bentonite
GROUT Material	:	

Riser
Screen
Sand
Bentonite
Cement Grout

Soil boring logged from cuttings 0-75’ bgs

*DTW recorded from temporary well at 0726 on 3/29/22

APEX ENVIROTECH, INC.

LOG OF BORING

QD-3/QS-19 (Page 2 of 2)

Shay Oil Chevron
280 E Main Street
Quartzsite, AZ 85346
SHA04.001

Date Completed	:	3/28/22	Bore Hole Dia. (in)	:	6 1/4”
Geologist	:	Patty Small	Depth Drilled (ft)	:	75’
Drilling Company	:	GSI	Ini. Depth to Water (ft)	:	62’
Driller	:	Andrew Schafer	Stc. Depth to Water (ft)	:	59.75*
Method	:	HSA			

Sample Legend: Sample location; Sleeve

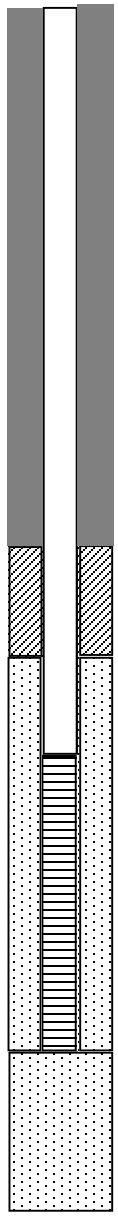
Groundwater: Static; Initial

Depth in Feet	DESCRIPTION	USCS	GRAPHIC	Sample	% Recovery	PID
40						0.0
		ML				
45						
50	Harder drilling @ 52’ Caliche, moist					
55						
60 ▼						
▽	62’ = water					
65						
70						
75	Terminate boring @ 75’ Set temporary well with 10’ of screen.					
80						

Well Construction Information

WELL CONSTRUCTION

WELL CASING Material	:	PVC
WELL SCREEN Material	:	Slotted PVC
FILTER PACK Material	:	Sand prepack
ANNULUS SEAL Material	:	Bentonite
GROUT Material	:	



Riser
Screen
Sand
Bentonite
Cement Grout

Soil boring logged from cuttings 0-75’ bgs

*DTW recorded from temporary well at 0726 on 3/29/22

APEX ENVIROTECH, INC.

LOG OF BORING

QD-4 (Page 1 of 2)

Shay Oil Chevron
280 E Main Street
Quartzsite, AZ 85346
SHA04.001

Date Completed	:	3/29/22	Bore Hole Dia. (in)	:	6 1/4”
Geologist	:	Patty Small	Depth Drilled (ft)	:	75’
Drilling Company	:	GSI	Ini. Depth to Water (ft)	:	63’
Driller	:	Andrew Schafer	Stc. Depth to Water (ft)	:	58.55’*
Method	:	HSA			

Sample Legend: Sample location; Sleeve

Groundwater: Static; Initial

Depth in Feet	DESCRIPTION	USCS	GRAPHIC	Sample	% Recovery	PID
0	Surface = gravel 0-20’ = red-brown silt w/gravel & some clay, dry	GM				0.0
10	Moist, gravel becomes pea gravel					
15	Decreasing gravel content					
20	20’-75’= silt w/some clay, some caliche throughout	ML				
40						

Well Construction Information

WELL CONSTRUCTION

WELL CASING Material	:	PVC
WELL SCREEN Material	:	Slotted PVC
FILTER PACK Material	:	Sand prepack
ANNULUS SEAL Material	:	Bentonite
GROUT Material	:	

Soil boring logged from cuttings 0-75’ bgs

*DTW recorded from temporary well at 1136 on 3/30/22

APEX ENVIROTECH, INC.

LOG OF BORING

QD-4 (Page 2 of 2)

Shay Oil Chevron
280 E Main Street
Quartzsite, AZ 85346
SHA04.001

Date Completed	:	3/29/22	Bore Hole Dia. (in)	:	6 1/4"
Geologist	:	Patty Small	Depth Drilled (ft)	:	75'
Drilling Company	:	GSI	Ini. Depth to Water (ft)	:	63'
Driller	:	Andrew Schafer	Stc. Depth to Water (ft)	:	58.55'*
Method	:	HSA			

Sample Legend: Sample location; Sleeve

Groundwater: Static; Initial

Depth in Feet	DESCRIPTION	USCS	GRAPHIC	Sample	% Recovery	PID
40		ML				0.0
45						0.0
50	Harder drilling @ 48'					0.2
55	Hard drilling at 56'-59					0.3
60						0.0
65	Wet ~63'-64'					0.0
70						
75	Terminate boring @ 75' Set temporary well with 10' of screen.					
80						

Well Construction Information

WELL CONSTRUCTION

WELL CASING Material	:	PVC
WELL SCREEN Material	:	Slotted PVC
FILTER PACK Material	:	Sand prepack
ANNULUS SEAL Material	:	Bentonite
GROUT Material	:	

Riser
Screen
Sand
Bentonite
Cement Grout

Soil boring logged from cuttings 0-75' bgs

*DTW recorded from temporary well at 1136 on 3/30/22

APEX ENVIROTECH, INC.

LOG OF BORING

QD-5 (Page 1 of 2)

Shay Oil Chevron
280 E Main Street
Quartzsite, AZ 85346
SHA04.001

Date Completed	:	3/30/22	Bore Hole Dia. (in)	:	6 1/4”
Geologist	:	Patty Small	Depth Drilled (ft)	:	75’
Drilling Company	:	GSI	Ini. Depth to Water (ft)	:	65’
Driller	:	Andrew Schafer	Stc. Depth to Water (ft)	:	55.3’*
Method	:	HSA			

Sample Legend: Sample location; Sleeve

Groundwater: Static; Initial

Depth in Feet	DESCRIPTION	USCS	GRAPHIC	Sample	% Recovery	PID
0	Surface = gravel 0-10’ = red-brown silt w/gravel & some clay, dry, no odor	GM				0.0
10	Less gravel, dry, no odor	ML				
15	Some caliche, no odor					
20	More caliche, no odor					
25	No odor					
30	Dry, no odor					
35	No odor					
40						

Well Construction Information

WELL CONSTRUCTION

WELL CASING Material	:	PVC
WELL SCREEN Material	:	Slotted PVC
FILTER PACK Material	:	Sand prepack
ANNULUS SEAL Material	:	Bentonite
GROUT Material	:	

Riser
Screen
Sand
Bentonite
Cement Grout

Soil boring logged from cuttings 0-75’ bgs

*DTW recorded from temporary well at 0710 on 3/31/22

APEX ENVIROTECH, INC.

LOG OF BORING

QD-5 (Page 2 of 2)

Shay Oil Chevron
280 E Main Street
Quartzsite, AZ 85346
SHA04.001

Date Completed	:	3/30/22	Bore Hole Dia. (in)	:	6 1/4”
Geologist	:	Patty Small	Depth Drilled (ft)	:	75’
Drilling Company	:	GSI	Ini. Depth to Water (ft)	:	65’
Driller	:	Andrew Schafer	Stc. Depth to Water (ft)	:	55.30’*
Method	:	HSA			

Sample Legend: Sample location; Sleeve

Groundwater: Static; Initial

Depth in Feet	DESCRIPTION	USCS	GRAPHIC	Sample	% Recovery	PID
40	No odor	ML				0.0
45	Moist Caliche layers					
50	More clay Harder drilling @ 48’					
55 ▼	No odor					
60	Hard drilling at 60’					
65 ▽	Wet around 65’					
70						
75	Terminate boring @ 75’ Set temporary well with 10’ of screen.					
80						

Well Construction Information

WELL CONSTRUCTION

WELL CASING Material	:	PVC
WELL SCREEN Material	:	Slotted PVC
FILTER PACK Material	:	Sand prepack
ANNULUS SEAL Material	:	Bentonite
GROUT Material	:	

Riser
Screen
Sand
Bentonite
Cement Grout

Soil boring logged from cuttings 0-75’ bgs

*DTW recorded from temporary well at 0710 on 3/31/22

APEX ENVIROTECH, INC.

LOG OF BORING

QD-6 (Page 1 of 2)

Shay Oil Chevron
280 E Main Street
Quartzsite, AZ 85346
SHA04.001

Date Completed	:	8/2/22	Bore Hole Dia. (in)	:	6 1/4”
Geologist	:	Patty Small	Depth Drilled (ft)	:	75’
Drilling Company	:	GSI	Ini. Depth to Water (ft)	:	64’
Driller	:	Eric Schafer	Stc. Depth to Water (ft)	:	61.3’*
Method	:	HSA			

Sample Legend: Sample location; Sleeve

Groundwater: Static; Initial

Depth in Feet	DESCRIPTION	USCS	GRAPHIC	Sample	% Recovery	PID
0	Surface = gravel 0-23’ = silt with sand & gravel, dry to slightly moist	GM				0.0
10	Less gravel					
15	More clay, no gravel	ML				
20	Slightly moist Caliche, harder drilling, some gravel					
25						
30						
35	Hard drilling, possibly cobbles, broken pieces of rock					
40						

Well Construction Information

WELL CONSTRUCTION

WELL CASING Material	:	PVC
WELL SCREEN Material	:	Slotted PVC
FILTER PACK Material	:	Sand prepack
ANNULUS SEAL Material	:	Bentonite
GROUT Material	:	

Riser
Screen
Sand
Bentonite
Cement Grout

Soil boring logged from cuttings 0-75’ bgs

*DTW recorded from temporary well at 1124 on 8/3/22

APEX ENVIROTECH, INC.

LOG OF BORING

QD-6 (Page 2 of 2)

Shay Oil Chevron
280 E Main Street
Quartzsite, AZ 85346
SHA04.001

Date Completed	:	8/2/22	Bore Hole Dia. (in)	:	6 1/4”
Geologist	:	Patty Small	Depth Drilled (ft)	:	75’
Drilling Company	:	GSI	Ini. Depth to Water (ft)	:	64’
Driller	:	Andrew Schafer	Stc. Depth to Water (ft)	:	61.3’*
Method	:	HSA			

Sample Legend: Sample location; Sleeve

Groundwater: Static; Initial

Depth in Feet	DESCRIPTION	USCS	GRAPHIC	Sample	% Recovery	PID
40	Some gravel	ML				0.0
45						
50						
55						
60						
	Water ~64’					
65						
70						
75	Terminate boring @ 75’ Set temporary well with 5’ of screen.					
80						

Well Construction Information

WELL CONSTRUCTION

WELL CASING Material	:	PVC
WELL SCREEN Material	:	Slotted PVC
FILTER PACK Material	:	Sand prepack
ANNULUS SEAL Material	:	Bentonite
GROUT Material	:	

Riser
Screen
Sand
Bentonite
Cement Grout

Soil boring logged from cuttings 0-75’ bgs

*DTW recorded from temporary well at 1124 on 8/3/22

APEX ENVIROTECH, INC.

LOG OF BORING

QD-7/QS-20 (Page 1 of 2)

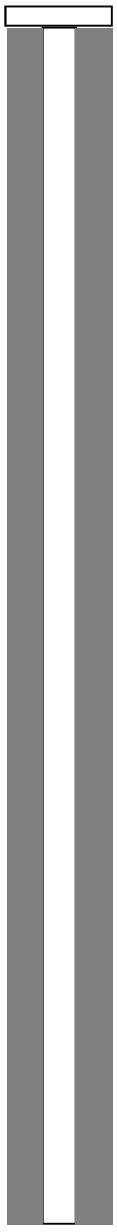
Shay Oil Chevron
280 E Main Street
Quartzsite, AZ 85346
SHA04.001

Date Completed	:	8/1/22	Bore Hole Dia. (in)	:	6 1/4”
Geologist	:	Patty Small	Depth Drilled (ft)	:	75’
Drilling Company	:	GSI	Ini. Depth to Water (ft)	:	65’
Driller	:	Eric Schafer	Stc. Depth to Water (ft)	:	60.7’*
Method	:	HSA			

Sample Legend: Sample location; Sleeve

Groundwater: Static; Initial

Depth in Feet	DESCRIPTION	USCS	GRAPHIC	Sample	% Recovery	PID
0	Surface = gravel 0-40’ = reddish silt w/sand and gravel, dry no odor	GM				0.0
20	Some caliche					



Well Construction Information

WELL CONSTRUCTION

WELL CASING Material	:	PVC
WELL SCREEN Material	:	Slotted PVC
FILTER PACK Material	:	Sand prepack
ANNULUS SEAL Material	:	Bentonite
GROUT Material	:	

Riser
Screen
Sand
Bentonite
Cement Grout

Soil boring logged from cuttings 0-75’ bgs

*DTW recorded from temporary well at 0738 on 8/2/22

APEX ENVIROTECH, INC.

LOG OF BORING

QD-7/QS-20 (Page 2 of 2)

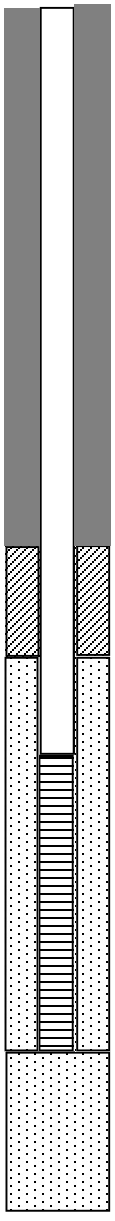
Shay Oil Chevron
280 E Main Street
Quartzsite, AZ 85346
SHA04.001

Date Completed	:	8/1/22	Bore Hole Dia. (in)	:	6 1/4”
Geologist	:	Patty Small	Depth Drilled (ft)	:	75’
Drilling Company	:	GSI	Ini. Depth to Water (ft)	:	65’
Driller	:	Andrew Schafer	Stc. Depth to Water (ft)	:	60.7’*
Method	:	HSA			

Sample Legend: Sample location; Sleeve

Groundwater: Static; Initial

Depth in Feet	DESCRIPTION	USCS	GRAPHIC	Sample	% Recovery	PID
40	Less gravel	ML				0.0
45						
50	Hard drilling					
55						
60						
65	Water ~65’					
70						
75	Terminate boring @ 75’ Set temporary well with 5’ of screen.					
80						



Well Construction Information

WELL CONSTRUCTION

WELL CASING Material	:	PVC
WELL SCREEN Material	:	Slotted PVC
FILTER PACK Material	:	Sand prepack
ANNULUS SEAL Material	:	Bentonite
GROUT Material	:	

Riser
Screen
Sand
Bentonite
Cement Grout

Soil boring logged from cuttings 0-75’ bgs

*DTW recorded from temporary well at 0738 on 8/2/22

APEX ENVIROTECH, INC.

LOG OF BORING

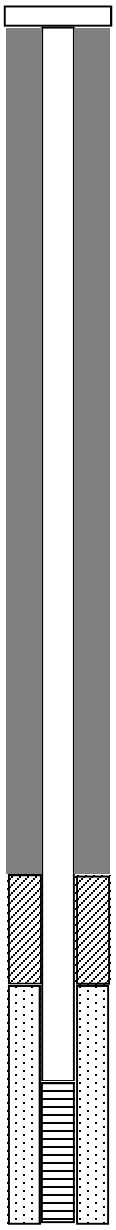
QB-1/QS-18 (Page 1 of 3)

Shay Oil Chevron
280 E Main Street
Quartzsite, AZ 85346
SHA04.001

Date Completed	:	4/5 to 4/8/21	Bore Hole Dia. (in)	:	6 1/4"
Geologist	:	Patty Currier	Depth Drilled (ft)	:	95'
Drilling Company	:	Yellow Jacket Drilling	Ini. Depth to Water (ft)	:	
Driller	:	Sean Carrigan	Stc. Depth to Water (ft)	:	
Method	:	Auger/Split Spoon Sampler			

Sample Legend: Sample location; Sleeve
Groundwater: Static; Initial

Depth in Feet	DESCRIPTION	USCS	GRAPHIC	Sample	% Recovery	PID
0	Asphalt 0-3"					0.6
	3" - 4' Brown sand and gravel and some fines and few cobbles, hard, dry, no petroleum odor	GM				0.1
	4-14' Pea gravel backfill, moist, no petroleum odor					0.5
5						
		PG		10' 1002		0.2
10						
	14-74' Light brown silty clay, cemented layers throughout (caliche), dry, no petroleum odor					
15						0.2
				20' 1110		
20						
25		ML				
				30'/ Dup 1245		
30	Petroleum odor from ~30-40' bgs					
35						1078
						1239
				40' 1343		
40						



Well Construction Information

WELL CONSTRUCTION

WELL CASING Material	:	PVC
WELL SCREEN Material	:	Slotted PVC
FILTER PACK Material	:	Sand
ANNULUS SEAL Material	:	Bentonite
GROUT Material	:	Surface Concrete

Riser
Screen
Sand
Bentonite
Cement Grout

Soil boring logged from cuttings 0-70' bgs

10-08-2009 C:\Documents and Settings\dalston\Desktop\Drafting\UNKNOWN MISSOURI JOB (MELISSA)\Soil Borings\mwBASE.bor

APEX ENVIROTECH, INC.

LOG OF BORING

QB-1/QS-18 (Page 2 of 3)

Shay Oil Chevron
280 E Main Street
Quartzsite, AZ 85346
SHA04.001

Date Completed	:	4/5 to 4/8/21	Bore Hole Dia. (in)	:	6 1/4”
Geologist	:	Patty Currier	Depth Drilled (ft)	:	95’
Drilling Company	:	Yellow Jacket Drilling	Ini. Depth to Water (ft)	:	
Driller	:	Sean Carrigan	Stc. Depth to Water (ft)	:	
Method	:	Auger/Split Spoon Sampler			

Sample Legend: Sample location; Sleeve

Groundwater: Static; Initial

Depth in Feet	DESCRIPTION	USCS	GRAPHIC	Sample	% Recovery	PID
40	14-74’ Light brown silty clay, cemented layers throughout (caliche), dry, no petroleum odor					193.6
45						93.2
50				50’ 1450		32.3
55		ML				75.1
60				60’ 1555		5.1
65						
70	Begin continuous core at 70’				100	6.3
						7.5
						6.2
						4.5
75	74-79’ Brown, silty clay with gravel and sand, hard, moist to wet, no petroleum odor					29.2
						3.0
		GC			90	3.9
						9.1
						17.7
80	79’- 80’ Brown silty clay with gravel and sand, stiff, plastic, moist, no petroleum odor					7.5

Well Construction Information

WELL CONSTRUCTION

WELL CASING Material	:	PVC
WELL SCREEN Material	:	Slotted PVC
FILTER PACK Material	:	Sand
ANNULUS SEAL Material	:	Bentonite
GROUT Material	:	Surface Concrete

Riser
Screen
Sand
Bentonite
Cement Grout

Soil boring logged from cuttings 0-70’ bgs

10-08-2009 C:\Documents and Settings\dalston\Desktop\Drafting\UNKNOWN MISSOURI JOB (MELISSA)\Soil Borings\mwBASE.bor

APPENDIX B

Groundwater Field Notes and Laboratory Analytical Results

Well ID:	QS-N	54.76		Sampler(s):	RMA/FE	
LNAPL?	Yes/No	IWL:	Well Depth:			
Date:	11/7/22	Sample Time:	14:13	Gallons Purged:	0-50	

Gal.							
1	14:03	30.3	6.72	11458	70.1	7.01	54.90
2	14:05	30.3	6.79	11584	80.1	3.63	54.98
3	14:07	30.2	6.76	11578	82.1	2.95	55.02
4	14:09	30.2	6.90	11513	83.0	2.73	55.05
5	14:11	30.3	6.79	11514	83.6	2.63	55.09
6	14:13	30.6	6.07	11500	84.4	2.56	55.11
7							
8							
9		Sampling			14:13		
10							
11							
12							
13		11/7/22					
14							
15							
16							
17		QS-11					
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34							
35							
36							
37							
38		1	0.1	3%	10	0.3	

Well ID:	DS-5	56.40		Sampler(s):		
LNAPL?	Yes (No)	IWL:		Well Depth:		
Date: 11/7/22		Sample Time:	15:20	Gallons Purged:	0.35	

1	15:08	29.3	6.98	7928	-131.5	1.39	56.50
2	15:10	29.3	6.99	7972	-149.8	1.22	56.54
3	15:12	29.1	6.99	7933	-160.1	1.26	56.56
4	15:14	29.1	6.96	7927	-171.1	1.39	56.53
5	15:16	29.0	6.96	7920	-175.2	1.46	56.55
6	15:18	29.1	6.96	7933	-177.5	1.55	56.58
7	15:20	29.2	6.96	7945	-177.1	1.58	56.57
8							
9							
10							
11							
12							
13							
14		Sampling 15:20					
15							
16							
17							
18							
19							
20							
21		DS-5					
22							
23							
24							
25		11/7/22					
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38		1	0.1	3%	10	0.3	

Well ID	QS-9	55.66		Sampler(s):	BRADFIELD	
LNAPL?	Yes (No)	IWL:	Well Depth:			
Date:	11/7/22	Sample Time:	13:17	Gallons Purged:	0.25	

1	13:09	29.2	6.76	7496	-171.1	5.21	55.76
2	13:09	29.1	6.78	7533	-82.7	3.10	55.78
3	13:11	29.1	6.76	7551	-89.6	2.79	55.80
4	13:13	29.1	6.77	7564	-94.9	2.66	55.82
5	13:15	29.2	6.80	7571	-97.5	2.62	55.85
6	13:17	29.2	6.81	7580	-99.0	2.58	55.85
7							
8							
9		Sampling 13:17					
10							
11		11/7/22					
12							
13							
14							
15							
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17							
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19							
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30							
31							
32							
33							
34							
35							
36							
37							
38		1	0.1	3%	10	0.3	

NO Groundwater

Well ID:	QS-8	56.56			Sampler(s):	Bradfield	
LNAPL?	Yes (No)	IWL:		Well Depth:	80.00		
Date:	11/7/22	Sample Time:	12:36		Gallons Purged:	1.0	
1	12:12	29.7	6.8	4582	272.6	2.55	56.67
2	12:14	29.6	6.8	4582	265.1	2.49	56.73
3	12:16	29.5	6.9	4575	254.0	2.45	56.73
4	12:18	29.3	6.9	4563	244.7	2.48	56.76
5	12:20	29.5	6.9	4562	238.0	2.46	56.80
6	12:22	29.4	6.8	4570	232.6	2.48	56.82
7	12:24	29.4	6.9	4568	224.0	2.45	56.84
8	12:26	29.5	6.9	4566	212.6	2.50	56.86
9	12:28	29.5	6.9	4571	202.1	2.44	56.80
10	12:30	29.7	6.9	4593	194.1	2.64	56.90
11	12:32	29.9	6.9	4640	185.6	2.43	56.88
12	12:34	30.0	7.0	4629	180.1	2.47	56.88
13	12:36	30.2	7.01	4635	174.1	2.40	56.86
14	12:36	30.1	7.0	4635	172.6	2.49	56.86
15							
16							
17							
18		Sampling			12:36		
19					11/7/22		
20							
21			QS-8				
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38		1	0.1	3%	10	0.3	

Well ID:	QS-17	58.87		Sampler(s):	BOADHE (c)	
LNAPL?	Yes (No)	FWL:	Well Depth:			
Date:	11/8/22	Sample Time:	10.11	Gallons Purged:	0.35	

1	9:55	26.8	5.8	2071	66.9	5.61	56.95
2	9:57	26.6	7.42	2061	70.1	4.94	56.93
3	9:59	26.1	7.44	2052	72.9	4.94	56.93
4	10:01	27.0	7.40	2080	76.6	3.81	56.99
5	10:03	27.2	7.38	2058	77.6	2.95	56.96
6	10:05	27.3	7.37	2085	77.1	2.15	56.96
7	10:07	27.4	7.36	2101	76.0	1.88	56.95
8	10:09	27.4	7.36	2103	73.6	1.88	56.97
9	10:10	27.9	7.36	2103	70.9	1.81	56.90
10							
11							
12		Sample			10:11		
13							
14							
15		11/8/22					
16							
17							
18							
19		QS-17					
20							
21							
22							
23							
24		Dup A					
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27							
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29							
30							
31							
32							
33							
34							
35							
36							
37							
38		1	0.1	3%	10	0.3	

Well ID:	QS-19		58.87		Sampler(s):	BRADLEE O	
LNAPL?	Yes (No)		IWL:		Well Depth:		
Date:	11/8/22	Sample Time:	09-18		Gallons Purged:	0.30	
1	9:00	25.7	6.8	2167	197.0	6.64	58.96
2	9:02	25.8	8.55	20.60	152.1	4.76	58.96
3	9:04	25.9	8.66	20.50	146.6	4.68	58.98
4	9:06	26.1	8.81	2045	139.7	4.53	58.93
5	9:08	26.1	9.01	2032	128.7	4.54	58.05
6	9:10	26.5	9.15	2026	121.4	4.23	57.16
7	9:12	27.1	9.00	2023	113.8	4.18	59.11
8	9:14	26.9	9.01	2022	113.2	4.03	59.12
9	9:16	26.6	9.04	2054	111.1	4.06	59.02
10	9:18	26.6	9.05	2048	109.1	3.96	59.09
11							
12							
13							
14		Sampling			9:18		
15							
16							
17		11/8/22					
18							
19							
20							
21		QS-19					
22							
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32							
33							
34							
35							
36							
37							
38		1	0.1	3%	10	0.3	

Well ID:	QS-4	54.60		Sampler(s):	BOOTH	
LNAPL?	Yes (No)	TWL:	Well Depth:			
Date:	11/8/22	Sample Time:	11:02	Gallons Purged:	0.20	

Gal.							
1	10:56	29.25	6.92	2263	-58.8	1.56	54.72
2	10:58	29.0	6.90	2249	-62.6	1.50	54.74
3	11:00	29.2	6.90	2255	-65.2	1.51	54.75
4	11:02	29.3	6.90	2259	-66.1	1.54	54.72
5							
6	Sample		11:02				
7							
8							
9			11/8/22				
10							
11							
12			QS-4				
13							
14							
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31							
32							
33							
34							
35							
36							
37							
38		1	0.1	3%	10	0.3	

Well ID:	QS-6	54.28			Sampler(s):	BRANDED	
LNAPL?	Yes (No)		IWL:		Well Depth:		
Date:	11/8/22	Sample Time:	12:19		Gallons Purged:	0.25	
1	12:13	26.85	6.59	5817	-50.1	1.35	54.35
2	12:15	28.43	6.58	5843	-53.7	1.29	54.40
3	12:17	28.61	6.59	5859	-55.1	1.38	54.43
4	12:19	24.54	6.60	5843	-56.1	1.38	54.44
5							
6							
7							
8		Sample			12:19		
9							
10							
11							
12		11/8/22					
13							
14							
15							
16							
17							
18		QS-6					
19							
20							
21							
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25							
26							
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28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38		1	0.1	3%	10	0.3	

Well ID:	QS-1	53.90		Sampler(s): Bam Field			
LNAPL?	Yes/No	IWL:		Well Depth:			
Date:	11/8/22	Sample Time:	13:00	Gallons Purged:	0.35		
1	12:50	29.62	6.84	5776	-48.4	1.21	53.98
2	12:54	29.8	6.81	5916	-57.2	1.48	52.05
3	12:56	30.1	6.81	5917	-58.1	1.48	54.06
4	12:58	29.9	6.80	5918	-58.1	1.47	54.62
5	13:00	29.7	6.81	5901	-59.2	1.47	54.13
6							
7							
8		Sample			13:00		
9							
10							
11							
12		11/8/22					
13							
14							
15							
16							
17		QS-1					
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30							
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32							
33							
34							
35							
36							
37							
38		1	0.1	3%	10	0.3	

Well ID:	QS-3	53.69		Sampler(s):	BM/MH/EG		
LNAPL?	Yes (No)	IWL:		Well Depth:			
Date:	11/8/22	Sample Time:	13:37	Gallons Purged:	0.35		
1	13:25	29.8	6.94	7485	3.1	3.64	53.23
2	13:27	30.2	6.90	7783	24.4	1.50	53.90
3	13:29	30.4	6.90	7734	32.9	1.47	53.93
4	13:31	30.4	6.90	7868	39.3	1.41	53.95
5	13:33	30.6	6.90	7899	43.9	1.32	53.88
6	13:35	30.6	6.90	7904	46.2	1.39	54.00
7	13:37	30.7	6.90	7908	47.1	1.38	54.07
8							
9							
10	Sample 13:37						
11							
12							
13							
14	11/8/22						
15							
16							
17							
18							
19	QS-3						
20							
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32							
33							
34							
35							
36							
37							
38		1	0.1	3%	10	0.3	

Well ID:	OS-18	53.78		Sampler(s):	Bradley	
LNAPL?	Yes / No	IWL:		Well Depth:		
Date: 11/8/22		Sample Time:	11:50	Gallons Purged:	0.25	

1	11:38	27.30	7.05	1664	-81.8	1.91	53.88
2	11:40	26.76	7.06	1618	-91.7	1.67	53.88
3	11:42	26.64	7.06	1589	-100.8	1.42	53.88
4	11:44	26.57	7.06	1578	-107.8	1.32	53.89
5	11:46	26.62	7.05	1577	-110.1	1.42	53.88
6	11:48	26.76	7.06	1578	-113.6	1.48	53.88
7	11:50	26.76	7.06	1579	114.9	1.5	53.88
8							
9							
10							
11		Sampling			11:50		
12							
13							
14							
15		11/8/22					
16							
17							
18							
19							
20							
21							
22							
23		OS-18					
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30							
31							
32							
33							
34							
35							
36							
37							
38		1	0.1	3%	10	0.3	

Well ID:	QS-20	60.93		Sampler(s):	BRADFIELD	
LNAPL?	Yes/No	IWL:	Well Depth:	75.00		
Date:	11/8/22	Sample Time:	14:27	Gallons Purged:	0.50	

1	14:18	28.25	7.67	1116	57.4	5.38	60.95
2	14:20	28.5	7.62	1158	64.8	5.02	60.98
3	14:22	28.4	7.59	1027	68.9	4.85	60.95
4	14:24	28.5	7.62	1024	72.3	4.76	60.97
5	14:26	28.6	7.62	1022	74.1	4.77	60.98
6	14:27	28.6	7.64	1021	75.1	4.72	60.98
7							
8							
9							
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24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38		1	0.1	3%	10	0.3	

Sample - 14:27

11/8/22

QS-20

Well ID:	QS 16		5640		Sampler(s):	Blaylock	
LNAPL?	Yes (No)		IWL:	Well Depth:			
Date:	11/9/22	Sample Time:	8:57		Gallons Purged:	0.25	
1	8:45	26.63	11.1	723	-38.2	4.92	56.00
2	8:47	25.7	11.1	728	-41.2	4.31	56.90
3	8:49	25.6	11.1	726	-38.3	3.57	56.87
4	8:51	25.9	11.2	734	-35.1	3.61	56.86
5	8:53	26.9	11.2	741	-33.7	3.52	56.85
6	8:55	26.2	11.1	743	-32.1	3.46	56.85
7	8:57	26.1	11.0	740	-29.2	3.40	56.85
8							
9		Stabilized			8:57		
10							
11							
12							
13		11/9/22					
14							
15							
16							
17							
18							
19		QS-16					
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31							
32							
33							
34							
35							
36							
37							
38		1	0.1	3%	10	0.3	

Well ID:	QS-10	56.63		Sampler(s):	BRADFIELD	
LNAPL?	Yes (No)	IWL:	Well Depth:			
Date:	11/9/22	Sample Time:	9:31	Gallons Purged:	0.50	

1	9:21	27.3	7.52	1450	54.7	2.28	56.76
2	9:23	27.5	7.49	1470	52.1	2.24	56.73
3	9:25	27.8	7.49	1483	48.1	2.30	56.75
4	9:27	28.2	7.48	1486	40.0	2.26	56.78
5	9:29	28.5	7.48	1488	38.6	2.26	56.78
6	9:31	28.5	7.49	1479	36.9	2.26	56.76
7							
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35							
36							
37							
38		1	0.1	3%	10	0.3	

Sampling QS-10 11/9/22 9:31

Orange Coast Analytical, Inc.
3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (480) 736-0960 Fax (480) 736-0970

LABORATORY REPORT FORM

ORANGE COAST ANALYTICAL, INC.

4620 East Elwood Street, Suite 4 Phoenix, AZ
85040

(480) 736-0960

Laboratory Certification (ELAP) No.:AZ0558, AZ0646
Expiration Date: 2022

Laboratory Director's Name:
Mark Noorani

Client:	Apex Envirotech Inc
Laboratory Reference:	AET AZ13442
Project Name:	Shay Oil
Project Number:	SHA04.001
Date Received:	3/31/2022
Date Reported:	4/20/2022
Chain of Custody Received:	☑
Analytical Method:	8310, 8260B, 6010D, 7471B,

Mark Noorani, Laboratory Director

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Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13442
Project Name: Shay Oil
Project #: SHA04.001

Case Narrative

Sample Receipt:

All samples on the Chain of Custody were received by OCA at 1.7ºC, on ice.

Holding Times:

All samples were analyzed within required holding times unless otherwise noted in the data qualifier section of the report.

Analytical Methods:

Sample analysis was performed following the analytical methods listed on the cover page.

Data Qualifiers:

Within this report, data qualifiers may have been assigned to clarify deviations in common laboratory procedures or any divergence from laboratory QA/QC criteria. If a data qualifier has been used, it will appear in the back of the report along with its description. All method QA/QC criteria have been met unless otherwise noted in the data qualifier section.

Definition of Terms:

The definitions of common terms and acronyms used in the report have been placed at the back of the report to assist data users.

Comments:

None

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13442
Project Name: Shay Oil
Project #: SHA04.001

Client Sample Summary

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
QD-3	AZ13442-001	3/31/2022	3/29/2022	Water
QD-2	AZ13442-002	3/31/2022	3/30/2022	Water
Soil Disposal	AZ13442-003	3/31/2022	3/30/2022	Soil
QD-4	AZ13442-004	3/31/2022	3/30/2022	Water
QD-5	AZ13442-005	3/31/2022	3/31/2022	Water
QD-1	AZ13442-006	3/31/2022	3/31/2022	Water

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13442
Project Name: Shay Oil
Project #: SHA04.001

Polynuclear Aromatic Hydrocarbons (EPA 8310)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Disposal	AZ13442-003	3/31/2022 15:07	3/30/2022 10:10	4/5/2022 9:33	4/5/2022 15:06	Soil

ANALYTE	CAS #	mg/kg	RL	MDL
Acenaphthene:	83-32-9	<0.0012	0.0020	0.0012
Acenaphthylene:	208-96-8	<0.0053	0.010	0.0053
Anthracene:	120-12-7	<0.00054	0.0050	0.00054
Benz(a)anthracene:	56-55-3	<0.00095	0.0020	0.00095
Benzo(a)pyrene:	50-32-8	<0.00080	0.0020	0.00080
Benzo(b)fluoranthene:	205-99-2	<0.0010	0.0020	0.0010
Benzo(k)fluoranthene:	207-08-9	<0.0010	0.0020	0.0010
Benzo(g,h,i)perylene:	191-24-2	<0.0017	0.0020	0.0017
Chrysene:	218-01-9	<0.0011	0.0020	0.0011
Dibenz(a,h)anthracene:	53-70-3	<0.0012	0.0020	0.0012
Fluoranthene:	206-44-0	<0.0014	0.0020	0.0014
Pyrene:	129-00-0	<0.00074	0.0020	0.00074
Fluorene:	86-73-7	<0.0076	0.010	0.0076
Indeno(1,2,3-cd)pyrene:	193-39-5	<0.0022	0.0030	0.0022
Naphthalene:	91-20-3	<0.0046	0.0050	0.0046

Surrogate:	% RC*
Nitrobenzene-d5	86

* Acceptable Recovery: 22-130 %

Dilution Factor: 1
Data Qualifiers: None

Method Blank	MBVV0404223			4/4/2022 16:50	4/5/2022 8:56	Soil

ANALYTE	CAS #	mg/kg	RL	MDL
Acenaphthene:	83-32-9	<0.0012	0.0020	0.0012
Acenaphthylene:	208-96-8	<0.0053	0.010	0.0053
Anthracene:	120-12-7	<0.00054	0.0050	0.00054
Benz(a)anthracene:	56-55-3	<0.00095	0.0020	0.00095
Benzo(a)pyrene:	50-32-8	<0.00080	0.0020	0.00080
Benzo(b)fluoranthene:	205-99-2	<0.0010	0.0020	0.0010
Benzo(k)fluoranthene:	207-08-9	<0.0010	0.0020	0.0010
Benzo(g,h,i)perylene:	191-24-2	<0.0017	0.0020	0.0017
Chrysene:	218-01-9	<0.0011	0.0020	0.0011
Dibenz(a,h)anthracene:	53-70-3	<0.0012	0.0020	0.0012
Fluoranthene:	206-44-0	<0.0014	0.0020	0.0014
Pyrene:	129-00-0	<0.00074	0.0020	0.00074
Fluorene:	86-73-7	<0.0076	0.010	0.0076
Indeno(1,2,3-cd)pyrene:	193-39-5	<0.0022	0.0030	0.0022
Naphthalene:	91-20-3	<0.0046	0.0050	0.0046

Surrogate:	% RC*
Nitrobenzene-d5	79

* Acceptable Recovery: 22-130 %

Dilution Factor: 1
Data Qualifiers: None

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13442
Project Name: Shay Oil
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Disposal	AZ13442-003	3/31/2022 15:07	3/30/2022 10:10	3/30/2022 10:10	4/5/2022 23:48	Soil

ANALYTE	CAS #	mg/kg	RL	MDL	mg/kg
Benzene	71-43-2	<0.011	0.040	0.011	
Ethylbenzene	100-41-4	<0.013	0.050	0.013	
Toluene	108-88-3	<0.019	0.050	0.019	
m- & p-Xylenes	179601-23-1	<0.020	0.10	0.020	
o-Xylene	95-47-6	<0.011	0.050	0.011	
Methyl t-butyl ether (MTBE)	1634-04-4	<0.050	0.050	0.030	

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	84	65-130 %
Toluene-d8:	99	47-130 %
4-Bromofluorobenzene:	97	42-132 %

Dilution Factor: 1

Data Qualifiers: None

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13442
Project Name: Shay Oil
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBTT0331221			3/31/2022 15:54	4/5/2022 19:52	Soil

ANALYTE	CAS #	mg/kg	RL	MDL	mg/kg
Benzene	71-43-2	<0.011	0.040	0.011	
Ethylbenzene	100-41-4	<0.013	0.050	0.013	
Toluene	108-88-3	<0.019	0.050	0.019	
m- & p-Xylenes	179601-23-1	<0.020	0.10	0.020	
o-Xylene	95-47-6	<0.011	0.050	0.011	
Methyl t-butyl ether (MTBE)	1634-04-4	<0.050	0.050	0.030	

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	81	65-130 %
Toluene-d8:	94	47-130 %
4-Bromofluorobenzene:	98	42-132 %

Dilution Factor: 1

Data Qualifiers: None

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13442
Project Name: Shay Oil
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QD-3	AZ13442-001	3/31/2022 15:07	3/29/2022 7:26	4/12/2022 9:29	4/12/2022 13:48	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21
Bromobenzene	108-86-1	<0.35	1.0	0.35
Bromochloromethane	74-97-5	<0.36	1.0	0.36
Bromodichloromethane	75-27-4	<0.33	0.50	0.33
Bromoform	75-25-2	<0.32	1.0	0.32
Bromomethane	74-83-9	<0.18	5.0	0.18
1,3-Butadiene	106-99-0	ND	TIC	--
n-Butylbenzene	104-51-8	<0.24	1.0	0.24
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26
Carbon Disulfide	75-15-0	<0.34	0.50	0.34
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44
Chlorobenzene	108-90-7	<0.23	1.0	0.23
Chloroethane	75-00-3	<0.39	5.0	0.39
Chloroform	67-66-3	<0.34	1.0	0.34
Chloromethane	74-87-3	<0.37	5.0	0.37
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26
Cyclohexane	110-82-7	ND	TIC	--
Dibromochloromethane	124-48-1	<0.27	1.0	0.27
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30
Dicyclopentadiene	77-73-6	ND	TIC	--
Ethylbenzene	100-41-4	<0.25	1.0	0.25
4-Ethyltoluene	622-96-8	ND	TIC	--
n-Hexane	110-54-3	ND	TIC	--
Isopropylbenzene	98-82-8	<0.21	1.0	0.21
4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
Methyl cyclohexane	108-87-2	ND	TIC	--
Methyl t-butyl ether (MTBE)	1634-04-4	<0.58	1.0	0.58
Naphthalene	91-20-3	<0.31	3.0	0.31
Propene	115-07-1	ND	TIC	--
n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Styrene	100-42-5	<0.18	1.0	0.18
1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Toluene	108-88-3	<0.37	1.0	0.37
1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Trichloroethene	79-01-6	<0.33	1.0	0.33
Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
Vinyl chloride	75-01-4	<0.35	2.0	0.35
m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
o-Xylene	95-47-6	<0.21	0.50	0.21

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	96	64-130 %
Toluene-d8:	89	47-130 %
4-Bromofluorobenzene:	86	44-134 %

Dilution Factor: 1

Data Qualifiers: T4,

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13442
Project Name: Shay Oil
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QD-2	AZ13442-002	3/31/2022 15:07	3/30/2022 7:30	4/12/2022 9:29	4/12/2022 13:28	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21
Bromobenzene	108-86-1	<0.35	1.0	0.35
Bromochloromethane	74-97-5	<0.36	1.0	0.36
Bromodichloromethane	75-27-4	<0.33	0.50	0.33
Bromoform	75-25-2	<0.32	1.0	0.32
Bromomethane	74-83-9	<0.18	5.0	0.18
1,3-Butadiene	106-99-0	ND	TIC	--
n-Butylbenzene	104-51-8	<0.24	1.0	0.24
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26
Carbon Disulfide	75-15-0	<0.34	0.50	0.34
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44
Chlorobenzene	108-90-7	<0.23	1.0	0.23
Chloroethane	75-00-3	<0.39	5.0	0.39
Chloroform	67-66-3	<0.34	1.0	0.34
Chloromethane	74-87-3	<0.37	5.0	0.37
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26
Cyclohexane	110-82-7	ND	TIC	--
Dibromochloromethane	124-48-1	<0.27	1.0	0.27
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30
Dicyclopentadiene	77-73-6	ND	TIC	--
Ethylbenzene	100-41-4	<0.25	1.0	0.25
4-Ethyltoluene	622-96-8	ND	TIC	--
n-Hexane	110-54-3	ND	TIC	--
Isopropylbenzene	98-82-8	<0.21	1.0	0.21
4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
Methyl cyclohexane	108-87-2	ND	TIC	--
Methyl t-butyl ether (MTBE)	1634-04-4	<0.58	1.0	0.58
Naphthalene	91-20-3	<0.31	3.0	0.31
Propene	115-07-1	ND	TIC	--
n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Styrene	100-42-5	<0.18	1.0	0.18
1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Toluene	108-88-3	<0.37	1.0	0.37
1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Trichloroethene	79-01-6	<0.33	1.0	0.33
Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
Vinyl chloride	75-01-4	<0.35	2.0	0.35
m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
o-Xylene	95-47-6	<0.21	0.50	0.21

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	98	64-130 %
Toluene-d8:	90	47-130 %
4-Bromofluorobenzene:	88	44-134 %

Dilution Factor: 1

Data Qualifiers: T4,

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13442
Project Name: Shay Oil
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QD-4	AZ13442-004	3/31/2022 15:07	3/30/2022 11:36	4/12/2022 9:29	4/12/2022 14:08	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21
Bromobenzene	108-86-1	<0.35	1.0	0.35
Bromochloromethane	74-97-5	<0.36	1.0	0.36
Bromodichloromethane	75-27-4	<0.33	0.50	0.33
Bromoform	75-25-2	<0.32	1.0	0.32
Bromomethane	74-83-9	<0.18	5.0	0.18
1,3-Butadiene	106-99-0	ND	TIC	--
n-Butylbenzene	104-51-8	<0.24	1.0	0.24
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26
Carbon Disulfide	75-15-0	<0.34	0.50	0.34
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44
Chlorobenzene	108-90-7	<0.23	1.0	0.23
Chloroethane	75-00-3	<0.39	5.0	0.39
Chloroform	67-66-3	<0.34	1.0	0.34
Chloromethane	74-87-3	<0.37	5.0	0.37
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26
Cyclohexane	110-82-7	ND	TIC	--
Dibromochloromethane	124-48-1	<0.27	1.0	0.27
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30
Dicyclopentadiene	77-73-6	ND	TIC	--
Ethylbenzene	100-41-4	<0.25	1.0	0.25
4-Ethyltoluene	622-96-8	ND	TIC	--
n-Hexane	110-54-3	ND	TIC	--
Isopropylbenzene	98-82-8	<0.21	1.0	0.21
4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
Methyl cyclohexane	108-87-2	ND	TIC	--
Methyl t-butyl ether (MTBE)	1634-04-4	13	1.0	0.58
Naphthalene	91-20-3	<0.31	3.0	0.31
Propene	115-07-1	ND	TIC	--
n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Styrene	100-42-5	<0.18	1.0	0.18
1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Toluene	108-88-3	<0.37	1.0	0.37
1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Trichloroethene	79-01-6	<0.33	1.0	0.33
Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
Vinyl chloride	75-01-4	<0.35	2.0	0.35
m- & p-Xylenes	179601-23-1	0.42	1.0	0.39
o-Xylene	95-47-6	<0.21	0.50	0.21

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	95	64-130 %
Toluene-d8:	86	47-130 %
4-Bromofluorobenzene:	83	44-134 %

Dilution Factor: 1

Data Qualifiers: J , T4,

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13442
Project Name: Shay Oil
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QD-5	AZ13442-005	3/31/2022 15:07	3/31/2022 7:10	4/12/2022 9:29	4/12/2022 15:08	Water

ANALYTE	CAS #	µg/L	RL	MDL	ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21	Dicyclopentadiene	77-73-6	ND	TIC	--
Bromobenzene	108-86-1	<0.35	1.0	0.35	Ethylbenzene	100-41-4	<0.25	1.0	0.25
Bromochloromethane	74-97-5	<0.36	1.0	0.36	4-Ethyltoluene	622-96-8	ND	TIC	--
Bromodichloromethane	75-27-4	<0.33	0.50	0.33	n-Hexane	110-54-3	ND	TIC	--
Bromoform	75-25-2	<0.32	1.0	0.32	Isopropylbenzene	98-82-8	<0.21	1.0	0.21
Bromomethane	74-83-9	<0.18	5.0	0.18	4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
1,3-Butadiene	106-99-0	ND	TIC	--	Methyl cyclohexane	108-87-2	ND	TIC	--
n-Butylbenzene	104-51-8	<0.24	1.0	0.24	Methyl t-butyl ether (MTBE)	1634-04-4	74	1.0	0.58
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21	Naphthalene	91-20-3	<0.31	3.0	0.31
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26	Propene	115-07-1	ND	TIC	--
Carbon Disulfide	75-15-0	<0.34	0.50	0.34	n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44	Styrene	100-42-5	<0.18	1.0	0.18
Chlorobenzene	108-90-7	<0.23	1.0	0.23	1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Chloroethane	75-00-3	<0.39	5.0	0.39	Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Chloroform	67-66-3	<0.34	1.0	0.34	Toluene	108-88-3	<0.37	1.0	0.37
Chloromethane	74-87-3	<0.37	5.0	0.37	1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30	1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26	1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Cyclohexane	110-82-7	ND	TIC	--	Trichloroethene	79-01-6	<0.33	1.0	0.33
Dibromochloromethane	124-48-1	<0.27	1.0	0.27	Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32	1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30	1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27	1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34	Vinyl chloride	75-01-4	<0.35	2.0	0.35
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28	m- & p-Xylenes	179601-23-1	0.54	1.0	0.39
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37	o-Xylene	95-47-6	<0.21	0.50	0.21
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38					
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43					
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29					
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33					
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34					
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26					
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35					
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29					
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26					
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30					

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	98	64-130 %
Toluene-d8:	89	47-130 %
4-Bromofluorobenzene:	88	44-134 %

Dilution Factor: 1

Data Qualifiers: J , T4,

Ms. Patty Small
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Overland Park, KS, 66223

Lab Reference #: AET AZ13442
Project Name: Shay Oil
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QD-1	AZ13442-006	3/31/2022 15:07	3/31/2022 7:25	4/12/2022 9:29	4/12/2022 16:09	Water

ANALYTE	CAS #	µg/L	RL	MDL	ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<1.1	2.5	1.1	Dicyclopentadiene	77-73-6	ND	TIC	--
Bromobenzene	108-86-1	<1.8	5.0	1.8	Ethylbenzene	100-41-4	<1.3	5.0	1.3
Bromochloromethane	74-97-5	<1.8	5.0	1.8	4-Ethyltoluene	622-96-8	ND	TIC	--
Bromodichloromethane	75-27-4	<1.7	2.5	1.7	n-Hexane	110-54-3	ND	TIC	--
Bromoform	75-25-2	<1.6	5.0	1.6	Isopropylbenzene	98-82-8	<1.1	5.0	1.1
Bromomethane	74-83-9	<0.90	25	0.90	4-Isopropyltoluene	99-87-6	<1.0	5.0	1.0
1,3-Butadiene	106-99-0	ND	TIC	--	Methyl cyclohexane	108-87-2	ND	TIC	--
n-Butylbenzene	104-51-8	<1.2	5.0	1.2	Methyl t-butyl ether (MTBE)	1634-04-4	160	5.0	2.9
sec-Butylbenzene	135-98-8	<1.1	5.0	1.1	Naphthalene	91-20-3	<1.6	15	1.6
tert-Butylbenzene	98-06-6	<1.3	5.0	1.3	Propene	115-07-1	ND	TIC	--
Carbon Disulfide	75-15-0	<1.7	2.5	1.7	n-Propylbenzene	103-65-1	<1.5	5.0	1.5
Carbon tetrachloride	56-23-5	<2.2	5.0	2.2	Styrene	100-42-5	<0.90	5.0	0.90
Chlorobenzene	108-90-7	<1.2	5.0	1.2	1,1,2,2-Tetrachloroethane	79-34-5	<1.8	5.0	1.8
Chloroethane	75-00-3	<2.0	25	2.0	Tetrachloroethene	127-18-4	<1.6	5.0	1.6
Chloroform	67-66-3	<1.7	5.0	1.7	Toluene	108-88-3	<1.9	5.0	1.9
Chloromethane	74-87-3	<1.9	25	1.9	1,2,3-Trichlorobenzene	87-61-6	<1.8	5.0	1.8
2-Chlorotoluene	95-49-8	<1.5	5.0	1.5	1,1,1-Trichloroethane	71-55-6	<1.7	5.0	1.7
4-Chlorotoluene	106-43-4	<1.3	5.0	1.3	1,1,2-Trichloroethane	79-00-5	<1.7	5.0	1.7
Cyclohexane	110-82-7	ND	TIC	--	Trichloroethene	79-01-6	<1.7	5.0	1.7
Dibromochloromethane	124-48-1	<1.4	5.0	1.4	Trichlorofluoromethane	75-69-4	<2.0	10	2.0
1,2-Dibromoethane	106-93-4	<1.6	5.0	1.6	1,2,3-Trichloropropane	96-18-4	<1.9	5.0	1.9
1,2-Dichlorobenzene	95-50-1	<1.5	5.0	1.5	1,2,4-Trimethylbenzene	95-63-6	<1.1	5.0	1.1
1,3-Dichlorobenzene	541-73-1	<1.4	5.0	1.4	1,3,5-Trimethylbenzene	108-67-8	<1.3	5.0	1.3
1,4-Dichlorobenzene	106-46-7	<1.7	5.0	1.7	Vinyl chloride	75-01-4	<1.8	10	1.8
Dichlorodifluoromethane	75-71-8	<1.4	10	1.4	m- & p-Xylenes	179601-23-1	<2.0	5.0	2.0
1,1-Dichloroethane	75-34-3	<1.9	5.0	1.9	o-Xylene	95-47-6	<1.1	2.5	1.1
1,2-Dichloroethane	107-06-2	<1.9	5.0	1.9					
1,1-Dichloroethene	75-35-4	<2.2	5.0	2.2					
cis-1,2-Dichloroethene	156-59-2	<1.5	5.0	1.5					
trans-1,2-Dichloroethene	156-60-5	<1.7	5.0	1.7					
1,2-Dichloropropane	78-87-5	<1.7	5.0	1.7					
1,3-Dichloropropane	142-28-9	<1.3	5.0	1.3					
2,2-Dichloropropane	594-20-7	<1.8	5.0	1.8					
1,1-Dichloropropene	563-58-6	<1.5	5.0	1.5					
cis-1,3-Dichloropropene	10061-01-5	<1.3	5.0	1.3					
trans-1,3-Dichloropropene	10061-02-6	<1.5	5.0	1.5					

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	95	64-130 %
Toluene-d8:	87	47-130 %
4-Bromofluorobenzene:	81	44-134 %

Dilution Factor: 5

Data Qualifiers: D2, T4,

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7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13442
Project Name: Shay Oil
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBHT0412222			4/12/2022 9:29	4/12/2022 12:06	Water

ANALYTE	CAS #	µg/L	RL	MDL	ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21	Dicyclopentadiene	77-73-6	ND	TIC	--
Bromobenzene	108-86-1	<0.35	1.0	0.35	Ethylbenzene	100-41-4	<0.25	1.0	0.25
Bromochloromethane	74-97-5	<0.36	1.0	0.36	4-Ethyltoluene	622-96-8	ND	TIC	--
Bromodichloromethane	75-27-4	<0.33	0.50	0.33	n-Hexane	110-54-3	ND	TIC	--
Bromoform	75-25-2	<0.32	1.0	0.32	Isopropylbenzene	98-82-8	<0.21	1.0	0.21
Bromomethane	74-83-9	<0.18	5.0	0.18	4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
1,3-Butadiene	106-99-0	ND	TIC	--	Methyl cyclohexane	108-87-2	ND	TIC	--
n-Butylbenzene	104-51-8	<0.24	1.0	0.24	Methyl t-butyl ether (MTBE)	1634-04-4	<0.58	1.0	0.58
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21	Naphthalene	91-20-3	<0.31	3.0	0.31
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26	Propene	115-07-1	ND	TIC	--
Carbon Disulfide	75-15-0	<0.34	0.50	0.34	n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44	Styrene	100-42-5	<0.18	1.0	0.18
Chlorobenzene	108-90-7	<0.23	1.0	0.23	1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Chloroethane	75-00-3	<0.39	5.0	0.39	Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Chloroform	67-66-3	<0.34	1.0	0.34	Toluene	108-88-3	<0.37	1.0	0.37
Chloromethane	74-87-3	<0.37	5.0	0.37	1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30	1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26	1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Cyclohexane	110-82-7	ND	TIC	--	Trichloroethene	79-01-6	<0.33	1.0	0.33
Dibromochloromethane	124-48-1	<0.27	1.0	0.27	Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32	1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30	1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27	1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34	Vinyl chloride	75-01-4	<0.35	2.0	0.35
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28	m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37	o-Xylene	95-47-6	<0.21	0.50	0.21
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38					
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43					
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29					
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33					
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34					
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26					
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35					
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29					
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26					
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30					

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	94	64-130 %
Toluene-d8:	86	47-130 %
4-Bromofluorobenzene:	82	44-134 %

Dilution Factor: 1

Data Qualifiers: T4,

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7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13442
Project Name: Shay Oil
Project #: SHA04.001

Metals

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
Soil Disposal	AZ13442-003	3/31/2022 15:07	3/30/2022 10:10	Soil

ANALYTE	EPA Method	Result	RL	MDL	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010D	11	2.0	1.0	mg/kg	04/06/22 16:00	04/07/22 16:53	--	1
Barium	6010D	180	1.0	0.26	mg/kg	04/06/22 16:00	04/07/22 16:53	--	1
Cadmium	6010D	0.69	0.50	0.054	mg/kg	04/06/22 16:00	04/07/22 16:53	--	1
Chromium	6010D	38	0.50	0.081	mg/kg	04/06/22 16:00	04/07/22 16:53	--	1
Lead	6010D	12	0.80	0.66	mg/kg	04/06/22 16:00	04/07/22 16:53	--	1
Mercury	7471B	<0.043	0.10	0.043	mg/kg	04/07/22 10:00	04/07/22 14:22	--	1
Selenium	6010D	<3.0	4.8	3.0	mg/kg	04/06/22 16:00	04/07/22 16:53	--	1
Silver	6010D	<0.15	0.50	0.15	mg/kg	04/06/22 16:00	04/07/22 16:53	--	1

Method Blank — Soil

MB ID	ANALYTE	EPA Method	Result	RL	MDL	Units	Date Extracted	Date Analyzed	Qual	DF
MBHV0406221	Arsenic	6010D	<1.0	2.0	1.0	mg/kg	04/06/22 16:00	04/07/22 16:28	--	1
MBHV0406221	Barium	6010D	<0.26	1.0	0.26	mg/kg	04/06/22 16:00	04/07/22 16:28	--	1
MBHV0406221	Cadmium	6010D	<0.054	0.50	0.054	mg/kg	04/06/22 16:00	04/07/22 16:28	--	1
MBHV0406221	Chromium	6010D	<0.081	0.50	0.081	mg/kg	04/06/22 16:00	04/07/22 16:28	--	1
MBHV0406221	Lead	6010D	<0.66	0.80	0.66	mg/kg	04/06/22 16:00	04/07/22 16:28	--	1
MBIR0407221	Mercury	7471B	<0.043	0.10	0.043	mg/kg	04/07/22 10:00	04/07/22 13:51	--	1
MBHV0406221	Selenium	6010D	<3.0	4.8	3.0	mg/kg	04/06/22 16:00	04/07/22 16:28	--	1
MBHV0406221	Silver	6010D	<0.15	0.50	0.15	mg/kg	04/06/22 16:00	04/07/22 16:28	--	1

QA/QC Report
for
Polynuclear Aromatic Hydrocarbons (8310)
Reporting Units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 4/5/2022 9:33
Date of Analysis: 4/5/2022 16:15
Dup Date of Analysis: 4/5/2022 16:38
Laboratory Sample #: AZ13445-002
MS/MSD Qualifiers: None
Reference #: AET AZ13442

Analyte	R1	Spike Conc.	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Acenaphthene	0.00	50.0	39.3	40.3	79	81	3	39-130	28	--
Acenaphthylene	0.00	50.0	39.5	39.5	79	79	0	45-130	24	--
Anthracene	0.00	50.0	35.9	38.0	72	76	6	40-130	25	--
Benz(a)anthracene	0.00	50.0	40.5	42.9	81	86	6	60-130	20	--
Benzo(a)pyrene	0.00	50.0	35.2	38.3	70	77	8	51-130	20	--
Benzo(b)fluoranthene	1.00	50.0	41.4	44.4	81	87	7	64-130	20	--
Benzo(g,h,i)perylene	0.00	50.0	42.4	45.1	85	90	6	56-130	20	--
Benzo(k)fluoranthene	0.00	50.0	40.8	44.3	82	89	8	62-130	20	--
Chrysene	0.00	50.0	42.1	44.4	84	89	5	57-130	20	--
Dibenz(a,h)anthracene	0.00	50.0	40.5	44.4	81	89	9	58-130	20	--
Fluoranthene	0.00	50.0	40.9	44.2	82	88	8	41-130	21	--
Fluorene	0.00	50.0	40.0	41.3	80	83	3	50-130	26	--
Indeno(1,2,3-cd)pyrene	0.00	50.0	44.0	47.0	88	94	7	57-130	20	--
Naphthalene	0.00	50.0	38.5	39.5	77	79	3	42-130	21	--
Pyrene	0.00	50.0	41.2	43.5	82	87	5	57-130	20	--

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual
Nitrobenzene-d5	78	84	☐

LCS	LCSD	Qual
73	81	☐

ACP % RC
22-130

Laboratory Control Sample (LCS) / Laboratory Control Sample Duplicate (LCSD)

Date of Extraction: 4/4/2022 16:50
Date of Analysis: 4/5/2022 9:19
Dup Date of Analysis: 4/5/2022 9:42
Laboratory Sample #: VV0404223
LCS/LCSD Qualifiers: None

Analyte	Spike Conc.	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Acenaphthene	50.0	35.9	40.3	72	81	12	57-130	20	--
Acenaphthylene	50.0	36.8	41.1	74	82	11	61-130	20	--
Anthracene	50.0	36.4	41.0	73	82	12	53-130	20	--
Benz(a)anthracene	50.0	38.6	43.7	77	87	12	70-130	20	--
Benzo(a)pyrene	50.0	35.6	35.7	71	71	0	59-130	20	--
Benzo(b)fluoranthene	50.0	39.1	44.8	78	90	14	70-130	20	--
Benzo(g,h,i)perylene	50.0	40.6	45.1	81	90	11	66-130	20	--
Benzo(k)fluoranthene	50.0	37.8	44.4	76	89	16	70-130	20	--
Chrysene	50.0	39.7	44.9	79	90	12	70-130	20	--
Dibenz(a,h)anthracene	50.0	39.2	45.1	78	90	14	70-130	20	--

QA/QC Report
for
Polynuclear Aromatic Hydrocarbons (8310)

Reporting Units: ppb

Analyte	Spike Conc.	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Fluoranthene	50.0	39.5	43.3	79	87	9	57-130	20	--
Fluorene	50.0	36.9	40.0	74	80	8	70-130	20	--
Indeno(1,2,3-cd)pyrene	50.0	40.7	46.9	81	94	14	66-130	20	--
Naphthalene	50.0	35.3	39.3	71	79	11	66-130	20	--
Pyrene	50.0	39.0	43.9	78	88	12	62-130	20	--

QA/QC Report
for
Volatile Organic Compounds (8260B)
Reporting Units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 4/5/2022 18:50
Date of Analysis: 4/5/2022 22:31
Dup Date of Analysis: 4/5/2022 23:09
Laboratory Sample #: AZ13445-002
MS/MSD Qualifiers: None
Reference #: AET AZ13442

Analyte	R1	Spike Conc.	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Benzene	0.00	500	415	454	83	91	9	67-138	20	--
Chlorobenzene	0.00	500	467	498	93	100	6	70-130	20	--
1,1-Dichloroethene	0.00	500	370	387	74	77	4	52-137	20	--
Toluene	0.00	500	468	499	94	100	6	63-133	20	--
Trichloroethene	0.00	500	418	466	84	93	11	69-130	20	--

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual	LCS	LCSD	Qual	ACP % RC
Dibromofluoromethane	83	83	☐	83	84	☐	65-130
Toluene-d8	96	96	☐	96	96	☐	47-130
4-Bromofluorobenzene	98	97	☐	98	100	☐	42-132

Laboratory Control Sample (LCS) / Laboratory Control Sample Duplicate (LCSD)

Date of Extraction: 4/5/2022 18:35
Date of Analysis: 4/5/2022 20:35
Dup Date of Analysis: 4/5/2022 21:13
Laboratory Sample #: TP0405221
LCS/LCSD Qualifiers: None

Analyte	Spike Conc.	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Benzene	500	407	441	81	88	8	70-134	20	--
Chlorobenzene	500	436	474	87	95	8	70-130	20	--
1,1-Dichloroethene	500	348	379	70	76	9	55-134	20	--
Toluene	500	443	466	89	93	5	69-130	20	--
Trichloroethene	500	398	433	80	87	8	70-130	20	--

QA/QC Report
for
Volatile Organic Compounds (8260B)
Reporting Units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 4/12/2022 9:29
Date of Analysis: 4/12/2022 14:28
Dup Date of Analysis: 4/12/2022 14:48
Laboratory Sample #: AZ13442-002
MS/MSD Qualifiers: None
Reference #: AET AZ13442

Analyte	R1	Spike Conc.	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Benzene	0.00	10.0	11.2	10.6	112	106	6	70-143	20	--
Chlorobenzene	0.00	10.0	10.6	9.99	106	100	6	70-139	20	--
1,1-Dichloroethene	0.00	10.0	11.2	10.6	112	106	6	55-137	20	--
Toluene	0.00	10.0	11.7	10.8	117	108	8	66-138	20	--
Trichloroethene	0.00	10.0	11.1	10.4	111	104	7	70-132	20	--

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual	LCS	LCSD	Qual	ACP % RC
Dibromofluoromethane	99	95	☐	96	94	☐	64-130
Toluene-d8	88	84	☐	84	86	☐	47-130
4-Bromofluorobenzene	85	76	☐	80	83	☐	44-134

Laboratory Control Sample (LCS) / Laboratory Control Sample Duplicate (LCSD)

Date of Extraction: 4/12/2022 9:29
Date of Analysis: 4/12/2022 12:27
Dup Date of Analysis: 4/12/2022 12:48
Laboratory Sample #: HT0412222
LCS/LCSD Qualifiers: None

Analyte	Spike Conc.	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Benzene	10.0	10.6	11.3	106	113	6	70-133	20	--
Chlorobenzene	10.0	9.85	10.8	99	108	9	70-130	20	--
1,1-Dichloroethene	10.0	10.9	11.6	109	116	6	56-131	20	--
Toluene	10.0	10.8	11.5	108	115	6	67-130	20	--
Trichloroethene	10.0	10.3	11.5	103	115	11	70-130	20	--

QA/QC Report
for
Metals

Reference #: AET AZ13442 Reporting units: ppm

Matrix Spike (MS) / Matrix Spike Duplicate (MSD) **6010D/7471B**

Laboratory Sample #: 26851-001 **Date of Extraction:** 04/06/22 16:00

Analyte	MS Date of Analysis	MSD Date of Analysis	R1	SPC CONC	MS	MSD	% MS	% MSD	RPD	ACP %MS	ACP RPD	Qualifiers
Arsenic	04/07/22 16:39	04/07/22 16:42	0.00	20.0	25.1	24.5	126	123	2	75-125	20	--
Barium	04/07/22 16:39	04/07/22 16:42	4.90	20.0	23.6	24.5	94	98	4	75-125	20	--
Cadmium	04/07/22 16:39	04/07/22 16:42	0.00	20.0	21.4	21.1	107	106	1	75-125	20	--
Chromium	04/07/22 16:39	04/07/22 16:42	4.80	20.0	25.7	26.3	105	107	2	75-125	20	--
Lead	04/07/22 16:39	04/07/22 16:42	0.910	20.0	21.5	21.0	103	100	2	75-125	20	--
Selenium	04/07/22 16:39	04/07/22 16:42	0.00	20.0	20.6	20.9	103	104	1	75-125	20	--
Silver	04/07/22 16:39	04/07/22 16:42	0.00	20.0	20.2	20.4	101	102	1	75-125	20	--

Laboratory Control Spike (LCS) / Laboratory Control Spike Duplicate (LCSD) **6010D/7471B**

Laboratory Sample #: HV0406221 **Date of Extraction:** 04/06/22 16:00

Analyte	LCS Date of Analysis	LCSD Date of Analysis		SPC CONC	LCS	LCSD	% LCS	% LCSD	RPD	ACP %LCS	ACP RPD	Qualifiers
Arsenic	04/07/22 16:31	04/07/22 16:33	--	20.0	21.0	21.6	105	108	3	80-120	20	--
Barium	04/07/22 16:31	04/07/22 16:33	--	20.0	18.5	18.8	93	94	2	80-120	20	--
Cadmium	04/07/22 16:31	04/07/22 16:33	--	20.0	21.0	21.3	105	106	1	80-120	20	--
Chromium	04/07/22 16:31	04/07/22 16:33	--	20.0	21.8	22.1	109	111	1	80-120	20	--
Lead	04/07/22 16:31	04/07/22 16:33	--	20.0	21.3	21.6	106	108	1	80-120	20	--
Selenium	04/07/22 16:31	04/07/22 16:33	--	20.0	20.2	20.6	101	103	2	80-120	20	--
Silver	04/07/22 16:31	04/07/22 16:33	--	20.0	19.5	19.8	98	99	2	80-120	20	--

Matrix Spike (MS) / Matrix Spike Duplicate (MSD) **6010D/7471B**

Laboratory Sample #: 26851-001 **Date of Extraction:** 04/07/22 10:00

Analyte	MS Date of Analysis	MSD Date of Analysis	R1	SPC CONC	MS	MSD	% MS	% MSD	RPD	ACP %MS	ACP RPD	Qualifiers
Mercury	04/07/22 13:58	04/07/22 13:59	0.00	1.00	1.02	1.01	102	101	1	80-120	20	--

Laboratory Control Spike (LCS) / Laboratory Control Spike Duplicate (LCSD) **6010D/7471B**

Laboratory Sample #: IR0407221 **Date of Extraction:** 04/07/22 10:00

Analyte	LCS Date of Analysis	LCSD Date of Analysis		SPC CONC	LCS	LCSD	% LCS	% LCSD	RPD	ACP %LCS	ACP RPD	Qualifiers
Mercury	04/07/22 12:52	04/07/22 13:54	--	1.00	1.02	1.02	102	102	0	80-120	20	--

Data Qualifier Definitions

Qualifier

D2 = Sample required dilution due to high concentration of target analyte.

J = Concentration estimated. Analyte was detected between MDL and RL.

AZ13442-004	8260B	m- & p-Xylenes.
AZ13442-005	8260B	m- & p-Xylenes.

T4 = Tentatively identified compound. Concentration is estimated and based on the closest internal standard.

Definition of terms:

R1	Result of unspiked laboratory sample used for matrix spike determination.
SP CONC (or Spike Conc.)	Spike concentration added to sample or blank
MS	Matrix Spike sample result
MSD	Matrix Spike Duplicate sample result
%MS	Percent recovery of MS: {(MS-R1) / SP CONC} x100
%MSD	Percent recovery of MSD: {(MSD-R1) / SP CONC} x 100
RPD (for MS/MSD)	Relative Percent Difference: {(MS-MSD) / (MS+MSD)} x 100 x 2
LCS	Laboratory Control Sample result
LCSD	Laboratory Control Sample Duplicate result
%LCS	Percent recovery of LCS: {(LCS) / SP CONC} x100
%LCSD	Percent recovery of LCSD: {(LCSD) / SP CONC} x 100
RPD (for LCS/LCSD)	Relative Percent Difference: {(LCS-LCSD) / (LCS+LCSD)} x 100 x 2
ACP %LCS	Acceptable percent recovery range for Laboratory Control Samples.
ACP %MS	Acceptable percent recovery range for Matrix Spike samples
ACP RPD	Acceptable Relative Percent Difference
D	Detectable, result must be greater than zero
Qual	A checked box indicates a data qualifier was utilized and/or required for this analyte see attached explanation.
ND	Analyte Not Detected

Analysis Request and Chain of Custody Record

Lab Job No: AZ13442
Page 1 of 1

ORANGE COAST ANALYTICAL, INC. www.ocalab.com

3002 Dow, Suite 532
Tustin, CA 92780
(714) 832-0064 Fax (714) 832-0067

4620 E. Elwood, Suite 4
Phoenix, AZ 85040
(480) 736-0960 Fax (480) 736-0970

REQUIRED TURN AROUND TIME: Standard: ✓
72 Hours: _____ 48 Hours: _____ 24 Hours: _____

CUSTOMER INFORMATION		PROJECT INFORMATION	
COMPANY:	Apex Envirotech, Inc	PROJECT NAME:	Shay Oil
SEND REPORT TO:	psmall@apexenvirotech.com	NUMBER:	Shay1.001
EMAIL:		ADDRESS:	
ADDRESS:	7111 W 151st St #338 Overland Park, KS		
PHONE:	816-807-2856 FAX: 1d1223	P.O. #:	
		SAMPLED BY:	PSmall

SAMPLE ID	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	ANALYSIS REQUEST / PRESERVATIVE: 8260B Target List for Petroleum Site Specific (Preservative 1 + 2)	RCRA 8 Metals	TAKHs	BTEX	REMARKS/PRECAUTIONS
QD-3	3	3/29/22	0726	GW		X				-001
QD-2	3	3/30/22	0930	GW		X				-002
Soil Disposal	2	3/30/22	1010	SS			X	X	X	-003
QD-4	3	3/30/22	1136	GW		X				-004
QD-5	3	3/31/22	0710	GW		X				-005
QD-1	3	3/31/22	0725	GW		X				-006

Total No. of Samples: 6 Method of Shipment:

Preservative: 1 = Ice 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

Relinquished By:	Date/Time:	Received By:	Date/Time:
Patty Small	3/31/22 1507	OCAAZ Jana Jornell	3/31/22 1507
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received For Lab By:	Date/Time:

Sample Matrix:
GW - Groundwater
WW - Wastewater
SW - Stormwater
DW - Drinking Water
W - Water
SS - Soil/Solid
OT - Other #12

Sample Integrity: 1-8-0-1
Intact: _____ On Ice: Yes / No @ 1.7 °C

By signing above, client acknowledges responsibility for payment of all services requested on this chain of custody form and any additional services provided in support of this project. Payment is due within 30 days of invoice date unless otherwise agreed upon, in writing, with Orange Coast Analytical, Inc. All samples remain the property of the client. A disposal fee may be imposed if client fails to pickup sample.

RE: Report and Invoice AET AZ13442 Shay Oil Rev1.0

From: Patty Small (psmall@apexenvirotech.com)

To: ocalab@sbcglobal.net

Cc: miriamm@ocalab.com; azoca@ocalab.com

Date: Wednesday, April 20, 2022, 7:38 AM PDT

Hi Miriam,

Did you happen to run the Soil Sample AZ13442-003 for the full 8260 suite? If so, can you add MtBE to the report? I understand there will be additional fees associated with the addition.

Thank you

Patty Small, R.G.

Sr. Project Manager

APEX ENVIROTECH, INC.

7111 W 151st St, #338

Overland Park, KS 66223

Mobile: 816-807-2856

Fax: 816-278-9161

www.apexenvirotech.com

From: Orange Coast Analytical <ocalab@sbcglobal.net>
Sent: Wednesday, April 13, 2022 12:00 PM
To: Patty Small <PSmall@apexenvirotech.com>
Cc: Miriam Molina <miriamm@ocalab.com>; ARIZONA LAB <azoca@ocalab.com>
Subject: Report and Invoice AET AZ13442 Shay Oil Rev1.0

Orange Coast Analytical, Inc.
3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (480) 736-0960 Fax (480) 736-0970

LABORATORY REPORT FORM

ORANGE COAST ANALYTICAL, INC.

4620 East Elwood Street, Suite 4 Phoenix, AZ
85040

(480) 736-0960

Laboratory Certification (ELAP) No.:AZ0558, AZ0646
Expiration Date: 2022

Laboratory Director's Name:
Mark Noorani

Client:	Apex Envirotech Inc
Laboratory Reference:	AET AZ13624
Project Name:	Shay Oil
Project Number:	SHA
Date Received:	8/4/2022
Date Reported:	8/10/2022
Chain of Custody Received:	☑
Analytical Method:	8310, 8260B, 6010D, 7471B,

Mark Noorani, Laboratory Director

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Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13624
Project Name: Shay Oil
Project #: SHA

Case Narrative

Sample Receipt:

All samples on the Chain of Custody were received by OCA at 1.7ºC, on ice.

Holding Times:

All samples were analyzed within required holding times unless otherwise noted in the data qualifier section of the report.

Analytical Methods:

Sample analysis was performed following the analytical methods listed on the cover page.

Data Qualifiers:

Within this report, data qualifiers may have been assigned to clarify deviations in common laboratory procedures or any divergence from laboratory QA/QC criteria. If a data qualifier has been used, it will appear in the back of the report along with its description. All method QA/QC criteria have been met unless otherwise noted in the data qualifier section.

Definition of Terms:

The definitions of common terms and acronyms used in the report have been placed at the back of the report to assist data users.

Comments:

None

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13624
Project Name: Shay Oil
Project #: SHA

Client Sample Summary

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
Soil Disposal	AZ13624-001	8/4/2022	8/3/2022	Soil
QD-6	AZ13624-002	8/4/2022	8/3/2022	Water
Trip Blank	AZ13624-003	8/4/2022	8/3/2022	Water

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13624
Project Name: Shay Oil
Project #: SHA

Polynuclear Aromatic Hydrocarbons (EPA 8310)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Disposal	AZ13624-001	8/4/2022 15:24	8/3/2022 7:35	8/5/2022 9:56	8/5/2022 17:05	Soil

ANALYTE	CAS #	mg/kg	RL	MDL
Acenaphthene:	83-32-9	<0.0012	0.0020	0.0012
Acenaphthylene:	208-96-8	<0.0053	0.010	0.0053
Anthracene:	120-12-7	<0.00054	0.0050	0.00054
Benz(a)anthracene:	56-55-3	<0.00095	0.0020	0.00095
Benzo(a)pyrene:	50-32-8	<0.00080	0.0020	0.00080
Benzo(b)fluoranthene:	205-99-2	<0.0010	0.0020	0.0010
Benzo(k)fluoranthene:	207-08-9	<0.0010	0.0020	0.0010
Benzo(g,h,i)perylene:	191-24-2	<0.0017	0.0040	0.0017
Chrysene:	218-01-9	<0.0011	0.0020	0.0011
Dibenz(a,h)anthracene:	53-70-3	<0.0012	0.0020	0.0012
Fluoranthene:	206-44-0	<0.0014	0.0040	0.0014
Pyrene:	129-00-0	<0.00074	0.0040	0.00074
Fluorene:	86-73-7	<0.0076	0.010	0.0076
Indeno(1,2,3-cd)pyrene:	193-39-5	<0.0022	0.0060	0.0022
Naphthalene:	91-20-3	<0.0046	0.0050	0.0046

Surrogate:	% RC*
Nitrobenzene-d5	84

* Acceptable Recovery: 21-130 %

Dilution Factor: 1
Data Qualifiers: None

Method Blank	MBVV0804222	8/4/2022 13:15	8/4/2022 19:30	Soil

ANALYTE	CAS #	mg/kg	RL	MDL
Acenaphthene:	83-32-9	<0.0012	0.0020	0.0012
Acenaphthylene:	208-96-8	<0.0053	0.010	0.0053
Anthracene:	120-12-7	<0.00054	0.0050	0.00054
Benz(a)anthracene:	56-55-3	<0.00095	0.0020	0.00095
Benzo(a)pyrene:	50-32-8	<0.00080	0.0020	0.00080
Benzo(b)fluoranthene:	205-99-2	<0.0010	0.0020	0.0010
Benzo(k)fluoranthene:	207-08-9	<0.0010	0.0020	0.0010
Benzo(g,h,i)perylene:	191-24-2	<0.0017	0.0040	0.0017
Chrysene:	218-01-9	<0.0011	0.0020	0.0011
Dibenz(a,h)anthracene:	53-70-3	<0.0012	0.0020	0.0012
Fluoranthene:	206-44-0	<0.0014	0.0040	0.0014
Pyrene:	129-00-0	<0.00074	0.0040	0.00074
Fluorene:	86-73-7	<0.0076	0.010	0.0076
Indeno(1,2,3-cd)pyrene:	193-39-5	<0.0022	0.0060	0.0022
Naphthalene:	91-20-3	<0.0046	0.0050	0.0046

Surrogate:	% RC*
Nitrobenzene-d5	84

* Acceptable Recovery: 21-130 %

Dilution Factor: 1
Data Qualifiers: None

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13624
Project Name: Shay Oil
Project #: SHA

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Soil Disposal	AZ13624-001	8/4/2022 15:24	8/3/2022 7:35	8/3/2022 7:35	8/9/2022 16:06	Soil

ANALYTE	CAS #	mg/kg	RL	MDL	mg/kg
Benzene	71-43-2	<0.011	0.050	0.011	
Ethylbenzene	100-41-4	<0.013	0.050	0.013	
Toluene	108-88-3	<0.019	0.050	0.019	
m- & p-Xylenes	179601-23-1	<0.020	0.10	0.020	
o-Xylene	95-47-6	<0.011	0.050	0.011	

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	94	62-130 %
Toluene-d8:	102	52-130 %
4-Bromofluorobenzene:	105	44-134 %

Dilution Factor: 1

Data Qualifiers:

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13624
Project Name: Shay Oil
Project #: SHA

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBTT0804223			8/4/2022 14:30	8/9/2022 11:43	Soil

ANALYTE	CAS #	mg/kg	RL	MDL	mg/kg
Benzene	71-43-2	<0.011	0.050	0.011	
Ethylbenzene	100-41-4	<0.013	0.050	0.013	
Toluene	108-88-3	<0.019	0.050	0.019	
m- & p-Xylenes	179601-23-1	<0.020	0.10	0.020	
o-Xylene	95-47-6	<0.011	0.050	0.011	

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	98	62-130 %
Toluene-d8:	106	52-130 %
4-Bromofluorobenzene:	105	44-134 %

Dilution Factor: 1

Data Qualifiers:

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13624
Project Name: Shay Oil
Project #: SHA

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QD-6	AZ13624-002	8/4/2022 15:24	8/3/2022 11:24	8/5/2022 11:32	8/5/2022 15:43	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21
Bromobenzene	108-86-1	<0.35	1.0	0.35
Bromochloromethane	74-97-5	<0.36	1.0	0.36
Bromodichloromethane	75-27-4	<0.33	0.50	0.33
Bromoform	75-25-2	<0.32	1.0	0.32
Bromomethane	74-83-9	<0.18	5.0	0.18
1,3-Butadiene	106-99-0	<10	10	TIC
n-Butylbenzene	104-51-8	<0.24	1.0	0.24
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26
Carbon Disulfide	75-15-0	<0.34	0.50	0.34
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44
Chlorobenzene	108-90-7	<0.23	1.0	0.23
Chloroethane	75-00-3	<0.39	5.0	0.39
Chloroform	67-66-3	<0.34	1.0	0.34
Chloromethane	74-87-3	<0.37	5.0	0.37
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26
Cyclohexane	110-82-7	<2.0	2.0	TIC
Dibromochloromethane	124-48-1	<0.27	1.0	0.27
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30
Dicyclopentadiene	77-73-6	<10	10	TIC
Ethylbenzene	100-41-4	<0.25	1.0	0.25
4-Ethyltoluene	622-96-8	<2.0	2.0	TIC
n-Hexane	110-54-3	<2.0	2.0	TIC
Isopropylbenzene	98-82-8	<0.21	1.0	0.21
4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
Methyl cyclohexane	108-87-2	<2.0	2.0	TIC
Methyl t-butyl ether (MTBE)	1634-04-4	<0.58	1.0	0.58
Naphthalene	91-20-3	<0.31	3.0	0.31
Propene	115-07-1	<10	10	TIC
n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Styrene	100-42-5	<0.18	1.0	0.18
1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Toluene	108-88-3	<0.37	1.0	0.37
1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Trichloroethene	79-01-6	<0.33	1.0	0.33
Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
Vinyl chloride	75-01-4	<0.35	2.0	0.35
m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
o-Xylene	95-47-6	<0.21	0.50	0.21

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	103	63-130 %
Toluene-d8:	107	48-134 %
4-Bromofluorobenzene:	107	43-138 %

Dilution Factor: 1

Data Qualifiers: T4,

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13624
Project Name: Shay Oil
Project #: SHA

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Trip Blank	AZ13624-003	8/4/2022 15:24	8/3/2022	8/5/2022 10:18	8/5/2022 16:07	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21
Bromobenzene	108-86-1	<0.35	1.0	0.35
Bromochloromethane	74-97-5	<0.36	1.0	0.36
Bromodichloromethane	75-27-4	<0.33	0.50	0.33
Bromoform	75-25-2	<0.32	1.0	0.32
Bromomethane	74-83-9	<0.18	5.0	0.18
1,3-Butadiene	106-99-0	<10	10	TIC
n-Butylbenzene	104-51-8	<0.24	1.0	0.24
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26
Carbon Disulfide	75-15-0	<0.34	0.50	0.34
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44
Chlorobenzene	108-90-7	<0.23	1.0	0.23
Chloroethane	75-00-3	<0.39	5.0	0.39
Chloroform	67-66-3	<0.34	1.0	0.34
Chloromethane	74-87-3	<0.37	5.0	0.37
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26
Cyclohexane	110-82-7	<2.0	2.0	TIC
Dibromochloromethane	124-48-1	<0.27	1.0	0.27
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30
Dicyclopentadiene	77-73-6	<10	10	TIC
Ethylbenzene	100-41-4	<0.25	1.0	0.25
4-Ethyltoluene	622-96-8	<2.0	2.0	TIC
n-Hexane	110-54-3	<2.0	2.0	TIC
Isopropylbenzene	98-82-8	<0.21	1.0	0.21
4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
Methyl cyclohexane	108-87-2	<2.0	2.0	TIC
Methyl t-butyl ether (MTBE)	1634-04-4	<0.58	1.0	0.58
Naphthalene	91-20-3	<0.31	3.0	0.31
Propene	115-07-1	<10	10	TIC
n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Styrene	100-42-5	<0.18	1.0	0.18
1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Toluene	108-88-3	<0.37	1.0	0.37
1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Trichloroethene	79-01-6	<0.33	1.0	0.33
Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
Vinyl chloride	75-01-4	<0.35	2.0	0.35
m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
o-Xylene	95-47-6	<0.21	0.50	0.21

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	109	63-130 %
Toluene-d8:	111	48-134 %
4-Bromofluorobenzene:	106	43-138 %

Dilution Factor: 1

Data Qualifiers: T4,

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13624
Project Name: Shay Oil
Project #: SHA

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBTP0805221			8/5/2022 9:51	8/5/2022 10:48	Water

ANALYTE	CAS #	µg/L	RL	MDL	ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21	Dicyclopentadiene	77-73-6	<10	10	TIC
Bromobenzene	108-86-1	<0.35	1.0	0.35	Ethylbenzene	100-41-4	<0.25	1.0	0.25
Bromochloromethane	74-97-5	<0.36	1.0	0.36	4-Ethyltoluene	622-96-8	<2.0	2.0	TIC
Bromodichloromethane	75-27-4	<0.33	0.50	0.33	n-Hexane	110-54-3	<2.0	2.0	TIC
Bromoform	75-25-2	<0.32	1.0	0.32	Isopropylbenzene	98-82-8	<0.21	1.0	0.21
Bromomethane	74-83-9	<0.18	5.0	0.18	4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
1,3-Butadiene	106-99-0	<10	10	TIC	Methyl cyclohexane	108-87-2	<2.0	2.0	TIC
n-Butylbenzene	104-51-8	<0.24	1.0	0.24	Methyl t-butyl ether (MTBE)	1634-04-4	<0.58	1.0	0.58
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21	Naphthalene	91-20-3	<0.31	3.0	0.31
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26	Propene	115-07-1	<10	10	TIC
Carbon Disulfide	75-15-0	<0.34	0.50	0.34	n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44	Styrene	100-42-5	<0.18	1.0	0.18
Chlorobenzene	108-90-7	<0.23	1.0	0.23	1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Chloroethane	75-00-3	<0.39	5.0	0.39	Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Chloroform	67-66-3	<0.34	1.0	0.34	Toluene	108-88-3	<0.37	1.0	0.37
Chloromethane	74-87-3	<0.37	5.0	0.37	1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30	1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26	1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Cyclohexane	110-82-7	<2.0	2.0	TIC	Trichloroethene	79-01-6	<0.33	1.0	0.33
Dibromochloromethane	124-48-1	<0.27	1.0	0.27	Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32	1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30	1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27	1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34	Vinyl chloride	75-01-4	<0.35	2.0	0.35
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28	m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37	o-Xylene	95-47-6	<0.21	0.50	0.21
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38					
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43					
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29					
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33					
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34					
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26					
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35					
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29					
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26					
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30					

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	116	63-130 %
Toluene-d8:	118	48-134 %
4-Bromofluorobenzene:	114	43-138 %

Dilution Factor: 1

Data Qualifiers: T4,

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13624
Project Name: Shay Oil
Project #: SHA

Metals

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
Soil Disposal	AZ13624-001	8/4/2022 15:24	8/3/2022 7:35	Soil

ANALYTE	EPA Method	Result	RL	MDL	Units	Date Extracted	Date Analyzed	Qual	DF
Arsenic	6010D	7.9	2.0	1.0	mg/kg	08/05/22 15:00	08/08/22 14:56	--	1
Barium	6010D	140	1.0	0.26	mg/kg	08/05/22 15:00	08/08/22 14:56	--	1
Cadmium	6010D	0.36	0.50	0.054	mg/kg	08/05/22 15:00	08/08/22 14:56	J ,	1
Chromium	6010D	15	0.50	0.081	mg/kg	08/05/22 15:00	08/08/22 14:56	--	1
Lead	6010D	9.4	0.80	0.66	mg/kg	08/05/22 15:00	08/08/22 14:56	--	1
Mercury	7471B	<0.043	0.10	0.043	mg/kg	08/05/22 16:00	08/08/22 13:04	--	1
Selenium	6010D	<3.0	4.8	3.0	mg/kg	08/05/22 15:00	08/08/22 14:56	--	1
Silver	6010D	<0.15	0.50	0.15	mg/kg	08/05/22 15:00	08/08/22 14:56	--	1

Method Blank — Soil

MB ID	ANALYTE	EPA Method	Result	RL	MDL	Units	Date Extracted	Date Analyzed	Qual	DF
MBIR0805221	Arsenic	6010D	<1.0	2.0	1.0	mg/kg	08/05/22 15:00	08/08/22 13:20	--	1
MBIR0805221	Barium	6010D	<0.26	1.0	0.26	mg/kg	08/05/22 15:00	08/08/22 13:20	--	1
MBIR0805221	Cadmium	6010D	<0.054	0.50	0.054	mg/kg	08/05/22 15:00	08/08/22 13:20	--	1
MBIR0805221	Chromium	6010D	<0.081	0.50	0.081	mg/kg	08/05/22 15:00	08/08/22 13:20	--	1
MBIR0805221	Lead	6010D	<0.66	0.80	0.66	mg/kg	08/05/22 15:00	08/08/22 13:20	--	1
MBIR0805222	Mercury	7471B	<0.043	0.10	0.043	mg/kg	08/05/22 16:00	08/08/22 12:29	--	1
MBIR0805221	Selenium	6010D	<3.0	4.8	3.0	mg/kg	08/05/22 15:00	08/08/22 13:20	--	1
MBIR0805221	Silver	6010D	<0.15	0.50	0.15	mg/kg	08/05/22 15:00	08/08/22 13:20	--	1

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QA/QC Report
for
Polynuclear Aromatic Hydrocarbons (8310)
Reporting Units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 8/4/2022 13:15
Date of Analysis: 8/4/2022 20:42
Dup Date of Analysis: 8/4/2022 21:06
Laboratory Sample #: AZ13622-012
MS/MSD Qualifiers: None
Reference #: AET AZ13624

Analyte	R	Spike Conc.	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Acenaphthene	0.00	40.0	31.4	33.7	78	84	7	36-130	29	--
Acenaphthylene	0.00	40.0	35.6	37.4	89	94	5	36-130	21	--
Anthracene	0.00	40.0	31.7	33.5	79	84	6	35-130	26	--
Benz(a)anthracene	0.00	40.0	36.5	35.7	91	89	2	52-130	20	--
Benzo(a)pyrene	0.00	40.0	33.0	32.8	82	82	1	47-130	20	--
Benzo(b)fluoranthene	0.00	40.0	37.6	36.8	94	92	2	54-130	20	--
Benzo(g,h,i)perylene	0.00	40.0	36.4	35.8	91	89	2	49-130	20	--
Benzo(k)fluoranthene	0.00	40.0	37.6	36.8	94	92	2	52-130	20	--
Chrysene	0.00	40.0	37.8	37.2	94	93	2	52-130	20	--
Dibenz(a,h)anthracene	0.00	40.0	36.6	36.0	91	90	2	48-130	20	--
Fluoranthene	0.00	40.0	35.9	36.2	90	91	1	40-130	22	--
Fluorene	0.00	40.0	32.1	34.5	80	86	7	36-130	25	--
Indeno(1,2,3-cd)pyrene	0.00	40.0	37.9	36.9	95	92	3	50-130	20	--
Naphthalene	0.00	40.0	30.6	32.4	76	81	6	39-130	20	--
Pyrene	0.00	40.0	35.3	35.6	88	89	1	44-130	25	--

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual
Nitrobenzene-d5	76	86	☐

LCS	LCSD	Qual
89	83	☐

ACP % RC
21-130

Laboratory Control Sample (LCS) / Laboratory Control Sample Duplicate (LCSD)

Date of Extraction: 8/4/2022 13:15
Date of Analysis: 8/4/2022 19:54
Dup Date of Analysis: 8/4/2022 20:18
Laboratory Sample #: VV0804222
LCS/LCSD Qualifiers: None

Analyte	Spike Conc.	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Acenaphthene	40.0	35.0	34.1	88	85	3	57-130	20	--
Acenaphthylene	40.0	40.5	38.7	101	97	5	59-130	20	--
Anthracene	40.0	33.9	33.2	85	83	2	54-130	20	--
Benz(a)anthracene	40.0	36.6	36.5	91	91	0	70-130	20	--
Benzo(a)pyrene	40.0	33.0	33.4	82	84	1	61-130	20	--
Benzo(b)fluoranthene	40.0	37.3	37.5	93	94	1	70-130	20	--
Benzo(g,h,i)perylene	40.0	36.1	36.3	90	91	1	67-130	20	--
Benzo(k)fluoranthene	40.0	37.4	37.7	94	94	1	70-130	20	--
Chrysene	40.0	37.8	37.7	94	94	0	70-130	20	--
Dibenz(a,h)anthracene	40.0	36.8	37.0	92	93	1	70-130	20	--

QA/QC Report
for
Polynuclear Aromatic Hydrocarbons (8310)

Reporting Units: ppb

Analyte	Spike Conc.	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Fluoranthene	40.0	36.5	36.3	91	91	1	59-130	20	--
Fluorene	40.0	35.3	34.5	88	86	2	70-130	20	--
Indeno(1,2,3-cd)pyrene	40.0	37.6	37.9	94	95	1	68-130	20	--
Naphthalene	40.0	34.0	32.7	85	82	4	63-130	20	--
Pyrene	40.0	36.0	35.6	90	89	1	63-130	20	--

QA/QC Report
for
Volatile Organic Compounds (8260B)
Reporting Units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 8/9/2022 12:39
Date of Analysis: 8/9/2022 13:20
Dup Date of Analysis: 8/9/2022 13:43
Laboratory Sample #: AZ13622-001
MS/MSD Qualifiers: None
Reference #: AET AZ13624

Analyte	R	Spike Conc.	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Benzene	0.00	500	494	494	99	99	0	69-139	20	--
Chlorobenzene	0.00	500	511	513	102	103	0	70-131	20	--
1,1-Dichloroethene	0.00	500	416	428	83	86	3	52-130	20	--
Toluene	0.00	500	529	504	106	101	5	68-133	20	--
Trichloroethene	0.00	500	517	509	103	102	2	70-132	20	--

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual	LCS	LCSD	Qual	ACP % RC
Dibromofluoromethane	89	95	☐	93	88	☐	62-130
Toluene-d8	102	102	☐	103	99	☐	52-130
4-Bromofluorobenzene	97	109	☐	107	104	☐	44-134

Laboratory Control Sample (LCS) / Laboratory Control Sample Duplicate (LCSD)

Date of Extraction: 8/9/2022 11:35
Date of Analysis: 8/9/2022 12:06
Dup Date of Analysis: 8/9/2022 12:30
Laboratory Sample #: TP0809221
LCS/LCSD Qualifiers: None

Analyte	Spike Conc.	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Benzene	500	479	481	96	96	0	70-135	20	--
Chlorobenzene	500	495	495	99	99	0	70-130	20	--
1,1-Dichloroethene	500	401	394	80	79	2	54-130	20	--
Toluene	500	500	494	100	99	1	70-130	20	--
Trichloroethene	500	494	488	99	98	1	70-130	20	--

QA/QC Report
for
Volatile Organic Compounds (8260B)
Reporting Units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 8/5/2022 11:11
Date of Analysis: 8/5/2022 14:09
Dup Date of Analysis: 8/5/2022 12:08
Laboratory Sample #: AZ13625-003
MS/MSD Qualifiers: None
Reference #: AET AZ13624

Analyte	R	Spike Conc.	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Benzene	0.00	10.0	9.59	9.59	96	96	0	70-144	20	--
Chlorobenzene	0.00	10.0	10.3	10.4	103	104	1	70-138	20	--
1,1-Dichloroethene	0.00	10.0	8.63	8.78	86	88	2	54-133	20	--
Toluene	0.00	10.0	10.2	10.7	102	107	5	70-137	20	--
Trichloroethene	0.00	10.0	9.96	10.5	100	105	5	70-136	20	--

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual	LCS	LCSD	Qual	ACP % RC
Dibromofluoromethane	108	102	☐	112	106	☐	63-130
Toluene-d8	109	108	☐	113	108	☐	48-134
4-Bromofluorobenzene	107	103	☐	111	106	☐	43-138

Laboratory Control Sample (LCS) / Laboratory Control Sample Duplicate (LCSD)

Date of Extraction: 8/5/2022 9:57
Date of Analysis: 8/5/2022 14:56
Dup Date of Analysis: 8/5/2022 15:20
Laboratory Sample #: TP0805221
LCS/LCSD Qualifiers: None

Analyte	Spike Conc.	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Benzene	10.0	9.41	8.70	94	87	8	70-132	20	--
Chlorobenzene	10.0	9.43	9.12	94	91	3	70-130	20	--
1,1-Dichloroethene	10.0	8.17	8.25	82	82	1	58-130	20	--
Toluene	10.0	9.31	8.83	93	88	5	68-130	20	--
Trichloroethene	10.0	8.78	9.05	88	91	3	70-130	20	--

QA/QC Report
for
Metals

Reference #: AET AZ13624 Reporting units: ppm

Matrix Spike (MS) / Matrix Spike Duplicate (MSD) **6010D/7471B**

Laboratory Sample #: AZ13620-001 **Date of Extraction:** 08/05/22 15:00

Analyte	MS Date of Analysis	MSD Date of Analysis	R1	SPC CONC	MS	MSD	% MS	% MSD	RPD	ACP %MS	ACP RPD	Qualifiers
Arsenic	08/08/22 13:36	08/08/22 13:42	0.00	20.0	20.5	19.8	102	99	3	75-125	20	--
Barium	08/08/22 13:36	08/08/22 13:42	13.0	20.0	45.1	37.9	160	125	17	75-125	20	M3,
Cadmium	08/08/22 13:36	08/08/22 13:42	0.00	20.0	20.0	19.3	100	96	4	75-125	20	--
Chromium	08/08/22 13:36	08/08/22 13:42	7.50	20.0	33.1	30.1	128	113	9	75-125	20	M3,
Lead	08/08/22 13:36	08/08/22 13:42	44.0	20.0	105	83.8	305	199	22	75-125	20	M3,
Selenium	08/08/22 13:36	08/08/22 13:42	0.00	20.0	18.1	18.2	91	91	1	75-125	20	--
Silver	08/08/22 13:36	08/08/22 13:42	0.00	20.0	19.7	19.5	99	98	1	75-125	20	--

Laboratory Control Spike (LCS) / Laboratory Control Spike Duplicate (LCSD) **6010D/7471B**

Laboratory Sample #: IR0805221 **Date of Extraction:** 08/05/22 15:00

Analyte	LCS Date of Analysis	LCSD Date of Analysis		SPC CONC	LCS	LCSD	% LCS	% LCSD	RPD	ACP %LCS	ACP RPD	Qualifiers
Arsenic	08/08/22 13:24	08/08/22 13:30	--	20.0	20.3	20.3	101	101	0	80-120	20	--
Barium	08/08/22 13:24	08/08/22 13:30	--	20.0	19.8	19.7	99	99	1	80-120	20	--
Cadmium	08/08/22 13:24	08/08/22 13:30	--	20.0	19.8	19.9	99	99	1	80-120	20	--
Chromium	08/08/22 13:24	08/08/22 13:30	--	20.0	20.6	20.4	103	102	1	80-120	20	--
Lead	08/08/22 13:24	08/08/22 13:30	--	20.0	20.4	20.2	102	101	1	80-120	20	--
Selenium	08/08/22 13:24	08/08/22 13:30	--	20.0	16.5	19.0	83	95	14	80-120	20	--
Silver	08/08/22 13:24	08/08/22 13:30	--	20.0	20.0	20.0	100	100	0	80-120	20	--

Matrix Spike (MS) / Matrix Spike Duplicate (MSD) **6010D/7471B**

Laboratory Sample #: AZ13620-001 **Date of Extraction:** 08/05/22 16:00

Analyte	MS Date of Analysis	MSD Date of Analysis	R1	SPC CONC	MS	MSD	% MS	% MSD	RPD	ACP %MS	ACP RPD	Qualifiers
Mercury	08/08/22 12:36	08/08/22 12:38	0.00	1.00	1.05	1.03	105	103	2	80-120	20	--

Laboratory Control Spike (LCS) / Laboratory Control Spike Duplicate (LCSD) **6010D/7471B**

Laboratory Sample #: IR0805222 **Date of Extraction:** 08/05/22 16:00

Analyte	LCS Date of Analysis	LCSD Date of Analysis		SPC CONC	LCS	LCSD	% LCS	% LCSD	RPD	ACP %LCS	ACP RPD	Qualifiers
Mercury	08/08/22 12:31	08/08/22 12:33	--	1.00	1.02	1.01	102	101	1	80-120	20	--

Data Qualifier Definitions

Qualifier

J = Concentration estimated. Analyte was detected between MDL and RL.

M3 = The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to spike level. The associated blank spike recovery was acceptable.

AZ13620-001	6010D	Barium	MS
AZ13620-001	6010D	Chromium	MS
AZ13620-001	6010D	Lead	MS/MSD

T4 = Tentatively identified compound. Concentration is estimated and based on the closest internal standard.

Definition of terms:

R	Result of unspiked laboratory sample used for matrix spike determination.
SP CONC (or Spike Conc.)	Spike concentration added to sample or blank
MS	Matrix Spike sample result
MSD	Matrix Spike Duplicate sample result
%MS	Percent recovery of MS: {(MS-R1) / SP CONC} x100
%MSD	Percent recovery of MSD: {(MSD-R1) / SP CONC} x 100
RPD (for MS/MSD)	Relative Percent Difference: {(MS-MSD) / (MS+MSD)} x 100 x 2
LCS	Laboratory Control Sample result
LCSD	Laboratory Control Sample Duplicate result
%LCS	Percent recovery of LCS: {(LCS) / SP CONC} x100
%LCSD	Percent recovery of LCSD: {(LCSD) / SP CONC} x 100
RPD (for LCS/LCSD)	Relative Percent Difference: {(LCS-LCSD) / (LCS+LCSD)} x 100 x 2
ACP %LCS	Acceptable percent recovery range for Laboratory Control Samples.
ACP %MS	Acceptable percent recovery range for Matrix Spike samples
ACP RPD	Acceptable Relative Percent Difference
D	Detectable, result must be greater than zero
Qual	A checked box indicates a data qualifier was utilized and/or required for this analyte see attached explanation.
ND	Analyte Not Detected

Analysis Request and Chain of Custody Record

Lab Job No: AZ13624
Page 1 of 1

ORANGE COAST ANALYTICAL, INC. www.ocalab.com

3002 Dow, Suite 532
Tustin, CA 92780
(714) 832-0064 Fax (714) 832-0067

4620 E. Elwood, Suite 4
Phoenix, AZ 85040
(480) 736-0960 Fax (480) 736-0970

REQUIRED TURN AROUND TIME: Standard: X
72 Hours: _____ 48 Hours: _____ 24 Hours: _____

CUSTOMER INFORMATION		PROJECT INFORMATION	
COMPANY:	Apex Envirotech	PROJECT NAME:	SHAY OIL
SEND REPORT TO:		NUMBER:	SHA
EMAIL:	psmall@apexenvirotech.com	ADDRESS:	Quartzsite
ADDRESS:			
		P.O. #:	
PHONE:	816-807-2856 FAX:	SAMPLED BY:	Patty Small

SAMPLE ID	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	BTEX	PAHs	RCRA 8 Metals	8260B Target List w/ TICs	REMARKS/PRECAUTIONS
Soil Disposal	2	8/3/22	0735	SS	VOA 8oz	X	X	X		AZ13624-001
QD-6	3	8/3/22	1124	GW	VOA				X	-002
TRIP BLANK	1	8/3/22							X	-003

Total No. of Samples: 2 Method of Shipment: Drop Off

Preservative: (1 = Ice) (2 = HCl) 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

Relinquished By:	Date/Time:	Received By:	Date/Time:
Patty Small	8/4/22 1524	Tim R	8/4/22 1524
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received For Lab By:	Date/Time:

Sample Matrix:
GW - Groundwater
WW - Wastewater
SW - Stormwater
DW - Drinking Water
W - Water
SS - Soil/Solid
OT - Other

Sample Integrity:
Intact: Y On Ice: (Yes) No @ 1.6+0.1=1.7°C

By signing above, client acknowledges responsibility for payment of all services requested on this chain of custody form and any additional services provided in support of this project. Payment is due within 30 days of invoice date unless otherwise agreed upon, in writing, with Orange Coast Analytical, Inc. All samples remain the property of the client. A disposal fee may be imposed if client fails to pickup sample.

Orange Coast Analytical, Inc.
3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (480) 736-0960 Fax (480) 736-0970

LABORATORY REPORT FORM

ORANGE COAST ANALYTICAL, INC.

4620 East Elwood Street, Suite 4 Phoenix, AZ
85040

(480) 736-0960

Laboratory Certification (ELAP) No.:AZ0558, AZ0646
Expiration Date: 2022

Laboratory Director's Name:
Mark Noorani

Client:	Apex Envirotech Inc
Laboratory Reference:	AET AZ13618
Project Name:	Shay Oil
Project Number:	SHA03
Date Received:	8/2/2022
Date Reported:	8/3/2022
Chain of Custody Received:	☑
Analytical Method:	8260B,

Mark Noorani, Laboratory Director

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Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13618
Project Name: Shay Oil
Project #: SHA03

Case Narrative

Sample Receipt:

All samples on the Chain of Custody were received by OCA at 1.5ºC, on ice.

Holding Times:

All samples were analyzed within required holding times unless otherwise noted in the data qualifier section of the report.

Analytical Methods:

Sample analysis was performed following the analytical methods listed on the cover page.

Data Qualifiers:

Within this report, data qualifiers may have been assigned to clarify deviations in common laboratory procedures or any divergence from laboratory QA/QC criteria. If a data qualifier has been used, it will appear in the back of the report along with its description. All method QA/QC criteria have been met unless otherwise noted in the data qualifier section.

Definition of Terms:

The definitions of common terms and acronyms used in the report have been placed at the back of the report to assist data users.

Comments:

None

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13618
Project Name: Shay Oil
Project #: SHA03

Client Sample Summary

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
QD-7	AZ13618-001	8/2/2022	8/2/2022	Water
QD-6 Prelim	AZ13618-002	8/2/2022	8/2/2022	Water
Trip Blank	AZ13618-003	8/2/2022		Water

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13618
Project Name: Shay Oil
Project #: SHA03

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QD-7	AZ13618-001	8/2/2022 14:50	8/2/2022 7:38	8/2/2022 15:42	8/2/2022 16:03	Water

ANALYTE	CAS #	µg/L	RL	MDL	ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21	Dicyclopentadiene	77-73-6	<10	10	TIC
Bromobenzene	108-86-1	<0.35	1.0	0.35	Ethylbenzene	100-41-4	<0.25	1.0	0.25
Bromochloromethane	74-97-5	<0.36	1.0	0.36	4-Ethyltoluene	622-96-8	<2.0	2.0	TIC
Bromodichloromethane	75-27-4	<0.33	0.50	0.33	n-Hexane	110-54-3	<2.0	2.0	TIC
Bromoform	75-25-2	<0.32	1.0	0.32	Isopropylbenzene	98-82-8	<0.21	1.0	0.21
Bromomethane	74-83-9	<0.18	5.0	0.18	4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
1,3-Butadiene	106-99-0	<10	10	TIC	Methyl cyclohexane	108-87-2	<2.0	2.0	TIC
n-Butylbenzene	104-51-8	<0.24	1.0	0.24	Methyl t-butyl ether (MTBE)	1634-04-4	<0.58	1.0	0.58
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21	Naphthalene	91-20-3	<0.31	3.0	0.31
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26	Propene	115-07-1	<10	10	TIC
Carbon Disulfide	75-15-0	<0.34	0.50	0.34	n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44	Styrene	100-42-5	<0.18	1.0	0.18
Chlorobenzene	108-90-7	<0.23	1.0	0.23	1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Chloroethane	75-00-3	<0.39	5.0	0.39	Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Chloroform	67-66-3	<0.34	1.0	0.34	Toluene	108-88-3	<0.37	1.0	0.37
Chloromethane	74-87-3	<0.37	5.0	0.37	1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30	1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26	1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Cyclohexane	110-82-7	<2.0	2.0	TIC	Trichloroethene	79-01-6	<0.33	1.0	0.33
Dibromochloromethane	124-48-1	<0.27	1.0	0.27	Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32	1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30	1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27	1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34	Vinyl chloride	75-01-4	<0.35	2.0	0.35
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28	m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37	o-Xylene	95-47-6	<0.21	0.50	0.21
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38					
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43					
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29					
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33					
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34					
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26					
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35					
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29					
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26					
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30					

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	112	64-130 %
Toluene-d8:	112	47-130 %
4-Bromofluorobenzene:	108	44-134 %

Dilution Factor: 1

Data Qualifiers: Q2, T4,

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13618
Project Name: Shay Oil
Project #: SHA03

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QD-6 Prelim	AZ13618-002	8/2/2022 14:50	8/2/2022 12:15	8/2/2022 16:01	8/2/2022 16:26	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21
Bromobenzene	108-86-1	<0.35	1.0	0.35
Bromochloromethane	74-97-5	<0.36	1.0	0.36
Bromodichloromethane	75-27-4	<0.33	0.50	0.33
Bromoform	75-25-2	<0.32	1.0	0.32
Bromomethane	74-83-9	<0.18	5.0	0.18
1,3-Butadiene	106-99-0	<10	10	TIC
n-Butylbenzene	104-51-8	<0.24	1.0	0.24
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26
Carbon Disulfide	75-15-0	<0.34	0.50	0.34
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44
Chlorobenzene	108-90-7	<0.23	1.0	0.23
Chloroethane	75-00-3	<0.39	5.0	0.39
Chloroform	67-66-3	<0.34	1.0	0.34
Chloromethane	74-87-3	<0.37	5.0	0.37
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26
Cyclohexane	110-82-7	<2.0	2.0	TIC
Dibromochloromethane	124-48-1	<0.27	1.0	0.27
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30
Dicyclopentadiene	77-73-6	<10	10	TIC
Ethylbenzene	100-41-4	<0.25	1.0	0.25
4-Ethyltoluene	622-96-8	<2.0	2.0	TIC
n-Hexane	110-54-3	<2.0	2.0	TIC
Isopropylbenzene	98-82-8	<0.21	1.0	0.21
4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
Methyl cyclohexane	108-87-2	<2.0	2.0	TIC
Methyl t-butyl ether (MTBE)	1634-04-4	<0.58	1.0	0.58
Naphthalene	91-20-3	<0.31	3.0	0.31
Propene	115-07-1	<10	10	TIC
n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Styrene	100-42-5	<0.18	1.0	0.18
1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Toluene	108-88-3	<0.37	1.0	0.37
1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Trichloroethene	79-01-6	<0.33	1.0	0.33
Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
Vinyl chloride	75-01-4	<0.35	2.0	0.35
m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
o-Xylene	95-47-6	<0.21	0.50	0.21

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	111	64-130 %
Toluene-d8:	110	47-130 %
4-Bromofluorobenzene:	110	44-134 %

Dilution Factor: 1

Data Qualifiers: Q2, T4,

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13618
Project Name: Shay Oil
Project #: SHA03

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Trip Blank	AZ13618-003	8/2/2022 14:50		8/2/2022 15:14	8/2/2022 17:37	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21
Bromobenzene	108-86-1	<0.35	1.0	0.35
Bromochloromethane	74-97-5	<0.36	1.0	0.36
Bromodichloromethane	75-27-4	<0.33	0.50	0.33
Bromoform	75-25-2	<0.32	1.0	0.32
Bromomethane	74-83-9	<0.18	5.0	0.18
1,3-Butadiene	106-99-0	<10	10	TIC
n-Butylbenzene	104-51-8	<0.24	1.0	0.24
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26
Carbon Disulfide	75-15-0	<0.34	0.50	0.34
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44
Chlorobenzene	108-90-7	<0.23	1.0	0.23
Chloroethane	75-00-3	<0.39	5.0	0.39
Chloroform	67-66-3	<0.34	1.0	0.34
Chloromethane	74-87-3	<0.37	5.0	0.37
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26
Cyclohexane	110-82-7	<2.0	2.0	TIC
Dibromochloromethane	124-48-1	<0.27	1.0	0.27
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30
Dicyclopentadiene	77-73-6	<10	10	TIC
Ethylbenzene	100-41-4	<0.25	1.0	0.25
4-Ethyltoluene	622-96-8	<2.0	2.0	TIC
n-Hexane	110-54-3	<2.0	2.0	TIC
Isopropylbenzene	98-82-8	<0.21	1.0	0.21
4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
Methyl cyclohexane	108-87-2	<2.0	2.0	TIC
Methyl t-butyl ether (MTBE)	1634-04-4	<0.58	1.0	0.58
Naphthalene	91-20-3	<0.31	3.0	0.31
Propene	115-07-1	<10	10	TIC
n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Styrene	100-42-5	<0.18	1.0	0.18
1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Toluene	108-88-3	<0.37	1.0	0.37
1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Trichloroethene	79-01-6	<0.33	1.0	0.33
Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
Vinyl chloride	75-01-4	<0.35	2.0	0.35
m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
o-Xylene	95-47-6	<0.21	0.50	0.21

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	109	64-130 %
Toluene-d8:	110	47-130 %
4-Bromofluorobenzene:	110	44-134 %

Dilution Factor: 1

Data Qualifiers: T4,

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Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13618
Project Name: Shay Oil
Project #: SHA03

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBTP0802221			8/2/2022 15:00	8/2/2022 15:39	Water

ANALYTE	CAS #	µg/L	RL	MDL	ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21	Dicyclopentadiene	77-73-6	<10	10	TIC
Bromobenzene	108-86-1	<0.35	1.0	0.35	Ethylbenzene	100-41-4	<0.25	1.0	0.25
Bromochloromethane	74-97-5	<0.36	1.0	0.36	4-Ethyltoluene	622-96-8	<2.0	2.0	TIC
Bromodichloromethane	75-27-4	<0.33	0.50	0.33	n-Hexane	110-54-3	<2.0	2.0	TIC
Bromoform	75-25-2	<0.32	1.0	0.32	Isopropylbenzene	98-82-8	<0.21	1.0	0.21
Bromomethane	74-83-9	<0.18	5.0	0.18	4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
1,3-Butadiene	106-99-0	<10	10	TIC	Methyl cyclohexane	108-87-2	<2.0	2.0	TIC
n-Butylbenzene	104-51-8	<0.24	1.0	0.24	Methyl t-butyl ether (MTBE)	1634-04-4	<0.58	1.0	0.58
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21	Naphthalene	91-20-3	<0.31	3.0	0.31
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26	Propene	115-07-1	<10	10	TIC
Carbon Disulfide	75-15-0	<0.34	0.50	0.34	n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44	Styrene	100-42-5	<0.18	1.0	0.18
Chlorobenzene	108-90-7	<0.23	1.0	0.23	1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Chloroethane	75-00-3	<0.39	5.0	0.39	Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Chloroform	67-66-3	<0.34	1.0	0.34	Toluene	108-88-3	<0.37	1.0	0.37
Chloromethane	74-87-3	<0.37	5.0	0.37	1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30	1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26	1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Cyclohexane	110-82-7	<2.0	2.0	TIC	Trichloroethene	79-01-6	<0.33	1.0	0.33
Dibromochloromethane	124-48-1	<0.27	1.0	0.27	Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32	1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30	1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27	1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34	Vinyl chloride	75-01-4	<0.35	2.0	0.35
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28	m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37	o-Xylene	95-47-6	<0.21	0.50	0.21
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38					
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43					
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29					
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33					
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34					
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26					
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35					
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29					
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26					
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30					

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	113	64-130 %
Toluene-d8:	114	47-130 %
4-Bromofluorobenzene:	112	44-134 %

Dilution Factor: 1

Data Qualifiers: T4,

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QA/QC Report
for
Volatile Organic Compounds (8260B)
Reporting Units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 8/2/2022 16:19
Date of Analysis: 8/2/2022 16:50
Dup Date of Analysis: 8/2/2022 17:14
Laboratory Sample #: AZ13618-001
MS/MSD Qualifiers: None
Reference #: AET AZ13618

Analyte	R	Spike Conc.	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Benzene	0.00	10.0	10.9	10.3	109	103	6	70-143	20	--
Chlorobenzene	0.00	10.0	10.8	10.6	108	106	2	70-139	20	--
1,1-Dichloroethene	0.00	10.0	9.65	9.53	96	95	1	55-137	20	--
Toluene	0.00	10.0	10.5	10.4	105	104	1	66-138	20	--
Trichloroethene	0.00	10.0	10.4	10.1	104	101	3	70-132	20	--

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual	LCS	LCSD	Qual	ACP % RC
Dibromofluoromethane	109	113	☐	108	112	☐	64-130
Toluene-d8	111	110	☐	110	113	☐	47-130
4-Bromofluorobenzene	111	111	☐	110	111	☐	44-134

Laboratory Control Sample (LCS) / Laboratory Control Sample Duplicate (LCSD)

Date of Extraction: 8/2/2022 16:19
Date of Analysis: 8/2/2022 18:01
Dup Date of Analysis: 8/2/2022 18:25
Laboratory Sample #: TP0802221
LCS/LCSD Qualifiers: None

Analyte	Spike Conc.	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Benzene	10.0	10.7	10.4	107	104	3	70-133	20	--
Chlorobenzene	10.0	10.9	10.4	109	104	5	70-130	20	--
1,1-Dichloroethene	10.0	9.51	9.34	95	93	2	56-131	20	--
Toluene	10.0	10.6	9.99	106	100	6	67-130	20	--
Trichloroethene	10.0	9.96	9.76	100	98	2	70-130	20	--

Data Qualifier Definitions

Qualifier

Q2 = Sample received with head space.
T4 = Tentatively identified compound. Concentration is estimated and based on the closest internal standard.

Definition of terms:

R	Result of unspiked laboratory sample used for matrix spike determination.
SP CONC (or Spike Conc.)	Spike concentration added to sample or blank
MS	Matrix Spike sample result
MSD	Matrix Spike Duplicate sample result
%MS	Percent recovery of MS: {(MS-R1) / SP CONC} x100
%MSD	Percent recovery of MSD: {(MSD-R1) / SP CONC} x 100
RPD (for MS/MSD)	Relative Percent Difference: {(MS-MSD) / (MS+MSD)} x 100 x 2
LCS	Laboratory Control Sample result
LCSD	Laboratory Control Sample Duplicate result
%LCS	Percent recovery of LCS: {(LCS) / SP CONC} x100
%LCSD	Percent recovery of LCSD: {(LCSD) / SP CONC} x 100
RPD (for LCS/LCSD)	Relative Percent Difference: {(LCS-LCSD) / (LCS+LCSD)} x 100 x 2
ACP %LCS	Acceptable percent recovery range for Laboratory Control Samples.
ACP %MS	Acceptable percent recovery range for Matrix Spike samples
ACP RPD	Acceptable Relative Percent Difference
D	Detectable, result must be greater than zero
Qual	A checked box indicates a data qualifier was utilized and/or required for this analyte see attached explanation.
ND	Analyte Not Detected

Analysis Request and Chain of Custody Record

Lab Job No: AZ13618
Page 1 of 1

ORANGE COAST ANALYTICAL, INC. www.ocalab.com

3002 Dow, Suite 532
Tustin, CA 92780
(714) 832-0064 Fax (714) 832-0067

4620 E. Elwood, Suite 4
Phoenix, AZ 85040
(480) 736-0960 Fax (480) 736-0970

REQUIRED TURN AROUND TIME: Standard: _____
72 Hours: _____ 48 Hours: _____ 24 Hours: X or Sooner

CUSTOMER INFORMATION	PROJECT INFORMATION
COMPANY: Apex Envirotech, Inc	PROJECT NAME: SHAY OIL
SEND REPORT TO:	NUMBER: SHA03
EMAIL: psmall@apexenvirotech.com	ADDRESS: Quartz Site
ADDRESS:	
	P.O. #:
PHONE: 916-807-2856 FAX:	SAMPLED BY: Patty Small

ANALYSIS REQUEST / PRESERVATIVE: S260B ADEQ TARGET LIST w/ TICS

SAMPLE ID	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	S260B								REMARKS/PRECAUTIONS
QD-7	3	8/2/22	0738	GW	VOA	X						-001		HCl reacted w/ Calcium in Sample so there are air Bubbles
QD-6 Prelim	3	8/2/22	1215	GW	VOA	X						-002		
Trip Blank	1					X						-003		

Total No. of Samples: Method of Shipment: Preservative: 1 = Ice, 2 = HCl, 3 = HNO_3, 4 = H_2SO_4, 5 = NaOH, 6 = Other

Relinquished By:	Date/Time:	Received By:	Date/Time:
Patty Small, Apex	8/2/22 1227	[signature]	8-2-22 12:27
[signature]	8/2-22 14:50	OCA AZ [signature]	8/2/22 1450
Relinquished By:	Date/Time:	Received For Lab By:	Date/Time:

Sample Matrix:
GW - Groundwater
WW - Wastewater
SW - Stormwater
DW - Drinking Water
W - Water
SS - Soil/Solid
OT - Other
#12

Sample Integrity: 1.4 +0.1
Intact: _____ On Ice: (Yes) / No @ 1.5 °C

By signing above, client acknowledges responsibility for payment of all services requested on this chain of custody form and any additional services provided in support of this project. Payment is due within 30 days of invoice date unless otherwise agreed upon, in writing, with Orange Coast Analytical, Inc. All samples remain the property of the client. A disposal fee may be imposed if client fails to pickup sample.

Orange Coast Analytical, Inc.
3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (480) 736-0960 Fax (480) 736-0970

LABORATORY REPORT FORM

ORANGE COAST ANALYTICAL, INC.

4620 East Elwood Street, Suite 4 Phoenix, AZ
85040

(480) 736-0960

Laboratory Certification (ELAP) No.:AZ0558, AZ0646
Expiration Date: 2023

Laboratory Director's Name:
Mark Noorani

Client:	Apex Envirotech Inc
Laboratory Reference:	AET AZ13753
Project Name:	Shay Oil Chevron
Project Number:	SHA04.001
Date Received:	11/9/2022
Date Reported:	11/16/2022
Chain of Custody Received:	☑
Analytical Method:	8260B,

Mark Noorani, Laboratory Director

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Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Case Narrative

Sample Receipt:

All samples on the Chain of Custody were received by OCA at 5.3ºC, on ice.

Holding Times:

All samples were analyzed within required holding times unless otherwise noted in the data qualifier section of the report.

Analytical Methods:

Sample analysis was performed following the analytical methods listed on the cover page.

Data Qualifiers:

Within this report, data qualifiers may have been assigned to clarify deviations in common laboratory procedures or any divergence from laboratory QA/QC criteria. If a data qualifier has been used, it will appear in the back of the report along with its description. All method QA/QC criteria have been met unless otherwise noted in the data qualifier section.

Definition of Terms:

The definitions of common terms and acronyms used in the report have been placed at the back of the report to assist data users.

Comments:

None

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Client Sample Summary

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
QS-8	AZ13753-001	11/9/2022	11/7/2022	Water
QS-9	AZ13753-002	11/9/2022	11/7/2022	Water
QS-11	AZ13753-003	11/9/2022	11/7/2022	Water
QS-5	AZ13753-004	11/9/2022	11/7/2022	Water
QS-19	AZ13753-005	11/9/2022	11/8/2022	Water
QS-17	AZ13753-006	11/9/2022	11/8/2022	Water
QS-4	AZ13753-007	11/9/2022	11/8/2022	Water
QS-18	AZ13753-008	11/9/2022	11/8/2022	Water
QS-6	AZ13753-009	11/9/2022	11/8/2022	Water
QS-1	AZ13753-010	11/9/2022	11/8/2022	Water
QS-3	AZ13753-011	11/9/2022	11/8/2022	Water
QS-20	AZ13753-012	11/9/2022	11/8/2022	Water
QS-16	AZ13753-013	11/9/2022	11/9/2022	Water
QS-10	AZ13753-014	11/9/2022	11/9/2022	Water
Dup A	AZ13753-015	11/9/2022		Water
Field Blank	AZ13753-016	11/9/2022	11/9/2022	Water
Trip Blank	AZ13753-017	11/9/2022		Water

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Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QS-8	AZ13753-001	11/9/2022 12:35	11/7/2022 12:36	11/11/2022 18:00	11/11/2022 19:06	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<3.4	8.0	3.4
Bromobenzene	108-86-1	<5.6	16	5.6
Bromochloromethane	74-97-5	<5.8	16	5.8
Bromodichloromethane	75-27-4	<5.3	8.0	5.3
Bromoform	75-25-2	<5.1	16	5.1
Bromomethane	74-83-9	<2.9	80	2.9
1,3-Butadiene	106-99-0	<160	160	TIC
n-Butylbenzene	104-51-8	<3.8	16	3.8
sec-Butylbenzene	135-98-8	<3.4	16	3.4
tert-Butylbenzene	98-06-6	<4.2	16	4.2
Carbon Disulfide	75-15-0	<5.4	8.0	5.4
Carbon tetrachloride	56-23-5	<7.0	16	7.0
Chlorobenzene	108-90-7	<3.7	16	3.7
Chloroethane	75-00-3	<6.2	80	6.2
Chloroform	67-66-3	<5.4	16	5.4
Chloromethane	74-87-3	<5.9	80	5.9
2-Chlorotoluene	95-49-8	<4.8	16	4.8
4-Chlorotoluene	106-43-4	<4.2	16	4.2
Cyclohexane	110-82-7	<32	32	TIC
Dibromochloromethane	124-48-1	<4.3	16	4.3
1,2-Dibromoethane	106-93-4	<5.1	16	5.1
1,2-Dichlorobenzene	95-50-1	<4.8	16	4.8
1,3-Dichlorobenzene	541-73-1	<4.3	16	4.3
1,4-Dichlorobenzene	106-46-7	<5.4	16	5.4
Dichlorodifluoromethane	75-71-8	<4.5	32	4.5
1,1-Dichloroethane	75-34-3	<5.9	16	5.9
1,2-Dichloroethane	107-06-2	<6.1	16	6.1
1,1-Dichloroethene	75-35-4	<6.9	16	6.9
cis-1,2-Dichloroethene	156-59-2	<4.6	16	4.6
trans-1,2-Dichloroethene	156-60-5	<5.3	16	5.3
1,2-Dichloropropane	78-87-5	<5.4	16	5.4
1,3-Dichloropropane	142-28-9	<4.2	16	4.2
2,2-Dichloropropane	594-20-7	<5.6	16	5.6
1,1-Dichloropropene	563-58-6	<4.6	16	4.6
cis-1,3-Dichloropropene	10061-01-5	<4.2	16	4.2
trans-1,3-Dichloropropene	10061-02-6	<4.8	16	4.8
Dicyclopentadiene	77-73-6	<160	160	TIC
Ethylbenzene	100-41-4	<4.0	16	4.0
4-Ethyltoluene	622-96-8	<32	32	TIC
n-Hexane	110-54-3	<32	32	TIC
Isopropylbenzene	98-82-8	<3.4	16	3.4
4-Isopropyltoluene	99-87-6	<3.2	16	3.2
Methyl cyclohexane	108-87-2	<32	32	TIC
Methyl t-butyl ether (MTBE)	1634-04-4	530	16	9.3
Naphthalene	91-20-3	<5.0	48	5.0
Propene	115-07-1	<160	160	TIC
n-Propylbenzene	103-65-1	<4.6	16	4.6
Styrene	100-42-5	<2.9	16	2.9
1,1,2,2-Tetrachloroethane	79-34-5	<5.6	16	5.6
Tetrachloroethene	127-18-4	<5.0	16	5.0
Toluene	108-88-3	<5.9	16	5.9
1,2,3-Trichlorobenzene	87-61-6	<5.6	16	5.6
1,1,1-Trichloroethane	71-55-6	<5.4	16	5.4
1,1,2-Trichloroethane	79-00-5	<5.3	16	5.3
Trichloroethene	79-01-6	<5.3	16	5.3
Trichlorofluoromethane	75-69-4	<6.2	32	6.2
1,2,3-Trichloropropane	96-18-4	<5.9	16	5.9
1,2,4-Trimethylbenzene	95-63-6	<3.5	16	3.5
1,3,5-Trimethylbenzene	108-67-8	<4.2	16	4.2
Vinyl chloride	75-01-4	<5.6	32	5.6
m- & p-Xylenes	179601-23-1	<6.2	16	6.2
o-Xylene	95-47-6	<3.4	8.0	3.4

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	83	63-130 %
Toluene-d8:	93	48-134 %
4-Bromofluorobenzene:	103	43-138 %

Dilution Factor: 16

Data Qualifiers: D2, T4,

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7111 W 151st St. #338
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Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QS-9	AZ13753-002	11/9/2022 12:35	11/7/2022 13:17	11/11/2022 18:01	11/11/2022 19:31	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	25	4.0	1.7
Bromobenzene	108-86-1	<2.8	8.0	2.8
Bromochloromethane	74-97-5	<2.9	8.0	2.9
Bromodichloromethane	75-27-4	<2.6	4.0	2.6
Bromoform	75-25-2	<2.6	8.0	2.6
Bromomethane	74-83-9	<1.4	40	1.4
1,3-Butadiene	106-99-0	<80	80	TIC
n-Butylbenzene	104-51-8	<1.9	8.0	1.9
sec-Butylbenzene	135-98-8	<1.7	8.0	1.7
tert-Butylbenzene	98-06-6	<2.1	8.0	2.1
Carbon Disulfide	75-15-0	<2.7	4.0	2.7
Carbon tetrachloride	56-23-5	<3.5	8.0	3.5
Chlorobenzene	108-90-7	<1.8	8.0	1.8
Chloroethane	75-00-3	<3.1	40	3.1
Chloroform	67-66-3	<2.7	8.0	2.7
Chloromethane	74-87-3	<3.0	40	3.0
2-Chlorotoluene	95-49-8	<2.4	8.0	2.4
4-Chlorotoluene	106-43-4	<2.1	8.0	2.1
Cyclohexane	110-82-7	<16	16	TIC
Dibromochloromethane	124-48-1	<2.2	8.0	2.2
1,2-Dibromoethane	106-93-4	<2.6	8.0	2.6
1,2-Dichlorobenzene	95-50-1	<2.4	8.0	2.4
1,3-Dichlorobenzene	541-73-1	<2.2	8.0	2.2
1,4-Dichlorobenzene	106-46-7	<2.7	8.0	2.7
Dichlorodifluoromethane	75-71-8	<2.2	16	2.2
1,1-Dichloroethane	75-34-3	<3.0	8.0	3.0
1,2-Dichloroethane	107-06-2	<3.0	8.0	3.0
1,1-Dichloroethene	75-35-4	<3.4	8.0	3.4
cis-1,2-Dichloroethene	156-59-2	<2.3	8.0	2.3
trans-1,2-Dichloroethene	156-60-5	<2.6	8.0	2.6
1,2-Dichloropropane	78-87-5	<2.7	8.0	2.7
1,3-Dichloropropane	142-28-9	<2.1	8.0	2.1
2,2-Dichloropropane	594-20-7	<2.8	8.0	2.8
1,1-Dichloropropene	563-58-6	<2.3	8.0	2.3
cis-1,3-Dichloropropene	10061-01-5	<2.1	8.0	2.1
trans-1,3-Dichloropropene	10061-02-6	<2.4	8.0	2.4
Dicyclopentadiene	77-73-6	<80	80	TIC
Ethylbenzene	100-41-4	12	8.0	2.0
4-Ethyltoluene	622-96-8	<16	16	TIC
n-Hexane	110-54-3	<16	16	TIC
Isopropylbenzene	98-82-8	<1.7	8.0	1.7
4-Isopropyltoluene	99-87-6	<1.6	8.0	1.6
Methyl cyclohexane	108-87-2	<16	16	TIC
Methyl t-butyl ether (MTBE)	1634-04-4	220	8.0	4.6
Naphthalene	91-20-3	3.7	24	2.5
Propene	115-07-1	<80	80	TIC
n-Propylbenzene	103-65-1	<2.3	8.0	2.3
Styrene	100-42-5	<1.4	8.0	1.4
1,1,2,2-Tetrachloroethane	79-34-5	<2.8	8.0	2.8
Tetrachloroethene	127-18-4	<2.5	8.0	2.5
Toluene	108-88-3	<3.0	8.0	3.0
1,2,3-Trichlorobenzene	87-61-6	<2.8	8.0	2.8
1,1,1-Trichloroethane	71-55-6	<2.7	8.0	2.7
1,1,2-Trichloroethane	79-00-5	<2.6	8.0	2.6
Trichloroethene	79-01-6	<2.6	8.0	2.6
Trichlorofluoromethane	75-69-4	<3.1	16	3.1
1,2,3-Trichloropropane	96-18-4	<3.0	8.0	3.0
1,2,4-Trimethylbenzene	95-63-6	2.1	8.0	1.8
1,3,5-Trimethylbenzene	108-67-8	<2.1	8.0	2.1
Vinyl chloride	75-01-4	<2.8	16	2.8
m- & p-Xylenes	179601-23-1	<3.1	8.0	3.1
o-Xylene	95-47-6	<1.7	4.0	1.7

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	79	63-130 %
Toluene-d8:	93	48-134 %
4-Bromofluorobenzene:	99	43-138 %

Dilution Factor: 8

Data Qualifiers: D2, E4, T4,

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7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QS-11	AZ13753-003	11/9/2022 12:35	11/7/2022 14:13	11/14/2022 13:26	11/14/2022 20:27	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21
Bromobenzene	108-86-1	<0.35	1.0	0.35
Bromochloromethane	74-97-5	<0.36	1.0	0.36
Bromodichloromethane	75-27-4	<0.33	0.50	0.33
Bromoform	75-25-2	<0.32	1.0	0.32
Bromomethane	74-83-9	<0.18	5.0	0.18
1,3-Butadiene	106-99-0	<10	10	TIC
n-Butylbenzene	104-51-8	<0.24	1.0	0.24
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26
Carbon Disulfide	75-15-0	<0.34	0.50	0.34
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44
Chlorobenzene	108-90-7	<0.23	1.0	0.23
Chloroethane	75-00-3	<0.39	5.0	0.39
Chloroform	67-66-3	<0.34	1.0	0.34
Chloromethane	74-87-3	<0.37	5.0	0.37
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26
Cyclohexane	110-82-7	<2.0	2.0	TIC
Dibromochloromethane	124-48-1	<0.27	1.0	0.27
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30
Dicyclopentadiene	77-73-6	<10	10	TIC
Ethylbenzene	100-41-4	<0.25	1.0	0.25
4-Ethyltoluene	622-96-8	<2.0	2.0	TIC
n-Hexane	110-54-3	<2.0	2.0	TIC
Isopropylbenzene	98-82-8	<0.21	1.0	0.21
4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
Methyl cyclohexane	108-87-2	<2.0	2.0	TIC
Methyl t-butyl ether (MTBE)	1634-04-4	<0.58	1.0	0.58
Naphthalene	91-20-3	<0.31	3.0	0.31
Propene	115-07-1	<10	10	TIC
n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Styrene	100-42-5	<0.18	1.0	0.18
1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Toluene	108-88-3	<0.37	1.0	0.37
1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Trichloroethene	79-01-6	<0.33	1.0	0.33
Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
Vinyl chloride	75-01-4	<0.35	2.0	0.35
m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
o-Xylene	95-47-6	<0.21	0.50	0.21

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	80	63-130 %
Toluene-d8:	94	48-134 %
4-Bromofluorobenzene:	98	43-138 %

Dilution Factor: 1

Data Qualifiers: T4,

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Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QS-5	AZ13753-004	11/9/2022 12:35	11/7/2022 15:20	11/11/2022 18:08	11/11/2022 20:21	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<17	40	17
Bromobenzene	108-86-1	<28	80	28
Bromochloromethane	74-97-5	<29	80	29
Bromodichloromethane	75-27-4	<26	40	26
Bromoform	75-25-2	<26	80	26
Bromomethane	74-83-9	<14	400	14
1,3-Butadiene	106-99-0	<800	800	TIC
n-Butylbenzene	104-51-8	<19	80	19
sec-Butylbenzene	135-98-8	<17	80	17
tert-Butylbenzene	98-06-6	<21	80	21
Carbon Disulfide	75-15-0	<27	40	27
Carbon tetrachloride	56-23-5	<35	80	35
Chlorobenzene	108-90-7	<18	80	18
Chloroethane	75-00-3	<31	400	31
Chloroform	67-66-3	<27	80	27
Chloromethane	74-87-3	<30	400	30
2-Chlorotoluene	95-49-8	<24	80	24
4-Chlorotoluene	106-43-4	<21	80	21
Cyclohexane	110-82-7	<160	160	TIC
Dibromochloromethane	124-48-1	<22	80	22
1,2-Dibromoethane	106-93-4	<26	80	26
1,2-Dichlorobenzene	95-50-1	<24	80	24
1,3-Dichlorobenzene	541-73-1	<22	80	22
1,4-Dichlorobenzene	106-46-7	<27	80	27
Dichlorodifluoromethane	75-71-8	<22	160	22
1,1-Dichloroethane	75-34-3	<30	80	30
1,2-Dichloroethane	107-06-2	<30	80	30
1,1-Dichloroethene	75-35-4	<34	80	34
cis-1,2-Dichloroethene	156-59-2	<23	80	23
trans-1,2-Dichloroethene	156-60-5	<26	80	26
1,2-Dichloropropane	78-87-5	<27	80	27
1,3-Dichloropropane	142-28-9	<21	80	21
2,2-Dichloropropane	594-20-7	<28	80	28
1,1-Dichloropropene	563-58-6	<23	80	23
cis-1,3-Dichloropropene	10061-01-5	<21	80	21
trans-1,3-Dichloropropene	10061-02-6	<24	80	24

ANALYTE	CAS #	µg/L	RL	MDL
Dicyclopentadiene	77-73-6	<800	800	TIC
Ethylbenzene	100-41-4	<20	80	20
4-Ethyltoluene	622-96-8	<160	160	TIC
n-Hexane	110-54-3	<160	160	TIC
Isopropylbenzene	98-82-8	<17	80	17
4-Isopropyltoluene	99-87-6	<16	80	16
Methyl cyclohexane	108-87-2	<160	160	TIC
Methyl t-butyl ether (MTBE)	1634-04-4	2200	80	46
Naphthalene	91-20-3	<25	240	25
Propene	115-07-1	<800	800	TIC
n-Propylbenzene	103-65-1	<23	80	23
Styrene	100-42-5	<14	80	14
1,1,2,2-Tetrachloroethane	79-34-5	<28	80	28
Tetrachloroethene	127-18-4	<25	80	25
Toluene	108-88-3	<30	80	30
1,2,3-Trichlorobenzene	87-61-6	<28	80	28
1,1,1-Trichloroethane	71-55-6	<27	80	27
1,1,2-Trichloroethane	79-00-5	<26	80	26
Trichloroethene	79-01-6	<26	80	26
Trichlorofluoromethane	75-69-4	<31	160	31
1,2,3-Trichloropropane	96-18-4	<30	80	30
1,2,4-Trimethylbenzene	95-63-6	<18	80	18
1,3,5-Trimethylbenzene	108-67-8	<21	80	21
Vinyl chloride	75-01-4	<28	160	28
m- & p-Xylenes	179601-23-1	<31	80	31
o-Xylene	95-47-6	<17	40	17

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	80	63-130 %
Toluene-d8:	92	48-134 %
4-Bromofluorobenzene:	100	43-138 %

Dilution Factor: 80

Data Qualifiers: D2, T4,

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Overland Park, KS, 66223

Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QS-19	AZ13753-005	11/9/2022 12:35	11/8/2022 9:18	11/14/2022 13:26	11/14/2022 17:39	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21
Bromobenzene	108-86-1	<0.35	1.0	0.35
Bromochloromethane	74-97-5	<0.36	1.0	0.36
Bromodichloromethane	75-27-4	<0.33	0.50	0.33
Bromoform	75-25-2	<0.32	1.0	0.32
Bromomethane	74-83-9	<0.18	5.0	0.18
1,3-Butadiene	106-99-0	<10	10	TIC
n-Butylbenzene	104-51-8	<0.24	1.0	0.24
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26
Carbon Disulfide	75-15-0	<0.34	0.50	0.34
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44
Chlorobenzene	108-90-7	<0.23	1.0	0.23
Chloroethane	75-00-3	<0.39	5.0	0.39
Chloroform	67-66-3	<0.34	1.0	0.34
Chloromethane	74-87-3	0.38	5.0	0.37
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26
Cyclohexane	110-82-7	<2.0	2.0	TIC
Dibromochloromethane	124-48-1	<0.27	1.0	0.27
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30
Dicyclopentadiene	77-73-6	<10	10	TIC
Ethylbenzene	100-41-4	<0.25	1.0	0.25
4-Ethyltoluene	622-96-8	<2.0	2.0	TIC
n-Hexane	110-54-3	<2.0	2.0	TIC
Isopropylbenzene	98-82-8	<0.21	1.0	0.21
4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
Methyl cyclohexane	108-87-2	<2.0	2.0	TIC
Methyl t-butyl ether (MTBE)	1634-04-4	<0.58	1.0	0.58
Naphthalene	91-20-3	<0.31	3.0	0.31
Propene	115-07-1	<10	10	TIC
n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Styrene	100-42-5	<0.18	1.0	0.18
1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Toluene	108-88-3	<0.37	1.0	0.37
1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Trichloroethene	79-01-6	<0.33	1.0	0.33
Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
Vinyl chloride	75-01-4	<0.35	2.0	0.35
m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
o-Xylene	95-47-6	<0.21	0.50	0.21

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	89	63-130 %
Toluene-d8:	96	48-134 %
4-Bromofluorobenzene:	102	43-138 %

Dilution Factor: 1

Data Qualifiers: E4, T4,

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Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QS-17	AZ13753-006	11/9/2022 12:35	11/8/2022 10:11	11/11/2022 18:09	11/11/2022 20:45	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<34	80	34
Bromobenzene	108-86-1	<56	160	56
Bromochloromethane	74-97-5	<58	160	58
Bromodichloromethane	75-27-4	<53	80	53
Bromoform	75-25-2	<51	160	51
Bromomethane	74-83-9	<29	800	29
1,3-Butadiene	106-99-0	<1600	1600	TIC
n-Butylbenzene	104-51-8	<38	160	38
sec-Butylbenzene	135-98-8	<34	160	34
tert-Butylbenzene	98-06-6	<42	160	42
Carbon Disulfide	75-15-0	<54	80	54
Carbon tetrachloride	56-23-5	<70	160	70
Chlorobenzene	108-90-7	<37	160	37
Chloroethane	75-00-3	<62	800	62
Chloroform	67-66-3	<54	160	54
Chloromethane	74-87-3	<59	800	59
2-Chlorotoluene	95-49-8	<48	160	48
4-Chlorotoluene	106-43-4	<42	160	42
Cyclohexane	110-82-7	<320	320	TIC
Dibromochloromethane	124-48-1	<43	160	43
1,2-Dibromoethane	106-93-4	<51	160	51
1,2-Dichlorobenzene	95-50-1	<48	160	48
1,3-Dichlorobenzene	541-73-1	<43	160	43
1,4-Dichlorobenzene	106-46-7	<54	160	54
Dichlorodifluoromethane	75-71-8	<45	320	45
1,1-Dichloroethane	75-34-3	<59	160	59
1,2-Dichloroethane	107-06-2	<61	160	61
1,1-Dichloroethene	75-35-4	<69	160	69
cis-1,2-Dichloroethene	156-59-2	<46	160	46
trans-1,2-Dichloroethene	156-60-5	<53	160	53
1,2-Dichloropropane	78-87-5	<54	160	54
1,3-Dichloropropane	142-28-9	<42	160	42
2,2-Dichloropropane	594-20-7	<56	160	56
1,1-Dichloropropene	563-58-6	<46	160	46
cis-1,3-Dichloropropene	10061-01-5	<42	160	42
trans-1,3-Dichloropropene	10061-02-6	<48	160	48

ANALYTE	CAS #	µg/L	RL	MDL
Dicyclopentadiene	77-73-6	<1600	1600	TIC
Ethylbenzene	100-41-4	<40	160	40
4-Ethyltoluene	622-96-8	<320	320	TIC
n-Hexane	110-54-3	<320	320	TIC
Isopropylbenzene	98-82-8	<34	160	34
4-Isopropyltoluene	99-87-6	<32	160	32
Methyl cyclohexane	108-87-2	<320	320	TIC
Methyl t-butyl ether (MTBE)	1634-04-4	4600	160	93
Naphthalene	91-20-3	<50	480	50
Propene	115-07-1	<1600	1600	TIC
n-Propylbenzene	103-65-1	<46	160	46
Styrene	100-42-5	<29	160	29
1,1,2,2-Tetrachloroethane	79-34-5	<56	160	56
Tetrachloroethene	127-18-4	<50	160	50
Toluene	108-88-3	<59	160	59
1,2,3-Trichlorobenzene	87-61-6	<56	160	56
1,1,1-Trichloroethane	71-55-6	<54	160	54
1,1,2-Trichloroethane	79-00-5	<53	160	53
Trichloroethene	79-01-6	<53	160	53
Trichlorofluoromethane	75-69-4	<62	320	62
1,2,3-Trichloropropane	96-18-4	<59	160	59
1,2,4-Trimethylbenzene	95-63-6	<35	160	35
1,3,5-Trimethylbenzene	108-67-8	<42	160	42
Vinyl chloride	75-01-4	<56	320	56
m- & p-Xylenes	179601-23-1	<62	160	62
o-Xylene	95-47-6	<34	80	34

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	85	63-130 %
Toluene-d8:	95	48-134 %
4-Bromofluorobenzene:	107	43-138 %

Dilution Factor: 160

Data Qualifiers: D2, T4,

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Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QS-4	AZ13753-007	11/9/2022 12:35	11/8/2022 11:02	11/11/2022 18:10	11/11/2022 21:10	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<13	32	13
Bromobenzene	108-86-1	<22	64	22
Bromochloromethane	74-97-5	<23	64	23
Bromodichloromethane	75-27-4	<21	32	21
Bromoform	75-25-2	<20	64	20
Bromomethane	74-83-9	<12	320	12
1,3-Butadiene	106-99-0	<640	640	TIC
n-Butylbenzene	104-51-8	<15	64	15
sec-Butylbenzene	135-98-8	<13	64	13
tert-Butylbenzene	98-06-6	<17	64	17
Carbon Disulfide	75-15-0	<22	32	22
Carbon tetrachloride	56-23-5	<28	64	28
Chlorobenzene	108-90-7	<15	64	15
Chloroethane	75-00-3	<25	320	25
Chloroform	67-66-3	<22	64	22
Chloromethane	74-87-3	<24	320	24
2-Chlorotoluene	95-49-8	<19	64	19
4-Chlorotoluene	106-43-4	<17	64	17
Cyclohexane	110-82-7	<130	130	TIC
Dibromochloromethane	124-48-1	<17	64	17
1,2-Dibromoethane	106-93-4	<20	64	20
1,2-Dichlorobenzene	95-50-1	<19	64	19
1,3-Dichlorobenzene	541-73-1	<17	64	17
1,4-Dichlorobenzene	106-46-7	<22	64	22
Dichlorodifluoromethane	75-71-8	<18	130	18
1,1-Dichloroethane	75-34-3	<24	64	24
1,2-Dichloroethane	107-06-2	<24	64	24
1,1-Dichloroethene	75-35-4	<28	64	28
cis-1,2-Dichloroethene	156-59-2	<19	64	19
trans-1,2-Dichloroethene	156-60-5	<21	64	21
1,2-Dichloropropane	78-87-5	<22	64	22
1,3-Dichloropropane	142-28-9	<17	64	17
2,2-Dichloropropane	594-20-7	<22	64	22
1,1-Dichloropropene	563-58-6	<19	64	19
cis-1,3-Dichloropropene	10061-01-5	<17	64	17
trans-1,3-Dichloropropene	10061-02-6	<19	64	19

ANALYTE	CAS #	µg/L	RL	MDL
Dicyclopentadiene	77-73-6	<640	640	TIC
Ethylbenzene	100-41-4	46	64	16
4-Ethyltoluene	622-96-8	<130	130	TIC
n-Hexane	110-54-3	<130	130	TIC
Isopropylbenzene	98-82-8	<13	64	13
4-Isopropyltoluene	99-87-6	<13	64	13
Methyl cyclohexane	108-87-2	<130	130	TIC
Methyl t-butyl ether (MTBE)	1634-04-4	1700	64	37
Naphthalene	91-20-3	<20	190	20
Propene	115-07-1	<640	640	TIC
n-Propylbenzene	103-65-1	<19	64	19
Styrene	100-42-5	<12	64	12
1,1,2,2-Tetrachloroethane	79-34-5	<22	64	22
Tetrachloroethene	127-18-4	<20	64	20
Toluene	108-88-3	<24	64	24
1,2,3-Trichlorobenzene	87-61-6	<22	64	22
1,1,1-Trichloroethane	71-55-6	<22	64	22
1,1,2-Trichloroethane	79-00-5	<21	64	21
Trichloroethene	79-01-6	<21	64	21
Trichlorofluoromethane	75-69-4	<25	130	25
1,2,3-Trichloropropane	96-18-4	<24	64	24
1,2,4-Trimethylbenzene	95-63-6	<14	64	14
1,3,5-Trimethylbenzene	108-67-8	<17	64	17
Vinyl chloride	75-01-4	<22	130	22
m- & p-Xylenes	179601-23-1	<25	64	25
o-Xylene	95-47-6	<13	32	13

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	80	63-130 %
Toluene-d8:	90	48-134 %
4-Bromofluorobenzene:	97	43-138 %

Dilution Factor: 64

Data Qualifiers: D2, E4, T4,

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Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QS-18	AZ13753-008	11/9/2022 12:35	11/8/2022 11:50	11/14/2022 14:07	11/14/2022 20:51	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	380	4.0	1.7
Bromobenzene	108-86-1	<2.8	8.0	2.8
Bromochloromethane	74-97-5	<2.9	8.0	2.9
Bromodichloromethane	75-27-4	<2.6	4.0	2.6
Bromoform	75-25-2	<2.6	8.0	2.6
Bromomethane	74-83-9	<1.4	40	1.4
1,3-Butadiene	106-99-0	<80	80	TIC
n-Butylbenzene	104-51-8	<1.9	8.0	1.9
sec-Butylbenzene	135-98-8	<1.7	8.0	1.7
tert-Butylbenzene	98-06-6	<2.1	8.0	2.1
Carbon Disulfide	75-15-0	<2.7	4.0	2.7
Carbon tetrachloride	56-23-5	<3.5	8.0	3.5
Chlorobenzene	108-90-7	<1.8	8.0	1.8
Chloroethane	75-00-3	<3.1	40	3.1
Chloroform	67-66-3	<2.7	8.0	2.7
Chloromethane	74-87-3	<3.0	40	3.0
2-Chlorotoluene	95-49-8	<2.4	8.0	2.4
4-Chlorotoluene	106-43-4	<2.1	8.0	2.1
Cyclohexane	110-82-7	<16	16	TIC
Dibromochloromethane	124-48-1	<2.2	8.0	2.2
1,2-Dibromoethane	106-93-4	<2.6	8.0	2.6
1,2-Dichlorobenzene	95-50-1	<2.4	8.0	2.4
1,3-Dichlorobenzene	541-73-1	<2.2	8.0	2.2
1,4-Dichlorobenzene	106-46-7	<2.7	8.0	2.7
Dichlorodifluoromethane	75-71-8	<2.2	16	2.2
1,1-Dichloroethane	75-34-3	<3.0	8.0	3.0
1,2-Dichloroethane	107-06-2	<3.0	8.0	3.0
1,1-Dichloroethene	75-35-4	<3.4	8.0	3.4
cis-1,2-Dichloroethene	156-59-2	<2.3	8.0	2.3
trans-1,2-Dichloroethene	156-60-5	<2.6	8.0	2.6
1,2-Dichloropropane	78-87-5	<2.7	8.0	2.7
1,3-Dichloropropane	142-28-9	<2.1	8.0	2.1
2,2-Dichloropropane	594-20-7	<2.8	8.0	2.8
1,1-Dichloropropene	563-58-6	<2.3	8.0	2.3
cis-1,3-Dichloropropene	10061-01-5	<2.1	8.0	2.1
trans-1,3-Dichloropropene	10061-02-6	<2.4	8.0	2.4
Dicyclopentadiene	77-73-6	<80	80	TIC
Ethylbenzene	100-41-4	59	8.0	2.0
4-Ethyltoluene	622-96-8	<16	16	TIC
n-Hexane	110-54-3	<16	16	TIC
Isopropylbenzene	98-82-8	2.5	8.0	1.7
4-Isopropyltoluene	99-87-6	<1.6	8.0	1.6
Methyl cyclohexane	108-87-2	<16	16	TIC
Methyl t-butyl ether (MTBE)	1634-04-4	300	8.0	4.6
Naphthalene	91-20-3	19	24	2.5
Propene	115-07-1	<80	80	TIC
n-Propylbenzene	103-65-1	6.4	8.0	2.3
Styrene	100-42-5	<1.4	8.0	1.4
1,1,2,2-Tetrachloroethane	79-34-5	<2.8	8.0	2.8
Tetrachloroethene	127-18-4	<2.5	8.0	2.5
Toluene	108-88-3	100	8.0	3.0
1,2,3-Trichlorobenzene	87-61-6	<2.8	8.0	2.8
1,1,1-Trichloroethane	71-55-6	<2.7	8.0	2.7
1,1,2-Trichloroethane	79-00-5	<2.6	8.0	2.6
Trichloroethene	79-01-6	<2.6	8.0	2.6
Trichlorofluoromethane	75-69-4	<3.1	16	3.1
1,2,3-Trichloropropane	96-18-4	<3.0	8.0	3.0
1,2,4-Trimethylbenzene	95-63-6	52	8.0	1.8
1,3,5-Trimethylbenzene	108-67-8	13	8.0	2.1
Vinyl chloride	75-01-4	<2.8	16	2.8
m- & p-Xylenes	179601-23-1	45	8.0	3.1
o-Xylene	95-47-6	69	4.0	1.7

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	83	63-130 %
Toluene-d8:	95	48-134 %
4-Bromofluorobenzene:	102	43-138 %

Dilution Factor: 8

Data Qualifiers: D2, E4, T4,

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Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QS-6	AZ13753-009	11/9/2022 12:35	11/8/2022 12:19	11/14/2022 13:39	11/14/2022 15:40	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	190	50	21
Bromobenzene	108-86-1	<35	100	35
Bromochloromethane	74-97-5	<36	100	36
Bromodichloromethane	75-27-4	<33	50	33
Bromoform	75-25-2	<32	100	32
Bromomethane	74-83-9	<18	500	18
1,3-Butadiene	106-99-0	<1000	1000	TIC
n-Butylbenzene	104-51-8	<24	100	24
sec-Butylbenzene	135-98-8	<21	100	21
tert-Butylbenzene	98-06-6	<26	100	26
Carbon Disulfide	75-15-0	<34	50	34
Carbon tetrachloride	56-23-5	<44	100	44
Chlorobenzene	108-90-7	<23	100	23
Chloroethane	75-00-3	<39	500	39
Chloroform	67-66-3	<34	100	34
Chloromethane	74-87-3	<37	500	37
2-Chlorotoluene	95-49-8	<30	100	30
4-Chlorotoluene	106-43-4	<26	100	26
Cyclohexane	110-82-7	<200	200	TIC
Dibromochloromethane	124-48-1	<27	100	27
1,2-Dibromoethane	106-93-4	<32	100	32
1,2-Dichlorobenzene	95-50-1	<30	100	30
1,3-Dichlorobenzene	541-73-1	<27	100	27
1,4-Dichlorobenzene	106-46-7	<34	100	34
Dichlorodifluoromethane	75-71-8	<28	200	28
1,1-Dichloroethane	75-34-3	<37	100	37
1,2-Dichloroethane	107-06-2	<38	100	38
1,1-Dichloroethene	75-35-4	<43	100	43
cis-1,2-Dichloroethene	156-59-2	<29	100	29
trans-1,2-Dichloroethene	156-60-5	<33	100	33
1,2-Dichloropropane	78-87-5	<34	100	34
1,3-Dichloropropane	142-28-9	<26	100	26
2,2-Dichloropropane	594-20-7	<35	100	35
1,1-Dichloropropene	563-58-6	<29	100	29
cis-1,3-Dichloropropene	10061-01-5	<26	100	26
trans-1,3-Dichloropropene	10061-02-6	<30	100	30

ANALYTE	CAS #	µg/L	RL	MDL
Dicyclopentadiene	77-73-6	<1000	1000	TIC
Ethylbenzene	100-41-4	330	100	25
4-Ethyltoluene	622-96-8	<200	200	TIC
n-Hexane	110-54-3	<200	200	TIC
Isopropylbenzene	98-82-8	<21	100	21
4-Isopropyltoluene	99-87-6	<20	100	20
Methyl cyclohexane	108-87-2	<200	200	TIC
Methyl t-butyl ether (MTBE)	1634-04-4	4700	100	58
Naphthalene	91-20-3	81	300	31
Propene	115-07-1	<1000	1000	TIC
n-Propylbenzene	103-65-1	31	100	29
Styrene	100-42-5	<18	100	18
1,1,2,2-Tetrachloroethane	79-34-5	<35	100	35
Tetrachloroethene	127-18-4	<31	100	31
Toluene	108-88-3	<37	100	37
1,2,3-Trichlorobenzene	87-61-6	<35	100	35
1,1,1-Trichloroethane	71-55-6	<34	100	34
1,1,2-Trichloroethane	79-00-5	<33	100	33
Trichloroethene	79-01-6	<33	100	33
Trichlorofluoromethane	75-69-4	<39	200	39
1,2,3-Trichloropropane	96-18-4	<37	100	37
1,2,4-Trimethylbenzene	95-63-6	<22	100	22
1,3,5-Trimethylbenzene	108-67-8	<26	100	26
Vinyl chloride	75-01-4	<35	200	35
m- & p-Xylenes	179601-23-1	<39	100	39
o-Xylene	95-47-6	<21	50	21

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	84	63-130 %
Toluene-d8:	90	48-134 %
4-Bromofluorobenzene:	100	43-138 %

Dilution Factor: 100

Data Qualifiers: D2, E4, T4,

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Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QS-1	AZ13753-010	11/9/2022 12:35	11/8/2022 13:00	11/11/2022 18:00	11/11/2022 22:48	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	3.9	0.50	0.21
Bromobenzene	108-86-1	<0.35	1.0	0.35
Bromochloromethane	74-97-5	<0.36	1.0	0.36
Bromodichloromethane	75-27-4	<0.33	0.50	0.33
Bromoform	75-25-2	<0.32	1.0	0.32
Bromomethane	74-83-9	<0.18	5.0	0.18
1,3-Butadiene	106-99-0	<10	10	TIC
n-Butylbenzene	104-51-8	0.74	1.0	0.24
sec-Butylbenzene	135-98-8	0.47	1.0	0.21
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26
Carbon Disulfide	75-15-0	<0.34	0.50	0.34
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44
Chlorobenzene	108-90-7	<0.23	1.0	0.23
Chloroethane	75-00-3	<0.39	5.0	0.39
Chloroform	67-66-3	<0.34	1.0	0.34
Chloromethane	74-87-3	<0.37	5.0	0.37
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26
Cyclohexane	110-82-7	<2.0	2.0	TIC
Dibromochloromethane	124-48-1	<0.27	1.0	0.27
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30
Dicyclopentadiene	77-73-6	<10	10	TIC
Ethylbenzene	100-41-4	40	1.0	0.25
4-Ethyltoluene	622-96-8	<2.0	2.0	TIC
n-Hexane	110-54-3	<2.0	2.0	TIC
Isopropylbenzene	98-82-8	1.8	1.0	0.21
4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
Methyl cyclohexane	108-87-2	3.0	2.0	TIC
Methyl t-butyl ether (MTBE)	1634-04-4	23	1.0	0.58
Naphthalene	91-20-3	7.5	3.0	0.31
Propene	115-07-1	<10	10	TIC
n-Propylbenzene	103-65-1	5.2	1.0	0.29
Styrene	100-42-5	<0.18	1.0	0.18
1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Toluene	108-88-3	1.5	1.0	0.37
1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Trichloroethene	79-01-6	<0.33	1.0	0.33
Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2,4-Trimethylbenzene	95-63-6	1.4	1.0	0.22
1,3,5-Trimethylbenzene	108-67-8	0.35	1.0	0.26
Vinyl chloride	75-01-4	<0.35	2.0	0.35
m- & p-Xylenes	179601-23-1	2.2	1.0	0.39
o-Xylene	95-47-6	1.4	0.50	0.21

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	86	63-130 %
Toluene-d8:	96	48-134 %
4-Bromofluorobenzene:	107	43-138 %

Dilution Factor: 1

Data Qualifiers: E4, T4,

Ms. Patty Small
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Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QS-3	AZ13753-011	11/9/2022 12:35	11/8/2022 13:37	11/15/2022 11:40	11/15/2022 14:59	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	0.87	0.50	0.21
Bromobenzene	108-86-1	<0.35	1.0	0.35
Bromochloromethane	74-97-5	<0.36	1.0	0.36
Bromodichloromethane	75-27-4	<0.33	0.50	0.33
Bromoform	75-25-2	<0.32	1.0	0.32
Bromomethane	74-83-9	<0.18	5.0	0.18
1,3-Butadiene	106-99-0	<10	10	TIC
n-Butylbenzene	104-51-8	<0.24	1.0	0.24
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26
Carbon Disulfide	75-15-0	<0.34	0.50	0.34
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44
Chlorobenzene	108-90-7	<0.23	1.0	0.23
Chloroethane	75-00-3	<0.39	5.0	0.39
Chloroform	67-66-3	<0.34	1.0	0.34
Chloromethane	74-87-3	<0.37	5.0	0.37
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26
Cyclohexane	110-82-7	<2.0	2.0	TIC
Dibromochloromethane	124-48-1	<0.27	1.0	0.27
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30
Dicyclopentadiene	77-73-6	<10	10	TIC
Ethylbenzene	100-41-4	2.4	1.0	0.25
4-Ethyltoluene	622-96-8	<2.0	2.0	TIC
n-Hexane	110-54-3	<2.0	2.0	TIC
Isopropylbenzene	98-82-8	<0.21	1.0	0.21
4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
Methyl cyclohexane	108-87-2	<2.0	2.0	TIC
Methyl t-butyl ether (MTBE)	1634-04-4	0.81	1.0	0.58
Naphthalene	91-20-3	0.62	3.0	0.31
Propene	115-07-1	<10	10	TIC
n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Styrene	100-42-5	<0.18	1.0	0.18
1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Toluene	108-88-3	0.51	1.0	0.37
1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Trichloroethene	79-01-6	<0.33	1.0	0.33
Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2,4-Trimethylbenzene	95-63-6	0.27	1.0	0.22
1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
Vinyl chloride	75-01-4	<0.35	2.0	0.35
m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
o-Xylene	95-47-6	0.35	0.50	0.21

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	87	63-130 %
Toluene-d8:	99	48-134 %
4-Bromofluorobenzene:	104	43-138 %

Dilution Factor: 1

Data Qualifiers: E4, T4,

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Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QS-20	AZ13753-012	11/9/2022 12:35	11/8/2022 14:27	11/14/2022 13:26	11/14/2022 18:26	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	0.38	0.50	0.21
Bromobenzene	108-86-1	<0.35	1.0	0.35
Bromochloromethane	74-97-5	<0.36	1.0	0.36
Bromodichloromethane	75-27-4	<0.33	0.50	0.33
Bromoform	75-25-2	<0.32	1.0	0.32
Bromomethane	74-83-9	<0.18	5.0	0.18
1,3-Butadiene	106-99-0	<10	10	TIC
n-Butylbenzene	104-51-8	<0.24	1.0	0.24
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26
Carbon Disulfide	75-15-0	<0.34	0.50	0.34
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44
Chlorobenzene	108-90-7	<0.23	1.0	0.23
Chloroethane	75-00-3	<0.39	5.0	0.39
Chloroform	67-66-3	<0.34	1.0	0.34
Chloromethane	74-87-3	<0.37	5.0	0.37
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26
Cyclohexane	110-82-7	<2.0	2.0	TIC
Dibromochloromethane	124-48-1	<0.27	1.0	0.27
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30
Dicyclopentadiene	77-73-6	<10	10	TIC
Ethylbenzene	100-41-4	0.93	1.0	0.25
4-Ethyltoluene	622-96-8	<2.0	2.0	TIC
n-Hexane	110-54-3	<2.0	2.0	TIC
Isopropylbenzene	98-82-8	<0.21	1.0	0.21
4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
Methyl cyclohexane	108-87-2	<2.0	2.0	TIC
Methyl t-butyl ether (MTBE)	1634-04-4	<0.58	1.0	0.58
Naphthalene	91-20-3	<0.31	3.0	0.31
Propene	115-07-1	<10	10	TIC
n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Styrene	100-42-5	<0.18	1.0	0.18
1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Toluene	108-88-3	0.43	1.0	0.37
1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Trichloroethene	79-01-6	<0.33	1.0	0.33
Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
Vinyl chloride	75-01-4	<0.35	2.0	0.35
m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
o-Xylene	95-47-6	<0.21	0.50	0.21

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	85	63-130 %
Toluene-d8:	96	48-134 %
4-Bromofluorobenzene:	105	43-138 %

Dilution Factor: 1

Data Qualifiers: E4, T4,

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Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QS-16	AZ13753-013	11/9/2022 12:35	11/9/2022 8:57	11/14/2022 13:26	11/14/2022 18:50	Water

ANALYTE	CAS #	µg/L	RL	MDL	ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21	Dicyclopentadiene	77-73-6	<10	10	TIC
Bromobenzene	108-86-1	<0.35	1.0	0.35	Ethylbenzene	100-41-4	0.35	1.0	0.25
Bromochloromethane	74-97-5	<0.36	1.0	0.36	4-Ethyltoluene	622-96-8	<2.0	2.0	TIC
Bromodichloromethane	75-27-4	<0.33	0.50	0.33	n-Hexane	110-54-3	<2.0	2.0	TIC
Bromoform	75-25-2	<0.32	1.0	0.32	Isopropylbenzene	98-82-8	<0.21	1.0	0.21
Bromomethane	74-83-9	<0.18	5.0	0.18	4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
1,3-Butadiene	106-99-0	<10	10	TIC	Methyl cyclohexane	108-87-2	<2.0	2.0	TIC
n-Butylbenzene	104-51-8	<0.24	1.0	0.24	Methyl t-butyl ether (MTBE)	1634-04-4	<0.58	1.0	0.58
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21	Naphthalene	91-20-3	<0.31	3.0	0.31
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26	Propene	115-07-1	<10	10	TIC
Carbon Disulfide	75-15-0	<0.34	0.50	0.34	n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44	Styrene	100-42-5	<0.18	1.0	0.18
Chlorobenzene	108-90-7	<0.23	1.0	0.23	1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Chloroethane	75-00-3	<0.39	5.0	0.39	Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Chloroform	67-66-3	<0.34	1.0	0.34	Toluene	108-88-3	0.47	1.0	0.37
Chloromethane	74-87-3	<0.37	5.0	0.37	1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30	1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26	1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Cyclohexane	110-82-7	<2.0	2.0	TIC	Trichloroethene	79-01-6	<0.33	1.0	0.33
Dibromochloromethane	124-48-1	<0.27	1.0	0.27	Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32	1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30	1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27	1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34	Vinyl chloride	75-01-4	<0.35	2.0	0.35
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28	m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37	o-Xylene	95-47-6	<0.21	0.50	0.21
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38					
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43					
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29					
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33					
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34					
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26					
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35					
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29					
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26					
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30					

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	83	63-130 %
Toluene-d8:	91	48-134 %
4-Bromofluorobenzene:	105	43-138 %

Dilution Factor: 1

Data Qualifiers: E4, T4,

Ms. Patty Small
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7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
QS-10	AZ13753-014	11/9/2022 12:35	11/9/2022 9:31	11/14/2022 13:26	11/14/2022 19:15	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21
Bromobenzene	108-86-1	<0.35	1.0	0.35
Bromochloromethane	74-97-5	<0.36	1.0	0.36
Bromodichloromethane	75-27-4	<0.33	0.50	0.33
Bromoform	75-25-2	<0.32	1.0	0.32
Bromomethane	74-83-9	<0.18	5.0	0.18
1,3-Butadiene	106-99-0	<10	10	TIC
n-Butylbenzene	104-51-8	<0.24	1.0	0.24
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26
Carbon Disulfide	75-15-0	<0.34	0.50	0.34
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44
Chlorobenzene	108-90-7	<0.23	1.0	0.23
Chloroethane	75-00-3	<0.39	5.0	0.39
Chloroform	67-66-3	<0.34	1.0	0.34
Chloromethane	74-87-3	<0.37	5.0	0.37
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26
Cyclohexane	110-82-7	<2.0	2.0	TIC
Dibromochloromethane	124-48-1	<0.27	1.0	0.27
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30
Dicyclopentadiene	77-73-6	<10	10	TIC
Ethylbenzene	100-41-4	0.46	1.0	0.25
4-Ethyltoluene	622-96-8	<2.0	2.0	TIC
n-Hexane	110-54-3	<2.0	2.0	TIC
Isopropylbenzene	98-82-8	<0.21	1.0	0.21
4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
Methyl cyclohexane	108-87-2	<2.0	2.0	TIC
Methyl t-butyl ether (MTBE)	1634-04-4	<0.58	1.0	0.58
Naphthalene	91-20-3	<0.31	3.0	0.31
Propene	115-07-1	<10	10	TIC
n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Styrene	100-42-5	<0.18	1.0	0.18
1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Toluene	108-88-3	<0.37	1.0	0.37
1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Trichloroethene	79-01-6	<0.33	1.0	0.33
Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
Vinyl chloride	75-01-4	<0.35	2.0	0.35
m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
o-Xylene	95-47-6	<0.21	0.50	0.21

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	85	63-130 %
Toluene-d8:	95	48-134 %
4-Bromofluorobenzene:	108	43-138 %

Dilution Factor: 1

Data Qualifiers: E4, T4,

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Dup A	AZ13753-015	11/9/2022 12:35		11/14/2022 14:10	11/14/2022 21:15	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<21	50	21
Bromobenzene	108-86-1	<35	100	35
Bromochloromethane	74-97-5	<36	100	36
Bromodichloromethane	75-27-4	<33	50	33
Bromoform	75-25-2	<32	100	32
Bromomethane	74-83-9	<18	500	18
1,3-Butadiene	106-99-0	<1000	1000	TIC
n-Butylbenzene	104-51-8	<24	100	24
sec-Butylbenzene	135-98-8	<21	100	21
tert-Butylbenzene	98-06-6	<26	100	26
Carbon Disulfide	75-15-0	<34	50	34
Carbon tetrachloride	56-23-5	<44	100	44
Chlorobenzene	108-90-7	<23	100	23
Chloroethane	75-00-3	<39	500	39
Chloroform	67-66-3	<34	100	34
Chloromethane	74-87-3	<37	500	37
2-Chlorotoluene	95-49-8	<30	100	30
4-Chlorotoluene	106-43-4	<26	100	26
Cyclohexane	110-82-7	<200	200	TIC
Dibromochloromethane	124-48-1	<27	100	27
1,2-Dibromoethane	106-93-4	<32	100	32
1,2-Dichlorobenzene	95-50-1	<30	100	30
1,3-Dichlorobenzene	541-73-1	<27	100	27
1,4-Dichlorobenzene	106-46-7	<34	100	34
Dichlorodifluoromethane	75-71-8	<28	200	28
1,1-Dichloroethane	75-34-3	<37	100	37
1,2-Dichloroethane	107-06-2	<38	100	38
1,1-Dichloroethene	75-35-4	<43	100	43
cis-1,2-Dichloroethene	156-59-2	<29	100	29
trans-1,2-Dichloroethene	156-60-5	<33	100	33
1,2-Dichloropropane	78-87-5	<34	100	34
1,3-Dichloropropane	142-28-9	<26	100	26
2,2-Dichloropropane	594-20-7	<35	100	35
1,1-Dichloropropene	563-58-6	<29	100	29
cis-1,3-Dichloropropene	10061-01-5	<26	100	26
trans-1,3-Dichloropropene	10061-02-6	<30	100	30
Dicyclopentadiene	77-73-6	<1000	1000	TIC
Ethylbenzene	100-41-4	<25	100	25
4-Ethyltoluene	622-96-8	<200	200	TIC
n-Hexane	110-54-3	<200	200	TIC
Isopropylbenzene	98-82-8	<21	100	21
4-Isopropyltoluene	99-87-6	<20	100	20
Methyl cyclohexane	108-87-2	<200	200	TIC
Methyl t-butyl ether (MTBE)	1634-04-4	4100	100	58
Naphthalene	91-20-3	<31	300	31
Propene	115-07-1	<1000	1000	TIC
n-Propylbenzene	103-65-1	<29	100	29
Styrene	100-42-5	<18	100	18
1,1,2,2-Tetrachloroethane	79-34-5	<35	100	35
Tetrachloroethene	127-18-4	<31	100	31
Toluene	108-88-3	<37	100	37
1,2,3-Trichlorobenzene	87-61-6	<35	100	35
1,1,1-Trichloroethane	71-55-6	<34	100	34
1,1,2-Trichloroethane	79-00-5	<33	100	33
Trichloroethene	79-01-6	<33	100	33
Trichlorofluoromethane	75-69-4	<39	200	39
1,2,3-Trichloropropane	96-18-4	<37	100	37
1,2,4-Trimethylbenzene	95-63-6	<22	100	22
1,3,5-Trimethylbenzene	108-67-8	<26	100	26
Vinyl chloride	75-01-4	<35	200	35
m- & p-Xylenes	179601-23-1	<39	100	39
o-Xylene	95-47-6	<21	50	21

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	81	63-130 %
Toluene-d8:	91	48-134 %
4-Bromofluorobenzene:	100	43-138 %

Dilution Factor: 100

Data Qualifiers: D2, T4,

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Ms. Patty Small
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7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Field Blank	AZ13753-016	11/9/2022 12:35	11/9/2022 9:00	11/14/2022 13:26	11/14/2022 19:39	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21
Bromobenzene	108-86-1	<0.35	1.0	0.35
Bromochloromethane	74-97-5	<0.36	1.0	0.36
Bromodichloromethane	75-27-4	<0.33	0.50	0.33
Bromoform	75-25-2	<0.32	1.0	0.32
Bromomethane	74-83-9	<0.18	5.0	0.18
1,3-Butadiene	106-99-0	<10	10	TIC
n-Butylbenzene	104-51-8	<0.24	1.0	0.24
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26
Carbon Disulfide	75-15-0	<0.34	0.50	0.34
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44
Chlorobenzene	108-90-7	<0.23	1.0	0.23
Chloroethane	75-00-3	<0.39	5.0	0.39
Chloroform	67-66-3	<0.34	1.0	0.34
Chloromethane	74-87-3	<0.37	5.0	0.37
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26
Cyclohexane	110-82-7	<2.0	2.0	TIC
Dibromochloromethane	124-48-1	<0.27	1.0	0.27
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30
Dicyclopentadiene	77-73-6	<10	10	TIC
Ethylbenzene	100-41-4	<0.25	1.0	0.25
4-Ethyltoluene	622-96-8	<2.0	2.0	TIC
n-Hexane	110-54-3	<2.0	2.0	TIC
Isopropylbenzene	98-82-8	<0.21	1.0	0.21
4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
Methyl cyclohexane	108-87-2	<2.0	2.0	TIC
Methyl t-butyl ether (MTBE)	1634-04-4	<0.58	1.0	0.58
Naphthalene	91-20-3	<0.31	3.0	0.31
Propene	115-07-1	<10	10	TIC
n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Styrene	100-42-5	<0.18	1.0	0.18
1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Toluene	108-88-3	<0.37	1.0	0.37
1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Trichloroethene	79-01-6	<0.33	1.0	0.33
Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
Vinyl chloride	75-01-4	<0.35	2.0	0.35
m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
o-Xylene	95-47-6	<0.21	0.50	0.21

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	81	63-130 %
Toluene-d8:	91	48-134 %
4-Bromofluorobenzene:	97	43-138 %

Dilution Factor: 1

Data Qualifiers: T4,

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Trip Blank	AZ13753-017	11/9/2022 12:35		11/14/2022 13:26	11/14/2022 20:03	Water

ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21
Bromobenzene	108-86-1	<0.35	1.0	0.35
Bromochloromethane	74-97-5	<0.36	1.0	0.36
Bromodichloromethane	75-27-4	<0.33	0.50	0.33
Bromoform	75-25-2	<0.32	1.0	0.32
Bromomethane	74-83-9	<0.18	5.0	0.18
1,3-Butadiene	106-99-0	<10	10	TIC
n-Butylbenzene	104-51-8	<0.24	1.0	0.24
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26
Carbon Disulfide	75-15-0	<0.34	0.50	0.34
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44
Chlorobenzene	108-90-7	<0.23	1.0	0.23
Chloroethane	75-00-3	<0.39	5.0	0.39
Chloroform	67-66-3	<0.34	1.0	0.34
Chloromethane	74-87-3	<0.37	5.0	0.37
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26
Cyclohexane	110-82-7	<2.0	2.0	TIC
Dibromochloromethane	124-48-1	<0.27	1.0	0.27
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30
Dicyclopentadiene	77-73-6	<10	10	TIC
Ethylbenzene	100-41-4	<0.25	1.0	0.25
4-Ethyltoluene	622-96-8	<2.0	2.0	TIC
n-Hexane	110-54-3	<2.0	2.0	TIC
Isopropylbenzene	98-82-8	<0.21	1.0	0.21
4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
Methyl cyclohexane	108-87-2	<2.0	2.0	TIC
Methyl t-butyl ether (MTBE)	1634-04-4	<0.58	1.0	0.58
Naphthalene	91-20-3	<0.31	3.0	0.31
Propene	115-07-1	<10	10	TIC
n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Styrene	100-42-5	<0.18	1.0	0.18
1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Toluene	108-88-3	<0.37	1.0	0.37
1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Trichloroethene	79-01-6	<0.33	1.0	0.33
Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
Vinyl chloride	75-01-4	<0.35	2.0	0.35
m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
o-Xylene	95-47-6	<0.21	0.50	0.21

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	84	63-130 %
Toluene-d8:	98	48-134 %
4-Bromofluorobenzene:	105	43-138 %

Dilution Factor: 1

Data Qualifiers: T4,

Ms. Patty Small
Apex Envirotech Inc
7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBTP1111221			11/11/2022 11:10	11/11/2022 12:28	Water

ANALYTE	CAS #	µg/L	RL	MDL	ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21	Dicyclopentadiene	77-73-6	<10	10	TIC
Bromobenzene	108-86-1	<0.35	1.0	0.35	Ethylbenzene	100-41-4	<0.25	1.0	0.25
Bromochloromethane	74-97-5	<0.36	1.0	0.36	4-Ethyltoluene	622-96-8	<2.0	2.0	TIC
Bromodichloromethane	75-27-4	<0.33	0.50	0.33	n-Hexane	110-54-3	<2.0	2.0	TIC
Bromoform	75-25-2	<0.32	1.0	0.32	Isopropylbenzene	98-82-8	<0.21	1.0	0.21
Bromomethane	74-83-9	<0.18	5.0	0.18	4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
1,3-Butadiene	106-99-0	<10	10	TIC	Methyl cyclohexane	108-87-2	<2.0	2.0	TIC
n-Butylbenzene	104-51-8	<0.24	1.0	0.24	Methyl t-butyl ether (MTBE)	1634-04-4	<0.58	1.0	0.58
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21	Naphthalene	91-20-3	<0.31	3.0	0.31
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26	Propene	115-07-1	<10	10	TIC
Carbon Disulfide	75-15-0	<0.34	0.50	0.34	n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44	Styrene	100-42-5	<0.18	1.0	0.18
Chlorobenzene	108-90-7	<0.23	1.0	0.23	1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Chloroethane	75-00-3	<0.39	5.0	0.39	Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Chloroform	67-66-3	<0.34	1.0	0.34	Toluene	108-88-3	<0.37	1.0	0.37
Chloromethane	74-87-3	<0.37	5.0	0.37	1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30	1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26	1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Cyclohexane	110-82-7	<2.0	2.0	TIC	Trichloroethene	79-01-6	<0.33	1.0	0.33
Dibromochloromethane	124-48-1	<0.27	1.0	0.27	Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32	1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30	1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27	1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34	Vinyl chloride	75-01-4	<0.35	2.0	0.35
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28	m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37	o-Xylene	95-47-6	<0.21	0.50	0.21
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38					
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43					
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29					
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33					
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34					
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26					
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35					
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29					
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26					
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30					

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	79	63-130 %
Toluene-d8:	92	48-134 %
4-Bromofluorobenzene:	95	43-138 %

Dilution Factor: 1

Data Qualifiers: T4,

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7111 W 151st St. #338
Overland Park, KS, 66223

Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBTP1114222			11/14/2022 13:34	11/14/2022 14:28	Water

ANALYTE	CAS #	µg/L	RL	MDL	ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21	Dicyclopentadiene	77-73-6	<10	10	TIC
Bromobenzene	108-86-1	<0.35	1.0	0.35	Ethylbenzene	100-41-4	<0.25	1.0	0.25
Bromochloromethane	74-97-5	<0.36	1.0	0.36	4-Ethyltoluene	622-96-8	<2.0	2.0	TIC
Bromodichloromethane	75-27-4	<0.33	0.50	0.33	n-Hexane	110-54-3	<2.0	2.0	TIC
Bromoform	75-25-2	<0.32	1.0	0.32	Isopropylbenzene	98-82-8	<0.21	1.0	0.21
Bromomethane	74-83-9	<0.18	5.0	0.18	4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
1,3-Butadiene	106-99-0	<10	10	TIC	Methyl cyclohexane	108-87-2	<2.0	2.0	TIC
n-Butylbenzene	104-51-8	<0.24	1.0	0.24	Methyl t-butyl ether (MTBE)	1634-04-4	<0.58	1.0	0.58
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21	Naphthalene	91-20-3	<0.31	3.0	0.31
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26	Propene	115-07-1	<10	10	TIC
Carbon Disulfide	75-15-0	<0.34	0.50	0.34	n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44	Styrene	100-42-5	<0.18	1.0	0.18
Chlorobenzene	108-90-7	<0.23	1.0	0.23	1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Chloroethane	75-00-3	<0.39	5.0	0.39	Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Chloroform	67-66-3	<0.34	1.0	0.34	Toluene	108-88-3	<0.37	1.0	0.37
Chloromethane	74-87-3	<0.37	5.0	0.37	1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30	1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26	1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Cyclohexane	110-82-7	<2.0	2.0	TIC	Trichloroethene	79-01-6	<0.33	1.0	0.33
Dibromochloromethane	124-48-1	<0.27	1.0	0.27	Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32	1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30	1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27	1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34	Vinyl chloride	75-01-4	<0.35	2.0	0.35
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28	m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37	o-Xylene	95-47-6	<0.21	0.50	0.21
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38					
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43					
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29					
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33					
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34					
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26					
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35					
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29					
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26					
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30					

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	91	63-130 %
Toluene-d8:	100	48-134 %
4-Bromofluorobenzene:	103	43-138 %

Dilution Factor: 1

Data Qualifiers: T4,

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Overland Park, KS, 66223

Lab Reference #: AET AZ13753
Project Name: Shay Oil Chevron
Project #: SHA04.001

Volatile Organics by GC/MS (EPA 8260B)

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBTP1115221			11/15/2022 11:57	11/15/2022 13:49	Water

ANALYTE	CAS #	µg/L	RL	MDL	ANALYTE	CAS #	µg/L	RL	MDL
Benzene	71-43-2	<0.21	0.50	0.21	Dicyclopentadiene	77-73-6	<10	10	TIC
Bromobenzene	108-86-1	<0.35	1.0	0.35	Ethylbenzene	100-41-4	<0.25	1.0	0.25
Bromochloromethane	74-97-5	<0.36	1.0	0.36	4-Ethyltoluene	622-96-8	<2.0	2.0	TIC
Bromodichloromethane	75-27-4	<0.33	0.50	0.33	n-Hexane	110-54-3	<2.0	2.0	TIC
Bromoform	75-25-2	<0.32	1.0	0.32	Isopropylbenzene	98-82-8	<0.21	1.0	0.21
Bromomethane	74-83-9	<0.18	5.0	0.18	4-Isopropyltoluene	99-87-6	<0.20	1.0	0.20
1,3-Butadiene	106-99-0	<10	10	TIC	Methyl cyclohexane	108-87-2	<2.0	2.0	TIC
n-Butylbenzene	104-51-8	<0.24	1.0	0.24	Methyl t-butyl ether (MTBE)	1634-04-4	<0.58	1.0	0.58
sec-Butylbenzene	135-98-8	<0.21	1.0	0.21	Naphthalene	91-20-3	<0.31	3.0	0.31
tert-Butylbenzene	98-06-6	<0.26	1.0	0.26	Propene	115-07-1	<10	10	TIC
Carbon Disulfide	75-15-0	<0.34	0.50	0.34	n-Propylbenzene	103-65-1	<0.29	1.0	0.29
Carbon tetrachloride	56-23-5	<0.44	1.0	0.44	Styrene	100-42-5	<0.18	1.0	0.18
Chlorobenzene	108-90-7	<0.23	1.0	0.23	1,1,2,2-Tetrachloroethane	79-34-5	<0.35	1.0	0.35
Chloroethane	75-00-3	<0.39	5.0	0.39	Tetrachloroethene	127-18-4	<0.31	1.0	0.31
Chloroform	67-66-3	<0.34	1.0	0.34	Toluene	108-88-3	<0.37	1.0	0.37
Chloromethane	74-87-3	<0.37	5.0	0.37	1,2,3-Trichlorobenzene	87-61-6	<0.35	1.0	0.35
2-Chlorotoluene	95-49-8	<0.30	1.0	0.30	1,1,1-Trichloroethane	71-55-6	<0.34	1.0	0.34
4-Chlorotoluene	106-43-4	<0.26	1.0	0.26	1,1,2-Trichloroethane	79-00-5	<0.33	1.0	0.33
Cyclohexane	110-82-7	<2.0	2.0	TIC	Trichloroethene	79-01-6	<0.33	1.0	0.33
Dibromochloromethane	124-48-1	<0.27	1.0	0.27	Trichlorofluoromethane	75-69-4	<0.39	2.0	0.39
1,2-Dibromoethane	106-93-4	<0.32	1.0	0.32	1,2,3-Trichloropropane	96-18-4	<0.37	1.0	0.37
1,2-Dichlorobenzene	95-50-1	<0.30	1.0	0.30	1,2,4-Trimethylbenzene	95-63-6	<0.22	1.0	0.22
1,3-Dichlorobenzene	541-73-1	<0.27	1.0	0.27	1,3,5-Trimethylbenzene	108-67-8	<0.26	1.0	0.26
1,4-Dichlorobenzene	106-46-7	<0.34	1.0	0.34	Vinyl chloride	75-01-4	<0.35	2.0	0.35
Dichlorodifluoromethane	75-71-8	<0.28	2.0	0.28	m- & p-Xylenes	179601-23-1	<0.39	1.0	0.39
1,1-Dichloroethane	75-34-3	<0.37	1.0	0.37	o-Xylene	95-47-6	<0.21	0.50	0.21
1,2-Dichloroethane	107-06-2	<0.38	1.0	0.38					
1,1-Dichloroethene	75-35-4	<0.43	1.0	0.43					
cis-1,2-Dichloroethene	156-59-2	<0.29	1.0	0.29					
trans-1,2-Dichloroethene	156-60-5	<0.33	1.0	0.33					
1,2-Dichloropropane	78-87-5	<0.34	1.0	0.34					
1,3-Dichloropropane	142-28-9	<0.26	1.0	0.26					
2,2-Dichloropropane	594-20-7	<0.35	1.0	0.35					
1,1-Dichloropropene	563-58-6	<0.29	1.0	0.29					
cis-1,3-Dichloropropene	10061-01-5	<0.26	1.0	0.26					
trans-1,3-Dichloropropene	10061-02-6	<0.30	1.0	0.30					

Surrogate:	% RC	Acceptable % RC
Dibromofluoromethane:	81	63-130 %
Toluene-d8:	94	48-134 %
4-Bromofluorobenzene:	106	43-138 %

Dilution Factor: 1

Data Qualifiers: T4,

QA/QC Report
for
Volatile Organic Compounds (8260B)
Reporting Units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 11/15/2022 15:02
Date of Analysis: 11/15/2022 15:23
Dup Date of Analysis: 11/15/2022 15:47
Laboratory Sample #: AZ13753-011
MS/MSD Qualifiers: None
Reference #: AET AZ13753

Analyte	R	Spike Conc.	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Benzene	0.870	10.0	8.85	8.57	80	77	3	70-144	20	--
Chlorobenzene	0.00	10.0	9.65	9.00	96	90	7	70-138	20	--
1,1-Dichloroethene	0.00	10.0	7.29	6.53	73	65	11	54-133	20	--
Toluene	0.510	10.0	9.32	9.32	88	88	0	70-137	20	--
Trichloroethene	0.00	10.0	8.76	8.17	88	82	7	70-136	20	--

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual
Dibromofluoromethane	80	77	☐
Toluene-d8	94	94	☐
4-Bromofluorobenzene	102	102	☐

LCS	LCSD	Qual
82	81	☐
98	92	☐
110	109	☐

ACP % RC
63-130
48-134
43-138

Laboratory Control Sample (LCS) / Laboratory Control Sample Duplicate (LCSD)

Date of Extraction: 11/15/2022 12:07
Date of Analysis: 11/15/2022 14:13
Dup Date of Analysis: 11/15/2022 14:36
Laboratory Sample #: TP1115221
LCS/LCSD Qualifiers: None

Analyte	Spike Conc.	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Benzene	10.0	7.90	8.01	79	80	1	70-132	20	--
Chlorobenzene	10.0	8.57	8.67	86	87	1	70-130	20	--
1,1-Dichloroethene	10.0	7.09	7.14	71	71	1	58-130	20	--
Toluene	10.0	8.36	8.88	84	89	6	68-130	20	--
Trichloroethene	10.0	8.35	8.90	84	89	6	70-130	20	--

QA/QC Report
for
Volatile Organic Compounds (8260B)
Reporting Units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 11/11/2022 12:52
Date of Analysis: 11/11/2022 14:14
Dup Date of Analysis: 11/11/2022 14:38
Laboratory Sample #: AZ13752-008
MS/MSD Qualifiers: None
Reference #: AET AZ13753

Analyte	R	Spike Conc.	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Benzene	17.0	80.0	79.5	78.1	78	76	2	70-144	20	--
Chlorobenzene	0.00	80.0	75.0	71.3	94	89	5	70-138	20	--
1,1-Dichloroethene	0.00	80.0	56.0	51.0	70	64	9	54-133	20	--
Toluene	190	80.0	265	250	94	75	6	70-137	20	--
Trichloroethene	0.00	80.0	67.6	64.5	84	81	5	70-136	20	--

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual	LCS	LCSD	Qual	ACP % RC
Dibromofluoromethane	82	80	☐	78	84	☐	63-130
Toluene-d8	100	91	☐	93	96	☐	48-134
4-Bromofluorobenzene	109	97	☐	104	103	☐	43-138

Laboratory Control Sample (LCS) / Laboratory Control Sample Duplicate (LCSD)

Date of Extraction: 11/11/2022 12:48
Date of Analysis: 11/11/2022 13:02
Dup Date of Analysis: 11/11/2022 13:25
Laboratory Sample #: TP1111221
LCS/LCSD Qualifiers: None

Analyte	Spike Conc.	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Benzene	10.0	8.01	8.30	80	83	4	70-132	20	--
Chlorobenzene	10.0	9.64	9.20	96	92	5	70-130	20	--
1,1-Dichloroethene	10.0	7.28	7.36	73	74	1	58-130	20	--
Toluene	10.0	9.39	9.06	94	91	4	68-130	20	--
Trichloroethene	10.0	9.21	8.57	92	86	7	70-130	20	--

QA/QC Report
for
Volatile Organic Compounds (8260B)
Reporting Units: ppb

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Extraction: 11/14/2022 13:42
Date of Analysis: 11/14/2022 16:03
Dup Date of Analysis: 11/14/2022 16:27
Laboratory Sample #: AZ13753-009
MS/MSD Qualifiers: None
Reference #: AET AZ13753

Analyte	R	Spike Conc.	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Benzene	190	1000	1170	1110	98	92	5	70-144	20	--
Chlorobenzene	0.00	1000	1020	984	102	98	4	70-138	20	--
1,1-Dichloroethene	0.00	1000	887	792	89	79	11	54-133	20	--
Toluene	0.00	1000	1020	978	102	98	4	70-137	20	--
Trichloroethene	0.00	1000	1010	946	101	95	7	70-136	20	--

Surrogate Recoveries for Spike Samples

Surrogate (%RC)	MS	MSD	Qual	LCS	LCSD	Qual	ACP % RC
Dibromofluoromethane	88	84	☐	85	88	☐	63-130
Toluene-d8	97	93	☐	96	98	☐	48-134
4-Bromofluorobenzene	108	100	☐	104	108	☐	43-138

Laboratory Control Sample (LCS) / Laboratory Control Sample Duplicate (LCSD)

Date of Extraction: 11/14/2022 13:42
Date of Analysis: 11/14/2022 14:52
Dup Date of Analysis: 11/14/2022 15:16
Laboratory Sample #: TP1114222
LCS/LCSD Qualifiers: None

Analyte	Spike Conc.	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Benzene	10.0	8.59	9.09	86	91	6	70-132	20	--
Chlorobenzene	10.0	9.32	9.97	93	100	7	70-130	20	--
1,1-Dichloroethene	10.0	7.29	8.06	73	81	10	58-130	20	--
Toluene	10.0	9.12	9.61	91	96	5	68-130	20	--
Trichloroethene	10.0	8.95	9.17	89	92	2	70-130	20	--

Data Qualifier Definitions

Qualifier

D2 = Sample required dilution due to high concentration of target analyte.

E4 = Concentration estimated. Analyte was detected below laboratory Minimum Reporting Limit (MRL) but above MDL.

AZ13753-002	8260B	Naphthalene, 1,2,4-Trimethylbenzene
AZ13753-005	8260B	Chloromethane
AZ13753-007	8260B	Ethylbenzene
AZ13753-008	8260B	Isopropylbenzene, Naphthalene, n-Propylbenzene
AZ13753-009	8260B	Naphthalene, n-Propylbenzene
AZ13753-010	8260B	n-Butylbenzene, sec-Butylbenzene, 1,3,5-Trimethylbenzene
AZ13753-011	8260B	Methyl t-butyl ether (MTBE), Naphthalene, Toluene, 1,2,4-Trimethylbenzene, o-Xylene
AZ13753-012	8260B	Benzene, Ethylbenzene, Toluene
AZ13753-013	8260B	Ethylbenzene, Toluene
AZ13753-014	8260B	Ethylbenzene

T4 = Tentatively identified compound. Concentration is estimated and based on the closest internal standard.

Definition of terms:

R	Result of unspiked laboratory sample used for matrix spike determination.
SP CONC (or Spike Conc.)	Spike concentration added to sample or blank
MS	Matrix Spike sample result
MSD	Matrix Spike Duplicate sample result
%MS	Percent recovery of MS: {(MS-R1) / SP CONC} x100
%MSD	Percent recovery of MSD: {(MSD-R1) / SP CONC} x 100
RPD (for MS/MSD)	Relative Percent Difference: {(MS-MSD) / (MS+MSD)} x 100 x 2
LCS	Laboratory Control Sample result
LCSD	Laboratory Control Sample Duplicate result
%LCS	Percent recovery of LCS: {(LCS) / SP CONC} x100
%LCSD	Percent recovery of LCSD: {(LCSD) / SP CONC} x 100
RPD (for LCS/LCSD)	Relative Percent Difference: {(LCS-LCSD) / (LCS+LCSD)} x 100 x 2
ACP %LCS	Acceptable percent recovery range for Laboratory Control Samples.
ACP %MS	Acceptable percent recovery range for Matrix Spike samples
ACP RPD	Acceptable Relative Percent Difference
D	Detectable, result must be greater than zero
Qual	A checked box indicates a data qualifier was utilized and/or required for this analyte see attached explanation.
ND	Analyte Not Detected

Analysis Request and Chain of Custody Record

Lab Job No: AZ 13753
Page 1 of 2

ORANGE COAST ANALYTICAL, INC. www.ocalab.com

3002 Dow, Suite 532
Tustin, CA 92780
(714) 832-0064 Fax (714) 832-0067

4620 E. Elwood, Suite 4
Phoenix, AZ 85040
(480) 736-0960 Fax (480) 736-0970

REQUIRED TURN AROUND TIME: (Standard:) _____
72 Hours: _____ 48 Hours: _____ 24 Hours: _____

CUSTOMER INFORMATION	PROJECT INFORMATION
COMPANY: APEX Envirotech Inc	PROJECT NAME: SWAY oil Chevron
SEND REPORT TO: Patty SMALL	NUMBER: SWA04.001
EMAIL: PSMALL@ApexEnvirotech.com	ADDRESS: Business Loop. 1-10
ADDRESS: DIII W 151ST ST #338	Quartzsite, Arizona
OVERLAND Park, KS 66223	P.O. #:
PHONE: 816-807-2856	SAMPLED BY: Bradfield

ANALYSIS REQUEST / PRESERVATIVE: 8260 w/ 14 TICs

SAMPLE ID	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE	8260	REMARKS/PRECAUTIONS
QS-8	3	11/7/22	12:36	WW	VOA	X	-001
QS-9	"	"	13:17	"	"	"	-002
QS-11	"	"	14:13	"	"	"	-003
QS-5	"	"	15:20	"	"	"	-004
QS-19	"	11/8/22	9:18	"	"	"	-005
QS-17	"	"	10:11	"	"	"	-006
QS-4	"	"	11:02	"	"	"	-007
QS-18	"	"	11:50	"	"	"	-008
QS-6	"	"	12:[illegible]	"	"	"	-009
QS-1	"	"	13:00	"	"	"	-010
QS-3	"	"	13:37	"	"	"	-011
QS-20	"	"	14:27	"	"	"	-012
QS-16	"	11/9/22	8:57	"	"	"	-013
QS-10	"	11/9/22	9:31	"	"	"	-014

Total No. of Samples: ~~13~~ 12 Method of Shipment:

Preservative: 1 = Ice 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	11/9/22 1235	OCAAZ [signature]	11/9/22 1235
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received For Lab By:	Date/Time:

Sample Matrix:
GW - Groundwater
WW - Wastewater
SW - Stormwater
DW - Drinking Water
W - Water
SS - Soil/Solid
OT - Other #12

Sample Integrity: 5.6 -0.3
Intact: _____ On Ice: (Yes) / No @ 5.3 °C

By signing above, client acknowledges responsibility for payment of all services requested on this chain of custody form and any additional services provided in support of this project. Payment is due within 30 days of invoice date unless otherwise agreed upon, in writing, with Orange Coast Analytical, Inc. All samples remain the property of the client. A disposal fee may be imposed if client fails to pickup sample.

Analysis Request and Chain of Custody Record

Lab Job No: AZ13753
Page 2 of 2

ORANGE COAST ANALYTICAL, INC. www.ocalab.com

3002 Dow, Suite 532
Tustin, CA 92780
(714) 832-0064 Fax (714) 832-0067

4620 E. Elwood, Suite 4
Phoenix, AZ 85040
(480) 736-0960 Fax (480) 736-0970

REQUIRED TURN AROUND TIME: (Standard) _____
72 Hours:_____ 48 Hours:_____ 24 Hours:_____

CUSTOMER INFORMATION	PROJECT INFORMATION
COMPANY: Apex Envirotech, Inc	PROJECT NAME: SMAY Oil Chevron
SEND REPORT TO: Patty SMALL	NUMBER: SHA04.001
EMAIL:	ADDRESS: Business Loop 1-10
ADDRESS: 7111 W 151ST ST #338 Overland Park, KS 66223	Quartzite AZ.
PHONE: 816 807 2856 FAX:	PO #:
	SAMPLED BY: Bradley

ANALYSIS REQUEST / PRESERVATIVE: 8260 WH +1C's

SAMPLE ID	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER TYPE		REMARKS/PRECAUTIONS
Dup A	3	—	—	W	VOA	X	-015
Field Blank	〃	11/9/22	900	〃	〃	〃	-016
Trip Blank	〃					X	-017

Total No. of Samples: 17 Method of Shipment:

Preservative: 1 = Ice 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

Relinquished By:	Date/Time:	Received By:	Date/Time:
JB	11/9/22 12:45	OCAAZ Jana Dowell	11/9/22 1245
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received For Lab By:	Date/Time:

Sample Matrix:
GW - Groundwater
WW - Wastewater
SW - Stormwater
DW - Drinking Water
W - Water
SS - Soil/Solid
OT - Other #12

Sample Integrity: 5.6-0.3
Intact: _____ On Ice: (Yes) No @ 5.3 °C

By signing above, client acknowledges responsibility for payment of all services requested on this chain of custody form and any additional services provided in support of this project. Payment is due within 30 days of invoice date unless otherwise agreed upon, in writing, with Orange Coast Analytical, Inc. All samples remain the property of the client. A disposal fee may be imposed if client fails to pickup sample.

APPENDIX C

EPA Vapor Intrusion Screening Level Calculation Output Reports

Commercial Air Inputs

Variable	Commercial Air Default Value	Site-Specific Value
AF_{gw} (Attenuation Factor Groundwater) unitless	0.001	0.001
AF_{ss} (Attenuation Factor Sub-Slab) unitless	0.03	0.03
AT_{w} (averaging time - composite worker)	365	365
ED_{w} (exposure duration - composite worker) yr	25	25
EF_{w} (exposure frequency - composite worker) day/yr	250	250
ET_{w} (exposure time - composite worker) hr	8	8
THQ (target hazard quotient) unitless	0.1	1
LT (lifetime) yr	70	70
TR (target risk) unitless	1.0E-06	1.0E-06

Output generated 20APR2023:15:57:39

Commercial Vapor Intrusion Screening Levels (VISL)

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; U = user provided; G = see RSL User's Guide Section 5; CA = cancer; NC = noncancer.

Chemical	CAS Number	Does the chemical meet the definition for volatility? (HLC>1E-5 or VP>1)	Does the chemical have inhalation toxicity data? (IUR and/or RfC)	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source? ($C_{vp} > C_{i,a}$,Target?)	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source? ($C_{hc} > C_{i,a}$,Target?)	Target Indoor Air Concentration (TCR=1E-06 or THQ=1) MIN($C_{ia,c}$,$C_{ia,nc}$) ($\mu g/m^3$)	Toxicity Basis	Target Sub-Slab and Near-source Soil Gas Concentration (TCR=1E-06 or THQ=1) C_{sg},Target ($\mu g/m^3$)	Target Groundwater Concentration (TCR=1E-06 or THQ=1) C_{gw},Target ($\mu g/L$)	Is Target Groundwater Concentration < MCL? (C_{gw} < MCL?)
Benzene	71-43-2	Yes	Yes	Yes	Yes	1.57E+00	CA	5.24E+01	6.93E+00	No (5)
Ethylbenzene	100-41-4	Yes	Yes	Yes	Yes	4.91E+00	CA	1.64E+02	1.52E+01	Yes (700)
Toluene	108-88-3	Yes	Yes	Yes	Yes	2.19E+04	NC	7.30E+05	8.07E+04	No (1000)
Total Petroleum Hydrocarbons (Aliphatic Low)	NA	Yes	Yes	Yes	Yes	1.75E+03	NC	5.84E+04	9.42E+02	--
Total Petroleum Hydrocarbons (Aromatic Low)	NA	Yes	No	No Inhal. Tox. Info	No Inhal. Tox. Info	-		-	-	
Xylenes	1330-20-7	Yes	Yes	Yes	Yes	4.38E+02	NC	1.46E+04	1.62E+03	Yes (10000)

Output generated 20APR2023:15:57:39

Commercial Vapor Intrusion Screening Levels (VISL)

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; U = user provided; G = see RSL User's Guide Section 5; CA = cancer; NC = noncancer.

Pure Phase Vapor Concentration C_{vp} \ (25 °C)\ (µg/m³)	Maximum Groundwater Vapor Concentration C_{hc} \ (µg/m³)	Temperature for Maximum Groundwater Vapor Concentration (°C)	Lower Explosive Limit LEL (% by volume)	LEL Ref	IUR (ug/m³)$^{-1}$	IUR Ref	RfC (mg/m³)	RfC Ref	Mutagenic Indicator	Carcinogenic VISL TCR=1E-06 $C_{ia,c}$ (µg/m³)	Noncarcinogenic VISL THQ=1 $C_{ia,nc}$ (µg/m³)
3.98E+08	4.06E+08	25	1.20	U	7.80E-06	U	3.00E-02	U	No	1.57E+00	1.31E+02
5.48E+07	5.44E+07	25	0.80	U	2.50E-06	U	1.00E+00	U	No	4.91E+00	4.38E+03
1.41E+08	1.43E+08	25	1.10	U	-		5.00E+00	U	No	-	2.19E+04
4.59E+08	1.40E+08	25	1.12	U	-		4.00E-01	U	No	-	1.75E+03
3.98E+08	4.06E+08	25	1.20	U	-		-		No	-	-
4.56E+07	2.87E+07	25	-		-		1.00E-01	U	No	-	4.38E+02

Chemical Properties

Chemical	CAS Number	Does the chemical meet the definition for volatility? (HLC>1E-5 or VP>1)	Does the chemical have inhalation toxicity data? (IUR and/or RfC)	MW	MW Ref	Vapor Pressure VP (mm Hg)	VP Ref	S (mg/L)	S Ref	MCL (ug/L)	HLC (atm-m ^{3}/mole)
Benzene	71-43-2	Yes	Yes	78.12	U	9.48E+01	U	1.79E+03	U	5	5.55E-03
Ethylbenzene	100-41-4	Yes	Yes	106.17	U	9.60E+00	U	1.69E+02	U	700	7.88E-03
Toluene	108-88-3	Yes	Yes	92.14	U	2.84E+01	U	5.26E+02	U	1000	6.64E-03
Total Petroleum Hydrocarbons (Aliphatic Low)	NA	Yes	Yes	89.50	U	9.54E+01	U	7.53E+01	U	-	4.55E-02
Total Petroleum Hydrocarbons (Aromatic Low)	NA	Yes	No	78.12	U	9.48E+01	U	1.79E+03	U	-	5.55E-03
Xylenes	1330-20-7	Yes	Yes	106.17	U	7.99E+00	U	1.06E+02	U	10000	6.63E-03

Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)	Normal Boiling Point BP (K)	BP Ref	Critical Temperature T_C\ (K)	T_C\ Ref	Enthalpy of vaporization at the normal boiling point $\Delta H_{v,b}$\ (cal/mol)	$\Delta H_{v,b}$\ Ref	Lower Explosive Limit LEL (% by volume)	LEL Ref
2.27E-01	U	2.27E-01	353.15	U	5.62E+02	U	7340.00	U	1.20	U
3.22E-01	U	3.22E-01	409.15	U	6.17E+02	U	8500.00	U	0.80	U
2.71E-01	U	2.71E-01	384.15	U	5.92E+02	U	7930.00	U	1.10	U
1.86E+00	U	1.86E+00	356.55	U	5.36E+02	U	7260.00	U	1.12	U
2.27E-01	U	2.27E-01	353.15	U	5.62E+02	U	7340.00	U	1.20	U
2.71E-01	U	2.71E-01	411.15	U	6.20E+02	U	8520.00	U	-	

Resident Air Inputs

Variable	Resident Air Default Value	Site-Specific Value
AF_{gw} (Attenuation Factor Groundwater) unitless	0.001	0.001
AF_{ss} (Attenuation Factor Sub-Slab) unitless	0.03	0.03
ED_{res} (exposure duration) years	26	26
ED_{0-2} (mutagenic exposure duration first phase) years	2	2
ED_{2-6} (mutagenic exposure duration second phase) years	4	4
ED_{6-16} (mutagenic exposure duration third phase) years	10	10
ED_{16-26} (mutagenic exposure duration fourth phase) years	10	10
EF_{res} (exposure frequency) days/year	350	350
EF_{0-2} (mutagenic exposure frequency first phase) days/year	350	350
EF_{2-6} (mutagenic exposure frequency second phase) days/year	350	350
EF_{6-16} (mutagenic exposure frequency third phase) days/year	350	350
EF_{16-26} (mutagenic exposure frequency fourth phase) days/year	350	350
ET_{res} (exposure time) hours/day	24	24
ET_{0-2} (mutagenic exposure time first phase) hours/day	24	24
ET_{2-6} (mutagenic exposure time second phase) hours/day	24	24
ET_{6-16} (mutagenic exposure time third phase) hours/day	24	24
ET_{16-26} (mutagenic exposure time fourth phase) hours/day	24	24
THQ (target hazard quotient) unitless	0.1	1
LT (lifetime) years	70	70
TR (target risk) unitless	1.0E-06	1.0E-06

Resident Vapor Intrusion Screening Levels (VISL)

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; U = user provided; G = see RSL User's Guide Section 5; CA = cancer; NC = noncancer.

Chemical	CAS Number	Does the chemical meet the definition for volatility? (HLC>1E-5 or VP>1)	Does the chemical have inhalation toxicity data? (IUR and/or RfC)	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source? (C_{vp} > $C_{i,a}$,Target?)	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source? (C_{hc} > $C_{i,a}$,Target?)	Target Indoor Air Concentration (TCR=1E-06 or THQ=1) MIN($C_{ia,c}$,$C_{ia,nc}$) ($\mu g/m^3$)	Toxicity Basis	Target Sub-Slab and Near-source Soil Gas Concentration (TCR=1E-06 or THQ=1) C_{sg},Target ($\mu g/m^3$)	Target Groundwater Concentration (TCR=1E-06 or THQ=1) C_{gw},Target ($\mu g/L$)	Is Target Groundwater Concentration < MCL? (C_{gw} < MCL?)
Benzene	71-43-2	Yes	Yes	Yes	Yes	3.60E-01	CA	1.20E+01	1.59E+00	Yes (5)
Ethylbenzene	100-41-4	Yes	Yes	Yes	Yes	1.12E+00	CA	3.74E+01	3.49E+00	Yes (700)
Toluene	108-88-3	Yes	Yes	Yes	Yes	5.21E+03	NC	1.74E+05	1.92E+04	No (1000)
Total Petroleum Hydrocarbons (Aliphatic Low)	NA	Yes	Yes	Yes	Yes	4.17E+02	NC	1.39E+04	2.24E+02	--
Total Petroleum Hydrocarbons (Aromatic Low)	NA	Yes	No	No Inhal. Tox. Info	No Inhal. Tox. Info	-		-	-	
Xylenes	1330-20-7	Yes	Yes	Yes	Yes	1.04E+02	NC	3.48E+03	3.85E+02	Yes (10000)

Resident Vapor Intrusion Screening Levels (VISL)

Key: I = IRIS; P = PPRTV; O = OPP; A = ATSDR; C = Cal EPA; X = PPRTV Screening Level; H = HEAST; D = DWSHA; W = TEF applied; E = RPF applied; U = user provided; G = see RSL User's Guide Section 5; CA = cancer; NC = noncancer.

Pure Phase Vapor Concentration C_{vp} \ (25 °C)\ (µg/m³)	Maximum Groundwater Vapor Concentration C_{hc} \ (µg/m³)	Temperature for Maximum Groundwater Vapor Concentration (°C)	Lower Explosive Limit LEL (% by volume)	LEL Ref	IUR (ug/m³)$^{-1}$	IUR Ref	RfC (mg/m³)	RfC Ref	Mutagenic Indicator	Carcinogenic VISL TCR=1E-06 $C_{ia,c}$ (µg/m³)	Noncarcinogenic VISL THQ=1 $C_{ia,nc}$ (µg/m³)
3.98E+08	4.06E+08	25	1.20	U	7.80E-06	U	3.00E-02	U	No	3.60E-01	3.13E+01
5.48E+07	5.44E+07	25	0.80	U	2.50E-06	U	1.00E+00	U	No	1.12E+00	1.04E+03
1.41E+08	1.43E+08	25	1.10	U	-		5.00E+00	U	No	-	5.21E+03
4.59E+08	1.40E+08	25	1.12	U	-		4.00E-01	U	No	-	4.17E+02
3.98E+08	4.06E+08	25	1.20	U	-		-		No	-	-
4.56E+07	2.87E+07	25	-		-		1.00E-01	U	No	-	1.04E+02

Resident Vapor Intrusion Risk

Chemical	CAS Number	Site Sub-Slab and Exterior Soil Gas Concentration C_{sg} \ (µg/m³)	Site Indoor Air Concentration $C_{i,a}$ \ (µg/m³)	VI Carcinogenic Risk CDI (µg/m³)	VI Carcinogenic Risk CR	VI Hazard CDI (mg/m³)	VI Hazard HQ	IUR (ug/m³)$^{-1}$	IUR Ref	Chronic RfC (mg/m³)	RfC Ref	Temperature (℃)\ for Groundwater Vapor Concentration	Mutagen?
Benzene	71-43-2	19.9	5.97E-01	2.13E-01	1.66E-06	5.72E-04	1.91E-02	7.80E-06	U	3.00E-02	U	25	No
Ethylbenzene	100-41-4	4.81	1.44E-01	5.14E-02	1.28E-07	1.38E-04	1.38E-04	2.50E-06	U	1.00E+00	U	25	No
Toluene	108-88-3	87.4	2.62E+00	9.34E-01	-	2.51E-03	5.03E-04	-		5.00E+00	U	25	No
Total Petroleum Hydrocarbons (Aliphatic Low)	NA	1140	3.42E+01	1.22E+01	-	3.28E-02	8.20E-02	-		4.00E-01	U	25	No
Total Petroleum Hydrocarbons (Aromatic Low)	NA	1140	-	-	-	-	-	-		-		25	No
Xylenes	1330-20-7	24.09	7.23E-01	2.57E-01	-	6.93E-04	6.93E-03	-		1.00E-01	U	25	No
*Sum		-	-	-	1.79E-06	-	1.09E-01	-		-		-	

Output generated 20APR2023:16:00:53

Chemical Properties

Chemical	CAS Number	Does the chemical meet the definition for volatility? (HLC>1E-5 or VP>1)	Does the chemical have inhalation toxicity data? (IUR and/or RfC)	MW	MW Ref	Vapor Pressure VP (mm Hg)	VP Ref	S (mg/L)	S Ref	MCL (ug/L)	HLC (atm-m ^{3}/mole)
Benzene	71-43-2	Yes	Yes	78.12	U	9.48E+01	U	1.79E+03	U	5	5.55E-03
Ethylbenzene	100-41-4	Yes	Yes	106.17	U	9.60E+00	U	1.69E+02	U	700	7.88E-03
Toluene	108-88-3	Yes	Yes	92.14	U	2.84E+01	U	5.26E+02	U	1000	6.64E-03
Total Petroleum Hydrocarbons (Aliphatic Low)	NA	Yes	Yes	89.50	U	9.54E+01	U	7.53E+01	U	-	4.55E-02
Total Petroleum Hydrocarbons (Aromatic Low)	NA	Yes	No	78.12	U	9.48E+01	U	1.79E+03	U	-	5.55E-03
Xylenes	1330-20-7	Yes	Yes	106.17	U	7.99E+00	U	1.06E+02	U	10000	6.63E-03

Henry's Law Constant (unitless)	H` and HLC Ref	Henry's Law Constant Used in Calcs (unitless)	Normal Boiling Point BP (K)	BP Ref	Critical Temperature T_C\ (K)	T_C\ Ref	Enthalpy of vaporization at the normal boiling point $\Delta H_{v,b}$\ (cal/mol)	$\Delta H_{v,b}$\ Ref	Lower Explosive Limit LEL (% by volume)	LEL Ref
2.27E-01	U	2.27E-01	353.15	U	5.62E+02	U	7340.00	U	1.20	U
3.22E-01	U	3.22E-01	409.15	U	6.17E+02	U	8500.00	U	0.80	U
2.71E-01	U	2.71E-01	384.15	U	5.92E+02	U	7930.00	U	1.10	U
1.86E+00	U	1.86E+00	356.55	U	5.36E+02	U	7260.00	U	1.12	U
2.27E-01	U	2.27E-01	353.15	U	5.62E+02	U	7340.00	U	1.20	U
2.71E-01	U	2.71E-01	411.15	U	6.20E+02	U	8520.00	U	-	