

FINAL SITE CHARACTERIZATION REPORT  
STATEWIDE HEALTH STANDARD  
QUINN'S CAFÉ STOP PROPERTY  
PADEP FACILITY ID #35-20617  
USTIF CLAIM #2016-0136  
224 MAIN STREET  
BOROUGH OF ARCHBALD, LACKAWANNA COUNTY, PENNSYLVANIA

PREPARED FOR  
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ARCHBALD, PENNSYLVANIA 18403

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## 1. BACKGROUND

### 1.1 General

LaBella Associates, P.C. (LaBella), on behalf of DK & DK, LLC, is pleased to present this Statewide Health Standard Final Site Characterization Report (FSCR) in association with the Quinn's Café Stop Property (subject property). The subject property is located at 224 Main Street in the Borough of Archbald, Lackawanna County, Pennsylvania. The activities summarized herein were completed in accordance with the guidelines and standards pursuant to the Pennsylvania Department of Environmental Protection's (PADEP's) "*Land Recycling and Environmental Remediation Standards Act*" (Act 2) of July, 1995, as amended; the Corrective Action Process under the Pennsylvania Storage Tank and Spill Prevention Act (25 PA Code Chapter 245.301 – 245.313, Corrective Action Process); and the PADEP's Groundwater Monitoring Guidance Manual dated December 1, 2001. A Site Location Map (Figure 1) depicting the location of the subject property is included in Appendix A. A Photograph Log compiled as part of this investigation is included as Appendix B. LaBella Representative Resumes are included as Appendix C to this report.

### 1.2 Background

On September 9, 2016, Francis Smith & Sons, Incorporated (Francis Smith) completed a PADEP Facility Operations Inspection (FOI) at the subject property. During this inspection, the spill buckets on Tanks #001, #002, #003 and #004 were noted to be deteriorated. A Site Sketch (Figure 2) and Site Sketch with Aerial Overlay (Figure 3) depicting the USTs at the subject property are included in Appendix A. These spill buckets failed hydrostatic testing conducted during the inspection. In response, Francis Smith submitted a Notice of Reportable Release (NORR) form, dated September 9, 2016, to the PADEP Northeast Regional Office.

On September 12, 2016, Mr. Kevin Beers of the PADEP conducted an inspection of the subject property in response to the September 9, 2016 NORR. Mr. Beers prepared a Storage System Report Form Narrative which indicated further investigation as required. On October 17, 2016, Francis Smith was onsite replacing the spill buckets on Tanks #001, #002, #003 and #004. During this work, odor was observed in the backfill around the outsides of the spill buckets on Tanks #001, #002, #003 and #004. In response, Francis Smith submitted a Notice of Reportable Release (NORR) form, dated October 18, 2016, to the PADEP Northeast Regional Office.

During the October 17, 2016 spill bucket replacement activities, the property owner contracted Pennsylvania Tectonics (now LaBella) to complete soil sampling activities to confirm the presence or absence of contamination in the vicinity of the spill buckets. The results of the soil sampling activities confirmed the presence of soil contamination at concentrations exceeding the applicable Non-Residential, Used Aquifer (TDS <2,500 mg/l) Statewide Health Standard MSCs. These exceedances were associated with Tanks #001, #002 and #003. The PADEP drafted two (2) Notice of Violation (NOV) letters dated September 15, 2016 (associated with the spill bucket integrity test failure) and October 18, 2016 (in response to the October 18, 2016 NORR) indicating that site characterization activities must be completed to investigate the release. Refer to Appendix D for copies of the September 15, 2016 and October 18, 2016 PADEP NOV's.

### 1.3 Site Location and Legal Description

The subject property is located at 224 Main Street in the Borough of Archbald, Lackawanna County, Pennsylvania. DK & DK, LLC currently owns the subject property. Refer to Appendix A for a Lackawanna County Tax Map (Figure 4) depicting the subject property. Refer to Appendix E for a copy of the current property deed. The subject property consists of one (1) distinct parcel of land, as summarized in Table 1-1:



**Table 1-1**  
**Quinn's Café Stop Property**  
**Summary of Parcel Information**

Parcel Number	Lot Size	Deed Book / Page
104.08-010-005	0.24 acres	2006 / 08764

#### 1.4 Site Description

The Quinn's Café Stop Property is located at 224 Main Street in the Borough of Archbald, Lackawanna County, Pennsylvania. The subject property is developed with one (1) convenience store building (~1,800 square feet), two (2) fuel dispenser canopies and five (5) associated UST systems situated on 0.2 (+/-) acres of land. The subject property maintains PADEP Facility ID #35-20617 in association with the current UST systems. The subject property is provided electricity by PPL; water service is provided by the Pennsylvania American Water Company; and, sewer service is provided by the Lackawanna River Basin Sewer Authority. The convenience store building is heated via natural gas provided by UGI. The average elevation of the subject property is 952 feet above mean sea level (M.S.L.), as indicated on the U.S.G.S. (7.5 Minute Series) Olyphant, Pennsylvania Quadrangle. Refer to Appendix A for a Site Sketch (Figure 2) and a Site Sketch with Aerial Overlay (Figure 3) depicting the subject property.

#### 1.5 Storage Tank Investigation

The subject property currently maintains five (5) regulated UST systems. The subject property maintains PADEP Facility ID #35-20617 in association with these UST systems. The five (5) current USTs were installed between 1985 and 1989. Refer to Appendix A for a Site Sketch (Figure 2) depicting the current UST systems. According to PADEP records ([www.depreportingsvcs.state.pa.us](http://www.depreportingsvcs.state.pa.us)), the most recent Facility Operations Inspection (FOI) was conducted on September 9, 2016. The next FOI is due no later than September 9, 2019. A summary of the historical UST systems is provided in Table 1-2, as follows:

**Table 1-2**  
**Quinn's Café Stop Property**  
**Summary of Current UST Systems**

Tank #	Capacity (gallons)	Product	Status
#001	10,000	Gasoline	Currently-In-Use
#002	8,000	Gasoline	Currently-In-Use
#003	4,000	Gasoline	Currently-In-Use
#004	4,000	Diesel Fuel	Currently-In-Use
#005	4,000	Diesel Fuel	Currently-In-Use

#### 1.6 Site Physiography

##### 1.6.1 Regional Bedrock Geology and Hydrogeology

The subject property, in the Borough of Archbald, Lackawanna County, Pennsylvania, is located in the Appalachian Mountain Section of the Valley and Ridge Physiographic Province. According to the Pennsylvania Geologic Survey (Berg 1980), the bedrock geology characteristic of the subject property is the Pennsylvania Age Llewellyn Formation. Refer to Appendix A for a Bedrock Geology Map (Figure 5).

Characteristic of the Llewellyn Formation are gray sandstones and shales containing numerous thick beds of anthracite coal (Geyer 1982). The coal beds are the most persistent units within the Llewellyn Formation. The intervening strata are characterized by extreme lateral changes in thickness and lithology. Throughout the Lackawanna Valley, the Llewellyn Formation has been extensively mined. The extensive mining in the area has resulted in poor groundwater quality due to the effects of acid mine drainage. As a result, groundwater from the Llewellyn Formation is not utilized as a source of potable water in the Lackawanna Valley. According to Hollowell (1975), regional groundwater is located at an approximate depth of 117 feet below grade at the study area and is restricted to the series of mine pools which have resulted from the extensive mining of anthracite coal. The mine pool which extends from the Borough of Archbald south to the Borough of Old Forge is known as the Scranton Pool. The study area is located above the Scranton Pool. The groundwater in the Scranton Pool is restricted to a series of stairstepped, interconnected basins separated by barrier pillars which restrict the flow of groundwater. The elevation of the groundwater surface in the portion of the Scranton Pool located beneath the study area is 835 feet above Mean Sea Level (M.S.L.). Refer to Appendix A for a Regional Water Table Map with Mining Features (Figure 6).

The absence of horizontally extensive stratigraphic units with the Llewellyn Formation generally results in the lack of appreciable saturated zones above the mine pools. Therefore, the existence of shallow, unconfined water tables throughout the Lackawanna Valley is on a location-by-location basis. These unconfined water tables exist primarily where there are sufficient unconsolidated formations, either glacial or alluvial, to accommodate a saturated zone. A shallow groundwater aquifer, located above the regional mine pool, was encountered at the subject property at an approximate depth of 5.0 feet below grade. This shallow aquifer was characterized as part of the activities conducted onsite by LaBella. The regional mine pool was not encountered and, therefore, not characterized as part of these activities.

#### 1.6.2 Review of Surficial Geology

A review of Braun (2006) was completed to investigate the surficial site geology. However, Braun has the subject property located in an area identified as Urban land. No geologic detail is provided. Lands located in the immediate vicinity of the subject property are identified as being associated with Urban land and large areas of former strip mine (for coal) land. Refer to Appendix A for a Surficial Geology Map (Figure 7).

#### 1.6.3 Site Soils Discussion

According to the *"Soil Survey of Lackawanna and Wyoming Counties, Pennsylvania"* (Eckenrode 1982), the soil type typical of the subject property is Urban land (Ur). Refer to Appendix A for a Soil Conservation Survey Map (Figure 8) depicting the subject property.

The Urban land association is a nearly level to moderately steep miscellaneous area which occurs on broad upland ridges. Slopes generally have been smoothed and range from 0 to 25 percent. Areas generally range from about 10 to more than 500 acres in size. The soil is so obscured by buildings, roads and other structures in areas of Urban land that identification of the natural soil is not practical. Most areas of this soil are on upland glacial till soils. Included in Urban land in mapping are small areas of Udorthents, strip mine and areas of Dumps, mine and Dumps and burned mine. Also included are small areas of Urban land, occasionally flooded. The soil properties of this map unit are highly variable because of the many kinds of soils in these areas and the amount of alteration during construction. Onsite investigation is necessary to determine soil properties and potentials of a particular area. No capability subclass or woodland ordination has been assigned to this map unit.

#### 1.6.4 Surface and Subsurface Drainage Discussion

The subject property is located within the Susquehanna River Basin. As such, the surface water runoff and the groundwater baseflow generated at the property eventually discharges into the Susquehanna River. Refer to Appendix A for a Local Watershed Map (Figure 9).

A review of the general area surrounding the subject property indicates the closest surface water to the subject property is Charles Creek, located 170 feet to the northeast. Charles Creek has been redirected into the storm sewer system that flows to the northeast under Main Street. The storm sewer system eventually discharges to the Lackawanna River 0.4 miles east-northeast of the subject property. The Lackawanna River flows in a southwesterly direction to its confluence with the Susquehanna River near the City of Pittston, Luzerne County, Pennsylvania. Please note: the presence of deep coal mining in the area has impacted the natural flow of groundwater in the vicinity of the subject property. As such, this stretch of the Lackawanna River is a losing stream and the groundwater present in the shallow aquifer below the site is believed to seep into the regional mine pool at elevation 835' MSL. This portion of the regional mine pool discharges into the Lackawanna River at the Gravity Slope Outfall, which is located ~0.9 miles to the southwest of the subject property. The Gravity Slope Outfall discharges up to 30 million gallons of water per day ([www.lrca.org](http://www.lrca.org)).

A review of the Special Protection Waters for Lackawanna County and Luzerne County, as listed in the Pennsylvania State Code Title 25 Chapter 93.9, indicates this stretch of the Lackawanna River is classified as a High Quality-Cold Water Fishery (HQ-CWF). This classification protects the listed waterways via the application of a variety of strict water quality standards.

#### 1.6.5 Wetlands Discussion

Wetlands are defined in Pennsylvania State Code, Title 25, Chapter 105, Dam Safety and Waterway Management rules and regulations as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs, and similar areas. Similarly, the PADEP defines a watercourse as “a channel or conveyance of surface water having defined bed and banks, whether natural or artificial, with perennial or intermittent flow.” (as found in PA Code, Title 25 Environmental Protection, Chapter 105 Dam Safety and Waterway Management).

A National Wetlands Inventory (NWI) Map was reviewed as part of this investigation. NWI Maps are prepared by the U.S. Department of the Interior, Fish and Wildlife Service, Office of Biological Services for the National Wetlands Inventory Program. Wetland areas are identified on the maps based upon the method specified in the Classification of Wetlands and Deep Water Habitats of the United States, Cowardin, et al, 1977. Due to the scale of NWI maps and inaccuracies inherent in the methods of their preparation, many small wetland areas are not mapped for any given NWI quadrangle. The wetland boundaries identified on the NWI maps are developed through aerial photographic interpretation. The NWI Map for this project (Olyphant, PA 7.5 Minute Series Quadrangle) identifies the absence of wetland areas on the subject property. LaBella confirmed the absence of wetlands at the subject property. Refer to Appendix A for a National Wetlands Inventory Map (Figure 10) depicting the subject property.

#### 1.7 Surrounding Land Use

An inspection of the areas surrounding the subject property was conducted in order to determine if any obvious signs of potential contamination were present. The subject property is located in a well-developed section of the Borough of Archbald, Lackawanna County, Pennsylvania. Refer to Appendix A for an Area Map (Figure 11). The surrounding land usage is as follows:

- **Northeast:** The subject property is bordered to the northeast by residential properties.
- **Southeast:** The subject property is bordered to the southeast by Main Street. Residential and commercial properties are located across Main Street.
- **Southwest:** The subject property is bordered to the southwest by Kennedy Drive. A United States Post Office and bank are located across Kennedy Drive.
- **Northwest:** The subject property is bordered to the northwest by commercial properties.

A review of the site history and an inspection of the areas located between the adjacent parcels and the subject property were conducted in order to determine if any obvious signs of potential contamination were present. No evidence of potential environmental impacts from surrounding properties was observed.

## 2. SITE CHARACTERIZATION ACTIVITIES

### 2.1 General

The field activities associated with the completion of the Site Characterization were conducted at the subject property between October 17, 2016 and September 7, 2018 under the supervision of Mr. Martin Gilgallon, P.G. of LaBella. The field activities conducted as part of the Site Characterization included the drilling of twenty (20) test borings; the collection and analysis of eighty (80) soil samples from excavations, test borings and monitoring wells; the installation of thirteen (13) shallow groundwater monitoring wells; the collection and analysis of seven (7) rounds of groundwater samples; the transportation and disposal of investigation derived wastes; the completion of aquifer testing; and the completion of vapor intrusion evaluations at the subject property and the adjacent residential property to the northeast.

### 2.2 Access Issues

Based on a review of soil data and groundwater data generated, it was evident that offsite access was required to complete the site characterization activities. The following access information is provided:

- Krenitsky Property – This property is located to the northeast of the subject property. This property is associated with Lackawanna County Parcel Identification Number 104.08-010-004. Two (2) groundwater monitoring wells (MW-6 and MW-11) have been installed at this property. A copy of the executed access agreement for the Krenitsky Property is included in Appendix F.
- Fetcho Property – This property is located to the southeast of the subject property, across Main Street. This property is associated with Lackawanna County Parcel Identification Numbers 104.08-020-014 and 104.08-020-015.01. Two (2) groundwater monitoring wells (MW-7 and MW-8) have been installed at this property. A copy of the executed access agreement for the Fetcho Property is included in Appendix F.
- Chekan Property – This property is located to the southeast of the subject property, across Main Street. This property is associated with Lackawanna County Parcel Identification Number 104.08-020-015. One (1) groundwater monitoring well (MW-9) has been installed at this property. A copy of the executed access agreement for the Chekan Property is included in Appendix F.
- NBT Bank Property – This property is located to the southwest of the subject property, across Kennedy Drive. This property is associated with Lackawanna County Parcel Identification Number 104.08-010-023. One (1) groundwater monitoring well (MW-10) has been installed at this property. A copy of the executed access agreement for the NBT Bank Property is included in Appendix F.
- Borough of Archbald – Two (2) groundwater monitoring wells (MW-12 and MW-13) were installed in streets owned by the Borough of Archbald. MW-12 was installed to the northeast in Charles Street and MW-13 was installed to the northeast in Delaware Street. A copy of the executed access agreement and permit for the Borough of Archbald is included in Appendix F.
- PennDOT SR 1012 Right-of-Way (Kennedy Drive and Main Street) – Three (3) test borings (TB-18 through TB-20) were installed in the PennDOT Right-of-Way (ROW) along Kennedy Drive and Main Street. A copy of the executed Highway Occupancy Permit for the PennDOT ROW along Kennedy Drive and Main Street is included in Appendix F.

### 2.3 Project Parameters

For the purpose of the site characterization activities summarized in this report, the parameters of concern are limited to the Unleaded Gasoline, Diesel Fuel / Fuel Oil #2 and Kerosene Parameters specified in the April 1, 1998 PADEP Technical Document: Closure Requirements for Underground Storage Tank Systems, as amended December 15, 2012. The list of the “Project Parameters” is as follows:

- Benzene
- Ethylbenzene
- Cumene (Isopropylbenzene)
- MTBE
- Naphthalene
- Toluene
- Total Xylenes
- 1,2,4-TMB
- 1,3,5-TMB

### 2.4 Site Soils Investigation

#### 2.4.1 Soil Sampling Activities – October 17, 2016

On October 17, 2016, LaBella completed soil sampling activities during tank top repair activities conducted by Francis Smith. Sampling activities included the collection / analysis of four (4) soil samples from the backfill surrounding the spill buckets for Tanks #001, #002, #003 and #004. In addition, two (2) soil samples were collected from the backfill surrounding the submersible turbine pump (STP) sumps for Tanks #001 and #003, which were also repaired at this time. Refer to Attachment A for a Sample Location Map (Figure 12) depicting the October 17, 2016 soil sample locations.

A total of six (6) soil samples were collected as part of the October 17, 2016 sampling activities. Soil samples were collected and containerized in accordance with EPA and PADEP protocols and submitted to ALS Environmental in Middletown, Pennsylvania. The six (6) soil samples were analyzed for the Project Parameters in Section 2.3. A Sample Log is provided in Table 2-1, as follows:

**Table 2-1**  
**Quinn’s Café Stop Property**  
**Sample Log**  
**October 17, 2016 Soil Sampling Activities**

Sample Number	Sample Description	Analysis
116-1017-T001 Fill	Tank #001 Spill Bucket – 1.3’ Below Grade	Project Parameters
116-1017-T001 STP	Tank #001 STP Sump – 1.3’ Below Grade	Project Parameters
116-1017-T002 Fill	Tank #002 Spill Bucket – 2.0’ Below Grade	Project Parameters
116-1017-T003 Fill	Tank #003 Spill Bucket – 1.5’ Below Grade	Project Parameters

**Table 2-1 (cont.)**  
**Quinn's Café Stop Property**  
**Sample Log**  
**October 17, 2016 Soil Sampling Activities**

Sample Number	Sample Description	Analysis
116-1017-T003 STP	Tank #003 STP Sump – 2.5' Below Grade	Project Parameters
116-1017-T004 Fill	Tank #004 Spill Bucket – 1.5' Below Grade	Project Parameters

#### 2.4.2 Test Boring Program – January 2017

Between January 30, 2017 and January 31, 2017, LaBella completed the installation of thirteen (13) test borings at the subject property. These test borings were installed to delineate the soil contamination confirmed during the October 17, 2016 sampling activities. A total of twenty-two (22) soil samples were collected from the thirteen (13) test borings. Refer to Appendix A for a Test Boring Location Map (Figure 13) depicting the test boring locations. Refer to Appendix G for the associated test boring logs.

A total of twenty-two (22) soil samples were collected as part of the October 17, 2016 sampling activities. Soil samples were collected and containerized in accordance with EPA and PADEP protocols and submitted to ALS Environmental in Middletown, Pennsylvania. The twenty-two (22) soil samples were analyzed for the Project Parameters in Section 2.3. A sample log is provided in Table 2-2, as follows:

**Table 2-2**  
**Quinn's Café Stop Property**  
**Sample Log**  
**January 2017 Soil Sampling Activities**

Sample Number	Sample Description	Analysis
116-0130-TB1	TB-1: 1.5' – 2.5'	Project Parameters
116-0130-TB2A	TB-2: 1.5' – 2.5'	Project Parameters
116-0130-TB2B	TB-2: 4.0' – 5.0'	Project Parameters
116-0130-TB3A	TB-3: 1.5' – 2.5'	Project Parameters
116-0130-TB3B	TB-3: 4.0' – 5.0'	Project Parameters
116-0130-TB4A	TB-4: 1.5' – 2.5'	Project Parameters
116-0130-TB4B	TB-4: 5.0' – 6.0'	Project Parameters
116-0130-TB5A	TB-5: 1.5' – 2.5'	Project Parameters
116-0130-TB5B	TB-5: 4.0' – 5.0'	Project Parameters
116-0130-TB6A	TB-6: 1.5' – 2.5'	Project Parameters
116-0130-TB6B	TB-6: 4.0' – 5.0'	Project Parameters
116-0130-TB7A	TB-7: 1.5' – 2.5'	Project Parameters
116-0130-TB7B	TB-7: 3.5' – 4.5'	Project Parameters
116-0130-MW1	MW-1: 1.5' – 2.5'	Project Parameters
116-0130-MW2A	MW-2: 1.5' – 2.5'	Project Parameters
116-0130-MW2B	MW-2: 4.0' – 5.0'	Project Parameters
116-0130-MW3A	MW-3: 1.5' – 2.5'	Project Parameters

**Table 2-2 (cont.)**  
**Quinn's Café Stop Property**  
**Sample Log**  
**January 2017 Soil Sampling Activities**

Sample Number	Sample Description	Analysis
116-0130-MW3B	MW-3: 4.0' - 5.0'	Project Parameters
116-0130-MW4A	MW-4: 1.5' - 2.5'	Project Parameters
116-0130-MW4B	MW-4: 4.0' - 5.0'	Project Parameters
116-0130-MW5A	MW-5: 1.5' - 2.5'	Project Parameters
116-0130-MW5B	MW-5: 3.5' - 4.5'	Project Parameters

#### 2.4.3 Additional Soil Sampling Activities – June 2017

Between June 5, 2017 and June 7, 2017, LaBella completed the installation of five (5) monitoring wells (MW-6 through MW-10) at properties surrounding the subject property. Soil samples were collected during the monitoring well installation activities to further delineate the soil contamination identified at the subject property. A total of ten (10) soil samples were collected from the five (5) monitoring well locations. Refer to Appendix A for a Test Boring Location Map (Figure 13) depicting the sampling locations. Refer to Appendix G for copies of the associated test boring logs.

A total of ten (10) soil samples were collected as part of the June 2017 sampling activities. Soil samples were collected and containerized in accordance with EPA and PADEP protocols and submitted to ALS Environmental in Middletown, Pennsylvania. The ten (10) soil samples were analyzed for the Unleaded Gasoline Parameters specified in the April 1, 1998 PADEP Technical Document: Closure Requirements for Underground Storage Tank Systems, as amended December 15, 2012. A Sample Log is provided in Table 2-3, as follows:

**Table 2-3**  
**Quinn's Café Stop Property**  
**Sample Log**  
**June 2017 Soil Sampling Activities**

Sample Number	Sample Description	Analysis
116-0605-MW6A	MW-6: 1.5' - 2.5'	Project Parameters
116-0605-MW6B	MW-6: 4.0' - 5.0'	Project Parameters
116-0605-MW7A	MW-7: 1.5' - 2.5'	Project Parameters
116-0605-MW7B	MW-7: 5.5' - 6.5'	Project Parameters
116-0605-MW8A	MW-8: 1.5' - 2.5'	Project Parameters
116-0605-MW8B	MW-8: 5.5' - 6.5'	Project Parameters
116-0605-MW9A	MW-9: 1.5' - 2.5'	Project Parameters
116-0605-MW9B	MW-9: 3.0' - 4.0'	Project Parameters
116-0605-MW10A	MW-10: 1.5' - 2.5'	Project Parameters
116-0605-MW10B	MW-10: 7.5' - 8.5'	Project Parameters

#### 2.4.4 Storm Sewer Investigation – August 2017

Between August 25, 2017 and August 28, 2017, LaBella oversaw the excavation and removal of 60 feet of storm sewer pipe located on land owned by the Pennsylvania Department of Transportation (PennDOT). Refer to Appendix A for a Storm Sewer Configuration Map (Figure 14) depicting the portion of the storm sewer that was removed. The storm sewer system was removed as part of a PennDOT road expansion project. Mr. Don Rood



of the PADEP was onsite during the storm sewer removal activities conducted on August 25, 2017. The following summary is provided:

- Potential contamination was observed beneath the storm sewer pipe within the gravel bedding. Soil and groundwater appeared to be impacted. Charles Corby & Sons Excavating (Corby), the general contractor for the PennDOT road expansion project, completed the removal of the pipe and impacted gravel pipe bedding to the top of bedrock. Groundwater was encountered between 5.5 feet below grade and 6.5 feet below grade. Bedrock was encountered between 5.5 feet and 7.0 feet below grade.
- Corby had a contract with JMT Environmental for the proper handling and disposal of all potentially contaminated material encountered during the road expansion project. JMT was not present during the August 2017 storm sewer investigation. Presumably contaminated soil was stockpiled by Corby at a nearby staging yard along Kennedy Drive for disposal considerations.
- It was the intention of LaBella to be present during future excavation activities along the storm sewer system in the vicinity of the subject property. LaBella informed Corby of this intention and asked to be notified when additional work was to be completed. To date, Corby has not notified LaBella of any additional activities. All additional work along the sewer line has been completed without notifying LaBella.

LaBella collected a series of soil and groundwater samples from the storm sewer excavation. A total of four (4) soil samples and one (1) groundwater sample were collected. One (1) water sample was also collected from the effluent of an abandoned drain pipe that was encountered. Refer to Appendix A for a Sample Location Map (Figure 15). The four (4) soil samples, one (1) groundwater sample and one (1) pipe water sample were analyzed for the Project Parameters in Section 2.3. A Sample Log is provided in Table 2-4, as follows:

**Table 2-4**  
**Quinn's Café Stop Property**  
**Sample Log**  
**August 2017 Storm Sewer Investigation**

<b>Sample Number</b>	<b>Sample Description</b>	<b>Analysis</b>
116-0825-Storm 1	Limit of Excavation – 7.0 ftbg.	Project Parameters
116-0828-Storm 2	Beneath Adjoining Storm Pipe – 5.0 ftbg.	Project Parameters
116-0828-Sidewall	Sidewall Sample – 6.5 ftbg.	Project Parameters
116-0828-Under Storm	Impacted Gravel Bed – 6.0 ftbg.	Project Parameters
116-0825-GW1	Groundwater Sample – Impacted Excavation	Project Parameters
116-0828-Pipe Water	Water Sample – Abandoned Drain Pipe	Project Parameters

#### 2.4.5 Test Boring Installation Activities – November 2017

Between November 9, 2017 and November 15, 2017, LaBella completed the installation of five (5) test borings and three (3) groundwater monitoring wells at the subject property and in the surrounding streets. These activities were conducted to further delineate the contamination identified at the subject property. A total of seventeen (17) soil samples were collected from the test borings and during the installation of MW-12 and MW-13. Refer to Appendix A for a Test Boring Location Map (Figure 13) depicting the sampling locations.

A total of seventeen (17) soil samples were collected as part of the November 2017 sampling activities. Soil samples were collected and containerized in accordance with EPA and PADEP protocols and submitted to ALS

Environmental in Middletown, Pennsylvania. The seventeen (17) soil samples were analyzed for the Project Parameters in Section 2.3. A Sample Log is provided in Table 2-5, as follows:

**Table 2-5**  
**Quinn's Café Stop Property**  
**Sample Log**  
**November 2017 Soil Sampling Activities**

Sample Number	Sample Description	Analysis
116-1109-TB8A	TB-8: 3.0' – 3.3'	Project Parameters
116-1109-TB8B	TB-8: 5.5' – 6.0'	Project Parameters
116-1109-TB9A	TB-9: 2.0' – 2.5'	Project Parameters
116-1109-TB9B	TB-9: 3.0' – 3.3'	Project Parameters
116-1109-TB10A	TB-10: 2.0' – 2.5'	Project Parameters
116-1109-TB10B	TB-10: 4.0' – 4.5'	Project Parameters
116-1109-TB10C	TB-10: 6.0' – 6.5'	Project Parameters
116-1109-TB11A	TB-11: 2.0' – 2.5'	Project Parameters
116-1109-TB11B	TB-11: 4.0' – 5.0'	Project Parameters
116-1109-TB11C	TB-11: 6.0' – 6.5'	Project Parameters
116-1109-TB12A	TB-12: 2.0' – 2.5'	Project Parameters
116-1109-TB12B	TB-12: 4.0' – 5.0'	Project Parameters
116-1109-TB12C	TB-12: 6.0' – 6.5'	Project Parameters
116-1109-PW12A	MW-12: 2.2' – 2.7'	Project Parameters
116-1109-PW12B	MW-12: 4.5' – 5.5'	Project Parameters
116-1109-PW13A	MW-13: 2.0' – 2.5'	Project Parameters
116-1109-PW13B	MW-13: 5.0' – 5.5'	Project Parameters

#### 2.4.6 Test Boring Program – August 2018

On August 23, 2018, LaBella completed the installation of eight (8) test borings at the subject property and in the PennDOT ROW along Kennedy Drive and Main Street. These activities were conducted to further delineate the contamination identified at the subject property. A total of sixteen (16) soil samples were collected from the test borings. Refer to Appendix A for a Test Boring Location Map (Figure 13) depicting the sampling locations.

A total of sixteen (16) soil samples were collected as part of the August 2018 sampling activities. Soil samples were collected and containerized in accordance with EPA and PADEP protocols and submitted to ALS Environmental in Middletown, Pennsylvania. The sixteen (16) soil samples were analyzed for the Project Parameters in Section 2.3. A Sample Log is provided in Table 2-6, as follows:

**Table 2-6**  
**Quinn's Café Stop Property**  
**Sample Log**  
**August 2018 Soil Sampling Activities**

Sample Number	Sample Description	Analysis
116-0823-TB13A	TB-13: 1.5' – 2.5'	Project Parameters
116-0823-TB13B	TB-13: 5.0' – 6.0'	Project Parameters
116-0823-TB14A	TB-14: 1.5' – 2.5'	Project Parameters
116-0823-TB14B	TB-14: 5.0' – 6.0'	Project Parameters

**Table 2-6 (cont.)**  
**Quinn's Café Stop Property**  
**Sample Log**  
**August 2018 Soil Sampling Activities**

Sample Number	Sample Description	Analysis
116-0823-TB15A	TB-15: 1.5' – 2.5'	Project Parameters
116-0823-TB15B	TB-15: 5.0' – 6.0'	Project Parameters
116-0823-TB16A	TB-16: 1.5' – 2.5'	Project Parameters
116-0823-TB16B	TB-16: 5.0' – 6.0'	Project Parameters
116-0823-TB17A	TB-17: 1.5' – 2.5'	Project Parameters
116-0823-TB17B	TB-17: 5.0' – 6.0'	Project Parameters
116-0823-TB18A	TB-18: 1.5' – 2.5'	Project Parameters
116-0823-TB18B	TB-18: 5.0' – 6.0'	Project Parameters
116-0823-TB19A	TB-19: 1.5' – 2.5'	Project Parameters
116-0823-TB19B	TB-19: 5.0' – 6.0'	Project Parameters
116-0823-TB20A	TB-20: 1.5' – 2.5'	Project Parameters
116-0823-TB20B	TB-20: 5.0' – 6.0'	Project Parameters

## 2.5 Site Groundwater Investigation

### 2.5.1 General

The Site Groundwater Investigation was conducted between January 30, 2017 and July 10, 2018. This investigation included the installation of thirteen (13) groundwater monitoring wells; the completion of seven (7) full or partial rounds of groundwater sampling; the interpretation of groundwater elevation and flow data; the transportation and disposal of investigation derived wastes; and the completion of aquifer testing.

### 2.5.2 Groundwater Monitoring Well Installation

Between January 30, 2017 and November 15, 2017, LaBella completed the field activities associated with the installation of thirteen (13) groundwater monitoring wells (MW-1 thru MW-13) at the subject property and surrounding properties / roadways. Drilling services were provided by Odyssey Environmental Services of Dauphin, Pennsylvania. Refer to Appendix A for a Monitoring Well Location Map (Figure 16) depicting the locations of the groundwater monitoring wells.

Each groundwater monitoring well was completed utilizing a combination of hollow stem auger and air rotary drilling techniques. Each groundwater monitoring well was constructed by lowering two-inch diameter PVC screen (0.010 slot) and PVC riser into the borehole. A sand pack consisting of No. 1 Morie sand was placed within the screened interval. A bentonite seal, consisting of hydrated bentonite pellets, was placed above the sand pack. Each well was completed with a flush grade manway with locking inner cap. Refer to Appendix H for copies of the Monitoring Well Logs associated with the well installations and to Appendix I for the Well Construction Details. A summary of the well construction information is included in Table 2-7, as follows:

**Table 2-7**  
**Quinn's Café Stop Property**  
**Well Construction Information**

Well #	Depth	Screen Size	Screen Interval	Sand Size	Sand Interval
MW-1	14.73'	0.010 slot	14.73' – 2.73'	No. 1 Morie	14.73' – 2.00'
MW-2	14.84'	0.010 Slot	14.84' – 2.84'	No. 1 Morie	14.84' – 2.00'
MW-3	15.48'	0.010 Slot	15.48' – 3.48'	No. 1 Morie	15.48' – 2.00'
MW-4	15.26'	0.010 Slot	15.26' – 3.26'	No. 1 Morie	15.26' – 2.00'
MW-5	15.50'	0.010 Slot	15.50' – 3.50'	No. 1 Morie	15.50' – 2.00'
MW-6	15.25'	0.010 Slot	15.25' – 3.25'	No. 1 Morie	15.25' – 2.00'
MW-7	17.10'	0.010 Slot	17.10' – 3.10'	No. 1 Morie	17.10' – 2.00'
MW-8	17.56'	0.010 Slot	17.56' – 3.56'	No. 1 Morie	17.56' – 2.00'
MW-9	17.17'	0.010 Slot	17.17' – 3.17'	No. 1 Morie	17.17' – 2.00'
MW-10	23.89'	0.010 Slot	23.89' – 3.89'	No. 1 Morie	23.89' – 2.00'
MW-11	17.00'	0.010 Slot	17.00' – 3.00'	No. 1 Morie	17.00' – 2.00'
MW-12	17.00'	0.010 Slot	17.00' – 3.00'	No. 1 Morie	17.00' – 2.00'
MW-13	17.00'	0.010 Slot	17.00' – 3.00'	No. 1 Morie	17.00' – 2.00'

#### 2.5.3 Groundwater Monitoring Well Development

The scope of work associated with the completion of the groundwater monitoring well development activities, conducted by LaBella, included the development of the thirteen (13) groundwater monitoring wells utilizing hand-bailing and surge block methods. Development activities included the monitoring of the pH, temperature and specific conductance of the groundwater effluent extracted from the wells. Well development was deemed complete when the pH, temperature and specific conductance had stabilized for a minimum of three (3) consecutive readings. The development did continue even after chemical stabilization if observations indicated the presence of sediment in the groundwater effluent. In accordance with the provisions of the PADEP's *Groundwater Monitoring Guidance Manual* (December 1, 2001 edition), the groundwater effluent generated during the well development activities was containerized onsite pending transportation and disposal considerations. Refer to Appendix J for copies of the field notes associated with the groundwater well development activities.

#### 2.5.4 Groundwater Monitoring Well Sampling

LaBella completed seven (7) full or partial rounds of groundwater monitoring well sampling activities at the subject property. The scope of work associated with the completion of the groundwater sampling activities included the purging of the groundwater monitoring wells utilizing a combination of low flow / low stress (*ASTM D 6771-02*) and hand bailing methods. Purging activities included the monitoring of the pH, temperature, specific conductance, dissolved oxygen and ORP of the groundwater effluent extracted from the wells. Well purging was deemed complete when the pH, temperature and specific conductance had stabilized for a minimum of three (3) consecutive readings. In an attempt to characterize the contamination plume, intrinsic parameters including manganese, ferrous iron, nitrate and sulfate were collected in the field. Data was collected after purging activities were completed. Copies of the well purging data generated by LaBella are included in Appendix J of this report.

The groundwater samples were collected and containerized in accordance with standard USEPA and PADEP protocols. The groundwater samples and QA/QC field blanks collected during the sampling activities were delivered to a PADEP-certified laboratory for analysis. The samples were analyzed for the Project Parameters

specified above. In accordance with the provisions of the PADEP's *Groundwater Monitoring Guidance Manual* (December 1, 2001 edition), the groundwater effluent generated was either containerized and transported offsite for proper disposal or treated with activated carbon and discharged onsite. A summary of the groundwater sampling events is included in Table 2-8, as follows:

**Table 2-8**  
**Quinn's Café Stop Property**  
**Site Characterization Activities**  
**Summary of Groundwater Sampling Events**

Sample Date	Sample Locations	Parameters
02/15/2017	MW-1 thru MW-5	Project Parameters
06/27/2017	MW-1 through MW-10	Project Parameters
09/11/2017	MW-1 through MW-10	Project Parameters
11/30/2017	MW-1 through MW-13	Project Parameters
01/22/2018	MW-1 through MW-13	Project Parameters
04/09/2018	MW-1 through MW-13	Project Parameters
07/09/2018	MW-1 through MW-13	Project Parameters

#### 2.5.5 Disposition of Drilling and Sampling Wastes

Two (2) distinct waste streams were generated via the completion of the site characterization activities summarized above. These waste streams included drill cuttings and well development / purge water. Drill cuttings generated by LaBella were staged in 55-gallon open top steel drums for off-site disposal. Well development and purge water generated by LaBella was either staged in 55-gallon closed top steel drums or was treated with activated carbon and discharged onsite. The drummed drill cuttings and development / purge water were transported offsite for disposal at Waste Recovery Solutions, Incorporated in Myerstown, Pennsylvania. Refer to Appendix K for copies of the drummed waste disposal documentation. Two (2) distinct waste transportation and disposal (T&D) events were completed, as summarized in Table 2-9, as follows.

**Table 2-9**  
**Quinn's Café Stop Property**  
**Site Characterization Activities**  
**Summary of T&D Events**

Transportation Date	# Drill Cuttings Drums	# Aqueous Drums
June 27, 2017	(11) drums	(3) drums
March 22, 2017	(4) drums	(1) drum

#### 2.5.6 Determination of Groundwater Flow

As part of the site characterization activities summarized above, LaBella constructed groundwater contour maps to determine the direction of groundwater flow beneath the study area. LaBella utilized the depth to groundwater data collected during the quarterly groundwater sampling activities to create the contour maps (i.e. seven (7) gauging events). LaBella determined the well casing elevations via the completion of a site survey and level run. These elevations were referenced to an arbitrary datum established on the site. The inferred direction of groundwater flow was determined via the use of EnviroInsite 5.0 software (copyright HydroAnalysis, Incorporated, 2007). A table summarizing the historical depth to groundwater data and the associated groundwater elevation information is provided in Appendix L. Copies of the groundwater contour maps are included in Appendix M. Site-specific observations are as follows.

- A review of local topography and local drainage patterns indicates surface water at the subject property flows to the northeast toward the Lackawanna River over land and via a buried storm water sewer system.
- The most recent groundwater contour map (i.e. July 9, 2018), which included all thirteen (13) monitoring wells, indicates the shallow groundwater beneath the subject property flows in a southeasterly direction. Shallow groundwater assumes a northeasterly flow direction in the northeastern portions of the study area.
- The hydraulic gradient across the study area was determined for each set of data. The hydraulic gradient values ranged from 0.016 feet / foot to 0.033 feet / foot. The average hydraulic gradient was calculated to be 0.021 feet / foot to the southeast.
- A hydraulic gradient of 0.017 feet / foot in a southeasterly direction was calculated for the most recent groundwater sampling event (July 9, 2018).
  - o The hydraulic gradient (i) was calculated using the groundwater elevations (h) associated with MW-2 ( $h_1$ ) and MW-4 ( $h_2$ ).
  - o The distance (d) between these wells is 61.0 feet.
  - o  $(i) = (h_1 - h_2) / d$ .
  - o  $(i) = (946.41 - 945.39) / 61.0 = 0.017 \text{ ft/ft}$  (based on 07/09/18 data).
- Due to the absence of deep monitoring wells onsite, an evaluation of the vertical component of flow could not be determined.

#### 2.5.7 Determination of Aquifer Parameters

The proposed scope of work summary associated with the Site Groundwater Investigation included the completion of slug tests at the subject property. These activities were conducted on September 7, 2018. In each case, an In-Situ Level Troll 700 data logger was placed in the well and set to record water level data at short-term intervals. Each test was started with the introduction of a solid PVC slug. The water level was then monitored through the data logger with a hand-held data recorder until the water level returned to static or near static (i.e. 95% recovery) levels. A slug-out test was then completed on each well by rapidly removing the slug from the saturated zone. The slug-out data was collected until static or near static levels (i.e. 95% of static) were achieved.

The slug test data generated at the subject property was processed utilizing “Aquifer Test” software designed by Waterloo Hydrogeologic (copyright 1996-1999). The Hvorslev Slug Test method was the chosen method to evaluate the data. The Hvorslev (1951) Slug Test is designed to estimate the hydraulic conductivity of an aquifer. The Hvorslev Slug Test is based on the following equation:

$$K = [r^2 \ln(L/R)] / 2LT_0, \text{ where:}$$

K = Hydraulic Conductivity

r = radius of well casing

R = Effective Radius

L = Length of Well Screen plus Filter Packing

$T_0$  = Time to Reach 37% of  $H_0$



With the slug test, the portion of the aquifer “sampled” for hydraulic conductivity is small compared to a pumping test and is limited to a cylindrical area of small radius immediately surrounding the well boring. The Hvorslev Method can be applied to confined and unconfined conditions (Weight and Sonderegger, 2001). The results of the slug test analyses are included in Table 2-10. Refer to Appendix N for copies of the data associated with the slug test calculations. The following assumptions were made during the data entry portion of the analyses:

1. Slug tests were completed on eight (8) monitoring wells located onsite and at adjoining properties (MW-1 through MW-8). These wells were chosen to provide data from throughout the study area. One (1) test was completed on each well.
2. MW-1 through MW-8 were completed as two-inch diameter PVC wells. The radius of the well casing (r) for these wells is equal to 1” or 0.083 feet. The radius of the well boring (R) is equal to 3” or 0.25 feet. The length of the screened interval (L) equals the actual length of the screened interval. The values for L may vary from well to well depending on construction.
3. The glacial deposits associated with the subject property contain alternating intervals of material of different hydraulic properties. Calculations of aquifer parameters from aquifer tests can, at best, be considered only estimates of the hydraulic properties of the aquifer near the test well (Davis 1989).
4. The Saturated Aquifer Thickness for each well was the total depth of the drilled borehole minus the static water level prior to the introduction of the “slug”.
5. The water level at t=0 was determined based on the lowest water level recorded in the well subsequent to the removal of the “slug”.
6. The slug-in data generated during these activities were not utilized for calculating any of the hydraulic conductivity values.
7. Due to the small intervals of groundwater fluctuation being observed, the collection of hand-generated data was not feasible during the completion of the slug tests.

LaBella completed one (1) slug-out test on the monitoring wells presented above. The resulting data was utilized to calculate the hydraulic conductivity of the shallow groundwater aquifer. These results are presented in Table 2-10, as follows:

**Table 2-10**  
**Quinn’s Café Stop Property**  
**Site Characterization Activities**  
**Hydraulic Conductivity (K) Data – Shallow Aquifer**

Well #	K (ft/min)	K (cm/sec)
MW-1	$4.19 \times 10^{-3}$	$1.13 \times 10^{-3}$
MW-2	$4.20 \times 10^{-3}$	$2.14 \times 10^{-3}$
MW-3	$3.83 \times 10^{-3}$	$1.94 \times 10^{-3}$
MW-4	$2.87 \times 10^{-3}$	$1.46 \times 10^{-3}$
MW-5	$5.56 \times 10^{-3}$	$2.83 \times 10^{-3}$
MW-6	$2.97 \times 10^{-3}$	$1.51 \times 10^{-3}$

**Table 2-10 (cont.)**  
**Quinn's Café Stop Property**  
**Site Characterization Activities**  
**Hydraulic Conductivity (K) Data – Shallow Aquifer**

Well #	K (ft/min)	K (cm/sec)
MW-7	$1.38 \times 10^{-6}$	$7.01 \times 10^{-7}$
MW-8	$1.44 \times 10^{-3}$	$7.30 \times 10^{-4}$

A review of the hydraulic conductivity data indicates the K values calculated vary across the site by three (3) orders of magnitude (when compared in ft/min) and are consistent with typical values for glacial deposits as presented by Driscoll (1986).



### 3. ANALYTICAL RESULTS

#### 3.1 General

The analytical results compiled as part of the site characterization activities were reviewed by LaBella. The compound concentrations detected were compared to the standards included in Pennsylvania's "*Land Recycling and Environmental Remediation Standards Act*" (Act 2) of July, 1995, as amended. Refer to Appendix O for a table summarizing the soil analytical data and copies of the soil analytical data sheets. Refer to Appendix P for a table summarizing the groundwater analytical data and copies of the groundwater analytical data sheets. Groundwater isopleth maps are included in Appendix Q.

#### 3.2 Determination of Cleanup Standards

For the purpose of comparing the analytical results obtained as part of the soil and groundwater sampling program to a cleanup standard, LaBella reviewed the three options provided in the PADEP's Act 2 program, as described in 25 Pa. Code Chapter 250 and PADEP's Act 2 Technical Guidance Manual. These options include Background, Statewide Health and Site Specific cleanup standards. Based on the nature of the project and data available, the Statewide Health Standards were utilized as the cleanup criteria to be applied to this site. These standards are referred to as the medium specific concentrations (MSCs) that must be achieved to demonstrate attainment of the Statewide Health Standard (SHS) for each contaminant compound of concern.

In order to determine the specific MSC for each compound of concern, LaBella followed the outline for determining soil and groundwater MSCs included in Chapter II of the TGM. Specifically, LaBella followed Figure II-5, "Flowchart for Selecting Statewide Health Standard MSCs for Groundwater and Soil". The Non-Residential Used Aquifer (TDS < 2,500) scenario was utilized due to the current and anticipated future use of the subject property for non-residential purposes. The Used Aquifer scenario was utilized since a non-use aquifer designation was not requested as part of the project.

#### 3.3 Comparison of Soil Data to Statewide Health Standard MSCs

A total of eighty (80) soil samples were collected from test borings, monitoring wells and excavations at the subject property and surrounding properties. Refer to Appendix A for a Cross-Section Identification Map (Figure 17). Cross-sections are provided in Appendix A as Figure 17A, Figure 17B, and Figure 17C. To complete the characterization of the site soils, samples were collected as follows:

- **Vadose Zone Samples:** A total of thirty-nine (39) soil samples were collected from the Vadose Zone, which includes the permanently unsaturated zone and the capillary fringe. The MSCs associated with unsaturated conditions are the applicable standards to be used for comparison.
- **Zone of Groundwater Saturation – Smear Zone:** A total of forty (40) soil samples were collected from the Smear Zone. The PADEP defines the Zone of Groundwater Saturation as the soil that is below the seasonal high water level. LaBella further bisected the Zone of Groundwater Saturation into the Smear Zone and the Permanently Saturated Zone. The Smear Zone is not saturated at all times and is subject to seasonal fluctuations in the groundwater table. The determination of the vertical limits of the Smear Zone was made via the review of historic groundwater elevation data. The MSCs associated with saturated conditions are the applicable standards to be used for comparison.
- **Permanently Saturated Zone:** One (1) soil sample was collected from the Permanently Saturated Soil, defined as the soil that is saturated on a continuous basis. The determination of the

vertical limits of this zone was made via the review of historical groundwater elevation data. Contamination present in the Permanently Saturated Zone is considered a groundwater issue and not a soil issue. Therefore, no soil MSCs apply.

### 3.3.1 Discussion on the Vadose Zone Results

A total of thirty-nine (39) soil samples were collected from the Vadose Zone as part of this investigation. Petroleum-related contamination was detected in five (5) soil samples at concentrations exceeding the applicable Statewide Health Standard MSCs. Refer to Appendix A for a Soil Contamination Distribution Map (Figure 18) depicting the distribution of soil contamination (i.e. >MSCs) in the Vadose Zone. A summary of the exceedances is included in Table 3-1, as follows.

**Table 3-1**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data (mg/kg)**  
**Summary of Soil Exceedances – Vadose Zone**

Sample #	Depth	Parameter	Concentration	Act 2 MSC
T001 - Fill	2.0'	Benzene	1.69 mg/kg	0.5 mg/kg
T002 - Fill	2.0'	Benzene	0.699 mg/kg	0.5 mg/kg
		1,2,4-TMB	109.0 mg/kg	35.0 mg/kg
T003 - Fill	1.5'	1,2,4-TMB	62.8 mg/kg	35.0 mg/kg
TB-11A	2.0' – 2.5'	Benzene	1.19 mg/kg	0.5 mg/kg

### 3.3.2 Discussion on the Smear Zone Results

A total of forty (40) soil samples were collected from the Smear Zone as part of this investigation. Petroleum-related contamination was detected in eight (8) of the soil samples at concentrations exceeding the applicable Statewide Health Standard MSCs. Refer to Appendix A for a Soil Contamination Distribution Map (Figure 19) depicting the locations of these exceedances in the Smear Zone. A summary of the exceedances is included in Table 3-2, as follows.

**Table 3-2**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data (mg/kg)**  
**Summary of Soil Exceedances – Smear Zone**

Sample #	Depth	Parameter	Concentration	Act 2 MSC
TB-4B	5.0' – 6.0'	Naphthalene	14.4 mg/kg	10.0 mg/kg
		1,2,4-TMB	83.9 mg/kg	6.2 mg/kg
TB-5B	4.0' – 5.0'	Naphthalene	30.3 mg/kg	10.0 mg/kg
		1,2,4-TMB	277.0 mg/kg	6.2 mg/kg
MW-2B	4.0' – 5.0'	Naphthalene	20.8 mg/kg	10.0 mg/kg
		1,2,4-TMB	69.1 mg/kg	6.2 mg/kg

**Table 3-2**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data (mg/kg)**  
**Summary of Soil Exceedances – Smear Zone**

Sample #	Depth	Parameter	Concentration	Act 2 MSC
MW-3B	4.0' – 5.0'	Benzene	0.551 mg/kg	0.5 mg/kg
		1,2,4-TMB	10.9 mg/kg	6.2 mg/kg
Under Storm	6.0'	1,2,4-TMB	8.48 mg/kg	6.2 mg/kg
TB-10C	6.0' – 6.5'	Benzene	<0.553 mg/kg	0.5 mg/kg
		Naphthalene	27.9 mg/kg	10.0 mg/kg
		1,2,4-TMB	30.8 mg/kg	6.2 mg/kg
TB-11B	4.0' – 5.0'	Benzene	0.697 mg/kg	0.5 mg/kg
		Naphthalene	12.4 mg/kg	10.0 mg/kg
TB-11C	6.0' – 6.5'	Benzene	1.26 mg/kg	0.5 mg/kg
		1,2,4-TMB	9.54 mg/kg	6.2 mg/kg
TB-19B	5.0' – 6.0'	Naphthalene	14.0 mg/kg	10.0 mg/kg
		1,2,4-TMB	307.0 mg/kg	6.2 mg/kg

### 3.3.3 Discussion on the Permanently Saturated Zone Results

One (1) soil sample was collected from the Permanently Saturated Zone as part of this investigation. Contamination present in the Permanently Saturated Zone is considered a groundwater issue and not a soil issue. Therefore, no soil MSCs apply.

## 3.4 Comparison of Groundwater Data to Statewide Health Standard MSCs

### 3.4.1 Storm Sewer Investigation – August 2017

The results of the Storm Sewer Investigation indicate petroleum-related contamination was detected in the one (1) groundwater sample collected from impacted excavation and in the one (1) water sample collected from an abandoned drain pipe. The groundwater sample collected from the impacted excavation expressed compound concentrations in excess of the respective Non-Residential, Used Aquifer (TDS <2,500 mg/l) Statewide Health Standard MSCs for benzene. Refer to Appendix P for copies of the associated laboratory analytical data sheets. A summary of the groundwater and abandoned pipe water analytical data is provided in Table 3-3, as follows:

**Table 3-3**  
**Quinn's Café Stop Property**  
**Summary of Analytical Data – Groundwater & Pipe Water (ug/l)**  
**August 2017 Storm Sewer Investigation**

Location	Parameter	Concentration	Act 2 MSC
GW-1	Benzene	75.8	5.0
	Ethylbenzene	65.0	700.0
	Cumene	10.8	3,500.0
	MTBE	5.4	20.0
	Naphthalene	21.0	100.0
	Toluene	<5.0	1,000.0
	Xylenes	40.6	10,000.0
	1,2,4-TMB	35.1	62.0
	1,3,5-TMB	<5.0	1,200.0
Pipe Water*	Benzene	<5.0	5.0
	Ethylbenzene	<5.0	700.0
	Cumene	<5.0	3,500.0
	MTBE	9.5	20.0
	Naphthalene	<10.0	100.0
	Toluene	<5.0	1,000.0
	Xylenes	<15.0	10,000.0
	1,2,4-TMB	<5.0	62.0
	1,3,5-TMB	<5.0	1,200.0

\*Aqueous sample collected from water inside pipe. The pipe was capped and the excavation was backfilled by contractor.

#### 3.4.2 Site Characterization Activities

Seven (7) full or partial rounds of groundwater samples have been collected from the subject property as part of the site characterization activities. Summary tables including the historical groundwater data and exceedances are presented in Appendix P of this report. Groundwater isopleth maps, depicting the distribution of the contamination, are included in Appendix Q. A review of the data collected indicates groundwater exceedances exist at the subject property. These exceedances are highlighted in Table P-1 located in Appendix P.

#### 3.5 Separate Phase Liquids

No SPL has been observed in any of the groundwater monitoring wells or excavations installed at the subject property. As such, no SPL is associated with the subject property.

## 4. VAPOR INTRUSION EVALUATION

### 4.1 General

The presence of soil and/or groundwater contamination at the subject property may result in the degradation of indoor air quality in nearby buildings. In accordance with the PADEP's *"Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings from Groundwater and Soil under the Act 2"* (Document Number 253-0300-101) dated January 18, 2017, an evaluation of this potential impact must be completed. This comparison is a stepped process, in that the guidance allows for the comparison of existing soil and groundwater data (as applicable) to screening values to determine if additional investigation (e.g. soil-gas sampling or modeling) is required.

### 4.2 Site Conceptual Model for Vapor Intrusion

In accordance with the guidance, a Site Conceptual Model (SCM) for Vapor Intrusion has been developed for the subject property. The SCM is as follows:

- **Property Description:** The subject property is utilized as a convenience store with the retail sale of unleaded gasoline and diesel fuel. At the time of this investigation, the subject property was active.
- **Site Development:** The subject property is developed with one (1) convenience store building (~1,800 square feet) situated on 0.2 acres of land. No basement is associated with this structure.
- **Contaminants of Concern:** The contaminants of concern are the unleaded gasoline, kerosene, and diesel constituents on PADEP's petroleum short list.
- **Contaminant Source:** The source of the contamination is believed to be leaking spill buckets for T001, T002 and T003. These spill buckets have been replaced.
- **Media of Concern:** Soil and groundwater have been impacted at concentrations exceeding the applicable PADEP MSCs.
- **Horizontal Proximity Distance:** Soil contamination is present within the 30-foot horizontal proximity distance from the convenience store building at the subject property. The residential structure at the Krenitsky property containing MW-6 is also located within the applicable horizontal proximity distances.
- **Vertical Proximity Distance for Soil:** Soil contamination is present within the 5-foot vertical proximity distance.
- **Vertical Proximity Distance for Groundwater:** Shallow groundwater is located between 4.0 and 5.0' below grade at the subject property. As such, groundwater is located within the vertical proximity distance of 5.0' feet for petroleum products.
- **Presence of SPL:** No measurable SPL was detected in any of the groundwater monitoring points during the January 2018 sampling activities.
- **Preferential Pathways & Significant Foundation Openings:** No preferential pathways or significant foundation openings have been identified.

MTBE: Note, MTBE is considered a gasoline additive and not a petroleum product. Therefore, the horizontal proximity distance of 100 feet applies to both soil and groundwater. Furthermore, MTBE does not have an associated vertical proximity distance.

#### 4.3 Soil Analytical Data Evaluation

To complete the Vapor Intrusion Evaluation for Soil, LaBella developed a Site Conceptual Model and delineated the concentrations of soil constituents. In accordance with the “*Statewide Health Standard Vapor Intrusion Assessment Process Flowchart*” (Figure 5 of the guidance), the following steps have been completed:

- In accordance with Statewide Health Standard protocols, a soil analytical data evaluation was completed on all historical soil analytical data generated at the subject property.
- No measurable SPL is associated with the subject property.
- LaBella compared all of the soil analytical data to the Soil Statewide Health Vapor Intrusion Screening Values ( $SV_{SOIL}$ ) included in Table 2 of the guidance. The residential scenario was followed due to the proximity of the residential structure at the Krenitsky property. These values are applicable since SPL is not present and there are no significant foundation openings. Exceedances were identified within the applicable horizontal proximity distances. Refer to Appendix R for a table comparing the soil analytical data to the Vapor Intrusion Screening Values.

The results of the Vapor Intrusion Evaluation summarized above indicate there is a potentially complete Soil-Vapor Intrusion Exposure Pathway at the subject property and the adjoining Krenitsky property to the northeast. Sub-slab soil vapor sampling was conducted at each of these properties to determine the presence or absence of a potentially complete soil vapor intrusion pathway. A summary of the sub-slab vapor sampling activities is provided in Section 4.5 of this report.

#### 4.4 Groundwater Analytical Data Evaluation

To complete the Vapor Intrusion Evaluation for Groundwater, LaBella developed a Site Conceptual Model and delineated the concentrations of groundwater constituents. In accordance with the “*Statewide Health Standard Vapor Intrusion Assessment Process Flowchart*” (Figure 5 of the guidance), the following steps have been completed:

- In accordance with Statewide Health Standard protocols, a groundwater analytical data evaluation was completed on all historical groundwater analytical data generated at the subject property.
- Dissolved phase groundwater contamination exists in the shallow aquifer at the subject property. No SPL is associated with the subject property.
- Groundwater in the shallow aquifer is present at depths within the vertical proximity distance of 5.0 feet for petroleum contamination, with at least 5.0' of soil-like material being present. No vertical proximity distance is associated with MTBE. A horizontal proximity distance of 100 feet applies to MTBE.
- LaBella compared all of the groundwater analytical data to the Groundwater Statewide Health Vapor Intrusion Screening Values ( $SV_{GW}$ ) included in Table 1 of the guidance. The residential scenario was followed due to the proximity of the residential structure at the Krenitsky property.

These values are applicable since SPL is not present and there are no significant foundation openings. Exceedances were identified within the applicable horizontal proximity distances. Refer to Appendix S for a table comparing the groundwater analytical data to the Vapor Intrusion Screening Values.

The results of the Vapor Intrusion Evaluation summarized above indicate there is a potentially complete Groundwater-Vapor Intrusion Exposure Pathway at the subject property and the adjoining Krenitsky property to the northeast. Sub-slab soil vapor sampling was conducted at each of these properties to determine the presence or absence of a potentially complete groundwater vapor intrusion pathway. A summary of the sub-slab vapor sampling activities is provided in Section 4.5 of this report.

#### 4.5 Soil-Vapor Sampling Activities

##### 4.5.1 Vapor Point Installation

The scope of work associated with this investigation included the completion of initial site evaluations to determine if any preferential vapor migration pathways existed at the subject property or the adjacent Krenitsky property. As a result of this evaluation, no preferential pathways or significant foundation openings were observed (according to the guidance, utility line penetrations are generally not considered significant foundation openings). Based on these results, two (2) sub-slab vapor points were installed through the concrete slab of the subject property building and two (2) sub-slab vapor points were installed through the concrete basement floor of the residential building at the Krenitsky property. Refer to Appendix A for a Vapor Point Location Map (Figure 20). The two (2) temporary sub-slab vapor points installed at the subject property were designated SS-1 and SS-2. The two (2) temporary sub-slab vapor points installed at the adjacent Krenitsky property were designated VP-1 and VP-2. The four (4) temporary sub-slab vapor points were installed as follows:

- A 0.5-inch diameter hole was drilled through the concrete floor slab approximately 3.0 inches into the sub-slab material to create an open cavity.
- The hole is sealed with a rubber stopper or equivalent when not in use.
- Prior to the collection of a sample, the rubber stopper was removed and a length of Teflon tubing was installed into the opening to a point just above the bottom of the slab.
- The length of tubing was sufficient so that a single length of tubing was connected to the Summa Canister regulator.
- The annulus of the vapor point was sealed with a non-volatile emitting material. For the purpose of this investigation, beeswax was utilized.

The tubing and beeswax were removed and discarded following the sample collection and the rubber stopper was reinstalled. The holes were repaired following the completion of the second round of sampling.

##### 4.5.2 Vapor Point Sampling

Sub-slab vapor sampling activities at the subject property were conducted on December 1, 2017 and January 24, 2018. Sub-slab vapor sampling activities at the adjoining Krenitsky property were conducted on April 19, 2018 and August 3, 2018. In accordance with the PADEP's Final *"Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings from Groundwater and Soil under the Act 2"* (Document Number 253-0300-101) dated January 18, 2017, the following information is provided:

- **Date & Times of Sampling:** The sampling activities at the subject property were conducted on December 1, 2017 and January 24, 2018. The sampling activities at the adjacent Krenitsky property were conducted on April 19, 2018 and August 3, 2018. The specific times of sampling are included on the appropriate chain-of-custody forms provided with the analytical data sheets.
- **Specific Locations of Sample Points:** Soil vapor samples at the subject property were collected from SS-1 and SS-2. Soil vapor samples at the adjacent Krenitsky property were collected from VP-1 and VP-2. Refer to Appendix A for a Sub-Slab Vapor Sample Location Map (Figure 20) depicting the four (4) sampling locations.
- **Documentation of Weather Conditions:** Weather conditions were monitored at the time of the sampling activities.
- **Duration & Frequency of Sampling:** Two (2) sampling events have been conducted. In general, the collection methods associated with the TO-15 analyses included the filling of a Summa Canister utilizing a four-hour, laboratory provided regulator. In theory, this method included the sampling of six (6) liters of air over a four (4) hour time period.
- **Equipment Utilized:** All vapor samples were collected utilizing a Summa Canister with a four-hour, laboratory-supplied airflow regulator. The pre-cleaned Summa Canisters were provided by ALS Environmental, Incorporated of Middletown, Pennsylvania (a Pennsylvania-certified laboratory). The regulators were attached to a length of Teflon tubing connected directly to the vapor implant. Dedicated tubing was utilized for each sample point.
- **EPA Test methods:** The samples collected were analyzed for the Project Parameters via EPA Method TO-15. The laboratory was requested to report the data for the Project Parameters.
- **Deviations from the Outlined Procedures:** No deviations from the outlined procedures were encountered during the TO-15 sample collection and analyses.
- **Other Analytical Methods:** No additional analytical methods were completed as part of this investigation.
- **QA/QC Checks:** The four (4) sub-slab vapor sampling points were purged prior to sampling with a RAE Systems Entry Rae multi-gas meter. Oxygen levels monitored during purging did not indicate ambient air was being drawn into the vapor points. This determination was made via a review of oxygen levels over time. One (1) QA/QC duplicate sample was collected per event. Limited laboratory QA/QC documents are included with the analytical data sheets. Full laboratory QA/QC documents are available upon request.
- **Identification of the Entity Conducting the Sampling:** Mr. Martin Gilgallon, P.G. of LaBella was responsible for the supervision of all sampling activities.
- **Identification of the PA Registered Laboratory:** All soil vapor analyses were conducted by ALS Environmental, Incorporated of Middletown, Pennsylvania.



#### 4.5.3 Determination of PADEP Standards

Refer to Appendix T for the Soil-Vapor Analytical Data Summary Tables and the associated analytical data sheets. The sub-slab vapor data was compared to the Residential MSCs listed in Table 4 of the PADEP's "*Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings from Groundwater and Soil under the Act 2*" (Document Number 253-0300-101) dated January 18, 2017. The residential standard was utilized due to the proximity of the residential structure at the adjacent Krenitsky property. The Residential, SHS MSCs for the compounds included in the TO-15 analysis are presented on Table T-1 through Table T-4 in Appendix T.

#### 4.5.4 Comparison of the Soil-Vapor Analytical Data to Applicable Standards

A review of the analytical data associated with the soil-vapor sampling reveals the following:

- A review of the sub-slab soil-vapor analytical data indicates there are no exceedances of the SHS, Sub-Slab Soil-Gas MSCs (i.e. SVss) at the subject property.
- A review of the sub-slab soil-vapor analytical data indicates there are no exceedances of the SHS, Sub-Slab Soil-Gas MSCs (i.e. SVss) at the adjacent Krenitsky property.

The results of the investigation indicate there is no potentially complete Soil-Vapor Exposure Pathway or Groundwater-Vapor Exposure Pathway in association with the presence of the petroleum-related compounds identified in the site soils and groundwater.

## 5. SENSITIVE RECEPTOR SURVEY

### 5.1 Ecological Screening

According to the PADEP's Technical Guidance Manual (TGM), "all sites remediated to the Statewide Health Standard must be screened for impacts to ecological receptors". LaBella followed the screening process described in Section 250.311 of the regulations and the flow chart included as Figure II-6 in the TGM to complete this process. The following information is provided:

- **Step 1:** Step 1 of the Ecological Screening Flow Chart (Section 250.311(b)(1)) asks are the only constituents detected onsite associated with light petroleum products, including jet fuel, gasoline, kerosene, fuel oil #2 or diesel fuel? The contaminants of concern at the subject property are associated with unleaded gasoline. Therefore, the answer to Step 1 is "Yes".
- **Step 2:** Step 2 of the Ecological Screening Flow Chart (Section 250.311(b)(2)) asks is the area less than two (2) acres of impacted surface soils or less than 1,000 square feet of impacted sediment? No surface soils or sediments were impacted on the subject property. Therefore, the answer to Step 2 is "Yes".
- **Step 3:** Step 3 of the Ecological Screening Flow Chart (Chapter 250.311(b)(3)) asks, does the site have features, which would obviously eliminate specific exposure pathways? The contamination is located below grade and is overlain by asphalt and concrete. Therefore, the answer to this question is "Yes".

According to the regulations, if the criteria in Step 1, Step 2 or Step 3 are met, no further ecological action is required. Since the criteria in Step 1, Step 2 and Step 3 have been met for the subject property, no further ecological screening action is required. However, the site has not been remediated and soil and groundwater concentrations, in excess of the Statewide Health Standards, remain on site. Because there are no special concern species or habitats in the area of concern, no federally listed, proposed or candidate species identified in the area of concern, and no complete ecological exposure pathways to soil or groundwater present at the site, the preliminary ecological screening process is adequate to determine that no substantial ecological risk exists at the subject property.

### 5.2 PNDI Search

LaBella completed a PNDI Search as part of the Sensitive Receptor Survey. No potential impacts were identified by the PA Department of Conservation and Natural Resources or the PA Fish and Boat Commission. The PA Game Commission deferred comments on potential impacts to the U.S. Fish and Wildlife Service (Conservation Measure Response). Potential impacts to the northern long-eared bat were identified by the U.S. Fish and Wildlife Service (USFWS). Additional information was sent to the USFWS for review and comment. A response from the USFWS indicated that because the cleanup area is in an urban area with asphalt or concrete finishes the northern long-eared bat is not likely to be adversely affected. No further evaluation is warranted. Refer to Appendix U for a copy of the PNDI Project Environmental Review Receipt and USFWS correspondences.

### 5.3 Well Inventory

LaBella completed a well inventory as part of the Sensitive Receptor Survey. This inventory was completed on the Pennsylvania Department of Conservation and Natural Resources (DCNR) website ([www.dcnr.state.pa.us](http://www.dcnr.state.pa.us)). The results of the well inventory identified sixteen (16) records for wells located

within a ½-mile radius of the subject property. All sixteen (16) wells are listed as observation or monitoring wells installed to investigate the Archbald Express Mart (a/k/a Propst Buy-Rite Mini Market) located 0.5 miles northeast of the subject property. Refer to Appendix V for a copy of the well inventory documentation.

#### 5.4 Surface Water Receptors

A review of the general area surrounding the subject property indicates the closest surface water to the subject property is Charles Creek, located 170 feet to the northeast. Charles Creek has been redirected into the storm sewer system that flows to the northeast under Main Street. The storm sewer system eventually discharges to the Lackawanna River 0.4 miles east-northeast of the subject property. The Lackawanna River flows in a southwesterly direction to its confluence with the Susquehanna River near the City of Pittston, Luzerne County, Pennsylvania. The presence of deep coal mining in the area has impacted the natural flow of groundwater in the vicinity of the subject property. As such, the nearby stretch of the Lackawanna River is a losing stream and the groundwater present in the shallow aquifer below the site is believed to seep into the regional mine pool at elevation 835' MSL. This portion of the regional mine pool discharges into the Lackawanna River at the Gravity Slope Outfall, which is located ~0.9 miles to the southwest of the subject property. The Gravity Slope Outfall discharges up to 30 million gallons of water per day ([www.lrca.org](http://www.lrca.org)). Due to the distance to the Lackawanna River from the subject property, and the fact that the groundwater plume has been delineated, no potentially complete surface water migration pathway exists.

#### 5.5 Evaluation of Exposure Pathways

LaBella has completed an evaluation of potential pathways to determine if the contamination at the subject property has the potential to impact human health and the environment. A review of these potential pathways is as follows:

- Soils - Direct Contact: All soil analytical data generated as part of the site characterization activities was compared to the Non-Residential, Used Aquifer Statewide Health Standard Direct Contact MSCs and the Soil-to-Groundwater Pathway MSCs for the Project Parameters. A review of the site soils data indicates no residual contamination concentrations exist at levels exceeding their applicable Direct Contact MSCs. However, compound concentrations in the soil do exceed the Soil-to-Groundwater Pathway MSCs for several compounds. The Soil-to-Groundwater Pathway MSCs are the ultimate MSCs for the Project.
- Groundwater: The results of the site characterization activities have identified the presence of groundwater contamination at the subject property and this groundwater contamination has been delineated. However, no groundwater receptors have been identified in the vicinity of the subject property. As such, currently no potentially complete Groundwater Exposure Pathway exists.
- Surface Water: The closest surface water features are Charles Creek and the Lackawanna River. These features are located 170' and 0.4 miles, respectively, from the subject property. Charles Creek has been directed into a storm water sewer system and is contained within this system hydraulically downgradient of the subject property. Due to the distances to the closest surface water features from the subject property, and the fact that the groundwater plume has been delineated, no potentially complete Surface Water Exposure Pathway exists.
- Vapor Intrusion: The results of the Vapor Intrusion Evaluation indicate there is no potentially complete Soil-Vapor Exposure Pathway or Groundwater-Vapor Exposure Pathway at the

subject property or adjacent Krenitsky property. No additional vapor intrusion evaluation or mitigation is required.

## 6. SITE CONCEPTUAL MODEL / FINDINGS

The Quinn's Café Stop Property is located at 224 Main Street in the Borough of Archbald, Lackawanna County, Pennsylvania. The subject property is developed with one (1) convenience store building (~1,800 square feet), two (2) fuel dispenser canopies and five (5) associated UST systems situated on 0.2 (+/-) acres of land. The subject property maintains PADEP Facility ID #35-20617 in association with the current UST systems. The subject property is 100% covered by asphalt, concrete and structures (building and canopy). The property has one (1) single-story, block and masonry building situated on a concrete slab. The subject property is connected to all available public utilities including electric, water, sewer and natural gas. The average elevation of the subject property is approximately 952 feet above mean sea level (M.S.L.). The Site Conceptual Model is as follows:

- The subject property is located along a shoulder of a narrow stream valley in the northeastern portion of Lackawanna County, Pennsylvania. The site is situated in a community known as Archbald Borough. Historically, the area surrounding the subject property consisted of a combination of residential, commercial and industrial development. In addition, the strip mining and deep mining of anthracite coal was a major industry in Archbald from the late 1800s through the 1950s. Since the 1960s, the Borough has seen a decrease in the industrial activity and the current land usage is residential and commercial in nature.
- The subject property is underlain by brown sands and silts with abundant sandstone pebbles, cobbles and boulders typical of an alluvial deposit. A shallow groundwater aquifer has been identified in the unconsolidated geologic unit. This aquifer is located at an approximate depth of 5.0 feet below grade. This depth varies in response to the infiltration of precipitation. A relatively thin Smear Zone of 1.0' to 2.0' has been documented onsite.
- The bedrock geology underlying the subject property is the Pennsylvania Age Llewellyn Formation. Characteristic of the Llewellyn Formation are gray sandstones and shales containing numerous thick beds of anthracite coal. The depth to the bedrock surface was between 1.0' and 9.0' below grade. Drilling activities were completed to a maximum depth of 24.0' below grade. A review of coal mine maps indicates a mine pool is located at an approximate depth of 117.0' below grade.
- A review of site drainage patterns indicates the Lackawanna River is located approximately 0.4 miles northeast of the subject property. The calculated groundwater flow direction at the subject property (in the shallow aquifer) is to the southeast toward the Lackawanna River. Due to the effects of coal mining, the Lackawanna River is considered an influent stream.
- On September 9, 2016, Francis Smith & Sons, Incorporated (Francis Smith) completed a PADEP Facility Operations Inspection (FOI) at the subject property. During this inspection, the spill buckets on Tanks #001, #002, #003 and #004 failed hydrostatic testing. In response, Francis Smith submitted a Notice of Reportable Release (NORR) form to the PADEP. During the October 17, 2016 spill bucket replacement activities, Pennsylvania Tectonics (now LaBella) completed soil sampling activities to confirm the presence or absence of contamination in the vicinity of the spill buckets. The results of the soil sampling activities confirmed the presence of soil contamination at concentrations exceeding the applicable Non-Residential, Used Aquifer (TDS <2,500 mg/l) Statewide Health Standard MSCs. The PADEP drafted two (2) Notice of Violation (NOV) letters indicating site characterization activities must be completed to investigate the release.

- The field activities associated with the completion of the Site Characterization Activities were conducted at the subject property between October 2016 and September 7, 2018. The field activities conducted as part of the Site Characterization included the drilling of twenty (20) test borings; the collection and analysis of eighty (80) soil samples from excavations, test borings and monitoring wells; the installation of thirteen (13) shallow groundwater monitoring wells; the collection and analysis of seven (7) rounds of groundwater samples; the transportation and disposal of investigation derived wastes; the completion of aquifer testing; and, the completion of vapor intrusion evaluations at the subject property and the adjacent residential property to the northeast.
- The results of the site soil investigation identified the presence of soil contamination in the Vadose Zone and Smear Zone at the subject property. This contamination is located in the vicinity of the current UST systems.
- Groundwater contamination has been detected at concentrations exceeding the applicable Statewide Health Standard MSCs. This contamination has migrated offsite and has impacted the neighboring property to the northeast. The groundwater contamination has been delineated.
- The results of the sub-slab soil vapor samples indicate there is no potentially complete soil-vapor or groundwater-vapor intrusion exposure pathway at the subject property or adjacent Krenitsky property.

In summary, petroleum-related contamination, in excess of current Non-Residential Statewide Health Standards, has been identified in the soil and groundwater at the subject property. The absence of groundwater usage in the vicinity of the site, in conjunction with the absence of surface water receptors, indicates no complete groundwater exposure pathways currently exist.

## 7. FATE & TRANSPORT ANALYSIS

### 7.1 General

In accordance with 25 Pennsylvania Code §245.310(a)23, a Fate & Transport (F&T) Model is required. These F&T analyses don't necessarily have to be a highly complex computer simulation. These analyses can actually be a qualitative empirical or simple conceptual model. Due to the geologic and hydrogeologic nature of the subject property, as well as the contamination present, LaBella has chosen to complete a simple qualitative model.

The completion of any F&T analysis is initiated with the collection of geologic, hydrogeologic and chemical data. The geological data was gathered via the review of available literature and the installation of numerous test borings and monitoring wells at the subject property. The chemical data was collected via the analysis of the soil and groundwater samples. The availability of hydrogeologic data is limited to the calculation of the hydraulic conductivity of the shallow aquifer. No pumping tests were completed as part of this investigation.

### 7.2 Review of Soil-Related Contamination

The potential for soil contamination at the subject property was documented during the spill bucket and tank-top upgrade activities conducted in October 2016. Subsequent test boring / soil sampling programs conducted by LaBella have identified soil contamination, in excess of applicable Non-Residential Statewide Health Standards, in the Vadose Zone and Smear Zone underlying the subject property.

- The results of the site characterization activities identified soil contamination in excess of standards in the Vadose Zone. Four (4) soil exceedances were documented in the Vadose Zone.
- The results of the site characterization activities identified soil contamination in excess of standards in the Smear Zone. Eight (8) soil exceedances were documented in the Smear Zone.

In summary, the soil contamination present onsite has been horizontally delineated. The soil contamination has been vertically delineated to the permanently saturated zone. No additional site soil investigation is warranted.

### 7.3 Review of Groundwater-Related Contamination

Based on the record of physical and chemical groundwater measurements at the site, the F&T analysis performed consists of an evaluation of the groundwater data for spatial and temporal trends. The petroleum-related groundwater impacts have been spatially delineated to the Non-Residential Statewide Health Standard MSCs. To that end, the following is provided:

- Shallow groundwater was encountered at the subject property. The groundwater table is located at an approximate depth of 5.0 feet below grade.
- The direction of groundwater flow has been calculated. The prominent direction of groundwater beneath the subject property is to the southeast. Groundwater assumes a northeasterly flow direction northeast of the subject property. The hydraulic gradient values ranged from 0.016 feet / foot to 0.033 feet / foot.
- Aquifer testing completed by LaBella yielded hydraulic conductivity ranging between  $5.56 \times 10^{-3}$  ft/min and  $1.38 \times 10^{-6}$  ft/min.

- Based on the groundwater data available, contamination in the shallow aquifer has been delineated.

A temporal trend analysis was performed for key compounds in the shallow monitoring wells that have expressed concentrations in excess of standards. Time-series graphs were prepared for each of the key compounds. These graphs are included in Appendix W. A linear regression best-fit trend line was fit to the time-series data on each graph using the trend line function in MS Excel. The following trends have been identified based on a review of the time-series graphs:

**Table 7-1**  
**Quinn's Café Stop Property**  
**Groundwater Data – Trend Analysis**

Well #	Compound	Trend	Concentration
MW-2	Benzene	Decreasing	Above MSC
	Naphthalene	Decreasing	Above MSC
	1,2,4-TMB	Decreasing	Below MSC
MW-3	Benzene	Increasing	Above MSC
	Ethylbenzene	Increasing	Above MSC
	MTBE	Increasing	Above MSC
	Naphthalene	Increasing	Above MSC
	1,2,4-TMB	Increasing	Above MSC
MW-4	Benzene	Decreasing	Above MSC
	MTBE	Stable	Above MSC
MW-5	Benzene	Increasing	Above MSC
	Ethylbenzene	Decreasing	Below MSC
	Naphthalene	Decreasing	Above MSC
	1,2,4-TMB	Decreasing	Above MSC
MW-6	Benzene	Decreasing	Above MSC
	MTBE	Decreasing	Below MSC

With the exception of MW-3, the time-series graphs indicate the contaminant concentrations are generally declining. Based on the information provided in this section, no additional site groundwater characterization is required at the subject property.



## 8. SELECTED REMEDIATION STANDARD

According to Act 2, a remediation cleanup standard can be selected for each media of concern and furthermore for each compound of concern. The four (4) standards provided in Act 2 include the Statewide Health Standard, site-specific standard, background standard and special industrial area provision. Since no onsite migration of contaminants from an offsite source is present, the background standard cannot be attained. In addition, the site does not qualify as a special industrial area. Therefore, the Statewide Health Standards and site-specific standards are viable options for the site.

To demonstrate attainment of the Statewide Health Standard, site soil and groundwater must be remediated to concentrations equivalent to the EPA drinking water standards. However, the selection of the site-specific standard requires the elimination of risks associated with elevated target compounds. The elimination of risks cannot be completed without institutional and/or engineering controls placed on the site. Furthermore, the groundwater contaminant plume has migrated and has reached the cross-gradient and downgradient point-of-compliance (POC). Therefore, the property owner has chosen to demonstrate attainment of the Non-Residential, Used Aquifer (TDS<2500 mg/l), Statewide Health Standard for the target compounds for the site soil and groundwater. Refer to Table 8-1 for a summary of the respective Non-Residential, Used Aquifer (TDS <2,500 mg/l) Statewide Health Standard MSCs. The standards are reflective of the August 27, 2016 revisions to the regulations.

**Table 8-1**  
**Quinn's Café Stop Property**  
**Summary of the Applicable Soil & Groundwater MSCs**

Parameter	Soil MSCs (mg/kg)*	Groundwater MSCs (ug/l)
Benzene	0.5 / 0.5	5.0
Cumene	2,500 / 350	3,500.0
Ethylbenzene	70.0 / 70.0	700.0
MTBE	2.0 / 2.0	20.0
Naphthalene	25.0 / 10.0	100.0
Toluene	100.0 / 100.0	1,000.0
1,2,4-TMB	35.0 / 6.2	62.0
1,3,5-TMB	210.0 / 120.0	1,200.0
Total Xylenes	1,000.0 / 1,000.0	10,000.0

(\*) Soil MSCs for unsaturated / saturated conditions

## 9. INTERIM REMEDIAL ACTIONS

### 9.1 Interim Remedial Actions for Soil

No interim remedial actions have been conducted to date at the subject property in response to the detection of the soil contamination.

### 9.2 Interim Remedial Actions for Groundwater

No interim remedial actions have been conducted to date at the subject property in response to the detection of the groundwater contamination.

## 10. REVIEW OF REMEDIAL OPTIONS

### 10.1 General

The following sections provide a summary of the remedial alternatives considered to lower the concentrations of target compounds to demonstrate attainment of the Statewide Health Standard at the subject property. Since both soils in the Vadose Zone and Smear Zone need to be remediated, as well as groundwater, the chosen remedial approach(s) must address each area of contamination.

#### 10.1.1 Monitored Natural Attenuation

Natural subsurface processes such as dilution, volatilization, biodegradation, adsorption, and chemical reactions with subsurface materials are allowed to reduce contaminant concentrations to acceptable levels. Natural attenuation is not a "technology" per se, and there is significant debate among technical experts about its use at hazardous waste sites. Consideration of this option usually requires modeling and evaluation of contaminant degradation rates and pathways and predicting contaminant concentration at downgradient receptor points, especially when the plume is still expanding/migrating. The primary objective of site modeling is to demonstrate that natural processes of contaminant degradation will reduce contaminant concentrations below regulatory standards or risk-based levels before potential exposure pathways are completed. In addition, long term monitoring must be conducted throughout the process to confirm that degradation is proceeding at rates consistent with meeting cleanup objectives.

Compared with other remediation technologies, natural attenuation has the following advantages:

- Less generation or transfer of remediation wastes;
- Less intrusive as few surface structures are required;
- May be applied to all or part of a given site, depending on site conditions and cleanup objectives;
- Natural attenuation may be used in conjunction with, or as a follow-up to, other (active) remedial measures; and
- Overall cost will likely be lower than active remediation.

Limitations include:

- Data used as input parameters for modeling need to be collected;
- Contaminants may migrate before they are degraded;
- Institutional controls may be required, which is not desirable to the property owner or the owners of adjacent properties;
- Long term monitoring and associated costs;
- Longer time frames may be required to achieve remediation objectives, compared to active remediation;
- The hydrologic and geochemical conditions amenable to natural attenuation are likely to change over time and could result in renewed mobility of previously stabilized contaminants and may adversely impact remedial effectiveness.

The suitability of Monitored Natural Attenuation is low due to the extent of groundwater impacts. Furthermore, Monitored Natural Attenuation is generally implemented on sites where soil contamination has been successfully remediated and groundwater attenuation is desired. The presence of soil contamination at the subject property may result in further impacts to groundwater before the natural attenuation process has time to degrade the contaminants to sub-Statewide Health Standard concentrations.

### 10.1.2 Excavation or Excavation Coupled with Groundwater Remediation

The excavation of contaminated soil is an ex-situ technology that includes the excavation of the contaminated soils with offsite disposal or treatment at a properly permitted facility. In some instances (usually with larger quantities of contaminated soil), the excavated material is treated onsite. The area of excavation is determined via the review of soil analytical data generated during the site characterization activities, in conjunction with the completion of field screening during the actual excavation process. Soil samples, collected in accordance with PADEP guidelines and regulations, are collected for analysis upon the completion of the excavation activities. The soil sample results are utilized to demonstrate the attainment of a selected cleanup standard. The excavation process would remediate the soils in the Vadose Zone and the Smear Zone (i.e. the periodically saturated soils located above the Permanent Zone of Saturation). The open cavity would allow for the pumping of any impacted groundwater or the application of a remedial solution such as bioremediation solutions or oxygen releasing compounds (ORC). The removal of the contaminated soils would also eliminate the contaminant source material, thereby reducing groundwater contamination over time.

Compared with other remediation technologies, soil excavation with groundwater remediation has the following advantages:

- Low construction costs as compared to other technologies;
- Soil contamination is removed rapidly and attainment is demonstrated in a short period of time in the form of laboratory analytical results;
- No need to complete additional test boring program to verify the success of the remediation;
- No engineering costs, capital costs or operation and maintenance costs;
- Site disruption limited depending on the extent of the work;
- May be applied to all or part of a given site, depending on site conditions and cleanup objectives;
- Will result in the remediation of the soil without the use of other active technologies.

Limitations include:

- Not applicable to larger sites where in-situ remediation of soil and / or groundwater become more cost effective;
- May not immediately remediate the groundwater to levels below the desired cleanup standards;
- Disruption of contaminated soils and groundwater may result in the limited migration of groundwater contamination away from the source.
- Due to the degree and distribution of groundwater contamination identified, the application of remedial solutions into an excavation cavity would not be sufficient to address the entire groundwater contamination issue.

The suitability of soil excavation is moderate due to the relatively small amount of soil contamination present onsite. However, removal of the product dispenser island and possibly the canopy would be required, increasing costs. The groundwater remediation portion of this approach would still probably involve a large-scale system, as highlighted below.

### 10.1.3 Soil Vapor Extraction

Soil vapor extraction (SVE) is an in-situ unsaturated (vadose) zone soil remediation technology in which a vacuum is applied to the soil to induce the controlled flow of air and remove volatile and some semivolatile contaminants from the soil. The gas leaving the soil may be treated to recover or destroy the contaminants, depending on local and state air discharge regulations. Vertical extraction vents are typically used at depths of 1.5

meters (5 feet) or greater and have been successfully applied as deep as 91 meters (300 feet). Horizontal extraction vents (installed in trenches or horizontal borings) can be used as warranted by contaminant zone geometry, drill rig access, or other site-specific factors.

Compared with other remediation technologies, soil vapor extraction has the following advantages:

- In-situ remediation, therefore less generation or transfer of remediation wastes (although vapors need to be remediated before discharge to the atmosphere);
- Once the system is installed, little to no disruption of day-to-day site operations;
- May be applied to all or part of a given site, depending on site conditions and cleanup objectives;
- May be used in conjunction with, or as a follow-up to, other remedial measures such as Monitored Natural Attenuation, and;
- May result in the remediation of the shallow groundwater without the use of other active technologies.

Limitations include:

- May not completely remediate the shallow groundwater resulting in the need for additional groundwater remediation activities or a site-specific closure on the groundwater, which is not desired;
- Engineering costs, construction costs, capital costs and operation and maintenance (O&M) costs are generally high;
- Due to the small soil contaminant plume at the subject property, the high engineering costs, construction costs, capital costs and O&M costs will result in a high unit cost for soil remediation as compared to other options;
- Need to complete additional test boring program to verify the success of the remediation in soil;
- Longer time frames to achieve remediation objectives for soil, as compared to the excavation option.

The suitability of soil vapor extraction alone is low due to the volume of soil in the smear zone and to the high engineering costs, construction costs, capital costs and O&M costs relative to the amount of soil contamination present onsite. In addition, soil vapor extraction alone may not remediate the groundwater contamination identified at the subject property.

#### 10.1.4 Air Sparging Coupled with Soil Vapor Extraction

Air sparging, which would involve the injection of air to expedite the volatilization of the contaminants, is often associated with soil vapor extraction. In general, the soil vapor extraction system is designed as indicated above in Section 10.4. The air sparge points would be installed into the shallow groundwater table, resulting in the injection of air and the remediation of the shallow groundwater contamination in concert with the soil contamination.

Compared with other remediation technologies, air sparging coupled with soil vapor extraction has the following advantages:

- In-situ remediation, therefore less generation or transfer of remediation wastes (although vapors need to be remediated before discharge to the atmosphere);
- Once the system is installed, little to no disruption of day-to-day site operations;

- May be applied to all or part of a given site, depending on site conditions and cleanup objectives;

Limitations include:

- May not completely remediate the shallow groundwater resulting the need for additional groundwater remediation activities or a site-specific closure on the groundwater, which is not desired;
- Engineering costs, construction costs, capital costs and operation and maintenance (O&M) costs are generally high;
- Due to the small soil contaminant plume at the subject property, the high engineering costs, construction costs, capital costs and O&M costs may result in a high unit cost for remediation as compared to other options;
- Need to complete additional test boring program to verify the success of the remediation;
- Longer time frames to achieve remediation objectives, as compared to the excavation option.

The suitability of air sparging with soil vapor extraction is moderate to high. The technology may remediate both the soil and groundwater. However, the configuration of the groundwater contaminant plume may restrict or limit the installation of extraction vents and sparge points due to the presence of active UST systems and buried utilities. To evaluate the viability of SVE/AS as a suitable remedial technology, a Pilot Test is required.

#### 10.1.5 Groundwater Pump and Treat

Aboveground treatment of groundwater is generally accomplished by bringing the groundwater to the surface where it can be treated (i.e., pump and treat). The groundwater is then either disposed, or discharged into the subsurface. Prior to the discharge into the subsurface, the groundwater must be run through an activated carbon treatment system or air stripper capable of removing the petroleum compounds to non-detect levels.

In addition, remediation by pump and treat is a slow process and cleanup times are often very long. System design, such as pumping rate, is one factor to consider when estimating cleanup times. A system pumping at very low rates may have a very long predicted cleanup time, while one operating at higher rates may have a shorter predicted cleanup time. Also, estimating the cleanup time is difficult and is subject to a large number of uncertainties; typical methods used to calculate cleanup time often result in underestimates because they neglect processes that can add years to the cleanup.

Groundwater pump and treat is generally not suited to geological formations with moderate to low permeability, such that exist at the subject property. In addition, groundwater pump and treat is generally used as a means of controlling the migration of groundwater contamination and not for remediation, per se, due to the long and unpredictable timeframes for completion. Groundwater pump and treat would not efficiently remediate the known Smear Zone soil contamination and would have no impact on Vadose Zone soil contamination. Therefore, the suitability of groundwater pump and treat as a remedial option is low at the subject property.

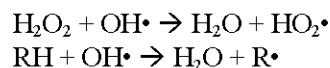
#### 10.1.6 Total Phase Extraction

Total Phase Extraction (TPE), sometimes referred to as Multi-Phase Extraction, involves the simultaneous extraction of soil vapor and groundwater to remediate both contaminated media at the same time. The Soil Vapor Extraction technology, as summarized above, is utilized to facilitate mass removal of residual and vapor-phase VOCs from the Vadose Zone and Smear Zone. The Groundwater Pump and Treat technology is simultaneously employed to pump and treat groundwater ex-situ.

The suitability of TPE is moderate to high at the subject property, as this technology will address both contaminated soil and groundwater. However, the handling of moderate to large quantities of groundwater would be required. These quantities may be sufficient enough where onsite storage with offsite treatment / disposal would not be cost effective. The local POTW recently denied access to the local sanitary sewer system for the discharge of treated groundwater in association with a similar remediation system. The remaining option is onsite treatment with discharge to the Lackawanna River (via the onsite storm water system) under a PADEP-approved NPDES permit. Since this stretch of the Lackawanna River is classified as a HQ-CWF, approval of the NPDES permit is unlikely.

#### 10.1.7 Chemical Oxidation

The chemical oxidation process involves free radical generation and direct oxidation. The contaminants are treated in-situ and are converted to innocuous and/or naturally occurring compounds (i.e.  $\text{H}_2\text{O}$ ,  $\text{CO}_2$ ,  $\text{O}_2$ , halide ions). As a side benefit, aerobic biodegradation of contaminants can benefit from the increase in dissolved oxygen released through peroxide degradation. The oxidation of contaminants involves a variety of competing reactions as follows (where RH is the contaminant of concern):



Typically, a 5% hydrogen peroxide solution would effectively reduce the contaminant concentrations to levels below the PADEP residential used aquifer Statewide Health Standards.

In-situ chemical oxidation (ISCO) involves the addition of chemical reagents into groundwater via injection wells. The reagents attack the petroleum contamination by chemical oxidation which breaks the organic compounds down into smaller molecules that are innocuous in nature. The reagents may be hydrogen peroxide or permanganate which are effective oxidizing agents. The process involves free radical generation and direct oxidation. The oxidation process is fast acting, taking several days to a few weeks. The contaminants are treated in situ and are converted to innocuous and/or naturally occurring compounds (i.e.  $\text{H}_2\text{O}$ ,  $\text{CO}_2$ ,  $\text{O}_2$ , halide ions).

The effectiveness of ISCO may be limited by low soil permeability, subsurface heterogeneities, and highly alkaline soils where carbonate ions are free radical scavengers. Low soil permeability may be overcome with the use of hydraulic fracturing of the subsurface geology. The reagent may also be consumed by natural organic matter or by reduced inorganic before effectively treating the contamination of concern. To perform the chemical oxidation, a pH between 2 and 4 is preferable, but not necessary. If necessary, the pH of the groundwater may be lowered by using acetic acid to achieve the desired range.

The potential side effects of ISCO remediation include evolution of gas, increase in temperature, resolubilization of reduced metals and reduction in biomass. Due to a possible increase in pressure, there is a potential for an explosion if the peroxide is added at a concentration greater than 10% by weight. Due to the presence of active USTs and the elevated risks associated with the evolution of gas and increased temperature, ISCO is not a suitable technology for this site.

#### 10.1.8 Enhanced Aerobic Biodegradation - Injection of Oxygen Release Compounds (ORC)

Via the collection of in-situ groundwater data (i.e. DO and ORP), as well as the analysis of intrinsic parameters such as Manganese, Ferrous Iron, Nitrate and Sulfate, LaBella has demonstrated that natural aerobic and anaerobic biodegradation is occurring at the subject property. Aerobic biodegradation will dominate until such time that dissolved oxygen levels are reduced, at which point anaerobic degradation takes over. Enhanced aerobic biodegradation is the practice of adding oxygen (an electron acceptor) to groundwater and/or soil to

increase the number and vitality of indigenous microorganisms performing biodegradation. Regenesis of San Clemente, California has developed a proprietary calcium oxy-hydroxide based material, ORC-Advanced™, which releases up to 17% of its weight as molecular oxygen. This release of oxygen is used to accelerate naturally occurring in-situ bioremediation of petroleum hydrocarbons, and certain fuel oxygenates such as MTBE, by indigenous microorganisms in the subsurface. This use of this remedial technique is advantageous for the following reasons:

- Low capital costs when compared to other remedial alternatives since there are no large scale capital equipment costs, no engineering costs and no O&M costs.
- There are no costs associated with completion of bench-scale or pilot-scale testing, nor are any costs associated with the evaluation of system performance such as with groundwater extraction wells or vapor extraction systems.
- Site disruption is minimal. The ORC Advanced™ injection points can be completed within one (1) week, with the release of oxygen occurring over a 9 to 12 month period.
- The use of ORC Advanced™ and enhanced bioremediation has a proven track record in the remediation of hydrocarbon-based contamination.
- There are no ongoing waste streams associated with the use of ORC Advanced™, thereby reducing overall project costs.
- There are no limiting factors associated with the use of ORC Advanced™ in close proximity to USTs, product feed lines or dispensers.

The suitability of enhanced aerobic biodegradation is low at the subject property. This conclusion is made based on the results of recent projects conducted by LaBella using this technology under similar chemical and geological conditions.

#### 10.1.9 Oxygen Injection

The injection of pure oxygen into groundwater using oxygen generators is a patented groundwater remediation process (U.S. Patent No. 5,874,001) developed by Matrix Environmental Technologies, Inc. (Matrix). It is a proven remediation technique for sites in which physical remediation processes (such as air sparging) are no longer effective or efficient, thus a biological process is more favorable. Oxygen injection rapidly enhances the biodegradation of organic contaminants such as petroleum hydrocarbons and most chlorinated solvents biodegradable under aerobic conditions. The system produces 95% oxygen, which is injected at flow rates and pressures to achieve breakout only. The primary mechanisms of oxygen transport are advection and dispersion, the same mechanisms that facilitated contaminant migration. The dissolution of nearly pure oxygen at a controlled rate has resulted in measured dissolved oxygen concentrations up to 40 mg/L. Oxygen injection is suitable for shallow groundwater conditions since there is no generation of hazardous vapors eliminating the need for vapor control. Biodegradation of MTBE and TBA, fuel additives that degrade slowly or not at all under anaerobic conditions, has been optimized at many sites.

Oxygen injection provides a very efficient process to stimulate the aerobic biodegradation of groundwater contaminants and may be applicable to the site. This technology would concurrently address the Smear Zone soil contamination and the groundwater contamination. This technology would not address any Vadose Zone soil contamination.

#### 10.2 Selected Remedial Alternatives for Soil and Groundwater

Based on the comparison of potential remedial technologies, LaBella and the project stakeholders have chosen Soil Vapor Extraction (SVE) / Air Sparge (AS) as the remedial approach to address site soils and groundwater. To evaluate the viability of a full scale SVE/AS at the site, a Pilot Test will be required.



The suitability of TPE is moderate to high at the subject property, as this technology will address both contaminated soil and groundwater. However, the handling of moderate to large quantities of groundwater would be required. These quantities may be sufficient enough where onsite storage with offsite treatment / disposal would not be cost effective. The local POTW recently denied access to the local sanitary sewer system for the discharge of treated groundwater in association with a similar remediation system. The remaining option is onsite treatment with discharge to the Lackawanna River (via the onsite storm water system) under a PADEP-approved NPDES permit. Since this stretch of the Lackawanna River is classified as a HQ-CWF, approval of the NPDES permit is unlikely.

## 11. SUMMARY

Based on the information contained in this report, and as outlined in the Site Conceptual Model / Findings section, LaBella recommends the following:

1. In accordance with recent PADEP protocols, LaBella will prepare a Pilot Test Work Plan to address the residual vadose zone soil contamination, smear zone soil contamination and groundwater contamination documented at the subject property.
  - LaBella will prepare the Pilot Test Work Plan within forty-five (45) days of approval of this FSCR by the PADEP
  - LaBella will complete a Pilot Test at the subject property to determine if SVE / AS is a viable remedial alternative for the subject property.
  - Labella will prepare the formal RAP upon demonstrating, via the pilot test, that the chosen remedial option is viable for the subject property.
2. Quarterly groundwater monitoring will be conducted at the subject property while this FSCR is being reviewed. Quarterly monitoring will continue as the pilot test is being completed and the RAP is prepared, approved and implemented. The quarterly monitoring for 2018 and 2019 will be conducted as follows:
  - 4<sup>th</sup> Quarter 2018 – October 2018
  - 1<sup>st</sup> Quarter 2019 – January 2019
  - 2<sup>nd</sup> Quarter 2019 – April 2019
  - 3<sup>rd</sup> Quarter 2019 – July 2019
  - 4<sup>th</sup> Quarter 2019 – October 2019

## 12. SIGNATURES

This Final Site Characterization Report was prepared by:

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Kevin Cucura  
Project Manager  
LaBella Associates, P.C.

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Regional Environmental Manager  
LaBella Associates, P.C.  
Pennsylvania Registered Professional  
Geologist No. 000639-G

*“By affixing my seal to this document, I am certifying that the information contained herein is true and correct. I further certify that I am licensed to practice geology in the Commonwealth of Pennsylvania and that it is within my professional area of expertise to verify the correctness of this information”.*

## References

The following references were utilized in the preparation of this document:

Berg, T.M., Edmunds, W.E., Geyer, A.R., et al, *Geologic Map of Pennsylvania*, Pennsylvania Topographic and Geologic Survey, Harrisburg, 2<sup>nd</sup> Edition, 1980.

Braun, D.D., *Surficial Geology of the Olyphant 7.5-Minute Quadrangle, Lackawanna County, Pennsylvania*: Pennsylvania Geological Survey, 4<sup>th</sup> Series, Open-File Report OFSM 06-02.0, 14 p. 2006.

Eckenrode, Joseph J., *Soil Survey of Lackawanna and Wyoming Counties, Pennsylvania*, United States Department of Agriculture, March 1982.

Geyer, A.R., and Wilshusen, J.P., 1982, *Engineering Characteristics of the Rocks of Pennsylvania*, Pennsylvania Topographic and Geologic Survey, Harrisburg, Environmental Geology Report EG 1, 300 p., (2<sup>nd</sup> Edition).

Lackawanna River Corridor Website ([www.lrca.org](http://www.lrca.org))

United States Department of the Interior, Fish and Wildlife Services, National Wetlands Inventory Maps, 7.5-Minute Series, Olyphant, Pennsylvania Quadrangle.

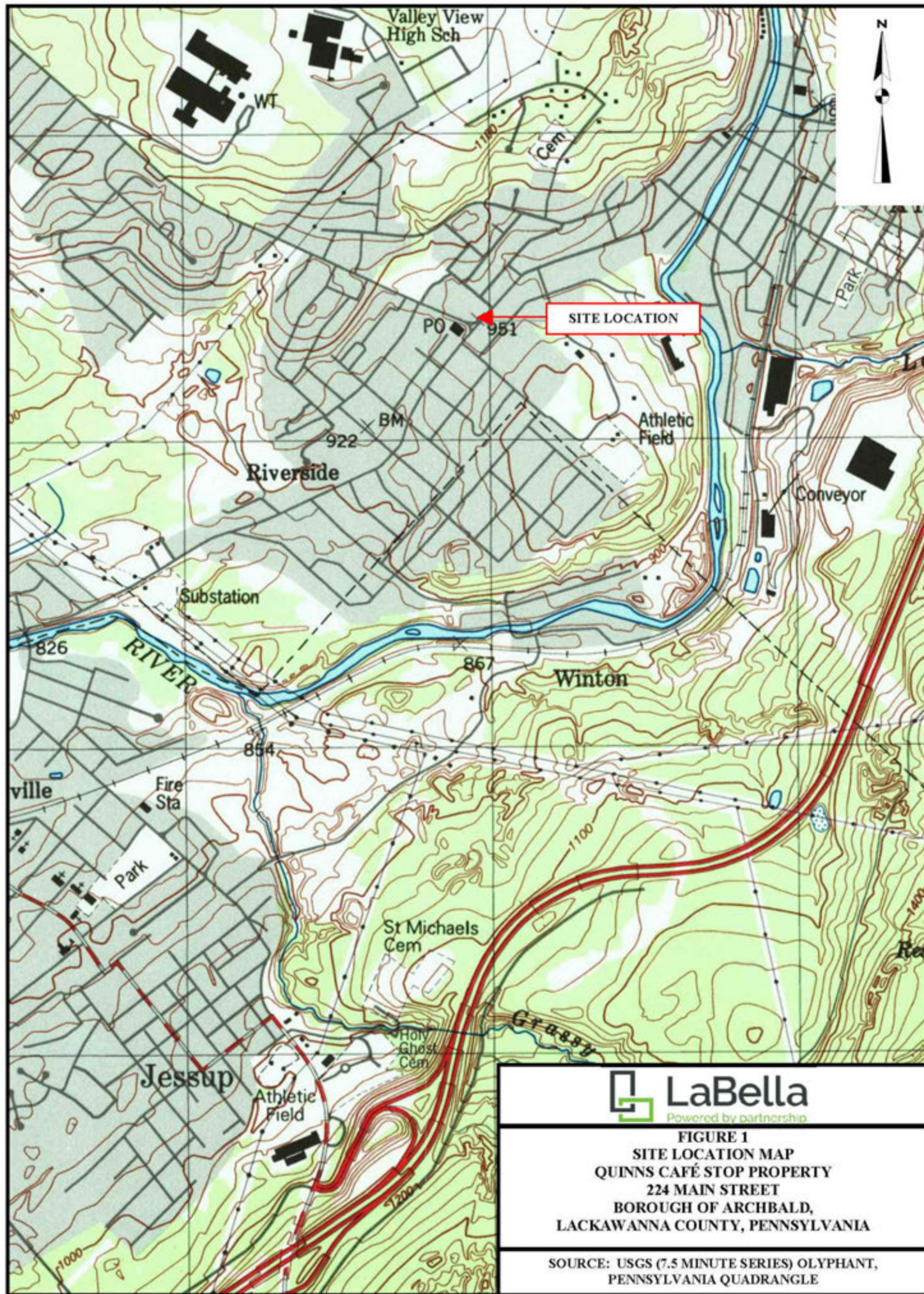
United States Geological Survey, 7.5-Minute Series, Olyphant, Pennsylvania Quadrangles.

25 Pennsylvania Code, Chapter 105, Dam Safety and Waterway Management, January, 1997.

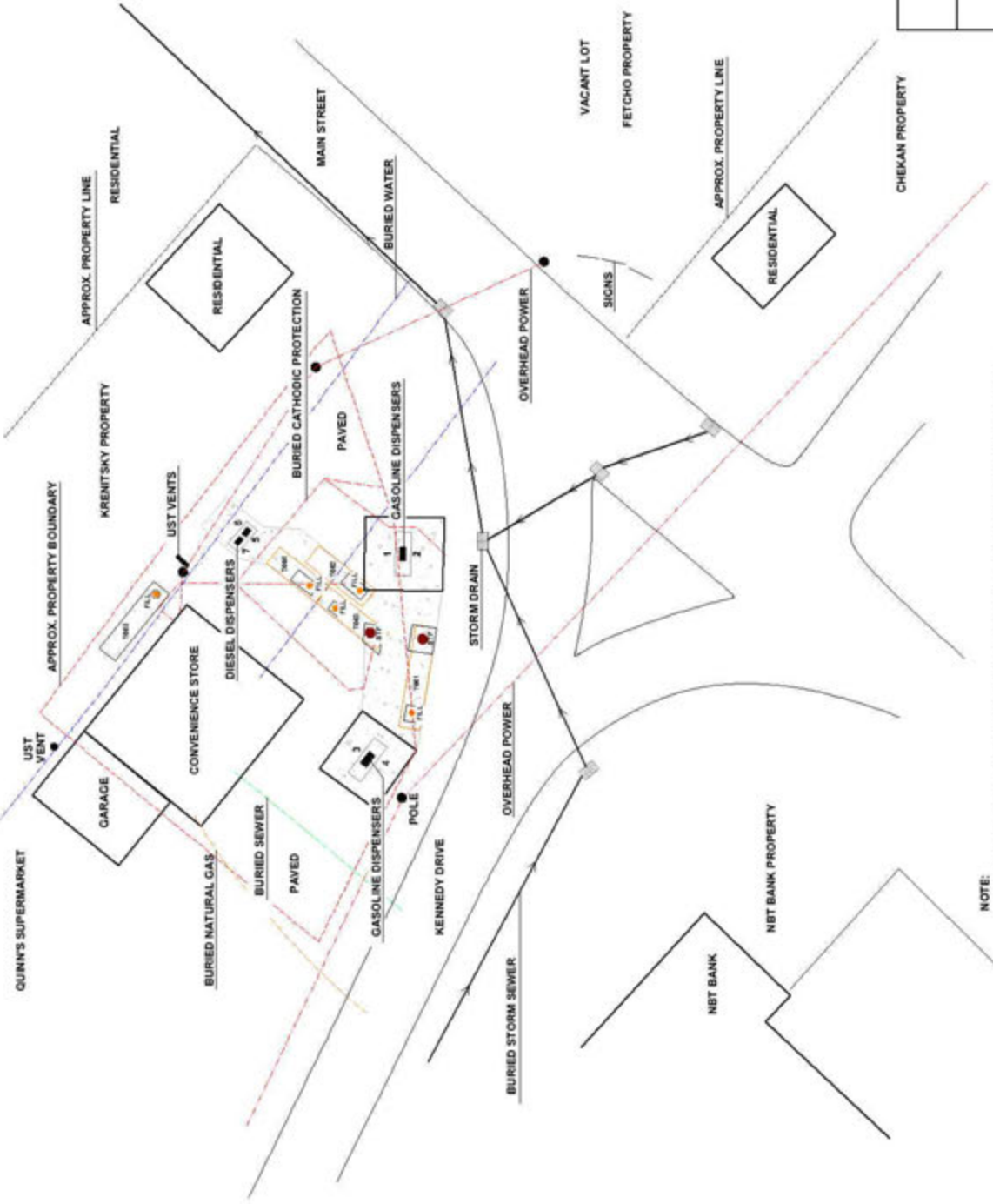
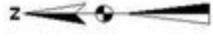
## APPENDIX A

### Site Maps and Figures









NOTE:  
1.) THE BURIED STORMSEWER DEPICTED IS CURRENTLY BEING REPLACED / RECONFIGURED  
AS PART OF ROAD CONSTRUCTION ACTIVITIES.



FIGURE 2  
SITE SKETCH  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBALD,  
LACKAWANNA COUNTY, PENNSYLVANIA  
DRAWN BY: KC DATE: 05/20/2017  
SCALE: 1" = 30'



FIGURE 3

SITE SKETCH - AERIAL

QUINN'S CAFE STOP PROPERTY

204 MAIN STREET

BOROUGH OF ARCHBALD,

LACKAWANNA COUNTY, PENNSYLVANIA

DRAWN BY: KC DATE: 09/06/2015

SCALE: 1" = 40'

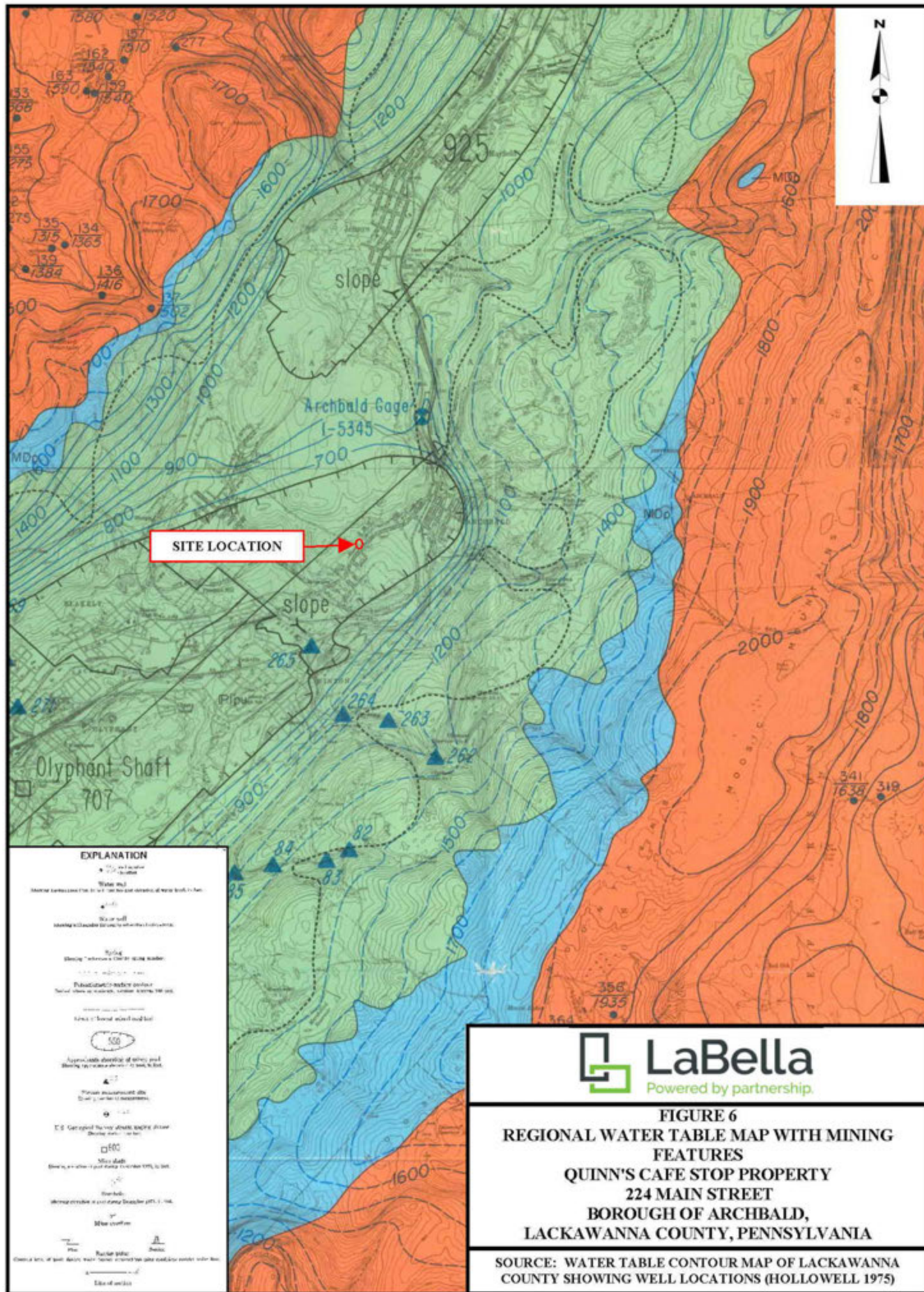




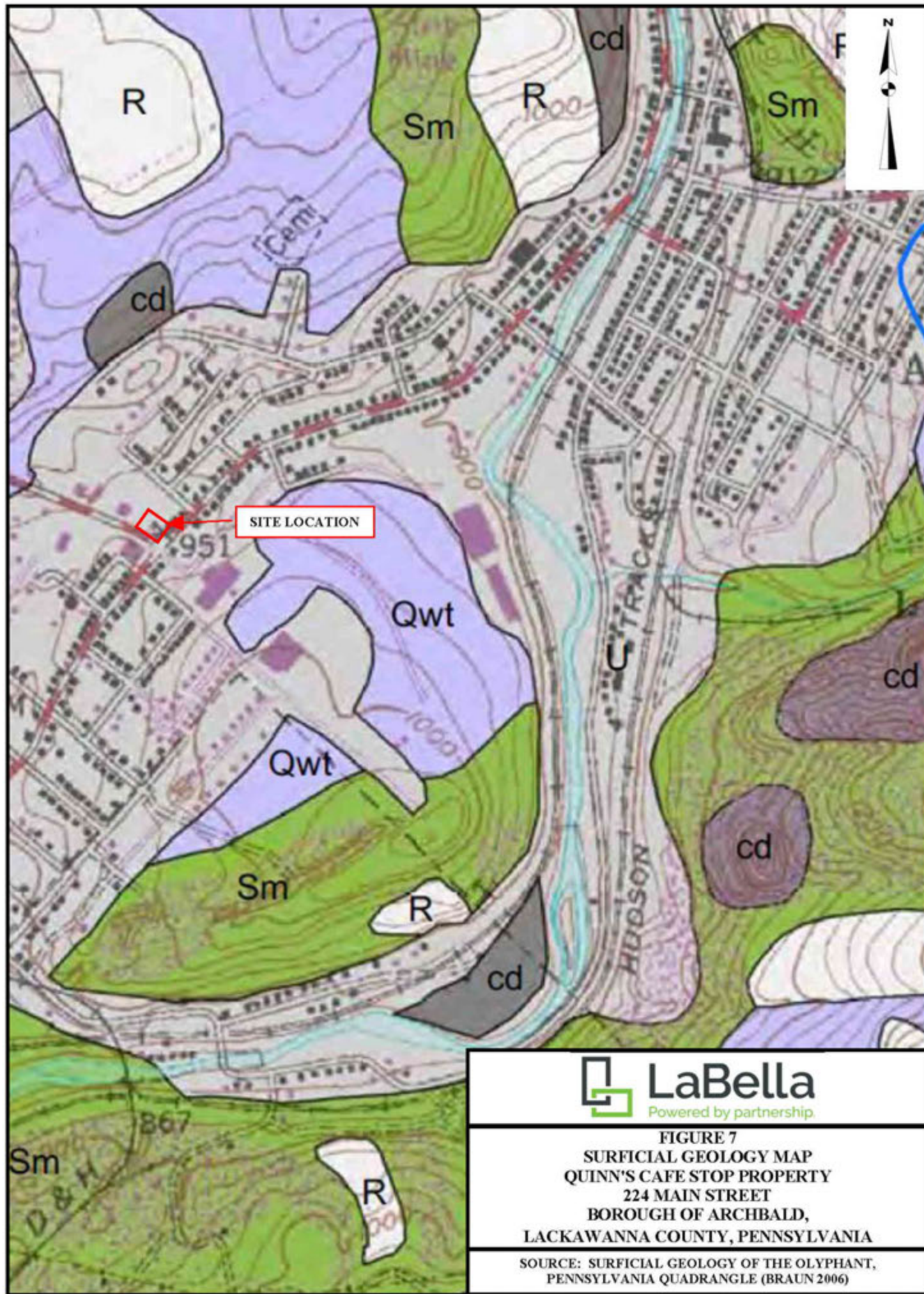




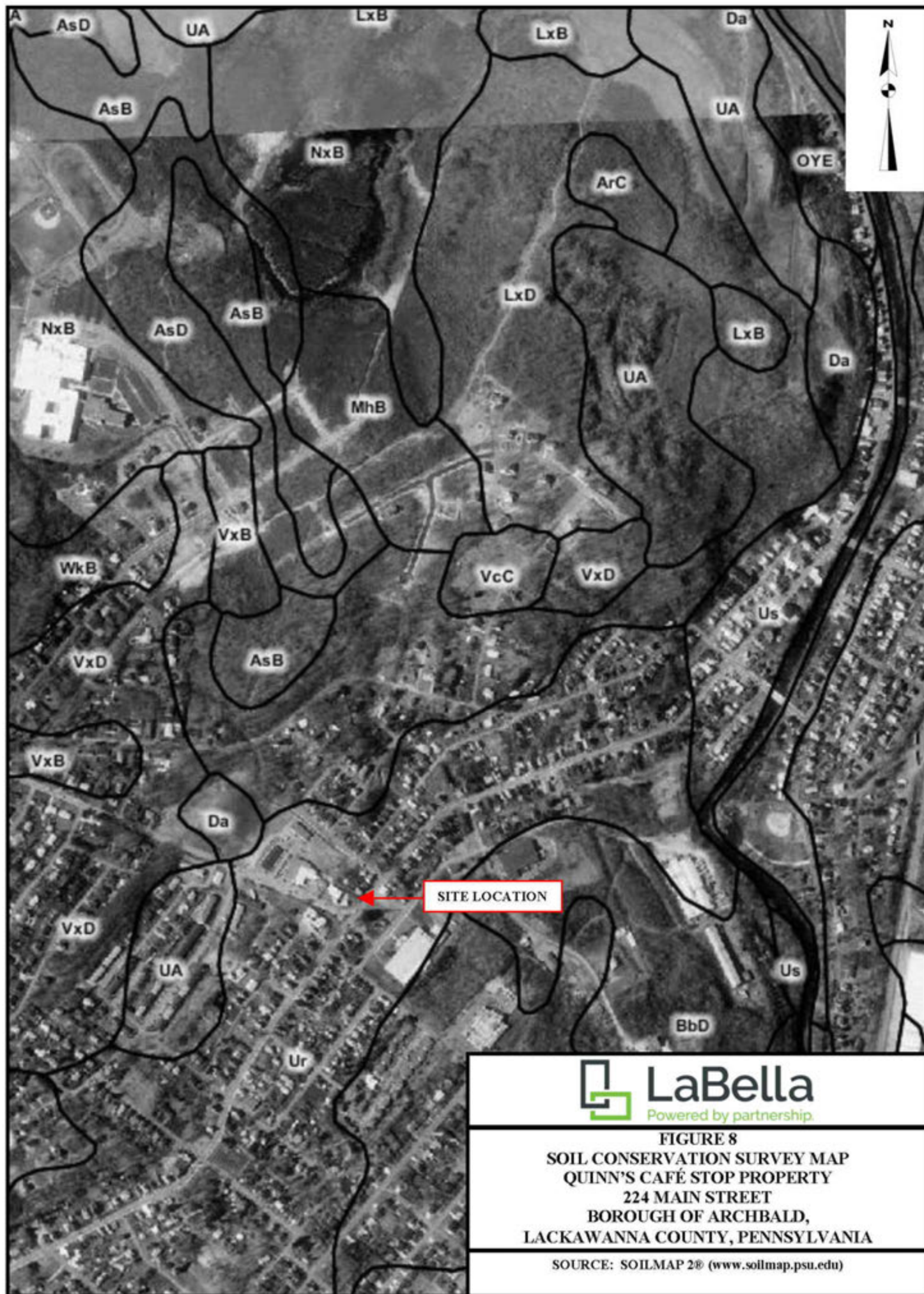




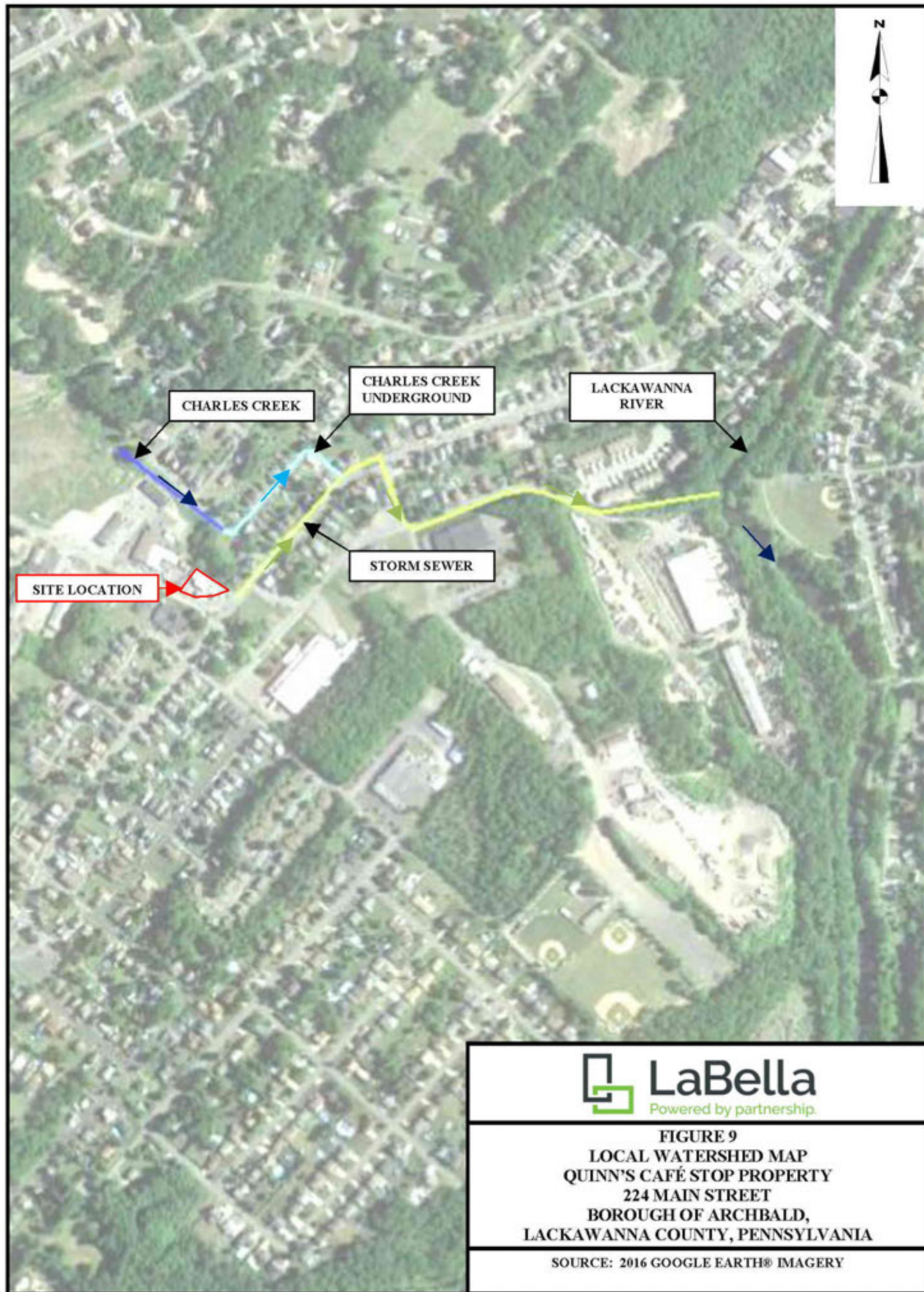
















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**FIGURE 10**  
**NATIONAL WETLAND INVENTORY MAP**  
**QUINN'S CAFÉ STOP PROPERTY**  
**224 MAIN STREET**  
**BOROUGH OF ARCHBALD,**  
**LACKAWANNA COUNTY, PENNSYLVANIA**

SOURCE: SOILMAP 2® ([www.soilmap.psu.edu](http://www.soilmap.psu.edu))





**FIGURE 10**  
**AREA MAP**  
**QUINN'S CAFÉ STOP PROPERTY**  
**224 MAIN STREET**  
**BOROUGH OF ARCHBALD,**  
**LACKAWANNA COUNTY, PENNSYLVANIA**

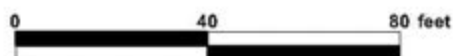
SOURCE: 2017 GOOGLE EARTH® IMAGERY  
([www.google.com/earth](http://www.google.com/earth))





SOIL SAMPLE LOCATION - OCTOBER 17, 2016

RECOVERY WELL

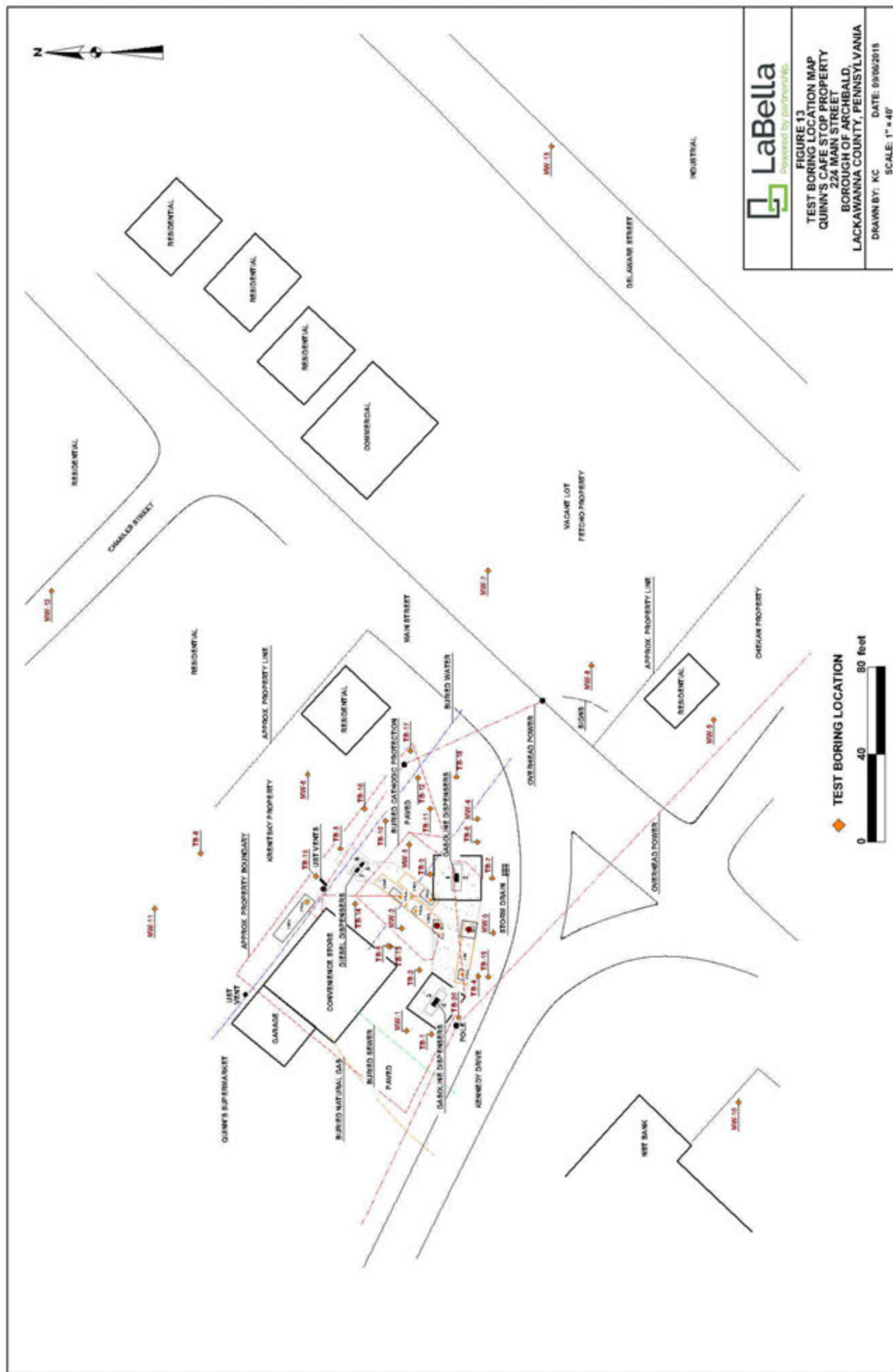


**FIGURE 11**  
**SAMPLE LOCATION MAP - OCTOBER 17, 2016**  
**QUINN'S CAFE STOP PROPERTY**  
**224 MAIN STREET**  
**BOROUGH OF ARCHBALD,**  
**LACKAWANNA COUNTY, PENNSYLVANIA**

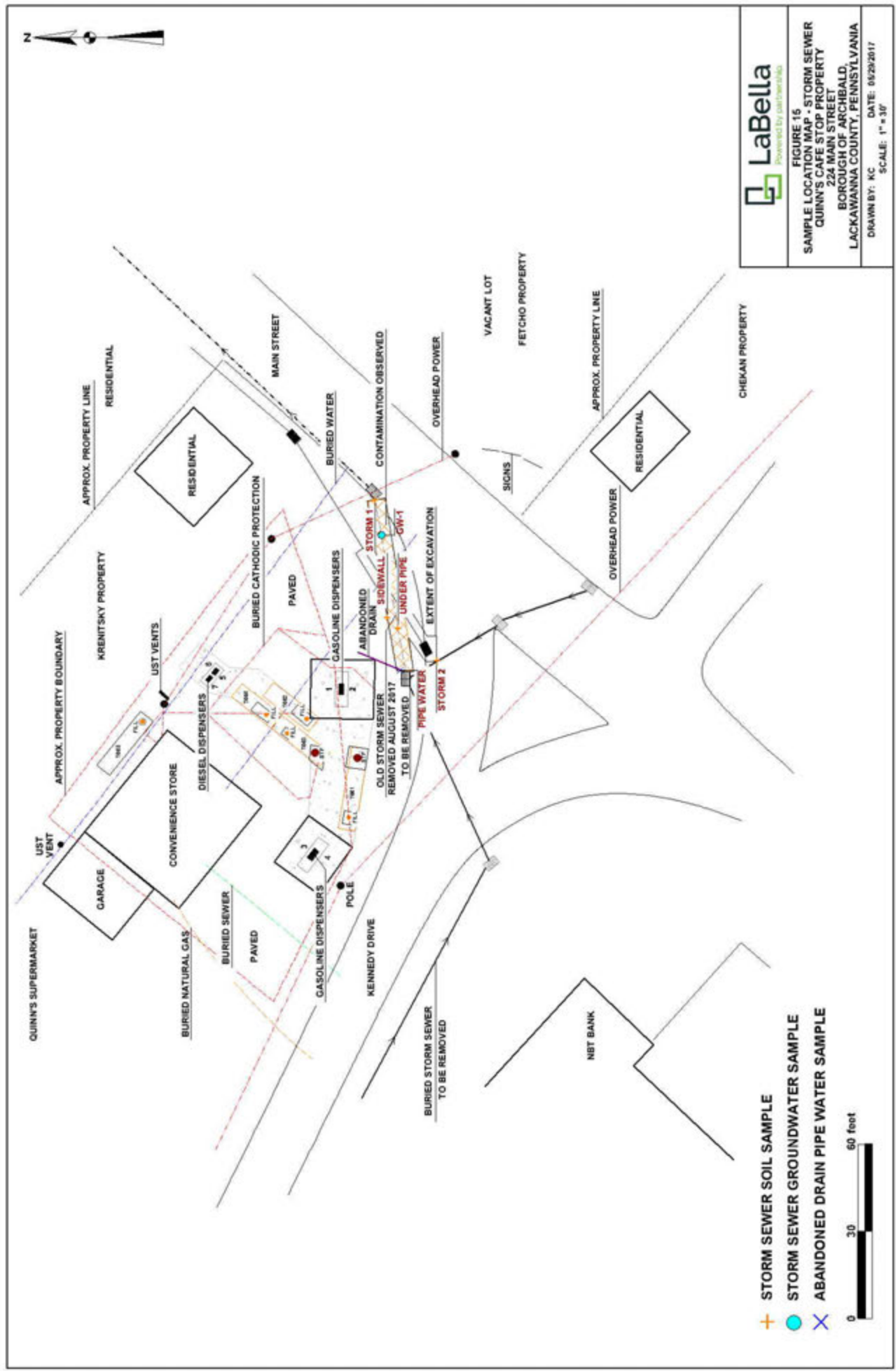
DRAWN BY: KC

DATE: 03/09/2017

SCALE: 1" = 40'

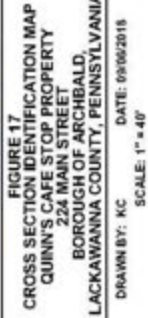


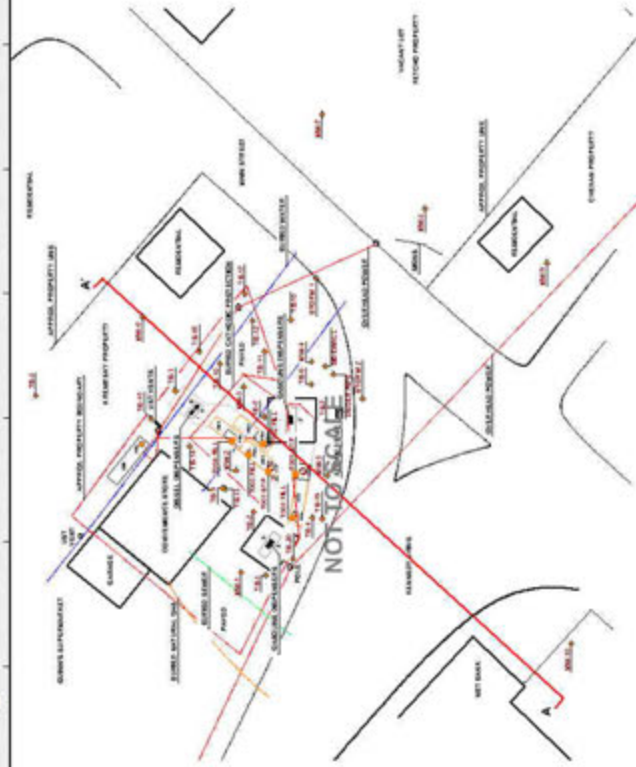












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FIGURE 17A

CROSS SECTION A - A'  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBALD,  
CKAWANNA COUNTY, PENNSYLVANIA

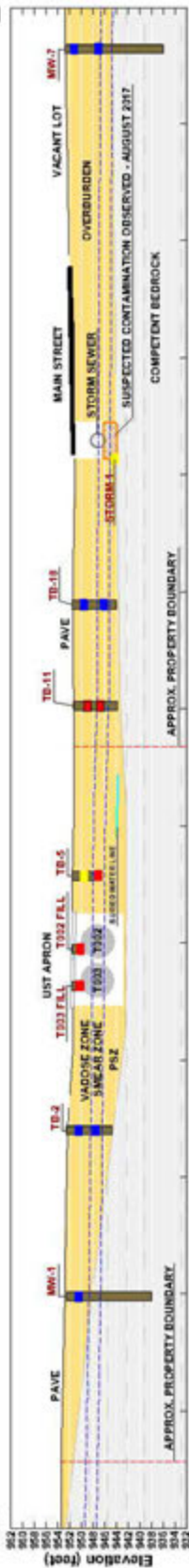
DRAWN BY: KC      DATE: 09/07/2016  
HORIZONTAL SCALE: 1" = 20' (NO VERT. EXAGGERATION)



B'

FACING NORTHEAST

B



- ANALYTICAL DATA ABOVE RESPECTIVE MSCs
- ANALYTICAL DATA BELOW RESPECTIVE MSCs
- ANALYTICAL DATA BELOW LABORATORY MDLs

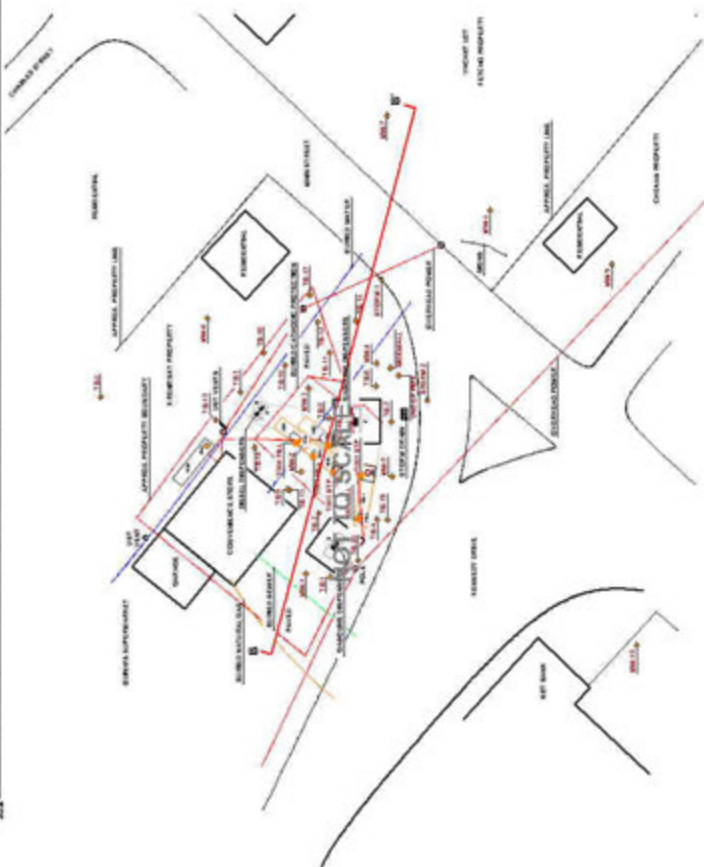


FIGURE 17B

CROSS SECTION B - B'  
QUINN'S CAFE STOP PROPERTY  
204 MAIN STREET  
BOROUGH OF ARCHBOLD,  
LACKAWANNA COUNTY, PENNSYLVANIA  
DRAWN BY: KC DATE: 09/07/2018  
HORIZONTAL SCALE: 1" = 20' (NO VERT. EXAGGERATION)



- EXTENT OF VADOSE ZONE CONTAMINATION
- ANALYTICAL DATA ABOVE RESPECTIVE MSCs
- ANALYTICAL DATA BELOW RESPECTIVE MSCs
- ANALYTICAL DATA BELOW LABORATORY MDLs
- NO VADOSE ZONE SAMPLE COLLECTED

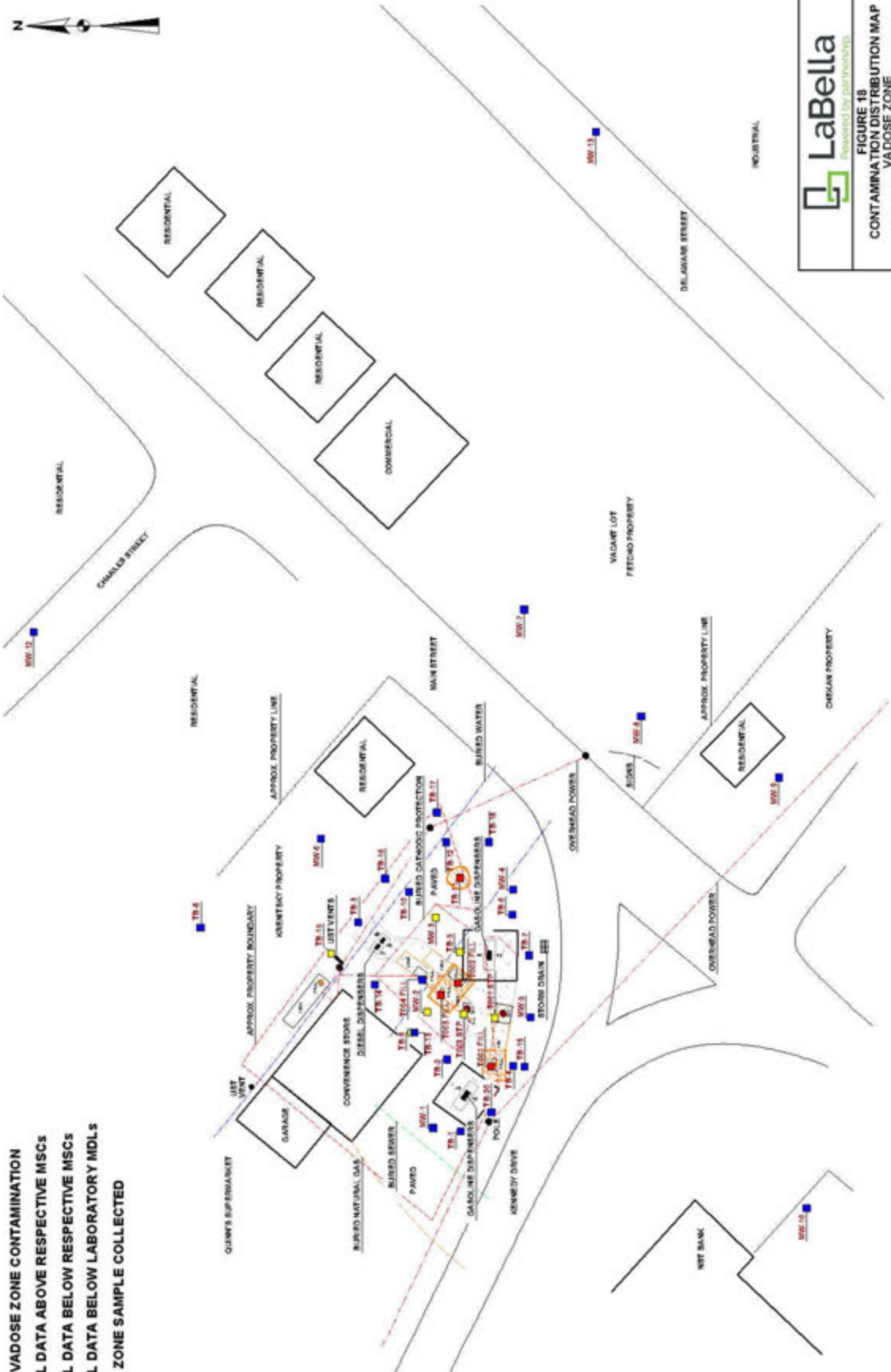


FIGURE 18  
CONTAMINATION DISTRIBUTION MAP  
VADOSE ZONE  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBALD,  
LACKAWANNA COUNTY, PENNSYLVANIA  
DRAWN BY: KC DATE: 09/05/2015  
SCALE: 1" = 40'

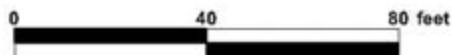
- EXTENT OF SMEAR ZONE CONTAMINATION
- ANALYTICAL DATA ABOVE RESPECTIVE MSCs
- ANALYTICAL DATA BELOW RESPECTIVE MSCs
- ANALYTICAL DATA BELOW LABORATORY MDLs
- NO SMEAR ZONE SAMPLE COLLECTED



FIGURE 19  
CONTAMINATION DISTRIBUTION MAP  
SMEAR ZONE  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBALD,  
LACKAWANNA COUNTY, PENNSYLVANIA  
DRAWN BY: KC DATE: 09/06/2018  
SCALE: 1"=40'



★ SUB-SLAB VAPOR SAMPLE LOCATION



**FIGURE 20**  
**SUB-SLAB VAPOR SAMPLE LOCATION MAP**  
**QUINN'S CAFE STOP PROPERTY**  
**224 MAIN STREET**  
**BOROUGH OF ARCHBALD,**  
**LACKAWANNA COUNTY, PENNSYLVANIA**

DRAWN BY: KC

DATE: 08/29/2018

SCALE: 1" = 40'

## APPENDIX B

### Photograph Log

Table B-1

## Photograph Log

Photo	Description	Date
1.	Typical view of the subject property facing north.	01/29/17
2.	Typical view of the subject property facing northeast.	01/29/17
3.	Typical view of the fuel dispensers at the subject property.	01/29/17
4.	View of conditions during the spill bucket and tank top upgrades in October 2016.	10/17/16
5.	View of conditions during the spill bucket and tank top upgrades in October 2016.	10/17/16
6.	View of conditions during the spill bucket and tank top upgrades in October 2016.	10/17/16
7.	View of conditions during the spill bucket and tank top upgrades in October 2016.	10/17/16
8.	Typical view of soft-dig activities during the test boring and monitoring well installation activities. TB-3 is depicted.	01/29/17
9.	Typical view of test boring installation activities. TB-4 is depicted.	01/30/17
10.	Typical view during monitoring well installation activities. MW-4 is depicted.	01/31/17
11.	Typical view during monitoring well installation activities. MW-6 is depicted.	06/06/17
12.	Typical view of conditions during the storm sewer investigation.	08/25/17
13.	View of conditions within the excavation installed during the storm sewer investigation.	08/25/17
14.	View of conditions during the storm sewer investigation.	08/28/17
15.	Typical view of test boring installation activities. TB-9 is depicted.	11/15/17
16.	Typical view during monitoring well installation activities. MW-12 is depicted.	11/16/17



Photo #1

01/29/17

Typical view of the subject property facing north.



Photo #2

01/29/17

Typical view of the subject property facing northeast.



Photo #3

01/29/17

Typical view of the fuel dispensers at the subject property.



Photo #4

10/17/16

View of conditions during the spill bucket and tank top upgrades in October 2016.





Photo #5

10/17/16

View of conditions during the spill bucket and tank top upgrades in October 2016.



Photo #6

10/17/16

View of conditions during the spill bucket and tank top upgrades in October 2016.





Photo #7

10/17/18

View of conditions during the spill bucket and tank top upgrades in October 2016.



Photo #8

01/29/17

Typical view of soft-dig activities during the test boring and monitoring well installation activities. TB-3 is depicted.



Photo #9

01/30/17

Typical view of test boring installation activities. TB-4 is depicted.



Photo #10

01/31/17

Typical view during monitoring well installation activities. MW-4 is depicted.





Photo #11

06/06/17

Typical view during monitoring well installation activities. MW-6 is depicted.



Photo #12

08/25/17

Typical view of conditions during the storm sewer investigation.



Photo #13

08/25/17

View of conditions within the excavation installed during the storm sewer investigation.



Photo #14

08/28/17

View of conditions during the storm sewer investigation.





Photo #15

11/15/17

Typical view of test boring installation activities. TB-9 is depicted.



Photo #16

11/16/17

Typical view during monitoring well installation activities. MW-12 is depicted.



## APPENDIX C

### LaBella Associates Representative Resumes



## KEVIN CUCURA

### Environmental Analyst

Kevin has twelve years of experience in site assessments, site remediation, water quality and natural resource monitoring and management. He has worked on numerous environmental remediation/restoration projects. He has also served as Site Supervisor for underground storage tank removals, assessments, soil boring/monitoring well installations and sampling programs.

#### EDUCATION

B.A. – Environmental Geology,  
Lock Haven University

#### CERTIFICATIONS/ REGISTRATIONS

ASTM: Phase I and Phase II  
Environmental Site Assessments  
for Commercial Real Estate

Pennsylvania Department  
of Environmental Protection  
Certified UST Installer

OSHA 1910.120 Hazardous Waste  
Site Training: 40 Hour

#### Lackawanna River 2000 Program - Lackawanna River Basin in Northeast PA

Kevin was Project Manager for this project which was an EPA funded watershed reclamation project involving acid mine drainage (AMD) and combined sewer overflows (CSO) identification and remediation, non-point source pollution control method applications, riverbank restoration, and water quality monitoring.

#### US Army Corps of Engineer: Lackawanna River watershed - Northeast PA

Kevin was Project Manager for a US Army Corps of Engineers funded project, aimed at assessing tributaries and their confluences in the upper Lackawanna River watershed in Northeast Pennsylvania. The project involved quantifying metal concentrations (Aluminum, Total Iron, Ferrous Iron and Manganese) versus flow and monitoring water quality in the Lackawanna River and its tributaries.

#### Additional experience includes:

Hazardous Waste  
Characterization And Remediation  
Phase I And Phase II  
Environmental Site Assessment

Test Borings And Monitoring

Well Installation Oversight And  
Sampling

Underground Storage Tank  
Compliance

Closure, Release Investigations

Watershed Monitoring

Remote And Real-Time Field  
Instrumentation Operation And  
Data Acquisition

GPS Surveying

Environmental Data Collection  
And Management

#### Scott Fuel Stop, Inc: Scott Fuel Stop Property - Scott Township, PA

Served as PADEP Certified Tank Handler (PADEP UMR 5585) during the removal of the diesel fuel supply lines and dispensers at the site. Roles included project planning, PADEP coordination, oversight of field activities, sample collection, determining applicable cleanup standards and final report preparation.

#### Pump-n-Pantry, Inc.: Pump-n- Pantry #002 Property - Great Bend Township, PA

Currently serving as project manager during ongoing site characterization and interim remedial activities

at the site. Roles include client coordination, PADEP coordination, subcontractor coordination, obtaining access to off-site properties, mapping/data presentation and report preparation.

**Community Bank, NA: Phillips Road Property - Springville, PA**

Served as project manager and site supervisor during the removal of a buried oil-water separator at the site. Roles included project planning, subcontractor coordination, oversight of field activities, sample collection, determining applicable cleanup standards, contaminated soil disposal and final report preparation.





COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Bureau of Environmental Cleanup and Brownfields  
Division of Storage Tanks  
P.O. Box 8763  
Harrisburg, PA 17105-8763



## Company Certification Certificate

This certification authorizes the below named company to employ certified installers and inspectors to perform certified activities on storage tanks regulated pursuant to the Storage Tank and Spill Prevention Act (35 P.S. Section 6021.101 et seq.). Individuals performing tank handling, tightness testing or inspection activities must also be certified by DEP in the appropriate certification category.

## LABELLA ASSOCIATES P.C.

Certification Number      1875  
DEP Client ID Number      301801

Expiration Date:      January 25, 2021

*Anne Toth*

Anne Toth, Chief  
Certification Unit



8/2005 COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



**BUREAU OF ENVIRONMENTAL CLEANUP AND BROWNFIELDS**  
**DIVISION OF STORAGE TANKS**  
**P.O. BOX 8763**  
**HARRISBURG, PENNSYLVANIA 17105-8763**



**pennsylvania**  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

THIS CERTIFICATION AUTHORIZES THE BELOW NAMED INDIVIDUAL TO CONDUCT TANK HANDLING OR INSPECTION ACTIVITIES PURSUANT TO THE STORAGE TANK AND SPILL PREVENTION ACT, AND DEPARTMENT REGULATIONS AT TITLE 25 PA CODE CHAPTER 245 IN THE SPECIFIC CATEGORIES SHOWN.

CATEGORIES				ISSUE DATE(S)	EXPIRATION DATE(S)
UMR	*****	*****	*****	08/24/2010	08/24/2019
*****	*****	*****	*****	*****	*****
*****	*****	*****	*****	*****	*****
*****	*****	*****	*****	*****	*****
*****	*****	*****	*****	*****	*****
*****	*****	*****	*****	*****	*****

Anne Toth

Anne Toth, Chief  
Certification Unit

ISSUED TO KEVIN M CUCURA

DEP CLIENT ID NUMBER 275081

**CERTIFICATION NUMBER** 5585

## WARNING

Special security measures are incorporated into this Certification Certificate and Identification Card. Any attempt to alter the information on these documents may be a violation of Pennsylvania law, including but not limited to 18 Pa. C.S.A. 4104 (relating to tampering with records or identification) and 18 Pa. C.S.A. 4911 (relating to tampering with public records and information).

Certified Companies employing the certified individual shown above may make a Photo Copy of the Certification Certificate for company records. The original certification documents shall be retained by the certified individual to whom they are issued unless otherwise directed by the Department.

## IMPORTANT INSTRUCTIONS

Carefully detach the Identification (ID) Card along perforated edges. Sign the ID Card on the reverse side and carry the ID Card at all times when performing certified activities. You must present (display) the ID Card upon request.

The ID Card may be covered or laminated with a clear plastic material (**after signing**) to protect it from deterioration.

[illegible]





## MARTIN GILGALLON

### Regional Environmental Manager

Marty is our Regional Manager in Scranton, PA and has 28 years of experience in the environmental field, specializing in environmental assessment, water quality and waste stream treatment evaluation, site characterization, subsurface investigations, and remedial design/action. Marty has worked with a variety of clients including energy and utility clients, development corporations, and commercial and residential developers throughout the Mid-Atlantic region.

#### PG

Professional Geologist, PA

#### EDUCATION

B.S. - Geosciences, Penn State University, 1987

#### ORGANIZATIONS

Association of Groundwater Scientists and Engineers.

National Groundwater Association

The Geological Society of America

Lackawanna River Corridor Association

#### CERTIFICATIONS/ REGISTRATIONS

Commonwealth of Pennsylvania Registered Professional Geologist

Pennsylvania Department of Environmental Protection Certified UST Installer

OSHA 1910.120 Hazardous Waste Site Training: 40 Hour and Annual 8 Hour

#### Lackawanna Watershed 2000 Program - Lackawanna River Basin in Northeastern PA

Marty served as Project Manager for this program on the Lackawanna River Basin in Northeastern Pennsylvania. He previously served as Project Manager under the Strategic Environmental Research and Development Program (SERDP) in conjunction with the completion of watershed studies on the Lackawanna River Basin and the Winters Run River Basin at the Aberdeen Proving Ground in Harford County, Maryland. The associated Scopes of Work included:

Completion of the mapping of each basin utilizing GPS and GIS technologies.

Generation of channel morphology data utilizing traditional surveying methods.

Collection of wet chemistries to determine baseline chemical characteristics of each river system.

Collection of water quality data utilizing in-situ real-time data collection equipment pursuant to the development of the prototypes.

Pilot demonstrations for an environmental Monitoring and Management System (EMMS) under SERDP.

In each investigation, the real-time data was collected from the field stations utilizing cellular telephone technologies and downloaded, via modem, to a central data collection laboratory at the National Institute for Environmental Renewal (NIER) located in Mayfield, Lackawanna County, Pennsylvania.

As Project Manager, his responsibilities also included coordination with officials of the Army Environmental Center at the Aberdeen Proving Ground; completion of the collection of atmospheric data with field representatives of the Waterways Experimental Station (WES) in Vicksburg, Mississippi; and coordination with local, county and state regulators and authorities.

#### Site Characterization

Marty conducted evaluations of Publicly Owned Treatment Works (POTW) effluent characterization protocols relative to compliance with PA Clean Streams and US EPA Clean Water Act requirements, as they apply

to receiving water limitations on quantities, rates, and concentrations of chemical and physical constituents.

**Dye Tracer Studies**

Marty also designed and implemented Dye Tracer studies for a variety of commercial and industrial clients, in order to determine the configuration of both sanitary and industrial piping systems. As part of a Design Study relative to a Groundwater Pump and Treat System, he evaluated the capability of a private Sewage Treatment Plant to process treated discharges from a hydrocarbon-contaminated wastestream. In support of Permit Applications for encroachments into wetlands, he prepared environmental assessment documentation regarding wetland aerial extent, value, function, adverse impacts and adverse environmental effect.

**Project Hydrogeologist**

As Project Hydrogeologist, Marty was responsible for the assessment of hydrologic and geologic conditions pertaining to project performance. Projects of note include the initiation and supervision of release investigations in conjunction with failed underground storage tank (UST) systems at numerous sites and UST Closures. These projects typically include the development of test boring and monitoring well networks and soil and groundwater sampling programs in order to discern migration pathways and the extent of potential contamination present at a facility. Marty's responsibilities included the design and implementation of remedial action plans to address soil and groundwater contamination; associated coordination with regulatory

agencies; and the preparation of UST Closure Reports. Remedial action projects include: the design and implementation of vacuum extraction and remediation systems to address petroleum contaminated soil and groundwater; and pump and treat remedial systems to address petroleum impacted groundwater in deep, bedrock aquifers.

**Environmental Assessments**

As Project Manager for environmental assessments and site characterizations, responsibilities included the preparation of and adherence to site specific health and safety plans, performance of background reviews and field investigations, oversight of field technicians, data review, and reporting. Projects of note include: the remedial investigation/feasibility study of a 120 acre industrial facility contaminated with various petroleum hydrocarbons, volatile organics and PCBs; hydrogeological study and quarterly monitoring of an abandoned industrial site contaminated with 1,1,1 Trichloroethane; geophysical documents review; and Phase I and Phase II environmental site assessments of commercial and industrial facilities.

**Geologist**

As Staff Geologist, Marty's duties included the design of groundwater monitoring systems for landfills and UST systems. Marty was responsible for the installation of test borings and construction of groundwater monitoring wells, and the development and implementation of soil and aqueous sampling programs. He was also responsible for environmental site assessments

and geotechnical investigations in conjunction with building design and construction, and report preparation. Projects of note include the hydrogeological investigation including project and client coordination for a US Environmental Protection Agency Superfund Site in New Jersey; and numerous geologic investigations for both government agencies and private corporations.

**COMMONWEALTH OF PENNSYLVANIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION****BUREAU OF ENVIRONMENTAL CLEANUP AND BROWNFIELDS**  
**DIVISION OF STORAGE TANKS**  
P.O. BOX 8763  
HARRISBURG, PENNSYLVANIA 17105-8763**pennsylvania**  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

THIS CERTIFICATION AUTHORIZES THE BELOW NAMED INDIVIDUAL TO CONDUCT TANK HANDLING OR INSPECTION ACTIVITIES PURSUANT TO THE STORAGE TANK AND SPILL PREVENTION ACT, AND DEPARTMENT REGULATIONS AT TITLE 25 PA CODE CHAPTER 245 IN THE SPECIFIC CATEGORIES SHOWN.

**CATEGORIES****ISSUE DATE(S)****EXPIRATION DATE(S)**

UMR      \*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*  
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05/07/2012

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05/07/2021

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\*\*\*\*\*  
\*\*\*\*\*

Anne Toth, Chief  
Certification Unit

ISSUED TO      MARTIN P GILGALLON

DEP CLIENT ID NUMBER      181651

CERTIFICATION NUMBER      4294



Commonwealth of Pennsylvania  
 Department of State  
 Bureau of Professional and Occupational Affairs  
 PO BOX 2649 Harrisburg PA 17105-2649

18 0062841

License Type  
 Professional Geologist

MARTIN PATRICK GILGALLON  
 18 Old Mill Road  
 Jermyn PA 18433



License Status  
 Active

Initial License Date  
 05/02/1994

Expiration Date  
 09/30/2019

*I-H*

License Number  
 PG000639G

Commissioner of Professional and Occupational Affairs

Signature

## APPENDIX D

### PADEP Notice of Violation (NOV) Letters



## APPENDIX D-1

PADEP Notice of Violation (NOV) – September 15, 2016



September 15, 2016

**NOTICE OF VIOLATION**

DK & DK LLC  
c/o Ms. Tricia Lorenzetti  
224 Main Street  
Archbald, PA 18403

Re: ECB-Storage Tank Program  
Legal File  
Quinn's Café Shop  
Facility ID No. 35-20617  
224 Main Street  
Archbald Borough, Lackawanna County

Dear Ms. Lorenzetti:

On September 9, 2016 this office was notified by Francis Smith & Sons that integrity testing of spill containment for Tanks 001, 002, 003 and 004 had failed.

On September 12, 2016, the Department performed an inspection at the above referenced facility. During this inspection it was noted deterioration of the spill containment for Tanks 001, 002, 003, and 004. A Field Narrative was provided to the facility and provided notice that a suspected release investigation to include a subsurface investigation should be completed. I have enclosed a copy of the Field Narrative for your use.

Based on the Department's inspection and submitted documentation the following violations of the Storage Tank and Spill Prevention Act and the applicable technical regulations in 25 Pa. Code Chapter 245 exist:

1. An investigation of a suspected release is to be conducted whenever a testing method has indicated a release may have occurred in accordance with 245.304. Failure to conduct a suspected release investigation is a violation of 245.304. Please be advised the sub surface investigation can be completed during the replacement of the spill containment.
2. Containment structures are to be maintained in a good state of repair and shall function as designed, in accordance with 245.432. Failure to maintain containment structures in a good state of repair is a violation of 245.432.

We request that you submit, by September 22, 2016, documentation demonstrating a subsurface investigation has been completed OR a signed contract with a tentative start date for the replacement of the spill containment for Tank 001, 002, 003, and 004. Submittal may be by mail (2 Public Square, Wilkes-Barre, PA 18701-1915), or by e-mail ([ra-nero-tanks@pa.gov](mailto:ra-nero-tanks@pa.gov)) or by fax (570.820.4907).

Section 1301 of the Storage Tank and Spill Prevention Act (Storage Tank Act) grants the Department the authority to withdraw, suspend or revoke the operating permit for the underground storage tanks located at the above referenced facility for violations of the Storage Tank Act and Chapter 245. In addition Section 1307 of the Storage Tank Act grants the Department the authority to assess civil penalties up to \$10,000 per day for each violation.

This Notice of Violation is neither an order nor any other final action of the Department of Environmental Protection. It does not waive any rights of the Commonwealth of Pennsylvania to take enforcement action under applicable law for the conditions discussed in this letter.

If you have any questions pertaining to storage tank system compliance or this letter, please contact me at 570.826.2353.

Sincerely,



Michele M Nesbit  
Water Quality Specialist Supervisor  
Environmental Cleanup and Brownfields

Enclosure: Field Narrative dated September 12, 2016

## APPENDIX D-2

PADEP Notice of Violation (NOV) – October 18, 2016





**pennsylvania**  
DEPARTMENT OF ENVIRONMENTAL  
PROTECTION

October 18, 2016

**CERTIFIED MAIL NO.: 7016 0910 0000 4016 6467**

DK & DK, LLC  
c/o Ms. Tricia Lorenzetti  
224 Main Street  
Archbald, PA 18403

Re: ECB-Storage Tanks Program  
Storage Tank System Release  
Quinn's Café Stop  
Facility ID #: 35-20617  
Incident#(s): # 49806  
224 Main Street  
Archbald Borough, Lackawanna County

Dear Ms. Lorenzetti:

On October 17, 2016, the Department of Environmental Protection (Department) received notification of a reportable release of a regulated substance at the above-named facility. The release was confirmed on October 17, 2016. This release is a violation of Section 1310 of the Pennsylvania Storage Tank and Spill Prevention Act. A copy of the Department's notification of a reported release form is enclosed for your reference.

This letter is to advise you that you have certain responsibilities regarding this release under the Corrective Action Process (CAP) regulations found in 25 PA Code Chapter 245, Subchapter D. You should carefully review these regulations to determine the specific requirements applicable to the release at your facility. The CAP regulations and several helpful fact sheets are available on the Department's website at [www.dep.pa.gov](http://www.dep.pa.gov), keyword "Tank Cleanup." In addition, please see the enclosed CAP Regulations Overview-Fact Sheet and CAP Flowchart. Collectively, this information can help you address the release quickly and effectively.

You should know that upon confirmation of a release, the CAP regulations require that you immediately implement any necessary interim remedial actions as described in Section 245.306 including: removing regulated substances from leaking tank systems; mitigating fire, explosion and safety hazards; preventing further migration of released substances; and identifying and sampling affected or potentially affected water supplies. Appropriate and timely interim remedial actions can often resolve environmental impacts caused by the release or limit their severity, thus making site cleanup easier and less expensive.

A site characterization must also be performed upon confirmation of a release in accordance with Section 245.309 of the CAP regulations. A Site Characterization Report (SCR) detailing the findings of the site characterization must be submitted to this office within 180 days of reporting the release as mandated in Section 245.310. We recommend that you engage the services of an experienced

environmental consulting firm, with a Licensed Professional Geologist on staff, to conduct the site characterization and prepare the SCR. Completion of a comprehensive site characterization and submission of a detailed SCR are critical in determining whether additional steps are needed to address the release at your facility. **The Site Characterization Report for this release is due on or before April 30, 2017.** Please note that due dates in this letter do not constitute an extension of compliance dates already established for previously reported contamination.

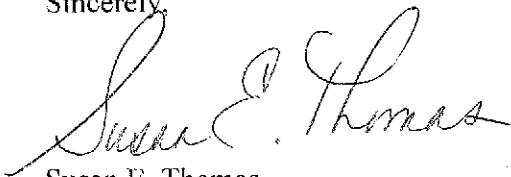
Your SCR must address all the elements of Section 245.310 and be submitted by the deadline listed above. A copy of Section 245.310 is enclosed for your reference. Requests for an extension of the deadline for SCR submittal will only be considered in limited cases based on valid technical reasons. Requests for an extension must be made in writing to this office at least 30 days before the SCR due date. Your written request must specify the technical reason(s) for the extension and include a new proposed submission date. No extension of the SCR due date will be permitted without written approval from the Department.

Financial assistance for corrective action may be available from the Underground Storage Tank Indemnification Fund (USTIF). You should immediately contact USTIF by calling 717-787-0763 or 800-595-9887 (in PA only) or by email to [ra-ustif@pa.gov](mailto:ra-ustif@pa.gov). Failure to notify USTIF within 60 days after knowledge of a potential claim will result in denial of coverage. You may wish to investigate other potential sources of financial assistance. We recommend that you contact the Pennsylvania Department of Community and Economic Development at 866-466-3972 or visit their website at [www.newpa.com](http://www.newpa.com).

Please forward all documents, reports, and written requests at the northeast regional office address listed above. If you have any questions concerning the corrective action process or if you wish to have an on-site meeting to discuss corrective action requirements as they relate to your site, then please contact Donald Rood – Licensed Professional Geologist, who is the DEP project officer assigned to manage reported release incidents at your facility, and who can be reached by either telephone at (570) 826-5449 or by email to [dorood@pg.gov](mailto:dorood@pg.gov).

If you have any questions concerning this letter, then please contact me either by telephone at (570) 826-2324 or through e-mail to [susathomas@pa.gov](mailto:susathomas@pa.gov).

Sincerely,



Susan E. Thomas  
Environmental Program Compliance Specialist  
Environmental Cleanup & Brownfields Program

Enclosures: NORR, CAP Overview-Fact Sheet, CAP Flowchart, Chapter 245.310

cc: Archblad Borough  
USTIF



**pennsylvania**  
DEPARTMENT OF ENVIRONMENTAL  
PROTECTION

May 31, 2018

DK & DK, LLC  
c/o Tricia Lorenzetti  
224 North Main Street  
Archbald, PA 18403-1945

Re: ECB-Storage Tanks Program  
SCR Alternative Timeframe Approval Letter  
Quinns Café Stop Facility  
Facility ID #: 35-20617  
Incident#(s): #49806  
224 N Main Street  
Archbald Borough, Lackawanna County

Dear Storage Tank Representative:

The Department of Environmental Protection (Department) has reviewed your May 21, 2018 request for an alternative time frame for submitting a complete Site Characterization Report (SCR) for the release incident(s) referenced above.

Based on the information submitted, the request is approved. The SCR is due on or before November 30, 2018. Failure to submit the SCR by November 30, 2018 may result in enforcement action by the Department, which can include civil penalty assessment and/or suspension of an operating permit.

If you have any questions, then please contact me either by telephone at (570) 826-2324 or through e-mail to [susathomas@pa.gov](mailto:susathomas@pa.gov).

Sincerely,

A handwritten signature in cursive script that reads "Susan E. Thomas".

Susan E. Thomas  
Environmental Protection Compliance Specialist  
Environmental Cleanup & Brownfields Program

cc: Archbald Borough  
LaBella Associates, P.C./ Mr. Martin Gilgallon, P.G.  
USTIF

## APPENDIX E

### Current Property Deed





**EVIE RAFALKO McNULTY**  
**LACKAWANNA COUNTY RECORDER OF DEEDS**  
200 North Washington Avenue  
Scranton, Pennsylvania 18503  
(570) 963-6775

Instrument Number - 200608764

Recorded On 4/4/2006 At 9:45:29 AM

\* Total Pages - 5

\* Instrument Type - DEED

Invoice Number - 48413

User - MH

\* Grantor - MOTTS, JOSEPH J

\* Grantee - DK & DK LLC

\* Customer - OLIVER, PRICE, & RHODES

\* **FEES**

STATE TRANSFER TAX	\$5,500.00
STATE WRIT TAX	\$0.50
STATE JCS/ACCESS TO JUSTICE	\$10.00
RECORDING FEES - RECORDER OF DEEDS	\$13.00
AFFORDABLE HOUSING	\$13.00
PARCEL CERTIFICATIONS	\$10.00
COUNTY IMPROVEMENT FEE	\$2.00
ROD IMPROVEMENT FEE	\$3.00
VALLEY VIEW SCHOOL	\$2,750.00
REALTY TAX	
ARCHBALD BOROUGH	\$2,750.00
TOTAL	\$11,051.50

This is a certification page

**DO NOT DETACH**

This page is now part  
of this legal document.

**RETURN DOCUMENT TO:**

OLIVER, PRICE, & RHODES  
1212 SOUTH ABINGTON RD  
PO BOX 240  
CLARKS SUMMIT, PA 18411  
ATTN: BOX 53

I hereby CERTIFY That this document is  
recorded in the Recorder of Deeds Office  
of Lackawanna County, Pennsylvania.



*Evie Rafalko McNulty*

Evie Rafalko McNulty  
Recorder of Deeds

\* - Information denoted by an asterisk may change during  
the verification process and may not be reflected on this page.

00F092



MUNI: 02  
PIN: 10408 010 005  
USE: ASSESS VAL:  
DATE: 44 06 10 JB  
CLERK

## This Deed,

Made, the 30<sup>TH</sup> day of MARCH, in the year of our Lord two thousand six (2006),

Between, **JOSEPH J. MOTTS**, as Executor of the Estate of Mary J. Motts, of the Borough of Archbald, County of Lackawanna, and Commonwealth of Pennsylvania hereinafter referred to as the GRANTOR,

## AND

**D K & D K, LLC**, a Pennsylvania Limited Liability Company, hereinafter referred to as the GRANTEE,

**Witnesseth**, that in consideration of five hundred fifty thousand dollars (\$550,000.00) in hand paid, the receipt whereof is hereby acknowledged, the said GRANTOR does hereby grant and convey to the said GRANTEE, it's successors and assigns,

**ALL** that certain lot or parcel of land situate in the Borough of Archbald, County of Lackawanna and State of Pennsylvania, bounded and described as follows:

**BEGINNING** at a point in the Southwesterly line of land left open for a street, said point being a distance of Twenty (20) feet as measured North Forty-eight (48) degrees Fifty-two (52) minutes West along said line of land left open for a street from its intersection with the Northwesterly line of Main Street Eighty-nine and two-tenths (89.2) foot wide, said point of beginning marking a corner in the Northerly line of land conveyed by the Hudson Coal Company to the Borough of Archbald by deed dated June 15, 1929 and recorded in the office of the Recorder of Deeds of Lackawanna County.

**THENCE** (1) Northwesterly, North Forty-eight (48) degrees Fifty-two (52) minutes West partially along said line of land left open for a street and partially along land now or late of the Hudson Coal Company, a distances of Two hundred fifty-one and three tenths (251.3) feet, more or less, to a point;

**THENCE** (2) Southwesterly, South Forty-six (46) degrees forty-five (45) minutes West along lands now or late of the Hudson Coal Company a distances of one hundred twenty-one and seven tenths (121.7) feet, more or less, to a point in the Northerly line of Eynon Road Fifty-five (55) feet wide;

**THENCE** (3) Southeasterly, South sixty (60) degrees thirty-nine (39) minutes East along said line of Eynon Road a distance of One Hundred seventy-six and five-tenths (176.5) feet to a point;

**THENCE** (4) easterly Eighty-three (83) degrees forty (40) minutes East still along said line of Eynon Road, a distance of Seventy-one and six-tenths (71.6) feet to a point;

**THENCE** (5) Easterly, North Seventy-six (76) degrees Thirty-nine (39) minutes East still along said line of Eynon Road, a distance of Fifty-four and four-tenths (54.4), more or less, to the first mentioned point and place of beginning.

**BEING** the same premises conveyed to Frank J. Motts and Mary J. Motts, by deed dated June 25, 1963 and recorded in Lackawanna County Recorder of Deeds at Book 596, Page 529.

The said Frank J. Motts died February 3, 1999 and by operation of law sole title to this property vested to his wife, Mary J. Motts. The said Mary J. Motts died on November 12, 2005 and by terms of her last will and testament probated to number 35-05-01322 in the Office of the Register of Wills of Lackawanna County, her son, Joseph J. Motts is named as executor.

**MAP #:**

**ALSO SUBJECT TO** such exceptions, reservations, easements covenants and conditions as are contained in the other deeds or instruments in the chain of title.

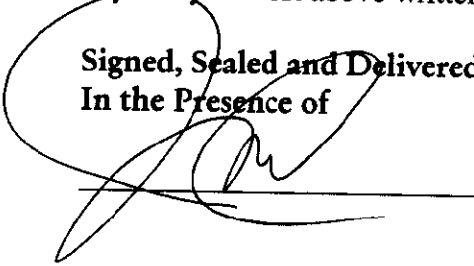
**THIS DOCUMENT MAY NOT SELL, CONVEY, TRANSFER, INCLUDE OR INSURE THE TITLE TO THE COAL AND RIGHT OF SUPPORT UNDERNEATH THE SURFACE LAND DESCRIBED OR REFERRED TO HEREIN, AND THE OWNER OR OWNERS OF SUCH COAL MAY HAVE THE COMPLETE LEGAL RIGHT TO REMOVE ALL OF SUCH COAL AND, IN THAT CONNECTION, DAMAGE MAY RESULT TO THE SURFACE OF THE LAND AND ANY HOUSE, BUILDING OR OTHER STRUCTURE ON OR IN SUCH LAND. THE INCLUSION OF THIS NOTICE DOES NOT ENLARGE, RESTRICT OR MODIFY ANY LEGAL RIGHTS OR ESTATES OTHERWISE CREATED, TRANSFERRED, EXCEPTED OR RESERVED BY THIS INSTRUMENT.**

**HAZARDOUS WASTE IS NOT BEING DISPOSED OF NOR HAS IT EVER BEEN DISPOSED OF ON THE PROPERTY CONVEYED HEREIN BY THE GRANTOR OR TO THE GRANTOR'S KNOWLEDGE. AND THE GRANTOR WILL WARRANT GENERALLY, THE PROPERTY HEREBY CONVEYED.**

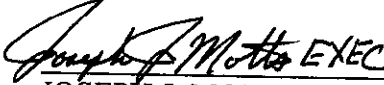
The said Grantors will warrant specially the property hereby conveyed.

In Witness whereof, the GRANTOR has hereunto set his hand and seal the day and year first above written.

Signed, Sealed and Delivered  
In the Presence of



---



EXEC (Seal)  
JOSEPH J. MOTTS,  
EXECUTOR OF THE ESTATE  
OF MARY J. MOTTS



Commonwealth of Pennsylvania :  
County of Lackawanna : SS.  
:

On this the 30<sup>th</sup> day of MARCH, 2006, before me, a Notary Public, the undersigned officer, personally appeared JOSEPH J. MOTTS, as Executor of the Estate of Mary J. Motts, known to me (or satisfactorily proven) to be the person(s) whose name(s) are subscribed to the within instrument and acknowledged that they executed the same in the capacity therein stated and for the purposes therein contained.

In Witness Whereof, I hereunto set my hand and official seal.

COMMONWEALTH OF PENNSYLVANIA  
Notarial Seal  
James W. Reid, Notary Public  
South Abington Twp., Lackawanna County  
My Commission Expires Aug. 19, 2008

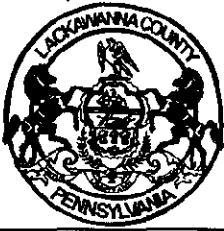
Member, Pennsylvania Association Of Notaries

W. Reid

I hereby certify that the precise residence of the Grantee is:

c/o QUINN'S MARKET  
10 KENNEDY DRIVE  
ALCOCK, PA. 18403

W. Reid  
Attorney for Grantee



EVIE RAFALKO MCNULTY  
Lackawanna County Recorder of Deeds  
Gateway Center  
135 Jefferson Avenue  
Scranton, Pennsylvania 18503

This is a certification page  
\*\*\*This page is now part of this legal document – DO NOT DETACH\*\*\*



INSTRUMENT #: 201505846

Receipt#: 243113  
Clerk: LH  
Rec Date: 04/23/2015 02:50:43 PM  
Doc Grp: D  
Descrip: DEED  
Num Pgs: 6  
Rec'd Frm: KEYSTONE ACQUISITION SERVICES  
CORP

Party1: DK & DK LLC  
Party2: PA COMMONWEALTH OF DEPT OF  
TRANSPORTATION  
Town: ARCHBALD BOROUGH

Consideration: 1.00  
Taxable Amount: 0.00  
Assessed Value: 35450.00

Recording:

Recording Fees - ROD	15.50
Cover/Index Page	2.00
Parcel Certification	20.00
State Writ Tax	0.50
State JCS/Access to Justi	35.50
Affordable Housing	13.00
County Improvement Fee	2.00
ROD Improvement Fee	3.00

Sub Total: 91.50

Transfer Tax	
STATE TRANSFER TAX	0.00
ARCHBALD BOROUGH	0.00
VALLEY VIEW SCHOOL DISTRI	0.00

Sub Total: 0.00

Total: 91.50

\*\*\*\* NOTICE: THIS IS NOT A BILL \*\*\*\*

I hereby CERTIFY that this document is recorded in the  
Recorder of Deeds Office of Lackawanna County,  
Pennsylvania.



*Evelyn Rafalko McNulty*  
Evelyn Rafalko McNulty  
Recorder of Deeds

\*\* Information may change during the verification  
process and may not be reflected on this page.

Record and Return To:

KEYSTONE ACQUISITION SERVICES CORP  
149 BROAD ST  
PITTSBURGH, PA 15201

**Prepared By:** Anne Bradbury, Project Negotiator  
Keystone Acquisition Services, Corp.



**Return To:** Keystone Acquisition Services, Corp.  
3200 McKnight East Drive, Suite 3204  
Pittsburgh, PA 15237

**Site Location:** Property ID # 10408-010-005 & 10408-010-006

RW-317F (3/14)  
18-FA-48.0

ROW OFFICE PROJ. NO.	040352
COUNTY	Lackawanna
S.R. - SECTION	1012-202
MUNICIPALITY	Archbald Borough
PARCEL NO.	5
CLAIM NO.	3500505000
CLAIMANT	DK & DK, LCC

**DEED**  
(Fee Simple)

THIS INDENTURE, made MARCH 13, 2015 by DK & DK, LLC, with an address of 10 Kennedy Drive, Archbald, PA 18403-1532 owner(s) of property affected by the construction or improvement of the above mentioned State Route, its heirs, executors, administrators, successors, and/or assigns, hereinafter, whether singular or plural, called the GRANTOR, and the Commonwealth of Pennsylvania, Department of Transportation, hereinafter called the COMMONWEALTH,

**WITNESSETH:**

WHEREAS the COMMONWEALTH recorded a plan in the Recorder of Deeds Office of the aforesaid County indicating its authorization to condemn property for the above highway from the aforesaid property; and

WHEREAS the parties hereto have agreed that, in lieu of condemnation, the GRANTOR will convey in fee simple and such other estate(s) as designated, if any, to the COMMONWEALTH the property or portion thereof required by the COMMONWEALTH,

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration, the GRANTOR does hereby grant and convey to the COMMONWEALTH

- ☐ In fee simple the premises described by metes and bounds in exhibit "A".  
☒ In fee simple that portion of the aforesaid premises designated as required right-of-way or as acquired in fee simple for other purposes on the plot plan attached hereto and made a part hereof; and those areas, if any, designated as required for easement purposes as identified by the plot plan and set forth below.

LACKAWANNA COUNTY  
Certified Property Identification  
MUNI: ARCHBALD  
P.O. APR 23 2015  
PIN: 10408-010-005  
USE: 4000 ASSESS VAL 24,000  
CLERK: 10.00

LACKAWANNA COUNTY  
Certified Property Identification  
MUNI: ARCHBALD  
P.O. APR 23 2015  
PIN: 10408-010-006  
USE: 4000 ASSESS VAL 16,450  
CLERK: 10.00

BEING all or a portion of the same property conveyed or devised to the GRANTOR by Deed of Joseph J. Motts, unmarried, of the Borough of Archbald, County of Lackawanna, Commonwealth of Pennsylvania, dated March 30, 2006 and recorded in Instrument Number 200608763 and by Deed of Joseph J. Motts, as Executor of the Estate of Mary J. Motts, of the Borough of Archbald, County of Lackawanna and Commonwealth of Pennsylvania, dated March 30, 2006 and recorded in Instrument Number 200608764, together with the improvements, hereditaments and appurtenances thereto.

This conveyance contains 145 Square Feet for Required Right-of-Way and is identified on COMMONWEALTH plans as Parcel 5. The GRANTOR warrants GENERALLY the property hereby conveyed.

The GRANTOR hereby excepts and reserves from this conveyance all right, title, and interest in and to all minerals, including oil, gas, subsurface gas storage, and subsurface gas storage protection together with the right to produce, inject, store subsurface, withdraw, and protect natural gas and oil; said mining, removal, storage and storage protection activities to be accomplished from a minimum depth to be determined by the COMMONWEALTH, from mine shafts, wells or other facilities located off the right-of-way, it being the intent of this provision that the COMMONWEALTH owns the right of support and no mineral activities may take place on the surface of the land acquired by the COMMONWEALTH.

The GRANTOR does further remise, release, quitclaim and forever discharge the COMMONWEALTH or any agency or political subdivision thereof or its or their employees or representatives of and from all suits, damages, claims and demands which the GRANTOR might otherwise have been entitled to assert under the provisions of the Eminent Domain Code, 26 Pa.C.S. § 101 et seq., for or on account of this conveyance and any injury to or destruction of the aforesaid property of the GRANTOR through or by reason of the aforesaid highway construction or improvement, except damages, if any, under Section 710 (Limited Reimbursement of Appraisal, Attorney and Engineering Fees) and Section 711 (Payment on Account of Increased Mortgage Costs) of the Eminent Domain Code; provided, however, that if relocation of a residence or business or farm operation is involved, this release shall likewise not apply to damages, if any, under Section 902 (Moving Expenses) and/or Section 903, 904 (Replacement Housing) and/or Section 905 (Housing Replacement Authorization) of the Eminent Domain Code.

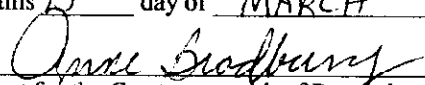
The GRANTOR does further indemnify the COMMONWEALTH against any claim made by any lessee of the aforesaid property who has not entered into a Settlement Agreement with the COMMONWEALTH.

#### Certificate of Residence

I hereby certify the Grantee's precise residence to be:

PennDOT Engineering District 4-0  
55 Keystone Industrial Park  
Dunmore, PA 18512-1516

Witness my hand this 13<sup>TH</sup> day of MARCH, 2015

  
Agent for the Commonwealth of Pennsylvania  
Department of Transportation

The GRANTOR has executed or caused to be executed these presents, intending to be legally bound thereby.

**INDIVIDUALS**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**ENTITIES\***

GRANTOR:

DK &amp; DK, LLC

(Name of Entity)

BY:

*Jeffrey Krenitsky*  
Jeffrey Krenitsky, Member

BY: \_\_\_\_\_

\* Use this block for a corporation, partnership, LLC, government entity, school district, church, trust, club, association, POA, attorney-in-fact, executor, administrator or any other entity. See R/W Manual Section 3.06.

**INDIVIDUAL**

STATE OF PENNSYLVANIA

COUNTY OF \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_,  
before me, \_\_\_\_\_,  
the undersigned officer, personally appeared  
Jeffrey Krenitsky and William Krenitsky

\_\_\_\_\_, known to me  
(or satisfactorily proven) to be the person(s) whose  
name(s) \_\_\_\_\_ subscribed to the within instrument,  
and acknowledged that \_\_\_\_\_ executed the  
instrument for the purposes contained in it.

In witness whereof, I hereto set my hand and official  
seal.

[Signature]

[Title]

[Seal]

**ENTITY**

STATE OF PENNSYLVANIA

COUNTY OF LACKAWANNA

On this 13<sup>TH</sup> day of MARCH, 2015,  
before me, ANNE M. BRADBURY, the undersigned  
officer, personally appeared JEFFREY KRENITSKY

\_\_\_\_\_, who acknowledged him self  
to be the MEMBER [title] of  
DK & DK, LLC [name of entity],

and that as such MEMBER  
[title], being authorized to do so,  
executed the foregoing instrument for the purposes  
contained in it by signing on behalf of the entity as  
MEMBER [title].

In witness whereof, I hereto set my hand and official seal.

*Anne M. Bradbury* [Signature]  
NOTARY PUBLIC [Title]

[Seal]

COMMONWEALTH OF PENNSYLVANIA

NOTARIAL SEAL

ANNE M. BRADBURY, Notary Public  
City of Pittston, Luzerne County  
My Commission Expires July 17, 2017

APPROVED AS TO FORM AND LEGALITY:

*J. P. C.*

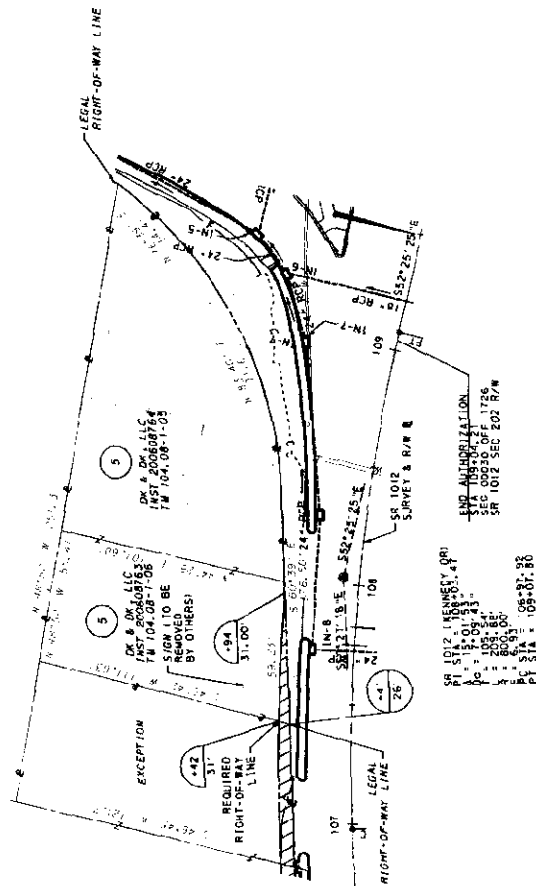
For Chief Counsel

04-01-15



*gpc*

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
4-0	LACKAWANNA	1012	202 R/W	19 OF 30
ARCHBOLD BOROUGH				
REVISIONS				
BY	DATE			



PLOT PLAN

RIGHT-OF-WAY CLAIM INFORMATION			
COMMONWEALTH OF PENNSYLVANIA-DEPARTMENT OF TRANSPORTATION			
STATE RTE. 1012, SEC. 202, R/W, ARCHBOLD BOROUGH, LACKAWANNA COUNTY			
PROJECT NO. 1012-202 R/W, SHEET NO. 19 OF 30, CLAIM NO. 1012-202 R/W			
GRANTOR: S.D. JOSEPH & SONS, UNINCORPORATED			
INSTRUMENT		DEED	
NUMBER	20050163	INSTRUMENT	20050163
DATE OF RECORD	11/01/2005	DATE OF RECORD	11/01/2005
DATE OF CONVEYANCE	11/01/2005	DATE OF CONVEYANCE	11/01/2005
CONSIDERATION	\$50,000.00	CONSIDERATION	\$50,000.00
TAX STAMPS	\$500.00	TAX STAMPS	\$500.00
AREAS		ACREAGE	
CALCULATED		0.312	
LEGAL R/W		0.300	
EFFECTIVE		0.381	
TOTAL REQ'D R/W		0.381	
TOTAL RESIDUE		0.381	
VERIFICATION DATE		11/01/2014	
DRAWN BY		JEL	

LEGEND: REQUIRED RIGHT-OF-WAY

SCALE 0 25 50 FEET

PRIVATE PROPERTY LINES ARE PLOTTED FROM THE RECORD, RECORDED SUBDIVISION OR LOT PLANS, EXISTING TOPOGRAPHICAL FEATURES AND LIMITED FIELD DATA. PRIVATE PROPERTY LINES WERE NOT SURVEYED BY THE PROFESSIONAL LAND SURVEYOR RESPONSIBLE FOR THE PROJECT. THIS PROPERTY PLOT PLAN IS NOT TO BE SUBSTITUTED FOR A BOUNDARY SURVEY.



**pennsylvania**  
DEPARTMENT OF REVENUE  
Bureau of Individual Taxes  
PO BOX 280603  
Harrisburg, PA 17128-0603

# REALTY TRANSFER TAX STATEMENT OF VALUE

See reverse for instructions.

## RECORDER'S USE ONLY

State Tax Paid \_\_\_\_\_  
Book Number \_\_\_\_\_  
Page Number Inst # 201505846  
Date Recorded 4-23-15

Complete each section and file in duplicate with Recorder of Deeds when (1) the full value/consideration is not set forth in the deed, (2) the deed is without consideration or by gift, or (3) a tax exemption is claimed. If more space is needed, please attach additional sheets. A Statement of Value (SOV) is not required if the transfer is wholly exempt from tax based on family relationship or public utility easement. However, it is recommended that a SOV accompany all documents filed for recording.

### A. CORRESPONDENT - All inquiries may be directed to the following person:

Name <b>Keystone Acquisition Services, Corp.</b>		Telephone Number: <b>(412) 364-8612</b>	
Mailing Address <b>3200 McKnight East Drive, Suite 3204</b>	City <b>Pittsburgh</b>	State <b>PA</b>	ZIP Code <b>15237</b>

### B. TRANSFER DATA

Date of Acceptance of Document <b>03 / 13 / 2015</b>			
Grantor(s)/Lessor(s) <b>DK &amp; DK, LLC</b>	Telephone Number: [REDACTED]	Grantee(s)/Lessee(s) <b>PA Dept. of Transportation</b>	Telephone Number: [REDACTED]
Mailing Address <b>10 Kennedy Drive</b>		Mailing Address <b>55 Keystone Industrial Park</b>	
City <b>Archbald</b>	State <b>PA</b>	ZIP Code <b>18403</b>	City <b>Dunmore</b>
			State <b>PA</b>
			ZIP Code <b>18512</b>

### C. REAL ESTATE LOCATION

Street Address <b>10 Kennedy Drive</b>		City, Township, Borough <b>Archbald Borough</b>	
County <b>Lackawanna</b>	School District <b>Valley View</b>	Tax Parcel Number <b>10408-010-005 &amp; 10408-010-006</b>	

### D. VALUATION DATA

Was transaction part of an assignment or relocation? ☐ Y ☒ N

1. Actual Cash Consideration <b>1.00</b>	2. Other Consideration <b>+0.00</b>	3. Total Consideration <b>= 1.00</b>
4. County Assessed Value <b>35,450.00</b>	5. Common Level Ratio Factor <b>x 4.72</b>	6. Fair Market Value <b>= 167,324.00</b>

### E. EXEMPTION DATA - Refer to instructions for exemption status.

1a. Amount of Exemption Claimed <b>\$ 167,324.00</b>	1b. Percentage of Grantor's Interest in Real Estate <b>100 %</b>	1c. Percentage of Grantor's Interest Conveyed <b>100 %</b>
---	---	---

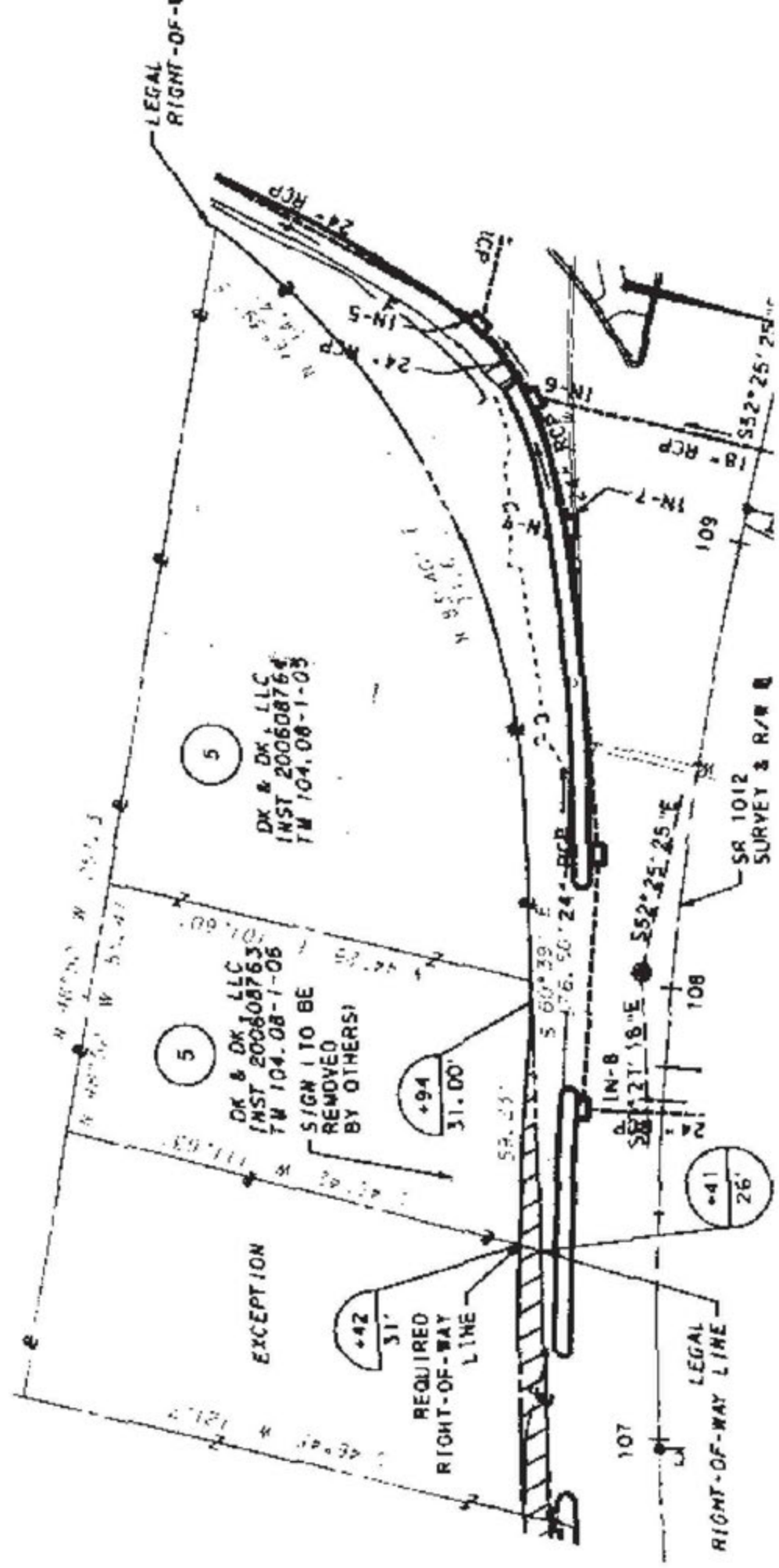
### 2. Check Appropriate Box Below for Exemption Claimed.

- ☐ Will or intestate succession. \_\_\_\_\_ (Name of Decedent) \_\_\_\_\_ (Estate File Number)
- ☐ Transfer to a trust. (Attach complete copy of trust agreement identifying all beneficiaries.)
- ☐ Transfer from a trust. Date of transfer into the trust \_\_\_\_\_  
If trust was amended attach a copy of original and amended trust.
- ☐ Transfer between principal and agent/straw party. (Attach complete copy of agency/straw party agreement.)
- ☒ Transfers to the commonwealth, the U.S. and instrumentalities by gift, dedication, condemnation or in lieu of condemnation. (If condemnation or in lieu of condemnation, attach copy of resolution.)
- ☐ Transfer from mortgagor to a holder of a mortgage in default. (Attach copy of mortgage and note/assignment.)
- ☐ Corrective or confirmatory deed. (Attach complete copy of the deed to be corrected or confirmed.)
- ☐ Statutory corporate consolidation, merger or division. (Attach copy of articles.)
- ☐ Other (Please explain exemption claimed.) \_\_\_\_\_

**Under penalties of law, I declare that I have examined this statement, including accompanying information, and to the best of my knowledge and belief, it is true, correct and complete.**

Signature of Correspondent or Responsible Party <i>Carrie Hadbury</i>	Date <b>4/23/15</b>
--	------------------------

**FAILURE TO COMPLETE THIS FORM PROPERLY OR ATTACH REQUESTED DOCUMENTATION MAY RESULT IN THE RECORDER'S REFUSAL TO RECORD THE DEED.**



## APPENDIX F

### Off-site Access Agreements

## APPENDIX F-1

### Off-site Access Agreement – Krenitsky Property



1000 Dunham Drive, Suite B1 Dunmore, PA 15512 • p 570.342.3101 | f 570.342.3945 | www.labellapc.com

November 1, 2017

William Krenitsky, Jr.  
232 South Main Street  
Archbald, PA 1403**VIA EMAIL ONLY – TRICIALORENZETTI@GMAIL.COM**

**RE: Request for Access – Krenitsky Property;**  
**Quinn's Café Stop Property – Site Characterization Activities;**  
224 Main Street  
Borough of Archbald, Lackawanna County, Pennsylvania  
PADEP Facility ID#35-20617  
USTIF Claim #2016-0136  
LaBella Associates Project Number: 2171853

Dear Property Owner,

LaBella Associates, P.C. (LaBella – formerly Pennsylvania Tectonics, Inc.) has been conducting an ongoing environmental investigation at the above referenced Quinn's Café Stop Property, which is located to the southwest of your property. Your property is located at 232 South Main Street and is identified by the Lackawanna County Parcel Identification Number 104.08-010-004. The Pennsylvania Department of Environmental Protection (PADEP) is requiring that we install one (1) additional groundwater monitoring well (PMW-11) on your property to further define the extent of groundwater contamination identified on the Quinn's Café Stop Property. LaBella will also require access to gauge, sample and eventually abandon MW-6 which has already been installed on your property. Please allow this letter to formally ask your permission to complete this investigation. The following is provided for your review:

- A map showing the proposed / existing well locations is attached to this letter (**Attachment A**). In addition, a photograph showing a typical well completion is provided to show that, once installed, the well locations will not impede your daily activities at the property (**Attachment B**). The final well locations will be based on authorization of the property owner, rig accessibility and the locations of underground and aboveground utilities / features.
- The proposed monitoring well will be installed via a hollow stem auger drilling rig with the capability for air-rotary drilling. It is estimated that the well installation can be completed within one (1) 8-hour workday, depending on drilling conditions. Your property will be restored to its original condition upon completion of the well installation activities.

- All drilling waste and groundwater effluent generated in association with the proposed activities will be promptly removed and transported to the Quinn's Café Stop Property for off-site disposal considerations. No project wastes will be stored on your property.
- The wells will remain at the site for a minimum of four (4) quarters (i.e. one (1) year). However, due to the unknown extent of contamination, the wells may remain onsite until the site has been remediated to applicable PADEP standards. LaBella will require access to the well locations periodically to develop the wells, sample the wells and collect water levels. No disruption of your routine activities will result by us completing these activities.
- Subsequent to the completion of the investigation activities, the proposed / existing groundwater monitoring wells will be properly abandoned in accordance with Act 610, the *Pennsylvania Well Drillers License Act*. At that time, the flush-grade manways will be removed and the areas will be restored to original condition.
- All of the above mentioned activities, including the well installation, sampling, closure and site restoration, will be completed at no expense to the property owner, owner's representative or its affiliates.
- LaBella will provide you with insurance certificates for ourselves and for our drilling subcontractor at your request.

In accordance with the completion of these activities, LaBella Associates, P.C. (LaBella), for itself, its successors and assigns hereby agrees to indemnify and hold harmless the property owner, directors, members, shareholders, employees, successors and assigns (hereinafter referred to as "Landowner") from and against all losses, liabilities, claims, demands, causes of action, damages, costs, including reasonable attorney's fees recoverable under applicable law, to the extent caused by the negligent acts and omissions of LaBella, its agents or employees in connection with the site characterization work being done by contractor on Landowner's property, including, but not limited to, those in connection with loss of life, bodily injury, personal injury, damage to property, contamination or adverse effects on the environment, any liability for fines, fees or penalties for violations of any statutes, ordinances, codes, rules, regulations or standards applicable to the services performed by LaBella, its agents and employees.

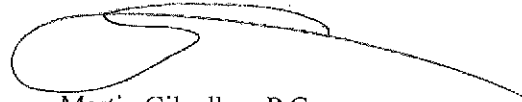
I trust this information meets your needs. If you are in agreement, please sign below and return to our Dunmore, Pennsylvania office via regular mail, email or fax. Also, please do not hesitate to contact me if you have any questions or comments concerning the contents of this letter or the project in general. Should you have any questions, the contact at the PADEP Wilkes-Barre Regional Office is Mr. Thomas Coar, Environmental Group Manager (570-826-2511).

We look forward to hearing from you soon on this matter and thank you in advance for your time.

Sincerely,



Kevin Cucura  
Project Manager  
LaBella Associates, P.C.



Martin Gilgallon, P.G.  
Regional Project Manager  
LaBella Associates, P.C.

Letter Reviewed and Accepted By:



Property Owner

KC/mg – 2171853 – Krenitsky

Attachments: Proposed Well Location Map  
Well Completion Photograph

cc: Mr. Joseph Motts / Quinn's Café Stop  
Mr. Tom Coar – PADEP  
Mr. Shane Marion – ICF International  
LaBella Associates Project File #2171853

## APPENDIX F-2

### Off-site Access Agreement – Fetcho Property



April 7, 2017

Mr. Joe Fetcho  
211 Constitution Avenue  
Jessup, PA 18434

VIA CERTIFIED MAIL #7015 0640 0006 3736 4424 & FAX (570.489.6899)

RE: Request for Access – Fetcho Property:  
Quinn's Café Stop Property – Site Characterization Activities;  
224 Main Street  
Borough of Archbald, Lackawanna County, Pennsylvania  
PADEP Facility ID#35-20617  
USTIF Claim #2016-0136  
Pennsylvania Tectonics Project Number: 26116

Dear Property Owner,

Pennsylvania Tectonics, Incorporated has been conducting an ongoing environmental investigation at the above referenced Quinn's Café Stop Property, which is located to the northwest of your property on the opposite side of Main Street. Your property consists of two (2) parcels of land which are identified by the Lackawanna County Parcel Identification Numbers 104.08-020-014 and 104.08-020-015.01. The Pennsylvania Department of Environmental Protection (PADEP) is requiring that we install two (2) groundwater monitoring wells (PMW-7 and PMW-8) on your property to further define the extent of groundwater contamination identified on the Quinn's Café Stop Property. Please allow this letter to formally ask your permission to complete this investigation. The following is provided for your review:

- A map showing the proposed well locations is attached to this letter (**Attachment A**). In addition, a photograph showing a typical well completion is provided to show that, once installed, the well locations will not impede your daily activities at the property (**Attachment B**). The final well locations will be based on authorization of the property owner, rig accessibility and the locations of underground and aboveground utilities / features.
- The two (2) monitoring wells will be installed via a hollow stem auger drilling rig with the capability for air-rotary drilling. It is estimated that the well installations can be completed within two (2) 8-hour workdays, depending on drilling conditions. Your property will be restored to its original condition upon completion of the well installation activities.
- All drilling waste and groundwater effluent generated in association with the proposed activities will be promptly removed and transported to the Quinn's

**environmental consultants**



Café Stop Property for off-site disposal considerations. No project wastes will be stored on your property.

- The wells will remain at the site for a minimum of four (4) quarters (i.e. one (1) year). However, due to the unknown extent of contamination, the wells may remain onsite until the site has been remediated to applicable PADEP standards. Pennsylvania Tectonics will require access to the well locations periodically to develop the wells, sample the wells and collect water levels. No disruption of your routine activities will result by us completing these activities.
- Subsequent to the completion of the investigation activities, the proposed groundwater monitoring wells will be properly abandoned in accordance with Act 610, the *Pennsylvania Well Drillers License Act*. At that time, the flush-grade manways will be removed and the areas will be restored to original condition.
- All of the above mentioned activities, including the well installation, sampling, closure and site restoration, will be completed at no expense to the property owner, owner's representative or its affiliates.
- Pennsylvania Tectonics will provide you with insurance certificates for ourselves and for our drilling subcontractor prior to the initiation of the work.

In accordance with the completion of these activities, Pennsylvania Tectonics, Incorporated, for itself, its successors and assigns hereby agrees to indemnify, defend and hold harmless the landowners, landowners' officers, directors, members, shareholders, employees, successors and assigns (hereinafter referred to as landowner) from and against all losses, liabilities, claims, demands, causes of action, damages, costs, including reasonable attorney's fees, and expenses of every kind and nature, whether or not covered by insurance, arising out of, resulting from or caused by, in whole or in part, any act, omission, negligence or fault of Pennsylvania Tectonics, its agents or employees in connection with the site characterization work being done by contractor on landowner's property, including, but not limited to, those in connection with loss of life, bodily injury, personal injury, damage to property, contamination or adverse effects on the environment, any liability for fines, fees or penalties for violations of any statutes, ordinances, codes, rules, regulations or standards applicable to the services performed by Pennsylvania Tectonics, its agents and employees.

I trust this information meets your needs. If you are in agreement, please sign below and return to our Archbald, Pennsylvania office via regular mail, email or fax. Also, please do not hesitate to contact me if you have any questions or comments concerning the contents of this letter or the project in general. Should you have any questions, the contact at the PADEP Wilkes-Barre Regional Office is Mr. Thomas Coar, Environmental Group Manager (570-826-2511).

We look forward to hearing from you soon on this matter and thank you in advance for your time.

Sincerely,

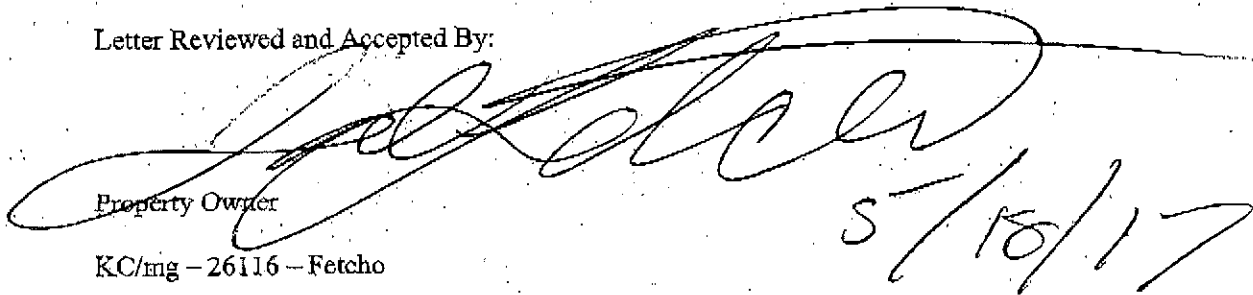


Kevin Cucura  
Project Manager  
Pennsylvania Tectonics, Inc.



Martin Gilgallon, P.G.  
Project Director  
Pennsylvania Tectonics, Inc.

Letter Reviewed and Accepted By:



5/10/17

Property Owner

KC/mg - 26116 - Fetcho

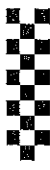
Attachments: Proposed Well Location Map  
Well Completion Photograph

cc: Mr. Joseph Motts / Quinn's Café Stop  
Mr. Tom Coar - PADEP  
Mr. Shane Marion - ICF International  
Pennsylvania Tectonics Project File #26116



## APPENDIX F-3

### Off-site Access Agreement – Chekan Property



RECEIVED APR 13 2017

# **Pennsylvania** tectonics

April 7, 2017

Mr. John Chekan  
227 South Main Street  
Archbald, PA 1403

**VIA CERTIFIED MAIL #7015 0640 0006 3736 4776**

**RE: Request for Access -- Chekan Property:  
Quinn's Café Stop Property -- Site Characterization Activities;  
224 Main Street  
Borough of Archbald, Lackawanna County, Pennsylvania  
PADEP Facility ID#35-20617  
USTIF Claim #2016-0136  
Pennsylvania Tectonics Project Number: 26116**

Dear Property Owner,

Pennsylvania Tectonics, Incorporated has been conducting an ongoing environmental investigation at the above referenced Quinn's Café Stop Property, which is located to the northwest of your property. Your property is located at 227 South Main Street and is identified by the Lackawanna County Parcel Identification Number 104.08-020-015. The Pennsylvania Department of Environmental Protection (PADEP) is requiring that we install one (1) groundwater monitoring well (PMW-9) on your property to further define the extent of groundwater contamination identified on the Quinn's Café Stop Property. Please allow this letter to formally ask your permission to complete this investigation. The following is provided for your review:

- A map showing the proposed well location is attached to this letter (**Attachment A**). In addition, a photograph showing a typical well completion is provided to show that, once installed, the well locations will not impede your daily activities at the property (**Attachment B**). The final well locations will be based on authorization of the property owner, rig accessibility and the locations of underground and aboveground utilities / features.
- The monitoring well will be installed via a hollow stem auger drilling rig with the capability for air-rotary drilling. It is estimated that the well installation can be completed within one (1) 8-hour workday, depending on drilling conditions. Your property will be restored to its original condition upon completion of the well installation activities.
- All drilling waste and groundwater effluent generated in association with the proposed activities will be promptly removed and transported to the Quinn's

**environmental consultants**

Café Stop Property for off-site disposal considerations. No project wastes will be stored on your property.

- The well will remain at the site for a minimum of four (4) quarters (i.e. one (1) year). However, due to the unknown extent of contamination, the well may remain onsite until the site has been remediated to applicable PADEP standards. Pennsylvania Tectonics will require access to the well location periodically to develop the well, sample the wells and collect water levels. No disruption of your routine activities will result by us completing these activities.
- Subsequent to the completion of the investigation activities, the proposed groundwater monitoring well will be properly abandoned in accordance with Act 610, the *Pennsylvania Well Drillers License Act*. At that time, the flush-grade manway will be removed and the area will be restored to its original condition.
- All of the above mentioned activities, including the well installation, sampling, closure and site restoration, will be completed at no expense to the property owner, owner's representative or its affiliates.
- Pennsylvania Tectonics will provide you with insurance certificates for ourselves and for our drilling subcontractor prior to the initiation of the work.

In accordance with the completion of these activities, Pennsylvania Tectonics, Incorporated, for itself, its successors and assigns hereby agrees to indemnify, defend and hold harmless the landowners, landowners' officers, directors, members, shareholders, employees, successors and assigns (hereinafter referred to as landowner) from and against all losses, liabilities, claims, demands, causes of action, damages, costs, including reasonable attorney's fees, and expenses of every kind and nature, whether or not covered by insurance, arising out of, resulting from or caused by, in whole or in part, any act, omission, negligence or fault of Pennsylvania Tectonics, its agents or employees in connection with the site characterization work being done by contractor on landowner's property, including, but not limited to, those in connection with loss of life, bodily injury, personal injury, damage to property, contamination or adverse effects on the environment, any liability for fines, fees or penalties for violations of any statutes, ordinances, codes, rules, regulations or standards applicable to the services performed by Pennsylvania Tectonics, its agents and employees.

I trust this information meets your needs. If you are in agreement, please sign below and return to our Archbald, Pennsylvania office via regular mail, email or fax. Also, please do not hesitate to contact me if you have any questions or comments concerning the contents of this letter or the project in general. Should you have any questions, the contact at the PADEP Wilkes-Barre Regional Office is Mr. Thomas Coar, Environmental Group Manager (570-826-2511).

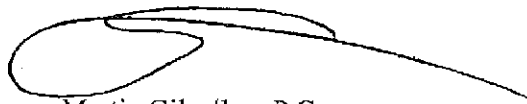


We look forward to hearing from you soon on this matter and thank you in advance for your time.

Sincerely,



Kevin Cucura  
Project Manager  
Pennsylvania Tectonics, Inc.



Martin Gilgallon, P.G.  
Project Director  
Pennsylvania Tectonics, Inc.

Letter Reviewed and Accepted By: *Theresa F Chekan*  
*Theresa F Chekan*

Property Owner

KC/mg - 26116 - Chekan

Attachments: Proposed Well Location Map  
Well Completion Photograph

cc: Mr. Joseph Motts / Quinn's Café Stop  
Mr. Tom Coar - PADEP  
Mr. Shane Marion - ICF International  
Pennsylvania Tectonics Project File #26116

## APPENDIX F-4

Off-site Access Agreement – NBT Bank Property



April 7, 2017

Mr. Brad Hall  
Facilities Manager  
NBT Bank  
52 South Broad Street  
Norwich, NY 13815

VIA CERTIFIED MAIL #7015 0640 0006 3736 4400

**RE: Request for Access – NBT Bank Property:**  
**Quinn's Café Stop Property – Site Characterization Activities;**  
224 Main Street  
Borough of Archbald, Lackawanna County, Pennsylvania  
PADEP Facility ID#35-20617  
USTIF Claim #2016-0136  
Pennsylvania Tectonics Project Number: 26116

Dear Mr. Hall,

Pennsylvania Tectonics, Incorporated has been conducting an ongoing environmental investigation at the above referenced Quinn's Café Stop Property, which is located to the southeast of your property on the opposite side of Kennedy Drive. Your property is located at 3 Kennedy Drive and is identified by the Lackawanna County Parcel Identification Number 104.08-010-023. The Pennsylvania Department of Environmental Protection (PADEP) is requiring that we install one (1) groundwater monitoring well (PMW-10) on your property to further define the extent of groundwater contamination identified on the Quinn's Café Stop Property. Please allow this letter to formally ask your permission to complete this investigation. The following is provided for your review:

- A map showing the proposed well location is attached to this letter (**Attachment A**). In addition, a photograph showing a typical well completion is provided to show that, once installed, the well locations will not impede your daily activities at the property (**Attachment B**). The final well locations will be based on authorization of the property owner, rig accessibility and the locations of underground and aboveground utilities / features.
- The monitoring well will be installed via a hollow stem auger drilling rig with the capability for air-rotary drilling. It is estimated that the well installation can be completed within one (1) 8-hour workday, depending on drilling conditions. Your property will be restored to its original condition upon completion of the well installation activities.

environmental consultants

- All drilling waste and groundwater effluent generated in association with the proposed activities will be promptly removed and transported to the Quinn's Café Stop Property for off-site disposal considerations. No project wastes will be stored on your property.
- The well will remain at the site for a minimum of four (4) quarters (i.e. one (1) year). However, due to the unknown extent of contamination, the well may remain onsite until the site has been remediated to applicable PADEP standards. Pennsylvania Tectonics will require access to the well location periodically to develop the well, sample the wells and collect water levels. No disruption of your routine activities will result by us completing these activities.
- Subsequent to the completion of the investigation activities, the proposed groundwater monitoring well will be properly abandoned in accordance with Act 610, the *Pennsylvania Well Drillers License Act*. At that time, the flush-grade manway will be removed and the area will be restored to its original condition.
- All of the above mentioned activities, including the well installation, sampling, closure and site restoration, will be completed at no expense to the property owner, owner's representative or its affiliates.
- Pennsylvania Tectonics will provide you with insurance certificates for ourselves and for our drilling subcontractor prior to the initiation of the work.

In accordance with the completion of these activities, Pennsylvania Tectonics, Incorporated, for itself, its successors and assigns hereby agrees to indemnify, defend and hold harmless the landowners, landowners' officers, directors, members, shareholders, employees, successors and assigns (hereinafter referred to as landowner) from and against all losses, liabilities, claims, demands, causes of action, damages, costs, including reasonable attorney's fees, and expenses of every kind and nature, whether or not covered by insurance, arising out of, resulting from or caused by, in whole or in part, any act, omission, negligence or fault of Pennsylvania Tectonics, its agents or employees in connection with the site characterization work being done by contractor on landowner's property, including, but not limited to, those in connection with loss of life, bodily injury, personal injury, damage to property, contamination or adverse effects on the environment, any liability for fines, fees or penalties for violations of any statutes, ordinances, codes, rules, regulations or standards applicable to the services performed by Pennsylvania Tectonics, its agents and employees.

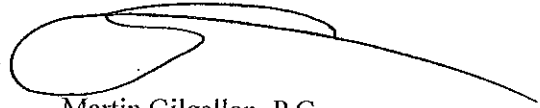
I trust this information meets your needs. If you are in agreement, please sign below and return to our Archbald, Pennsylvania office via regular mail, email or fax. Also, please do not hesitate to contact me if you have any questions or comments concerning the contents of this letter or the project in general. Should you have any questions, the contact at the PADEP Wilkes-Barre Regional Office is Mr. Thomas Coar, Environmental Group Manager (570-826-2511).

We look forward to hearing from you soon on this matter and thank you in advance for your time.

Sincerely,



Kevin Cucura  
Project Manager  
Pennsylvania Tectonics, Inc.



Martin Gilgallon, P.G.  
Project Director  
Pennsylvania Tectonics, Inc.

Letter Reviewed and Accepted By:



Brad Hall, Facilities Manager  
for NBT Bank, N.A.

Property Owner

KC/mg -- 26116 -- NBT

Attachments: Proposed Well Location Map  
Well Completion Photograph

cc: Mr. Joseph Motts / Quinn's Café Stop  
Mr. Tom Coar -- PADEP  
Mr. Shane Marion -- ICF International  
Pennsylvania Tectonics Project File #26116



## APPENDIX F-5

### Off-site Access Agreement – Borough of Archbald

November 1, 2017

Mr. Jack J. Giordano  
Archbald Borough Manager  
400 Church Street  
Archbald, PA 18403

**VIA EMAIL ONLY**

**RE: Request for Access – Charles Street & Delaware Street:  
Quinn's Café Stop Property – Site Characterization Activities;**  
224 Main Street  
Borough of Archbald, Lackawanna County, Pennsylvania  
PADEP Facility ID#35-20617  
USTIF Claim #2016-0136  
LaBella Associates Project Number: 2171853

Dear Mr. Giordano,

LaBella Associates, PC (LaBella – formerly Pennsylvania Tectonics, Incorporated) has been conducting an ongoing environmental investigation at the above referenced Quinn's Café Stop Property (subject property). The subject property is located in the vicinity of Charles Street and Delaware Street, which are owned by the Borough of Archbald (Borough). The Pennsylvania Department of Environmental Protection (PADEP) is requiring that we install one (1) groundwater monitoring well in Charles Street and one (1) groundwater monitoring well in Delaware Street to further define the extent of groundwater contamination identified on the Quinn's Café Stop Property. Please allow this letter to formally ask your permission to complete this investigation. The following is provided for your review:

- A map showing the proposed well locations is attached to this letter (**Attachment A**). In addition, a photograph showing a typical well completion is provided to show that, once installed, the well locations will not impede traffic conditions at the roadways (**Attachment B**). The final well locations will be based on authorization of the Borough, rig accessibility and the locations of underground and aboveground utilities / features.
- The two (2) monitoring wells will be installed via a hollow stem auger drilling rig with the capability for air-rotary drilling. It is estimated that the well installations can be completed within three (3) 8-hour workdays, depending on drilling conditions. The roadways will be restored to original condition upon completion of the well installation activities.

- All drilling waste and groundwater effluent generated in association with the proposed activities will be promptly removed and transported to the Quinn's Café Stop Property for off-site disposal considerations. No project wastes will be stored on Borough property.
- The wells will remain for a minimum of four (4) quarters (i.e. one (1) year). However, due to the unknown extent of contamination, the wells may remain onsite until the site has been remediated to applicable PADEP standards. LaBella will require access to the well locations periodically to develop the wells, sample the wells and collect water levels.
- Subsequent to the completion of the investigation activities, the proposed groundwater monitoring wells will be properly abandoned in accordance with Act 610, the *Pennsylvania Well Drillers License Act*. At that time, the flush-grade manways will be removed and the areas will be restored to original condition.
- All of the above mentioned activities, including the well installation, sampling, closure and site restoration, will be completed at no expense to the Borough of Archbald, Borough representatives or its affiliates.
- LaBella will provide you with insurance certificates for ourselves and for our drilling subcontractor at your request.

In accordance with the completion of these activities, LaBella Associates, P.C. (LaBella), for itself, its successors and assigns hereby agrees to indemnify and hold harmless the Borough of Archbald, borough officers, directors, members, shareholders, employees, successors and assigns (hereinafter referred to as "Landowner") from and against all losses, liabilities, claims, demands, causes of action, damages, costs, including reasonable attorney's fees recoverable under applicable law, to the extent caused by the negligent acts and omissions of LaBella, its agents or employees in connection with the site characterization work being done by contractor on Landowner's property, including, but not limited to, those in connection with loss of life, bodily injury, personal injury, damage to property, contamination or adverse effects on the environment, any liability for fines, fees or penalties for violations of any statutes, ordinances, codes, rules, regulations or standards applicable to the services performed by LaBella, its agents and employees.

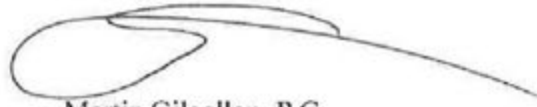
I trust this information meets your needs. If you are in agreement, please sign below and return to our Dunmore, Pennsylvania office via regular mail, email or fax. Also, please do not hesitate to contact me if you have any questions or comments concerning the contents of this letter or the project in general. Should you have any questions, the contact at the PADEP Wilkes-Barre Regional Office is Mr. Thomas Coar, Environmental Group Manager (570-826-2511).

We look forward to hearing from you soon on this matter and thank you in advance for your time.

Sincerely,



Kevin Cucura  
Project Manager  
LaBella Associates, P.C.



Martin Gilgallon, P.G.  
Regional Environmental Manager  
LaBella Associates, P.C.

Letter Reviewed and Accepted By:



Borough of Archbald

KC/kc - 2171853 - Archbald Borough

Attachments: Proposed Well Location Map  
Well Completion Photograph  
Excavations and Openings Street Permit

cc: Mr. Joseph Motts / Quinn's Café Stop  
Mr. Tom Coar - PADEP  
Mr. Shane Marion - ICF International  
LaBella Associates Project File #2171853



BOROUGH OF ARCHBALD  
400 CHURCH STREET  
ARCHBALD, PA 18403  
PHONE (717) 876-1800 FAX (717) 876-5518

**EXCAVATIONS AND OPENINGS STREET PERMIT**

No. 2017-11-01

Name LABELLA ASSOCIATES, P.C. Street CHARLES & DELAWARE STREETS Date 11/01/2017  
(SERVICE)

Name ODYSSEY ENVIRONMENTAL SERVICES is hereby permitted to excavate or open CHARLES / DELAWARE  
(CONTRACTOR MAKING CUT)

Street. Avenue, Court or Alley on 11/9/2017 as follows (2) MONITORING WELLS - 8" DIAMETER EACH  
(DIMENSIONS)

for the purpose of installing, repairing, search for water, sewage, gas, telephone lines; also the occupancy and storing of building or repair materials thereon. Excavating and opening to be completed promptly and streets restored promptly at the cost of the applicants restoration of CHARLES / DELAWARE to it's former condition shall be done by  
(AVENUE/ STREET)  
reliable people experienced in the business of constructing streets. Excavations and openings to be properly barricaded. Street not to be closed without special permission. Opening or excavation not to remain open over twenty-four (24) hour period.

Contractor to repair CHARLES / DELAWARE STREETS Avenue/Street

Cost of Permit \$ 250<sup>00</sup>

*Anthony J. Giordano*  
Approved Archbald Borough

This permit expires Nov. 30 2017



## APPENDIX F-6

### PennDOT Highway Occupancy Permit



**pennsylvania**

DEPARTMENT OF TRANSPORTATION

**Date:** 07/03/2018  
**Subject:** Highway Occupancy Permit Application No. 162229 - Permit Issued  
**To:** DK & DK, LLC  
224 Main Street  
Archbald, PA 18403  
**From:** PennDOT Engineering District 4-0  
55 Keystone Industrial Park  
Dunmore, PA 18512

Dear Applicant,

Your application for a Highway Occupancy Permit has been approved and a permit issued by the Department. When you leave this window, you may click on Attachments to download and/or print the permit. Please note, a copy of the permit and relevant work plans shall be made available at the work site for inspection by any police officer or representative of the Department.

If you have any questions regarding this matter, you may contact Bob Kretschmer, District Permit Manager, at (570) 963-4067.

# Highway Occupancy Permit

Permit No.: **04059092**

Name and Address of Permittee: DK & DK, LLC 224 Main Street Archbald, PA 18403	County: Lackawanna	Issue Date: 7/3/2018
	County Contact No.: (570) 586-2211	Expiration Date: 7/3/2019
	Issuing District Office: 4-0	Application No.: 162229
	District Contact No.: (570) 963-4067	Account No.:
	Municipalities: Archbald Borough	Permit Fee: \$ 65.00

*Immediately upon completion of the work Permittee shall notify the permit office where application was made. Subject to all the conditions, agreements, restrictions, and regulations prescribed by the Pennsylvania Department of Transportation, (see in particular 67 Pa. Code, Chapter 212, 441 and 459 and State Highway Law, 36 P.S. Section 670 - 411, 420 and 421 ) and subject to the plans, special conditions, or restrictions herein set forth or attached hereto. This permit shall be located at the work site and shall be available for inspection by any police officer or Department representative.*

Location and Description of Work		Permit No.: <b>04059092</b>
1 of 1	State Route #: 1012 Segment(s): From 0030 To 0030 Offset(s): From 1425 To 1953	161: Open Test Hole

Permit Conditions		Permit No.: <b>04059092</b>
1 of 6	MINIMUM WORK ZONE TRAFFIC CONTROL TO BE IN ACCORDANCE WITH PUB. 213 ATTACHED FIGURE(S). SEE PUB 212 FOR ADDITIONAL DETAILS.	
2 of 6	ALL DISTURBED AREAS OUTSIDE THE PAVEMENT OR SHOULDER SHALL BE RESTORED TO A CONDITION AT LEAST EQUAL TO THAT WHICH EXISTED BEFORE THE START OF WORK.	
3 of 6	SHOULDERS MUST BE RESTORED IN ACCORDANCE WITH APPROPRIATE SECTION OF PUB. 408 AND ROADWAY CONSTRUCTION STANDARDS RC-25M.	
4 of 6	DEPARTMENT MUST BE NOTIFIED IN WRITING UPON COMPLETION OF WORK.	
5 of 6	THIS PERMIT AUTHORIZES WORK ONLY IN DEPARTMENT HIGHWAY RIGHT OF WAY.	
6 of 6	CONTACT COUNTY PERMIT INSPECTOR AT LEAST 3 WORK DAYS PRIOR TO START OF WORK AT 570-903-1140.	

Acknowledgement of Completion Permit work has been completed:  Date:  By:	_____ Leslie S. Richards
	_____ Secretary of Transportation
	_____ George J. Roberts, P.E.
	_____ District Executive


## APPENDIX G

### Test Boring Logs

LaBella Associates, P.C.				TEST BORING LOG		
Project: Quinn's Café Stop Property				Date Started: January 31, 2017		
Client: Quinn's Café Stop				Date Finished: January 31, 2017		
Purpose: Site Characterization Activities						
Contractor: Odyssey Environmental				Boring Number: TB-1		
Driller: Jake Shaffer				Job Number: 26116		
Inspector: Chris Herman				Sheet: 1 of 1		
TIME LOG		Begin	Finish	Depth	S.W.L. Elevation TOC	TOC/GL Surface
		10:00	10:05	3.0'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	SS-1		Rec: 2.8'	0.0' - 3.0'	Asphalt Surface	
1---	0'-5'	0.0		Light brown sand and silt	Dry	
---	(10:05)			with sub-angular pebbles to		
2---		0.0		2.5', change to pulverized		
---				gray sandstone		
3---		0.0		Refusal at 3.0'		
---						
4---						
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Sample Log:  
Sample ID #:  
116-0130-TB1  
Sample Depth:  
1.5' - 2.5'  
Sample Time: 1005

Log Approved By:  
Martin Gilgallon, P.G.





LaBella Associates, P.C.

## TEST BORING LOG

Project: Quinn's Café Stop Property

Date Started: January 30, 2017

Client: Quinn's Café Stop

Date Finished: January 30, 2017

Purpose: Site Characterization Activities

Contractor: Odyssey Environmental


Boring Number: TB-2


Driller: Jake Shaffer

Job Number: 26116

Inspector: Chris Herman

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L. Elevation TOC	TOC/GL Surface
		10:10	10:55	3.0'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	SS-1		Rec: N/A	0.0' - 3.0'	<p>Asphalt Surface Damp</p> <p><b>Sample Log:</b> Sample ID #: 116-0130-TB2A Sample Depth: 1.5' - 2.5' Sample Time: 1026</p> <p>Sample ID #: 116-0130-TB2B Sample Depth: 3.0' Sample Time: 1055</p> 	
0'--	0'-5'			Soft dig to 3.0'; dark brown sand and silt with abundant sub-angular pebbles, change to dark brown sand and silt with abundant sub-angular pebbles and cobbles; bedrock at 3.0'		
1'--		0.0				
2'--		0.0				
3'--		0.0				
4'--						
5'--						
6'--						
7'--						
8'--						
9'--						
10'--						
11'--						
12'--						
13'--						
14'--						
15'--						
16'--						
17'--						
18'--						
19'--						
				Log Approved By: Martin Gilgallon, P.G.		

LaBella Associates, P.C.				TEST BORING LOG		
Project: Quinn's Café Stop Property				Date Started: January 30, 2017		
Client: Quinn's Café Stop				Date Finished: January 30, 2017		
Purpose: Site Characterization Activities						
Contractor: Odyssey Environmental				Boring Number: TB-3		
Driller: Jake Shaffer				Job Number: 26116		
Inspector: Kevin Cucura / Chris Herman				Sheet: 1 of 1		
TIME LOG		Begin	Finish	Depth	S.W.L. Elevation TOC	TOC/GL Surface
		9:15	9:55	5.0'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	SS-1	0.0	Rec: N/A	0.0' - 5.0' Soft dig to 5.0'; very dark brown sand and silt with sub-angular pebbles, change to dark brown sand and silt with angular pebbles and cobbles	Asphalt Surface	
1---	0'-5'				Damp	
---		0.0				
2---						
---		0.0			Wet at 4.0'	
3---						
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---		0.0				
7---						
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10---						
---		0.0			Sample Log:	
11---						
---		0.0			Sample ID #:	
12---						
---		0.0			116-0130-TB3A	
13---						
---		0.0			Sample Depth:	
14---						
---		0.0			1.5' - 2.5'	
15---						
---		0.0			Sample Time: 0935	
16---						
---		0.0			Sample ID #:	
17---						
---		0.0			116-0130-TB3B	
18---						
---		0.0			Sample Depth:	
19---						
---		0.0			4.0' - 5.0'	
---						
---		0.0			Sample Time: 0955	
---						
				Log Approved By:		
				Martin Gilgallon, P.G.		

Project: Quinn's Café Stop Property

Date Started: January 31, 2017

Client: Quinn's Café Stop

Date Finished: January 31, 2017

Purpose: Site Characterization Activities

Contractor: Odyssey Environmental

Boring Number: TB-4

Driller: Jake Shaffer

Job Number: 26116

Inspector: Chris Herman

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L. Elevation TOC	TOC/GL Surface
		10:35	10:44	8.0'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	SS-1 0'-5'		Rec: 4.0'	0.0' - 5.0'	Asphalt Surface	
1---	(10:40)	0.0		Dark brown sand and silt with few sub-angular pebbles to 2.5', change to orange brown sand and silt with pulverized sandstone		
2---		2.0				
3---		0.0				
4---		0.0				
5---	SS-2	71	Rec: 2.9'	5.0' - 8.0'	Wet	
6---	5'-10'			Dark brown sand with		
7---	(10:44)	>999		sub-angular pebbles to 8.0', pulverized sandstone in shoe		
8---		>999				
9---		>999		Refusal at 8.0'		
10---						
11---						
12---						
13---						
14---						
15---						
16---						
17---						
18---						
19---						
---						
				Log Approved By:		
				Martin Gilgallon, P.G.		


**Sample Log:**  
 Sample ID #: 116-0130-TB4A  
 Sample Depth: 1.5' - 2.5'  
 Sample Time: 1040

Sample ID #: 116-0130-TB4B  
 Sample Depth: 5.0' - 6.0'  
 Sample Time: 1044



LaBella Associates, P.C.				TEST BORING LOG		
Project: Quinn's Café Stop Property				Date Started: January 30, 2017		
Client: Quinn's Café Stop				Date Finished: January 30, 2017		
Purpose: Site Characterization Activities						
Contractor: Odyssey Environmental				Boring Number: TB-5		
Driller: Jake Shaffer				Job Number: 26116		
Inspector: Chris Herman				Sheet: 1 of 1		
TIME LOG		Begin	Finish	Depth	S.W.L. Elevation TOC	TOC/GL Surface
		12:40	12:57	5.0'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	SS-1		Rec: N/A	0.0' - 5.0'	Asphalt Surface	
1---	0'-5'	14		Soft dig to 5.0'; very dark	Damp	
---				brown sand and silt with		
2---		12		abundant sub-angular		
---				pebbles and cobbles, change		
3---				to dark gray sand and silt		
---				with some sub-angular		
4---		708		pebbles	Wet at 4.0'	
---						
5---						
---						
6---						
---						
7---						
---						
8---						
---						
9---						
---						
10---					Sample Log:	
---					Sample ID #:	
11---					116-0130-TB5A	
---					Sample Depth:	
12---					1.5' - 2.5'	
---					Sample Time: 1246	
13---						
---					Sample ID #:	
14---					116-0130-TB5B	
---					Sample Depth:	
15---					4.0' - 5.0'	
---					Sample Time: 1257	
16---						
---						
17---						
---						
18---						
---						
19---						
---						

Log Approved By:  
Martin Gilgallon, P.G.



Project: Quinn's Café Stop Property

Date Started: January 31, 2017

Client: Quinn's Café Stop

Date Finished: January 31, 2017

Purpose: Site Characterization Activities

Contractor: Odyssey Environmental


Boring Number: TB-6

Driller: Jake Shaffer

Job Number: 26116

Inspector: Chris Herman

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L. Elevation TOC	TOC/GL Surface
		11:28	11:34	6.5'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	SS-1		Rec: 2.7'	0.0' - 5.0'	Asphalt Surface	
1---	0'-5'	6		Medium brown sand and silt	Moist	
---	(11:30)			with slag and pulverized		
2---		6		sandstone to 4.0', change to		
---				dark gray sand and silt with		
3---		5		pulverized sandstone		
---				fragments		
4---		16			Wet at 4.0'	
---						
5---	SS-2	40	Rec: 1.0'	5.0' - 6.5'	Wet	
---	5'-10'			Light gray sand; pulverized		
6---	(11:34)	885		sandstone in shoe		
---		>999		Refusal at 6.5'		
7---						
---						
8---						
---						
9---						
---						
10---					<b>Sample Log:</b> Sample ID #: 116-0130-TB6A Sample Depth: 1.5' - 2.5' Sample Time: 1130	
---						
11---						
---						
12---					Sample ID #: 116-0130-TB6B Sample Depth: 4.0' - 5.0' Sample Time: 1132	
---						
13---						
---						
14---						
---						
15---						
---						
16---					Log Approved By: Martin Gilgallon, P.G.	
---						
17---						
---						
18---						
---						
19---						
---						



Project: Quinn's Café Stop Property

Date Started: January 31, 2017

Client: Quinn's Café Stop

Date Finished: January 31, 2017

Purpose: Site Characterization Activities

Contractor: Odyssey Environmental

Boring Number: TB-7

Driller: Jake Shaffer

Job Number: 26116

Inspector: Chris Herman

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L. Elevation TOC	TOC/GL Surface
		10:59	11:05	7.5'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	SS-1		Rec: 2.7'	0.0' - 5.0'	Asphalt Surface	
1---	0'-5'	2		Brown sand and silt with	Dry / Damp	
2---	(11:03)	4		angular pebbles to 3.5',		
3---				change to dark gray sand and		
4---		31		silt with clay	Wet at 3.5'	
5---	SS-2	337	Rec: 2.1'	5.0' - 7.5'	Wet to 6.0'	
6---	5'-10'	>999		Dark gray sand and silt with	Moist 6.0' - 7.5'	
7---	(11:05)	264		clay to 6.0', change to gray		
8---		127		silt and clay with sub-angular		
9---				pebbles		
10---				Refusal at 7.5'		
11---					Sample Log:	
12---					Sample ID #:	
13---					116-0130-TB7A	
14---					Sample Depth:	
15---					1.5' - 2.5'	
16---					Sample Time: 1103	
17---					Sample ID #:	
18---					116-0130-TB7B	
19---					Sample Depth:	
---					3.5' - 4.5'	
---					Sample Time: 1105	
				Log Approved By:		
				Martin Gilgallon, P.G.		



LaBella Associates, P.C.

## TEST BORING LOG

Project: Quinn's Café Stop Property

Date Started: January 31, 2017

Client: Quinn's Café Stop

Date Finished: January 31, 2017

Purpose: Site Characterization Activities

Contractor: Odyssey Environmental

Boring Number: TB-8

Driller: Jake Shaffer

Job Number: 26116

Inspector: Chris Herman

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L. Elevation TOC	TOC/GL Surface
		10:17	10:27	1.0'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	SS-1		Rec: 0.5'	0.0' - 1.0'	Asphalt Surface Dry	
1---	0'-5'			Pulverized sandstone		
---	(10:27)			Refusal at 1.0'	No Sample Collected	
2---						
---						
3---						
---						
4---						
---						
5---						
---						
6---						
---						
7---						
---						
8---						
---						
9---						
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10---						
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11---						
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12---						
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13---						
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14---						
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15---						
---						
16---						
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17---						
---						
18---						
---						
19---						
---						
				Log Approved By: Martin Gilgallon, P.G.		



## LaBella Associates, P.C.

## TEST BORING LOG

Project: Quinn's Café Stop Property		Date Started: 11/09/2017		Soft Dig		Geoprobe	
Client: Quinn's Café Stop		Date Finished: 11/09/2017				11/15/2017	
Purpose: Site Characterization Activities							
Contractor: Odyssey Environmental				Boring Number: TB-8A			
Driller: Jake Shaffer / Zach Hoppes				Job Number: 26116			
Inspector: Dean Cruciani				Sheet: 1 of 1			
TIME LOG		Begin	Finish	Depth	S.W.L.		TOC/GL
Soft Dig		15:05	15:42	6.0'	Elevation TOC		Surface
Geoprobe		13:10	13:21	7.5'			
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description		Notes	
---			Rec: N/A	0.0' - 6.0'		Gravel Surface	
1---		0.0		Soft dig to 6.0' on 11/09/2017;		Dry	
2---				Fill materials; gravel, asphalt			
3---		0.0		millings and sandy soil to 1.4',		Moist	
4---				change to asphalt to 1.9',			
5---				change to brown sand and			
6---		0.0	Rec: 2.4'	silt with abundant pebbles			
7---				and cobbles			
8---				6.0' - 7.5'		Dry	
9---				Brown sand and silt with			
10---				abundant pebbles			
11---				Refusal at 7.5'		Sample Log:	
12---						Sample ID #:	
13---						116-1109-TB8A	
14---						Sample Depth:	
15---						3.0' - 3.3'	
16---						Sample Time: 1535	
17---						Sample ID #:	
18---						116-1109-TB8B	
19---						Sample Depth:	
---						5.5' - 6.0'	
						Sample Time: 1542	
				Log Approved By:			
				Martin Gilgallon, P.G.			




## LaBella Associates, P.C.


## TEST BORING LOG

Project: Quinn's Café Stop Property		Soft Dig		Geoprobe	
Client: Quinn's Café Stop		Date Started: 11/09/2017		11/15/2017	
Purpose: Site Characterization Activities		Date Finished: 11/09/2017		11/15/2017	
Contractor: Odyssey Environmental		Boring Number: TB-9			
Driller: Jake Shaffer / Zach Hoppes		Job Number: 26116			
Inspector: Dean Cruciani		Sheet: 1 of 1			
TIME LOG		Begin	Finish	Depth	S.W.L.
Soft Dig		13:26	14:40	4.0'	Elevation TOC
Geoprobe		13:28	13:36	5.0'	TOC/GL Surface
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes
---			Rec: N/A	0.0' - 4.0'	Asphalt Surface
1---		0.0		Soft dig to 4.0' on 11/09/2017;	Damp
---				Asphalt to 0.8', change to	
2---		0.0		brown sand and silt with	
---				abundant pebbles and	
3---		0.0		cobbles to 3.3', change to	
---				weathered sandstone to 4.0'	
4---		0.0	Rec: 2.1'	4.0' - 5.0'	Damp to 3.0'
---				Brown sand and silt with	Moist - 3.0' - 5.0'
5---		0.0		abundant sub-angular pebbles	
---				and cobbles, change to gray	
6---				sandstone at 5.0'	
---					
7---				Refusal at 5.0'	
---					
8---					<b>Sample Log:</b>
---					Sample ID #:
9---					116-1109-TB9A
---					Sample Depth:
10---					2.0' - 2.5'
---					Sample Time: 1344
11---					
---					Sample ID #:
12---					116-1109-TB9B
---					Sample Depth:
13---					3.0' - 3.3'
---					Sample Time: 1440
14---					
---					
15---					
---					
16---					
---					
17---					
---					
18---					
---					
19---					
---					
				Log Approved By:	
				Martin Gilgallon, P.G.	



LaBella Associates, P.C.				TEST BORING LOG			
Project: Quinn's Café Stop Property				Soft Dig		Geoprobe	
Client: Quinn's Café Stop				Date Started: 11/09/2017		11/15/2017	
Purpose: Site Characterization Activities				Date Finished: 11/09/2017		11/15/2017	
Contractor: Odyssey Environmental				Boring Number: TB-10			
Driller: Jake Shaffer / Zach Hoppes				Job Number: 26116			
Inspector: Dean Cruciani				Sheet: 1 of 1			
TIME LOG		Begin	Finish	Depth	S.W.L.	TOC/GL	
Soft Dig		11:48	12:23	5.0'	Elevation TOC	Surface	
Geoprobe		13:44	13:51	7.5'			
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log		Lithologic Description	Notes	
---			Rec: N/A		0.0' - 5.0'	Asphalt Surface	
1---		0.0			Soft dig to 5.0' on 11/09/2017;	Damp	
2---		0.0			Asphalt to 0.8', change to		
3---		0.0			brown sand and silt with		
4---					abundant pebbles and cobbles		
5---		513			to 4.5', change to dark gray to		
6---		0.0	Rec: 1.9'		black sand and silt with		
7---					abundant pebbles and cobbles;		
8---					ash and carbonaceous		
9---					materials present		
10---					5.0' - 7.5'	Wet 6.5'	
11---					Brown and grayish brown sand	Odor Present	
12---					and silt with abundant	6.0' - 7.0'	
13---					sub-angular pebbles and		
14---					cobbles; gray sandstone at 7.5'		
15---					Refusal at 7.5'	Sample Log:	
16---						Sample ID #:	
17---						116-1109-TB10A	
18---						Sample Depth:	
19---						2.0' - 2.5'	
---						Sample Time: 1206	
						Sample ID #:	
						116-1109-TB10B	
						Sample Depth:	
						4.0' - 4.5'	
						Sample Time: 1223	
						Sample ID #:	
						116-1109-TB10C	
						Sample Depth:	
						6.0' - 6.5'	
						Sample Time: 1351	
							
					Log Approved By:		
					Martin Gilgallon, P.G.		



LaBella Associates, P.C.				TEST BORING LOG			
Project: Quinn's Café Stop Property				Soft Dig		Geoprobe	
Client: Quinn's Café Stop				Date Started: 11/09/2017		11/15/2017	
Purpose: Site Characterization Activities				Date Finished: 11/09/2017		11/15/2017	
Contractor: Odyssey Environmental				Boring Number: TB-11			
Driller: Jake Shaffer / Zach Hoppes				Job Number: 26116			
Inspector: Dean Cruciani				Sheet: 1 of 1			
TIME LOG		Begin	Finish	Depth	S.W.L.	TOC/GL	
Soft Dig		10:50	11:25	5.0'	Elevation TOC	Surface	
Geoprobe		14:02	14:14	7.5'			
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes		
---		0.0		0.0' - 5.0'	Asphalt Surface		
1---				Asphalt to 0.8', change to mixed brown and dark brown sand, silt and clay with slag, ash, carbonaceous materials and abundant pebbles and cobbles to 3.0', change to grayish brown and gray sand, silt and clay with abundant pebbles and cobbles	Damp		
2---		7.0					
3---							
4---		380.0			Wet at 4.0'		
5---		458	Rec: 2.0'	5.0' - 7.5'	Wet		
6---				Black to grayish black sand and silt with abundant sub-angular pebbles and cobbles	Strong Odors in Saturated Zone		
7---							
8---				Refusal at 7.5'	Sample Log:		
9---					Sample ID #:		
10---					116-1109-TB11A		
11---					Sample Depth:		
12---					2.0' - 2.5'		
13---					Sample Time: 1110		
14---					Sample ID #:		
15---					116-1109-TB11B		
16---					Sample Depth:		
17---					4.0' - 5.0'		
18---					Sample Time: 1125		
19---					Sample ID #:		
---					116-1109-TB11C		
					Sample Depth:		
					6.0' - 6.5'		
					Sample Time: 1414		
							
					Log Approved By:		
					Martin Gilgallon, P.G.		

## LaBella Associates, P.C.

## TEST BORING LOG

Project: Quinn's Café Stop Property		Soft Dig		Geoprobe	
Client: Quinn's Café Stop		Date Started: 11/09/2017		11/15/2017	
Purpose: Site Characterization Activities		Date Finished: 11/09/2017		11/15/2017	
Contractor: Odyssey Environmental		Boring Number: TB-12			
Driller: Jake Shaffer / Zach Hoppes		Job Number: 26116			
Inspector: Dean Cruciani		Sheet: 1 of 1			
TIME LOG		Begin	Finish	Depth	
Soft Dig		9:35	10:36	5.0'	
Geoprobe		14:17	14:24	6.8'	
		S.W.L.			TOC/GL
		Elevation TOC			Surface
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes
---			Rec: N/A	0.0' - 5.0'	Asphalt Surface
1---		0.0		Soft dig to 5.0' on 11/09/2017;	Damp
2---		0.0		Asphalt to 0.8', change to	
3---		0.0		mixed brown sand, silt and	
4---		0.0		clay with abundant cobbles,	
5---		0.0		pebbles and mixed fill material	
6---		0.0		(red brick, ash, carbonaceous	
7---		0.0		fill material) to 5.0'	
8---		0.0	Rec: 1.3'	5.0' - 6.8'	Wet at 4.5'
9---				Grayish brown sand and silt	Wet
10---				with abundant sub-angular	
11---				pebbles and cobbles	
12---					<b>Sample Log:</b>
13---					Sample ID #:
14---					116-1109-TB12A
15---					Sample Depth:
16---					2.0' - 2.5'
17---					Sample Time: 0950
18---					Sample ID #:
19---					116-1109-TB12B
					Sample Depth:
					4.0' - 5.0'
					Sample Time: 1036
					Sample ID #:
					116-1109-TB12C
					Sample Depth:
					6.0' - 6.5'
					Sample Time: 1424
				Log Approved By:	
				Martin Gilgallon, P.G.	



## LaBella Associates, P.C.

## TEST BORING LOG

Project: Quinn's Café Stop Property

Date Started: August 23, 2018

Client: Quinn's Café Stop

Date Finished: August 23, 2018

Purpose: Site Characterization Activities

Contractor: LaBella, LLC

Boring Number: TB-13

Driller: Dylan Hitchcock

Job Number: 26116 / 2171853

Inspector: Chris Herman

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L. Elevation TOC	TOC/GL Surface
		14:00	15:10	6.0'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	SS-1 0'-3'		Rec: NA	0.0' - 5.0'	Asphalt Surface	
1---		0.0		Light to medium brown sand	Soft Dig to 3.0'	
2---		0.0		and silt with abundant	Damp	
3---	SS-2 3'-5'	0.0	Rec: 2.0'	subangular cobbles and	Dry	
4---		0.0		pebbles to 3.0'; change to		
5---	SS-3 5'-10'	0.0	Rec: 1.0'	sand and silt with abundant	Dry	
6---		46.0		pulverized cobbles		
7---				5.0' - 6.0'		
8---				Tan to light gray sand and		
9---				pulverized sandstone		
10---				fragments		
11---				Refusal at 6.0'		
12---						
13---						
14---						
15---						
16---						
17---						
18---						
19---						
---						
				Log Approved By:		
				Martin Gilgallon, P.G.		

## Sample Log:

116-0823-TB13A

Sample Depth:

1.5' - 2.5'

Sample Time: 1415

116-0823-TB13B

Sample Depth:

5.0' - 6.0'

Sample Time: 1510



LaBella Associates, P.C.

## TEST BORING LOG

Project: Quinn's Café Stop Property

Date Started: August 23, 2018

Client: Quinn's Café Stop

Date Finished: August 23, 2018

Purpose: Site Characterization Activities

Contractor: LaBella, LLC

Boring Number: TB-14

Driller: Dylan Hitchcock

Job Number: 26116 / 2171853

Inspector: Chris Herman

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L. Elevation TOC	TOC/GL Surface
		12:20	13:38	7.0'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	SS-1 0'-5'		Rec: NA	0.0' - 5.0'	Asphalt Surface	
1---		0.0		Very dark brown sand and	Soft Dig to 4.0'	
2---		0.0		silt with very abundant	Damp	
3---		0.0		subangular cobbles and		
4---		0.0		pebbles		
5---	SS-2 5'-10'	0.0	Rec: 1.3'	5.0' - 7.0'	Wet	
6---		0.0		Medum gray silt and clay		
7---		31.1		with some subangular		
8---				pebbles		
9---				Refusal at 7.0'		
10---					Sample Log:	
11---					116-0823-TB14A	
12---					Sample Depth:	
13---					1.5' - 2.5'	
14---					Sample Time: 1236	
15---					116-0823-TB14B	
16---					Sample Depth:	
17---					5.0' - 6.0'	
18---					Sample Time: 1338	
19---						
---						
				Log Approved By:		
				Martin Gilgallon, P.G.		



## LaBella Associates, P.C.

## TEST BORING LOG

Project: Quinn's Café Stop Property

Date Started: August 23, 2018

Client: Quinn's Café Stop

Date Finished: August 23, 2018

Purpose: Site Characterization Activities

Contractor: LaBella, LLC


Boring Number: TB-15

Driller: Dylan Hitchcock

Job Number: 26116 / 2171853

Inspector: Chris Herman

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L. Elevation TOC	TOC/GL Surface
		10:04	10:10	8.2'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	SS-1 0'-5'		Rec: 2.1'	0.0' - 5.0' Modified gravel fill to 1.5'; change to very dark sand and silt with subangular pebbles; pulverized sandstone in shoe	Asphalt Surface Soft Dig to 4.0'	
1---		0.0			Damp	
2---		0.0			Damp	
3---		0.0			Damp	
4---		0.0				
5---	SS-2 5'-10'	0.0	Rec: 2.2'	5.0' - 8.2' Very dark sand and silt with subangular pebbles to 6.0'; change to light brown to tan silty clay	Wet	
6---		0.0				
7---		0.0				
8---		0.0			Very Moist	
9---				Refusal at 8.2'		
10---					<b>Sample Log:</b>	
11---					116-0823-TB15A	
12---					Sample Depth:	
13---					1.5' - 2.5'	
14---					Sample Time: 1006	
15---					116-0823-TB15B	
16---					Sample Depth:	
17---					5.0' - 6.0'	
18---					Sample Time: 1010	
19---						
---						
				Log Approved By: Martin Gilgallon, P.G.		



## LaBella Associates, P.C.

## TEST BORING LOG

Project: Quinn's Café Stop Property

Date Started: August 23, 2018

Client: Quinn's Café Stop

Date Finished: August 23, 2018

Purpose: Site Characterization Activities

Contractor: LaBella, LLC

Boring Number: TB-16

Driller: Dylan Hitchcock

Job Number: 26116 / 2171853

Inspector: Chris Herman

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L. Elevation TOC	TOC/GL Surface
		09:42	09:48	7.9'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	SS-1 0'-5'		Rec: 2.7'	0.0' - 5.0'	Gravel Surface	
1---		0.0		Sand and silt with very abundant subangular pebbles and cobbles to 3.0'; change to	Damp	
2---		0.0		very dark gray sand with some small subangular pebbles	Wet	
3---		0.0				
4---		0.0				
5---	SS-2 5'-10'	0.0	Rec: 2.0'	5.0' - 7.9'		
6---		2.0	Slight Odor	Very dark gray sand, silt and clay with some small subangular pebbles	Wet	
7---		0.7				
8---		0.7				
9---				Refusal at 7.9'		
10---					Sample Log:	
11---					116-0823-TB16A	
12---					Sample Depth:	
13---					1.5' - 2.5'	
14---					Sample Time: 0944	
15---					116-0823-TB16B	
16---					Sample Depth:	
17---					5.0' - 6.0'	
18---					Sample Time: 0948	
19---						
---						
				Log Approved By:		
				Martin Gilgallon, P.G.		



## LaBella Associates, P.C.

## TEST BORING LOG

Project: Quinn's Café Stop Property

Date Started: August 23, 2018

Client: Quinn's Café Stop

Date Finished: August 23, 2018

Purpose: Site Characterization Activities

Contractor: LaBella, LLC

Boring Number: TB-17

Driller: Dylan Hitchcock

Job Number: 26116 / 2171853

Inspector: Chris Herman

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L. Elevation TOC	TOC/GL Surface
		09:33	09:40	8.0'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	SS-1 0'-5'		Rec: 2.0'	0.0' - 5.0'	Gravel Surface	
1---		0.0		Modified gravel to 0.5'; change		
2---		0.0		to medium dark brown sand	Moist	
3---		0.0		and silt with some sub-rounded		
4---		0.0		pebbles to 2.5'; change to	Wet	
5---		0.0		dark gray and light gray sand		
6---	SS-2 5'-10'	0.0	Rec: 3.0'	5.0' - 10.0'	Moist	
7---		0.0		Tan clay with iron staining to		
8---		0.0		6.5'; change to very dark		
9---		0.0		gray sand and silt with		
10---				abundant sub-rounded	Damp	
11---				pebbles		
12---				Refusal at 8.0'		
13---						
14---						
15---						
16---						
17---						
18---						
19---						
---						
				Log Approved By:		
				Martin Gilgallon, P.G.		



## LaBella Associates, P.C.

## TEST BORING LOG

Project: Quinn's Café Stop Property

Date Started: August 23, 2018

Client: Quinn's Café Stop

Date Finished: August 23, 2018

Purpose: Site Characterization Activities

Contractor: LaBella, LLC

Boring Number: TB-18

Driller: Dylan Hitchcock

Job Number: 26116 / 2171853

Inspector: Chris Herman

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L. Elevation TOC	TOC/GL Surface
		09:21	09:25	7.5'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	SS-1 0'-5'		Rec: 2.5'	0.0' - 5.0' Modified gravel to 1.5'; change to light medium brown silty sand with some pulverized cobbles to 4.0'; change to pulverized coal and coal fines	Asphalt Surface	
1---		0.0			Moist	
2---		0.0				
3---		0.0				
4---		0.0				
5---	SS-2 5'-10'	0.0	Rec: 2.5'	5.0' - 10.0' Medium dark gray clay to 6.5'; change to pulverized reddish brown weathered sandstone	Moist	
6---		0.0				
7---		0.0				
8---		0.0				
9---				Refusal at 7.5'		
10---					Sample Log:	
11---					116-0823-TB18A	
12---					Sample Depth:	
13---					1.5' - 2.5'	
14---					Sample Time: 0923	
15---					116-0823-TB18B	
16---					Sample Depth:	
17---					5.0' - 6.0'	
18---					Sample Time: 0925	
19---						
---						
				Log Approved By: Martin Gilgallon, P.G.		



Project: Quinn's Café Stop Property

Date Started: August 23, 2018

Client: Quinn's Café Stop

Date Finished: August 23, 2018

Purpose: Site Characterization Activities

Contractor: LaBella, LLC

Boring Number: TB-19

Driller: Dylan Hitchcock

Job Number: 26116 / 2171853

Inspector: Chris Herman

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L. Elevation TOC	TOC/GL Surface
		10:30	10:34	8.1'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	SS-1 0'-5'		Rec: 3.4'	0.0' - 5.0'	Asphalt Surface	
1---		0.0		Pulverized asphalt to 0.5';		
2---		0.0		change to medium brown	Damp	
3---		0.0		sand and silt with abundant		
4---		0.0		pulverized sandstone		
5---	SS-2 5'-10'	0.0	Rec: 2.9'	5.0' - 10.0'		
6---		119.0	Odor	Light brownish gray sand and	Damp	
7---		425.0		silt with abundant subangular		
8---		925.0		pebbles		
9---				Refusal at 8.1'	Dry	
10---					Sample Log:	
11---					116-0823-TB19A	
12---					Sample Depth:	
13---					1.5' - 2.5'	
14---					Sample Time: 1031	
15---					116-0823-TB19B	
16---					Sample Depth:	
17---					5.0' - 6.0'	
18---					Sample Time: 1034	
19---						
				Log Approved By:		
				Martin Gilgallon, P.G.		



## LaBella Associates, P.C.

## TEST BORING LOG

Project: Quinn's Café Stop Property

Date Started: August 23, 2018

Client: Quinn's Café Stop

Date Finished: August 23, 2018

Purpose: Site Characterization Activities

Contractor: LaBella, LLC

Boring Number: TB-20

Driller: Dylan Hitchcock

Job Number: 26116 / 2171853

Inspector: Chris Herman

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L. Elevation TOC	TOC/GL Surface
		10:42	10:54	7.6'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	SS-1 0'-5'		Rec: 3.5'	0.0' - 5.0'	Asphalt Surface	
1---		0.0		Orange brown sand and silt with abundant pulverized pebbles and cobbles to 4.0';	Damp	
2---		0.0		change to pulverized orange brown sandstone		
3---		0.0			Moist	
4---		0.0				
5---	SS-2 5'-10'	0.0	Rec: 2.6'	5.0' - 10.0'	Damp	
6---		300.0		Light gray to light brown sand and silt with some subangular pebbles	Dry	
7---		118.0			Damp	
8---		119.0				
9---				Refusal at 7.6'		
10---					Sample Log:	
11---					116-0823-TB20A	
12---					Sample Depth:	
13---					1.5' - 2.5'	
14---					Sample Time: 1044	
15---					116-0823-TB20B	
16---					Sample Depth:	
17---					5.0' - 6.0'	
18---					Sample Time: 1054	
19---						
---						
				Log Approved By:		
				Martin Gilgallon, P.G.		



## APPENDIX H

### Monitoring Well Logs



Project: Quinn's Café Stop Property

Date Started: Geoprobe: 01.31.17 / Drilling: 02.01.17

Client: Quinn's Café Stop

Date Finished: Geoprobe: 01.31.17 / Drilling: 02.01.17

Purpose: Site Characterization Activities

Contractor: Odyssey Environmental

Boring Number: MW-1

Driller: Jake Shaffer


Job Number: 26116

Inspectors: Chris Herman (Geoprobe) / Kevin Cucura (Drill)

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L.	TOC/GL
Geoprobe Drilling		10:08	10:10	3.0'	Elevation TOC	Surface
		14:50	16:05	15.0'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	SS-1		Rec: 1.6'	0.0' - 3.0'	Asphalt Surface	
1---	0' - 3'	0.0		Brown sand and silt with sub-rounded pebbles to 2.5',	Geoprobe 0.0' - 3.0'	
2---		0.0		change to pulverized orange brown weathered bedrock - Geoprobe refusal	10" Diameter Hollow-Stem Auger 0.0' - 2.5'	
3---		0.0	Choppy Drilling 2.5' - 4.5'	3.0' - 4.5'	6" Diameter Air-Rotary 2.5' - 15.0'	
4---		--	Dry	Orange brown weathered bedrock		
5---		--	Hard Steady Drilling 4.5' - 9.5'	4.5' - 15.0'	Competent Bedrock at 4.5'	
6---		--		Gray medium grained sandstone		
7---		--	Rod Change at 7.0'		Dry	
8---		--	Dry			
9---		--				
10---		--	Choppy Drilling 9.5' - 10.0'		Water Bearing Fracture at 9.5'	
11---		--	Strong Odor			
12---		--	Hard Steady Drilling 10.0' - 15.0'			
13---		--	Rod Change at 12.0' - Wet		<b>Sample Log:</b> Sample ID #: 116-0130-MW-1 Sample Depth: 1.5' - 2.5' Sample Time: 1010	
14---		--				
15---		--				
16---		--		Note: A diverter was utilized during the air-rotary drilling from 2.5' - 15.0'. As such, no PID readings were collected.		
17---		--				
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LaBella Associates, P.C.			TEST BORING LOG			
Project: Quinn's Café Stop Property			Date Started: Soft Dig: 01.30.17 / Drilling: 02.01.17			
Client: Quinn's Café Stop			Date Finished: Soft Dig: 01.30.17 / Drilling: 02.01.17			
Purpose: Site Characterization Activities						
Contractor: Odyssey Environmental			Boring Number: MW-2			
Driller: Jake Shaffer			Job Number: 26116			
Inspector: Chris Herman (Soft) / Kevin Cucura (Drill)			Sheet: 1 of 1			
TIME LOG		Begin	Finish	Depth	S.W.L.	TOC/GL
Soft Dig		11:20	11:45	5.0'	Elevation TOC	Surface
Drilling		9:40	10:40	15.0'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---				0.0' - 5.0'	Asphalt Surface	
1--		4		Brown and gray sand and silt with some sub-rounded pebbles	Soft Dig 0.0' - 5.0'	
2--		3			10" Diameter Hollow-Stem Auger 0.0' - 5.0'	
3--						
4--		475	Wet at 4.0'			
5--		--	Choppy Drilling 5.0' - 9.5'	5.0' - 9.5'	6" Diameter Air-Rotary 5.0' - 15.0'	
6--		--		Weathered bedrock		
7--		--	Rod Change at 7.0'			
8--		--	Wet			
9--		--				
10--		--	Hard Steady Drilling 9.5' - 15.0'	9.5' - 15.0'	Competent Bedrock at 9.5'	
11--		--		Gray medium grained sandstone	Sample Log:	
12--		--	Rod Change at 12.0' - Wet		Sample ID #:	
13--		--			116-0130-MW2A	
14--		--			Sample Depth:	
15--		--			1.5' - 2.5'	
16--					Sample Time: 1130	
17--						
18--					Sample ID #:	
19--					116-0130-MW2B	
---					Sample Depth:	
					4.0' - 5.0'	
					Sample Time: 1145	
				Note: A diverter was utilized during the air-rotary drilling from 5.0' - 15.0'. As such, no PID readings were collected.		
				Log Approved By:		
				Martin Gilgallon, P.G.		



LaBella Associates, P.C.				TEST BORING LOG		
Project: Quinn's Café Stop Property				Date Started: Soft Dig: 01.30.17 / Drilling: 02.01.17		
Client: Quinn's Café Stop				Date Finished: Soft Dig: 01.30.17 / Drilling: 02.01.17		
Purpose: Site Characterization Activities						
Contractor: Odyssey Environmental				Boring Number: MW-3		
Driller: Jake Shaffer				Job Number: 26116		
Inspector: Chris Herman (Soft) / Kevin Cucura (Drill)				Sheet: 1 of 1		
TIME LOG		Begin	Finish	Depth	S.W.L.	TOC/GL
Soft Dig		13:15	13:40	5.0'	Elevation TOC	Surface
Drilling		12:15	13:45	15.5'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
		0.0		0.0' - 5.0'	Asphalt Surface	
---				Very dark brown sand and silt with abundant sub-angular pebbles and cobbles to 3.0',	Soft Dig 0.0' - 5.0'	
1---						
---				change to dark gray sand and silt with some sub-angular pebbles	10" Diameter Hollow-Stem Auger 0.0' - 9.0'	
2---		0.0				
---						
3---		6				
---						
4---			Wet at 4.0'			
---						
5---		55				
---						
6---		102				
---						
7---		21				
---						
8---		15				
---						
9---			Hard Steady Drilling 9.0' - 15.5'	9.0' - 15.5'	Competent Bedrock at 9.0'	
---				Gray medium grained sandstone	6" Diameter Air-Rotary 9.0' - 15.5'	
10---		--			Sample Log:	
---					Sample ID #:	
11---		--	Rod Change at 11.0' - Wet		116-0130-MW3A	
---					Sample Depth:	
12---		--			1.5' - 2.5'	
---					Sample Time: 1331	
13---		--				
---						
14---		--			Sample ID #:	
---					116-0130-MW3B	
15---		--			Sample Depth:	
---					4.0' - 5.0'	
16---				Note: A diverter was utilized during the air-rotary drilling from 9.0' - 15.5'. As such, no PID readings were collected	Sample Time: 1340	
---						
17---						
---						
18---						
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19---						
---						
				Log Approved By: Martin Gilgallon, P.G.		

Project: Quinn's Café Stop Property

Date Started: Geoprobe: 01.31.17 / Drilling: 02.01.17

Client: Quinn's Café Stop

Date Finished: Geoprobe: 01.31.17 / Drilling: 02.01.17

Purpose: Site Characterization Activities

Contractor: Odyssey Environmental

Boring Number: MW-4

Driller: Jake Shaffer

Job Number: 26116

Inspector: Chris Herman

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L.	TOC/GL
Geoprobe		11:35	11:45	7.0'	Elevation TOC	
Drilling		12:48	13:55	15.5'	Surface	
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	SS-1		Rec: 2.5'	0.0' - 5.0'	Asphalt Surface	
1---	0'-5'	5		Medium brown sand and silt	Geoprobe 0.0' - 7.0'	
---	(11:37)			with pulverized slag and		
2---		41		sandstone to 4.0', change to	10" Diameter Hollow-	
---				gray sand and silt	Stem Auger 0.0' - 7.0'	
3---		45				
---						
4---		47			Wet at 4.0'	
---						
5---	SS-2	32	Rec: 2.8'	5.0' - 7.0'	Moist	
---	5'-7'			Brown sand and silt to 6.0',		
6---	(11:40)	>999		change to pulverized		
---				weathered bedrock		
7---		120	Hard Steady	7.0' - 11.0'	Competent Bedrock	
---			Drilling 7.0' - 11.0'	Gray medium grained	at 7.0'	
8---		--		sandstone	6" Diameter Air-Rotary	
---					7.0' - 15.5'	
9---		--				
---						
10---		--				
---						
11---		--	Choppy Drilling	11.0' - 12.0'	<b>Sample Log:</b>	
---			11.0' - 12.0'	Brown weathered sandstone	Sample ID #:	
12---		--	Rod Change at	12.0' - 15.5'	116-0130-MW4A	
---			12.0' - Dry	Gray medium grained	Sample Depth:	
13---		--	Hard Steady	sandstone	1.5' - 2.5'	
---			Drilling 12.0' - 15.5'		Sample Time: 1137	
14---		--				
---					Sample ID #:	
15---		--			116-0130-MW4B	
---					Sample Depth:	
16---					4.0' - 5.0'	
---					Sample Time: 1140	
17---						
---						
18---						
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19---						
---						
				Note: A diverter was utilized		
				during the air-rotary drilling		
				from 7.0' - 15.5'. As such,		
				no PID readings were		
				collected.		
				Log Approved By:		
				Martin Gilgallon, P.G.		



Project: Quinn's Café Stop Property

Date Started: Geoprobe: 01.31.17 / Drilling: 02.01.17

Client: Quinn's Café Stop

Date Finished: Geoprobe: 01.31.17 / Drilling: 02.01.17

Purpose: Site Characterization Activities

Contractor: Odyssey Environmental

Boring Number: MW-5

Driller: Jake Shaffer

Job Number: 26116

Inspector: Chris Herman

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L.	TOC/GL
Geoprobe		10:52	10:57	5.0'	Elevation	TOC
Drilling		15:09	15:57	15.5'		Surface
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	SS-1		Rec: 3.4'	0.0' - 5.0'	Asphalt Surface	
1---	0'-5'	6		Dark brown sand and silt with	Geoprobe 0.0' - 5.0'	
---	(10:55)			sub-angular pebbles to 3.5',		
2---		6		change to light brown sand	10" Diameter Hollow-	
---				and silt with some clay to 4.5',	Stem Auger 0.0' - 5.0'	
3---		6		change to pulverized		
---				sandstone		
4---		5	Wet at 3.5'			
---						
5---		41	Soft Steady Drilling	5.0' - 8.0'	6" Diameter Air-Rotary	
---			5.0' - 8.0'	Weathered bedrock	5.0' - 15.5'	
6---		--				
---			Rod Change at 7.0'			
7---		--	Dry			
---						
8---		--	Hard Steady	8.0' - 15.5'	Competent Bedrock	
---			Drilling 8.0' - 15.5'	Gray medium grained	at 8.0'	
9---		--		sandstone		
---						
10---		--				
---						
11---		--				
---						
12---		--	Rod Change at		Sample Log:	
---			12.0' - Wet		Sample ID #:	
13---		--			116-0130-MW5A	
---					Sample Depth:	
14---		--			1.5' - 2.5'	
---					Sample Time: 1055	
15---		--				
---						
16---		--			Sample ID #:	
---					116-0130-MW5B	
17---		--			Sample Depth:	
---					3.5' - 4.5'	
18---		--			Sample Time: 1057	
---						
19---		--				
---						
				Note: A diverter was utilized		
				during the air-rotary drilling		
				from 5.0' - 15.5'. As such,		
				no PID readings were		
				collected.		
				Log Approved By:		
				Martin Gilgallon, P.G.		



Project: Quinn's Café Stop Property

Date Started: Soft Dig: 06.05.17 / Drilling: 06.06.17

Client: Quinn's Café Stop

Date Finished: Soft Dig: 06.05.17 / Drilling: 06.06.17

Purpose: Site Characterization Activities

Contractor: Odyssey Environmental

Boring Number: MW-6

Driller: Corey Suter / Jake Shaffer

Job Number: 26116

Inspectors: Chris Herman (Soft Dig) / Kevin Cucura (Drill)

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L.	TOC/GL
Soft Dig		9:30	9:50	5.0'	Elevation TOC	
Drilling		10:15	11:00	16.0'	Surface	
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---				0.0' - 6.5'	Grass Surface	
1---	(09:35)	0.0		Dark brown sand and silt	10" Diameter Hollow-	
2---		0.0		with sub-angular pebbles and	Stem Auger 0.0' - 6.5'	
3---		0.0		cobbles to 4.0', change to	Damp 0.0' - 4.0'	
4---		7.6		dark to medium gray sand,	Wet 4.0' - 12.5'	
5---	(09:50)	9.3	Faint Odor	silt and clay with abundant		
6---		10.5		sub-angular pebbles and		
7---		--	Soft Drilling	6.5' - 7.5'	6" Diameter Air-Rotary	
8---		--	6.5' - 12.5'	Sandstone boulder	6.5' - 16.0'	
9---		--		7.5' - 12.5'		
10---		--	Slight Odor	Medium gray sand and silt		
11---		--		with abundant sub-angular		
12---		--		cobbles		
13---		--	Hard Steady	12.5' - 16.0'	Competent Bedrock	
14---		--	Drilling 12.5' - 16.0'	Gray sandstone; no fractures	at 12.5'	
15---		--	No potential water	observed		
16---		--	bearing zones in		<b>Sample Log:</b>	
17---		--	bedrock		Sample ID #:	
18---		--			016-0605-MW6A	
19---		--			Sample Depth:	
					1.5' - 2.5'	
					Sample Time: 0935	
					Sample ID #:	
					116-0605-MW6B	
					Sample Depth:	
					4.0' - 5.0'	
					Sample Time: 0950	

Log Approved By:  
Martin Gilgallon, P.G.



Project: Quinn's Café Stop Property

Date Started: Soft Dig: 06.05.17 / Drilling: 06.07.17

Client: Quinn's Café Stop

Date Finished: Soft Dig: 06.05.17 / Drilling: 06.07.17

Purpose: Site Characterization Activities

Contractor: Odyssey Environmental

Boring Number: MWV-7

Driller: Corey Suter / Jake Shaffer

Job Number: 26116

Inspector: Chris Herman (Soft Dig) / Kevin Cucura (Drill)

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L.	TOC/GL
Soft Dig		12:51	13:22	4.0'	Elevation TOC	
Drilling		13:30	14:35	17.5'	Surface	
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	(12:54)	0.0	Damp	0.0' - 4.0'	Grass Surface	
1---				Extremely dark brown and dark gray sand and silt with abundant sub-angular cobbles and pebbles to 1.0',	10" Diameter Hollow-Stem Auger 0.0' - 4.0'	
2---				change to very dark brown and medium light brown sand and silt with very abundant		
3---		0.0		sub-angular pebbles and cobbles	Large boulder at 4.0'	
4---		--		4.0' - 6.5'	6" Diameter Air-Rotary	
5---		--		Dark brown sand and silt with some pulverized sandstone fragments	4.0' - 17.5'	
6---		--	Moist / Wet	6.5' - 8.0'		
7---		--		Weathered pulverized dark brown sandstone		
8---		--		8.0' - 17.5'	Competent Bedrock at 8.0'	
9---		--	Hard Steady Drilling 8.0' - 10.0'	Interbedded medium gray and light gray medium grained sandstone		
10---		--	Choppy Drilling 10.0' to 10.5'		Dry	
11---		--	Hard Steady Drilling 10.5' - 13.0'			
12---		--				
13---		--	Choppy Drilling 13.0' - 13.5'		Dry	
14---		--	Hard Steady Drilling 13.5' - 17.5'			
15---		--				
16---				Note: A diverter was utilized during the air-rotary drilling from 4.0' - 17.5'. As such, no PID readings were collected.	<b>Sample Log:</b> Sample ID #: 116-0605-MW7A Sample Depth: 1.5' - 2.5' Sample Time: 1254	
17---						
18---					Sample ID #: 116-0605-MW7B Sample Depth: 5.5' - 6.5' Sample Time: 1345	
19---						

Log Approved By:  
Martin Gilgallon, P.G.

Project: Quinn's Café Stop Property

Date Started: Geoprobe: 06.05.17 / Drilling: 06.07.17

Client: Quinn's Café Stop

Date Finished: Geoprobe: 06.05.17 / Drilling: 06.07.17

Purpose: Site Characterization Activities

Contractor: Odyssey Environmental

Boring Number: MW-8

Driller: Corey Suter / Jake Shaffer

Job Number: 26116

Inspector: Chris Herman (Soft Dig) / Kevin Cucura (Drill)

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L.	TOC/GL
Soft Dig		12:18	12:40	5.0'	Elevation TOC	Surface
Drilling		10:30	11:35	18.0'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---	(12:22)			0.0' - 5.0'	Grass Surface	
1---		0.0		Dark brown and light brown sand and silt with sub-angular cobbles and pebbles to 5.0'	10" Diameter Hollow-Stem Auger 0.0' - 6.0'	
2---		0.0			Moist 0.0' - 4.0'	
3---		0.0			Wet 4.0' - 6.5'	
4---		0.0			Large cobbles at 5.0'	
5---		0.0		5.0' - 6.5'	6" Diameter Air-Rotary	
6---		0.0		Dark brown sand and silt with pulverized sandstone fragments	6.0' - 18.0'	
7---		--	Choppy Drilling 6.5' - 7.5'	6.5' - 7.5'	Competent Rock at 7.5'	
8---		--		Weathered dark gray sandstone and silt		
9---		--	Very Hard Steady Drilling 7.5' - 18.0'	7.5' - 18.0'		
10---		--		Interbedded medium gray and light gray medium grained sandstone		
11---		--				
12---		--				
13---		--				
14---		--			<b>Sample Log:</b> Sample ID #: 116-0605-MW8A Sample Depth: 1.5' - 2.5' Sample Time: 1220  Sample ID #: 116-0605-MW8B Sample Depth: 5.5' - 6.5' Sample Time: 1007	
15---		--	No potential water bearing zones in bedrock			
16---		--				
17---		--				
18---		--				
19---		--				
---				Note: A diverter was utilized during the air-rotary drilling from 6.0' - 18.0'. As such, no PID readings were collected	Log Approved By: Martin Gilgallon, P.G.	



Project: Quinn's Café Stop Property

Date Started: Soft Dig: 06.05.17 / Drilling: 06.08.17

Client: Quinn's Café Stop

Date Finished: Soft Dig: 06.05.17 / Drilling: 06.08.17

Purpose: Site Characterization Activities

Contractor: Odyssey Environmental

Boring Number: MW-9

Driller: Corey Suter / Jake Shaffer

Job Number: 26116

Inspector: Chris Herman (Soft Dig) Kevin Cucura (Drill)

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L.	TOC/GL
Soft Dig		10:20	10:43	5.0'	Elevation TOC	
Drilling		8:55	10:22	17.5'	Surface	
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---				0.0' - 5.0'	Grass Surface	
1---		0.0		Dark brown and medium	10" Diamter Hollow-Stem Auger 0.0' - 4.0'	
2---	(10:23)	0.0		gray sand, silt and clay with		
3---		0.0		oxidation and few sub-angular		
4---	(10:35)	0.0		pebbles and cobbles to 3.0',		
5---		0.0		change to dark brown and	Wet 3.0' - 7.0'	
6---		0.0		dark gray sand, silt and clay	6" Diamter Air-Rotary 4.0' - 17.5'	
7---		--		with sub-angular pebbles and		
8---		--		cobbles		
9---		--		5.0' - 7.0'		
10---		--		Dark brown and gray sand	Competent Rock at 9.0'	
11---		--		and silt with abundant		
12---		--		sub-angular cobbles		
13---		--		7.0' - 9.0'		
14---		--	Soft Choppy	Dark brown weathered		
15---		--	Drilling 7.0' - 9.0'	sandstone		
16---		--		9.0' - 17.5'		
17---		--		Interbedded medium gray		
18---		--		and light gray sandstone	Sample Log: Sample ID #: 116-0605-MW9A Sample Depth: 1.5' - 2.5' Sample Time: 1023	
19---		--				
---		--				
---		--				
---		--			Sample ID #: 116-0605-MW9B Sample Depth: 3.0' - 4.0' Sample Time: 11035	
---		--				
---		--				
---		--				



Note: A diverter was utilized during the air-rotary drilling from 4.0' - 17.5'. As such, no PID readings were collected.

Log Approved By:  
Martin Gilgallon, P.G.

Project: Quinn's Café Stop Property

Date Started: Soft Dig: 06.05.17 / Drilling: 06.06.17

Client: Quinn's Café Stop

Date Finished: Soft Dig: 06.05.17 / Drilling: 06.06.17

Purpose: Site Characterization Activities

Contractor: Odyssey Environmental

Boring Number: MWV-10

Driller: Corey Suter / Jake Shaffer

Job Number: 26116

Inspector: Chris Herman (Soft Dig) Kevin Cucura (Drill)

Sheet: 1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L.	TOC/GL	
Soft Dig		11:00	11:26	5.0'	Elevation TOC		
Drilling		12:10	14:00	24.0'	Surface		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes		
---	(11:06)	0.0		0.0' - 5.0'	Asphalt Surface		
1---				Very dark brown and light	10" Diameter Borehole		
---				brown sand and silt with			
2---				abundant sub-angular			
---				cobbles and some pebbles	Moist 0.0' - 7.5'		
3---				to 5.0'			
---							
4---							
5---					5.0' - 8.5'		
---					Dark brown sand and silt		
6---					with some coal fragments		
---					and sub-angular pebbles and	Wet 7.5' - 8.5'	
7---					cobbles		
---							
8---							
9---						8.5' - 9.0'	6" Diameter Borehole
---						Dark gray and brown	
10---						weathered sandstone	
---						9.0' - 24.0'	Competent Rock
11---			Medium grained medium gray				
---			sandstone with interbedded				
12---			light gray sandstone				
---							
13---							
14---					<b>Sample Log:</b> Sample ID #: 116-0605-MW10A Sample Depth: 1.5' - 2.5' Sample Time: 1106  Sample ID #: 116-0605-MW10B Sample Depth: 7.5' - 8.5' Sample Time: 1335		
---			06.07.17				
15---			Check for water				
---			at 0730; 1.3' of				
16---			water in bottom				
---			of borehole				
17---							
18---							
19---							
---							

Note: A diverter was utilized during the air-rotary drilling from 9.0' - 24.0'. As such, no PID readings were collected.

Log Approved By:  
Martin Gilgallon, P.G.



LaBella Associates, P.C.

## TEST BORING LOG

Project:	Quinn's Café Stop Property	Soft Dig Date Started:	11/10/2017	Drilling Date Finished:	11/15/2017
Client:	Quinn's Café Stop	Date Finished:	11/10/2017		11/15/2017
Purpose:	Site Characterization Activities				
Contractor:	Odyssey Environmental	Boring Number:	MW-11		
Driller:	Jake Shaffer / Zach Hoppes	Job Number:	26116		
Inspector:	Dean Cruciani	Sheet:	1 of 1		

TIME LOG Soft Dig Drilling		Begin	Finish	Depth	S.W.L. Elevation TOC	TOC/GL Surface
		7:20	7:43	6.0'		
		10:05	11:48	17.0'		
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---				0.0' - 6.0'	Gravel Surface	
1---				Soft dig to 6.0' on 11/10/2017;	10" Diameter Borehole	
---		0.0		Asphalt millings and gravel fill	0.0' - 7.0'	
2---				to 1.5', change to brown sand	Moist 1.5' - 6.0'	
---				and silt with abundant		
3---		0.0		pebbles and cobbles		
---						
4---						
---						
5---		0.0				
---						
6---		0.0		6.5' - 9.5'	Wet at 6.0'	
---				Grayish brown to gray	6" Diameter Borehole	
7---		0.0		sandstone	7.0' - 17.0'	
---					Soft /Weathered Rock	
8---		0.0			6.5' - 9.5'	
---						
9---		0.0				
---				9.5' - 17.0'	Competent Rock at 9.5'	
10---		0.0		Gray sandstone; no fractures		
---				observed		
11---		0.0				
---						
12---		0.0				
---						
13---		0.0				
---						
14---		0.0				
---						
15---		0.0			No Samples Collected	
---						
16---		0.0				
---						
17---		0.0				
---						
18---						
---						
19---						
---						



Log Approved By:  
Martin Gilgallon, P.G.

Project:	Quinn's Café Stop Property	Soft Dig	Drilling
Client:	Quinn's Café Stop	Date Started: 11/10/2017	11/15/2017
Purpose:	Site Characterization Activities	Date Finished: 11/10/2017	11/15/2017
Contractor:	Odyssey Environmental	Boring Number:	MW-12
Driller:	Jake Shaffer / Zach Hoppes	Job Number:	26116
Inspector:	Dean Cruciani	Sheet:	1 of 1

TIME LOG		Begin	Finish	Depth	S.W.L.	TOC/GL
Soft Dig		9:44	10:17	5.0'	Elevation	TOC
Drilling		10:08	12:00	20.0'		Surface
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---				0.0' - 5.0'	Asphalt Surface	
1---				Soft dig to 5.0' on 11/10/2017;		
---				Asphalt to 0.7', change to		
2---		0.0		mixed gray and grayish brown	Moist	
---				sand and silt with abundant		
3---		0.0		pebbles to 3.0', change to		
---				brown sand, silt and clay with		
4---		0.0		abundant pebbles and		
---				cobbles		
5---	SS-2	0.0	Rec: 2.4'	5.0' - 10.0'		
---	5'-10'			Brown sand and silt with		
6---				abundant sub-angular	Wet 6.0' - 13.5'	
---				pebbles; orange mottles	No Odor	
7---					No Visual	
---						
8---						
---						
9---						
---						
10---	SS-3	0.0	Rec: 3.0'	10.0' - 15.0'		
---	10'-15'			Gray sand and silt with		
11---				abundant sub-angular	Cobble 15.0' - 15.5'	
---				pebbles and cobbles		
12---						
---						
13---						
---						
14---					<b>Sample Log:</b>	
---					Sample ID #:	
15---				15.0' - 20.0'	116-1109-PW12A	
---				Dark gray to gray sand and	Sample Depth:	
16---				silt with abundant	2.2' - 2.7'	
---				sandstone pebbles and	Sample Time: 1010	
17---				cobbles to 20.0'		
---						
18---					Sample ID #:	
---					116-1109-PW12B	
19---					Sample Depth:	
---					4.5' - 5.0'	
---					Sample Time: 1017	



Log Approved By:  
Martin Gilgallon, P.G.



Project:	Quinn's Café Stop Property	Soft Dig	Drilling
Client:	Quinn's Café Stop	Date Started: 11/10/2017	11/15/2017
Purpose:	Site Characterization Activities	Date Finished: 11/10/2017	11/15/2017
Contractor:	Odyssey Environmental	Boring Number: PMW-13	
Driller:	Corey Suter / Jake Shaffer	Job Number: 26116	
Inspector:	Dean Cruciani	Sheet: 1 of 1	

TIME LOG		Begin	Finish	Depth	S.W.L.	TOC/GL
Soft Dig		8:10	9:13	5.0'	Elevation TOC	
Drilling		8:17	9:49	17.0'	Surface	
Dept (feet)	Sample No's	PID (ppm)	Field Assessment Log	Lithologic Description	Notes	
---				0.0' - 5.0'	Asphalt Surface	
1---		0.0		Soft dig to 5.0' on 11/10/2017;	10" Diameter Borehole	
---				Asphalt to 0.6', change to	0.0' - 5.5'	
2---		0.0		gravel fill, mixed fill materials;		
---				brown sand, silt and clay with		
3---				abundant pebbles and		
---				cobbles		
4---		0.0				
---						
5---		0.0		5.5' - 11.0'	Wet 5.0' - 5.5'	
---				Abundant pebbles and	6" Diameter Borehole	
6---		0.0		cobbles in brown sandy	5.5' - 17.0'	
---				matrix		
7---		0.0				
---						
8---		0.0				
---						
9---		0.0				
---						
10---		0.0				
---						
11---		0.0		11.0' - 17.0'		
---				Gray sandstone		
12---		0.0				
---						
13---		0.0				
---						
14---		0.0			<b>Sample Log:</b> Sample ID #: 116-1109-PW13A Sample Depth: 2.0' - 2.5' Sample Time: 0845	
---						
15---		0.0				
---						
16---		0.0			Sample ID #: 116-1109-PW13B Sample Depth: 5.0' - 5.5' Sample Time: 1538	
---						
17---		0.0				
---						
18---						
---						
19---						
---						



Log Approved By:  
Martin Gilgallon, P.G.

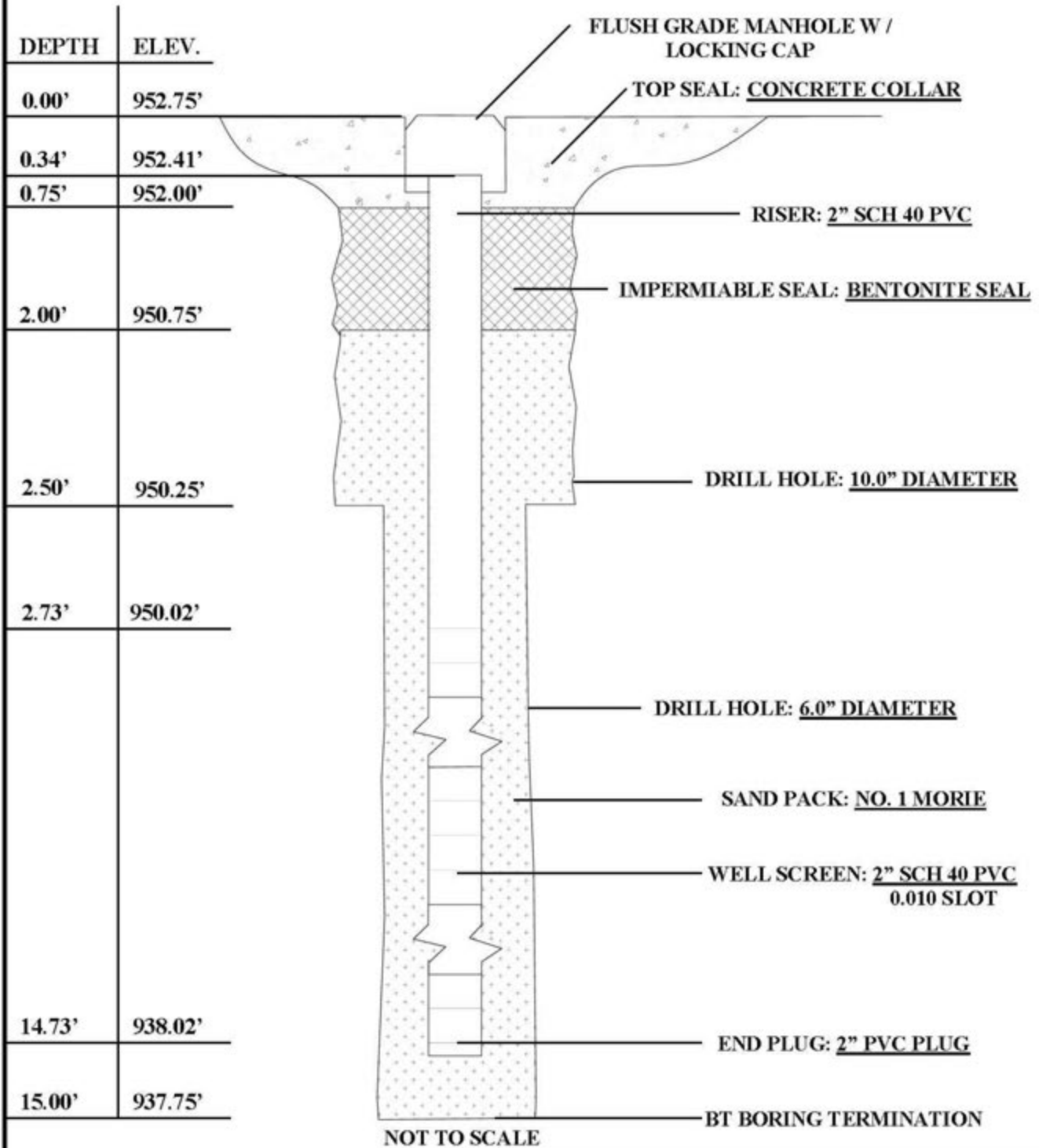
## APPENDIX I

### Well Construction Details



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## MONITORING WELL CONSTRUCTION DETAIL

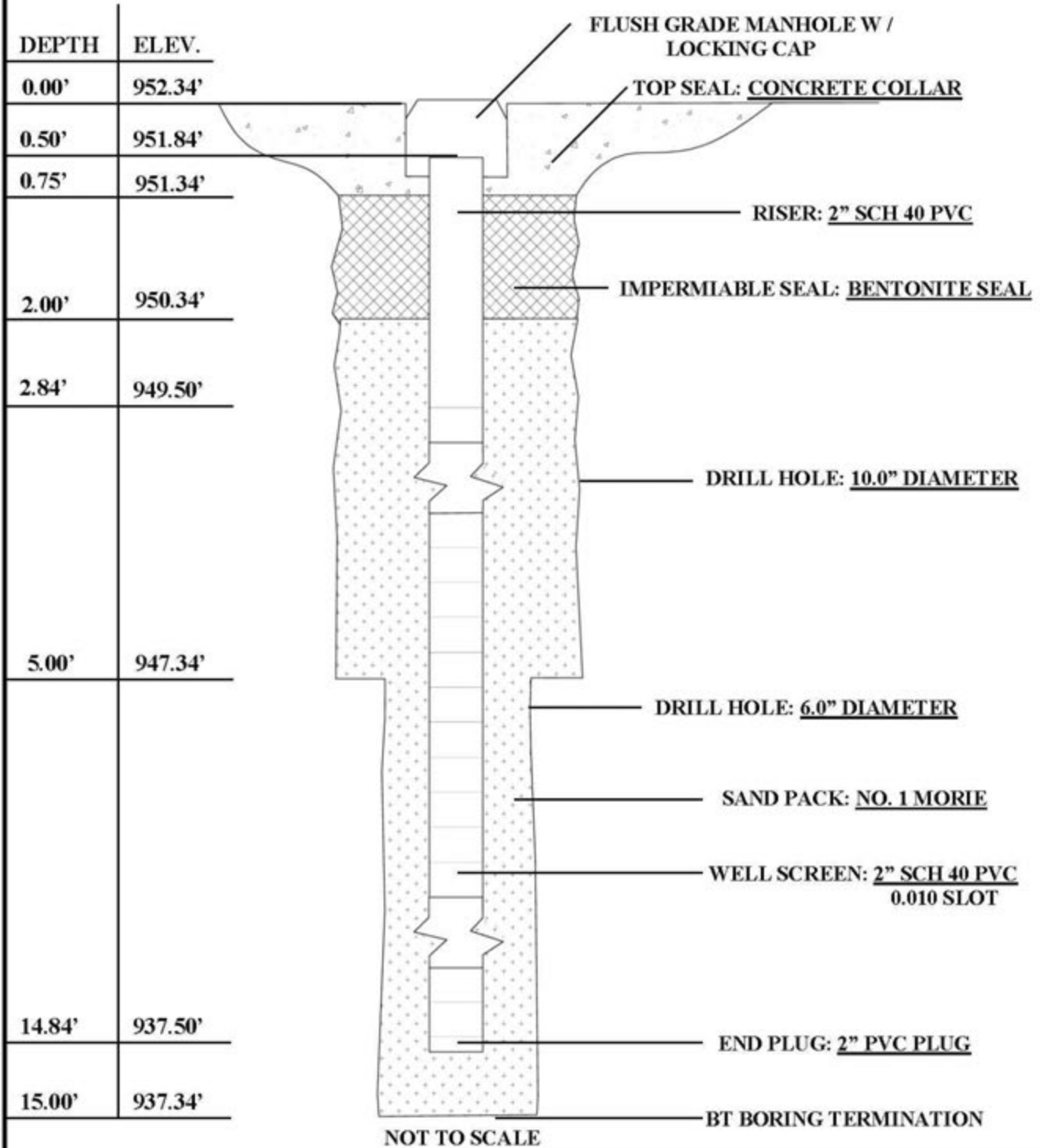


SITE CHARACTERIZATION ACTIVITIES  
QUINN'S CAFÉ STOP PROPERTY  
MONITORING WELL 1



**LaBella**  
Powered by partnership.

## MONITORING WELL CONSTRUCTION DETAIL

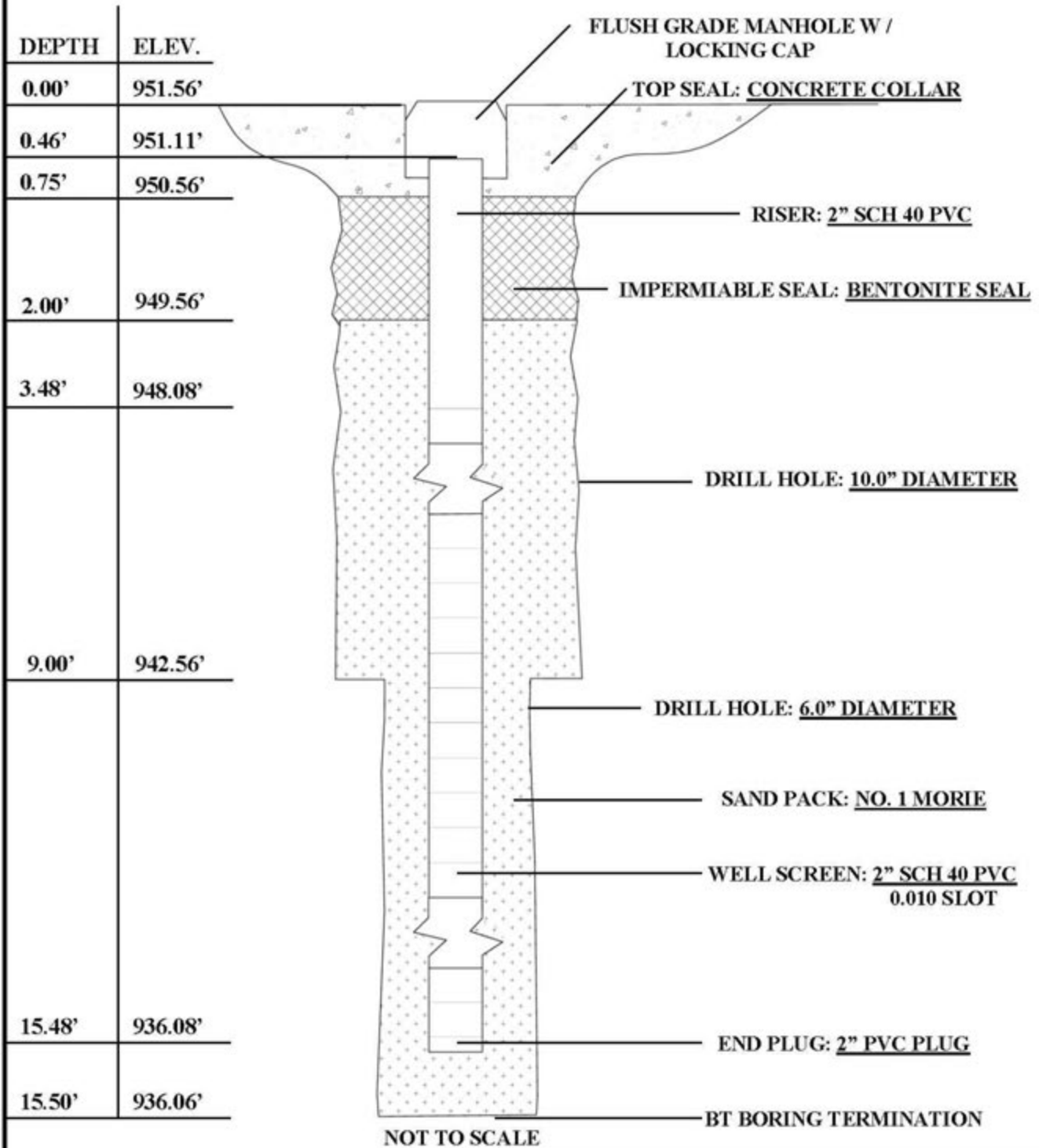


**SITE CHARACTERIZATION ACTIVITIES  
QUINN'S CAFÉ STOP PROPERTY  
MONITORING WELL 2**



**LaBella**  
Powered by partnership.

## MONITORING WELL CONSTRUCTION DETAIL

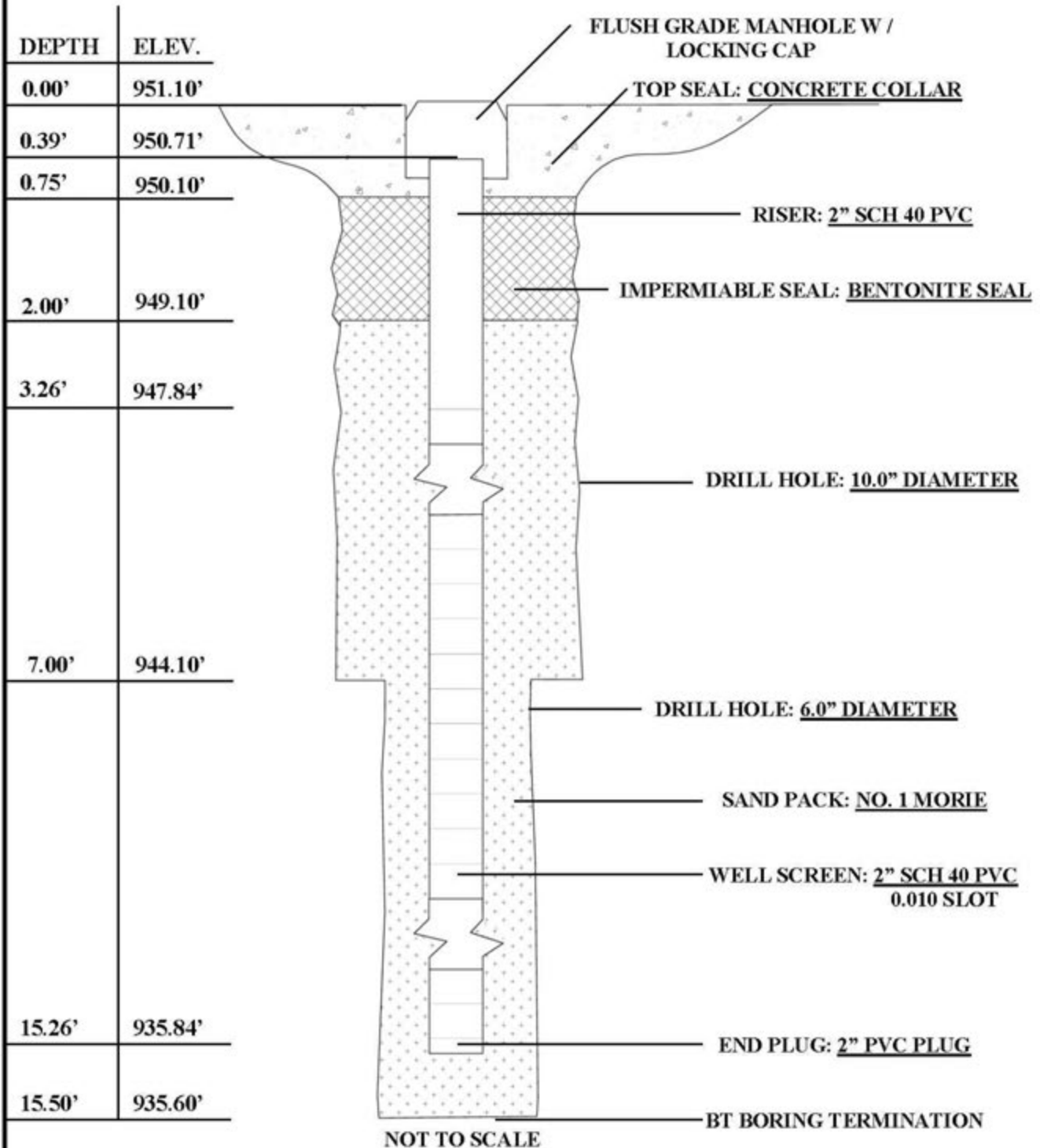


SITE CHARACTERIZATION ACTIVITIES  
QUINN'S CAFÉ STOP PROPERTY  
MONITORING WELL 3



**LaBella**  
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## MONITORING WELL CONSTRUCTION DETAIL



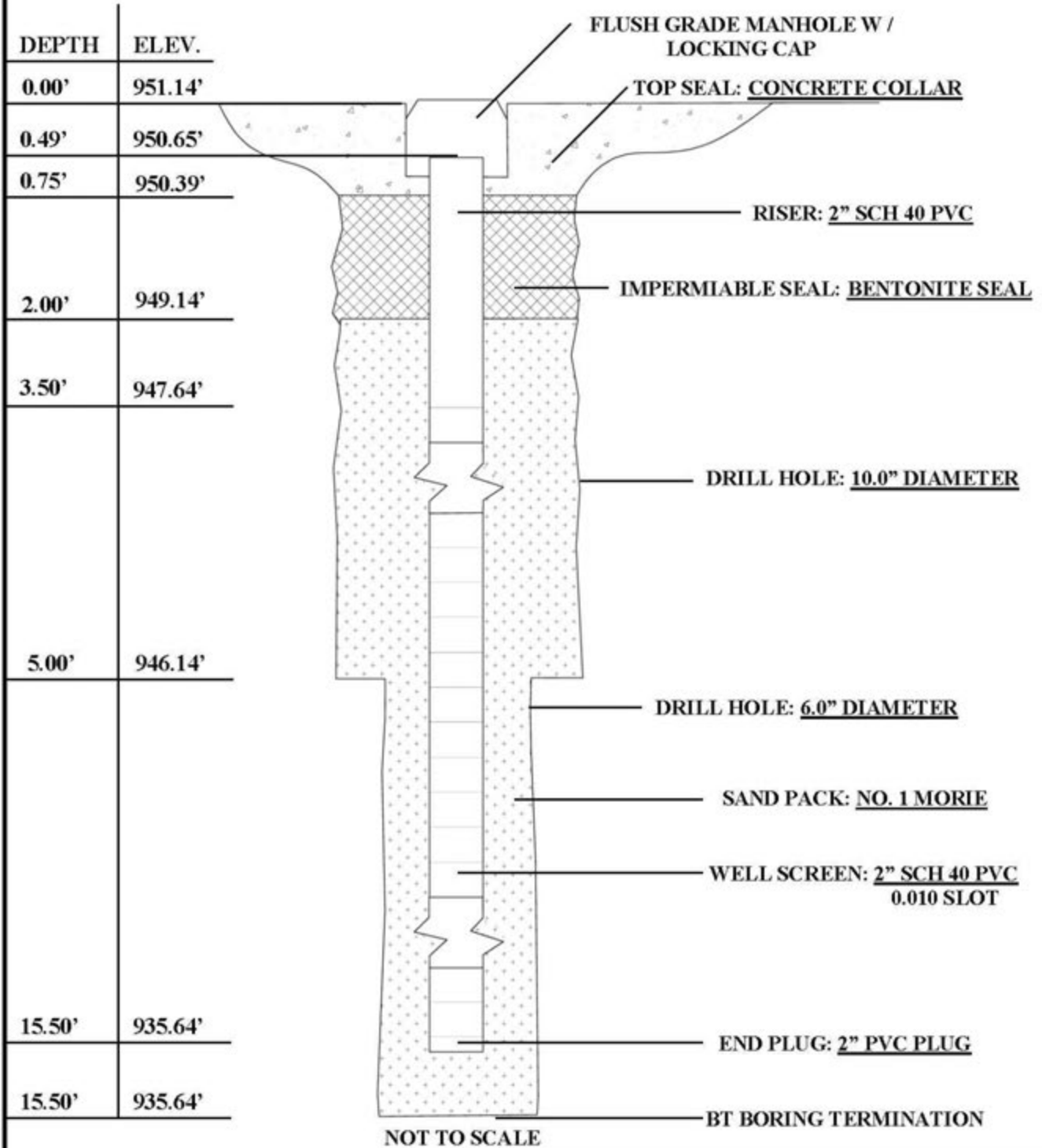
**SITE CHARACTERIZATION ACTIVITIES  
QUINN'S CAFÉ STOP PROPERTY  
MONITORING WELL 4**





**LaBella**  
Powered by partnership.

## MONITORING WELL CONSTRUCTION DETAIL

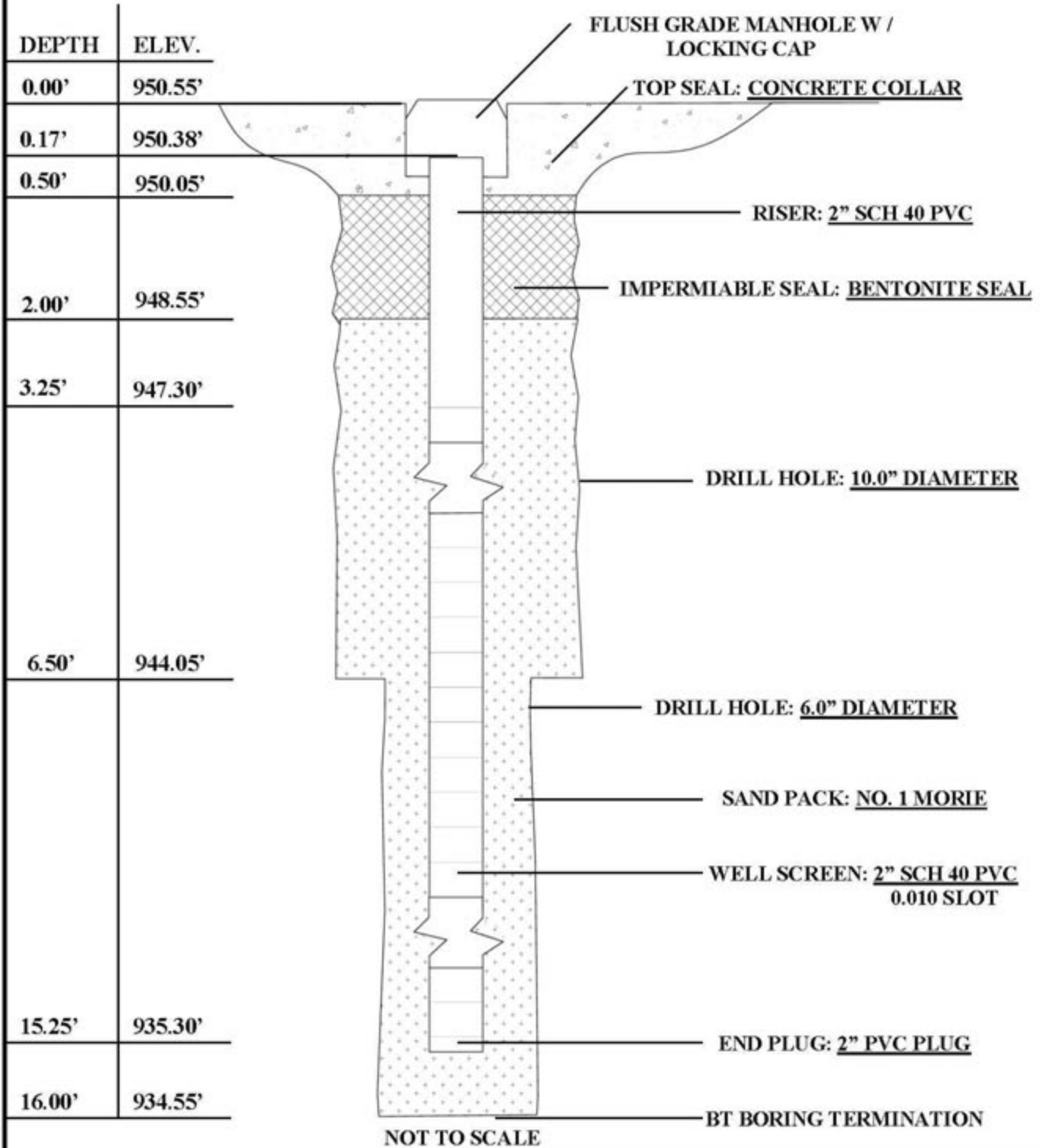


SITE CHARACTERIZATION ACTIVITIES  
QUINN'S CAFÉ STOP PROPERTY  
MONITORING WELL 5



**LaBella**  
Powered by partnership.

## MONITORING WELL CONSTRUCTION DETAIL



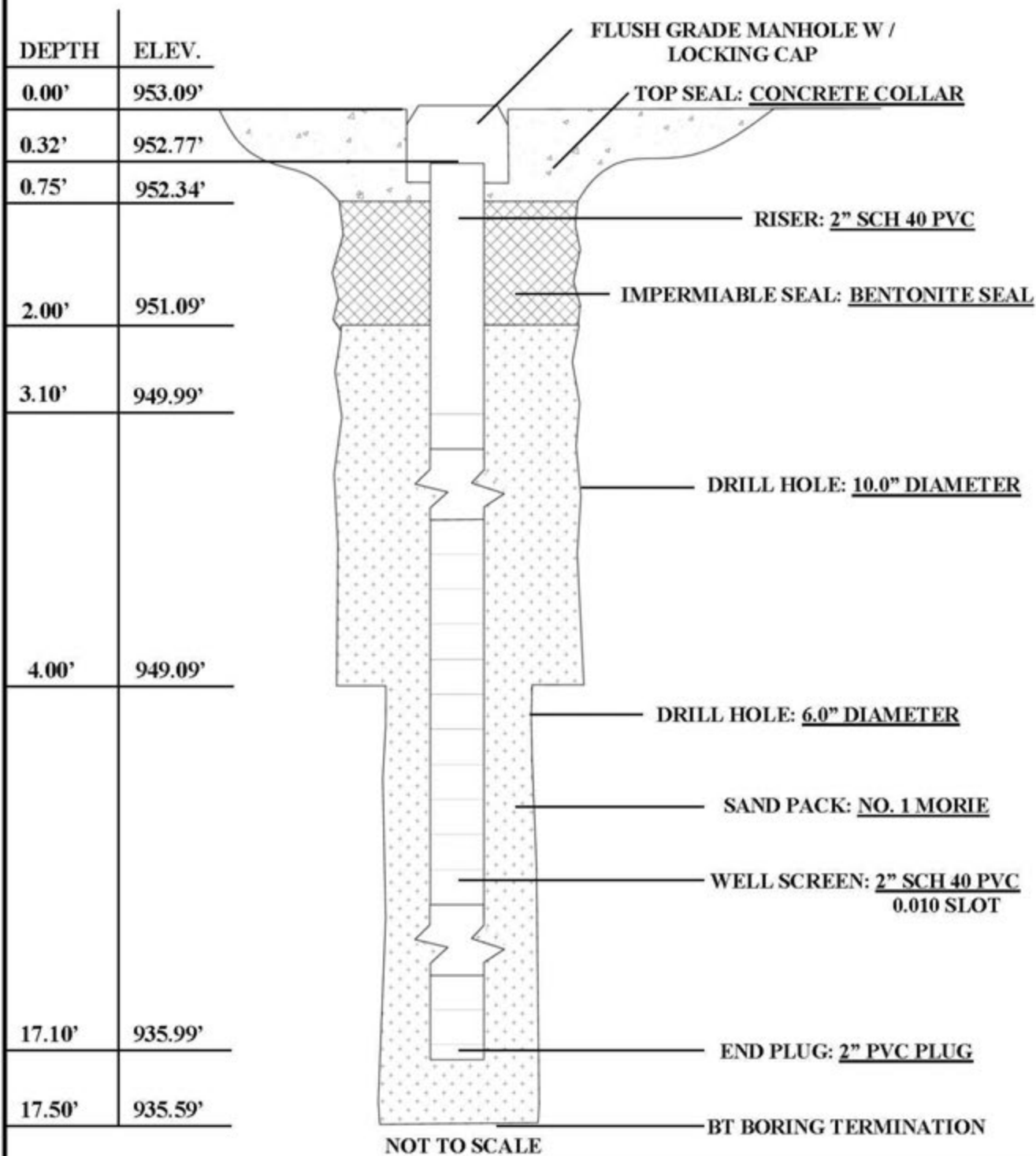
SITE CHARACTERIZATION ACTIVITIES  
QUINN'S CAFÉ STOP PROPERTY  
MONITORING WELL 6



# LaBella

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## MONITORING WELL CONSTRUCTION DETAIL

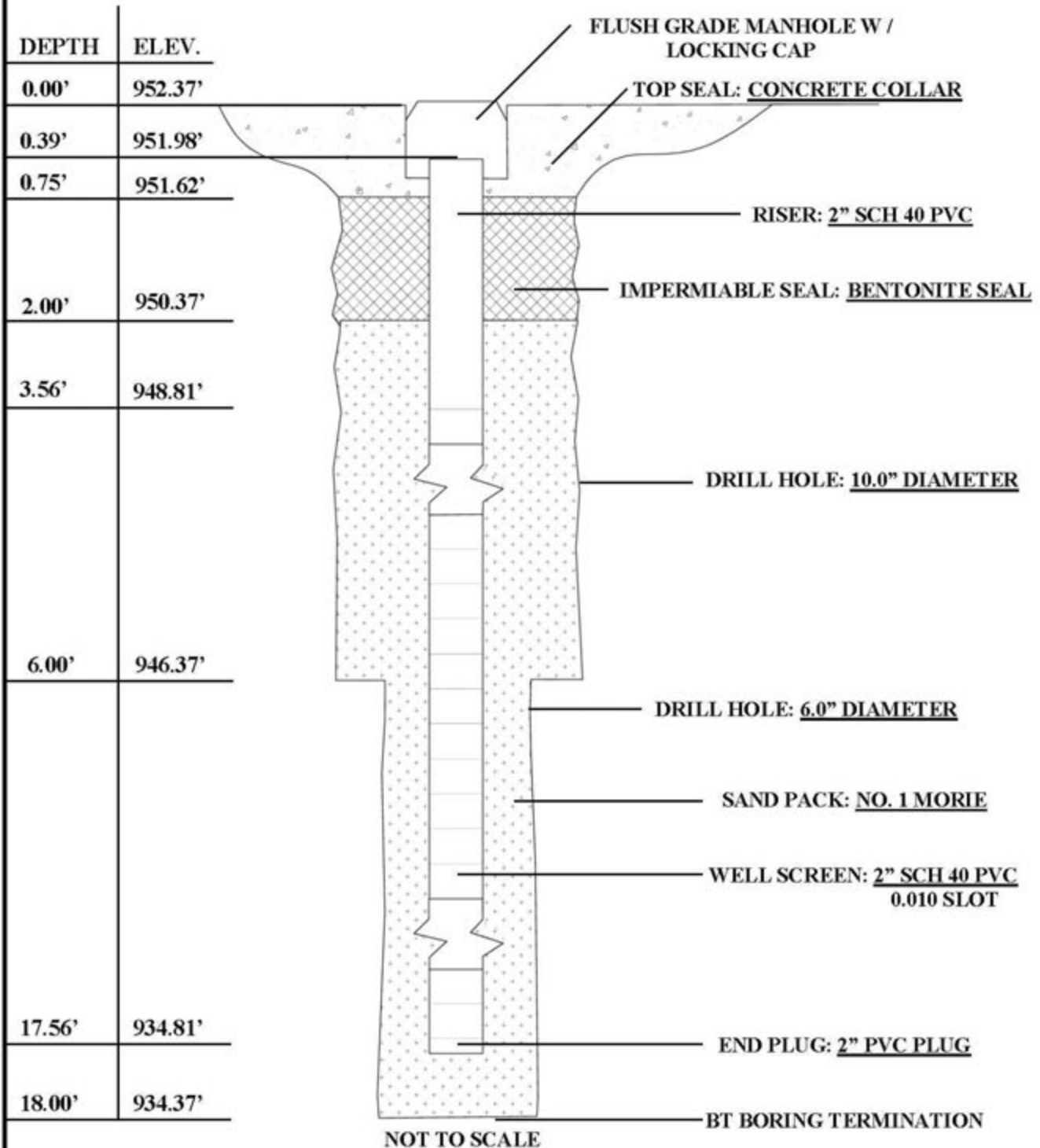


SITE CHARACTERIZATION ACTIVITIES  
QUINN'S CAFÉ STOP PROPERTY  
MONITORING WELL 7



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## MONITORING WELL CONSTRUCTION DETAIL

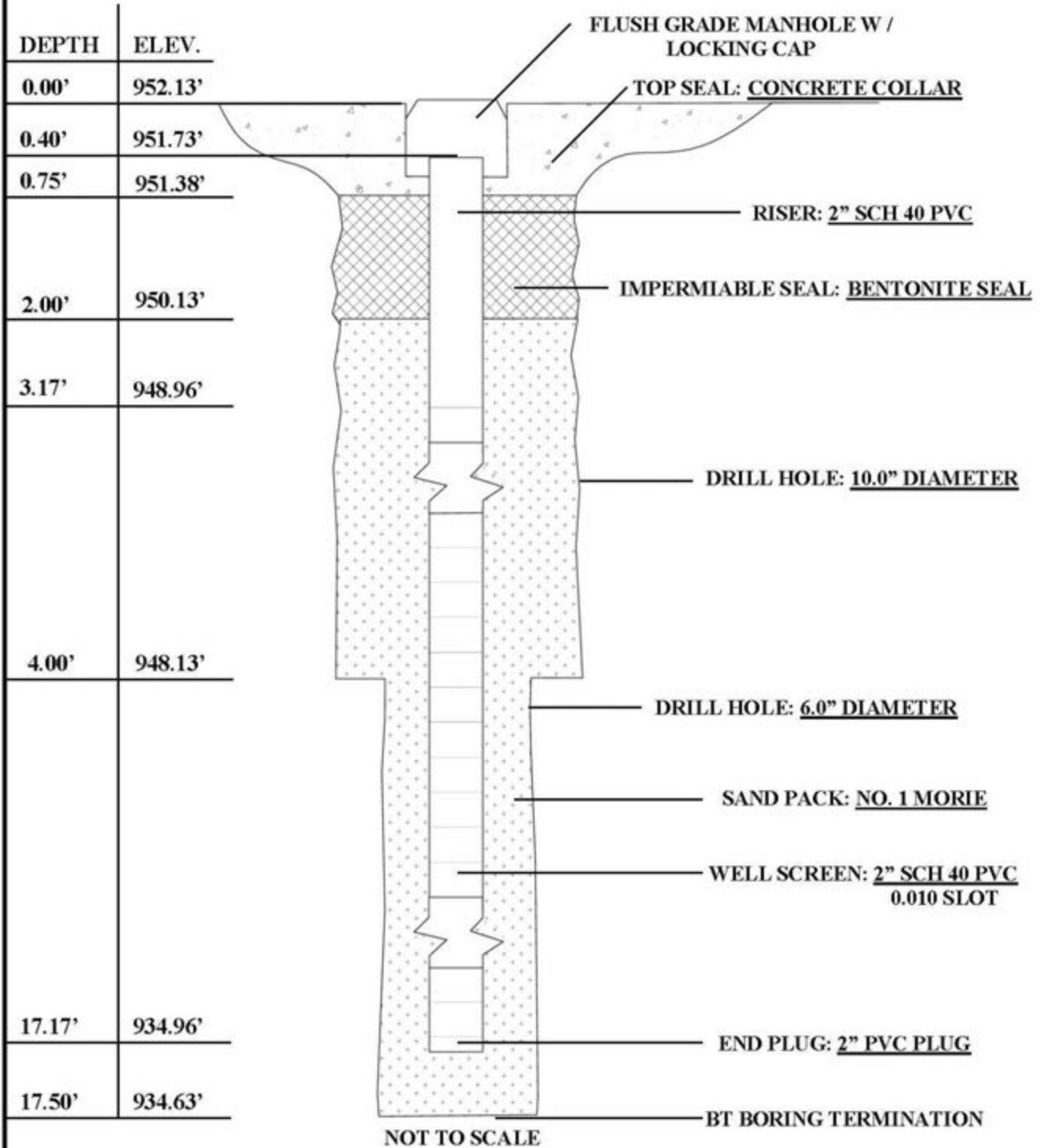


SITE CHARACTERIZATION ACTIVITIES  
QUINN'S CAFÉ STOP PROPERTY  
MONITORING WELL 8



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## MONITORING WELL CONSTRUCTION DETAIL



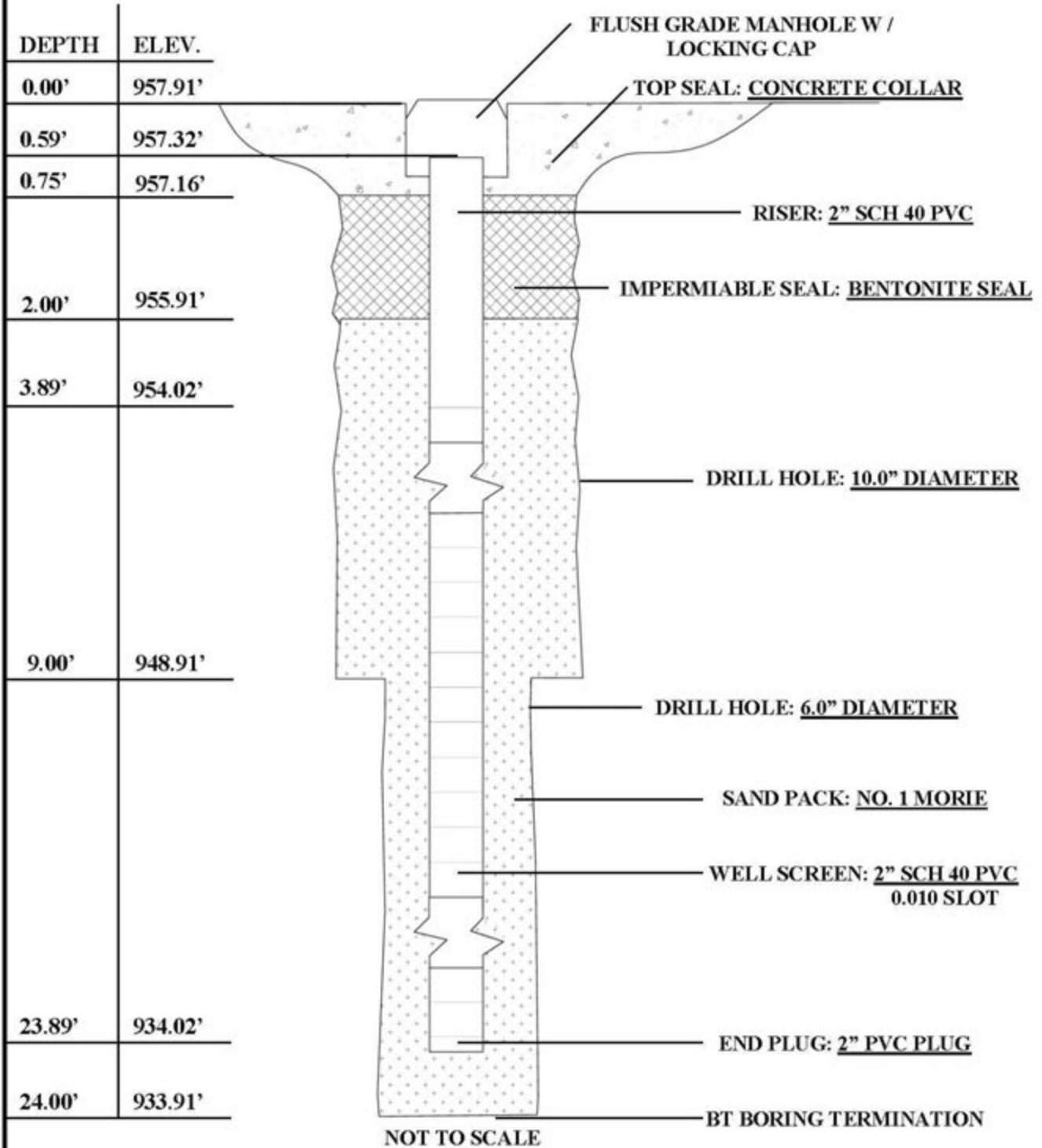
SITE CHARACTERIZATION ACTIVITIES  
QUINN'S CAFÉ STOP PROPERTY  
MONITORING WELL 9





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## MONITORING WELL CONSTRUCTION DETAIL



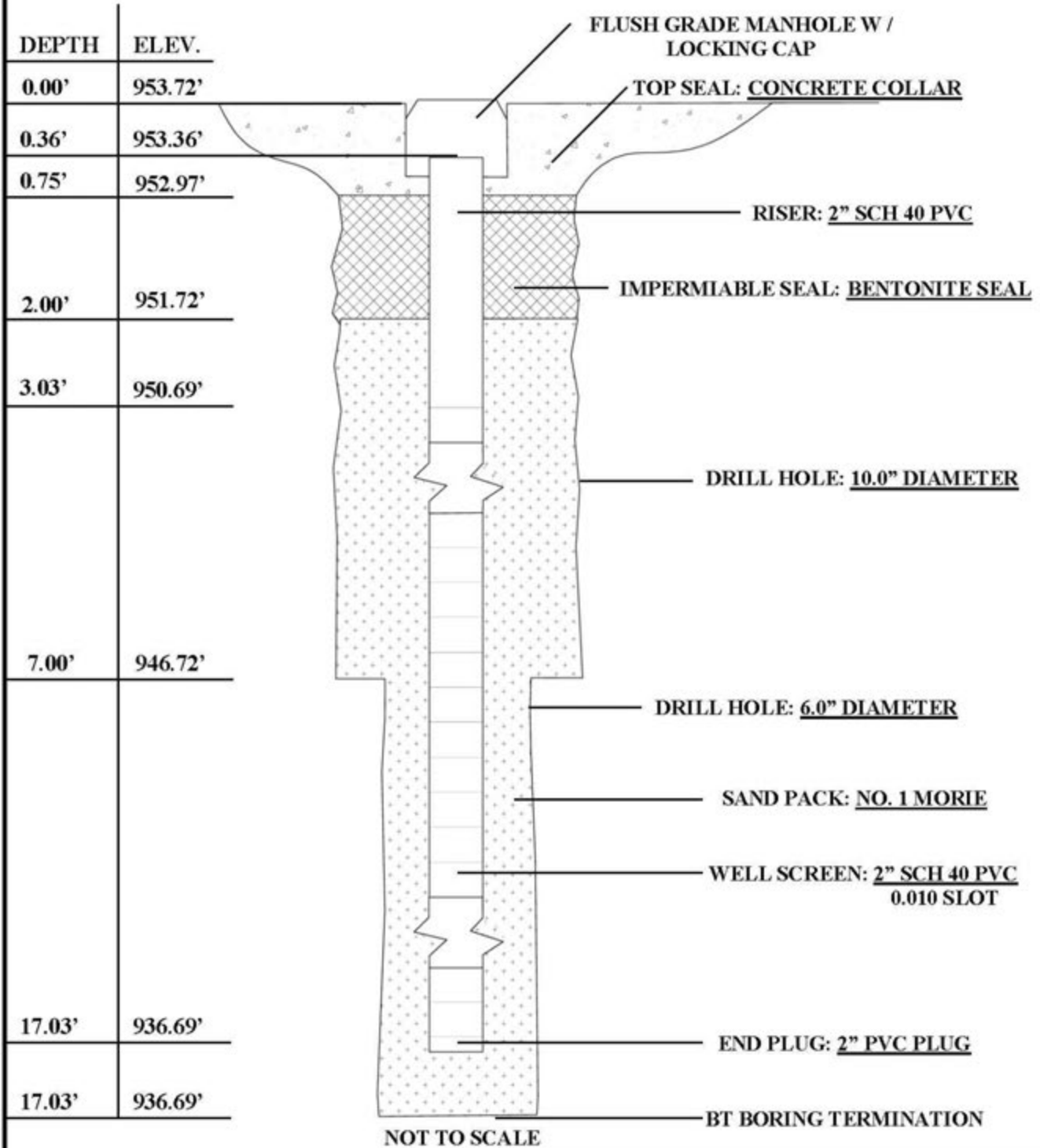
SITE CHARACTERIZATION ACTIVITIES  
QUINN'S CAFÉ STOP PROPERTY  
MONITORING WELL 10





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## MONITORING WELL CONSTRUCTION DETAIL

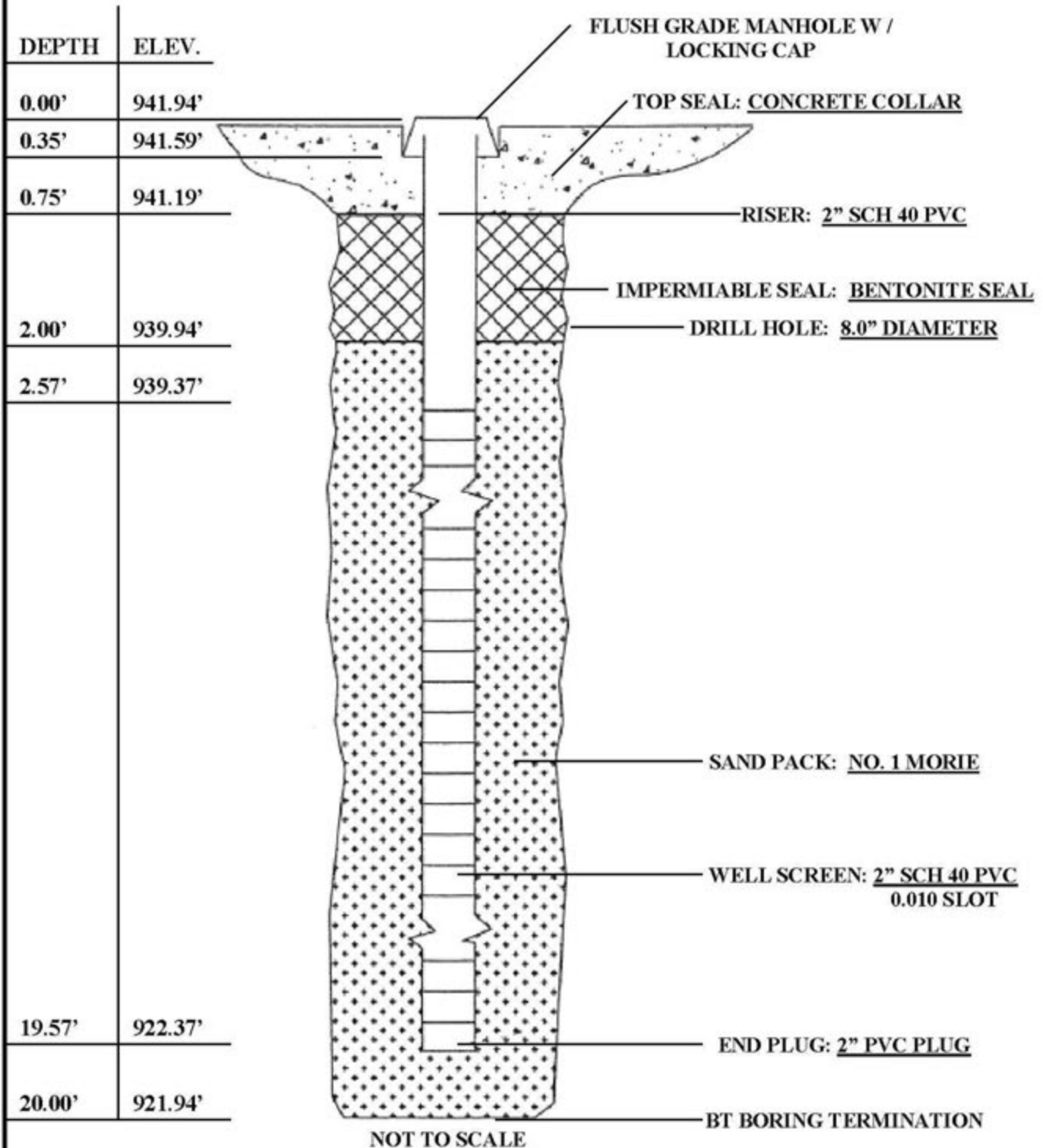


**SITE CHARACTERIZATION ACTIVITIES  
QUINN'S CAFÉ STOP PROPERTY  
MONITORING WELL 11**



**LaBella**  
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## MONITORING WELL CONSTRUCTION DETAIL

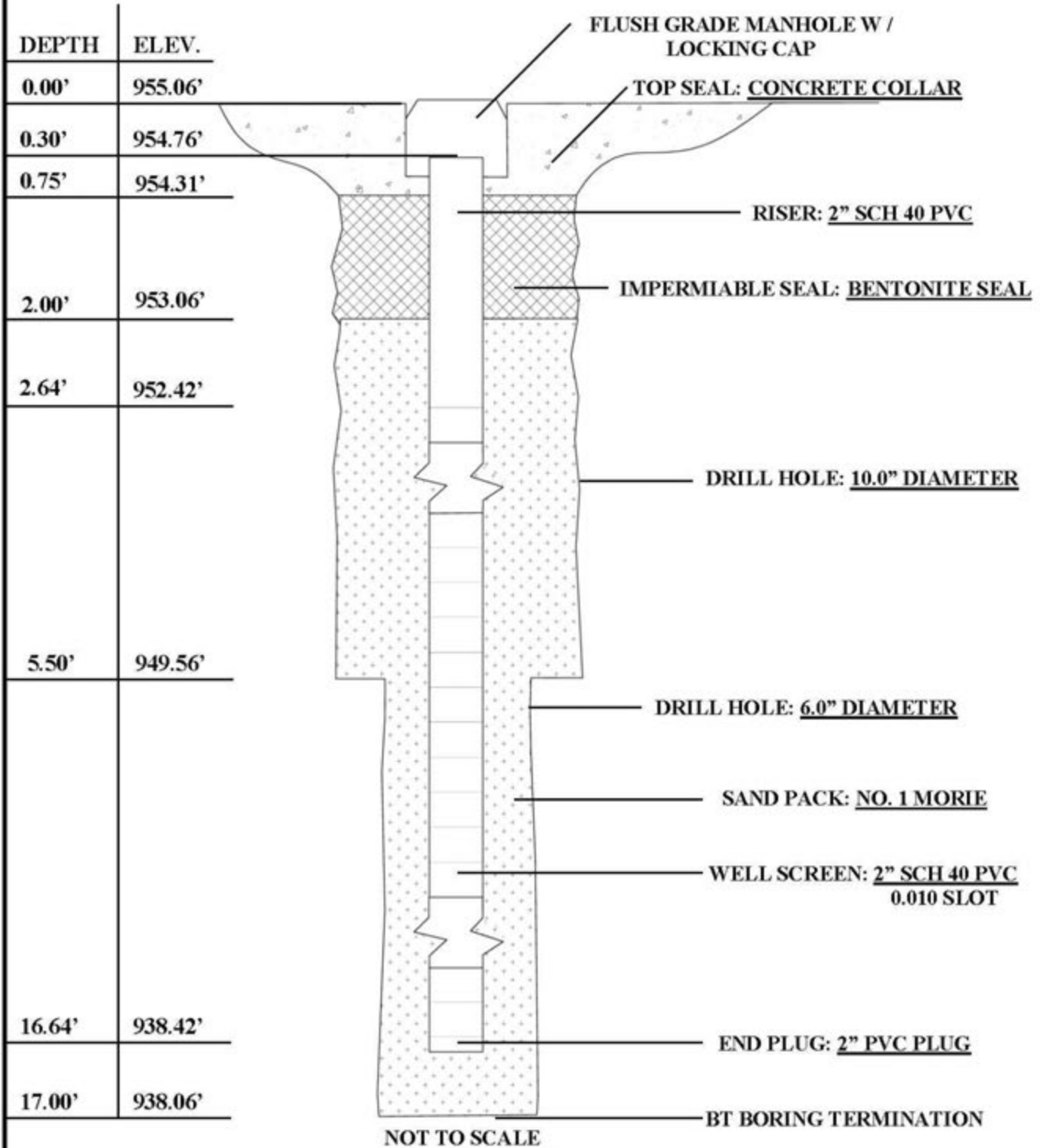


SITE CHARACTERIZATION ACTIVITIES  
QUINN'S CAFÉ STOP PROPERTY  
MONITORING WELL 12



**LaBella**  
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## MONITORING WELL CONSTRUCTION DETAIL



**SITE CHARACTERIZATION ACTIVITIES  
QUINN'S CAFÉ STOP PROPERTY  
MONITORING WELL 13**

## APPENDIX J

### Well Development and Purging Records

## Field Notes

TO: File  
FROM: Chris Herman  
DATE: February 3, 2017  
PROJECT: Quinn's Café Stop / Site Characterization  
PROJECT NUMBER: 26116  
SUBJECT: Monitoring Well Development Activities

0720: Arrived onsite and initiated site activities with the collection of static water levels from the five (5) groundwater monitoring wells located onsite. The purpose of the field activities was to develop the five (5) groundwater monitoring wells installed at the subject property between January 30, 2017 and January 31, 2017. The general well information is as follows:

**Table 1**  
**General Well Information**

Well #	SWL (Feet)	Depth (Feet)	1 Volume (Gallons)	10 Volumes (Gallons)	Purged (Gallons)
MW-1	4.61	14.39	1.6	16	20.0
MW-2	4.45	15.02	1.8	18	20.0
MW-3	3.73	14.89	1.9	19	20.0
MW-4	4.44	14.87	1.7	17	12.5
MW-5	3.38	15.01	1.9	19	23.0

MW-1: A total of 20.0 gallons was extracted from MW-1. Odorous and visual indications of potential contamination were observed. Recharge was excellent.

**Table 2**  
**Well Development Data – MW-1**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons Purged	Comment
0811	9.7	7.33	--	0.981	--	1.0	Cloudy
0813	9.5	7.26	--	0.967	--	3.0	Cloudy
0815	10.3	7.22	--	0.960	--	5.0	Cloudy
0816	10.2	7.17	--	0.953	--	8.0	Cloudy
0818	10.2	7.19	--	0.961	--	10.0	Cloudy
0820	10.2	7.15	--	0.952	--	13.0	Cloudy
0823	10.0	7.16	--	0.949	--	15.0	Cloudy
0824	10.0	7.17	--	0.938	--	18.0	Cloudy
0827	10.1	7.16	--	0.933	--	20.0	Cloudy

MW-2: A total of 20.0 gallons was extracted from MW-2. Strong odorous and visual indications of potential contamination were observed. Recharge was excellent.

**Table 3**  
**Well Development Data – MW-2**

Time	Temp (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons Purged	Comment
0931	10.4	6.73	--	1.582	--	1.0	V. Silty
0932	9.9	6.74	--	1.386	--	3.0	V. Silty
0933	9.9	6.74	--	1.431	--	5.0	V. Silty
0935	9.9	6.75	--	1.597	--	7.0	V. Silty
0937	10.0	6.75	--	1.630	--	10.0	V. Silty
0939	9.8	6.75	--	1.790	--	13.0	V. Silty
0940	9.7	6.77	--	1.864	--	15.0	V. Silty
0941	9.9	6.77	--	1.918	--	17.0	V. Silty
0942	9.6	6.78	--	1.982	--	20.0	V. Silty

MW-3: A total of 20.0 gallons was extracted from MW-3. Odorous indications of potential contamination were observed. Recharge was excellent.

**Table 4**  
**Well Development Data – MW-3**

Time	Temp (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons Purged	Comment
0904	9.2	6.81	--	1.754	--	1.0	V. Cloudy
0905	9.4	6.83	--	1.734	--	3.0	V. Cloudy
0907	9.5	6.84	--	1.725	--	5.0	V. Cloudy
0908	9.6	6.85	--	1.719	--	7.0	V. Cloudy
0910	9.5	6.86	--	1.706	--	10.0	V. Cloudy
0913	9.2	6.87	--	1.711	--	13.0	V. Cloudy
0915	9.4	6.88	--	1.708	--	15.0	V. Cloudy
0916	9.8	6.89	--	1.685	--	18.0	Cloudy
0918	10.2	6.93	--	1.696	--	20.0	Cloudy

MW-4: A total of 12.5 gallons was extracted from MW-4. The well was evacuated several times. No odorous or visual indications of potential contamination were observed. Recharge was poor.

**Table 5**  
**Well Development Data – MW-4**

Time	Temp (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons Purged	Comment
0851	11.2	6.82	--	2.21	--	1.0	Clear
0852	11.0	6.75	--	2.22	--	3.0	Cloudy
0854	11.5	6.72	--	2.35	--	5.0	Cloudy
1022	11.2	6.76	--	2.25	--	7.0	Cloudy
1024	11.7	6.80	--	2.40	--	8.5	Cloudy
1135	11.9	6.77	--	2.27	--	9.5	Cloudy
1248	12.0	6.76	--	2.18	--	11.5	Clear



MW-5: A total of 23.0 gallons was extracted from MW-5. The well was evacuated several times. Odorous indications of potential contamination were observed. Recharge was poor.

**Table 6**  
**Well Development Data – MW-5**

Time	Temp (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons Purged	Comment
0840	9.9	6.98	--	2.15	--	1.0	V. Cloudy
0842	10.0	6.98	--	1.947	--	3.0	V. Cloudy
0844	11.2	7.16	--	2.12	--	6.0	V. Cloudy
1012	9.6	6.95	--	2.21	--	7.0	Cloudy
1013	9.7	6.98	--	1.989	--	9.0	Cloudy
1014	10.8	7.08	--	2.16	--	11.0	Cloudy
1130	9.9	6.89	--	2.24	--	12.0	Clear
1131	9.4	6.95	--	2.24	--	14.0	Cloudy
1132	10.6	7.03	--	1.988	--	17.0	Cloudy
1235	10.0	6.85	--	2.25	--	18.0	Clear
1236	9.7	6.95	--	2.26	--	20.0	Cloudy
1238	10.4	7.02	--	2.22	--	22.0	Cloudy

Offsite: 1300

SN / ch

## Field Notes

TO: File  
FROM: Chris Herman  
DATE: February 15, 2017  
PROJECT: Quinn's Café Stop / Site Characterization  
PROJECT NUMBER: 26116  
SUBJECT: Groundwater Sampling Activities

0855: Arrived onsite and initiated site activities with the collection of static water levels from the five (5) groundwater monitoring wells located onsite. The purpose of the field activities was to collect groundwater samples from the five (5) monitoring wells for laboratory analysis. The general well information is as follows:

**Table 1A**  
**General Well Information**  
**Wells Sampled via Hand-Bailing Techniques**

Well #	S.W.L. (Feet)	Total Depth (Feet)	1 Volume (Gallons)	3 Volumes (Gallons)	Purged (Gallons)
MW-1	4.00	14.39	--	--	--
MW-2	4.41	15.02	1.8	5.4	6.0
MW-3	3.70	14.89	--	--	--
MW-4	4.44	14.87	1.7	5.1	6.0
MW-5	3.34	15.01	2.0	6.0	6.0

**Table 1B**  
**General Well Information**  
**Well Sampled via Low-Flow Techniques**

Well #	S.W.L. (Feet)	T.D. (Feet)	Pump Depth (Feet)	Rate (L/min.)	Purged (Gallons)
MW-1	4.00	14.39	9.2	0.11	1.0
MW-2	4.41	15.02	--	--	--
MW-3	3.70	14.89	9.3	0.32	1.5
MW-4	4.44	14.87	--	--	--
MW-5	3.34	15.01	--	--	--

**MW-1:** MW-1 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 9.2'. The well was purged and sampled at 110 ml / min. The well maintained steady recharge throughout the purging activities. A total of 1.0 gallons was extracted from the well. Odorous indications of contamination were observed during purging activities.

**Table 2**  
**Well Purging Data – MW-1**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
0915	7.57	7.37	138	0.705	69.5	1.68	4.10
0918	7.58	7.49	103	0.710	67.3	1.39	4.11
0921	8.15	7.60	67	0.722	55.8	1.18	4.11
0924	8.18	7.65	50	0.725	43.4	1.09	4.11
0927	8.16	7.71	37	0.726	34.3	1.03	4.11
0930	8.46	7.75	25	0.732	28.1	1.05	4.11
0933	8.36	7.78	21	0.729	22.7	1.00	4.11
0936	8.50	7.80	16	0.736	24.9	0.92	4.11
0939	8.75	7.81	12	0.741	19.1	0.88	4.11

**MW-2:** MW-2 was characterized as being extensively contaminated. A trace amount of free product was observed during the purging activities. As such, no purge data was obtained. A total of six (6) gallons was extracted from MW-2 using a hand bailer and the well was sampled upon recharge. Strong odorous and visual indications of contamination were observed.

**MW-3:** MW-3 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 9.3'. The well was purged and sampled at 320 ml / min. The well maintained steady recharge throughout the purging activities. A total of 1.5 gallons was extracted from the well. Odorous indications of contamination were observed during purging activities.

**Table 3**  
**Well Purging Data – MW-3**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
1008	7.55	7.54	-21	1.41	20.2	0.53	3.81
1011	7.10	7.51	-27	1.39	12.6	0.50	3.81
1014	7.00	7.49	-31	1.39	6.3	0.46	3.81
1017	7.01	7.49	-34	1.38	4.9	0.46	3.81
1020	7.06	7.48	-36	1.38	4.7	0.42	3.81

**MW-4:** MW-4 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. Three (3) well volumes were calculated and purged from the well. No odorous or visual indications of contamination were observed. A total of 6.0 gallons was extracted from the well.

**Table 4**  
**Well Purging Data – MW-4**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1101	10.47	7.58	-53	1.42	1.31	0.50	Cloudy
1102	9.19	7.63	-59	1.41	2.16	1.0	Cloudy
1104	8.89	7.60	-58	1.43	2.91	3.0	Cloudy
1105	9.37	7.59	-48	1.47	3.32	5.0	Cloudy
1106	9.87	7.58	-42	1.53	4.97	6.0	Cloudy

**MW-5:** MW-5 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. Three (3) well volumes were calculated and purged from the well. Odorous and visual indications of contamination were observed. A total of 6.0 gallons was extracted from the well.

**Table 5**  
**Well Purging Data – MW-5**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1123	9.30	7.83	-73	1.53	1.71	0.50	Clear
1125	7.94	7.83	-72	1.48	2.68	1.0	Cloudy
1127	8.04	7.83	-71	1.47	3.32	3.0	Cloudy
1128	8.68	7.84	-70	1.47	3.26	5.0	V. Cloudy
1129	9.18	7.83	-68	1.49	2.89	6.0	V. Cloudy

**Table 6**  
**Final Sample Data Summary**

Well #	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Level (Feet)
MW-1	8.75	7.81	12	0.741	19.1	0.88	--
MW-2	--	--	--	--	--	--	4.45
MW-3	7.06	7.48	-36	1.38	4.7	0.42	--
MW-4	7.57	8.31	-68	1.28	--	6.44	4.93
MW-5	7.18	7.90	-77	1.53	--	4.15	3.36

**Table 7**  
**Final Sample Data**

Well #	Manganese (mg/L)	Ferrous Iron (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
MW-1	0.9	0.67	1.9	18
MW-2	--	--	--	--
MW-3	14.5	3.16	2.4	20
MW-4	15.2	2.03	4.2	14
MW-5	12.2	>3.30	0.7	0

-- = too turbid

**Table 8**  
**Final Sample Data Summary**

Well #	Time	Date
116-0215-MW1	0942	02.15.17
116-0215-MW2	1235	02.15.17
116-0215-MW3	1023	02.15.17
116-0215-MW4	1400	02.15.17
116-0215-MW5	1425	02.15.17
116-0215-FB1	1440	02.15.17

1450: Offsite

SN / kc

## Field Notes

TO: File  
FROM: Chris Herman  
DATE: June 16, 2017  
PROJECT: Quinn's Café Stop / Site Characterization  
PROJECT NUMBER: 26116  
SUBJECT: Monitoring Well Development Activities

0740: Arrived onsite and initiated site activities with the collection of static water levels from the ten (10) groundwater monitoring wells located onsite. The purpose of the field activities was to develop the five (5) groundwater monitoring wells installed at the subject property between June 5, 2017 and June 6, 2017. The general well information is as follows:

**Table 1**  
**General Well Information**

Well #	SWL (Feet)	Depth (Feet)	1 Volume (Gallons)	10 Volumes (Gallons)	Purged (Gallons)
MW-1	5.08	14.39	--	--	--
MW-2	5.05	15.02	--	--	--
MW-3	4.69	14.89	--	--	--
MW-4	4.88	14.87	--	--	--
MW-5	3.89	15.01	--	--	--
MW-6	4.36	15.08	1.8	18.0	20.0
MW-7	7.48	16.78	1.6	16.0	3.0
MW-8	6.31	17.17	1.8	18.0	7.0
MW-9	6.31	16.77	1.8	18.0	10.0
MW-10	9.89	23.30	2.2	22.0	5.0

**MW-6:** A total of 20.0 gallons was extracted from MW-6. Odorous indications of potential contamination were observed. Recharge was excellent.

**Table 2**  
**Well Development Data – MW-6**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons Purged	Comment
0855	13.8	6.70	--	0.631	--	0.25	Cloudy
0856	13.3	6.72	--	0.556	--	5.0	V. Silty
0857	13.2	6.71	--	0.550	--	10.0	V. Silty
0858	13.2	6.74	--	0.550	--	15.0	V. Silty
0902	13.2	6.74	--	0.545	--	18.0	V. Silty
0903	13.1	6.74	--	0.549	--	20.0	V. Silty



**MW-7:** A total of 3.0 gallons was extracted from MW-7. The well was evacuated at 3.0 gallons. No odorous or visual indications of potential contamination were observed. Recharge was very poor.

**Table 3**  
**Well Development Data – MW-7**

Time	Temp (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons Purged	Comment
1052	12.5	7.08	--	0.441	--	0.25	Clear
1053	12.6	7.03	--	0.397	--	3.0	Clear

**MW-8:** A total of 7.0 gallons was extracted from MW-8. The well was evacuated several times. No odorous or visual indications of potential contamination were observed. Recharge was poor / fair.

**Table 4**  
**Well Development Data – MW-8**

Time	Temp (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons Purged	Comment
1028	12.6	7.25	--	0.461	--	0.25	Clear
1029	12.3	7.18	--	0.515	--	5.0	V. Cloudy
1035	12.2	7.09	--	0.441	--	6.0	Cloudy
1046	12.7	6.48	--	0.313	--	7.0	Cloudy

**MW-9:** A total of 10.0 gallons was extracted from MW-9. The well was evacuated at 10.0 gallons. No odorous or visual indications of potential contamination were observed. Recharge was fair.

**Table 5**  
**Well Development Data – MW-9**

Time	Temp (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons Purged	Comment
1000	12.9	7.14	--	0.717	--	0.25	Cloudy
1002	12.6	7.01	--	0.781	--	5.0	Silty
10.12	13.3	6.96	--	0.785	--	10.0	Silty

**MW-10:** A total of 5.0 gallons was extracted from MW-10. The well was evacuated at 5.0 gallons. No odorous or visual indications of potential contamination were observed. Recharge was very poor.

**Table 6**  
**Well Development Data – MW-10**

Time	Temp (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons Purged	Comment
0930	13.7	6.35	--	9.44	--	0.25	Cloudy
0931	13.5	6.26	--	9.55	--	5.0	V. Cloudy

Offsite: 1115

SN / ch

## Field Notes

TO: File  
FROM: Chris Herman  
DATE: June 27 - 28, 2017  
PROJECT: Quinn's Café Stop / Site Characterization  
PROJECT NUMBER: 26116  
SUBJECT: Groundwater Sampling Activities

0900: Arrived onsite and initiated site activities with the collection of static water levels from the ten (10) groundwater monitoring wells located onsite. The purpose of the field activities was to collect groundwater samples from the ten (10) monitoring wells for laboratory analysis. The general well information is as follows:

**Table 1A**  
**General Well Information**  
**Wells Sampled via Hand-Bailing Techniques**

Well #	S.W.L. (Feet)	Total Depth (Feet)	1 Volume (Gallons)	3 Volumes (Gallons)	Purged (Gallons)
MW-1	4.46	14.39	--	--	--
MW-2	4.91	15.02	1.7	5.1	5.5
MW-3	4.63	14.89	--	--	--
MW-4	4.88	14.87	1.7	5.1	4.0
MW-5	4.78	15.01	1.7	5.1	4.0
MW-6	4.27	15.08	--	--	--
MW-7	7.49	16.78	1.6	4.8	3.0
MW-8	6.27	17.17	1.8	5.4	4.0
MW-9	6.12	16.77	1.8	5.4	6.0
MW-10	15.32	23.30	1.3	3.9	2.0

**Table 1B**  
**General Well Information**  
**Well Sampled via Low-Flow Techniques**

Well #	S.W.L. (Feet)	T.D. (Feet)	Pump Depth (Feet)	Rate (L/min.)	Purged (Gallons)
MW-1	4.46	14.39	9.4	0.25	1.5
MW-2	4.91	15.02	--	--	--
MW-3	4.63	14.89	9.8	0.23	1.0
MW-4	4.88	14.87	--	--	--
MW-5	4.78	15.01	--	--	--
MW-6	4.27	15.08	9.7	0.48	5.0
MW-7	7.49	16.78	--	--	--
MW-8	6.27	17.17	--	--	--
MW-9	6.12	16.77	--	--	--
MW-10	15.32	23.30	--	--	--

**MW-1:** MW-1 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 9.4'. The well was purged and sampled at 250 ml / min. The well maintained steady recharge throughout the purging activities. A total of 1.5 gallons was extracted from the well. No odorous or visual indications of contamination were observed during purging activities.

**Table 2**  
**Well Purging Data – MW-1**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
1115	18.91	8.51	-99	0.752	36.4	0.73	4.84
1118	19.15	8.47	-102	0.756	34.1	0.66	4.85
1121	19.23	8.46	-104	0.759	32.0	0.63	4.85
1124	19.40	8.44	-106	0.763	27.9	0.58	4.85

**MW-2:** MW-2 was characterized as being extensively contaminated. A trace amount of free product was observed during the purging activities. As such, no purge data was obtained. A total of 5.5 gallons was extracted from MW-2 using a hand bailer and the well was sampled upon recharge. Strong odorous and visual indications of contamination were observed.

**MW-3:** MW-3 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 9.8'. The well was purged and sampled at 230 ml / min. The well maintained steady recharge throughout the purging activities. A total of 1.0 gallon was extracted from the well. Odorous indications of contamination were observed during purging activities.

**Table 3**  
**Well Purging Data – MW-3**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
1302	19.45	7.85	-134	1.20	20.8	0.39	5.28
1305	19.68	7.86	-139	1.22	19.7	0.38	5.28
1308	19.89	7.87	-142	1.24	17.5	0.38	5.28
1311	20.03	7.88	-146	1.25	13.4	0.38	5.28

**MW-4:** MW-4 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. Three (3) well volumes were calculated and purged from the well. Slight odorous indications of contamination were observed. A total of 4.0 gallons was extracted from the well.

**Table 4**  
**Well Purging Data – MW-4**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0827	14.10	8.23	-135	2.56	1.76	0.25	Clear
0829	15.35	8.20	-133	2.31	2.39	1.0	Cloudy
0831	15.64	8.20	-134	2.20	2.30	2.0	Cloudy
0833	15.34	8.16	-132	2.36	2.91	3.0	Cloudy
0835	14.82	8.13	-130	2.49	2.77	4.0	Cloudy

**MW-5:** MW-5 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. Three (3) well volumes were calculated and purged from the well. Odorous and visual indications of contamination were observed. A total of 4.0 gallons was extracted from the well.

**Table 5**  
**Well Purging Data – MW-5**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0809	13.51	8.36	-104	2.57	2.12	0.25	Clear
0811	15.13	8.44	-115	1.88	2.50	1.0	Cloudy
0813	15.66	8.43	-121	1.77	2.11	2.0	Cloudy
0815	15.18	8.41	-126	1.89	2.94	3.0	Cloudy
0817	14.35	8.41	-133	2.15	2.53	4.0	Cloudy

**MW-6:** MW-6 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 9.7". The well was purged and sampled at 480 ml / min. The well maintained steady recharge throughout the purging activities. A total of 5.0 gallons was extracted from the well. Odorous indications of contamination were observed during purging activities.

**Table 6**  
**Well Purging Data – MW-6**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
1217	15.20	8.13	-112	0.477	85.5	0.44	4.74
1220	14.87	8.09	-115	0.476	78.5	0.42	4.74
1223	14.73	8.07	-118	0.476	82.1	0.41	4.74
1226	14.68	8.05	-119	0.476	80.0	0.41	4.74
1229	15.11	8.04	-121	0.481	72.5	0.40	4.74

**MW-7:** MW-7 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. Three (3) well volumes were calculated and purged from the well. No odorous or visual indications of contamination were observed. A total of 3.0 gallons was extracted from the well.

**Table 7**  
**Well Purging Data – MW-7**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1504	13.25	8.21	127	0.370	3.32	0.25	Clear
1506	13.13	8.14	135	0.340	4.99	1.0	Cloudy
1508	12.89	8.12	139	0.349	5.34	2.0	Cloudy
1510	12.71	8.07	140	0.393	3.69	3.0	Cloudy

**MW-8:** MW-8 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. Three (3) well volumes were calculated and purged from the well. No odorous or visual indications of contamination were observed. A total of 4.0 gallons was extracted from the well.

**Table 8**  
**Well Purging Data – MW-8**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1445	14.72	8.28	92	0.404	2.93	0.25	Clear
1447	13.93	8.25	101	0.383	5.51	1.0	V. Cloudy
1449	13.68	8.23	109	0.398	5.56	2.0	V. Cloudy
1451	13.24	8.23	116	0.419	5.97	3.0	V. Cloudy
1453	12.93	8.31	116	0.433	5.74	4.0	V. Cloudy

**MW-9:** MW-9 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. Three (3) well volumes were calculated and purged from the well. No odorous or visual indications of contamination were observed. A total of 6.0 gallons was extracted from the well.

**Table 9**  
**Well Purging Data – MW-9**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1350	16.36	8.68	-97	0.621	1.01	0.25	Clear
1353	14.79	8.51	-73	0.554	2.46	1.0	Silty
1356	14.22	8.23	-52	0.543	2.42	2.0	Silty
1359	14.39	7.93	-30	0.522	4.87	3.0	Silty
1402	14.41	7.67	-9	0.505	2.93	4.0	Silty
1405	14.46	7.43	14	0.484	2.98	5.0	Silty
1408	14.63	7.20	44	0.446	3.58	6.0	Silty

**MW-10:** MW-10 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. Three (3) well volumes were calculated and purged from the well. No odorous or visual indications of contamination were observed. A total of 2.0 gallons was extracted from the well.

**Table 10**  
**Well Purging Data – MW-10**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0752	12.29	7.34	309	6.75	3.27	0.25	Clear
0754	12.44	7.39	312	6.84	4.80	1.0	Cloudy
0756	12.39	7.42	311	6.89	4.79	2.0	Cloudy

**Table 11**  
**Final Sample Data Summary**

Well #	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Level (Feet)
MW-1	19.40	8.44	-106	0.763	27.9	0.58	--
MW-2	--	--	--	--	--	--	--
MW-3	20.03	7.88	-146	1.25	13.4	0.38	--
MW-4	16.45	8.54	-111	1.94	--	5.24	5.17
MW-5	17.72	8.68	-95	2.13	--	2.44	3.85
MW-6	15.11	8.04	-121	0.481	72.5	0.40	--
MW-7	14.50	8.13	162	0.360	--	4.98	14.07
MW-8	14.62	7.05	182	0.284	--	4.01	6.38
MW-9	17.18	6.97	121	0.415	--	7.48	6.33
MW-10	14.44	7.86	107	6.92	--	9.23	20.30

**Table 12**  
**Final Sample Data**

Well #	Manganese (mg/L)	Ferrous Iron (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
MW-1	0.2	0.62	0.2	15
MW-2	--	--	--	--
MW-3	>22.0	>3.30	3.2	0
MW-4	8.8	>3.30	1.4	0
MW-5	10.8	>3.30	2.0	0
MW-6	5.0	>3.30	0.0	4
MW-7	--	--	--	--
MW-8	0.5	0.04	0.2	5
MW-9	1.5	0.60	0.0	14
MW-10	3.5	0.13	1.0	>80

-- = too turbid

**Table 13**  
**Final Sample Data Summary**

Well #	Time	Date
116-0627-MW1	1127	06.27.17
116-0627-MW2	0900	06.28.17
116-0627-MW3	1314	06.27.17
116-0627-MW4	1101	06.28.17
116-0627-MW5	1034	06.28.17
116-0627-MW6	1232	06.27.17
116-0627-MW7	1545	06.27.17
116-0627-MW8	1530	06.27.17
116-0627-MW9	1430	06.27.17
116-0627-MW10	1002	06.28.17
116-0627-FB1	1547	06.27.17
116-0627-FB2	1115	06.28.17

Day 1  
0900: Onsite  
1550: Offsite

Day 2  
0728: Onsite  
1126: Offsite

SN / ch



## Field Notes

TO: File  
FROM: Chris Herman  
DATE: September 11, 2017  
PROJECT: Quinn's Café Stop / Site Characterization  
PROJECT NUMBER: 2171853 (26116)  
SUBJECT: Groundwater Sampling Activities

0717: Arrived onsite and initiated site activities with the collection of static water levels from the ten (10) groundwater monitoring wells located onsite. The purpose of the field activities was to collect groundwater samples from the ten (10) monitoring wells for laboratory analysis. The general well information is as follows:

**Table 1A**  
**General Well Information**  
**Wells Sampled via Hand-Bailing Techniques**

Well #	S.W.L. (Feet)	Total Depth (Feet)	1 Volume (Gallons)	3 Volumes (Gallons)	Purged (Gallons)
MW-1	3.98	14.39	--	--	--
MW-2	4.30	15.02	1.8	5.4	6.0
MW-3	3.73	14.89	--	--	--
MW-4	5.15	14.87	1.6	4.8	3.0
MW-5	3.32	15.01	2.0	6.0	4.0
MW-6	3.64	15.08	--	--	--
MW-7	7.23	16.78	1.6	4.8	2.0
MW-8	5.02	17.17	2.0	6.0	6.0
MW-9	5.05	16.77	2.0	6.0	6.0
MW-10	8.17	23.30	2.5	7.5	5.0

**Table 1B**  
**General Well Information**  
**Well Sampled via Low-Flow Techniques**

Well #	S.W.L. (Feet)	T.D. (Feet)	Pump Depth (Feet)	Rate (L/min.)	Purged (Gallons)
MW-1	3.98	14.39	9.2	0.30	1.5
MW-2	4.30	15.02	--	--	--
MW-3	3.73	14.89	9.3	0.35	2.0
MW-4	5.15	14.87	--	--	--
MW-5	3.32	15.01	--	--	--
MW-6	3.64	15.08	9.4	0.36	3.0
MW-7	7.23	16.78	--	--	--
MW-8	5.02	17.17	--	--	--
MW-9	5.05	16.77	--	--	--
MW-10	8.17	23.30	--	--	--

**MW-1:** MW-1 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 9.2'. The well was purged and sampled at 300 ml / min. The well maintained steady recharge throughout the purging activities. A total of 1.5 gallons was extracted from the well. No odorous or visual indications of contamination were observed during purging activities.

**Table 2**  
**Well Purging Data – MW-1**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
1229	20.81	8.58	-129	0.752	38.4	0.38	4.32
1232	21.03	8.57	-127	0.758	37.2	0.38	4.32
1235	21.31	8.55	-125	0.761	34.4	0.38	4.32
1238	21.41	8.55	-123	0.762	27.9	0.38	4.32

**MW-2:** MW-2 contained a trace amount of free product (<0.01'). As such, no purge data was obtained. A total of 6.0 gallons was extracted from MW-2 using a hand bailer and the well was sampled upon recharge. Odorous and visual indications of contamination were observed.

**MW-3:** MW-3 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 9.3'. The well was purged and sampled at 350 ml / min. The well maintained steady recharge throughout the purging activities. A total of 2.0 gallons was extracted from the well. Odorous indications of contamination were observed during purging activities.

**Table 3**  
**Well Purging Data – MW-3**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
1308	22.19	8.35	-141	1.08	23.6	0.33	4.25
1311	22.29	8.34	-146	1.08	22.1	0.34	4.24
1314	22.38	8.33	-151	1.08	21.8	0.32	4.24
1317	22.41	8.32	-153	1.08	21.9	0.32	4.24

**MW-4:** MW-4 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. Three (3) well volumes were calculated and purged from the well. Odorous indications of contamination were observed. A total of 3.0 gallons was extracted from the well.

**Table 4**  
**Well Purging Data – MW-4**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1138	17.99	8.65	-128	2.36	6.55	0.25	Clear
1140	18.62	8.59	-129	2.11	2.15	1.0	Silty
1142	18.33	8.56	-127	2.17	1.90	2.0	Silty
1144	17.94	8.56	-127	2.23	2.16	3.0	Silty

**MW-5:** MW-5 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. Three (3) well volumes were calculated and purged from the well. Odorous and visual indications of contamination were observed. A total of 4.0 gallons was extracted from the well.

**Table 5**  
**Well Purging Data – MW-5**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1022	18.09	8.88	-127	2.19	1.24	0.25	Clear
1024	19.51	8.83	-129	1.70	1.45	1.0	Silty
1026	19.09	8.77	-131	1.70	1.73	3.0	Silty
1028	18.30	8.78	-134	1.84	2.11	4.0	Silty

**MW-6:** MW-6 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 9.4'. The well was purged and sampled at 360 ml / min. The well maintained steady recharge throughout the purging activities. A total of 3.0 gallons was extracted from the well. Odorous indications of contamination were observed during purging activities.

**Table 6**  
**Well Purging Data – MW-6**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
1343	18.42	8.31	-115	0.506	160	0.35	3.94
1346	18.45	8.27	-118	0.498	99.2	0.34	3.94
1349	18.46	8.23	-119	0.495	78.1	0.32	3.94
1352	18.48	8.19	-121	0.491	58.0	0.32	3.94
1355	18.54	8.16	-122	0.491	51.0	0.32	3.94
1358	18.44	8.15	-124	0.489	42.3	0.31	3.94
1401	18.60	8.13	-125	0.491	40.2	0.31	3.94

**MW-7:** MW-7 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. Three (3) well volumes were calculated and purged from the well. No odorous or visual indications of contamination were observed. A total of 2.0 gallons was extracted from the well.

**Table 7**  
**Well Purging Data – MW-7**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0948	14.75	8.72	59	0.545	1.38	0.25	Clear
0950	15.25	8.73	-3	0.518	1.89	1.0	Clear
0952	15.12	8.80	-32	0.505	2.29	2.0	Clear

**MW-8:** MW-8 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. Three (3) well volumes were calculated and purged from the well. No odorous or visual indications of contamination were observed. A total of 6.0 gallons was extracted from the well.

**Table 8**  
**Well Purging Data – MW-8**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0933	15.13	7.96	184	0.712	1.64	0.25	Clear
0936	15.16	8.08	177	0.766	2.07	1.0	Silty
0938	14.95	8.17	171	0.888	2.14	3.0	Silty
0941	14.62	8.28	168	1.09	2.32	6.0	Silty
0943	14.62	8.49	164	0.893	3.46	6.0	Silty

**MW-9:** MW-9 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. Three (3) well volumes were calculated and purged from the well. No odorous or visual indications of contamination were observed. A total of 6.0 gallons was extracted from the well.

**Table 9**  
**Well Purging Data – MW-9**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0843	14.68	9.05	-82	1.08	1.04	0.25	Clear
0846	14.64	8.91	-63	0.379	1.51	1.0	V. Silty
0849	14.56	8.66	-40	0.352	2.23	3.0	V. Silty
0851	14.38	8.49	-22	0.416	2.70	5.0	V. Silty
0854	14.37	8.30	-23	0.266	3.20	6.0	V. Silty

**MW-10:** MW-10 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. Three (3) well volumes were calculated and purged from the well. No odorous or visual indications of contamination were observed. A total of 5.0 gallons was extracted from the well.

**Table 10**  
**Well Purging Data – MW-10**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0821	15.35	8.06	327	8.22	1.45	0.25	Clear
0824	16.54	8.07	323	8.38	2.47	1.0	Cloudy
0826	16.32	8.12	321	8.44	2.23	3.0	Cloudy
0828	15.56	8.19	320	8.19	2.39	5.0	Cloudy

**Table 11**  
**Final Sample Data Summary**

Well #	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Level (Feet)
MW-1	21.41	8.55	-123	0.762	27.9	0.38	--
MW-2	19.62	8.25	-132	1.88	--	1.18	4.35
MW-3	22.41	8.32	-153	1.08	21.9	0.32	--
MW-4	21.99	8.49	-133	2.06	--	5.24	5.25
MW-5	22.35	8.19	-108	1.75	--	1.30	3.28
MW-6	18.60	8.13	-125	0.491	40.2	0.31	--
MW-7	15.60	8.67	-23	0.472	--	2.55	8.18
MW-8	15.72	7.78	47	0.147	--	2.79	5.24
MW-9	14.24	7.58	134	0.187	--	2.87	5.06
MW-10	16.21	8.02	149	8.04	--	3.97	17.35

**Table 12**  
**Final Sample Data**

Well #	Manganese (mg/L)	Ferrous Iron (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
MW-1	1.2	0.24	1.0	20
MW-2	--	--	--	--
MW-3	7.6	>3.30	2.3	0
MW-4	6.1	>3.30	0.0	8
MW-5	9.7	>3.30	0.7	7
MW-6	9.0	>3.30	1.8	0
MW-7	1.1	2.34	0.9	11
MW-8	0.4	0.07	0.0	9
MW-9	1.2	1.23	0.0	9
MW-10	3.5	0.08	2.1	>80

-- = too turbid

**Table 13**  
**Final Sample Data Summary**

Well #	Time	Date
116-0911-MW1	1241	09.11.17
116-0911-MW2	1206	09.11.17
116-0911-MW3	1320	09.11.17
116-0911-MW4	1500	09.11.17
116-0911-MW5	1432	09.11.17
116-0911-MW6	1404	09.11.17
116-0911-MW7	1036	09.11.17
116-0911-MW8	1006	09.11.17
116-0911-MW9	0907	09.11.17
116-0911-MW10	1103	09.11.17
116-0911-FB1	1510	09.11.17

Day 1  
0717: Onsite  
1515: Offsite

SN / mg

## Field Notes

TO: File  
FROM: Chris Herman  
DATE: November 17, 2017  
PROJECT: Quinn's Café Stop / Site Characterization  
PROJECT NUMBER: 2171853 (26116)  
SUBJECT: Monitoring Well Development Activities

0905: Arrived onsite and initiated site activities with the collection of static water levels from the thirteen (13) groundwater monitoring wells located within the study area. The purpose of the field activities was to develop the three (3) groundwater monitoring wells installed at the subject property between November 15, 2017 and November 16, 2017. The general well information is as follows:

**Table 1**  
**General Well Information**

Well #	SWL (Feet)	Depth (Feet)	1 Volume (Gallons)	10 Volumes (Gallons)	Purged (Gallons)
MW-1	5.38	14.39	--	--	--
MW-2	5.27	15.02	--	--	--
MW-3	5.14	14.89	--	--	--
MW-4	5.39	14.87	--	--	--
MW-5	4.17	15.01	--	--	--
MW-6	4.56	15.08	--	--	--
MW-7	7.74	16.78	--	--	--
MW-8	6.12	17.17	--	--	--
MW-9	6.03	16.77	--	--	--
MW-10	9.24	23.30	--	--	--
MW-11	15.65	16.67	0.17	1.7	0.09
MW-12	5.64	19.22	2.3	23.0	25.0
MW-13	12.90	16.34	0.6	6.0	1.0

MW-11: A total of 0.09 gallons was extracted from MW-11. The well was evacuated at 0.09 gallons. No odorous or visual indications of potential contamination were observed. Recharge was very poor.

**Table 2**  
**Well Development Data – MW-11**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons Purged	Comment
1015	15.2	7.2	--	0.637	--	0.01	Clear



**MW-12:** A total of 25.0 gallons was extracted from MW-12. The well was nearly evacuated several times. No odorous or visual indications of potential contamination were observed. Recharge was good.

**Table 3**  
**Well Development Data – MW-12**

Time	Temp (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons Purged	Comment
1045	15.8	6.66	--	0.895	--	0.25	Ex. Silty
1047	16.1	6.64	--	0.940	--	3.0	Ex. Silty
1049	15.7	6.59	--	0.953	--	5.0	V. Silty
1059	15.9	6.58	--	0.926	--	8.0	V. Silty
1102	16.4	6.60	--	0.920	--	10.0	V. Silty
1107	16.4	6.75	--	0.966	--	12.0	V. Silty
1111	16.1	6.78	--	1.025	--	15.0	V. Silty
1126	15.8	6.84	--	1.070	--	18.0	V. Silty
1139	16.1	6.79	--	1.013	--	20.0	Silty
1143	15.4	6.87	--	1.055	--	23.0	Silty
1146	15.5	6.80	--	1.089	--	25.0	Silty

**MW-13:** A total of 1.0 gallon was extracted from MW-13. The well was evacuated at 1.0 gallon. No odorous or visual indications of potential contamination were observed. Recharge was very poor.

**Table 4**  
**Well Development Data – MW-8**

Time	Temp (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons Purged	Comment
1238	17.3	6.83	--	0.844	--	0.25	Clear
1240	17.8	6.76	--	0.755	--	1.0	Cloudy

Offsite: 1325

SN / kc

## Field Notes

TO: File  
FROM: Chris Herman  
DATE: November 30, 2017  
PROJECT: Quinn's Café Stop / Site Characterization  
PROJECT NUMBER: 2171853 (26116)  
SUBJECT: Groundwater Sampling Activities

0805: Arrived onsite and initiated site activities with the collection of static water levels from the thirteen (13) groundwater monitoring wells located onsite. The purpose of the field activities was to collect groundwater samples from the thirteen (13) monitoring wells for laboratory analysis. The general well information is as follows:

**Table 1A**  
**General Well Information**  
**Wells Sampled via Hand-Bailing Techniques**

Well #	S.W.L. (Feet)	Total Depth (Feet)	1 Volume (Gallons)	3 Volumes (Gallons)	Purged (Gallons)
MW-1	5.45	14.39	--	--	--
MW-2	5.39	15.02	--	--	--
MW-3	5.28	14.89	--	--	--
MW-4	5.54	14.87	1.6	4.8	3.0
MW-5	4.28	15.01	1.8	5.4	5.0
MW-6	4.71	15.08	--	--	--
MW-7	7.71	16.78	1.5	4.5	3.0
MW-8	6.05	17.17	1.9	5.7	6.0
MW-9	6.04	16.77	1.8	5.4	6.0
MW-10	9.47	23.30	2.3	6.9	5.0
MW-11	6.26	16.67	1.7	5.1	5.0
MW-12	5.99	19.22	--	--	--
MW-13	13.14	16.34	0.5	1.5	1.5

**Table 1B**  
**General Well Information**  
**Well Sampled via Low-Flow Techniques**

Well #	S.W.L. (Feet)	T.D. (Feet)	Pump Depth (Feet)	Rate (L/min.)	Purged (Gallons)
MW-1	5.45	14.39	9.9	0.26	1.0
MW-2	5.39	15.02	10.2	0.46	3.0
MW-3	5.28	14.89	10.1	0.10	1.0
MW-4	5.54	14.87	--	--	--
MW-5	4.28	15.01	--	--	--
MW-6	4.71	15.08	9.9	0.35	2.5
MW-7	7.71	16.78	--	--	--
MW-8	6.05	17.17	--	--	--
MW-9	6.04	16.77	--	--	--
MW-10	9.47	23.30	--	--	--
MW-11	6.26	16.67	--	--	--
MW-12	5.99	19.22	12.6	0.29	2.0
MW-13	13.14	16.34	--	--	--

MW-1: MW-1 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 9.9'. The well was purged and sampled at 260 ml / min. The well maintained steady recharge throughout the purging activities. A total of 1.0 gallon was extracted from the well. No odorous or visual indications of contamination were observed during purging activities.

**Table 2**  
**Well Purging Data – MW-1**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
1301	13.87	9.15	-131	0.733	21.4	0.51	5.69
1304	14.15	9.06	-124	0.733	20.8	0.49	5.69
1307	14.45	8.98	-119	0.727	22.0	0.49	5.69
1310	14.78	8.93	-115	0.730	22.0	0.45	5.69
1313	14.77	8.90	-112	0.727	20.7	0.46	5.69
1316	14.93	8.87	-109	0.730	21.0	0.43	5.69
1319	15.00	8.85	-107	0.725	20.3	0.45	5.69
1322	14.95	8.85	-105	0.719	21.4	0.45	5.69

**MW-2:** MW-2 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 10.2'. The well was purged and sampled at 460 ml / min. The well maintained steady recharge throughout the purging activities. A total of 3.0 gallons was extracted from the well. Odorous indications of contamination were observed during purging activities.

**Table 3**  
**Well Purging Data – MW-2**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
1353	13.62	8.62	-129	0.892	24.4	0.44	5.57
1356	13.95	8.58	-131	0.814	19.7	0.40	5.57
1359	14.12	8.54	-132	0.845	19.9	0.34	5.57
1402	14.18	8.52	-134	0.861	19.6	0.32	5.57
1405	14.11	8.50	-135	0.905	20.2	0.34	5.57
1408	14.17	8.48	-136	0.954	20.4	0.34	5.57
1411	14.22	8.47	-138	0.973	20.5	0.38	5.57

**MW-3:** MW-3 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 10.1'. The well was purged and sampled at 100 ml / min. The well maintained steady recharge throughout the purging activities. A total of 1.0 gallon was extracted from the well. Odorous indications of contamination were observed during purging activities.

**Table 4**  
**Well Purging Data – MW-3**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
1317	13.58	8.49	-128	0.999	21.3	0.43	5.80
1320	13.63	8.51	-132	1.00	20.8	0.41	5.80
1323	13.98	8.51	-135	1.00	20.9	0.40	5.80
1326	14.19	8.51	-138	1.01	26.0	0.42	5.80

**MW-4:** MW-4 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well was evacuated at 3.0 gallons, and sampled upon recharge. Odorous indications of contamination were observed.

**Table 5**  
**Well Purging Data – MW-4**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1228	13.55	8.65	-114	1.95	1.67	0.25	Clear
1231	13.71	8.63	-113	1.95	1.57	1.0	Cloudy
1234	14.10	8.61	-112	2.00	2.08	2.0	Cloudy
1237	14.29	8.63	-113	2.04	1.80	3.0	Cloudy

MW-5: MW-5 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well evacuated at 5.0 gallons, and was sampled upon recharge. Odorous and visual indications of contamination were observed.

Table 6  
Well Purging Data – MW-5

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1207	13.10	8.55	-76	1.39	1.72	0.25	Clear
1209	12.75	8.63	-87	1.42	1.86	1.0	Silty
1211	12.94	8.66	-95	1.44	2.00	2.0	Silty
1214	13.11	8.71	-103	1.47	2.56	3.0	Silty
1217	13.19	8.74	-107	1.62	2.25	4.0	Silty
1219	13.10	8.79	-111	1.56	2.89	5.0	Silty

MW-6: MW-6 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 9.9'. The well was purged and sampled at 350 ml / min. The well maintained steady recharge throughout the purging activities. A total of 2.5 gallons was extracted from the well. Odorous indications of contamination were observed during purging activities.

Table 7  
Well Purging Data – MW-6

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
1224	14.13	8.59	-103	0.450	81.6	0.43	5.07
1227	14.31	8.54	-105	0.452	87.7	0.42	5.07
1230	14.24	8.51	-107	0.452	71.6	0.40	5.07
1233	14.30	8.50	-109	0.451	64.3	0.37	5.07
1236	14.46	8.48	-111	0.454	55.7	0.39	5.07

MW-7: MW-7 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well evacuated at 3.0 gallons, and was sampled upon recharge. No odorous or visual indications of contamination were observed.

Table 8  
Well Purging Data – MW-7

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1015	12.61	8.89	5	0.469	1.94	0.25	Clear
1018	12.48	8.90	-34	0.458	2.25	1.0	Cloudy
1020	12.42	8.93	-49	0.462	2.43	2.0	Cloudy
1023	12.35	8.94	-68	0.481	2.34	3.0	Cloudy

**MW-8:** MW-8 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. Three (3) well volumes were calculated and purged from the well. No odorous or visual indications of contamination were observed. A total of 6.0 gallons was extracted from the well.

**Table 9**  
**Well Purging Data – MW-8**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1033	12.01	8.79	-16	0.744	2.39	0.25	Clear
1036	11.40	8.87	1	0.703	2.51	1.0	V. Cloudy
1038	11.29	8.91	11	0.664	3.41	2.0	V. Cloudy
1040	11.47	8.92	24	0.686	3.20	3.0	V. Cloudy
1042	11.62	8.84	33	0.781	2.54	4.0	Silty
1044	11.28	8.88	44	0.788	3.62	5.0	Silty
1046	11.59	9.03	66	0.477	4.80	6.0	Silty

**MW-9:** MW-9 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. Three (3) well volumes were calculated and purged from the well. No odorous or visual indications of contamination were observed. A total of 6.0 gallons was extracted from the well.

**Table 10**  
**Well Purging Data – MW-9**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1130	12.09	9.22	-104	1.17	0.86	0.25	Clear
1133	12.14	9.37	-100	0.432	1.70	1.0	Silty
1135	12.19	9.16	-85	0.323	2.32	2.0	Silty
1137	12.14	8.94	-71	0.291	2.29	3.0	Silty
1139	11.89	8.78	-59	0.296	2.71	4.0	Silty
1141	11.79	8.76	-53	0.300	3.14	5.0	Silty
1143	11.61	8.76	-47	0.287	3.30	6.0	Silty

**MW-10:** MW-10 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well evacuated at 5.0 gallons, and was sampled upon recharge. No odorous or visual indications of contamination were observed.

**Table 11**  
**Well Purging Data – MW-10**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1059	13.19	7.90	134	6.91	2.03	0.25	Clear
1101	13.33	7.98	127	7.25	2.57	1.0	Cloudy
1103	13.30	8.04	122	7.44	2.18	2.0	V. Cloudy
1105	13.27	8.11	122	7.53	2.93	3.0	V. Cloudy
1107	13.06	8.17	120	7.55	2.38	4.0	V. Cloudy
1109	13.06	8.20	120	7.60	3.07	5.0	V. Cloudy



**MW-11:** MW-11 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well evacuated at 5.0 gallons, and was sampled upon recharge. No odorous or visual indications of contamination were observed.

**Table 12**  
**Well Purging Data – MW-11**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0923	11.61	9.29	324	0.488	4.62	0.25	Clear
0928	11.27	9.22	329	0.452	4.67	1.0	V. Cloudy
0930	11.57	9.29	322	0.496	5.31	2.0	V. Cloudy
0933	11.86	9.37	313	0.575	5.27	3.0	V. Cloudy
0935	11.75	9.41	309	0.588	4.85	4.0	V. Cloudy
0938	11.61	9.46	305	0.562	5.51	5.0	V. Cloudy

**MW-12:** MW-12 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 12.6'. The well was purged and sampled at 290 ml / min. The well maintained steady recharge throughout the purging activities. A total of 2.0 gallons was extracted from the well. No odorous or visual indications of contamination were observed during purging activities.

**Table 13**  
**Well Purging Data – MW-12**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
1127	12.85	8.70	-112	0.814	362	0.53	6.30
1130	13.13	8.64	-112	0.865	171	0.49	6.30
1133	13.07	8.62	-113	0.866	98.7	0.47	6.30
1136	13.20	8.60	-114	0.866	63.7	0.45	6.30
1139	13.17	8.60	-115	0.863	55.5	0.45	6.30

**MW-13:** MW-13 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. Three (3) well volumes were calculated and purged from the well. No odorous or visual indications of contamination were observed. A total of 1.5 gallons was extracted from the well.

**Table 14**  
**Well Purging Data – MW-13**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0953	13.82	9.32	308	0.558	3.86	0.25	Clear
0956	14.00	9.31	308	0.565	3.65	0.50	Cloudy
0959	13.80	9.31	280	0.606	3.23	1.0	Cloudy
1001	13.85	9.30	231	0.664	2.99	1.5	Silty

**Table 15**  
**Final Sample Data Summary**

Well #	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Level (Feet)
MW-1	14.95	8.85	-105	0.719	21.4	0.45	--
MW-2	14.22	8.47	-138	0.973	20.5	0.38	--
MW-3	14.19	8.51	-138	1.01	26.0	0.42	--
MW-4	12.43	8.94	-88	1.81	--	3.38	6.53
MW-5	11.83	9.12	70	1.67	--	2.89	4.25
MW-6	14.46	8.48	-111	0.454	55.7	0.39	--
MW-7	12.47	7.95	344	0.277	--	4.75	9.72
MW-8	12.02	8.39	173	0.173	--	4.73	6.10
MW-9	11.45	7.91	222	0.167	--	3.10	6.07
MW-10	12.03	8.08	329	7.02	--	5.22	18.00
MW-11	14.11	8.30	342	0.472	--	6.74	12.80
MW-12	13.17	8.60	-115	0.863	55.5	0.45	--
MW-13	14.50	8.34	54	0.914	--	3.10	13.16

**Table 16**  
**Final Sample Metals Data**

Well #	Manganese (mg/L)	Ferrous Iron (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
MW-1	1.9	0.04	31.1	29
MW-2	>22.0	>3.30	11.6	3
MW-3	>22.0	>3.30	1.3	0
MW-4	8.8	>3.30	2.6	67
MW-5	6.0	2.02	0.0	0
MW-6	7.0	>3.30	2.5	3
MW-7	0.6	0.04	0.0	15
MW-8	0.1	0.00	0.0	15
MW-9	0.6	1.99	2.9	14
MW-10	0.0	0.00	0.0	>80
MW-11	0.4	0.00	0.0	>80
MW-12	3.8	>3.30	0.0	10
MW-13	2.3	0.07	0.0	21

-- = too turbid

**Table 17**  
**Final Sample Data Summary**

<b>Well #</b>	<b>Time</b>	<b>Date</b>
116-1130-MW1	1325	11.30.17
116-1130-MW2	1414	12.01.17
116-1130-MW3	1329	12.01.17
116-1130-MW4	1054	12.01.17
116-1130-MW5	1035	12.01.17
116-1130-MW6	1239	12.01.17
116-1130-MW7	0933	12.01.17
116-1130-MW8	1420	11.30.17
116-1130-MW9	1453	11.30.17
116-1130-MW10	1007	12.01.17
116-1130-MW11	0900	12.01.17
116-1130-MW12	1142	12.01.17
116-1130-MW13	1350	11.30.17
116-1130-FB1	1500	11.30.17
116-1130-FB2	1420	12.01.17

Day 1  
0805: Onsite  
1510: Offsite

Day 2  
0735: Onsite  
1425: Offsite

SN / ch

## Field Notes

TO: File  
FROM: Chris Herman  
DATE: January 22 - 23, 2017  
PROJECT: Quinn's Café Stop / Site Characterization  
PROJECT NUMBER: 2171853 (26116)  
SUBJECT: Groundwater Sampling Activities

0820: Arrived onsite and initiated site activities with the collection of static water levels from the thirteen (13) groundwater monitoring wells located onsite. The purpose of the field activities was to collect groundwater samples from the thirteen (13) monitoring wells for laboratory analysis. The general well information is as follows:

**Table 1A**  
**General Well Information**  
**Wells Sampled via Hand-Bailing Techniques**

Well #	S.W.L. (Feet)	Total Depth (Feet)	1 Volume (Gallons)	3 Volumes (Gallons)	Purged (Gallons)
MW-1	5.53	14.39	--	--	--
MW-2	5.43	15.02	--	--	--
MW-3	5.18	14.89	--	--	--
MW-4	5.32	14.87	1.6	4.8	3.0
MW-5	4.28	15.01	1.8	5.4	3.0
MW-6	2.94	15.08	--	--	--
MW-7	7.58	16.78	1.5	4.5	2.0
MW-8	6.05	17.17	1.9	5.7	6.0
MW-9	5.97	16.77	--	--	--
MW-10	8.43	23.30	2.5	7.5	5.5
MW-11	5.80	16.67	1.8	5.4	4.0
MW-12	5.74	19.22	2.3	6.9	7.0
MW-13	12.63	16.34	0.6	1.8	2.0

**Table 1B**  
**General Well Information**  
**Well Sampled via Low-Flow Techniques**

Well #	S.W.L. (Feet)	T.D. (Feet)	Pump Depth (Feet)	Rate (L/min.)	Purged (Gallons)
MW-1	5.53	14.39	10.0	0.20	0.5
MW-2	5.43	15.02	10.2	0.47	3.0
MW-3	5.18	14.89	10.0	0.10	0.5
MW-4	5.32	14.87	--	--	--
MW-5	4.28	15.01	--	--	--
MW-6	2.94	15.08	9.1	0.50	3.0
MW-7	7.58	16.78	--	--	--
MW-8	6.05	17.17	--	--	--
MW-9	5.97	16.77	11.4	0.40	4.0
MW-10	8.43	23.30	--	--	--
MW-11	5.80	16.67	--	--	--
MW-12	5.74	19.22	--	--	--
MW-13	12.63	16.34	--	--	--

**MW-1:** MW-1 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 10.0'. The well was purged and sampled at 200 ml / min. The well maintained steady recharge throughout the purging activities. A total of 0.5 gallons was extracted from the well. Slight odorous indications of contamination were observed during purging activities.

**Table 2**  
**Well Purging Data – MW-1**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
0914	9.46	7.11	-116	0.588	0.0	0.27	5.14
0917	9.89	7.09	-41	0.589	0.0	0.00	5.12
0920	9.42	7.11	-41	0.590	0.0	0.00	5.12
0923	10.13	7.09	-39	0.593	0.0	0.00	5.12

**MW-2:** MW-2 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 10.2'. The well was purged and sampled at 470 ml / min. The well maintained steady recharge throughout the purging activities. A total of 3.0 gallons was extracted from the well. Very slight odorous indications of contamination were observed during purging activities.

**Table 3**  
**Well Purging Data – MW-2**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
0946	9.01	8.28	-149	0.564	0.0	0.00	5.30
0949	9.00	8.41	-152	0.537	0.0	0.00	5.30
0952	8.94	8.52	-101	0.532	0.0	0.00	5.30
0955	8.93	8.60	-105	0.543	0.0	0.00	5.30
0958	8.86	8.63	-106	0.568	0.0	0.00	5.30
1001	8.87	8.63	-106	0.581	0.0	0.00	5.30
1004	8.83	8.65	-107	0.630	0.0	0.00	5.30

**MW-3:** MW-3 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 10.0'. The well was purged and sampled at 100 ml / min. The well maintained steady recharge throughout the purging activities. A total of 0.5 gallons was extracted from the well. Odorous indications of contamination were observed during purging activities.

**Table 4**  
**Well Purging Data – MW-3**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
1203	9.78	8.75	-174	1.31	8.6	0.17	5.19
1206	10.14	8.78	-176	1.31	2.4	0.02	5.19
1209	10.42	8.77	-178	1.33	0.0	0.00	5.19
1212	10.74	8.75	-178	1.33	0.0	0.00	5.19
1215	10.80	8.76	-178	1.33	0.0	0.00	5.19

**MW-4:** MW-4 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well was evacuated at 3.0 gallons, and was sampled upon recharge. Odorous indications of contamination were observed.

**Table 5**  
**Well Purging Data – MW-4**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0836	10.58	6.26	-144	2.52	1.97	0.25	Clear
0839	9.66	6.73	-136	2.70	1.18	1.0	Cloudy
0841	9.61	6.84	-137	2.58	1.47	2.0	Cloudy
0844	10.09	6.86	-134	2.70	1.17	3.0	Cloudy

**MW-5:** MW-5 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well evacuated at 3.0 gallons, and was sampled upon recharge. Odorous and visual indications of contamination were observed.

**Table 6**  
**Well Purging Data – MW-5**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0819	10.98	7.12	-157	2.18	1.15	0.25	Clear
0823	10.02	7.27	-164	1.96	1.39	1.0	V. Cloudy
0826	10.50	7.31	-166	1.72	1.50	3.0	V. Cloudy



**MW-6:** MW-6 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 9.1'. The well was purged and sampled at 500 ml / min. The well maintained steady recharge throughout the purging activities. A total of 3.0 gallons was extracted from the well. Odorous indications of contamination were observed during purging activities.

**Table 7**  
**Well Purging Data – MW-6**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
1045	9.38	5.81	-59	0.684	98.1	3.16	3.28
1048	9.71	5.82	-66	0.661	68.3	2.53	3.28
1051	9.73	5.84	-75	0.634	59.8	2.53	3.28
1054	9.84	5.87	-84	0.616	45.1	2.49	3.28
1057	9.92	5.88	-89	0.609	32.7	2.40	3.28
1100	10.01	5.89	-93	0.602	25.2	2.34	3.28

**MW-7:** MW-7 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well evacuated at 2.0 gallons, and was sampled upon recharge. No odorous or visual indications of contamination were observed.

**Table 8**  
**Well Purging Data – MW-7**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1132	9.02	6.16	21	0.594	1.34	0.25	Clear
1137	9.14	6.23	-4	0.511	1.68	1.0	V. Cloudy
1140	9.70	6.32	-7	0.530	1.67	2.0	V. Cloudy

**MW-8:** MW-8 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well was nearly evacuated at 6.0 gallons, and was sampled upon recharge. No odorous or visual indications of contamination were observed.

**Table 9**  
**Well Purging Data – MW-8**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1154	9.51	6.39	-83	0.723	3.06	0.25	Clear
1159	8.86	6.41	-61	0.705	3.25	1.0	V. Cloudy
1203	8.92	6.41	-49	0.696	3.14	3.0	V. Cloudy
1206	9.33	6.45	-40	0.708	3.46	5.0	V. Cloudy
1216	9.11	5.98	29	0.250	5.59	6.0	Clear

**MW-9:** MW-9 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 11.6'. The well was purged and sampled at 400 ml / min. The well maintained steady recharge throughout the purging activities. A total of 4.0 gallons was extracted from the well. Septic odors and no visual indications of contamination were observed during purging activities.

**Table 10**  
**Well Purging Data – MW-9**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
1403	8.93	6.25	-34	0.238	6.4	0.00	6.31
1406	8.72	6.19	-27	0.230	0.0	0.00	6.31
1409	8.70	6.15	-22	0.226	0.0	0.00	6.31
1412	8.54	6.12	-17	0.223	0.0	0.00	6.31
1415	8.56	6.09	-13	0.219	0.0	0.00	6.31
1418	8.57	6.05	-7	0.213	0.0	0.00	6.31
1421	8.61	6.04	-4	0.213	0.0	0.00	6.31
1424	8.67	6.03	-4	0.212	0.0	0.00	6.31

**MW-10:** MW-10 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well evacuated at 5.5 gallons, and was sampled upon recharge. No odorous or visual indications of contamination were observed.

**Table 11**  
**Well Purging Data – MW-10**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1237	11.24	5.80	51	40.3	2.65	0.25	Clear
1241	10.73	5.79	69	41.8	2.38	1.0	Clear
1245	11.43	5.82	82	41.8	2.28	3.0	Cloudy
1251	12.20	5.88	103	41.9	1.92	5.0	Cloudy
1254	12.35	5.92	110	42.0	1.64	5.5	Cloudy

**MW-11:** MW-11 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well evacuated at 4.0 gallons, and was sampled upon recharge. No odorous or visual indications of contamination were observed.

**Table 12**  
**Well Purging Data – MW-11**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0859	12.22	5.52	79	0.659	4.24	0.25	Clear
0902	9.98	5.14	98	0.527	5.80	1.0	Silty
0905	9.52	5.23	106	0.551	5.14	2.0	Silty
0909	9.72	5.58	108	0.631	3.97	3.0	Silty
0911	9.79	5.75	111	0.700	3.61	4.0	Silty

**MW-12:** MW-12 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well evacuated at 7.0 gallons, and was sampled upon recharge. No odorous or visual indications of contamination were observed.

**Table 13**  
**Well Purging Data – MW-12**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0935	9.95	5.99	-129	0.942	0.37	0.25	Rusty
0938	8.57	6.19	-128	1.00	1.52	1.0	Rusty
0942	7.95	5.73	-123	1.07	1.97	2.0	V. Silty
0945	7.70	6.25	-120	1.10	1.52	3.0	V. Silty
0948	8.01	6.50	-120	1.05	1.25	4.0	V. Silty
0950	7.72	6.52	-106	1.08	3.99	5.0	V. Silty
0952	7.74	6.41	-102	1.08	2.23	6.0	V. Silty
0954	7.99	6.41	-99	1.07	1.73	7.0	V. Silty

**MW-13:** MW-13 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. Three (3) well volumes were calculated and purged from the well. No odorous or visual indications of contamination were observed. A total of 2.0 gallons was extracted from the well.

**Table 14**  
**Well Purging Data – MW-13**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1028	10.23	5.45	-17	1.10	2.61	0.25	Clear
1032	10.52	5.46	8	1.22	4.60	0.50	Silty
1039	10.90	5.63	32	1.30	2.30	1.0	Silty
1042	10.75	5.79	17	1.68	2.70	2.0	Silty

**Table 15**  
**Final Sample Data Summary**

Well #	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Level (Feet)
MW-1	10.13	7.09	-39	0.593	0.0	0.00	--
MW-2	8.83	8.65	-107	0.630	0.0	0.00	--
MW-3	10.80	8.76	-178	1.33	0.0	0.00	--
MW-4	9.07	6.98	-132	2.39	--	0.84	4.90
MW-5	8.96	6.80	-142	1.60	--	2.39	3.90
MW-6	10.01	5.89	-93	0.602	25.2	2.34	--
MW-7	9.59	6.16	-19	0.426	--	5.77	12.30
MW-8	8.92	5.59	24	0.267	-	4.46	6.04
MW-9	8.67	6.03	-4	0.212	0.0	0.00	--
MW-10	11.93	6.58	-18	9.67	--	6.36	7.51
MW-11	10.53	6.31	120	2.94	--	3.61	13.81
MW-12	6.93	6.15	-98	1.10	--	3.89	6.46
MW-13	10.03	5.65	-7	1.86	--	3.37	12.60

**Table 16**  
**Final Sample Metals Data**

Well #	Manganese (mg/L)	Ferrous Iron (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
MW-1	1.5	0.76	3.8	2
MW-2	10.9	2.54	0.0	0
MW-3	5.9	>3.30	7.6	0
MW-4	1.9	>3.30	8.0	>80
MW-5	4.8	2.95	3.6	23
MW-6	4.8	>3.30	4.3	43
MW-7	0.8	0.06	0.7	34
MW-8	2.0	0.07	1.4	15
MW-9	2.8	0.86	6.1	10
MW-10	1.0	0.04	27.0	>80
MW-11	2.4	0.22	10.9	>80
MW-12	--	--	--	--
MW-13	4.1	1.48	5.2	26

-- = too turbid

**Table 17**  
**Final Sample Data Summary**

Well #	Time	Date
116-0122-MW1	0926	01.23.18
116-0122-MW2	1007	01.23.18
116-0122-MW3	1218	01.23.18
116-0122-MW4	1308	01.23.18
116-0122-MW5	1244	01.23.18
116-0122-MW6	1103	01.23.18
116-0122-MW7	1523	01.22.18
116-0122-MW8	1500	01.22.18
116-0122-MW9	1427	01.22.18
116-0122-MW10	0804	01.23.18
116-0122-MW11	1324	01.22.18
116-0122-MW12	1003	01.22.18
116-0122-MW13	1450	01.22.18
116-0122-FB1	1530	01.22.18
116-0122-FB2	1315	01.23.18

Day 1  
0820: Onsite  
1555: Offsite

Day 2  
0744: Onsite  
1330: Offsite

SN / ke

## Field Notes

TO: File  
FROM: Chris Herman  
DATE: April 9-10, 2018  
PROJECT: Quinn's Café Stop / Site Characterization  
PROJECT NUMBER: 2171853 (26116)  
SUBJECT: Groundwater Sampling Activities

0827: Arrived onsite and initiated site activities with the collection of static water levels from the thirteen (13) groundwater monitoring wells located onsite. The purpose of the field activities was to collect groundwater samples from the thirteen (13) monitoring wells for laboratory analysis. The general well information is as follows:

**Table 1A**  
**General Well Information**  
**Wells Sampled via Hand-Bailing Techniques**

Well #	S.W.L. (Feet)	Total Depth (Feet)	1 Volume (Gallons)	3 Volumes (Gallons)	Purged (Gallons)
MW-1	4.92	14.39	--	--	--
MW-2	4.80	15.02	--	--	--
MW-3	4.29	14.89	--	--	--
MW-4	5.21	14.87	1.6	4.8	5.0
MW-5	3.68	15.01	1.9	5.7	6.0
MW-6	3.94	15.08	--	--	--
MW-7	7.14	16.78	1.6	4.8	3.0
MW-8	5.13	17.17	2.0	6.0	6.0
MW-9	5.04	16.77	--	--	--
MW-10	8.03	23.30	2.5	7.5	8.0
MW-11	4.66	16.67	2.0	6.0	6.0
MW-12	4.95	19.22	--	--	--
MW-13	10.93	16.34	0.9	2.7	3.0



**Table 1B**  
**General Well Information**  
**Well Sampled via Low-Flow Techniques**

Well #	S.W.L. (Feet)	T.D. (Feet)	Pump Depth (Feet)	Rate (L/min.)	Purged (Gallons)
MW-1	4.92	14.39	9.7	0.18	1.5
MW-2	4.80	15.02	9.9	0.33	4.0
MW-3	4.29	14.89	9.5	0.10	1.0
MW-4	5.21	14.87	--	--	--
MW-5	3.68	15.01	--	--	--
MW-6	3.94	15.08	9.5	0.22	1.0
MW-7	7.14	16.78	--	--	--
MW-8	5.13	17.17	--	--	--
MW-9	5.04	16.77	10.9	0.20	2.5
MW-10	8.03	23.30	--	--	--
MW-11	4.66	16.67	--	--	--
MW-12	4.95	19.22	12.1	0.29	3.0
MW-13	10.93	16.34	--	--	--

MW-1: MW-1 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 9.7'. The well was purged and sampled at 180 ml / min. The well maintained steady recharge throughout the purging activities. A total of 1.5 gallons was extracted from the well. No odorous or visual indications of contamination were observed during purging activities.

**Table 2**  
**Well Purging Data – MW-1**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
0924	8.95	7.90	--	0.661	20.3	0.35	5.43
0927	9.17	7.86	--	0.647	18.9	0.36	5.43
0930	9.32	7.83	--	0.643	17.9	0.40	5.43
0933	9.45	7.81	--	0.649	12.5	0.39	5.43
0936	9.52	7.80	--	0.648	8.3	0.38	5.43
0939	9.82	7.79	--	0.647	3.4	0.40	5.43

**MW-2:** MW-2 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 9.9'. The well was purged and sampled at 330 ml / min. The well maintained steady recharge throughout the purging activities. A total of 4.0 gallons was extracted from the well. Odorous indications of contamination were observed during purging activities.

**Table 3**  
**Well Purging Data – MW-2**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
1011	8.30	7.55	-89	0.582	24.6	0.00	4.96
1014	8.61	7.56	-95	0.565	9.4	0.00	4.96
1017	8.90	7.59	-101	0.581	3.7	0.00	4.96
1020	9.06	7.60	-104	0.603	2.1	0.00	4.96
1023	9.13	7.61	-108	0.633	1.7	0.00	4.96
1025	9.17	7.61	-110	0.655	1.2	0.00	4.96
1028	9.16	7.61	-112	0.694	1.1	0.00	4.96
1031	9.19	7.61	-113	0.719	1.4	0.00	4.96
1034	9.20	7.61	-114	0.741	1.0	0.00	4.96
1037	9.20	7.61	-115	0.770	0.8	0.00	4.96
1040	9.21	7.61	-116	0.784	1.1	0.00	4.96
1043	9.31	7.61	-117	0.827	0.6	0.00	4.96

**MW-3:** MW-3 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 9.5'. The well was purged and sampled at 100 ml / min. The well maintained steady recharge throughout the purging activities. A total of 1.0 gallons was extracted from the well. Odorous indications of contamination were observed during purging activities.

**Table 4**  
**Well Purging Data – MW-3**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
1140	7.95	7.59	-84	1.25	20.8	0.24	4.57
1143	7.70	7.61	-91	1.24	17.7	0.21	4.57
1146	8.03	7.61	-94	1.27	14.3	0.13	4.57
1149	8.51	7.60	-95	1.30	12.2	0.12	4.57
1152	8.92	7.60	-97	1.33	10.5	0.07	4.57
1155	9.23	7.60	-98	1.33	9.5	0.06	4.57
1158	9.03	7.60	-99	1.32	9.5	0.04	4.57
1201	9.48	7.60	-100	1.33	8.4	0.02	4.57

**MW-4:** MW-4 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well was evacuated at 5.0 gallons, and was sampled upon recharge. Odorous indications of contamination were observed.

**Table 5**  
**Well Purging Data – MW-4**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0834	8.09	7.86	-110	3.01	2.29	0.25	Clear
0836	8.07	7.70	-101	3.18	2.19	1.0	Clear
0838	8.22	7.66	-103	3.26	3.51	3.0	Clear
0845	7.71	7.82	-114	3.20	5.95	5.0	Cloudy

**MW-5:** MW-5 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well was evacuated at 6.0 gallons, and was sampled upon recharge. Odorous and visual indications of contamination were observed.

**Table 6**  
**Well Purging Data – MW-5**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0816	9.36	8.08	-76	1.87	1.41	0.25	Clear
0818	8.96	7.96	-103	1.67	1.07	2.0	Cloudy
0820	8.48	8.00	-108	1.63	2.39	3.0	Black/Cloudy
0822	8.68	7.98	-106	1.71	2.25	5.0	Black/Cloudy
0828	8.74	8.16	-119	1.65	5.65	6.0	Black/Cloudy

**MW-6:** MW-6 was purged and sampled utilizing low flow / low stress sampling methods (*ASTM D 6771-02*). The pump was set at 9.5'. The well was purged and sampled at 220 ml / min. The well maintained steady recharge throughout the purging activities. A total of 1.0 gallon was extracted from the well. Slight odorous indications of contamination were observed during purging activities.

**Table 7**  
**Well Purging Data – MW-6**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
1219	7.43	7.57	-87	0.480	257	1.54	4.18
1222	7.83	7.52	-67	0.476	160	1.28	4.17
1225	8.16	7.49	-56	0.482	81.6	1.01	4.17
1228	8.47	7.48	-52	0.487	52.0	0.88	4.17
1231	8.64	7.47	-51	0.488	43.5	0.84	4.17
1234	8.63	7.47	-50	0.487	26.8	0.79	4.17

MW-7: MW-7 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well evacuated at 3.0 gallons, and was sampled upon recharge. No odorous or visual indications of contamination were observed.

**Table 8**  
**Well Purging Data – MW-7**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1130	6.66	7.81	-18	0.416	2.36	0.25	Clear
1133	6.36	7.81	1	0.334	2.67	1.0	Clear
1137	6.56	7.84	2	0.337	2.64	2.0	Cloudy
1140	6.83	7.86	-22	0.335	3.85	3.0	Cloudy

MW-8: MW-8 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well was nearly evacuated at 6.0 gallons, and was sampled upon recharge. No odorous or visual indications of contamination were observed.

**Table 9**  
**Well Purging Data – MW-8**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1144	6.68	7.96	-33	0.456	5.38	0.25	Clear
1146	6.25	8.03	-30	0.371	5.61	1.0	Cloudy
1158	6.31	7.93	-16	0.399	4.51	3.0	Silty
1150	6.71	8.08	9	0.472	6.62	5.0	Silty
1152	6.79	8.14	9	0.358	6.80	6.0	Silty

MW-9: MW-9 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 10.9'. The well was purged and sampled at 200 ml / min. The well maintained steady recharge throughout the purging activities. A total of 2.5 gallons was extracted from the well. No odorous or visual indications of contamination were observed during purging activities.

**Table 10**  
**Well Purging Data – MW-9**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Depth to Water (Feet)
1443	9.20	7.32	22	0.278	166	0.05	5.21
1446	9.40	7.31	15	0.279	147	0.08	5.23
1449	9.73	7.30	13	0.283	104	0.18	5.23
1452	10.14	7.28	15	0.287	79.3	0.38	5.23
1455	10.34	7.25	18	0.295	59.0	0.68	5.23
1458	10.28	7.21	24	0.298	49.7	0.91	5.23
1501	10.14	7.17	32	0.297	36.7	1.07	5.23
1504	10.09	7.12	38	0.299	27.5	1.22	5.23
1507	10.12	7.09	45	0.303	22.3	1.33	5.23
1510	10.41	7.03	52	0.305	22.2	1.35	5.23
1513	10.52	7.01	55	0.306	19.8	1.39	5.23
1516	10.59	6.99	60	0.308	15.6	1.40	5.23

**MW-10:** MW-10 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well evacuated at 8.0 gallons, and was sampled upon recharge. No odorous or visual indications of contamination were observed.

**Table 11**  
**Well Purging Data – MW-10**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1317	6.82	7.83	153	8.85	6.75	0.25	Clear
1320	8.10	7.71	148	13.6	5.28	2.0	Clear
1323	9.07	7.66	146	22.8	4.22	4.0	Clear
1328	9.27	7.93	122	20.0	5.01	6.0	Cloudy
1354	9.59	8.05	115	20.8	5.05	8.0	Cloudy

**MW-11:** MW-11 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well evacuated at 3.0 gallons, and was sampled upon recharge. No odorous or visual indications of contamination were observed.

**Table 12**  
**Well Purging Data – MW-11**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0859	10.63	7.17	222	0.761	2.56	0.25	Very Silty
0903	8.11	6.86	229	0.491	3.79	1.5	Very Silty
0906	7.45	6.84	238	0.440	5.25	3.0	Very Silty
0909	7.35	7.41	214	0.650	386	4.5	Very Silty
0911	7.16	7.49	213	0.676	4.70	6.0	Very Silty

**MW-12:** MW-12 was purged and sampled utilizing low flow / low stress sampling methods (*ASTM D 6771-02*). The pump was set at 12.1'. The well was purged and sampled at 290 ml / min. The well maintained steady recharge throughout the purging activities. A total of 3.0 gallons was extracted from the well. No odorous or visual indications of contamination were observed during purging activities.

**Table 13**  
**Well Purging Data – MW-12**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity	D.O. (mg/L)	Level
0957	6.82	7.48	-69	1.29	0	1.49	5.41
1000	6.78	7.48	-69	1.29	490	0.87	5.41
1003	6.84	7.49	-71	1.29	274	0.50	5.41
1006	7.20	7.49	-72	1.31	186	0.24	5.41
1009	7.38	7.49	-74	1.32	332	0.15	5.41

**MW-13:** MW-13 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. Three (3) well volumes were calculated and purged from the well. No odorous or visual indications of contamination were observed. A total of 3.5 gallons was extracted from the well.

**Table 14**  
**Well Purging Data – MW-13**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1038	5.69	7.49	-42	199	4.85	0.25	Silty
1040	6.43	7.42	-27	2.32	4.15	1.0	Very Silty
1043	7.04	7.30	-9	2.52	2.94	2.0	Very Silty
1046	7.55	7.21	17	2.67	4.29	3.0	Very Silty

**Table 15**  
**Final Sample Data Summary**

Well #	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	Turbidity (NTU)	D.O. (mg/L)	Level (Feet)
MW-1	9.82	7.79	0	0.647	3.4	0.40	--
MW-2	9.31	7.61	-117	0.827	0.6	0.00	--
MW-3	9.48	7.60	-100	1.33	8.4	0.02	--
MW-4	7.83	7.72	-76	2.56	--	3.56	5.31
MW-5	7.93	7.90	-79	1.59	--	2.52	3.72
MW-6	8.63	7.47	-50	0.487	26.8	0.79	--
MW-7	7.93	7.77	105	0.369	--	6.86	13.68
MW-8	7.47	7.28	115	0.824	--	4.24	5.17
MW-9	10.59	6.99	60	0.308	15.6	1.40	--
MW-10	11.95	7.51	218	8.61	--	6.73	9.22
MW-11	7.54	7.67	127	0.574	--	8.43	11.40
MW-12	7.38	7.49	-74	1.32	332	0.15	--
MW-13	7.67	7.17	6	2.84	--	4.36	11.50

**Table 16**  
**Final Sample Metals Data**

Well #	Manganese (mg/L)	Ferrous Iron (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
MW-1	--	--	--	--
MW-2	--	--	--	--
MW-3	--	--	--	--
MW-4	--	--	--	--
MW-5	--	--	--	--
MW-6	--	--	--	--
MW-7	--	--	--	--
MW-8	--	--	--	--
MW-9	--	--	--	--
MW-10	--	--	--	--
MW-11	--	--	--	--
MW-12	--	--	--	--
MW-13	--	--	--	--

\*Colorimeter malfunctioning on sample date



**Table 17**  
**Final Sample Data Summary**

Well #	Time	Date
116-0409-MW1	0942	04.10.18
116-0409-MW2	1046	04.10.18
116-0409-MW3	1201	04.10.18
116-0409-MW4	1310	04.10.18
116-0409-MW5	1303	04.10.18
116-0409-MW6	1237	04.10.18
116-0409-MW7	1412	04.09.18
116-0409-MW8	1405	04.09.18
116-0409-MW9	1519	04.09.18
116-0409-MW10	0749	04.10.18
116-0409-MW11	1420	04.09.18
116-0409-MW12	1012	04.09.18
116-0409-MW13	1113	04.09.18
116-0409-FB1	1045	04.09.18
116-0409-FB2	0930	04.10.18

Day 1  
0827: Onsite  
1526: Offsite

Day 2  
0736: Onsite  
1322: Offsite

MM / sn

## Field Notes

TO: File  
FROM: Matt Morell  
DATE: July 9-10, 2018  
PROJECT: Quinn's Café Stop / Site Characterization  
PROJECT NUMBER: 2171853 (26116)  
SUBJECT: Groundwater Sampling Activities

0800: Arrived onsite and initiated site activities with the collection of static water levels from the thirteen (13) groundwater monitoring wells located onsite. The purpose of the field activities was to collect groundwater samples from the thirteen (13) monitoring wells for laboratory analysis. The general well information is as follows:

**Table 1A**  
**General Well Information**  
**Wells Sampled via Hand-Bailing Techniques**

Well #	S.W.L. (Feet)	Total Depth (Feet)	1 Volume (Gallons)	3 Volumes (Gallons)	Purged (Gallons)
MW-1	5.21	14.39	--	--	--
MW-2	5.39	15.02	--	--	--
MW-3	4.98	14.89	--	--	--
MW-4	5.30	14.87	1.6	4.8	5.0
MW-5	4.28	15.01	1.8	5.4	3.0
MW-6	4.78	15.08	--	--	--
MW-7	7.78	16.78	1.5	3.0	3.0
MW-8	6.66	17.17	1.8	5.4	5.5
MW-9	6.48	16.77	--	--	--
MW-10	9.76	23.30	2.3	6.9	5.0
MW-11	6.78	16.67	1.7	5.1	4.0
MW-12	6.53	19.22	--	--	--
MW-13	12.59	16.34	0.6	1.8	2.0

**Table 1B**  
**General Well Information**  
**Well Sampled via Low-Flow Techniques**

Well #	S.W.L. (Feet)	T.D. (Feet)	Pump Depth (Feet)	Rate (L/min.)	Purged (Gallons)
MW-1	5.21	14.39	9.8	0.19	1.5
MW-2	5.39	15.02	10.2	0.43	4.0
MW-3	4.98	14.89	10.0	0.35	2.0
MW-4	5.30	14.87	--	--	--
MW-5	4.28	15.01	--	--	--
MW-6	4.78	15.08	9.9	0.33	3.0
MW-7	7.78	16.78	--	--	--
MW-8	6.66	17.17	--	--	--
MW-9	6.48	16.77	11.6	0.45	4.5
MW-10	9.76	23.30	-	--	5.5
MW-11	6.78	16.67	--	--	4.0
MW-12	6.53	19.22	12.9	0.12	1.5
MW-13	12.59	16.34	--	--	--

**MW-1:** MW-1 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 9.8'. The well was purged and sampled at 190 ml / min. The well maintained steady recharge throughout the purging activities. A total of 1.5 gallons was extracted from the well. No odorous or visual indications of contamination were observed during purging activities.

**Table 2**  
**Well Purging Data – MW-1**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Turbidity (NTU)	Depth to Water (Feet)
0928	20.09	7.73	68.0	0.919	2.30	--	5.57
0931	19.88	7.35	61.9	0.918	0.82	--	5.57
0934	20.66	7.16	48.0	0.926	0.63	--	5.57
0937	21.26	7.13	40.0	0.928	0.61	--	5.57
0940	22.18	7.10	30.7	0.925	0.59	--	5.57
0943	22.48	7.08	27.3	0.921	0.55	--	5.57
0946	22.58	7.08	26.1	0.920	0.54	--	5.57
0949	22.75	7.07	24.0	0.916	0.50	--	5.57
0952	23.11	7.07	22.9	0.912	0.49	--	5.57
0955	23.19	7.06	20.4	0.910	0.48	--	5.57

**MW-2:** MW-2 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 10.2'. The well was purged and sampled at 430 ml / min. The well maintained steady recharge throughout the purging activities. A total of 4.0 gallons was extracted from the well. Odorous indications of contamination were observed during purging activities.

**Table 3**  
**Well Purging Data – MW-2**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Turbidity (NTU)	Depth to Water (Feet)
1145	12.69	6.73	-67.2	1.061	1.27	--	5.69
1148	20.77	6.66	-75.5	1.058	0.72	--	5.69
1151	21.03	6.55	-88.8	0.945	0.55	--	5.69
1154	22.34	6.52	-101.0	0.900	0.75	--	5.69
1157	22.71	6.57	-121.6	0.986	0.37	--	5.69
1200	22.74	6.58	-128.5	1.047	0.35	--	5.69
1203	22.62	6.58	-134.2	1.123	0.36	--	5.69
1206	22.57	6.57	-136.5	1.160	0.37	--	5.69
1209	22.58	6.57	-140.2	1.211	0.35	--	5.69

**MW-3:** MW-3 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 10.0'. The well was purged and sampled at 350 ml / min. The well maintained steady recharge throughout the purging activities. A total of 2.0 gallons was extracted from the well. Odorous indications of contamination were observed during purging activities.

**Table 4**  
**Well Purging Data – MW-3**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Turbidity (NTU)	Depth to Water (Feet)
1110	19.44	6.66	-82.0	1.253	0.86	--	5.58
1113	19.20	6.66	-86.7	1.254	0.78	--	5.58
1116	19.31	6.64	-99.6	1.239	0.99	--	5.58
1119	20.90	6.58	-114.9	1.180	0.57	--	5.58
1122	21.23	6.59	-117.3	1.178	0.59	--	5.58
1125	21.83	6.65	-127.0	1.176	0.68	--	5.58
1128	22.31	6.67	-136.4	1.188	0.53	--	5.58
1131	22.34	6.68	-139.2	1.193	0.50	--	5.58
1134	22.44	6.68	-143.1	1.200	0.46	--	5.58

**MW-4:** MW-4 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well was evacuated at 4.0 gallons, and was sampled after purging a fifth gallon upon recharge. Odorous indications of contamination were observed.

**Table 5**  
**Well Purging Data – MW-4**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0818	18.40	6.37	-22.9	4.074	5.18	0.25	Clear
0820	18.16	6.38	-29.3	3.893	3.52	1.0	Clear
0822	17.90	6.40	-33.0	3.808	3.17	2.0	Clear
0824	16.25	6.30	-27.9	4.179	3.09	3.0	Cloudy
0826	15.54	6.23	-26.1	4.467	2.92	4.0	Cloudy
0839	16.32	6.68	-39.1	3.833	6.04	5.0	Clear

**MW-5:** MW-5 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well evacuated at 3.0 gallons, and was sampled upon recharge. Odorous and visual indications of contamination were observed.

**Table 6**  
**Well Purging Data – MW-5**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0831	17.04	6.60	-54.1	2.310	1.80	0.25	Clear
0833	19.50	6.69	-60.7	2.124	1.80	1.0	Very Cloudy
0835	17.97	6.88	-63.5	2.200	3.15	2.0	Very Cloudy
0837	17.42	6.86	-61.2	2.279	2.29	3.0	Very Cloudy

MW-6: MW-6 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 9.9'. The well was purged and sampled at 330 ml / min. The well maintained steady recharge throughout the purging activities. A total of 3.0 gallons were extracted from the well. Odorous indications of contamination were observed during purging activities.

**Table 7**  
**Well Purging Data – MW-6**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Turbidity (NTU)	Depth to Water (Feet)
1031	17.35	6.74	29.6	0.653	0.85	--	5.38
1034	17.37	5.88	23.0	0.683	0.79	--	5.38
1037	17.34	6.22	-13.7	0.689	0.65	--	5.38
1040	17.32	6.24	-18.8	0.690	0.59	--	5.38
1043	17.44	6.35	-34.2	0.692	0.60	--	5.38
1046	17.52	6.41	-44.9	0.695	0.67	--	5.38
1049	17.50	6.42	-51.7	0.698	0.70	--	5.38
1052	17.71	6.43	-58.3	0.701	0.63	--	5.38
1055	17.76	6.43	-63.4	0.703	0.58	--	5.38

MW-7: MW-7 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well evacuated at 2.0 gallons, and was sampled after purging a third (3.0) gallon upon recharge. No odorous or visual indications of contamination were observed.

**Table 8**  
**Well Purging Data – MW-7**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0920	15.65	6.74	118.3	0.489	2.82	0.25	Clear
0922	14.59	6.72	52.4	0.500	2.41	1.0	Very Cloudy
0924	14.19	6.77	32.8	0.543	3.42	2.0	Very Cloudy
0949	13.67	7.17	20.5	0.531	4.37	3.0	Very Cloudy

MW-8: MW-8 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well was evacuated at 3.0 gallons, and was sampled after purging an additional 1.5 gallons upon recharge. No odorous or visual indications of contamination were observed. A total of 5.5 gallons were purged.

**Table 9**  
**Well Purging Data – MW-8**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0929	15.44	6.79	51.9	0.648	3.84	0.25	Clear
0930	14.67	7.02	66.8	0.673	4.89	1.0	Cloudy
0933	15.07	7.12	92.5	0.683	5.20	2.0	Cloudy
0936	14.07	7.19	101.5	0.697	5.54	3.0	Cloudy
0956	14.55	6.67	62.3	0.581	7.11	4.0	Clear
0958	14.47	6.69	90.2	0.638	7.56	5.0	Cloudy
1000	14.57	6.71	104.0	0.651	8.00	5.5	Cloudy

**MW-9:** MW-9 was purged and sampled utilizing low flow / low stress sampling methods *ASTM D 6771-02*). The pump was set at 11.6". The well was purged and sampled at 450 ml / min. The well maintained steady recharge throughout the purging activities. A total of 4.5 gallons was extracted from the well. Odorous indications of contamination were observed during purging activities.

**Table 10**  
**Well Purging Data – MW-9**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Turbidity (NTU)	Depth to Water (Feet)
1210	19.69	7.52	-43.4	0.612	2.51	--	6.85
1213	16.50	7.14	-48.6	0.606	0.88	--	6.85
1216	16.62	6.67	-46.1	0.496	0.79	--	6.85
1219	17.17	6.11	-19.0	0.503	1.04	--	6.85
1222	17.27	5.91	-9.9	0.497	0.98	--	6.85
1225	17.55	5.81	7.4	0.542	0.84	--	6.85
1228	17.39	5.71	24.6	0.557	0.78	--	6.85
1231	17.61	5.64	35.2	0.563	0.78	--	6.85
1234	17.54	5.62	42.3	0.554	0.78	--	6.85
1237	17.57	5.60	44.4	0.556	0.79	--	6.85
1240	17.79	5.56	53.5	0.551	0.77	--	6.85

**MW-10:** MW-10 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well evacuated at 5.0 gallons, and was sample upon recharge. No odorous or visual indications of contamination were observed.

**Table 11**  
**Well Purging Data – MW-10**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
1152	13.96	6.88	152.3	12.34	3.31	0.25	Clear
1154	15.00	6.80	154.8	12.34	2.55	1.0	Cloudy
1156	15.30	6.83	151.1	12.31	5.76	2.0	Cloudy
1158	14.67	6.75	151.9	12.32	5.38	3.0	Cloudy
1200	14.80	6.89	149.8	12.41	6.28	4.0	Cloudy
1202	13.45	6.79	150.7	12.51	3.61	5.0	Cloudy

**MW-11:** MW-11 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. The well evacuated at 4.0 gallons, and was sampled upon recharge. No odorous or visual indications of contamination were observed.

**Table 12**  
**Well Purging Data – MW-11**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0815	12.64	7.19	122.1	1.074	6.24	0.25	Clear
0818	12.71	5.44	178.4	0.836	7.44	1.0	Silty
0822	12.32	5.55	184.8	0.977	7.00	2.0	Silty
0824	11.88	5.70	188.0	1.103	6.87	3.0	Silty
0830	11.63	5.80	189.6	1.067	5.93	4.0	Silty



**MW-12:** MW-12 was purged and sampled utilizing low flow / low stress sampling methods (*ASTM D 6771-02*). The pump was set at 12.9'. The well was purged and sampled at 120 ml / min. The well maintained steady recharge throughout the purging activities. A total of 1.5 gallons was extracted from the well. No odorous or visual indications of contamination were observed during purging activities.

**Table 13**  
**Well Purging Data – MW-12**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Turbidity	Level
1029	17.06	6.52	-52.1	1.570	0.93	--	6.54
1032	17.41	6.50	-67.5	1.576	1.32	--	6.54
1035	17.69	6.48	-76.0	1.581	1.14	--	6.54
1038	18.03	6.49	-82.0	1.589	0.96	--	6.54
1041	18.16	6.50	-85.5	1.599	0.96	--	6.54
1044	18.28	6.51	-88.1	1.608	0.96	--	6.54
	18.52	6.51	-89.9	1.614	0.93	--	6.54
1050	18.77	6.51	-91.5	1.614	0.89	--	6.54

**MW-13:** MW-13 was characterized as having insufficient recharge for low flow / low stress sampling methods. Therefore, the well was purged and sampled utilizing a hand bailer. Three (3) well volumes were calculated and purged from the well. No odorous or visual indications of contamination were observed. A total of 2.0 gallons was extracted from the well.

**Table 14**  
**Well Purging Data – MW-13**

Time	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Gallons	Comment
0858	15.25	6.88	140.0	1.401	2.66	0.25	Clear
0902	13.80	6.53	120.7	1.720	2.32	1.0	Silty
0904	13.75	6.25	96.0	2.024	3.67	2.0	Silty

**Table 15**  
**Final Sample Data Summary**

Well #	Temp. (°C)	pH (SU)	ORP (mV)	Conductivity (mS/cm)	D.O. (mg/L)	Turbidity (NTU)	Level (Feet)
MW-1	23.19	7.06	20.4	0.910	0.48	--	--
MW-2	22.58	6.57	-140.2	1.211	0.35	--	--
MW-3	22.44	6.68	-143.1	1.200	0.46	--	--
MW-4	19.36	6.64	2.9	3.645	3.61	--	5.36
MW-5	18.73	6.82	-37.9	2.204	3.60	--	4.28
MW-6	17.76	6.43	-63.4	0.703	0.58	--	--
MW-7	15.27	6.70	115.0	0.453	7.17	--	12.63
MW-8	15.64	5.94	153.4	0.584	7.99	--	6.73
MW-9	17.79	5.56	53.5	0.551	0.77	--	--
MW-10	15.89	6.96	84.6	12.19	8.10	--	19.71
MW-11	13.47	6.80	116.2	0.926	8.62	--	15.18
MW-12	18.77	6.51	-91.5	1.614	0.89	--	--
MW-13	17.34	6.43	106.9	1.915	6.31	--	12.63

**Table 16**  
**Final Sample Metals Data**

Well #	Manganese (mg/L)	Ferrous Iron (mg/L)	Nitrate (mg/L)	Sulfate (mg/L)
MW-1	0.40	0.19	>35.0	24
MW-2	5.0	>3.30	0.7	---
MW-3	1.3	>3.30	0.4	---
MW-4	4.0	>3.30	5.5	0.0
MW-5	4.1	>3.30	3.3	0.0
MW-6	5.5	>3.30	4.5	11
MW-7	0.0	0.32	2.3	28
MW-8	1.0	0.00	2.5	10
MW-9	0.07	2.38	0.0	14
MW-10	0.2	0.00	2.5	>80
MW-11	0.2	0.02	1.3	72
MW-12	2.6	>3.30	1.3	24
MW-13	2.2	>3.30	0.0	20

**Table 17**  
**Final Sample Data Summary**

Well #	Time	Date
116-0709-MW1	0958	07.10.18
116-0709-MW2	1210	07.10.18
116-0709-MW3	1135	07.10.18
116-0709-MW4	1303	07.10.18
116-0709-MW5	1324	07.10.18
116-0709-MW6	1058	07.10.18
116-0709-MW7	1342	07.09.18
116-0709-MW8	1345	07.09.18
116-0709-MW9	1241	07.09.18
116-0709-MW10	0940	07.10.18
116-0709-MW11	1122	07.09.18
116-0709-MW12	1053	07.09.18
116-0709-MW13	1321	07.09.18
116-0709-FB1	1100	07.09.18
116-0709-FB2	1000	07.10.18

Day 1  
0800: Onsite  
1445: Offsite

Day 2  
0800: Onsite  
1345: Offsite

MM / sn

## APPENDIX K

### Drummed Waste T&D Documentation

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number <i>N/A</i>	2. Page 1 of <i>1</i>	3. Emergency Response Phone <i>570-510-0815</i>	4. Waste Tracking Number <i>QCS-082717</i>	
5. Generator's Name and Mailing Address <i>QUINN'S CAR STOP 224 MAIN ST Archbald, PA 18403</i>			Generator's Site Address (If different than mailing address)			
Generator's Phone: <i>570-876-3340</i>			6. Transporter 1 Company Name <i>Waste Recovery Solutions, Inc</i>		U.S. EPA ID Number <i>PAR000043026</i>	
7. Transporter 2 Company Name					U.S. EPA ID Number	
8. Designated Facility Name and Site Address  <i>717-896-9966 Waste Recovery Solutions, Inc 343 King Street Myerstown, PA 17057</i>					U.S. EPA ID Number <i>PAR000043026</i>	
Facility's Phone:						
9. Waste Shipping Name and Description			10. Containers		11. Total Quantity	12. Unit Wt./Vol.
			No.	Type		
1. Non Regulated Material, (Drill Cuttings) <i>LFI-116854</i>			<i>011</i>	<i>DM</i>	<i>6050</i>	<i>P</i>
2. Non Regulated Material, (Purge Water) <i>CWI-116895</i>			<i>003</i>	<i>DM</i>	<i>1200</i>	<i>P</i>
3.						
4.						
13. Special Handling Instructions and Additional Information						
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.						
Generator's/Officer's Printed/Typed Name <i>CHRIS HERMAN</i>			Signature <i>Chris Herman</i>		Month Day Year <i>06 27 17</i>	
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.			Port of entry/exit: Date leaving U.S.:			
Transporter Signature (for exports only):						
16. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name <i>Scott Zellers</i>			Signature <i>Scott Zellers</i>		Month Day Year <i>06 27 17</i>	
Transporter 2 Printed/Typed Name			Signature		Month Day Year	
17. Discrepancy						
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
Manifest Reference Number:						
17b. Alternate Facility (or Generator)			U.S. EPA ID Number			
Facility's Phone:						
17c. Signature of Alternate Facility (or Generator)					Month Day Year	
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a						
Printed/Typed Name			Signature		Month Day Year	

GENERATOR

INTL

TRANSPORTER

DESIGNATED FACILITY

# NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No.		Manifest Document No. <b>72217</b>	2. Page 1 of 1
3. Generator's Name and Mailing Address <b>Green's Care Shop Pharmacy 123 North Main Street Anytown PA 12345</b>		4. Generator's Phone ( <b>570</b> ) <b>447-1986</b>		5. Transporter 1 Company Name <b>Common Environmental Solutions</b>	
6. US EPA ID Number <b>PA 0000043020</b>		A. State Transporter's ID		B. Transporter 1 Phone <b>717 491-2156</b>	
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID	
9. Designated Facility Name and Site Address <b>Waste Recycling Solutions, Inc. 34567 Street Anytown PA 12345</b>		10. US EPA ID Number <b>PA 0000043020</b>		D. Transporter 2 Phone	
				E. State Facility's ID	
				F. Facility's Phone <b>717 491-2156</b>	
11. WASTE DESCRIPTION		12. Containers	13. Total Quantity	14. Unit Wt./Vol.	
a. <b>Oil Change DOT Non-Hazardous RCRA Non-Hazardous</b>		No. <b>4</b> Type <b>DM<sup>sz</sup></b>	<b>2000</b>	<b>P<sup>sz</sup></b>	
b. <b>Wiper Fluid DOT Non-Hazardous RCRA Non-Hazardous</b>		No. <b>1</b> Type <b>DM<sup>sz</sup></b>	<b>300</b>	<b>P<sup>sz</sup></b>	
c.					
d.					
G. Additional Descriptions for Materials Listed Above		H. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information <b>At 121-110301 At 121-110303</b>					
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.					
Printed/Typed Name <b>Don Green</b>		Signature <i>[Signature]</i>		Date <b>12/22/17</b>	
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature <i>[Signature]</i>		Date <b>12/22/17</b>	
Printed/Typed Name <b>Scott Zeller</b>		Signature <i>[Signature]</i>		Date <b>12/22/17</b>	
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Date	
Printed/Typed Name		Signature		Date	
19. Discrepancy Indication Space					
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.					
Printed/Typed Name		Signature		Date	

NON-HAZARDOUS WASTE



## APPENDIX L

### Groundwater Elevation Summary Table



[illegible]

**NM**      **Not Measured**

[illegible]

**NM**      **Not Measured**

[illegible]

**NM**      **Not Measured**

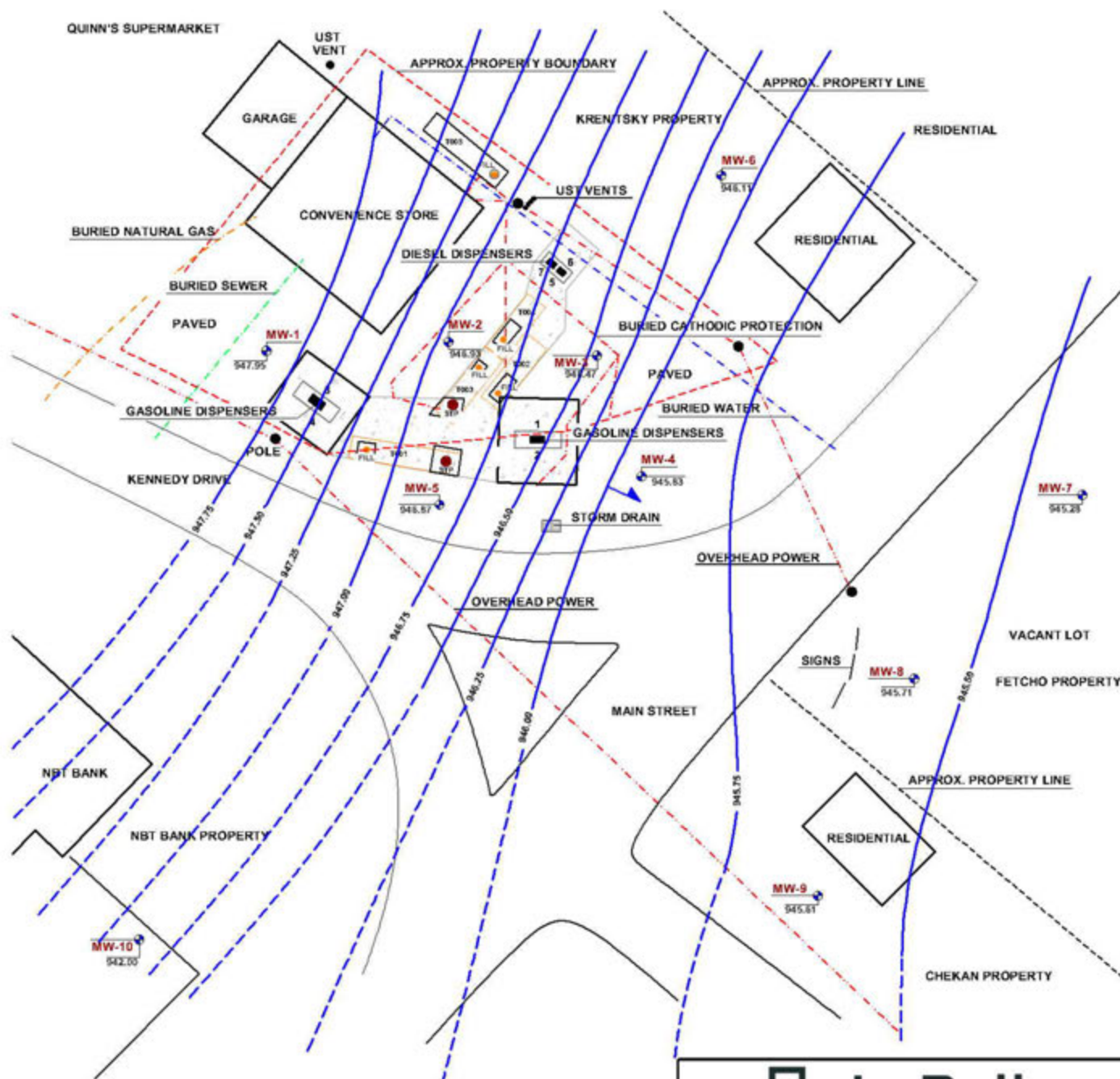
## APPENDIX M

### Groundwater Contour Maps



**LaBella**  
Powered by partnership.

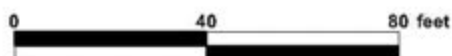
SCALE: 1" = 40'



GROUNDWATER ELEVATIONS IN FEET. CONTOUR INTERVAL = 0.25'.

MW-10 WAS OMITTED DURING THE PREPARATION OF THIS GROUNDWATER CONTOUR MAP DUE TO AN ANOMALOUSLY LOW GROUNDWATER ELEVATION

 MONITORING WELL LOCATION



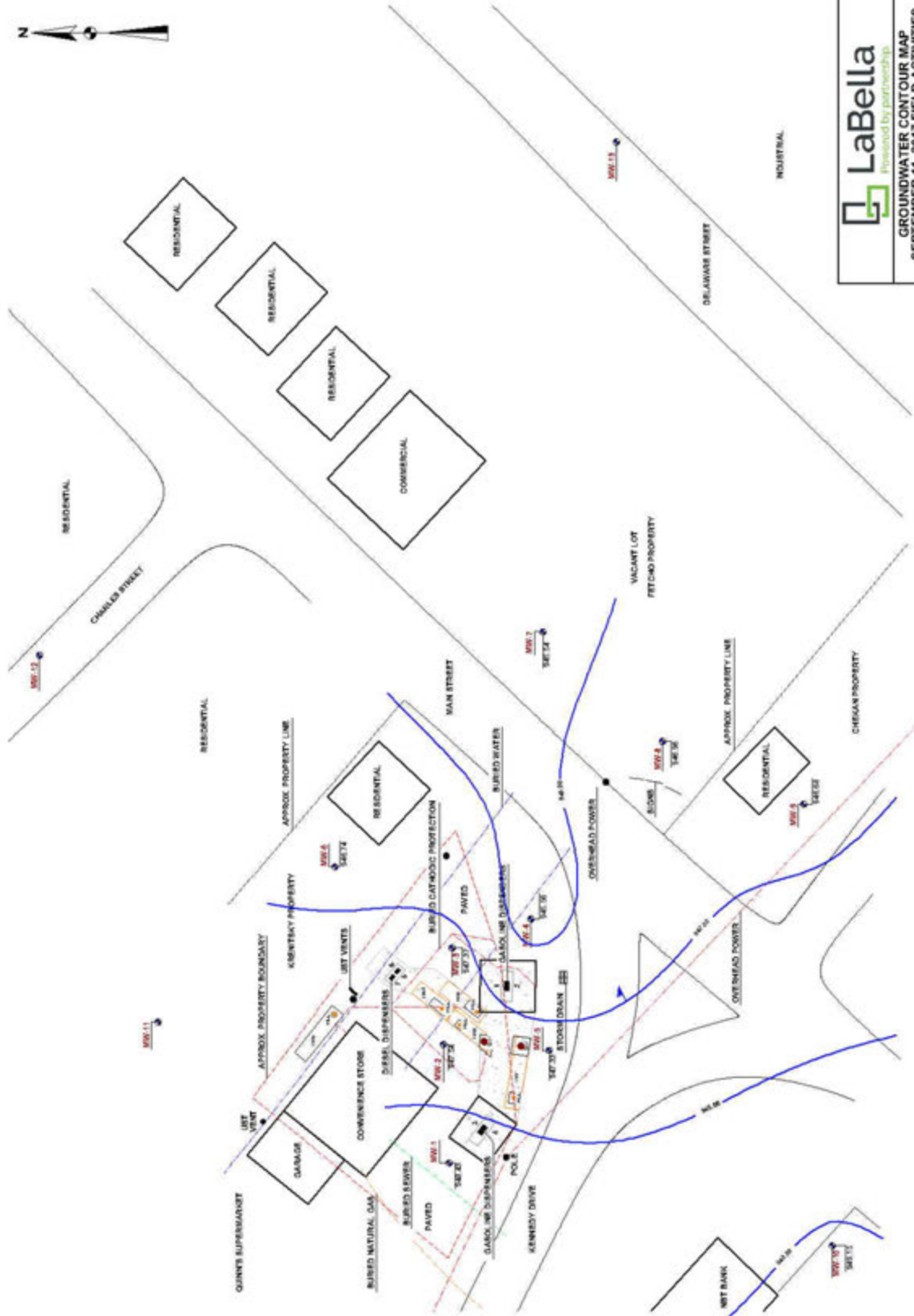
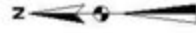
**GROUNDWATER CONTOUR MAP**  
**JUNE 27, 2017 FIELD ACTIVITIES**  
**QUINN'S CAFE STOP PROPERTY**  
**224 MAIN STREET**  
**BOROUGH OF ARCHBALD,**  
**LACKAWANNA COUNTY, PENNSYLVANIA**

DRAWN BY: KC

DATE: 07/28/2017

SCALE: 1" = 40'





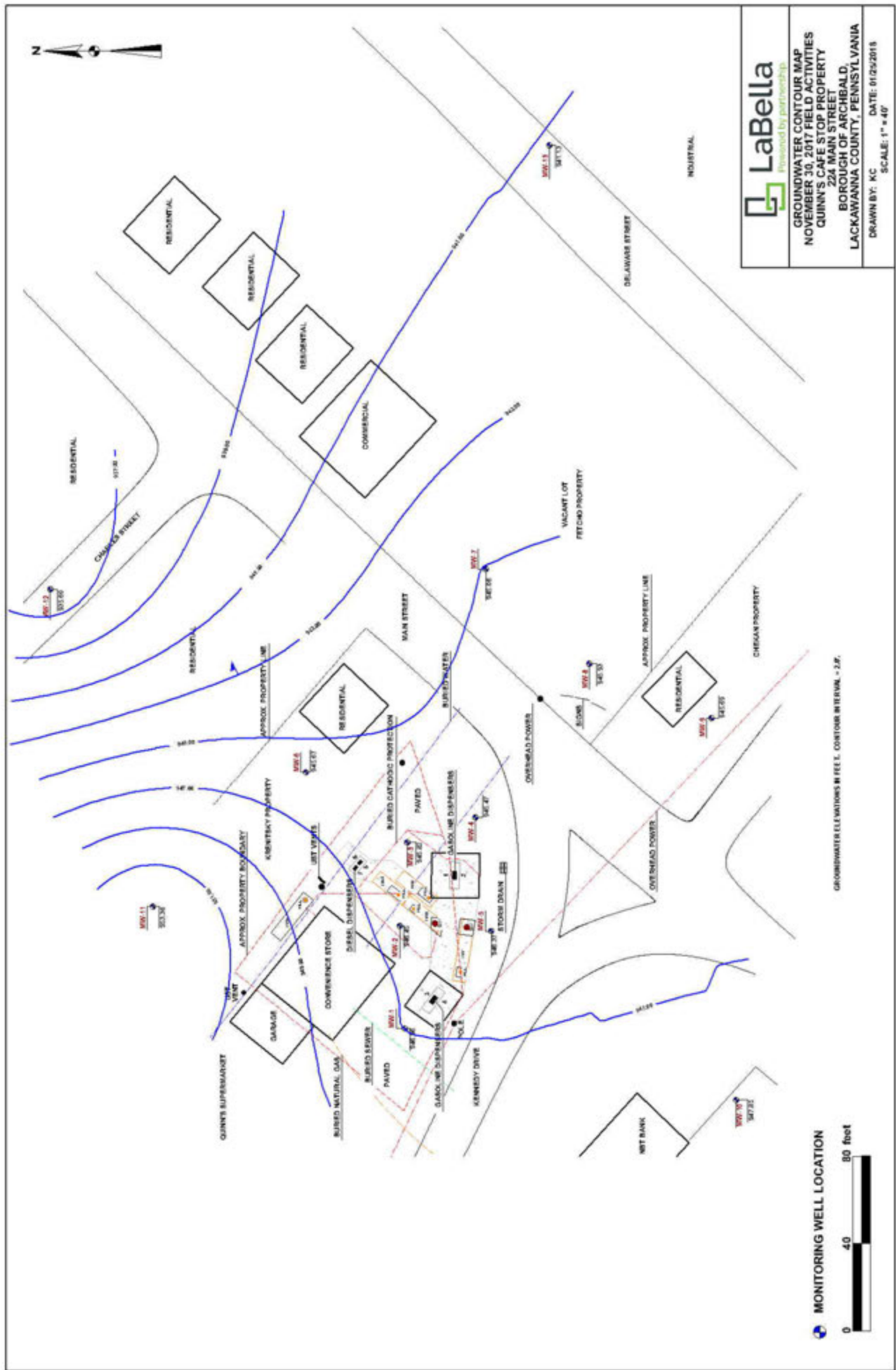
MONITORING WELL LOCATION

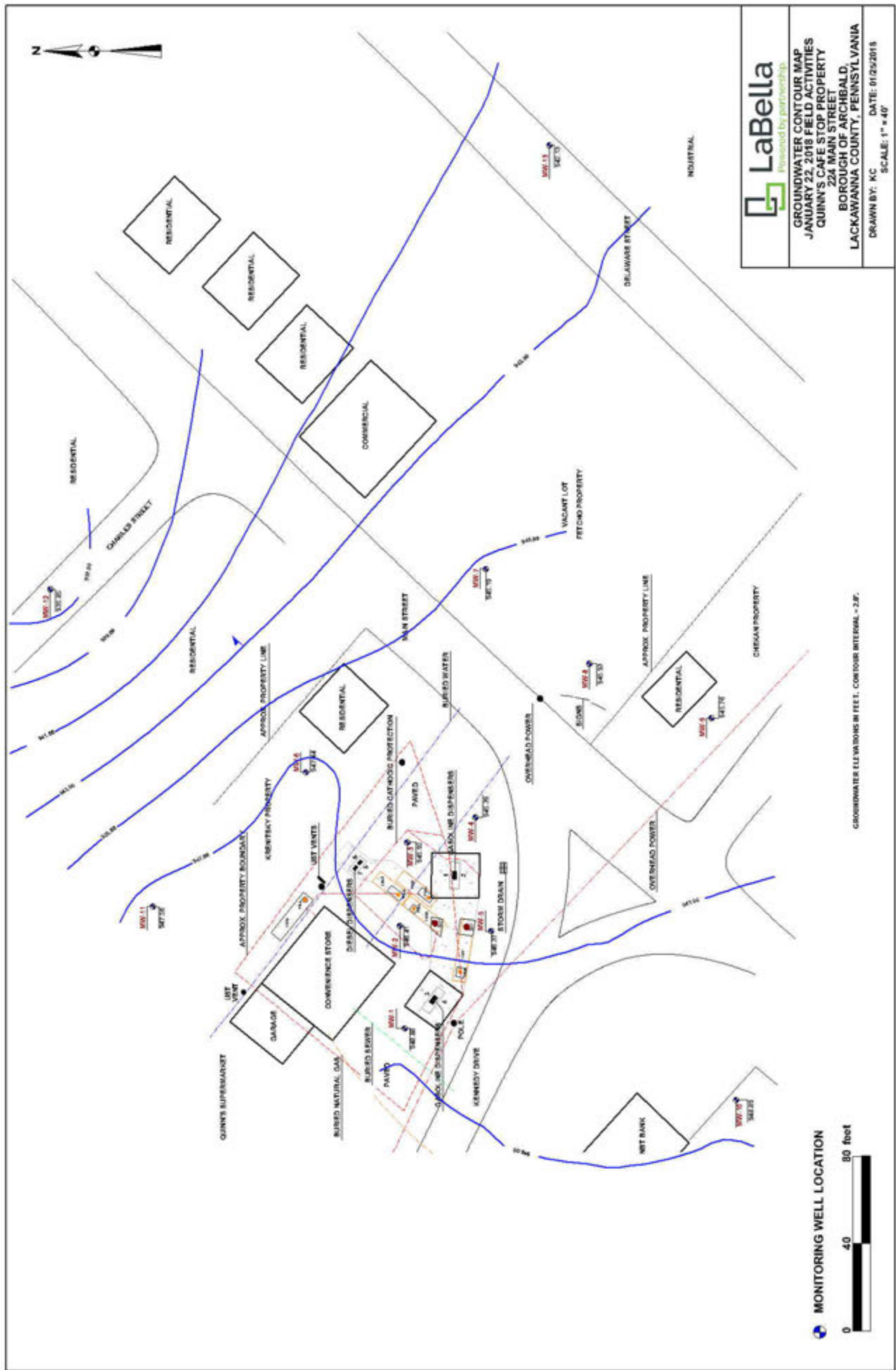


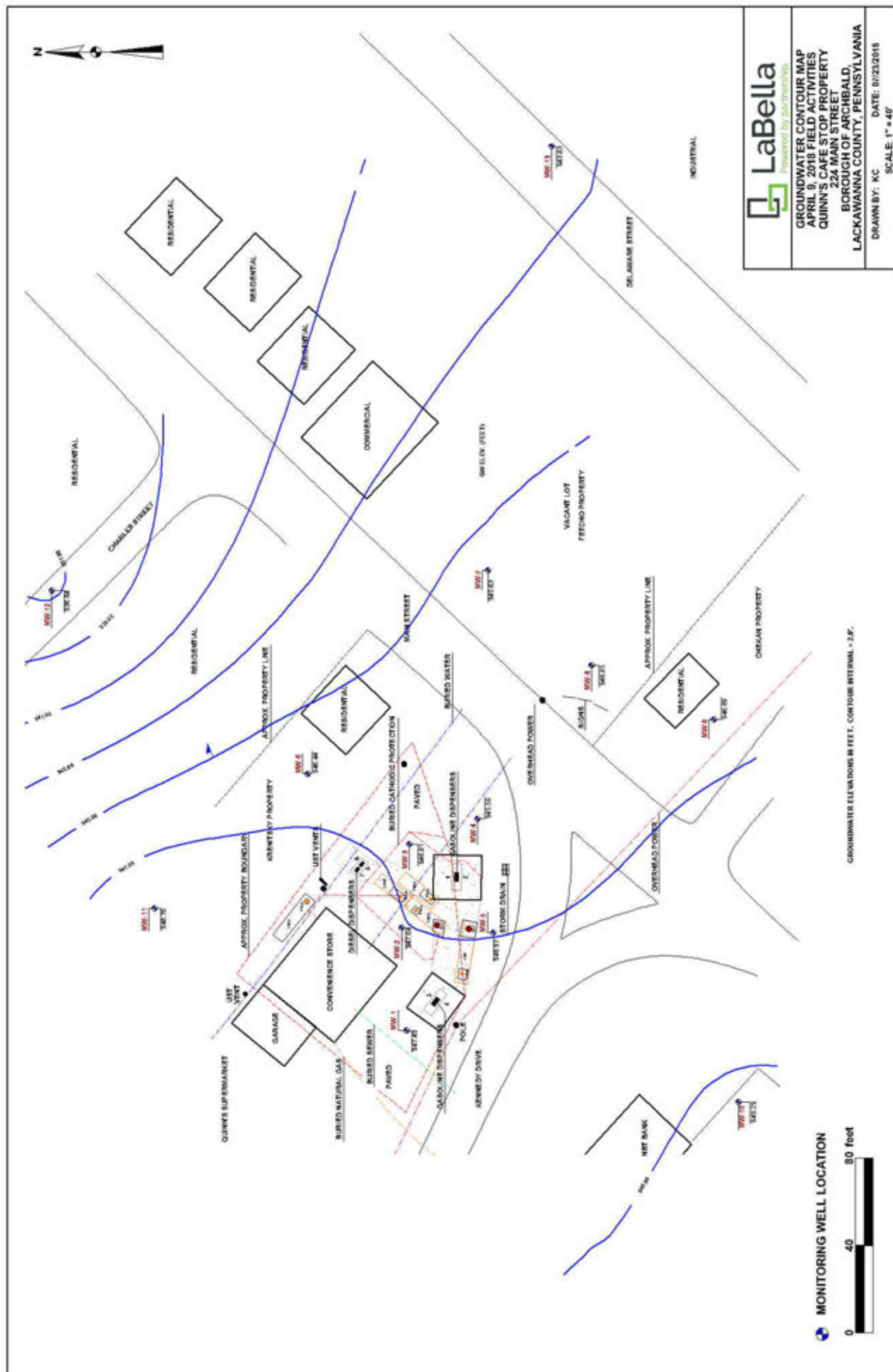
GROUNDWATER ELEVATIONS IN FEET 1. CONFORM TO REVAL - 1.5".  
MW 11, MW 12 AND MW 13 WERE NOT INSTALLED AT THE TIME OF THE  
SEPTEMBER 2017 FIELD ACTIVITIES.



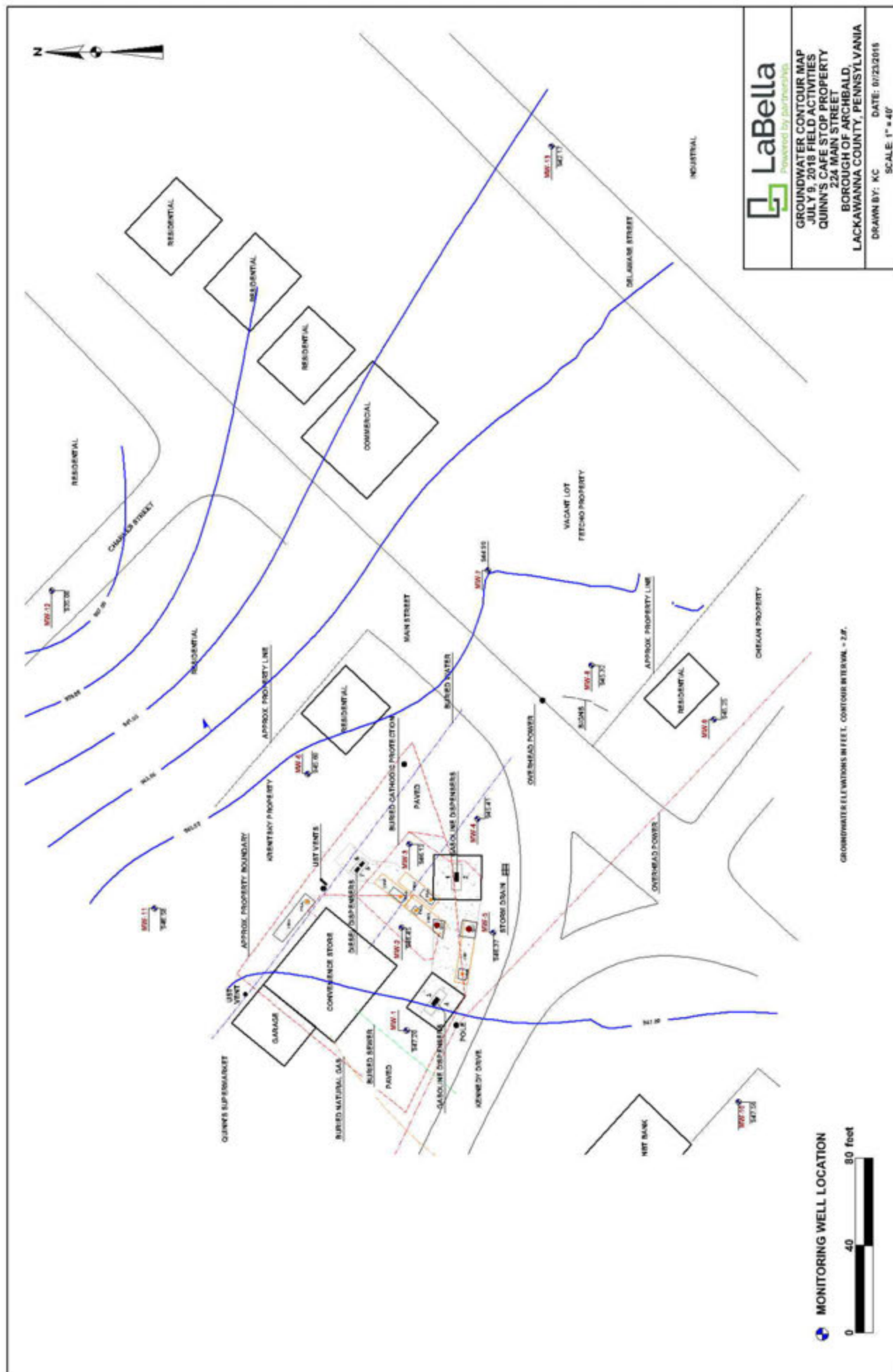
GROUNDWATER CONTOUR MAP  
SEPTEMBER 11, 2017 FIELD ACTIVITIES  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBOLD  
LACKAWANNA COUNTY, PENNSYLVANIA  
DRAWN BY: KC DATE: 01/25/2018  
SCALE: 1" = 40'











## APPENDIX N

### Slug Test Data Documentation



## Slug Test Analysis Worksheet

**Project:** Quinn's Café Stop Property  
**Project #:** 26116 / 2171853  
**Analyzed By:** Kevin Cucura  
**Analysis Date:** 09/10/2018  
**Test Date:** 09/07/2018  
**Well #:** MW-1  
**Test ID:** MW-1 Slug Out

### Slug Info

**Size:** 1" X 3'  
**Slug Volume ( $V_{slug}$ )** =  $\pi r^2 L$   
 **$V_{slug}$  =**  $(3.14)(0.5")^2 (36") = 28.26 \text{ in}^3$

**Expected Displacement in 2" well ( $H^*o$ )** =  $V_{slug} / \pi \text{ casing radius } (r_{casing})^2$

**$H^*o$  =**  $(28.26 \text{ in}^3) / (3.14) (1")^2 = 9" \text{ or } 0.75'$

**Screen Radius (R) =** 0.083'

**Screen Length (L) =** 13.00'

**Saturated Thickness (b) =** 9.63' (Total Depth minus Static Water Level)

**Casing Radius (r) =** 0.083'

**Borehole Radius (B) =** 0.25'

**Static Water Level =** 4.76' (measured in the field from top of casing)

**Total Depth =** 14.39' (measured in the field from top of casing)

**Level @ Time 0 ( $T_o$ ) =** 5.30'

**Slug Size =** 1" X 3'

**$H^*o$  =** 0.75'

**Actual Displacement ( $H_o$ ) =** 0.54'

**Notes:** No issues.

**K =**  $4.19 \times 10^{-3}$  (ft/min)

**K =**  $2.13 \times 10^{-3}$  (cm/sec)



# Slug Test Analysis Report

Project: Quinn's Cafe Stop Property

Number: 2171853

Client: DK & DK LLC

Location: Archbald, PA

Slug Test: MW-1 Slug Out

Test Well: MW-1

Test Conducted by: Chris Herman

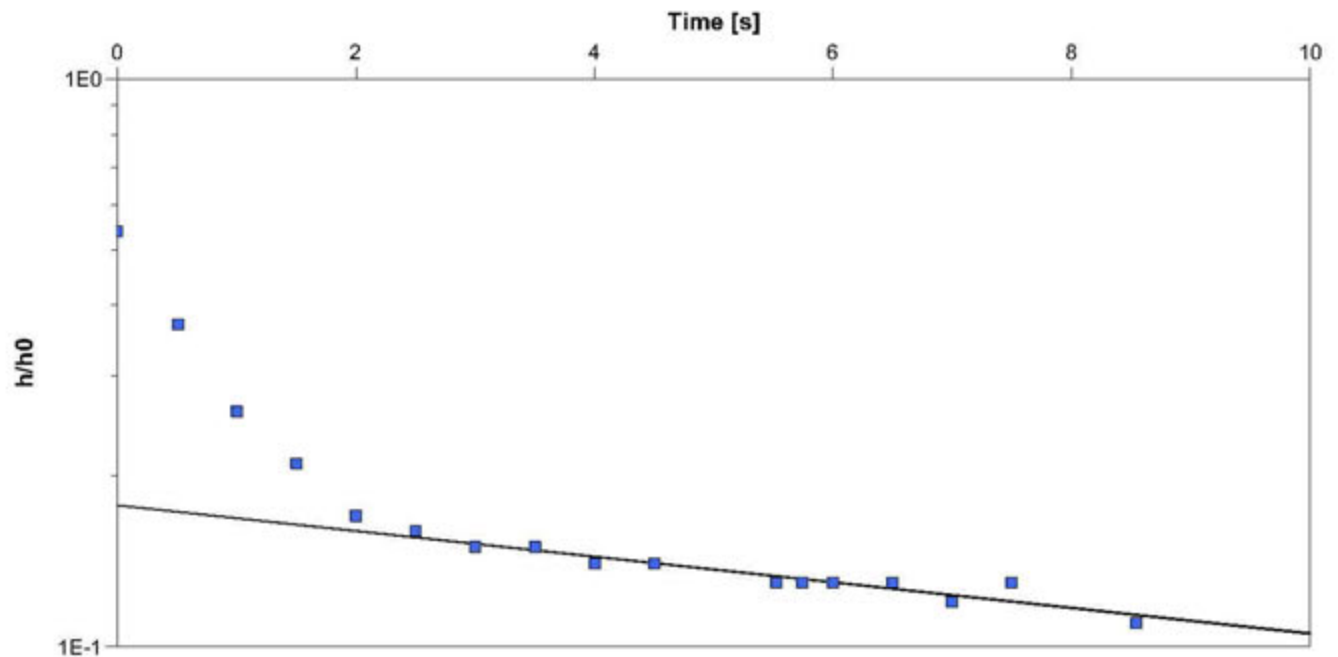
Test Date: 9/7/2018

Analysis Performed by: Kevin Cucura

MW-1 Slug Out

Analysis Date: 9/10/2018

Aquifer Thickness:



Calculation using Hvorslev

Observation Well	Hydraulic Conductivity [ft/min]	
MW-1	$4.19 \times 10^{-3}$	

## Slug Test Analysis Worksheet

**Project:** Quinn's Café Stop Property  
**Project #:** 26116 / 2171853  
**Analyzed By:** Kevin Cucura  
**Analysis Date:** 09/10/2018  
**Test Date:** 09/07/2018  
**Well #:** MW-2  
**Test ID:** MW-2 Slug Out

### Slug Info

**Size:** 1" X 3'  
**Slug Volume ( $V_{slug}$ )** =  $\pi r^2 L$   
 **$V_{slug}$**  =  $(3.14)(0.5")^2 (36") = 28.26 \text{ in}^3$

**Expected Displacement in 2" well ( $H^*o$ )** =  $V_{slug} / \pi \text{ casing radius } (r_{casing})^2$

**$H^*o$**  =  $(28.26 \text{ in}^3) / (3.14) (1")^2 = 9" \text{ or } 0.75'$

**Screen Radius (R)** = 0.083'

**Screen Length (L)** = 13.00'

**Saturated Thickness (b)** = 10.06' (Total Depth minus Static Water Level)

**Casing Radius (r)** = 0.083'

**Borehole Radius (B)** = 0.25'

**Static Water Level** = 4.96' (measured in the field from top of casing)

**Total Depth** = 15.02' (measured in the field from top of casing)

**Level @ Time 0 ( $T_o$ )** = 5.69'

**Slug Size** = 1" X 3'

**$H^*o$**  = 0.75'

**Actual Displacement ( $H_o$ )** = 0.73'

**Notes:** No issues.

**K** =  $4.20 \times 10^{-3}$  (ft/min)  
**K** =  $2.14 \times 10^{-3}$  (cm/sec)



# Slug Test Analysis Report

Project: Quinn's Cafe Stop Property

Number: 2171853

Client: DK & DK LLC

Location: Archbald, PA

Slug Test: MW-2 Slug Out

Test Well: MW-2

Test Conducted by: Chris Herman

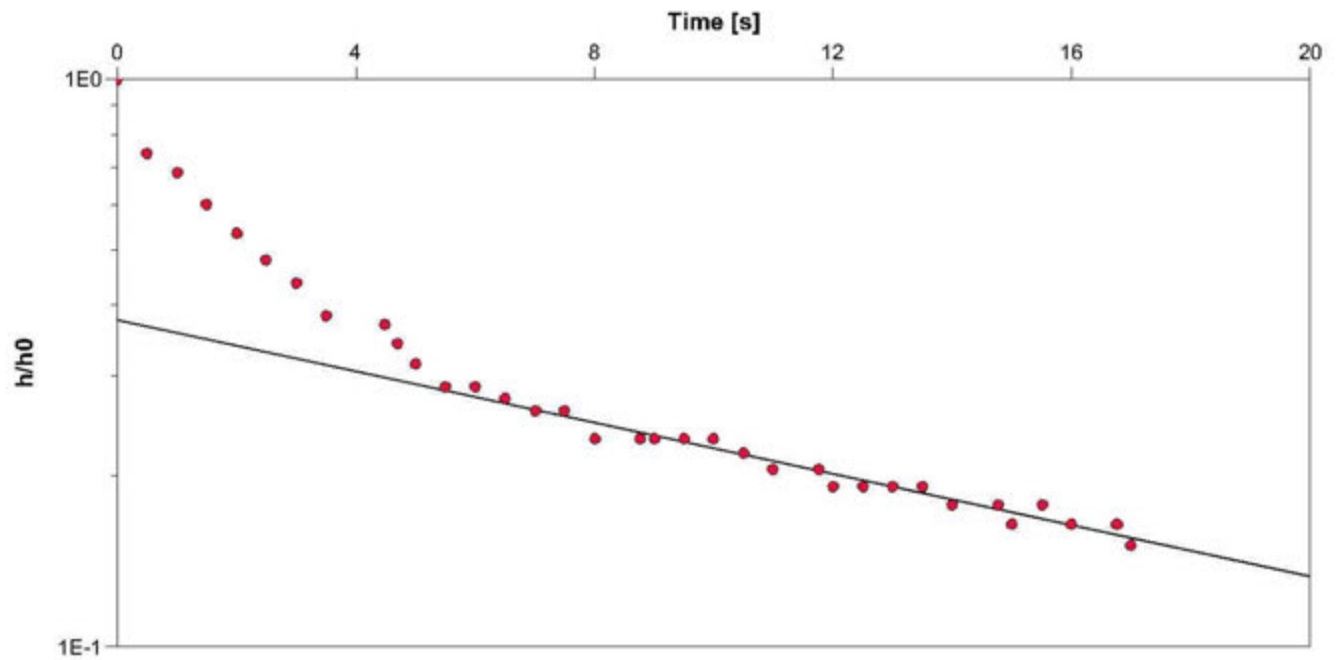
Test Date: 9/7/2018

Analysis Performed by: Kevin Cucura

MW-2 Slug Out

Analysis Date: 9/10/2018

Aquifer Thickness:



Calculation using Hvorslev

Observation Well	Hydraulic Conductivity [ft/min]	
MW-2	$4.20 \times 10^{-3}$	

## Slug Test Analysis Worksheet

**Project:** Quinn's Café Stop Property  
**Project #:** 26116 / 2171853  
**Analyzed By:** Kevin Cucura  
**Analysis Date:** 09/10/2018  
**Test Date:** 09/07/2018  
**Well #:** MW-3  
**Test ID:** MW-3 Slug Out

### Slug Info

**Size:** 1" X 3'  
**Slug Volume ( $V_{slug}$ )** =  $\pi r^2 L$   
 **$V_{slug}$  =**  $(3.14)(0.5")^2 (36") = 28.26 \text{ in}^3$

**Expected Displacement in 2" well ( $H^*o$ )** =  $V_{slug} / \pi \text{ casing radius } (r_{casing})^2$

**$H^*o$  =**  $(28.26 \text{ in}^3) / (3.14) (1")^2 = 9" \text{ or } 0.75'$

**Screen Radius (R) =** 0.083'

**Screen Length (L) =** 13.50'

**Saturated Thickness (b) =** 10.32' (Total Depth minus Static Water Level)

**Casing Radius (r) =** 0.083'

**Borehole Radius (B) =** 0.25'

**Static Water Level =** 4.57' (measured in the field from top of casing)

**Total Depth =** 14.89' (measured in the field from top of casing)

**Level @ Time 0 ( $T_o$ ) =** 5.06'

**Slug Size =** 1" X 3'

**$H^*o$  =** 0.75'

**Actual Displacement ( $H_o$ ) =** 0.49'

**Notes:** No issues.

**K =**  $3.83 \times 10^{-3}$  (ft/min)  
**K =**  $1.94 \times 10^{-3}$  (cm/sec)



# Slug Test Analysis Report

Project: Quinn's Cafe Stop Property

Number: 2171853

Client: DK & DK LLC

Location: Archbald, PA

Slug Test: MW-3 Slug Out

Test Well: MW-3

Test Conducted by: Chris Herman

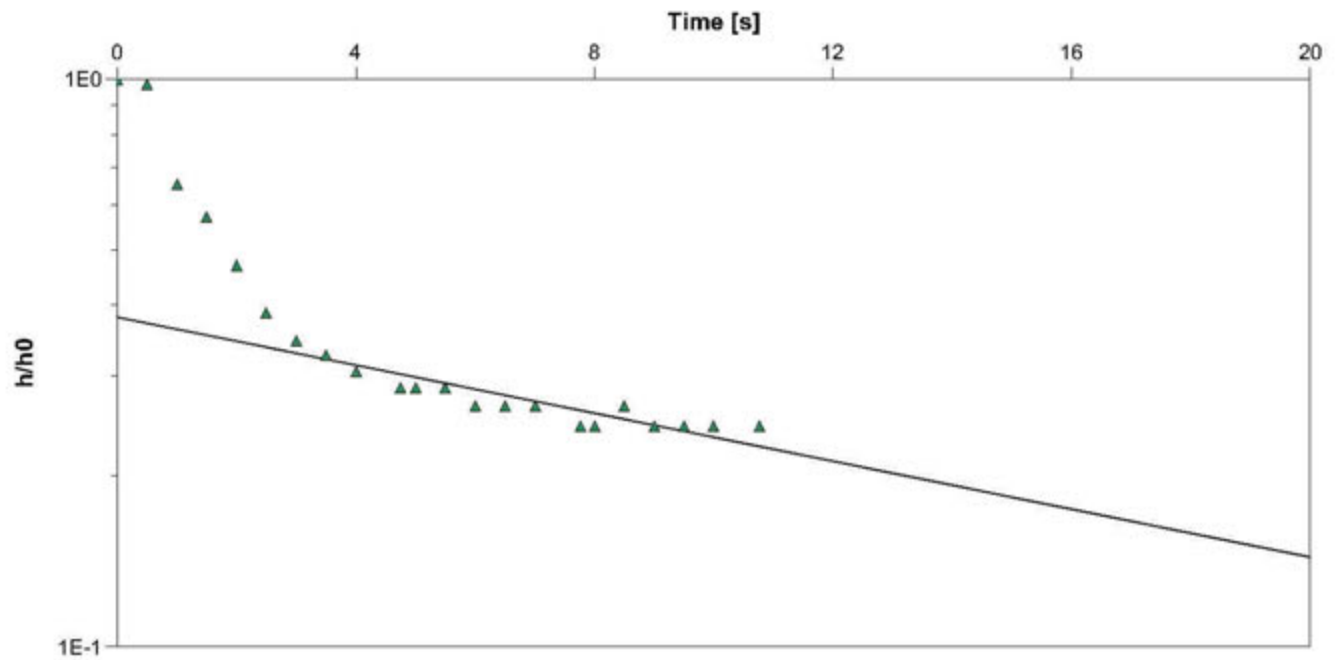
Test Date: 9/7/2018

Analysis Performed by: Kevin Cucura

MW-3 Slug Out

Analysis Date: 9/10/2018

Aquifer Thickness:



Calculation using Hvorslev

Observation Well	Hydraulic Conductivity [ft/min]	
MW-3	$3.83 \times 10^{-3}$	



## Slug Test Analysis Worksheet

**Project:** Quinn's Café Stop Property  
**Project #:** 26116 / 2171853  
**Analyzed By:** Kevin Cucura  
**Analysis Date:** 09/10/2018  
**Test Date:** 09/07/2018  
**Well #:** MW-4  
**Test ID:** MW-4 Slug Out

### Slug Info

**Size:** 1" X 3'  
**Slug Volume ( $V_{slug}$ )** =  $\pi r^2 L$   
 **$V_{slug}$**  =  $(3.14)(0.5")^2 (36") = 28.26 \text{ in}^3$

**Expected Displacement in 2" well ( $H^*o$ )** =  $V_{slug} / \pi \text{ casing radius } (r_{casing})^2$

**$H^*o$**  =  $(28.26 \text{ in}^3) / (3.14) (1")^2 = 9" \text{ or } 0.75'$

**Screen Radius (R)** = 0.083'

**Screen Length (L)** = 13.50'

**Saturated Thickness (b)** = 9.65' (Total Depth minus Static Water Level)

**Casing Radius (r)** = 0.083'

**Borehole Radius (B)** = 0.25'

**Static Water Level** = 5.22' (measured in the field from top of casing)

**Total Depth** = 14.87' (measured in the field from top of casing)

**Level @ Time 0 ( $T_o$ )** = 5.84'

**Slug Size** = 1" X 3'

**$H^*o$**  = 0.75'

**Actual Displacement ( $H_o$ )** = 0.62'

**Notes:** No issues.

**K** =  $2.87 \times 10^{-3}$  (ft/min)  
**K** =  $1.46 \times 10^{-3}$  (cm/sec)



# Slug Test Analysis Report

Project: Quinn's Cafe Stop Property

Number: 2171853

Client: DK & DK LLC

Location: Archbald, PA

Slug Test: MW-4 Slug Out

Test Well: MW-4

Test Conducted by: Chris Herman

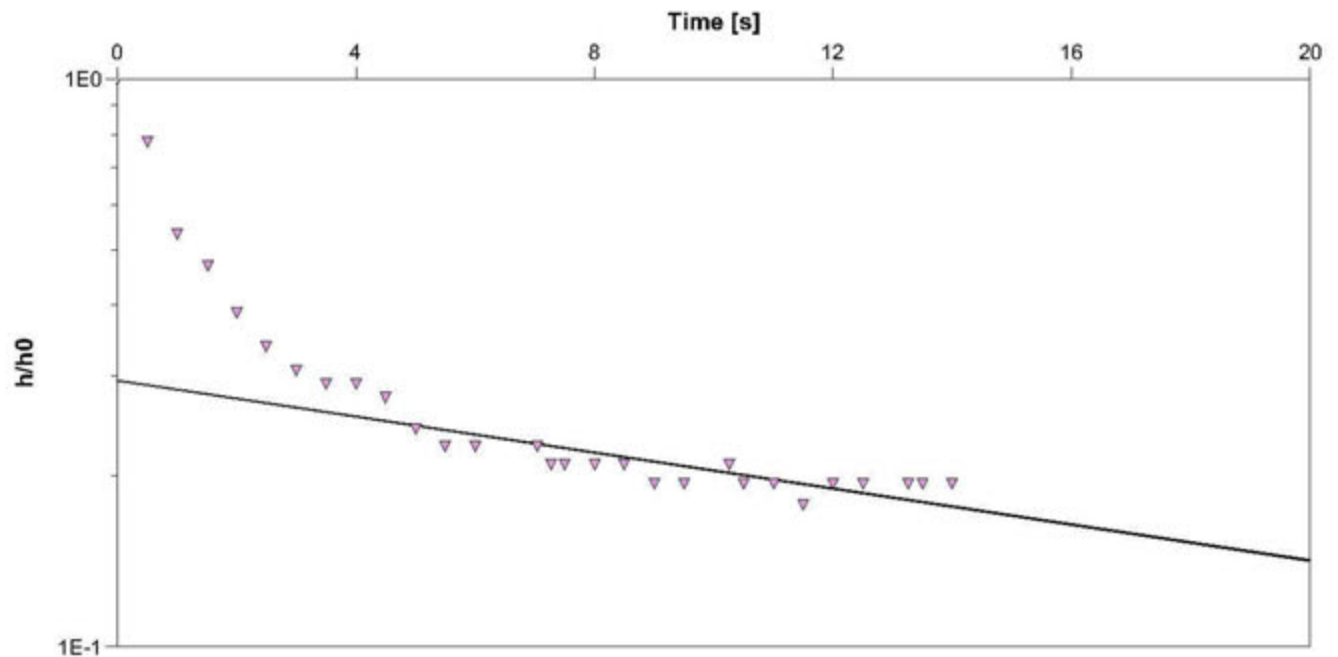
Test Date: 9/7/2018

Analysis Performed by: Kevin Cucura

MW-4 Slug Out

Analysis Date: 9/10/2018

Aquifer Thickness:



Calculation using Hvorslev

Observation Well	Hydraulic Conductivity [ft/min]	
MW-4	$2.87 \times 10^{-3}$	

## Slug Test Analysis Worksheet

**Project:** Quinn's Café Stop Property  
**Project #:** 26116 / 2171853  
**Analyzed By:** Kevin Cucura  
**Analysis Date:** 09/10/2018  
**Test Date:** 09/07/2018  
**Well #:** MW-5  
**Test ID:** MW-5 Slug Out

### Slug Info

**Size:** 1" X 3'  
**Slug Volume** ( $V_{\text{slug}} = \pi r^2 L$ )  
 $V_{\text{slug}} = (3.14)(0.5'')^2 (36'') = 28.26 \text{ in}^3$

**Expected Displacement in 2" well** ( $H^*o = V_{\text{slug}} / \pi \text{ casing radius } (r_{\text{casing}})^2$ )

$H^*o = (28.26 \text{ in}^3) / (3.14) (1')^2 = 9'' \text{ or } 0.75'$

**Screen Radius (R) =** 0.083'

**Screen Length (L) =** 13.50'

**Saturated Thickness (b) =** 11.13' (Total Depth minus Static Water Level)

**Casing Radius (r) =** 0.083'

**Borehole Radius (B) =** 0.25'

**Static Water Level =** 3.88' (measured in the field from top of casing)

**Total Depth =** 15.01' (measured in the field from top of casing)

**Level @ Time 0 (To) =** 4.51'

**Slug Size =** 1" X 3'

**H\*o =** 0.75'

**Actual Displacement (Ho) =** 0.63'

**Notes:** No issues.

**K =**  $5.56 \times 10^{-3}$  (ft/min)  
**K =**  $2.83 \times 10^{-3}$  (cm/sec)



# Slug Test Analysis Report

Project: Quinn's Cafe Stop Property

Number: 2171853

Client: DK & DK LLC

Location: Archbald, PA

Slug Test: MW-5 Slug Out

Test Well: MW-5

Test Conducted by: Chris Herman

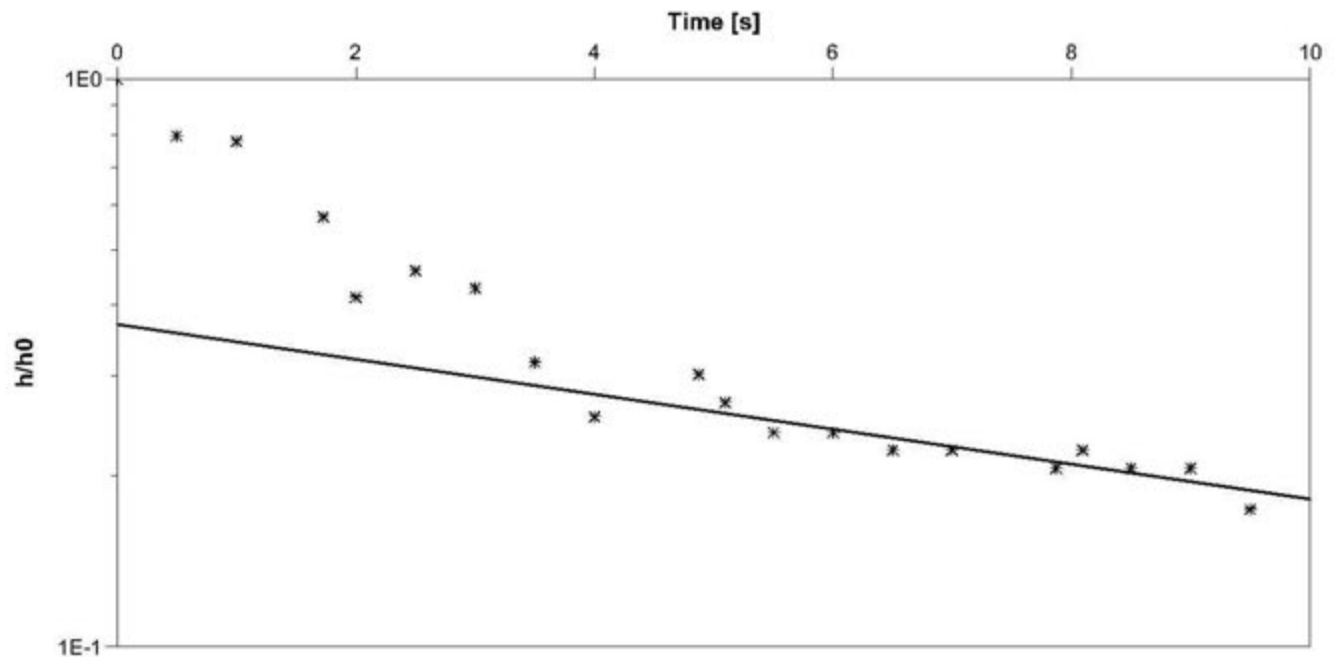
Test Date: 9/7/2018

Analysis Performed by: Kevin Cucura

MW-5 Slug Out

Analysis Date: 9/10/2018

Aquifer Thickness:



Calculation using Hvorslev

Observation Well	Hydraulic Conductivity [ft/min]	
MW-5	$5.56 \times 10^{-3}$	

## Slug Test Analysis Worksheet

**Project:** Quinn's Café Stop Property  
**Project #:** 26116 / 2171853  
**Analyzed By:** Kevin Cucura  
**Analysis Date:** 09/10/2018  
**Test Date:** 09/07/2018  
**Well #:** MW-6  
**Test ID:** MW-6 Slug Out

### Slug Info

**Size:** 1" X 3'  
**Slug Volume** ( $V_{\text{slug}} = \pi r^2 L$ )  
 $V_{\text{slug}} = (3.14)(0.5'')^2 (36'') = 28.26 \text{ in}^3$

**Expected Displacement in 2" well** ( $H^*o = V_{\text{slug}} / \pi \text{ casing radius} (r_{\text{casing}})^2$ )

$H^*o = (28.26 \text{ in}^3) / (3.14) (1')^2 = 9'' \text{ or } 0.75'$

**Screen Radius (R) =** 0.083'

**Screen Length (L) =** 14.00'

**Saturated Thickness (b) =** 10.86' (Total Depth minus Static Water Level)

**Casing Radius (r) =** 0.083'

**Borehole Radius (B) =** 0.25'

**Static Water Level =** 4.22' (measured in the field from top of casing)

**Total Depth =** 15.08' (measured in the field from top of casing)

**Level @ Time 0 (To) =** 4.95'

**Slug Size =** 1" X 3'

**H\*o =** 0.75'

**Actual Displacement (Ho) =** 0.73'

**Notes:** No issues.

$K = 2.97 \times 10^{-3} \text{ (ft/min)}$   
 $K = 1.51 \times 10^{-3} \text{ (cm/sec)}$



# Slug Test Analysis Report

Project: Quinn's Cafe Stop Property

Number: 2171853

Client: DK & DK LLC

Location: Archbald, PA

Slug Test: MW-6 Slug Out

Test Well: MW-6

Test Conducted by: Chris Herman

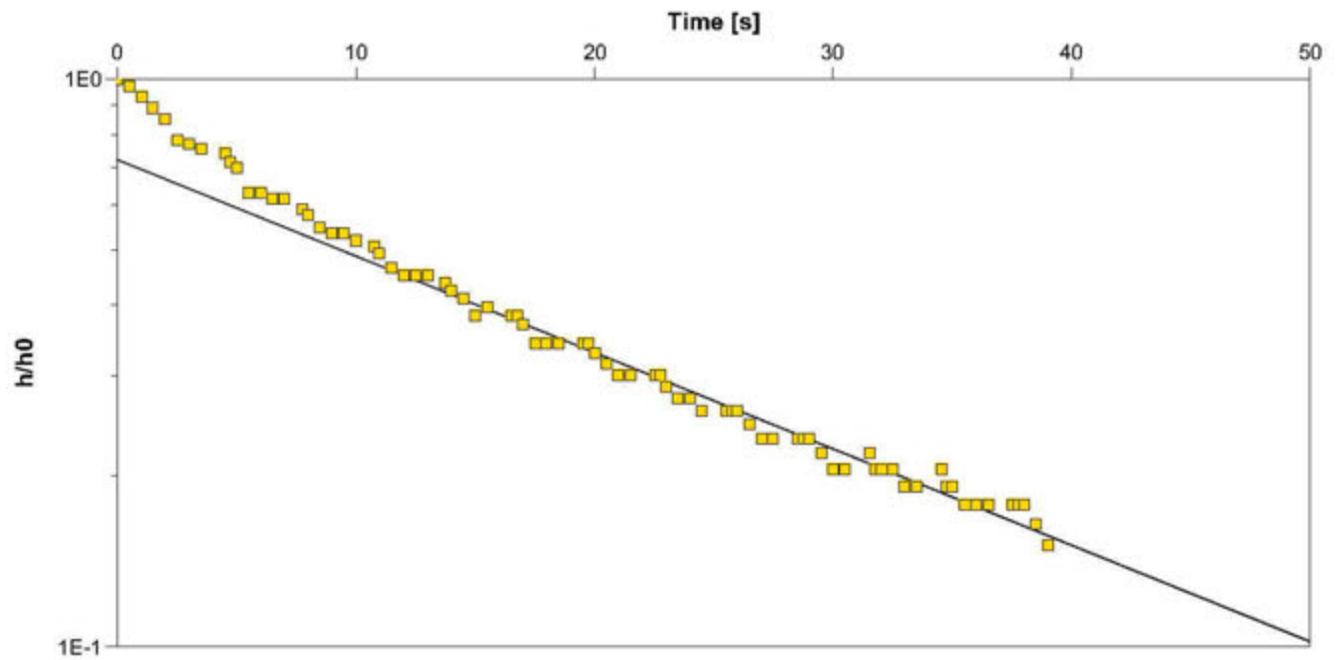
Test Date: 9/7/2018

Analysis Performed by: Kevin Cucura

MW-6 Slug Out

Analysis Date: 9/10/2018

Aquifer Thickness:



Calculation using Hvorslev

Observation Well	Hydraulic Conductivity [ft/min]	
MW-6	$2.97 \times 10^{-3}$	



## Slug Test Analysis Worksheet

**Project:** Quinn's Café Stop Property  
**Project #:** 26116 / 2171853  
**Analyzed By:** Kevin Cucura  
**Analysis Date:** 09/10/2018  
**Test Date:** 09/07/2018  
**Well #:** MW-7  
**Test ID:** MW-7 Slug Out

### Slug Info

**Size:** 1" X 3'  
**Slug Volume** ( $V_{\text{slug}} = \pi r^2 L$ )  
 $V_{\text{slug}} = (3.14)(0.5'')^2 (36'') = 28.26 \text{ in}^3$

**Expected Displacement in 2" well** ( $H^*o = V_{\text{slug}} / \pi \text{ casing radius } (r_{\text{casing}})^2$ )

$H^*o = (28.26 \text{ in}^3) / (3.14) (1')^2 = 9'' \text{ or } 0.75'$

**Screen Radius (R) =** 0.083'

**Screen Length (L) =** 15.50'

**Saturated Thickness (b) =** 9.70' (Total Depth minus Static Water Level)

**Casing Radius (r) =** 0.083'

**Borehole Radius (B) =** 0.25'

**Static Water Level =** 7.08' (measured in the field from top of casing)

**Total Depth =** 16.78' (measured in the field from top of casing)

**Level @ Time 0 ( $T_o$ ) =** 7.73'

**Slug Size =** 1" X 3'

**$H^*o =$**  0.75'

**Actual Displacement ( $H_o$ ) =** 0.65'

**Notes:** No issues.

$K = 1.38 \times 10^{-6} \text{ (ft/min)}$   
 $K = 7.01 \times 10^{-7} \text{ (cm/sec)}$



# Slug Test Analysis Report

Project: Quinn's Cafe Stop Property

Number: 2171853

Client: DK & DK LLC

Location: Archbald, PA

Slug Test: MW-7 Slug Out

Test Well: MW-7

Test Conducted by: Chris Herman

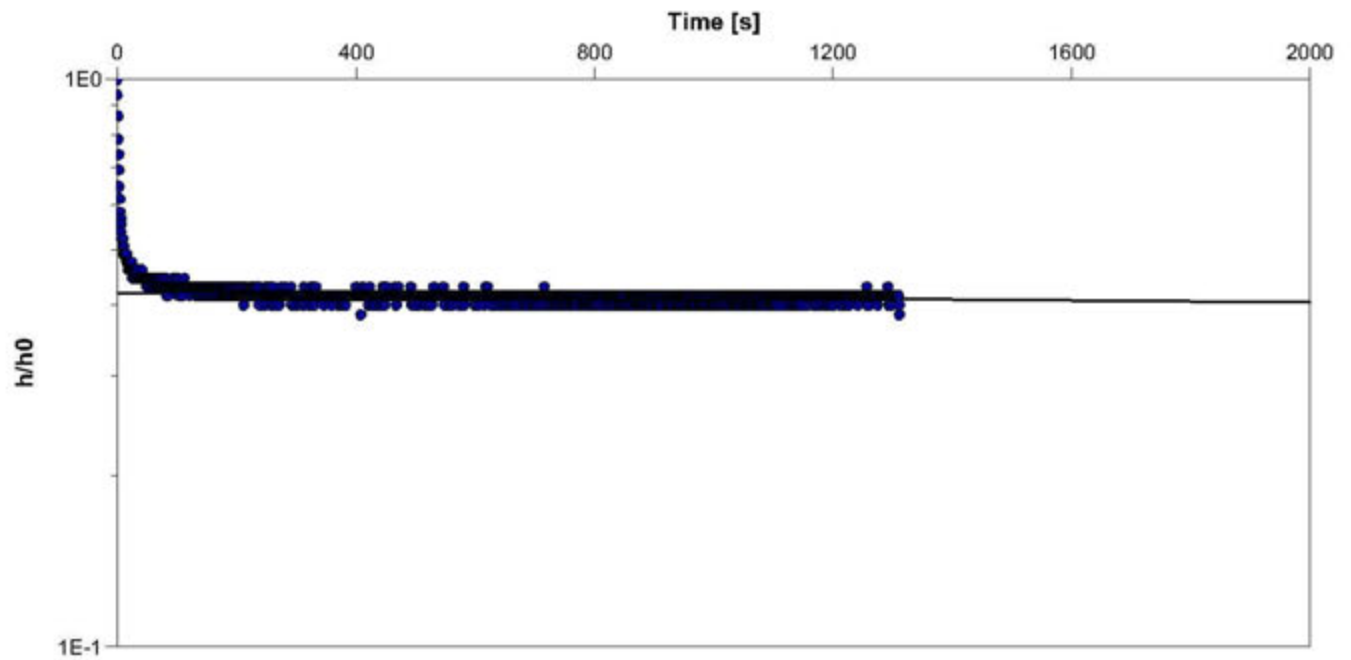
Test Date: 9/7/2018

Analysis Performed by: Kevin Cucura

MW-7 Slug Out

Analysis Date: 9/10/2018

Aquifer Thickness:



Calculation using Hvorslev

Observation Well	Hydraulic Conductivity [ft/min]	
MW-7	$1.38 \times 10^{-6}$	

## Slug Test Analysis Worksheet

**Project:** Quinn's Café Stop Property  
**Project #:** 26116 / 2171853  
**Analyzed By:** Kevin Cucura  
**Analysis Date:** 09/10/2018  
**Test Date:** 09/07/2018  
**Well #:** MW-8  
**Test ID:** MW-8 Slug Out

### Slug Info

**Size:** 1" X 3'  
**Slug Volume** ( $V_{\text{slug}} = \pi r^2 L$ )  
 $V_{\text{slug}} = (3.14)(0.5'')^2 (36'') = 28.26 \text{ in}^3$

**Expected Displacement in 2" well** ( $H^*o = V_{\text{slug}} / \pi \text{ casing radius} (r_{\text{casing}})^2$ )

$H^*o = (28.26 \text{ in}^3) / (3.14) (1')^2 = 9'' \text{ or } 0.75'$

**Screen Radius (R) =** 0.083'

**Screen Length (L) =** 16.00'

**Saturated Thickness (b) =** 10.92' (Total Depth minus Static Water Level)

**Casing Radius (r) =** 0.083'

**Borehole Radius (B) =** 0.25'

**Static Water Level =** 6.25' (measured in the field from top of casing)

**Total Depth =** 17.17' (measured in the field from top of casing)

**Level @ Time 0 (To) =** 6.90'

**Slug Size =** 1" X 3'

**H\*o =** 0.75'

**Actual Displacement (Ho) =** 0.65'

**Notes:** No issues.

$K = 1.44 \times 10^{-3} \text{ (ft/min)}$   
 $K = 7.30 \times 10^{-4} \text{ (cm/sec)}$



# Slug Test Analysis Report

Project: Quinn's Cafe Stop Property

Number: 2171853

Client: DK & DK LLC

Location: Archbald, PA

Slug Test: MW-8 Slug Out

Test Well: MW-8

Test Conducted by: Chris Herman

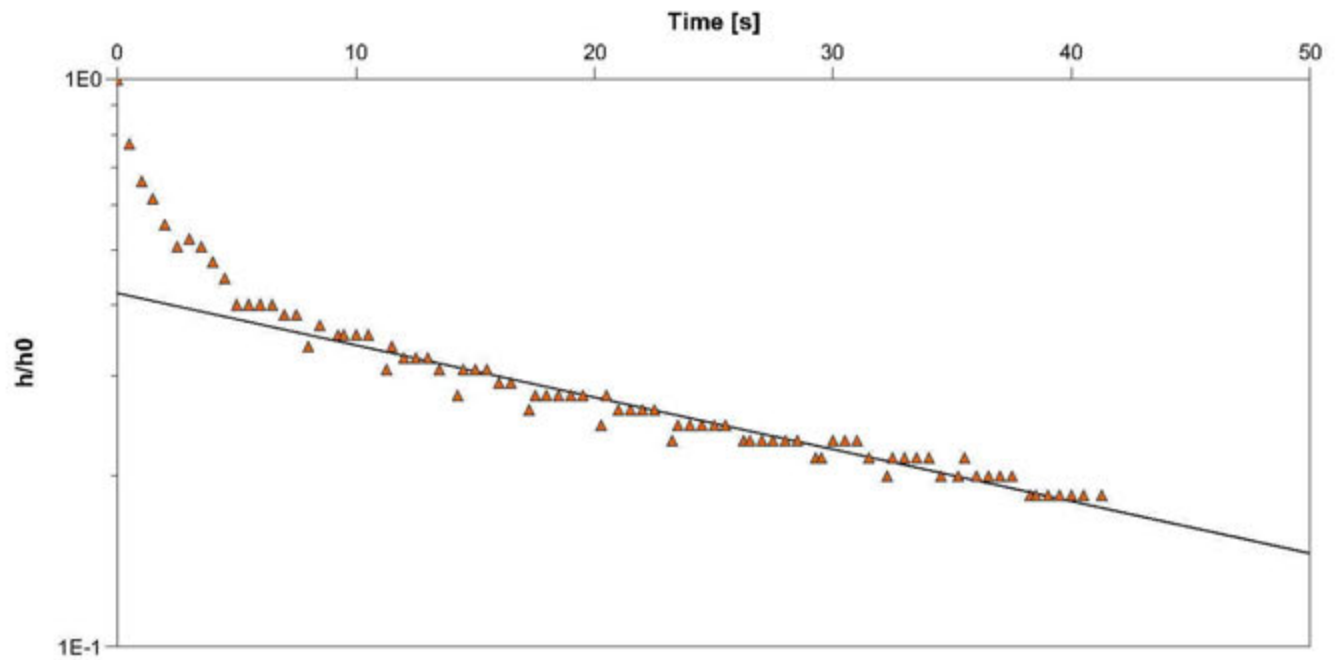
Test Date: 9/7/2018

Analysis Performed by: Kevin Cucura

MW-8 Slug Out

Analysis Date: 9/10/2018

Aquifer Thickness:



Calculation using Hvorslev

Observation Well	Hydraulic Conductivity [ft/min]	
MW-8	$1.44 \times 10^{-3}$	

## APPENDIX O

Soil Analytical Summary Table

&

Laboratory Analytical Data Sheets

## APPENDIX O-1

### Soil Analytical Summary Table



Table O-1  
Site Characterization Activities  
Quinn's Café Stop Property  
Soil Sample Analytical Data Summary (mg/kg)

Parameter	T001 - Fill	T001 - STP	T002 - Fill	T003 - Fill	SHS MSC*	SHS MSC**
Depth	2.0'	2.0'	2.0'	1.5'		
Condition	Vadose	Vadose	Vadose	Vadose		
Sample Date	10/17/2016	10/17/2016	10/17/2016	10/17/2016		
% Moisture	14.5%	12.9%	12.4%	12.2%		
Benzene	1.69	0.251	0.699	0.148	0.5	0.5
Ethylbenzene	5.13	0.704	6.92	2.77	70.0	70.0
Cumene	0.728	0.148	2.38	0.673	2,500.0	350.0
MTBE	<0.0406	<0.0462	<0.0498	<0.0455	2.0	2.0
Naphthalene	2.05	0.253	23.3	8.8	25.0	10.0
Toluene	49.5	5.0	8.57	2.73	100.0	100.0
Total Xylenes	40.7	6.2	80.1	51.3	1,000.0	1,000.0
1,2,4-TMB	6.39	0.977	109	62.8	35.0	6.2
1,3,5-TMB	3.44	0.445	32.5	26.9	210.0	120.0

MTBE

Methyl Tert Butyl Ether

1,2,4-TMB

1,2,4-Trimethylbenzene

1,3,5-TMB

1,3,5-Trimethylbenzene

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer setting



Act 2 SHS exceedances - Unsaturated Zone\*



Act 2 SHS exceedances - Saturated Zone\*\*

**Condition:**

Vadose: Vadose Zone - Unsaturated MSCs Apply

Smear: Zone of Groundwater Saturation (Smear Zone) - Saturated MSCs Apply

PSZ: Permanently Saturated Zone - Saturated MSCs Apply

Table O-1  
Site Characterization Activities  
Quinn's Café Stop Property  
Soil Sample Analytical Data Summary (mg/kg)

Parameter	T003 - STP	T004 - Fill	TB-1	TB-2A	SHS MSC*	SHS MSC**
Depth	2.5'	1.5'	1.5' - 2.5'	1.5' - 2.5'		
Condition	Vadose	Vadose	Vadose	Vadose		
Sample Date	10/17/2016	10/17/2016	1/31/2017	1/30/2017		
% Moisture	8.2%	4.9%	5.2%	11.8%		
Benzene	<0.0416	<0.0369	<0.0464	<0.0615	0.5	0.5
Ethylbenzene	<0.0416	<0.0369	<0.0464	<0.0615	70.0	70.0
Cumene	<0.0416	<0.0369	<0.0464	<0.0615	2,500.0	350.0
MTBE	<0.0416	<0.0369	<0.0464	<0.0615	2.0	2.0
Naphthalene	<0.0831	<0.0738	<0.0928	<0.123	25.0	10.0
Toluene	0.0981	<0.0369	<0.0464	<0.0615	100.0	100.0
Total Xylenes	0.144	<0.111	<0.139	<0.185	1,000.0	1,000.0
1,2,4-TMB	<0.0416	<0.0369	<0.0464	<0.0615	35.0	6.2
1,3,5-TMB	<0.0416	<0.0369	<0.0464	<0.0615	210.0	120.0

MTBE

Methyl Tert Butyl Ether

1,2,4-TMB

1,2,4-Trimethylbenzene

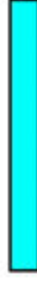
1,3,5-TMB

1,3,5-Trimethylbenzene

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer setting



Act 2 SHS exceedances - Unsaturated Zone\*



Act 2 SHS exceedances - Saturated Zone\*\*

Condition:

Vadose: Vadose Zone - Unsaturated MSCs Apply

Smear: Zone of Groundwater Saturation (Smear Zone) - Saturated MSCs Apply

PSZ: Permanently Saturated Zone - Saturated MSCs Apply

Table O-1  
Site Characterization Activities  
Quinn's Café Stop Property  
Soil Sample Analytical Data Summary (mg/kg)

Parameter	TB-2B	TB-3A	TB-3B	TB-4A	SHS MSC*	SHS MSC**
Depth	4.0' - 5.0'	1.5' - 2.5'	4.0' - 5.0'	1.5' - 2.5'		
Condition	Smear	Vadose	Smear	Vadose		
Sample Date	1/30/2017	1/30/2017	1/30/2017	1/31/2017		
% Moisture	9.0%	10.7%	34.4%	15.1%		
Benzene	<0.0367	<0.0367	0.0639	<0.0373	0.5	0.5
Ethylbenzene	<0.0367	<0.0367	<0.0560	<0.0373	70.0	70.0
Cumene	<0.0367	<0.0367	<0.0560	<0.0373	2,500.0	350.0
MTBE	<0.0367	<0.0367	<0.0560	<0.0373	2.0	2.0
Naphthalene	<0.0734	<0.0734	<0.112	<0.0745	25.0	10.0
Toluene	<0.0367	<0.0367	0.273	<0.0373	100.0	100.0
Total Xylenes	<0.110	<0.110	0.220	<0.112	1,000.0	1,000.0
1,2,4-TMB	<0.0367	<0.0367	<0.0560	<0.0373	35.0	6.2
1,3,5-TMB	<0.0367	<0.0367	<0.0560	<0.0373	210.0	120.0

**MTBE**

Methyl Tert Butyl Ether

**1,2,4-TMB**

1,2,4-Trimethylbenzene

**1,3,5-TMB**

1,3,5-Trimethylbenzene

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer setting



Act 2 SHS exceedances - Unsaturated Zone\*



Act 2 SHS exceedances - Saturated Zone\*\*

**Condition:**

Vadose: Vadose Zone - Unsaturated MSCs Apply

Smear: Zone of Groundwater Saturation (Smear Zone) - Saturated MSCs Apply

PSZ: Permanently Saturated Zone - Saturated MSCs Apply

Table O-1  
Site Characterization Activities  
Quinn's Café Stop Property  
Soil Sample Analytical Data Summary (mg/kg)

Parameter	TB-4B	TB-5A	TB-5B	TB-6A	SHS MSC*	SHS MSC**
Depth	5.0' - 6.0'	1.5' - 2.5'	4.0' - 5.0'	1.5' - 2.5'		
Condition	Smear	Vadose	Smear	Vadose		
Sample Date	1/31/2017	1/30/2017	1/30/2017	1/31/2017		
% Moisture	5.0%	9.1%	25.4%	17.0%		
Benzene	<0.0385	0.229	<0.470	<0.0404	0.5	0.5
Ethylbenzene	5.22	<0.0381	19.0	<0.0404	70.0	70.0
Cumene	2.18	0.0787	5.25	<0.0404	2,500.0	350.0
MTBE	<0.0385	<0.0381	<0.470	<0.0404	2.0	2.0
Naphthalene	14.4	<0.0762	30.3	<0.0808	25.0	10.0
Toluene	<0.0385	<0.0381	0.498	<0.0404	100.0	100.0
Total Xylenes	12.4	0.305	101.0	<0.121	1,000.0	1,000.0
1,2,4-TMB	83.9	0.0647	277.0	<0.0404	35.0	6.2
1,3,5-TMB	0.187	<0.0381	43.8	<0.0404	210.0	120.0

**MTBE**

Methyl Tert Butyl Ether

**1,2,4-TMB**

1,2,4-Trimethylbenzene

**1,3,5-TMB**

1,3,5-Trimethylbenzene

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer setting



Act 2 SHS exceedances - Unsaturated Zone\*



Act 2 SHS exceedances - Saturated Zone\*\*

**Condition:**

Vadose: Vadose Zone - Unsaturated MSCs Apply

Smear: Zone of Groundwater Saturation (Smear Zone) - Saturated MSCs Apply

PSZ: Permanently Saturated Zone - Saturated MSCs Apply

Table O-1  
Site Characterization Activities  
Quinn's Café Stop Property  
Soil Sample Analytical Data Summary (mg/kg)

Parameter	TB-6B	TB-7A	TB-7B	MW-1	SHS MSC*	SHS MSC**
Depth	4.0' - 5.0'	1.5' - 2.5'	3.5' - 4.5'	1.5' - 2.5'		
Condition	Smear	Vadose	Smear	Vadose		
Sample Date	1/31/2017	1/31/2017	1/31/2017	1/31/2017		
% Moisture	16.4%	11.1%	22.1%	8.2%		
Benzene	0.233	<0.0361	0.338	<0.0358	0.5	0.5
Ethylbenzene	0.185	<0.0361	0.679	<0.0358	70.0	70.0
Cumene	0.182	<0.0361	0.567	<0.0358	2,500.0	350.0
MTBE	<0.0400	<0.0361	<0.0472	<0.0358	2.0	2.0
Naphthalene	<0.0800	<0.0722	0.734	<0.0717	25.0	10.0
Toluene	0.331	<0.0361	0.102	<0.0358	100.0	100.0
Total Xylenes	1.150	<0.108	0.853	<0.107	1,000.0	1,000.0
1,2,4-TMB	0.294	<0.0361	0.180	<0.0358	35.0	6.2
1,3,5-TMB	0.178	<0.0361	<0.0472	<0.0358	210.0	120.0

**MTBE**

Methyl Tert Butyl Ether

**1,2,4-TMB**

1,2,4-Trimethylbenzene

**1,3,5-TMB**

1,3,5-Trimethylbenzene

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer setting



Act 2 SHS exceedances - Unsaturated Zone\*



Act 2 SHS exceedances - Saturated Zone\*\*

**Condition:**

Vadose: Vadose Zone - Unsaturated MSCs Apply

Smear: Zone of Groundwater Saturation (Smear Zone) - Saturated MSCs Apply

PSZ: Permanently Saturated Zone - Saturated MSCs Apply



Table O-1  
Site Characterization Activities  
Quinn's Café Stop Property  
Soil Sample Analytical Data Summary (mg/kg)

Parameter	MW-2A	MW-2B	MW-3A	MW-3B	SHS MSC*	SHS MSC**
Depth	1.5' - 2.5'	4.0' - 5.0'	1.5' - 2.5'	4.0' - 5.0'		
Condition	Vadose	Smear	Vadose	Smear		
Sample Date	1/30/2017	1/30/2017	1/30/2017	1/30/2017		
% Moisture	6.7%	11.9%	9.4%	27.3%		
Benzene	<0.0597	<0.369	<0.0397	0.551	0.5	0.5
Ethylbenzene	<0.0597	11.1	<0.0397	4.01	70.0	70.0
Cumene	<0.0597	2.12	<0.0397	0.819	2,500.0	350.0
MTBE	<0.0597	<0.369	<0.0397	<0.0617	2.0	2.0
Naphthalene	<0.119	20.8	<0.0794	5.27	25.0	10.0
Toluene	<0.0597	0.432	<0.0397	0.411	100.0	100.0
Total Xylenes	<0.179	41.8	0.146	8.88	1,000.0	1,000.0
1,2,4-TMB	0.0698	69.1	0.057	10.9	35.0	6.2
1,3,5-TMB	<0.0597	13.5	<0.0397	1.57	210.0	120.0

MTBE

Methyl Tert Butyl Ether

1,2,4-TMB

1,2,4-Trimethylbenzene

1,3,5-TMB

1,3,5-Trimethylbenzene

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer setting

Act 2 SHS exceedances - Unsaturated Zone\*

Act 2 SHS exceedances - Saturated Zone\*\*

Condition:

Vadose: Vadose Zone - Unsaturated MSCs Apply

Smear: Zone of Groundwater Saturation (Smear Zone) - Saturated MSCs Apply

PSZ: Permanently Saturated Zone - Saturated MSCs Apply



Table O-1  
Site Characterization Activities  
Quinn's Café Stop Property  
Soil Sample Analytical Data Summary (mg/kg)

Parameter	MW-4A	MW-4B	MW-5A	MW-5B	SHS MSC*	SHS MSC**
Depth	1.5' - 2.5'	4.0' - 5.0'	1.5' - 2.5'	3.5' - 4.5'		
Condition	Vadose	Smear	Vadose	Smear		
Sample Date	1/31/2017	1/31/2017	1/31/2017	1/31/2017		
% Moisture	10.0%	14.9%	13.1%	19.5%		
Benzene	<0.0513	<0.0450	<0.0388	<0.0450	0.5	0.5
Ethylbenzene	<0.0513	<0.0450	<0.0388	<0.0450	70.0	70.0
Cumene	<0.0513	<0.0450	<0.0388	<0.0450	2,500.0	350.0
MTBE	<0.0513	<0.0450	<0.0388	<0.0450	2.0	2.0
Naphthalene	<0.103	<0.0900	<0.0776	<0.0900	25.0	10.0
Toluene	<0.0513	<0.0450	<0.0388	<0.0450	100.0	100.0
Total Xylenes	<0.154	<0.135	<0.116	<0.135	1,000.0	1,000.0
1,2,4-TMB	<0.0513	<0.0450	<0.0388	<0.0450	35.0	6.2
1,3,5-TMB	<0.0513	<0.0450	<0.0388	<0.0450	210.0	120.0

MTBE

Methyl Tert Butyl Ether

1,2,4-TMB

1,2,4-Trimethylbenzene

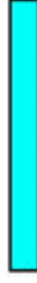
1,3,5-TMB

1,3,5-Trimethylbenzene

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer setting



Act 2 SHS exceedances - Unsaturated Zone\*



Act 2 SHS exceedances - Saturated Zone\*\*

Condition:

Vadose: Vadose Zone - Unsaturated MSCs Apply

Smear: Zone of Groundwater Saturation (Smear Zone) - Saturated MSCs Apply

PSZ: Permanently Saturated Zone - Saturated MSCs Apply

Table O-1  
Site Characterization Activities  
Quinn's Café Stop Property  
Soil Sample Analytical Data Summary (mg/kg)

Parameter	MW-6A	MW-6B	MW-7A	MW-7B	SHS MSC*	SHS MSC**
Depth	1.5' - 2.5'	4.0' - 5.0'	1.5' - 2.5'	5.5' - 6.5'		
Condition	Vadose	Smear	Vadose	Smear		
Sample Date	6/5/2017	6/5/2017	6/5/2017	6/7/2017		
% Moisture	9.3%	24.2%	11.5%	19.6%		
Benzene	<0.0384	<0.0263	<0.0332	<0.0561	0.5	0.5
Ethylbenzene	<0.0384	<0.0263	<0.0332	<0.0561	70.0	70.0
Cumene	<0.0384	<0.0263	<0.0332	<0.0561	2,500.0	350.0
MTBE	<0.0384	<0.0263	<0.0332	<0.0561	2.0	2.0
Naphthalene	<0.0768	<0.0526	<0.0663	<0.112	25.0	10.0
Toluene	<0.0384	<0.0263	<0.0332	<0.0561	100.0	100.0
Total Xylenes	<0.115	<0.0790	<0.0995	<0.168	1,000.0	1,000.0
1,2,4-TMB	<0.0384	<0.0263	<0.0332	<0.0561	35.0	6.2
1,3,5-TMB	<0.0384	<0.0263	<0.0332	<0.0561	210.0	120.0

MTBE

Methyl Tert Butyl Ether

1,2,4-TMB

1,2,4-Trimethylbenzene

1,3,5-TMB

1,3,5-Trimethylbenzene

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer setting



Act 2 SHS exceedances - Unsaturated Zone\*



Act 2 SHS exceedances - Saturated Zone\*\*

Condition:

Vadose: Vadose Zone - Unsaturated MSCs Apply

Smear: Zone of Groundwater Saturation (Smear Zone) - Saturated MSCs Apply

PSZ: Permanently Saturated Zone - Saturated MSCs Apply

Table O-1  
Site Characterization Activities  
Quinn's Café Stop Property  
Soil Sample Analytical Data Summary (mg/kg)

Parameter	MW-8A	MW-8B	MW-9A	MW-9B	SHS MSC*	SHS MSC**
Depth	1.5' - 2.5'	5.5' - 6.5'	1.5' - 2.5'	3.0' - 4.0'		
Condition	Vadose	Smear	Vadose	Smear		
Sample Date	6/5/2017	6/7/2017	6/5/2017	6/5/2017		
% Moisture	12.5%	11.0%	14.0%	10.6%		
Benzene	<0.0432	<0.0428	<0.0373	<0.0366	0.5	0.5
Ethylbenzene	<0.0432	<0.0428	<0.0373	<0.0366	70.0	70.0
Cumene	<0.0432	<0.0428	<0.0373	<0.0366	2,500.0	350.0
MTBE	<0.0432	<0.0428	<0.0373	<0.0366	2.0	2.0
Naphthalene	<0.0864	<0.0855	<0.0746	<0.0732	25.0	10.0
Toluene	<0.0432	<0.0428	<0.0373	<0.0366	100.0	100.0
Total Xylenes	<0.130	<0.128	<0.112	<0.110	1,000.0	1,000.0
1,2,4-TMB	<0.0432	<0.0428	<0.0373	<0.0366	35.0	6.2
1,3,5-TMB	<0.0432	<0.0428	<0.0373	<0.0366	210.0	120.0

MTBE

Methyl Tert Butyl Ether

1,2,4-TMB

1,2,4-Trimethylbenzene

1,3,5-TMB

1,3,5-Trimethylbenzene

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer setting



Act 2 SHS exceedances - Unsaturated Zone\*



Act 2 SHS exceedances - Saturated Zone\*\*

Condition:

Vadose: Vadose Zone - Unsaturated MSCs Apply

Smear: Zone of Groundwater Saturation (Smear Zone) - Saturated MSCs Apply

PSZ: Permanently Saturated Zone - Saturated MSCs Apply

Table O-1  
Site Characterization Activities  
Quinn's Café Stop Property  
Soil Sample Analytical Data Summary (mg/kg)

Parameter	MW-10A	MW-10B	SHS MSC*	SHS MSC**
Depth	1.5' - 2.5'	7.5' - 8.5'		
Condition	Vadose	Smear		
Sample Date	6/5/2017	6/5/2017		
% Moisture	10.2%	8.7%		
Benzene	<0.0424	<0.0431	0.5	0.5
Ethylbenzene	<0.0424	<0.0431	70.0	70.0
Cumene	<0.0424	<0.0431	2,500.0	350.0
MTBE	<0.0424	<0.0431	2.0	2.0
Naphthalene	<0.0848	<0.0863	25.0	10.0
Toluene	<0.0424	<0.0431	100.0	100.0
Total Xylenes	<0.127	<0.129	1,000.0	1,000.0
1,2,4-TMB	<0.0424	<0.0431	35.0	6.2
1,3,5-TMB	<0.0424	<0.0431	210.0	120.0

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer setting

Act 2 SHS exceedances - Unsaturated Zone\*

Act 2 SHS exceedances - Saturated Zone\*\*

**Condition:**

Vadose: Vadose Zone - Unsaturated MSCs Apply

Smear: Zone of Groundwater Saturation (Smear Zone) - Saturated MSCs Apply

PSZ: Permanently Saturated Zone - Saturated MSCs Apply

Table O-1  
Site Characterization Activities  
Quinn's Café Stop Property  
Soil Sample Analytical Data Summary (mg/kg)

Parameter	Storm 1	Storm 2	Sidewall 1	Under Storm	SHS MSC*	SHS MSC**
Depth	7.0'	5.0'	6.5'	6.0'		
Condition	PSZ	Smear	Smear	Smear		
Sample Date	8/25/2017	8/28/2017	8/28/2017	8/28/2017		
% Moisture	33.7%	17.8%	10.7%	23.3%		
Benzene	0.317	<0.0462	<0.0454	0.17	0.5	0.5
Ethylbenzene	0.388	<0.0462	<0.0454	0.917	70.0	70.0
Cumene	<0.0742	<0.0462	<0.0454	0.559	2,500.0	350.0
MTBE	<0.0742	<0.0462	<0.0454	<0.0586	2.0	2.0
Naphthalene	0.548	<0.0925	<0.0909	1.880	25.0	10.0
Toluene	1.55	<0.0462	<0.0454	0.159	100.0	100.0
Total Xylenes	3.58	<0.139	<0.136	0.934	1,000.0	1,000.0
1,2,4-TMB	1.5	<0.0462	0.0492	8.48	35.0	6.2
1,3,5-TMB	0.25	<0.0462	<0.0454	0.485	210.0	120.0

MTBE

Methyl Tert Butyl Ether

1,2,4-TMB

1,2,4-Trimethylbenzene

1,3,5-TMB

1,3,5-Trimethylbenzene

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer setting



Act 2 SHS exceedances - Unsaturated Zone\*



Act 2 SHS exceedances - Saturated Zone\*\*

**Condition:**

Vadose: Vadose Zone - Unsaturated MSCs Apply

Smear: Zone of Groundwater Saturation (Smear Zone) - Saturated MSCs Apply

PSZ: Permanently Saturated Zone - Saturated MSCs Apply



Table O-1  
Site Characterization Activities  
Quinn's Café Stop Property  
Soil Sample Analytical Data Summary (mg/kg)

Parameter	TB-8A	TB-8B	TB-9A	TB-9B	SHS MSC*	SHS MSC**
Depth	3.0' - 3.3'	5.5' - 6.0'	2.0' - 2.5'	3.0' - 3.3'		
Condition	Vadose	Smear	Vadose	Vadose		
Sample Date	11/9/2017	11/9/2017	11/9/2017	11/9/2017		
% Moisture	13.6%	11.0%	16.0%	14.8%		
Benzene	<0.0318	<0.033	<0.0334	<0.0304	0.5	0.5
Ethylbenzene	<0.0318	<0.033	<0.0334	<0.0304	70.0	70.0
Cumene	<0.0318	<0.033	<0.0334	<0.0304	2,500.0	350.0
MTBE	<0.0318	<0.033	<0.0334	<0.0304	2.0	2.0
Naphthalene	<0.0636	<0.066	<0.0667	<b>0.518</b>	25.0	10.0
Toluene	<0.0318	<0.033	<0.0334	<0.0304	100.0	100.0
Total Xylenes	<0.0954	<0.099	<0.100	<0.0911	1,000.0	1,000.0
1,2,4-TMB	<0.0318	<0.033	<0.0334	<0.0304	35.0	6.2
1,3,5-TMB	<0.0318	<0.033	<0.0334	<0.0304	210.0	120.0

MTBE

Methyl Tert Butyl Ether

1,2,4-TMB

1,2,4-Trimethylbenzene

1,3,5-TMB

1,3,5-Trimethylbenzene

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer setting



Act 2 SHS exceedances - Unsaturated Zone\*



Act 2 SHS exceedances - Saturated Zone\*\*

Condition:

Vadose: Vadose Zone - Unsaturated MSCs Apply

Smear: Zone of Groundwater Saturation (Smear Zone) - Saturated MSCs Apply

PSZ: Permanently Saturated Zone - Saturated MSCs Apply



Table O-1  
Site Characterization Activities  
Quinn's Café Stop Property  
Soil Sample Analytical Data Summary (mg/kg)

Parameter	TB-10A	TB-10B	TB-10C	TB-11A	SHS MSC*	SHS MSC**
Depth	2.0' - 2.5'	4.0' - 4.5'	6.0' - 6.5'	2.0' - 2.5'		
Condition	Vadose	Smear	Smear	Vadose		
Sample Date	11/9/2017	11/9/2017	11/15/2017	11/9/2017		
% Moisture	13.5%	26.7%	23.6%	11.7%		
Benzene	<0.0297	0.275	<0.553	1.19	0.5	0.5
Ethylbenzene	<0.0297	1.34	3.61	0.0522	70.0	70.0
Cumene	<0.0297	1.04	1.06	0.149	2,500.0	350.0
MTBE	<0.0297	<0.221	<0.553	<0.0336	2.0	2.0
Naphthalene	<0.0594	6.37	27.9	<0.0673	25.0	10.0
Toluene	<0.0297	0.762	<0.553	0.0588	100.0	100.0
Total Xylenes	<0.0891	1.7	6.57	0.674	1,000.0	1,000.0
1,2,4-TMB	<0.0297	0.923	30.8	0.12	35.0	6.2
1,3,5-TMB	<0.0297	<0.221	<0.553	0.0548	210.0	120.0

MTBE

Methyl Tert Butyl Ether

1,2,4-TMB

1,2,4-Trimethylbenzene

1,3,5-TMB

1,3,5-Trimethylbenzene

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer setting



Act 2 SHS exceedances - Unsaturated Zone\*



Act 2 SHS exceedances - Saturated Zone\*\*

Condition:

Vadose: Vadose Zone - Unsaturated MSCs Apply

Smear: Zone of Groundwater Saturation (Smear Zone) - Saturated MSCs Apply

PSZ: Permanently Saturated Zone - Saturated MSCs Apply

Table O-1  
Site Characterization Activities  
Quinn's Café Stop Property  
Soil Sample Analytical Data Summary (mg/kg)

Parameter	TB-11B	TB-11C	TB-12A	TB-12B	SHS MSC*	SHS MSC**
Depth	4.0' - 5.0'	6.0' - 6.5'	2.0' - 2.5'	4.0' - 5.0'		
Condition	Smear	Smear	Vadose	Smear		
Sample Date	11/9/2017	11/15/2017	11/9/2017	11/9/2017		
% Moisture	18.8%	18.1%	11.2%	20.1%		
Benzene	0.697	1.26	<0.0284	<0.0382	0.5	0.5
Ethylbenzene	4.27	5.17	<0.0284	<0.0382	70.0	70.0
Cumene	2.68	1.15	<0.0284	<0.0382	2,500.0	350.0
MTBE	<0.179	<0.169	<0.0284	<0.0382	2.0	2.0
Naphthalene	12.4	5.39	<0.0568	<0.0764	25.0	10.0
Toluene	0.26	0.546	<0.0284	0.0508	100.0	100.0
Total Xylenes	3.52	12.9	<0.0852	<0.115	1,000.0	1,000.0
1,2,4-TMB	3.65	9.54	<0.0284	<0.0382	35.0	6.2
1,3,5-TMB	<0.179	1.7	<0.0284	<0.0382	210.0	120.0

MTBE

Methyl Tert Butyl Ether

1,2,4-TMB

1,2,4-Trimethylbenzene

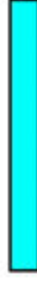
1,3,5-TMB

1,3,5-Trimethylbenzene

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer setting



Act 2 SHS exceedances - Unsaturated Zone\*



Act 2 SHS exceedances - Saturated Zone\*\*

Condition:

Vadose: Vadose Zone - Unsaturated MSCs Apply

Smear: Zone of Groundwater Saturation (Smear Zone) - Saturated MSCs Apply

PSZ: Permanently Saturated Zone - Saturated MSCs Apply

Table O-1  
Site Characterization Activities  
Quinn's Café Stop Property  
Soil Sample Analytical Data Summary (mg/kg)

Parameter	TB-12C	PW-12A	PW-12B	PW-13A	SHS MSC*	SHS MSC**
Depth	6.0' - 6.5'	2.2' - 2.7'	4.0' - 5.0'	2.0' - 2.5'		
Condition	Smear	Vadose	Smear	Vadose		
Sample Date	11/15/2017	11/10/2017	11/10/2017	11/10/2017		
% Moisture	23.2%	11.7%	21.1%	15.0%		
Benzene	<0.062	<0.0357	<0.0382	<0.0316	0.5	0.5
Ethylbenzene	<0.062	<0.0357	<0.0382	<0.0316	70.0	70.0
Cumene	<0.062	<0.0357	<0.0382	<0.0316	2,500.0	350.0
MTBE	<0.062	<0.0357	<0.0382	<0.0316	2.0	2.0
Naphthalene	<0.124	<0.0714	<0.0764	<0.0631	25.0	10.0
Toluene	<0.062	<0.0357	<0.0382	<0.0316	100.0	100.0
Total Xylenes	<0.186	<0.107	<0.115	<0.0947	1,000.0	1,000.0
1,2,4-TMB	<0.062	<0.0357	<0.0382	<0.0316	35.0	6.2
1,3,5-TMB	<0.062	<0.0357	<0.0382	<0.0316	210.0	120.0

**MTBE**

Methyl Tert Butyl Ether

**1,2,4-TMB**

1,2,4-Trimethylbenzene

**1,3,5-TMB**

1,3,5-Trimethylbenzene

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer setting



Act 2 SHS exceedances - Unsaturated Zone\*



Act 2 SHS exceedances - Saturated Zone\*\*

**Condition:**

Vadose: Vadose Zone - Unsaturated MSCs Apply

Smear: Zone of Groundwater Saturation (Smear Zone) - Saturated MSCs Apply

PSZ: Permanently Saturated Zone - Saturated MSCs Apply

**Table O-1**  
**Site Characterization Activities**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data Summary (mg/kg)**

Parameter	PW-13B	SHS MSC*	SHS MSC**
Depth	5.0' - 5.5'		
Condition	Smear		
Sample Date	11/15/2017		
% Moisture	8.8%		
Benzene	<0.0316	0.5	0.5
Ethylbenzene	<0.0316	70.0	70.0
Cumene	<0.0316	2,500.0	350.0
MTBE	<0.0316	2.0	2.0
Naphthalene	<0.0633	25.0	10.0
Toluene	<0.0136	100.0	100.0
Total Xylenes	<0.0949	1,000.0	1,000.0
1,2,4-TMB	<0.0316	35.0	6.2
1,3,5-TMB	<0.0316	210.0	120.0

**MTBE**  
**1,2,4-TMB**  
**1,3,5-TMB**

Methyl Tert Butyl Ether  
 1,2,4-Trimethylbenzene  
 1,3,5-Trimethylbenzene

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer setting

Act 2 SHS exceedances - Unsaturated Zone\*

Act 2 SHS exceedances - Saturated Zone\*\*

**Condition:**

Vadose: Vadose Zone - Unsaturated MSCs Apply

Smear: Zone of Groundwater Saturation (Smear Zone) - Saturated MSCs Apply

PSZ: Permanently Saturated Zone - Saturated MSCs Apply

Table O-1  
Site Characterization Activities  
Quinn's Café Stop Property  
Soil Sample Analytical Data Summary (mg/kg)

Parameter	TB-13A	TB-13B	TB-14A	TB-14B	SHS MSC*	SHS MSC**
Depth	1.5' - 2.5'	5.0' - 6.0'	1.5' - 2.5'	5.0' - 6.0'		
Condition	Vadose	Smear	Vadose	Smear		
Sample Date	8/23/2018	8/23/2018	8/23/2018	8/23/2018		
% Moisture	9.8%	4.8%	10.5%	28.3%		
Benzene	<0.0373	<0.0296	<0.0468	<0.0324	0.5	0.5
Ethylbenzene	<0.0373	<0.0296	<0.0468	<0.0324	70.0	70.0
Cumene	<0.0373	0.0496	<0.0468	<0.0324	2,500.0	350.0
MTBE	<0.0373	<0.0296	<0.0468	<0.0324	2.0	2.0
Naphthalene	<0.0746	0.235	<0.0937	<0.0648	25.0	10.0
Toluene	<0.0373	<0.0296	<0.0468	<0.0324	100.0	100.0
Total Xylenes	<0.112	<0.0889	<0.141	<0.0973	1,000.0	1,000.0
1,2,4-TMB	<0.0373	<0.0296	<0.0468	<0.0324	35.0	6.2
1,3,5-TMB	<0.0373	<0.0296	<0.0468	<0.0324	210.0	120.0

**MTBE**

Methyl Tert Butyl Ether

**1,2,4-TMB**

1,2,4-Trimethylbenzene

**1,3,5-TMB**

1,3,5-Trimethylbenzene

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer setting



Act 2 SHS exceedances - Unsaturated Zone\*



Act 2 SHS exceedances - Saturated Zone\*\*

**Condition:**

Vadose: Vadose Zone - Unsaturated MSCs Apply

Smear: Zone of Groundwater Saturation (Smear Zone) - Saturated MSCs Apply

PSZ: Permanently Saturated Zone - Saturated MSCs Apply



Table O-1  
Site Characterization Activities  
Quinn's Café Stop Property  
Soil Sample Analytical Data Summary (mg/kg)

Parameter	TB-15A	TB-15B	TB-16A	TB-16B	SHS MSC*	SHS MSC**
Depth	1.5' - 2.5'	5.0' - 6.0'	1.5' - 2.5'	5.0' - 6.0'		
Condition	Vadose	Smear	Vadose	Smear		
Sample Date	8/23/2018	8/23/2018	8/23/2018	8/23/2018		
% Moisture	17.5%	10.3%	21.9%	25.9%		
Benzene	<0.0314	<0.0294	<0.0390	0.0826	0.5	0.5
Ethylbenzene	<0.0314	<0.0294	<0.0390	0.126	70.0	70.0
Cumene	<0.0314	<0.0294	<0.0390	<0.0326	2,500.0	350.0
MTBE	<0.0314	<0.0294	<0.0390	<0.0326	2.0	2.0
Naphthalene	<0.0629	<0.0588	<0.0780	<0.0652	25.0	10.0
Toluene	<0.0314	<0.0294	<0.0390	0.315	100.0	100.0
Total Xylenes	<0.0943	<0.0883	<0.117	0.530	1,000.0	1,000.0
1,2,4-TMB	0.388	0.0448	<0.0390	0.204	35.0	6.2
1,3,5-TMB	0.202	<0.0294	<0.0390	0.0582	210.0	120.0

**MTBE**

Methyl Tert Butyl Ether

**1,2,4-TMB**

1,2,4-Trimethylbenzene

**1,3,5-TMB**

1,3,5-Trimethylbenzene

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer setting



Act 2 SHS exceedances - Unsaturated Zone\*



Act 2 SHS exceedances - Saturated Zone\*\*

**Condition:**

Vadose: Vadose Zone - Unsaturated MSCs Apply

Smear: Zone of Groundwater Saturation (Smear Zone) - Saturated MSCs Apply

PSZ: Permanently Saturated Zone - Saturated MSCs Apply



Table O-1  
Site Characterization Activities  
Quinn's Café Stop Property  
Soil Sample Analytical Data Summary (mg/kg)

Parameter	TB-17A	TB-17B	TB-18A	TB-18B	SHS MSC*	SHS MSC**
Depth	1.5' - 2.5'	5.0' - 6.0'	1.5' - 2.5'	5.0' - 6.0'		
Condition	Vadose	Smear	Vadose	Smear		
Sample Date	8/23/2018	8/23/2018	8/23/2018	8/23/2018		
% Moisture	11.1%	17.6%	17.7%	30.0%		
Benzene	<0.0265	<0.0284	<0.0323	<0.0376	0.5	0.5
Ethylbenzene	<0.0265	<0.0284	<0.0323	<0.0376	70.0	70.0
Cumene	<0.0265	<0.0284	<0.0323	<0.0376	2,500.0	350.0
MTBE	<0.0265	<0.0284	<0.0323	<0.0376	2.0	2.0
Naphthalene	<0.0531	<0.0567	<0.0647	<0.0752	25.0	10.0
Toluene	<0.0265	<0.0284	<0.0323	<0.0376	100.0	100.0
Total Xylenes	<0.0796	<0.0851	<0.0970	<0.113	1,000.0	1,000.0
1,2,4-TMB	<0.0265	<0.0284	<0.0323	<0.0376	35.0	6.2
1,3,5-TMB	<0.0265	<0.0284	<0.0323	<0.0376	210.0	120.0

MTBE Methyl Tert Butyl Ether  
1,2,4-TMB 1,2,4-Trimethylbenzene  
1,3,5-TMB 1,3,5-Trimethylbenzene

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer setting



Act 2 SHS exceedances - Unsaturated Zone\*



Act 2 SHS exceedances - Saturated Zone\*\*

**Condition:**

Vadose: Vadose Zone - Unsaturated MSCs Apply

Smear: Zone of Groundwater Saturation (Smear Zone) - Saturated MSCs Apply

PSZ: Permanently Saturated Zone - Saturated MSCs Apply

Table O-1  
Site Characterization Activities  
Quinn's Café Stop Property  
Soil Sample Analytical Data Summary (mg/kg)

Parameter	TB-19A	TB-19B	TB-20A	TB-20B	SHS MSC*	SHS MSC**
Depth	1.5' - 2.5'	5.0' - 6.0'	1.5' - 2.5'	5.0' - 6.0'		
Condition	Vadose	Smear	Vadose	Smear		
Sample Date	8/23/2018	8/23/2018	8/23/2018	8/23/2018		
% Moisture	14.8%	11.6%	9.7%	4.6%		
Benzene	<0.0345	<0.201	<0.0405	<0.0347	0.5	0.5
Ethylbenzene	<0.0345	16.8	<0.0405	0.0712	70.0	70.0
Cumene	<0.0345	6.19	<0.0405	<0.0347	2,500.0	350.0
MTBE	<0.0345	<0.201	<0.0405	<0.0347	2.0	2.0
Naphthalene	<0.0689	14.0	<0.0811	<0.0694	25.0	10.0
Toluene	<0.0345	0.262	<0.0405	<0.0347	100.0	100.0
Total Xylenes	<0.103	42.3	<0.122	<0.104	1,000.0	1,000.0
1,2,4-TMB	<0.0345	307.0	<0.0405	<0.0347	35.0	6.2
1,3,5-TMB	<0.0345	13.8	<0.0405	<0.0347	210.0	120.0

MTBE Methyl Tert Butyl Ether  
1,2,4-TMB 1,2,4-Trimethylbenzene  
1,3,5-TMB 1,3,5-Trimethylbenzene

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer setting

Act 2 SHS exceedances - Unsaturated Zone\*

Act 2 SHS exceedances - Saturated Zone\*\*

**Condition:**

Vadose: Vadose Zone - Unsaturated MSCs Apply

Smear: Zone of Groundwater Saturation (Smear Zone) - Saturated MSCs Apply

PSZ: Permanently Saturated Zone - Saturated MSCs Apply

## APPENDIX O-2

Laboratory Analytical Data Sheets

Soil Sampling Activities - October 2017



October 24, 2016

Mr. Marty Gilgallon  
PA Tectonics  
723 Main Street  
Archbald, PA 18403

## Certificate of Analysis

Revised Report - 10/24/2016 6:13:30 PM - See workorder comment section for explanation

Project Name:	<b>Routine Sample Submission</b>	Workorder:	<b>2182821</b>
Purchase Order:		Workorder ID:	<b>Quinn's Cafe Stop/26116</b>

Dear Mr. Gilgallon:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, October 18, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Debra J. Musser (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

Ms. Debra J. Musser  
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 2182821 Quinn's Cafe Stop/26116

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2182821001	116-1017-T001-Fill	Solid	10/17/2016 14:35	10/18/2016 09:30	Collected by Client
2182821002	116-1017-T001-STP	Solid	10/17/2016 14:45	10/18/2016 09:30	Collected by Client
2182821003	116-1017-T002- Fill	Solid	10/17/2016 14:20	10/18/2016 09:30	Collected by Client
2182821004	116-1017-T003- Fill	Solid	10/17/2016 14:00	10/18/2016 09:30	Collected by Client
2182821005	116-1017-T003-STP	Solid	10/17/2016 14:11	10/18/2016 09:30	Collected by Client
2182821006	116-1017-T004-Fill	Solid	10/17/2016 13:50	10/18/2016 09:30	Collected by Client

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## SAMPLE SUMMARY

Workorder: 2182821 Quinn's Cafe Stop/26116

### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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**ALS Environmental**



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34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ [www.alsglobal.com](http://www.alsglobal.com)

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NELAP Certifications: NJ PA010, NY 11759, PA 22-293 DoD ELAP: A2LA 0818.01  
State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

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## PROJECT SUMMARY

Workorder: 2182821 Quinn's Cafe Stop/26116

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### Workorder Comments

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This report was revised to include the dilution information. DJM

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Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

## ANALYTICAL RESULTS

Workorder: 2182821 Quinn's Cafe Stop/26116

Lab ID: 2182821001

Date Collected: 10/17/2016 14:35

Matrix: Solid

Sample ID: 116-1017-T001-Fill

Date Received: 10/18/2016 09:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	1690		ug/kg	40.6	SW846 8260B	10/17/16 14:35	SYB	10/21/16 02:25	SYB	A
Ethylbenzene	5130		ug/kg	40.6	SW846 8260B	10/17/16 14:35	SYB	10/21/16 02:25	SYB	A
Isopropylbenzene	728		ug/kg	40.6	SW846 8260B	10/17/16 14:35	SYB	10/21/16 02:25	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	40.6	SW846 8260B	10/17/16 14:35	SYB	10/21/16 02:25	SYB	A
Naphthalene	2050		ug/kg	81.2	SW846 8260B	10/17/16 14:35	SYB	10/21/16 02:25	SYB	A
Toluene	49500		ug/kg	406	SW846 8260B	10/17/16 14:35	JAH	10/22/16 00:02	CJG	A
Total Xylenes	40700		ug/kg	1220	SW846 8260B	10/17/16 14:35	JAH	10/22/16 00:02	CJG	A
1,2,4-Trimethylbenzene	6390		ug/kg	40.6	SW846 8260B	10/17/16 14:35	SYB	10/21/16 02:25	SYB	A
1,3,5-Trimethylbenzene	3440		ug/kg	40.6	SW846 8260B	10/17/16 14:35	SYB	10/21/16 02:25	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	104		%	71 - 146	SW846 8260B	10/17/16 14:35	JAH	10/22/16 00:02	CJG	A
1,2-Dichloroethane-d4 (S)	105		%	71 - 146	SW846 8260B	10/17/16 14:35	SYB	10/21/16 02:25	SYB	A
4-Bromofluorobenzene (S)	90		%	46 - 138	SW846 8260B	10/17/16 14:35	JAH	10/22/16 00:02	CJG	A
4-Bromofluorobenzene (S)	97.1		%	46 - 138	SW846 8260B	10/17/16 14:35	SYB	10/21/16 02:25	SYB	A
Dibromofluoromethane (S)	78.1		%	42 - 143	SW846 8260B	10/17/16 14:35	SYB	10/21/16 02:25	SYB	A
Dibromofluoromethane (S)	78.3		%	42 - 143	SW846 8260B	10/17/16 14:35	JAH	10/22/16 00:02	CJG	A
Toluene-d8 (S)	81.1		%	54 - 141	SW846 8260B	10/17/16 14:35	JAH	10/22/16 00:02	CJG	A
Toluene-d8 (S)	84.1		%	54 - 141	SW846 8260B	10/17/16 14:35	SYB	10/21/16 02:25	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	14.5		%	0.1	S2540G-11			10/19/16 12:42	VKB	D
Total Solids	85.5		%	0.1	S2540G-11			10/19/16 12:42	VKB	D



Ms. Debra J. Musser

Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2182821 Quinn's Cafe Stop/26116

Lab ID: **2182821002**  
Sample ID: **116-1017-T001-STP**

Date Collected: 10/17/2016 14:45 Matrix: Solid  
Date Received: 10/18/2016 09:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	251		ug/kg	46.2	SW846 8260B	10/17/16 14:45	SYB	10/21/16 02:47	SYB	A
Ethylbenzene	704		ug/kg	46.2	SW846 8260B	10/17/16 14:45	SYB	10/21/16 02:47	SYB	A
Isopropylbenzene	148		ug/kg	46.2	SW846 8260B	10/17/16 14:45	SYB	10/21/16 02:47	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	46.2	SW846 8260B	10/17/16 14:45	SYB	10/21/16 02:47	SYB	A
Naphthalene	253		ug/kg	92.4	SW846 8260B	10/17/16 14:45	SYB	10/21/16 02:47	SYB	A
Toluene	5000		ug/kg	46.2	SW846 8260B	10/17/16 14:45	SYB	10/21/16 02:47	SYB	A
Total Xylenes	6200		ug/kg	139	SW846 8260B	10/17/16 14:45	SYB	10/21/16 02:47	SYB	A
1,2,4-Trimethylbenzene	977		ug/kg	46.2	SW846 8260B	10/17/16 14:45	SYB	10/21/16 02:47	SYB	A
1,3,5-Trimethylbenzene	445		ug/kg	46.2	SW846 8260B	10/17/16 14:45	SYB	10/21/16 02:47	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	101		%	71 - 146	SW846 8260B	10/17/16 14:45	SYB	10/21/16 02:47	SYB	A
4-Bromofluorobenzene (S)	102		%	46 - 138	SW846 8260B	10/17/16 14:45	SYB	10/21/16 02:47	SYB	A
Dibromofluoromethane (S)	81.8		%	42 - 143	SW846 8260B	10/17/16 14:45	SYB	10/21/16 02:47	SYB	A
Toluene-d8 (S)	88.9		%	54 - 141	SW846 8260B	10/17/16 14:45	SYB	10/21/16 02:47	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	12.9		%	0.1	S2540G-11			10/19/16 12:42	VKB	D
Total Solids	87.1		%	0.1	S2540G-11			10/19/16 12:42	VKB	D



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## ANALYTICAL RESULTS

Workorder: 2182821 Quinn's Cafe Stop/26116

Lab ID: **2182821003**  
Sample ID: **116-1017-T002- Fill**

Date Collected: 10/17/2016 14:20 Matrix: Solid  
Date Received: 10/18/2016 09:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	699		ug/kg	49.8	SW846 8260B	10/17/16 14:20	SYB	10/21/16 03:10	SYB	A
Ethylbenzene	6920		ug/kg	49.8	SW846 8260B	10/17/16 14:20	SYB	10/21/16 03:10	SYB	A
Isopropylbenzene	2380		ug/kg	49.8	SW846 8260B	10/17/16 14:20	SYB	10/21/16 03:10	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	49.8	SW846 8260B	10/17/16 14:20	SYB	10/21/16 03:10	SYB	A
Naphthalene	23300		ug/kg	1990	SW846 8260B	10/17/16 14:20	JAH	10/22/16 00:25	CJG	A
Toluene	8570		ug/kg	49.8	SW846 8260B	10/17/16 14:20	SYB	10/21/16 03:10	SYB	A
Total Xylenes	80100		ug/kg	2990	SW846 8260B	10/17/16 14:20	JAH	10/22/16 00:25	CJG	A
1,2,4-Trimethylbenzene	109000		ug/kg	996	SW846 8260B	10/17/16 14:20	JAH	10/22/16 00:25	CJG	A
1,3,5-Trimethylbenzene	32500		ug/kg	996	SW846 8260B	10/17/16 14:20	JAH	10/22/16 00:25	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	105		%	71 - 146	SW846 8260B	10/17/16 14:20	SYB	10/21/16 03:10	SYB	A
1,2-Dichloroethane-d4 (S)	106		%	71 - 146	SW846 8260B	10/17/16 14:20	JAH	10/22/16 00:25	CJG	A
4-Bromofluorobenzene (S)	93.3		%	46 - 138	SW846 8260B	10/17/16 14:20	JAH	10/22/16 00:25	CJG	A
4-Bromofluorobenzene (S)	93		%	46 - 138	SW846 8260B	10/17/16 14:20	SYB	10/21/16 03:10	SYB	A
Dibromofluoromethane (S)	77.4		%	42 - 143	SW846 8260B	10/17/16 14:20	JAH	10/22/16 00:25	CJG	A
Dibromofluoromethane (S)	80.7		%	42 - 143	SW846 8260B	10/17/16 14:20	SYB	10/21/16 03:10	SYB	A
Toluene-d8 (S)	83.9		%	54 - 141	SW846 8260B	10/17/16 14:20	JAH	10/22/16 00:25	CJG	A
Toluene-d8 (S)	87.4		%	54 - 141	SW846 8260B	10/17/16 14:20	SYB	10/21/16 03:10	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	12.4		%	0.1	S2540G-11			10/19/16 12:42	VKB	D
Total Solids	87.6		%	0.1	S2540G-11			10/19/16 12:42	VKB	D



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## ANALYTICAL RESULTS

Workorder: 2182821 Quinn's Cafe Stop/26116

Lab ID: **2182821004**  
Sample ID: **116-1017-T003- Fill**

Date Collected: 10/17/2016 14:00 Matrix: Solid  
Date Received: 10/18/2016 09:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	148		ug/kg	45.5	SW846 8260B	10/17/16 14:00	SYB	10/21/16 03:33	SYB	A
Ethylbenzene	2770		ug/kg	45.5	SW846 8260B	10/17/16 14:00	SYB	10/21/16 03:33	SYB	A
Isopropylbenzene	673		ug/kg	45.5	SW846 8260B	10/17/16 14:00	SYB	10/21/16 03:33	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	45.5	SW846 8260B	10/17/16 14:00	SYB	10/21/16 03:33	SYB	A
Naphthalene	8800		ug/kg	1820	SW846 8260B	10/17/16 14:00	JAH	10/22/16 00:48	CJG	A
Toluene	2730		ug/kg	45.5	SW846 8260B	10/17/16 14:00	SYB	10/21/16 03:33	SYB	A
Total Xylenes	51300		ug/kg	2730	SW846 8260B	10/17/16 14:00	JAH	10/22/16 00:48	CJG	A
1,2,4-Trimethylbenzene	62800		ug/kg	910	SW846 8260B	10/17/16 14:00	JAH	10/22/16 00:48	CJG	A
1,3,5-Trimethylbenzene	26900		ug/kg	910	SW846 8260B	10/17/16 14:00	JAH	10/22/16 00:48	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	93.7		%	71 - 146	SW846 8260B	10/17/16 14:00	JAH	10/22/16 00:48	CJG	A
1,2-Dichloroethane-d4 (S)	117		%	71 - 146	SW846 8260B	10/17/16 14:00	SYB	10/21/16 03:33	SYB	A
4-Bromofluorobenzene (S)	102		%	46 - 138	SW846 8260B	10/17/16 14:00	SYB	10/21/16 03:33	SYB	A
4-Bromofluorobenzene (S)	96.2		%	46 - 138	SW846 8260B	10/17/16 14:00	JAH	10/22/16 00:48	CJG	A
Dibromofluoromethane (S)	94.2		%	42 - 143	SW846 8260B	10/17/16 14:00	SYB	10/21/16 03:33	SYB	A
Dibromofluoromethane (S)	77.3		%	42 - 143	SW846 8260B	10/17/16 14:00	JAH	10/22/16 00:48	CJG	A
Toluene-d8 (S)	105		%	54 - 141	SW846 8260B	10/17/16 14:00	SYB	10/21/16 03:33	SYB	A
Toluene-d8 (S)	81.8		%	54 - 141	SW846 8260B	10/17/16 14:00	JAH	10/22/16 00:48	CJG	A
<b>WET CHEMISTRY</b>										
Moisture	12.2		%	0.1	S2540G-11			10/19/16 12:42	VKB	D
Total Solids	87.8		%	0.1	S2540G-11			10/19/16 12:42	VKB	D



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## ANALYTICAL RESULTS

Workorder: 2182821 Quinn's Cafe Stop/26116

Lab ID: **2182821005**  
Sample ID: **116-1017-T003-STP**

Date Collected: 10/17/2016 14:11 Matrix: Solid  
Date Received: 10/18/2016 09:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	41.6	SW846 8260B	10/17/16 14:11	JAH	10/21/16 23:17	CJG	A
Ethylbenzene	ND		ug/kg	41.6	SW846 8260B	10/17/16 14:11	JAH	10/21/16 23:17	CJG	A
Isopropylbenzene	ND		ug/kg	41.6	SW846 8260B	10/17/16 14:11	JAH	10/21/16 23:17	CJG	A
Methyl t-Butyl Ether	ND		ug/kg	41.6	SW846 8260B	10/17/16 14:11	JAH	10/21/16 23:17	CJG	A
Naphthalene	ND		ug/kg	83.1	SW846 8260B	10/17/16 14:11	JAH	10/21/16 23:17	CJG	A
Toluene	98.1		ug/kg	41.6	SW846 8260B	10/17/16 14:11	JAH	10/21/16 23:17	CJG	A
Total Xylenes	144		ug/kg	125	SW846 8260B	10/17/16 14:11	JAH	10/21/16 23:17	CJG	A
1,2,4-Trimethylbenzene	ND		ug/kg	41.6	SW846 8260B	10/17/16 14:11	JAH	10/21/16 23:17	CJG	A
1,3,5-Trimethylbenzene	ND		ug/kg	41.6	SW846 8260B	10/17/16 14:11	JAH	10/21/16 23:17	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	103		%	71 - 146	SW846 8260B	10/17/16 14:11	JAH	10/21/16 23:17	CJG	A
4-Bromofluorobenzene (S)	107		%	46 - 138	SW846 8260B	10/17/16 14:11	JAH	10/21/16 23:17	CJG	A
Dibromofluoromethane (S)	86.5		%	42 - 143	SW846 8260B	10/17/16 14:11	JAH	10/21/16 23:17	CJG	A
Toluene-d8 (S)	84.7		%	54 - 141	SW846 8260B	10/17/16 14:11	JAH	10/21/16 23:17	CJG	A
<b>WET CHEMISTRY</b>										
Moisture	8.2		%	0.1	S2540G-11			10/19/16 12:42	VKB	D
Total Solids	91.8		%	0.1	S2540G-11			10/19/16 12:42	VKB	D



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## ANALYTICAL RESULTS

Workorder: 2182821 Quinn's Cafe Stop/26116

Lab ID: **2182821006**  
Sample ID: **116-1017-T004-Fill**

Date Collected: 10/17/2016 13:50 Matrix: Solid  
Date Received: 10/18/2016 09:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	36.9	SW846 8260B	10/17/16 13:50	JAH	10/21/16 23:39	CJG	A
Ethylbenzene	ND		ug/kg	36.9	SW846 8260B	10/17/16 13:50	JAH	10/21/16 23:39	CJG	A
Isopropylbenzene	ND		ug/kg	36.9	SW846 8260B	10/17/16 13:50	JAH	10/21/16 23:39	CJG	A
Methyl t-Butyl Ether	ND		ug/kg	36.9	SW846 8260B	10/17/16 13:50	JAH	10/21/16 23:39	CJG	A
Naphthalene	ND		ug/kg	73.8	SW846 8260B	10/17/16 13:50	JAH	10/21/16 23:39	CJG	A
Toluene	ND		ug/kg	36.9	SW846 8260B	10/17/16 13:50	JAH	10/21/16 23:39	CJG	A
Total Xylenes	ND		ug/kg	111	SW846 8260B	10/17/16 13:50	JAH	10/21/16 23:39	CJG	A
1,2,4-Trimethylbenzene	ND		ug/kg	36.9	SW846 8260B	10/17/16 13:50	JAH	10/21/16 23:39	CJG	A
1,3,5-Trimethylbenzene	ND		ug/kg	36.9	SW846 8260B	10/17/16 13:50	JAH	10/21/16 23:39	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	102		%	71 - 146	SW846 8260B	10/17/16 13:50	JAH	10/21/16 23:39	CJG	A
4-Bromofluorobenzene (S)	111		%	46 - 138	SW846 8260B	10/17/16 13:50	JAH	10/21/16 23:39	CJG	A
Dibromofluoromethane (S)	86.1		%	42 - 143	SW846 8260B	10/17/16 13:50	JAH	10/21/16 23:39	CJG	A
Toluene-d8 (S)	89.7		%	54 - 141	SW846 8260B	10/17/16 13:50	JAH	10/21/16 23:39	CJG	A
<b>WET CHEMISTRY</b>										
Moisture	4.9		%	0.1	S2540G-11			10/19/16 12:42	VKB	D
Total Solids	95.1		%	0.1	S2540G-11			10/19/16 12:42	VKB	D



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34 Dogwood Lane  
Middletown, PA 17057  
P: 717-944-5541  
F: 717-944-1430

# Environmetal

Co. Name: **Pennsylvania Tectonics, Inc.**  
Contact (Report to): **Martin G. Gallon**  
Address: **723 Main Street  
Delaware PA 18403**

Phone: 570-487-1959

Bill to (if different than Report to):

PO#:

Project Name/ID: **Quinn's Cafe stop / 26116** ALS Quote #:

TAT: ☐ Normal-Standard TAT is 10-12 business days.  
☒ Rush-Subject to ALS approval and surcharges. **3Day**

Email? ☒ **MG:lgallon@protectwics.com**

Fax? ☐

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time
1 116-1017-7001 F11		10.17.16	1435
2 116-1017-7001 JTP		10.17.16	1445
3 116-1017-7002 F11		10.17.16	1420
4 116-1017-7003 F11		10.17.16	1400
5 116-1017-7003 STP		10.17.16	1411
6 116-1017-7004 F11		10.17.16	1350
7			
8			

SAMPLED BY (Please Print):

**Kevin Cuxea**

Relinquished By / Company Name

**PA Tectonics**

Date

**10.17.16**

Time

**1510**

Received By / Company Name

**2 Fenton B10398192346**

Date

**10.17.16**

Time

**1510**

Project Comments:

## CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /  
SAMPLER. INSTRUCTIONS ON THE BACK.

Container Type: **CG**  
Container Size: **40L**  
Preservative: **MeOH H355g**

### ANALYSES/METHOD REQUESTED

**UNLEADED GASOLINE  
UNLEADED GASOLINE  
UNLEADED GASOLINE**

### Enter Number of Containers Per Analysis

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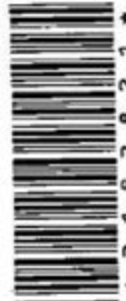
**1 2 1**  
**1 2 1**  
**1 2 1**  
**1 2 1**  
**1 2 1**  
**1 2 1**

Page 1 of 1

Counter: **FED-EX**

Tracking #: **8103 9819**

**2346**



2 1 8 2 8 2 1 \*

Container ID: **74350**

No. of Containers: **3**

Notes:

Correct container? **Y**

Correct sample volume? **Y**

Correct preservation? **Y**

Headspace/volatility? **Y**

COC/Labels complete/accurate? **Y**

Container in good condition? **Y**

Custody seals Present? **Y**

(if present) Seals intact? **Y**

Received on ice? **Y**

COC/Labels complete/accurate? **Y**

Container in good condition? **Y**

Custody seals Present? **Y**

(if present) Seals intact? **Y**

Received on ice? **Y**

COC/Labels complete/accurate? **Y**

Container in good condition? **Y**

Custody seals Present? **Y**

(if present) Seals intact? **Y**

Received on ice? **Y**

COC/Labels complete/accurate? **Y**

Container in good condition? **Y**

Custody seals Present? **Y**

(if present) Seals intact? **Y**

Received on ice? **Y**

COC/Labels complete/accurate? **Y**

Container in good condition? **Y**

Custody seals Present? **Y**

(if present) Seals intact? **Y**

Received on ice? **Y**

COC/Labels complete/accurate? **Y**

Container in good condition? **Y**

Custody seals Present? **Y**

(if present) Seals intact? **Y**

Received on ice? **Y**

COC/Labels complete/accurate? **Y**

Container in good condition? **Y**

Custody seals Present? **Y**

(if present) Seals intact? **Y**

Received on ice? **Y**

COC/Labels complete/accurate? **Y**

Container in good condition? **Y**

## APPENDIX O-3

Laboratory Analytical Data Sheets

Soil Sampling Activities - January 2017



February 14, 2017

Mr. Marty Gilgallon  
PA Tectonics  
723 Main Street  
Archbald, PA 18403

## Certificate of Analysis

Revised Report - 2/14/2017 2:05:40 PM - See workorder comment section for explanation

Project Name: **Quinns Cafe Stop/26116**Workorder: **2205730**

Purchase Order:

Workorder ID: **Quinns Cafe Stop/26116**

Dear Mr. Gilgallon:

Enclosed are the analytical results for samples received by the laboratory on Thursday, February 2, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

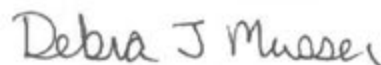
If you have any questions regarding this certificate of analysis, please contact Ms. Debra J. Musser (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

Ms. Debra J. Musser  
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2205730001	116-0130-TB1	Solid	1/31/2017 10:05	2/2/2017 08:59	Collected by Client
2205730002	116-0130-TB2A	Solid	1/30/2017 10:26	2/2/2017 08:59	Collected by Client
2205730003	116-0130-TB2B	Solid	1/30/2017 10:55	2/2/2017 08:59	Collected by Client
2205730004	116-0130-TB3A	Solid	1/30/2017 09:35	2/2/2017 08:59	Collected by Client
2205730005	116-0130-TB3B	Solid	1/30/2017 09:55	2/2/2017 08:59	Collected by Client
2205730006	116-0130-TB4A	Solid	1/31/2017 10:40	2/2/2017 08:59	Collected by Client
2205730007	116-0130-TB4B	Solid	1/31/2017 10:44	2/2/2017 08:59	Collected by Client
2205730008	116-0130-TB5A	Solid	1/30/2017 12:46	2/2/2017 08:59	Collected by Client
2205730009	116-0130-TB5B	Solid	1/30/2017 12:57	2/2/2017 08:59	Collected by Client
2205730010	116-0130-TB6A	Solid	1/31/2017 11:30	2/2/2017 08:59	Collected by Client
2205730011	116-0130-TB6B	Solid	1/31/2017 11:32	2/2/2017 08:59	Collected by Client
2205730012	116-0130-TB7A	Solid	1/31/2017 11:03	2/2/2017 08:59	Collected by Client
2205730013	116-0130-TB7B	Solid	1/31/2017 11:05	2/2/2017 08:59	Collected by Client
2205730014	116-0130-MW1	Solid	1/31/2017 10:10	2/2/2017 08:59	Collected by Client
2205730015	116-0130-MW2A	Solid	1/30/2017 11:30	2/2/2017 08:59	Collected by Client
2205730016	116-0130-MW2B	Solid	1/30/2017 11:45	2/2/2017 08:59	Collected by Client
2205730017	116-0130-MW3A	Solid	1/30/2017 13:31	2/2/2017 08:59	Collected by Client
2205730018	116-0130-MW3B	Solid	1/30/2017 13:40	2/2/2017 08:59	Collected by Client
2205730019	116-0130-MW4A	Solid	1/31/2017 11:37	2/2/2017 08:59	Collected by Client
2205730020	116-0130-MW4B	Solid	1/31/2017 11:40	2/2/2017 08:59	Collected by Client
2205730021	116-0130-MW5A	Solid	1/31/2017 10:55	2/2/2017 08:59	Collected by Client
2205730022	116-0130-MW5B	Solid	1/31/2017 10:57	2/2/2017 08:59	Collected by Client

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## SAMPLE SUMMARY

Workorder: 2205730 Quinns Cafe Stop/26116

### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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## PROJECT SUMMARY

Workorder: 2205730 Quinns Cafe Stop/26116

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### Workorder Comments

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This report was revised to correct the work order ID. DJM 2/14/17

### Sample Comments

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**Lab ID:** 2205730009      **Sample ID:** 116-0130-TB5B      **Sample Type:** SAMPLE

This sample was collected in a soil jar for the volatile analysis. The sample was received and prepared by Method 5035 after the 48-hour holding time.

**Lab ID:** 2205730015      **Sample ID:** 116-0130-MW2A      **Sample Type:** SAMPLE

This sample was collected in a soil jar for the volatile analysis. The sample was received and prepared by Method 5035 after the 48-hour holding time.

**Lab ID:** 2205730016      **Sample ID:** 116-0130-MW2B      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

---

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## ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730001  
Sample ID: 116-0130-TB1

Date Collected: 1/31/2017 10:05 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	46.4	SW846 8260B	1/31/17 10:05	SYB	2/4/17 03:38	SYB	A
Ethylbenzene	ND		ug/kg	46.4	SW846 8260B	1/31/17 10:05	SYB	2/4/17 03:38	SYB	A
Isopropylbenzene	ND		ug/kg	46.4	SW846 8260B	1/31/17 10:05	SYB	2/4/17 03:38	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	46.4	SW846 8260B	1/31/17 10:05	SYB	2/4/17 03:38	SYB	A
Naphthalene	ND		ug/kg	92.8	SW846 8260B	1/31/17 10:05	SYB	2/4/17 03:38	SYB	A
Toluene	ND		ug/kg	46.4	SW846 8260B	1/31/17 10:05	SYB	2/4/17 03:38	SYB	A
Total Xylenes	ND		ug/kg	139	SW846 8260B	1/31/17 10:05	SYB	2/4/17 03:38	SYB	A
1,2,4-Trimethylbenzene	ND		ug/kg	46.4	SW846 8260B	1/31/17 10:05	SYB	2/4/17 03:38	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	46.4	SW846 8260B	1/31/17 10:05	SYB	2/4/17 03:38	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	126		%	71 - 146	SW846 8260B	1/31/17 10:05	SYB	2/4/17 03:38	SYB	A
4-Bromofluorobenzene (S)	130		%	46 - 138	SW846 8260B	1/31/17 10:05	SYB	2/4/17 03:38	SYB	A
Dibromofluoromethane (S)	97.4		%	42 - 143	SW846 8260B	1/31/17 10:05	SYB	2/4/17 03:38	SYB	A
Toluene-d8 (S)	141		%	54 - 141	SW846 8260B	1/31/17 10:05	SYB	2/4/17 03:38	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	5.2		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	94.8		%	0.1	S2540G-11			2/9/17 14:55	VKB	

Ms. Debra J. Musser  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730002  
Sample ID: 116-0130-TB2A

Date Collected: 1/30/2017 10:26 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	61.5	SW846 8260B	2/4/17 00:56	SYB	2/4/17 04:59	SYB	A1
Ethylbenzene	ND		ug/kg	61.5	SW846 8260B	2/4/17 00:56	SYB	2/4/17 04:59	SYB	A1
Isopropylbenzene	ND		ug/kg	61.5	SW846 8260B	2/4/17 00:56	SYB	2/4/17 04:59	SYB	A1
Methyl t-Butyl Ether	ND		ug/kg	61.5	SW846 8260B	2/4/17 00:56	SYB	2/4/17 04:59	SYB	A1
Naphthalene	ND		ug/kg	123	SW846 8260B	2/4/17 00:56	SYB	2/4/17 04:59	SYB	A1
Toluene	ND		ug/kg	61.5	SW846 8260B	2/4/17 00:56	SYB	2/4/17 04:59	SYB	A1
Total Xylenes	ND		ug/kg	185	SW846 8260B	2/4/17 00:56	SYB	2/4/17 04:59	SYB	A1
1,2,4-Trimethylbenzene	ND		ug/kg	61.5	SW846 8260B	2/4/17 00:56	SYB	2/4/17 04:59	SYB	A1
1,3,5-Trimethylbenzene	ND		ug/kg	61.5	SW846 8260B	2/4/17 00:56	SYB	2/4/17 04:59	SYB	A1
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	87.9		%	71 - 146	SW846 8260B	2/4/17 00:56	SYB	2/4/17 04:59	SYB	A1
4-Bromofluorobenzene (S)	101		%	46 - 138	SW846 8260B	2/4/17 00:56	SYB	2/4/17 04:59	SYB	A1
Dibromofluoromethane (S)	71.8		%	42 - 143	SW846 8260B	2/4/17 00:56	SYB	2/4/17 04:59	SYB	A1
Toluene-d8 (S)	106		%	54 - 141	SW846 8260B	2/4/17 00:56	SYB	2/4/17 04:59	SYB	A1
<b>WET CHEMISTRY</b>										
Moisture	11.8		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	88.2		%	0.1	S2540G-11			2/9/17 14:55	VKB	



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## ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730003  
Sample ID: 116-0130-TB2B

Date Collected: 1/30/2017 10:55 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	36.7	SW846 8260B	1/31/17 10:55	SYB	2/4/17 05:22	SYB	A
Ethylbenzene	ND		ug/kg	36.7	SW846 8260B	1/31/17 10:55	SYB	2/4/17 05:22	SYB	A
Isopropylbenzene	ND		ug/kg	36.7	SW846 8260B	1/31/17 10:55	SYB	2/4/17 05:22	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	36.7	SW846 8260B	1/31/17 10:55	SYB	2/4/17 05:22	SYB	A
Naphthalene	ND		ug/kg	73.4	SW846 8260B	1/31/17 10:55	SYB	2/4/17 05:22	SYB	A
Toluene	ND		ug/kg	36.7	SW846 8260B	1/31/17 10:55	SYB	2/4/17 05:22	SYB	A
Total Xylenes	ND		ug/kg	110	SW846 8260B	1/31/17 10:55	SYB	2/4/17 05:22	SYB	A
1,2,4-Trimethylbenzene	ND		ug/kg	36.7	SW846 8260B	1/31/17 10:55	SYB	2/4/17 05:22	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	36.7	SW846 8260B	1/31/17 10:55	SYB	2/4/17 05:22	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	137		%	71 - 146	SW846 8260B	1/31/17 10:55	SYB	2/4/17 05:22	SYB	A
4-Bromofluorobenzene (S)	150	2	%	46 - 138	SW846 8260B	1/31/17 10:55	SYB	2/4/17 05:22	SYB	A
Dibromofluoromethane (S)	108		%	42 - 143	SW846 8260B	1/31/17 10:55	SYB	2/4/17 05:22	SYB	A
Toluene-d8 (S)	153	1	%	54 - 141	SW846 8260B	1/31/17 10:55	SYB	2/4/17 05:22	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	9.0		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	91.0		%	0.1	S2540G-11			2/9/17 14:55	VKB	



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## ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730004  
Sample ID: 116-0130-TB3A

Date Collected: 1/30/2017 09:35 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	36.7	SW846 8260B	1/30/17 09:35	SYB	2/4/17 05:44	SYB	A
Ethylbenzene	ND		ug/kg	36.7	SW846 8260B	1/30/17 09:35	SYB	2/4/17 05:44	SYB	A
Isopropylbenzene	ND		ug/kg	36.7	SW846 8260B	1/30/17 09:35	SYB	2/4/17 05:44	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	36.7	SW846 8260B	1/30/17 09:35	SYB	2/4/17 05:44	SYB	A
Naphthalene	ND		ug/kg	73.4	SW846 8260B	1/30/17 09:35	SYB	2/4/17 05:44	SYB	A
Toluene	ND		ug/kg	36.7	SW846 8260B	1/30/17 09:35	SYB	2/4/17 05:44	SYB	A
Total Xylenes	ND		ug/kg	110	SW846 8260B	1/30/17 09:35	SYB	2/4/17 05:44	SYB	A
1,2,4-Trimethylbenzene	ND		ug/kg	36.7	SW846 8260B	1/30/17 09:35	SYB	2/4/17 05:44	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	36.7	SW846 8260B	1/30/17 09:35	SYB	2/4/17 05:44	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	130		%	71 - 146	SW846 8260B	1/30/17 09:35	SYB	2/4/17 05:44	SYB	A
4-Bromofluorobenzene (S)	138		%	46 - 138	SW846 8260B	1/30/17 09:35	SYB	2/4/17 05:44	SYB	A
Dibromofluoromethane (S)	101		%	42 - 143	SW846 8260B	1/30/17 09:35	SYB	2/4/17 05:44	SYB	A
Toluene-d8 (S)	145	1	%	54 - 141	SW846 8260B	1/30/17 09:35	SYB	2/4/17 05:44	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	10.7		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	89.3		%	0.1	S2540G-11			2/9/17 14:55	VKB	



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## ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730005  
Sample ID: 116-0130-TB3B

Date Collected: 1/30/2017 09:55 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	63.9		ug/kg	56.0	SW846 8260B	1/30/17 09:55	SYB	2/4/17 06:07	SYB	A
Ethylbenzene	ND		ug/kg	56.0	SW846 8260B	1/30/17 09:55	SYB	2/4/17 06:07	SYB	A
Isopropylbenzene	ND		ug/kg	56.0	SW846 8260B	1/30/17 09:55	SYB	2/4/17 06:07	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	56.0	SW846 8260B	1/30/17 09:55	SYB	2/4/17 06:07	SYB	A
Naphthalene	ND		ug/kg	112	SW846 8260B	1/30/17 09:55	SYB	2/4/17 06:07	SYB	A
Toluene	273		ug/kg	56.0	SW846 8260B	1/30/17 09:55	SYB	2/4/17 06:07	SYB	A
Total Xylenes	220		ug/kg	168	SW846 8260B	1/30/17 09:55	SYB	2/4/17 06:07	SYB	A
1,2,4-Trimethylbenzene	ND		ug/kg	56.0	SW846 8260B	1/30/17 09:55	SYB	2/4/17 06:07	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	56.0	SW846 8260B	1/30/17 09:55	SYB	2/4/17 06:07	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	115		%	71 - 146	SW846 8260B	1/30/17 09:55	SYB	2/4/17 06:07	SYB	A
4-Bromofluorobenzene (S)	123		%	46 - 138	SW846 8260B	1/30/17 09:55	SYB	2/4/17 06:07	SYB	A
Dibromofluoromethane (S)	89.2		%	42 - 143	SW846 8260B	1/30/17 09:55	SYB	2/4/17 06:07	SYB	A
Toluene-d8 (S)	125		%	54 - 141	SW846 8260B	1/30/17 09:55	SYB	2/4/17 06:07	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	34.4		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	65.6		%	0.1	S2540G-11			2/9/17 14:55	VKB	

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### ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730006  
Sample ID: 116-0130-TB4A

Date Collected: 1/31/2017 10:40 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	37.3	SW846 8260B	1/31/17 10:40	SYB	2/4/17 06:30	SYB	A
Ethylbenzene	ND		ug/kg	37.3	SW846 8260B	1/31/17 10:40	SYB	2/4/17 06:30	SYB	A
Isopropylbenzene	ND		ug/kg	37.3	SW846 8260B	1/31/17 10:40	SYB	2/4/17 06:30	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	37.3	SW846 8260B	1/31/17 10:40	SYB	2/4/17 06:30	SYB	A
Naphthalene	ND		ug/kg	74.5	SW846 8260B	1/31/17 10:40	SYB	2/4/17 06:30	SYB	A
Toluene	ND		ug/kg	37.3	SW846 8260B	1/31/17 10:40	SYB	2/4/17 06:30	SYB	A
Total Xylenes	ND		ug/kg	112	SW846 8260B	1/31/17 10:40	SYB	2/4/17 06:30	SYB	A
1,2,4-Trimethylbenzene	ND		ug/kg	37.3	SW846 8260B	1/31/17 10:40	SYB	2/4/17 06:30	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	37.3	SW846 8260B	1/31/17 10:40	SYB	2/4/17 06:30	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	133		%	71 - 146	SW846 8260B	1/31/17 10:40	SYB	2/4/17 06:30	SYB	A
4-Bromofluorobenzene (S)	143	2	%	46 - 138	SW846 8260B	1/31/17 10:40	SYB	2/4/17 06:30	SYB	A
Dibromofluoromethane (S)	104		%	42 - 143	SW846 8260B	1/31/17 10:40	SYB	2/4/17 06:30	SYB	A
Toluene-d8 (S)	149	1	%	54 - 141	SW846 8260B	1/31/17 10:40	SYB	2/4/17 06:30	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	15.1		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	84.9		%	0.1	S2540G-11			2/9/17 14:55	VKB	



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## ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730007  
Sample ID: 116-0130-TB4B

Date Collected: 1/31/2017 10:44 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	38.5	SW846 8260B	1/31/17 10:44	SYB	2/4/17 06:53	SYB	A
Ethylbenzene	5220		ug/kg	38.5	SW846 8260B	1/31/17 10:44	SYB	2/4/17 06:53	SYB	A
Isopropylbenzene	2180		ug/kg	38.5	SW846 8260B	1/31/17 10:44	SYB	2/4/17 06:53	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	38.5	SW846 8260B	1/31/17 10:44	SYB	2/4/17 06:53	SYB	A
Naphthalene	14400		ug/kg	1540	SW846 8260B	1/31/17 10:44	SYB	2/8/17 02:44	SYB	A
Toluene	ND		ug/kg	38.5	SW846 8260B	1/31/17 10:44	SYB	2/4/17 06:53	SYB	A
Total Xylenes	12400		ug/kg	115	SW846 8260B	1/31/17 10:44	SYB	2/4/17 06:53	SYB	A
1,2,4-Trimethylbenzene	83900		ug/kg	770	SW846 8260B	1/31/17 10:44	SYB	2/8/17 02:44	SYB	A
1,3,5-Trimethylbenzene	187		ug/kg	38.5	SW846 8260B	1/31/17 10:44	SYB	2/4/17 06:53	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	149	1	%	71 - 146	SW846 8260B	1/31/17 10:44	SYB	2/4/17 06:53	SYB	A
1,2-Dichloroethane-d4 (S)	101		%	71 - 146	SW846 8260B	1/31/17 10:44	SYB	2/8/17 02:44	SYB	A
4-Bromofluorobenzene (S)	133		%	46 - 138	SW846 8260B	1/31/17 10:44	SYB	2/4/17 06:53	SYB	A
4-Bromofluorobenzene (S)	76		%	46 - 138	SW846 8260B	1/31/17 10:44	SYB	2/8/17 02:44	SYB	A
Dibromofluoromethane (S)	96.6		%	42 - 143	SW846 8260B	1/31/17 10:44	SYB	2/4/17 06:53	SYB	A
Dibromofluoromethane (S)	68.7		%	42 - 143	SW846 8260B	1/31/17 10:44	SYB	2/8/17 02:44	SYB	A
Toluene-d8 (S)	83.4		%	54 - 141	SW846 8260B	1/31/17 10:44	SYB	2/8/17 02:44	SYB	A
Toluene-d8 (S)	138		%	54 - 141	SW846 8260B	1/31/17 10:44	SYB	2/4/17 06:53	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	5.0		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	95.0		%	0.1	S2540G-11			2/9/17 14:55	VKB	



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## ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730008  
Sample ID: 116-0130-TB5A

Date Collected: 1/30/2017 12:46 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	229		ug/kg	38.1	SW846 8260B	1/30/17 12:46	JAH	2/6/17 15:46	DD	A
Ethylbenzene	ND		ug/kg	38.1	SW846 8260B	1/30/17 12:46	JAH	2/6/17 15:46	DD	A
Isopropylbenzene	78.7		ug/kg	38.1	SW846 8260B	1/30/17 12:46	JAH	2/6/17 15:46	DD	A
Methyl t-Butyl Ether	ND		ug/kg	38.1	SW846 8260B	1/30/17 12:46	JAH	2/6/17 15:46	DD	A
Naphthalene	ND		ug/kg	76.2	SW846 8260B	1/30/17 12:46	JAH	2/6/17 15:46	DD	A
Toluene	ND		ug/kg	38.1	SW846 8260B	1/30/17 12:46	JAH	2/6/17 15:46	DD	A
Total Xylenes	305		ug/kg	114	SW846 8260B	1/30/17 12:46	JAH	2/6/17 15:46	DD	A
1,2,4-Trimethylbenzene	64.7		ug/kg	38.1	SW846 8260B	1/30/17 12:46	JAH	2/6/17 15:46	DD	A
1,3,5-Trimethylbenzene	ND		ug/kg	38.1	SW846 8260B	1/30/17 12:46	JAH	2/6/17 15:46	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	81.3		%	71 - 146	SW846 8260B	1/30/17 12:46	JAH	2/6/17 15:46	DD	A
4-Bromofluorobenzene (S)	88.7		%	46 - 138	SW846 8260B	1/30/17 12:46	JAH	2/6/17 15:46	DD	A
Dibromofluoromethane (S)	67.2		%	42 - 143	SW846 8260B	1/30/17 12:46	JAH	2/6/17 15:46	DD	A
Toluene-d8 (S)	90.1		%	54 - 141	SW846 8260B	1/30/17 12:46	JAH	2/6/17 15:46	DD	A
<b>WET CHEMISTRY</b>										
Moisture	9.1		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	90.9		%	0.1	S2540G-11			2/9/17 14:55	VKB	



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## ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730009  
Sample ID: 116-0130-TB5B

Date Collected: 1/30/2017 12:57 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	470	SW846 8260B	1/30/17 12:57	SYB	2/6/17 18:47	DD	B1
Ethylbenzene	19000		ug/kg	470	SW846 8260B	1/30/17 12:57	SYB	2/6/17 18:47	DD	B1
Isopropylbenzene	5250		ug/kg	470	SW846 8260B	1/30/17 12:57	SYB	2/6/17 18:47	DD	B1
Methyl t-Butyl Ether	ND		ug/kg	470	SW846 8260B	1/30/17 12:57	SYB	2/6/17 18:47	DD	B1
Naphthalene	30300		ug/kg	940	SW846 8260B	1/30/17 12:57	SYB	2/6/17 18:47	DD	B1
Toluene	498		ug/kg	470	SW846 8260B	1/30/17 12:57	SYB	2/6/17 18:47	DD	B1
Total Xylenes	101000		ug/kg	1410	SW846 8260B	1/30/17 12:57	SYB	2/6/17 18:47	DD	B1
1,2,4-Trimethylbenzene	277000		ug/kg	2350	SW846 8260B	1/30/17 12:57	SYB	2/8/17 03:06	SYB	B1
1,3,5-Trimethylbenzene	43800		ug/kg	470	SW846 8260B	1/30/17 12:57	SYB	2/6/17 18:47	DD	B1
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	206	3	%	71 - 146	SW846 8260B	1/30/17 12:57	SYB	2/8/17 03:06	SYB	B1
1,2-Dichloroethane-d4 (S)	88.6	1	%	71 - 146	SW846 8260B	1/30/17 12:57	SYB	2/6/17 18:47	DD	B1
4-Bromofluorobenzene (S)	304	2	%	46 - 138	SW846 8260B	1/30/17 12:57	SYB	2/6/17 18:47	DD	B1
4-Bromofluorobenzene (S)	110		%	46 - 138	SW846 8260B	1/30/17 12:57	SYB	2/8/17 03:06	SYB	B1
Dibromofluoromethane (S)	85		%	42 - 143	SW846 8260B	1/30/17 12:57	SYB	2/6/17 18:47	DD	B1
Dibromofluoromethane (S)	95.2		%	42 - 143	SW846 8260B	1/30/17 12:57	SYB	2/8/17 03:06	SYB	B1
Toluene-d8 (S)	131		%	54 - 141	SW846 8260B	1/30/17 12:57	SYB	2/8/17 03:06	SYB	B1
Toluene-d8 (S)	136		%	54 - 141	SW846 8260B	1/30/17 12:57	SYB	2/6/17 18:47	DD	B1
<b>WET CHEMISTRY</b>										
Moisture	25.4		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	74.6		%	0.1	S2540G-11			2/9/17 14:55	VKB	



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## ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730010  
Sample ID: 116-0130-TB6A

Date Collected: 1/31/2017 11:30 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	40.4	SW846 8260B	1/31/17 11:30	SYB	2/6/17 17:17	DD	A
Ethylbenzene	ND		ug/kg	40.4	SW846 8260B	1/31/17 11:30	SYB	2/6/17 17:17	DD	A
Isopropylbenzene	ND		ug/kg	40.4	SW846 8260B	1/31/17 11:30	SYB	2/6/17 17:17	DD	A
Methyl t-Butyl Ether	ND		ug/kg	40.4	SW846 8260B	1/31/17 11:30	SYB	2/6/17 17:17	DD	A
Naphthalene	ND		ug/kg	80.8	SW846 8260B	1/31/17 11:30	SYB	2/6/17 17:17	DD	A
Toluene	ND		ug/kg	40.4	SW846 8260B	1/31/17 11:30	SYB	2/6/17 17:17	DD	A
Total Xylenes	ND		ug/kg	121	SW846 8260B	1/31/17 11:30	SYB	2/6/17 17:17	DD	A
1,2,4-Trimethylbenzene	ND		ug/kg	40.4	SW846 8260B	1/31/17 11:30	SYB	2/6/17 17:17	DD	A
1,3,5-Trimethylbenzene	ND		ug/kg	40.4	SW846 8260B	1/31/17 11:30	SYB	2/6/17 17:17	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	146		%	71 - 146	SW846 8260B	1/31/17 11:30	SYB	2/6/17 17:17	DD	A
4-Bromofluorobenzene (S)	157	2	%	46 - 138	SW846 8260B	1/31/17 11:30	SYB	2/6/17 17:17	DD	A
Dibromofluoromethane (S)	118		%	42 - 143	SW846 8260B	1/31/17 11:30	SYB	2/6/17 17:17	DD	A
Toluene-d8 (S)	165	1	%	54 - 141	SW846 8260B	1/31/17 11:30	SYB	2/6/17 17:17	DD	A
<b>WET CHEMISTRY</b>										
Moisture	17.0		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	83.0		%	0.1	S2540G-11			2/9/17 14:55	VKB	



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## ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730011  
Sample ID: 116-0130-TB6B

Date Collected: 1/31/2017 11:32 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	233		ug/kg	40.0	SW846 8260B	1/31/17 11:32	SYB	2/6/17 17:39	DD	A
Ethylbenzene	185		ug/kg	40.0	SW846 8260B	1/31/17 11:32	SYB	2/6/17 17:39	DD	A
Isopropylbenzene	182		ug/kg	40.0	SW846 8260B	1/31/17 11:32	SYB	2/6/17 17:39	DD	A
Methyl t-Butyl Ether	ND		ug/kg	40.0	SW846 8260B	1/31/17 11:32	SYB	2/6/17 17:39	DD	A
Naphthalene	ND		ug/kg	80.0	SW846 8260B	1/31/17 11:32	SYB	2/6/17 17:39	DD	A
Toluene	331		ug/kg	40.0	SW846 8260B	1/31/17 11:32	SYB	2/6/17 17:39	DD	A
Total Xylenes	1150		ug/kg	120	SW846 8260B	1/31/17 11:32	SYB	2/6/17 17:39	DD	A
1,2,4-Trimethylbenzene	294		ug/kg	40.0	SW846 8260B	1/31/17 11:32	SYB	2/6/17 17:39	DD	A
1,3,5-Trimethylbenzene	178		ug/kg	40.0	SW846 8260B	1/31/17 11:32	SYB	2/6/17 17:39	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	150	1	%	71 - 146	SW846 8260B	1/31/17 11:32	SYB	2/6/17 17:39	DD	A
4-Bromofluorobenzene (S)	151	3	%	46 - 138	SW846 8260B	1/31/17 11:32	SYB	2/6/17 17:39	DD	A
Dibromofluoromethane (S)	116		%	42 - 143	SW846 8260B	1/31/17 11:32	SYB	2/6/17 17:39	DD	A
Toluene-d8 (S)	161	2	%	54 - 141	SW846 8260B	1/31/17 11:32	SYB	2/6/17 17:39	DD	A
<b>WET CHEMISTRY</b>										
Moisture	16.4		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	83.6		%	0.1	S2540G-11			2/9/17 14:55	VKB	



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### ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730012  
Sample ID: 116-0130-TB7A

Date Collected: 1/31/2017 11:03 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	36.1	SW846 8260B	1/31/17 11:03	SYB	2/6/17 18:02	DD	A
Ethylbenzene	ND		ug/kg	36.1	SW846 8260B	1/31/17 11:03	SYB	2/6/17 18:02	DD	A
Isopropylbenzene	ND		ug/kg	36.1	SW846 8260B	1/31/17 11:03	SYB	2/6/17 18:02	DD	A
Methyl t-Butyl Ether	ND		ug/kg	36.1	SW846 8260B	1/31/17 11:03	SYB	2/6/17 18:02	DD	A
Naphthalene	ND		ug/kg	72.2	SW846 8260B	1/31/17 11:03	SYB	2/6/17 18:02	DD	A
Toluene	ND		ug/kg	36.1	SW846 8260B	1/31/17 11:03	SYB	2/6/17 18:02	DD	A
Total Xylenes	ND		ug/kg	108	SW846 8260B	1/31/17 11:03	SYB	2/6/17 18:02	DD	A
1,2,4-Trimethylbenzene	ND		ug/kg	36.1	SW846 8260B	1/31/17 11:03	SYB	2/6/17 18:02	DD	A
1,3,5-Trimethylbenzene	ND		ug/kg	36.1	SW846 8260B	1/31/17 11:03	SYB	2/6/17 18:02	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	141		%	71 - 146	SW846 8260B	1/31/17 11:03	SYB	2/6/17 18:02	DD	A
4-Bromofluorobenzene (S)	145	2	%	46 - 138	SW846 8260B	1/31/17 11:03	SYB	2/6/17 18:02	DD	A
Dibromofluoromethane (S)	113		%	42 - 143	SW846 8260B	1/31/17 11:03	SYB	2/6/17 18:02	DD	A
Toluene-d8 (S)	158	1	%	54 - 141	SW846 8260B	1/31/17 11:03	SYB	2/6/17 18:02	DD	A
<b>WET CHEMISTRY</b>										
Moisture	11.1		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	88.9		%	0.1	S2540G-11			2/9/17 14:55	VKB	



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## ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730013  
Sample ID: 116-0130-TB7B

Date Collected: 1/31/2017 11:05 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	338		ug/kg	47.2	SW846 8260B	1/31/17 11:05	SYB	2/6/17 18:24	DD	A
Ethylbenzene	679		ug/kg	47.2	SW846 8260B	1/31/17 11:05	SYB	2/6/17 18:24	DD	A
Isopropylbenzene	567		ug/kg	47.2	SW846 8260B	1/31/17 11:05	SYB	2/6/17 18:24	DD	A
Methyl t-Butyl Ether	ND		ug/kg	47.2	SW846 8260B	1/31/17 11:05	SYB	2/6/17 18:24	DD	A
Naphthalene	734		ug/kg	94.5	SW846 8260B	1/31/17 11:05	SYB	2/6/17 18:24	DD	A
Toluene	102		ug/kg	47.2	SW846 8260B	1/31/17 11:05	SYB	2/6/17 18:24	DD	A
Total Xylenes	853		ug/kg	142	SW846 8260B	1/31/17 11:05	SYB	2/6/17 18:24	DD	A
1,2,4-Trimethylbenzene	180		ug/kg	47.2	SW846 8260B	1/31/17 11:05	SYB	2/6/17 18:24	DD	A
1,3,5-Trimethylbenzene	ND		ug/kg	47.2	SW846 8260B	1/31/17 11:05	SYB	2/6/17 18:24	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	148	1	%	71 - 146	SW846 8260B	1/31/17 11:05	SYB	2/6/17 18:24	DD	A
4-Bromofluorobenzene (S)	149	3	%	46 - 138	SW846 8260B	1/31/17 11:05	SYB	2/6/17 18:24	DD	A
Dibromofluoromethane (S)	111		%	42 - 143	SW846 8260B	1/31/17 11:05	SYB	2/6/17 18:24	DD	A
Toluene-d8 (S)	157	2	%	54 - 141	SW846 8260B	1/31/17 11:05	SYB	2/6/17 18:24	DD	A
<b>WET CHEMISTRY</b>										
Moisture	22.1		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	77.9		%	0.1	S2540G-11			2/9/17 14:55	VKB	



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### ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730014  
Sample ID: 116-0130-MW1

Date Collected: 1/31/2017 10:10 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	35.8	SW846 8260B	1/31/17 10:10	SYB	2/8/17 05:41	SYB	A
Ethylbenzene	ND		ug/kg	35.8	SW846 8260B	1/31/17 10:10	SYB	2/8/17 05:41	SYB	A
Isopropylbenzene	ND		ug/kg	35.8	SW846 8260B	1/31/17 10:10	SYB	2/8/17 05:41	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	35.8	SW846 8260B	1/31/17 10:10	SYB	2/8/17 05:41	SYB	A
Naphthalene	ND		ug/kg	71.7	SW846 8260B	1/31/17 10:10	SYB	2/8/17 05:41	SYB	A
Toluene	ND		ug/kg	35.8	SW846 8260B	1/31/17 10:10	SYB	2/8/17 05:41	SYB	A
Total Xylenes	ND		ug/kg	107	SW846 8260B	1/31/17 10:10	SYB	2/8/17 05:41	SYB	A
1,2,4-Trimethylbenzene	ND		ug/kg	35.8	SW846 8260B	1/31/17 10:10	SYB	2/8/17 05:41	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	35.8	SW846 8260B	1/31/17 10:10	SYB	2/8/17 05:41	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	127		%	71 - 146	SW846 8260B	1/31/17 10:10	SYB	2/8/17 05:41	SYB	A
4-Bromofluorobenzene (S)	131		%	46 - 138	SW846 8260B	1/31/17 10:10	SYB	2/8/17 05:41	SYB	A
Dibromofluoromethane (S)	100		%	42 - 143	SW846 8260B	1/31/17 10:10	SYB	2/8/17 05:41	SYB	A
Toluene-d8 (S)	138		%	54 - 141	SW846 8260B	1/31/17 10:10	SYB	2/8/17 05:41	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	8.2		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	91.8		%	0.1	S2540G-11			2/9/17 14:55	VKB	



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## ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730015  
Sample ID: 116-0130-MW2A

Date Collected: 1/30/2017 11:30 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	59.7	SW846 8260B	2/8/17 00:59	SYB	2/8/17 06:03	SYB	A1
Ethylbenzene	ND		ug/kg	59.7	SW846 8260B	2/8/17 00:59	SYB	2/8/17 06:03	SYB	A1
Isopropylbenzene	ND		ug/kg	59.7	SW846 8260B	2/8/17 00:59	SYB	2/8/17 06:03	SYB	A1
Methyl t-Butyl Ether	ND		ug/kg	59.7	SW846 8260B	2/8/17 00:59	SYB	2/8/17 06:03	SYB	A1
Naphthalene	ND		ug/kg	119	SW846 8260B	2/8/17 00:59	SYB	2/8/17 06:03	SYB	A1
Toluene	ND		ug/kg	59.7	SW846 8260B	2/8/17 00:59	SYB	2/8/17 06:03	SYB	A1
Total Xylenes	ND		ug/kg	179	SW846 8260B	2/8/17 00:59	SYB	2/8/17 06:03	SYB	A1
1,2,4-Trimethylbenzene	69.8		ug/kg	59.7	SW846 8260B	2/8/17 00:59	SYB	2/8/17 06:03	SYB	A1
1,3,5-Trimethylbenzene	ND		ug/kg	59.7	SW846 8260B	2/8/17 00:59	SYB	2/8/17 06:03	SYB	A1
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	101		%	71 - 146	SW846 8260B	2/8/17 00:59	SYB	2/8/17 06:03	SYB	A1
4-Bromofluorobenzene (S)	99.4		%	46 - 138	SW846 8260B	2/8/17 00:59	SYB	2/8/17 06:03	SYB	A1
Dibromofluoromethane (S)	78.3		%	42 - 143	SW846 8260B	2/8/17 00:59	SYB	2/8/17 06:03	SYB	A1
Toluene-d8 (S)	112		%	54 - 141	SW846 8260B	2/8/17 00:59	SYB	2/8/17 06:03	SYB	A1
<b>WET CHEMISTRY</b>										
Moisture	6.7		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	93.3		%	0.1	S2540G-11			2/9/17 14:55	VKB	



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## ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730016  
Sample ID: 116-0130-MW2B

Date Collected: 1/30/2017 11:45 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	369	SW846 8260B	1/30/17 11:45	SYB	2/9/17 09:02	SYB	A
Ethylbenzene	11100		ug/kg	369	SW846 8260B	1/30/17 11:45	SYB	2/9/17 09:02	SYB	A
Isopropylbenzene	2120		ug/kg	369	SW846 8260B	1/30/17 11:45	SYB	2/9/17 09:02	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	369	SW846 8260B	1/30/17 11:45	SYB	2/9/17 09:02	SYB	A
Naphthalene	20800		ug/kg	737	SW846 8260B	1/30/17 11:45	SYB	2/9/17 09:02	SYB	A
Toluene	432		ug/kg	369	SW846 8260B	1/30/17 11:45	SYB	2/9/17 09:02	SYB	A
Total Xylenes	41800		ug/kg	1110	SW846 8260B	1/30/17 11:45	SYB	2/9/17 09:02	SYB	A
1,2,4-Trimethylbenzene	69100		ug/kg	369	SW846 8260B	1/30/17 11:45	SYB	2/9/17 09:02	SYB	A
1,3,5-Trimethylbenzene	13500		ug/kg	369	SW846 8260B	1/30/17 11:45	SYB	2/9/17 09:02	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	89.3		%	71 - 146	SW846 8260B	1/30/17 11:45	SYB	2/9/17 09:02	SYB	A
4-Bromofluorobenzene (S)	85		%	46 - 138	SW846 8260B	1/30/17 11:45	SYB	2/9/17 09:02	SYB	A
Dibromofluoromethane (S)	69.4		%	42 - 143	SW846 8260B	1/30/17 11:45	SYB	2/9/17 09:02	SYB	A
Toluene-d8 (S)	83.1		%	54 - 141	SW846 8260B	1/30/17 11:45	SYB	2/9/17 09:02	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	11.9		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	88.1		%	0.1	S2540G-11			2/9/17 14:55	VKB	



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### ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730017  
Sample ID: 116-0130-MW3A

Date Collected: 1/30/2017 13:31 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	39.7	SW846 8260B	1/30/17 13:31	SYB	2/9/17 08:18	SYB	A
Ethylbenzene	ND		ug/kg	39.7	SW846 8260B	1/30/17 13:31	SYB	2/9/17 08:18	SYB	A
Isopropylbenzene	ND		ug/kg	39.7	SW846 8260B	1/30/17 13:31	SYB	2/9/17 08:18	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	39.7	SW846 8260B	1/30/17 13:31	SYB	2/9/17 08:18	SYB	A
Naphthalene	ND		ug/kg	79.4	SW846 8260B	1/30/17 13:31	SYB	2/9/17 08:18	SYB	A
Toluene	ND		ug/kg	39.7	SW846 8260B	1/30/17 13:31	SYB	2/9/17 08:18	SYB	A
Total Xylenes	146		ug/kg	119	SW846 8260B	1/30/17 13:31	SYB	2/9/17 08:18	SYB	A
1,2,4-Trimethylbenzene	56.7		ug/kg	39.7	SW846 8260B	1/30/17 13:31	SYB	2/9/17 08:18	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	39.7	SW846 8260B	1/30/17 13:31	SYB	2/9/17 08:18	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	93.7		%	71 - 146	SW846 8260B	1/30/17 13:31	SYB	2/9/17 08:18	SYB	A
4-Bromofluorobenzene (S)	104		%	46 - 138	SW846 8260B	1/30/17 13:31	SYB	2/9/17 08:18	SYB	A
Dibromofluoromethane (S)	84.3		%	42 - 143	SW846 8260B	1/30/17 13:31	SYB	2/9/17 08:18	SYB	A
Toluene-d8 (S)	113		%	54 - 141	SW846 8260B	1/30/17 13:31	SYB	2/9/17 08:18	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	9.4		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	90.6		%	0.1	S2540G-11			2/9/17 14:55	VKB	



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## ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730018  
Sample ID: 116-0130-MW3B

Date Collected: 1/30/2017 13:40 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	551		ug/kg	61.7	SW846 8260B	1/30/17 13:40	SYB	2/9/17 08:40	SYB	A
Ethylbenzene	4010		ug/kg	61.7	SW846 8260B	1/30/17 13:40	SYB	2/9/17 08:40	SYB	A
Isopropylbenzene	819		ug/kg	61.7	SW846 8260B	1/30/17 13:40	SYB	2/9/17 08:40	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	61.7	SW846 8260B	1/30/17 13:40	SYB	2/9/17 08:40	SYB	A
Naphthalene	5270		ug/kg	123	SW846 8260B	1/30/17 13:40	SYB	2/9/17 08:40	SYB	A
Toluene	411		ug/kg	61.7	SW846 8260B	1/30/17 13:40	SYB	2/9/17 08:40	SYB	A
Total Xylenes	8880		ug/kg	185	SW846 8260B	1/30/17 13:40	SYB	2/9/17 08:40	SYB	A
1,2,4-Trimethylbenzene	10900		ug/kg	61.7	SW846 8260B	1/30/17 13:40	SYB	2/9/17 08:40	SYB	A
1,3,5-Trimethylbenzene	1570		ug/kg	61.7	SW846 8260B	1/30/17 13:40	SYB	2/9/17 08:40	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	82.7		%	71 - 146	SW846 8260B	1/30/17 13:40	SYB	2/9/17 08:40	SYB	A
4-Bromofluorobenzene (S)	74.3		%	46 - 138	SW846 8260B	1/30/17 13:40	SYB	2/9/17 08:40	SYB	A
Dibromofluoromethane (S)	66		%	42 - 143	SW846 8260B	1/30/17 13:40	SYB	2/9/17 08:40	SYB	A
Toluene-d8 (S)	85.1		%	54 - 141	SW846 8260B	1/30/17 13:40	SYB	2/9/17 08:40	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	27.3		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	72.7		%	0.1	S2540G-11			2/9/17 14:55	VKB	



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## ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730019  
Sample ID: 116-0130-MW4A

Date Collected: 1/31/2017 11:37 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	51.3	SW846 8260B	1/31/17 11:37	SYB	2/8/17 06:25	SYB	A
Ethylbenzene	ND		ug/kg	51.3	SW846 8260B	1/31/17 11:37	SYB	2/8/17 06:25	SYB	A
Isopropylbenzene	ND		ug/kg	51.3	SW846 8260B	1/31/17 11:37	SYB	2/8/17 06:25	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	51.3	SW846 8260B	1/31/17 11:37	SYB	2/8/17 06:25	SYB	A
Naphthalene	ND		ug/kg	103	SW846 8260B	1/31/17 11:37	SYB	2/8/17 06:25	SYB	A
Toluene	ND		ug/kg	51.3	SW846 8260B	1/31/17 11:37	SYB	2/8/17 06:25	SYB	A
Total Xylenes	ND		ug/kg	154	SW846 8260B	1/31/17 11:37	SYB	2/8/17 06:25	SYB	A
1,2,4-Trimethylbenzene	ND		ug/kg	51.3	SW846 8260B	1/31/17 11:37	SYB	2/8/17 06:25	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	51.3	SW846 8260B	1/31/17 11:37	SYB	2/8/17 06:25	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	124		%	71 - 146	SW846 8260B	1/31/17 11:37	SYB	2/8/17 06:25	SYB	A
4-Bromofluorobenzene (S)	127		%	46 - 138	SW846 8260B	1/31/17 11:37	SYB	2/8/17 06:25	SYB	A
Dibromofluoromethane (S)	97.5		%	42 - 143	SW846 8260B	1/31/17 11:37	SYB	2/8/17 06:25	SYB	A
Toluene-d8 (S)	140		%	54 - 141	SW846 8260B	1/31/17 11:37	SYB	2/8/17 06:25	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	10		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	90.0		%	0.1	S2540G-11			2/9/17 14:55	VKB	



Ms. Debra J. Musser  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730020  
Sample ID: 116-0130-MW4B

Date Collected: 1/31/2017 11:40 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	45.0	SW846 8260B	1/31/17 11:40	SYB	2/8/17 06:48	SYB	A
Ethylbenzene	ND		ug/kg	45.0	SW846 8260B	1/31/17 11:40	SYB	2/8/17 06:48	SYB	A
Isopropylbenzene	ND		ug/kg	45.0	SW846 8260B	1/31/17 11:40	SYB	2/8/17 06:48	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	45.0	SW846 8260B	1/31/17 11:40	SYB	2/8/17 06:48	SYB	A
Naphthalene	ND		ug/kg	90.0	SW846 8260B	1/31/17 11:40	SYB	2/8/17 06:48	SYB	A
Toluene	ND		ug/kg	45.0	SW846 8260B	1/31/17 11:40	SYB	2/8/17 06:48	SYB	A
Total Xylenes	ND		ug/kg	135	SW846 8260B	1/31/17 11:40	SYB	2/8/17 06:48	SYB	A
1,2,4-Trimethylbenzene	ND		ug/kg	45.0	SW846 8260B	1/31/17 11:40	SYB	2/8/17 06:48	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	45.0	SW846 8260B	1/31/17 11:40	SYB	2/8/17 06:48	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	126		%	71 - 146	SW846 8260B	1/31/17 11:40	SYB	2/8/17 06:48	SYB	A
4-Bromofluorobenzene (S)	129		%	46 - 138	SW846 8260B	1/31/17 11:40	SYB	2/8/17 06:48	SYB	A
Dibromofluoromethane (S)	99		%	42 - 143	SW846 8260B	1/31/17 11:40	SYB	2/8/17 06:48	SYB	A
Toluene-d8 (S)	136		%	54 - 141	SW846 8260B	1/31/17 11:40	SYB	2/8/17 06:48	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	14.9		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	85.1		%	0.1	S2540G-11			2/9/17 14:55	VKB	



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## ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730021  
Sample ID: 116-0130-MW5A

Date Collected: 1/31/2017 10:55 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	38.8	SW846 8260B	1/31/17 10:55	SYB	2/8/17 07:10	SYB	A
Ethylbenzene	ND		ug/kg	38.8	SW846 8260B	1/31/17 10:55	SYB	2/8/17 07:10	SYB	A
Isopropylbenzene	ND		ug/kg	38.8	SW846 8260B	1/31/17 10:55	SYB	2/8/17 07:10	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	38.8	SW846 8260B	1/31/17 10:55	SYB	2/8/17 07:10	SYB	A
Naphthalene	ND		ug/kg	77.6	SW846 8260B	1/31/17 10:55	SYB	2/8/17 07:10	SYB	A
Toluene	ND		ug/kg	38.8	SW846 8260B	1/31/17 10:55	SYB	2/8/17 07:10	SYB	A
Total Xylenes	ND		ug/kg	116	SW846 8260B	1/31/17 10:55	SYB	2/8/17 07:10	SYB	A
1,2,4-Trimethylbenzene	ND		ug/kg	38.8	SW846 8260B	1/31/17 10:55	SYB	2/8/17 07:10	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	38.8	SW846 8260B	1/31/17 10:55	SYB	2/8/17 07:10	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	136		%	71 - 146	SW846 8260B	1/31/17 10:55	SYB	2/8/17 07:10	SYB	A
4-Bromofluorobenzene (S)	142	2	%	46 - 138	SW846 8260B	1/31/17 10:55	SYB	2/8/17 07:10	SYB	A
Dibromofluoromethane (S)	108		%	42 - 143	SW846 8260B	1/31/17 10:55	SYB	2/8/17 07:10	SYB	A
Toluene-d8 (S)	153	1	%	54 - 141	SW846 8260B	1/31/17 10:55	SYB	2/8/17 07:10	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	13.1		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	86.9		%	0.1	S2540G-11			2/9/17 14:55	VKB	



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## ANALYTICAL RESULTS

Workorder: 2205730 Quinns Cafe Stop/26116

Lab ID: 2205730022  
Sample ID: 116-0130-MW5B

Date Collected: 1/31/2017 10:57 Matrix: Solid  
Date Received: 2/2/2017 08:59

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	45.0	SW846 8260B	1/31/17 10:57	SYB	2/8/17 07:32	SYB	A
Ethylbenzene	ND		ug/kg	45.0	SW846 8260B	1/31/17 10:57	SYB	2/8/17 07:32	SYB	A
Isopropylbenzene	ND		ug/kg	45.0	SW846 8260B	1/31/17 10:57	SYB	2/8/17 07:32	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	45.0	SW846 8260B	1/31/17 10:57	SYB	2/8/17 07:32	SYB	A
Naphthalene	ND		ug/kg	90.0	SW846 8260B	1/31/17 10:57	SYB	2/8/17 07:32	SYB	A
Toluene	ND		ug/kg	45.0	SW846 8260B	1/31/17 10:57	SYB	2/8/17 07:32	SYB	A
Total Xylenes	ND		ug/kg	135	SW846 8260B	1/31/17 10:57	SYB	2/8/17 07:32	SYB	A
1,2,4-Trimethylbenzene	ND		ug/kg	45.0	SW846 8260B	1/31/17 10:57	SYB	2/8/17 07:32	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	45.0	SW846 8260B	1/31/17 10:57	SYB	2/8/17 07:32	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	123		%	71 - 146	SW846 8260B	1/31/17 10:57	SYB	2/8/17 07:32	SYB	A
4-Bromofluorobenzene (S)	128		%	46 - 138	SW846 8260B	1/31/17 10:57	SYB	2/8/17 07:32	SYB	A
Dibromofluoromethane (S)	97.7		%	42 - 143	SW846 8260B	1/31/17 10:57	SYB	2/8/17 07:32	SYB	A
Toluene-d8 (S)	135		%	54 - 141	SW846 8260B	1/31/17 10:57	SYB	2/8/17 07:32	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	19.5		%	0.1	S2540G-11			2/9/17 14:55	VKB	
Total Solids	80.5		%	0.1	S2540G-11			2/9/17 14:55	VKB	



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**PARAMETER QUALIFIERS**

Lab ID	#	Sample ID	Analytical Method	Analyte
2205730003	1	116-0130-TB2B	SW846 8260B	Toluene-d8
The surrogate Toluene-d8 for method SW846 8260B was outside of control limits. The % Recovery was reported as 153 and the control limits were 54 to 141. This result was reported at a dilution of 50.				
2205730003	2	116-0130-TB2B	SW846 8260B	4-Bromofluorobenzene
The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 150 and the control limits were 46 to 138. This result was reported at a dilution of 50.				
2205730004	1	116-0130-TB3A	SW846 8260B	Toluene-d8
The surrogate Toluene-d8 for method SW846 8260B was outside of control limits. The % Recovery was reported as 145 and the control limits were 54 to 141. This result was reported at a dilution of 50.				
2205730006	1	116-0130-TB4A	SW846 8260B	Toluene-d8
The surrogate Toluene-d8 for method SW846 8260B was outside of control limits. The % Recovery was reported as 149 and the control limits were 54 to 141. This result was reported at a dilution of 50.				
2205730006	2	116-0130-TB4A	SW846 8260B	4-Bromofluorobenzene
The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 143 and the control limits were 46 to 138. This result was reported at a dilution of 50.				
2205730007	1	116-0130-TB4B	SW846 8260B	1,2-Dichloroethane-d4
The surrogate 1,2-Dichloroethane-d4 for method SW846 8260B was outside of control limits. The % Recovery was reported as 149 and the control limits were 71 to 146. This result was reported at a dilution of 50.				
2205730009	1	116-0130-TB5B	SW846 8260B	1,2-Dichloroethane-d4
The surrogate 1,2-Dichloroethane-d4 for method SW846 8260B was outside of control limits. The % Recovery was reported as 50.8 and the control limits were 71 to 146. This result was reported at a dilution of 500.				
2205730009	2	116-0130-TB5B	SW846 8260B	4-Bromofluorobenzene
The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 175 and the control limits were 46 to 138. This result was reported at a dilution of 500.				
2205730009	3	116-0130-TB5B	SW846 8260B	1,2-Dichloroethane-d4
The surrogate 1,2-Dichloroethane-d4 for method SW846 8260B was outside of control limits. The % Recovery was reported as 206 and the control limits were 71 to 146. This result was reported at a dilution of 2500.				
2205730010	1	116-0130-TB6A	SW846 8260B	Toluene-d8
The surrogate Toluene-d8 for method SW846 8260B was outside of control limits. The % Recovery was reported as 165 and the control limits were 54 to 141. This result was reported at a dilution of 50.				
2205730010	2	116-0130-TB6A	SW846 8260B	4-Bromofluorobenzene
The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 157 and the control limits were 46 to 138. This result was reported at a dilution of 50.				
2205730011	1	116-0130-TB6B	SW846 8260B	1,2-Dichloroethane-d4
The surrogate 1,2-Dichloroethane-d4 for method SW846 8260B was outside of control limits. The % Recovery was reported as 150 and the control limits were 71 to 146. This result was reported at a dilution of 50.				
2205730011	2	116-0130-TB6B	SW846 8260B	Toluene-d8
The surrogate Toluene-d8 for method SW846 8260B was outside of control limits. The % Recovery was reported as 161 and the control limits were 54 to 141. This result was reported at a dilution of 50.				
2205730011	3	116-0130-TB6B	SW846 8260B	4-Bromofluorobenzene
The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 151 and the control limits were 46 to 138. This result was reported at a dilution of 50.				
2205730012	1	116-0130-TB7A	SW846 8260B	Toluene-d8
The surrogate Toluene-d8 for method SW846 8260B was outside of control limits. The % Recovery was reported as 158 and the control limits were 54 to 141. This result was reported at a dilution of 50.				
2205730012	2	116-0130-TB7A	SW846 8260B	4-Bromofluorobenzene
The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 145 and the control limits were 46 to 138. This result was reported at a dilution of 50.				

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**ANALYTICAL RESULTS**

Workorder: 2205730 Quinns Cafe Stop/26116

<b>2205730013</b>	1	116-0130-TB7B	SW846 8260B	1,2-Dichloroethane-d4
The surrogate 1,2-Dichloroethane-d4 for method SW846 8260B was outside of control limits. The % Recovery was reported as 148 and the control limits were 71 to 146. This result was reported at a dilution of 50.				
<b>2205730013</b>	2	116-0130-TB7B	SW846 8260B	Toluene-d8
The surrogate Toluene-d8 for method SW846 8260B was outside of control limits. The % Recovery was reported as 157 and the control limits were 54 to 141. This result was reported at a dilution of 50.				
<b>2205730013</b>	3	116-0130-TB7B	SW846 8260B	4-Bromofluorobenzene
The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 149 and the control limits were 46 to 138. This result was reported at a dilution of 50.				
<b>2205730021</b>	1	116-0130-MW5A	SW846 8260B	Toluene-d8
The surrogate Toluene-d8 for method SW846 8260B was outside of control limits. The % Recovery was reported as 153 and the control limits were 54 to 141. This result was reported at a dilution of 50.				
<b>2205730021</b>	2	116-0130-MW5A	SW846 8260B	4-Bromofluorobenzene
The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 142 and the control limits were 46 to 138. This result was reported at a dilution of 50.				

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34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

# Environmetal

## CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /  
SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 4  
Courier: FedEx  
Tracking #: 8110 0423  
1890



Co. Name: Pennsylvania Tectonics, Inc.  
Contact (Report to): Martin Gilgallon  
Address: 723 main street  
Archbald, PA 18403

Phone:  
(570) 487-1959

Bill to (if different than Report to):

PO#:

Project Name/ID: Quince Cafe Stop / 26116 ALS Quote #:

TAT: ☒ Normal-Standard TAT is 10-12 business days.

☐ Rush-Subject to ALS approval and surcharges.

Email? ☒ Y ☐ N  
Fax? ☒ Y ☐ N

Sample Description/Location  
(as it will appear on the lab report)

Sample	COC Comments	Sample Date	Military Time
1 116 - 0130 - TB1		1/31/17	1005
2 116 - 0130 - TB2A		1/31/17	1026
3 116 - 0130 - TB2B		1/31/17	1055
4 116 - 0130 - TB3A		1/31/17	0935
5 116 - 0130 - TB3B		1/31/17	0955
6 116 - 0130 - TB4A		1/31/17	1040
7 116 - 0130 - TB4B		1/31/17	1044
8 116 - 0130 - TB5A		1/31/17	1246

SAMPLED BY (Please Print):

Chris Herman

Project Comments:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Chris Herman / PA Tectonics	2/1/17	1200	2 FedEx 8110 0423 1890	2/1/17	1200
3			4 NW	2-27-17	1859
5			6		
7			8		
9			10		

Container Type	CG	CG
Container Size	40L	402
Preservative	MSOH	NONE

### ANALYSES/METHOD REQUESTED

Unleaded Gasoline	Unleaded Gasoline
26116	

### Enter Number of Containers Per Analysis

Correct container?	Correct sample volume?	Correct preservation?	Headspace/volatiles?	Container in good condition?
Y	Y	Y	Y	Y
Correct container?	Correct sample volume?	Correct preservation?	Headspace/volatiles?	Container in good condition?
Y	Y	Y	Y	Y

ALS FIELD SERVICES	SDWA	Form 7-2	Yes	Yes	Yes	Yes
Standard	CLP-like	NIJ-Reduced	NIJ-Full	Other	EDs	DD Criteria Required?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Copies: WHITE - ORIGINAL - CUSTOMER COPY  
\* G=Grab; C=Composite  
\*\*Matrix: AL=Air; DW=Drinking Water; GW=Groundwater; Oil/Oil; CL=Other Liquid; SL=Sludge; WP=Wipe; WW=Wastewater  
\*\*\*Container Type: AG=Amber Glass; CG=Clear Glass, PL=Plastic. Container Size: 250ml, 500ml, 1L, 500L, etc. Preservatives: HCl, HNO3, NaOH, etc.





34 Dogwood Lane  
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F. 717-944-1430

# Environmental

## CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Page 2 of 4  
Courier: FedEx  
Tracking #: 81100423

2205730

Co. Name: Pennsylvania Tectonics, Inc.

Contact (Report to): Martin Gilgallon

Address: 723 main street

Archbald, PA 18403

Phone:

(570) 487-1959

Bill to (if different than Report to):

PO#:

Project Name/ID: Quinn's Cafe Stop / 20114 ALS Quote #:

TAT: ☒ Normal Standard TAT is 10-12 business days.

☐ Rush Subject to ALS approval and surcharges.

Email?

Fax?

☒ Y ☐ N mgilgallon@pa.tectonics.com

Sample Description/Location

(as it will appear on the lab report)

COC Comments

Sample Date

Military Time

1 110-0130-TB5B

2 110-0130-TB6A

3 110-0130-TB6B

4 110-0130-TB7A

5 110-0130-TB7B

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34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

# Environmental

## CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /  
SAMPLER. INSTRUCTIONS ON THE BACK.

Page 4 of 4  
Courier: FedEx  
Tracking #: 8110 0423  
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2205730

Co. Name: Pennsylvania Technics, Inc.

Contact (Report to): Martin Gilgallon

Address: 723 main Street

Archbold, PA 18403

Phone:

(570) 487-1959

Bill to (if different than Report to):

PO#:

Project Name/ID: Quiana's Lake Stop / 26116

ALS Quote #:

TAT: ☒ Normal-Standard TAT is 10-12 business days.

☐ Rush-Subject to ALS approval and surcharges.

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Sample Description/Location  
(as it will appear on the lab report)

1 110-0130- NW5B

COC Comments

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Military Time

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ALS FIELD SERVICES

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Lab

Composite Sampling

Rental Equipment

Other

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## APPENDIX O-4

Laboratory Analytical Data Sheets

Soil Sampling Activities - June 2017





June 14, 2017

Mr. Marty Gilgallon  
PA Tectonics  
723 Main Street  
Archbald, PA 18403

## Certificate of Analysis

Project Name: **Quinn's Cafe Stop/26116**Workorder: **2237289**

Purchase Order:

Workorder ID: **Quinn's Cafe Stop/26116**

Dear Mr. Gilgallon:

Enclosed are the analytical results for samples received by the laboratory on Friday, June 9, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

Ms. Amy K Borden

Project Coordinator

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

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**SAMPLE SUMMARY**

Workorder: 2237289 Quinn's Cafe Stop/26116

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2237289001	116-0605-MW6A	Solid	6/5/2017 09:35	6/9/2017 08:47	Collected by Client
2237289002	116-0605-MW6B	Solid	6/5/2017 09:50	6/9/2017 08:47	Collected by Client
2237289003	116-0605-MW7A	Solid	6/5/2017 12:54	6/9/2017 08:47	Collected by Client
2237289004	116-0605-MW7B	Solid	6/7/2017 13:45	6/9/2017 08:47	Collected by Client
2237289005	116-0605-MW8A	Solid	6/5/2017 12:22	6/9/2017 08:47	Collected by Client
2237289006	116-0605-MW8B	Solid	6/7/2017 10:07	6/9/2017 08:47	Collected by Client
2237289007	116-0605-MW9A	Solid	6/5/2017 10:23	6/9/2017 08:47	Collected by Client
2237289008	116-0605-MW9B	Solid	6/5/2017 10:35	6/9/2017 08:47	Collected by Client
2237289009	116-0605-MW10A	Solid	6/5/2017 11:06	6/9/2017 08:47	Collected by Client
2237289010	116-0605-MW10B	Solid	6/6/2017 13:35	6/9/2017 08:47	Collected by Client

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## SAMPLE SUMMARY

Workorder: 2237289 Quinn's Cafe Stop/26116

### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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## ANALYTICAL RESULTS

Workorder: 2237289 Quinn's Cafe Stop/26116

Lab ID: 2237289001  
Sample ID: 116-0605-MW6A

Date Collected: 6/5/2017 09:35 Matrix: Solid  
Date Received: 6/9/2017 08:47

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	38.4	SW846 8260B	6/5/17 09:35	SYB	6/13/17 06:55	SYB	A
Ethylbenzene	ND		ug/kg	38.4	SW846 8260B	6/5/17 09:35	SYB	6/13/17 06:55	SYB	A
Isopropylbenzene	ND		ug/kg	38.4	SW846 8260B	6/5/17 09:35	SYB	6/13/17 06:55	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	38.4	SW846 8260B	6/5/17 09:35	SYB	6/13/17 06:55	SYB	A
Naphthalene	ND		ug/kg	76.8	SW846 8260B	6/5/17 09:35	SYB	6/13/17 06:55	SYB	A
Toluene	ND		ug/kg	38.4	SW846 8260B	6/5/17 09:35	SYB	6/13/17 06:55	SYB	A
Total Xylenes	ND		ug/kg	115	SW846 8260B	6/5/17 09:35	SYB	6/13/17 06:55	SYB	A
1,2,4-Trimethylbenzene	ND		ug/kg	38.4	SW846 8260B	6/5/17 09:35	SYB	6/13/17 06:55	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	38.4	SW846 8260B	6/5/17 09:35	SYB	6/13/17 06:55	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	119		%	71 - 146	SW846 8260B	6/5/17 09:35	SYB	6/13/17 06:55	SYB	A
4-Bromofluorobenzene (S)	118		%	46 - 138	SW846 8260B	6/5/17 09:35	SYB	6/13/17 06:55	SYB	A
Dibromofluoromethane (S)	105		%	42 - 143	SW846 8260B	6/5/17 09:35	SYB	6/13/17 06:55	SYB	A
Toluene-d8 (S)	121		%	54 - 141	SW846 8260B	6/5/17 09:35	SYB	6/13/17 06:55	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	9.3		%	0.1	S2540G-11			6/11/17 19:34	VXF	
Total Solids	90.7		%	0.1	S2540G-11			6/11/17 19:34	VXF	



Ms. Amy K Borden  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2237289 Quinn's Cafe Stop/26116

Lab ID: 2237289002  
Sample ID: 116-0605-MW6B

Date Collected: 6/5/2017 09:50 Matrix: Solid  
Date Received: 6/9/2017 08:47

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	26.3	SW846 8260B	6/5/17 09:50	SYB	6/13/17 07:17	SYB	A
Ethylbenzene	ND		ug/kg	26.3	SW846 8260B	6/5/17 09:50	SYB	6/13/17 07:17	SYB	A
Isopropylbenzene	ND		ug/kg	26.3	SW846 8260B	6/5/17 09:50	SYB	6/13/17 07:17	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	26.3	SW846 8260B	6/5/17 09:50	SYB	6/13/17 07:17	SYB	A
Naphthalene	ND		ug/kg	52.6	SW846 8260B	6/5/17 09:50	SYB	6/13/17 07:17	SYB	A
Toluene	ND		ug/kg	26.3	SW846 8260B	6/5/17 09:50	SYB	6/13/17 07:17	SYB	A
Total Xylenes	ND		ug/kg	79.0	SW846 8260B	6/5/17 09:50	SYB	6/13/17 07:17	SYB	A
1,2,4-Trimethylbenzene	ND		ug/kg	26.3	SW846 8260B	6/5/17 09:50	SYB	6/13/17 07:17	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	26.3	SW846 8260B	6/5/17 09:50	SYB	6/13/17 07:17	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	119		%	71 - 146	SW846 8260B	6/5/17 09:50	SYB	6/13/17 07:17	SYB	A
4-Bromofluorobenzene (S)	116		%	46 - 138	SW846 8260B	6/5/17 09:50	SYB	6/13/17 07:17	SYB	A
Dibromofluoromethane (S)	103		%	42 - 143	SW846 8260B	6/5/17 09:50	SYB	6/13/17 07:17	SYB	A
Toluene-d8 (S)	115		%	54 - 141	SW846 8260B	6/5/17 09:50	SYB	6/13/17 07:17	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	24.2		%	0.1	S2540G-11			6/11/17 19:34	VXF	
Total Solids	75.8		%	0.1	S2540G-11			6/11/17 19:34	VXF	



Ms. Amy K Borden  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2237289 Quinn's Cafe Stop/26116

Lab ID: 2237289003  
Sample ID: 116-0605-MW7A

Date Collected: 6/5/2017 12:54 Matrix: Solid  
Date Received: 6/9/2017 08:47

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	33.2	SW846 8260B	6/5/17 12:54	SYB	6/13/17 07:40	SYB	A
Ethylbenzene	ND		ug/kg	33.2	SW846 8260B	6/5/17 12:54	SYB	6/13/17 07:40	SYB	A
Isopropylbenzene	ND		ug/kg	33.2	SW846 8260B	6/5/17 12:54	SYB	6/13/17 07:40	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	33.2	SW846 8260B	6/5/17 12:54	SYB	6/13/17 07:40	SYB	A
Naphthalene	ND		ug/kg	66.3	SW846 8260B	6/5/17 12:54	SYB	6/13/17 07:40	SYB	A
Toluene	ND		ug/kg	33.2	SW846 8260B	6/5/17 12:54	SYB	6/13/17 07:40	SYB	A
Total Xylenes	ND		ug/kg	99.5	SW846 8260B	6/5/17 12:54	SYB	6/13/17 07:40	SYB	A
1,2,4-Trimethylbenzene	ND		ug/kg	33.2	SW846 8260B	6/5/17 12:54	SYB	6/13/17 07:40	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	33.2	SW846 8260B	6/5/17 12:54	SYB	6/13/17 07:40	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	124		%	71 - 146	SW846 8260B	6/5/17 12:54	SYB	6/13/17 07:40	SYB	A
4-Bromofluorobenzene (S)	117		%	46 - 138	SW846 8260B	6/5/17 12:54	SYB	6/13/17 07:40	SYB	A
Dibromofluoromethane (S)	109		%	42 - 143	SW846 8260B	6/5/17 12:54	SYB	6/13/17 07:40	SYB	A
Toluene-d8 (S)	119		%	54 - 141	SW846 8260B	6/5/17 12:54	SYB	6/13/17 07:40	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	11.5		%	0.1	S2540G-11			6/11/17 19:34	VXF	
Total Solids	88.5		%	0.1	S2540G-11			6/11/17 19:34	VXF	



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Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2237289 Quinn's Cafe Stop/26116

Lab ID: 2237289004  
Sample ID: 116-0605-MW7B

Date Collected: 6/7/2017 13:45 Matrix: Solid  
Date Received: 6/9/2017 08:47

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	56.1	SW846 8260B	6/7/17 13:45	SYB	6/13/17 08:02	SYB	A
Ethylbenzene	ND		ug/kg	56.1	SW846 8260B	6/7/17 13:45	SYB	6/13/17 08:02	SYB	A
Isopropylbenzene	ND		ug/kg	56.1	SW846 8260B	6/7/17 13:45	SYB	6/13/17 08:02	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	56.1	SW846 8260B	6/7/17 13:45	SYB	6/13/17 08:02	SYB	A
Naphthalene	ND		ug/kg	112	SW846 8260B	6/7/17 13:45	SYB	6/13/17 08:02	SYB	A
Toluene	ND		ug/kg	56.1	SW846 8260B	6/7/17 13:45	SYB	6/13/17 08:02	SYB	A
Total Xylenes	ND		ug/kg	168	SW846 8260B	6/7/17 13:45	SYB	6/13/17 08:02	SYB	A
1,2,4-Trimethylbenzene	ND		ug/kg	56.1	SW846 8260B	6/7/17 13:45	SYB	6/13/17 08:02	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	56.1	SW846 8260B	6/7/17 13:45	SYB	6/13/17 08:02	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	115		%	71 - 146	SW846 8260B	6/7/17 13:45	SYB	6/13/17 08:02	SYB	A
4-Bromofluorobenzene (S)	116		%	46 - 138	SW846 8260B	6/7/17 13:45	SYB	6/13/17 08:02	SYB	A
Dibromofluoromethane (S)	99.4		%	42 - 143	SW846 8260B	6/7/17 13:45	SYB	6/13/17 08:02	SYB	A
Toluene-d8 (S)	115		%	54 - 141	SW846 8260B	6/7/17 13:45	SYB	6/13/17 08:02	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	19.6		%	0.1	S2540G-11			6/11/17 19:34	VXF	
Total Solids	80.4		%	0.1	S2540G-11			6/11/17 19:34	VXF	



Ms. Amy K Borden  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2237289 Quinn's Cafe Stop/26116

Lab ID: 2237289005  
Sample ID: 116-0605-MW8A

Date Collected: 6/5/2017 12:22 Matrix: Solid  
Date Received: 6/9/2017 08:47

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	43.2	SW846 8260B	6/5/17 12:22	SYB	6/13/17 08:25	SYB	A
Ethylbenzene	ND		ug/kg	43.2	SW846 8260B	6/5/17 12:22	SYB	6/13/17 08:25	SYB	A
Isopropylbenzene	ND		ug/kg	43.2	SW846 8260B	6/5/17 12:22	SYB	6/13/17 08:25	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	43.2	SW846 8260B	6/5/17 12:22	SYB	6/13/17 08:25	SYB	A
Naphthalene	ND		ug/kg	86.4	SW846 8260B	6/5/17 12:22	SYB	6/13/17 08:25	SYB	A
Toluene	ND		ug/kg	43.2	SW846 8260B	6/5/17 12:22	SYB	6/13/17 08:25	SYB	A
Total Xylenes	ND		ug/kg	130	SW846 8260B	6/5/17 12:22	SYB	6/13/17 08:25	SYB	A
1,2,4-Trimethylbenzene	ND		ug/kg	43.2	SW846 8260B	6/5/17 12:22	SYB	6/13/17 08:25	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	43.2	SW846 8260B	6/5/17 12:22	SYB	6/13/17 08:25	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	125		%	71 - 146	SW846 8260B	6/5/17 12:22	SYB	6/13/17 08:25	SYB	A
4-Bromofluorobenzene (S)	122		%	46 - 138	SW846 8260B	6/5/17 12:22	SYB	6/13/17 08:25	SYB	A
Dibromofluoromethane (S)	109		%	42 - 143	SW846 8260B	6/5/17 12:22	SYB	6/13/17 08:25	SYB	A
Toluene-d8 (S)	124		%	54 - 141	SW846 8260B	6/5/17 12:22	SYB	6/13/17 08:25	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	12.5		%	0.1	S2540G-11			6/11/17 19:34	VXF	
Total Solids	87.5		%	0.1	S2540G-11			6/11/17 19:34	VXF	



Ms. Amy K Borden  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2237289 Quinn's Cafe Stop/26116

Lab ID: 2237289006  
Sample ID: 116-0605-MW8B

Date Collected: 6/7/2017 10:07 Matrix: Solid  
Date Received: 6/9/2017 08:47

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	42.8	SW846 8260B	6/7/17 10:07	SYB	6/14/17 03:51	SYB	A
Ethylbenzene	ND		ug/kg	42.8	SW846 8260B	6/7/17 10:07	SYB	6/14/17 03:51	SYB	A
Isopropylbenzene	ND		ug/kg	42.8	SW846 8260B	6/7/17 10:07	SYB	6/14/17 03:51	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	42.8	SW846 8260B	6/7/17 10:07	SYB	6/14/17 03:51	SYB	A
Naphthalene	ND		ug/kg	85.5	SW846 8260B	6/7/17 10:07	SYB	6/14/17 03:51	SYB	A
Toluene	ND		ug/kg	42.8	SW846 8260B	6/7/17 10:07	SYB	6/14/17 03:51	SYB	A
Total Xylenes	ND		ug/kg	128	SW846 8260B	6/7/17 10:07	SYB	6/14/17 03:51	SYB	A
1,2,4-Trimethylbenzene	ND		ug/kg	42.8	SW846 8260B	6/7/17 10:07	SYB	6/14/17 03:51	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	42.8	SW846 8260B	6/7/17 10:07	SYB	6/14/17 03:51	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	113		%	71 - 146	SW846 8260B	6/7/17 10:07	SYB	6/14/17 03:51	SYB	A
4-Bromofluorobenzene (S)	105		%	46 - 138	SW846 8260B	6/7/17 10:07	SYB	6/14/17 03:51	SYB	A
Dibromofluoromethane (S)	101		%	42 - 143	SW846 8260B	6/7/17 10:07	SYB	6/14/17 03:51	SYB	A
Toluene-d8 (S)	108		%	54 - 141	SW846 8260B	6/7/17 10:07	SYB	6/14/17 03:51	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	11.0		%	0.1	S2540G-11			6/11/17 19:34	VXF	
Total Solids	89.0		%	0.1	S2540G-11			6/11/17 19:34	VXF	



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## ANALYTICAL RESULTS

Workorder: 2237289 Quinn's Cafe Stop/26116

Lab ID: 2237289007  
Sample ID: 116-0605-MW9A

Date Collected: 6/5/2017 10:23 Matrix: Solid  
Date Received: 6/9/2017 08:47

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	37.3	SW846 8260B	6/5/17 10:23	SYB	6/14/17 04:13	SYB	A
Ethylbenzene	ND		ug/kg	37.3	SW846 8260B	6/5/17 10:23	SYB	6/14/17 04:13	SYB	A
Isopropylbenzene	ND		ug/kg	37.3	SW846 8260B	6/5/17 10:23	SYB	6/14/17 04:13	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	37.3	SW846 8260B	6/5/17 10:23	SYB	6/14/17 04:13	SYB	A
Naphthalene	ND		ug/kg	74.6	SW846 8260B	6/5/17 10:23	SYB	6/14/17 04:13	SYB	A
Toluene	ND		ug/kg	37.3	SW846 8260B	6/5/17 10:23	SYB	6/14/17 04:13	SYB	A
Total Xylenes	ND		ug/kg	112	SW846 8260B	6/5/17 10:23	SYB	6/14/17 04:13	SYB	A
1,2,4-Trimethylbenzene	ND		ug/kg	37.3	SW846 8260B	6/5/17 10:23	SYB	6/14/17 04:13	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	37.3	SW846 8260B	6/5/17 10:23	SYB	6/14/17 04:13	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	124		%	71 - 146	SW846 8260B	6/5/17 10:23	SYB	6/14/17 04:13	SYB	A
4-Bromofluorobenzene (S)	124		%	46 - 138	SW846 8260B	6/5/17 10:23	SYB	6/14/17 04:13	SYB	A
Dibromofluoromethane (S)	109		%	42 - 143	SW846 8260B	6/5/17 10:23	SYB	6/14/17 04:13	SYB	A
Toluene-d8 (S)	122		%	54 - 141	SW846 8260B	6/5/17 10:23	SYB	6/14/17 04:13	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	14.0		%	0.1	S2540G-11			6/11/17 19:34	VXF	
Total Solids	86.0		%	0.1	S2540G-11			6/11/17 19:34	VXF	



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## ANALYTICAL RESULTS

Workorder: 2237289 Quinn's Cafe Stop/26116

Lab ID: 2237289008  
Sample ID: 116-0605-MW9B

Date Collected: 6/5/2017 10:35 Matrix: Solid  
Date Received: 6/9/2017 08:47

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	36.6	SW846 8260B	6/5/17 10:35	SYB	6/14/17 04:36	SYB	A
Ethylbenzene	ND		ug/kg	36.6	SW846 8260B	6/5/17 10:35	SYB	6/14/17 04:36	SYB	A
Isopropylbenzene	ND		ug/kg	36.6	SW846 8260B	6/5/17 10:35	SYB	6/14/17 04:36	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	36.6	SW846 8260B	6/5/17 10:35	SYB	6/14/17 04:36	SYB	A
Naphthalene	ND		ug/kg	73.2	SW846 8260B	6/5/17 10:35	SYB	6/14/17 04:36	SYB	A
Toluene	ND		ug/kg	36.6	SW846 8260B	6/5/17 10:35	SYB	6/14/17 04:36	SYB	A
Total Xylenes	ND		ug/kg	110	SW846 8260B	6/5/17 10:35	SYB	6/14/17 04:36	SYB	A
1,2,4-Trimethylbenzene	ND		ug/kg	36.6	SW846 8260B	6/5/17 10:35	SYB	6/14/17 04:36	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	36.6	SW846 8260B	6/5/17 10:35	SYB	6/14/17 04:36	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	124		%	71 - 146	SW846 8260B	6/5/17 10:35	SYB	6/14/17 04:36	SYB	A
4-Bromofluorobenzene (S)	119		%	46 - 138	SW846 8260B	6/5/17 10:35	SYB	6/14/17 04:36	SYB	A
Dibromofluoromethane (S)	112		%	42 - 143	SW846 8260B	6/5/17 10:35	SYB	6/14/17 04:36	SYB	A
Toluene-d8 (S)	124		%	54 - 141	SW846 8260B	6/5/17 10:35	SYB	6/14/17 04:36	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	10.6		%	0.1	S2540G-11			6/11/17 19:34	VXF	
Total Solids	89.4		%	0.1	S2540G-11			6/11/17 19:34	VXF	



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## ANALYTICAL RESULTS

Workorder: 2237289 Quinn's Cafe Stop/26116

Lab ID: 2237289009  
Sample ID: 116-0605-MW10A

Date Collected: 6/5/2017 11:06 Matrix: Solid  
Date Received: 6/9/2017 08:47

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	42.4	SW846 8260B	6/5/17 11:06	SYB	6/14/17 04:58	SYB	A
Ethylbenzene	ND		ug/kg	42.4	SW846 8260B	6/5/17 11:06	SYB	6/14/17 04:58	SYB	A
Isopropylbenzene	ND		ug/kg	42.4	SW846 8260B	6/5/17 11:06	SYB	6/14/17 04:58	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	42.4	SW846 8260B	6/5/17 11:06	SYB	6/14/17 04:58	SYB	A
Naphthalene	ND		ug/kg	84.8	SW846 8260B	6/5/17 11:06	SYB	6/14/17 04:58	SYB	A
Toluene	ND		ug/kg	42.4	SW846 8260B	6/5/17 11:06	SYB	6/14/17 04:58	SYB	A
Total Xylenes	ND		ug/kg	127	SW846 8260B	6/5/17 11:06	SYB	6/14/17 04:58	SYB	A
1,2,4-Trimethylbenzene	ND		ug/kg	42.4	SW846 8260B	6/5/17 11:06	SYB	6/14/17 04:58	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	42.4	SW846 8260B	6/5/17 11:06	SYB	6/14/17 04:58	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	128		%	71 - 146	SW846 8260B	6/5/17 11:06	SYB	6/14/17 04:58	SYB	A
4-Bromofluorobenzene (S)	123		%	46 - 138	SW846 8260B	6/5/17 11:06	SYB	6/14/17 04:58	SYB	A
Dibromofluoromethane (S)	115		%	42 - 143	SW846 8260B	6/5/17 11:06	SYB	6/14/17 04:58	SYB	A
Toluene-d8 (S)	126		%	54 - 141	SW846 8260B	6/5/17 11:06	SYB	6/14/17 04:58	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	10.2		%	0.1	S2540G-11			6/11/17 19:34	VXF	
Total Solids	89.8		%	0.1	S2540G-11			6/11/17 19:34	VXF	



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## ANALYTICAL RESULTS

Workorder: 2237289 Quinn's Cafe Stop/26116

Lab ID: 2237289010  
Sample ID: 116-0605-MW10B

Date Collected: 6/6/2017 13:35 Matrix: Solid  
Date Received: 6/9/2017 08:47

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	43.1	SW846 8260B	6/6/17 13:35	SYB	6/14/17 05:21	SYB	A
Ethylbenzene	ND		ug/kg	43.1	SW846 8260B	6/6/17 13:35	SYB	6/14/17 05:21	SYB	A
Isopropylbenzene	ND		ug/kg	43.1	SW846 8260B	6/6/17 13:35	SYB	6/14/17 05:21	SYB	A
Methyl t-Butyl Ether	ND		ug/kg	43.1	SW846 8260B	6/6/17 13:35	SYB	6/14/17 05:21	SYB	A
Naphthalene	ND		ug/kg	86.3	SW846 8260B	6/6/17 13:35	SYB	6/14/17 05:21	SYB	A
Toluene	ND		ug/kg	43.1	SW846 8260B	6/6/17 13:35	SYB	6/14/17 05:21	SYB	A
Total Xylenes	ND		ug/kg	129	SW846 8260B	6/6/17 13:35	SYB	6/14/17 05:21	SYB	A
1,2,4-Trimethylbenzene	ND		ug/kg	43.1	SW846 8260B	6/6/17 13:35	SYB	6/14/17 05:21	SYB	A
1,3,5-Trimethylbenzene	ND		ug/kg	43.1	SW846 8260B	6/6/17 13:35	SYB	6/14/17 05:21	SYB	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	114		%	71 - 146	SW846 8260B	6/6/17 13:35	SYB	6/14/17 05:21	SYB	A
4-Bromofluorobenzene (S)	108		%	46 - 138	SW846 8260B	6/6/17 13:35	SYB	6/14/17 05:21	SYB	A
Dibromofluoromethane (S)	99.5		%	42 - 143	SW846 8260B	6/6/17 13:35	SYB	6/14/17 05:21	SYB	A
Toluene-d8 (S)	110		%	54 - 141	SW846 8260B	6/6/17 13:35	SYB	6/14/17 05:21	SYB	A
<b>WET CHEMISTRY</b>										
Moisture	8.7		%	0.1	S2540G-11			6/11/17 19:34	VXF	
Total Solids	91.3		%	0.1	S2540G-11			6/11/17 19:34	VXF	



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34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

**CHAIN OF CUSTODY/  
REQUEST FOR ANALYSIS**

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /  
SAMPLER. INSTRUCTIONS ON THE BACK.

Co. Name: PENNSYLVANIA TESTERIES, INC  
Contact (Report to): MURRAY GILLGON  
Address: 723 MAIN STREET  
ACHBARD PA 18403  
Phone: 570-487-1959

## Bill to (Re)form the Republic

**PO#:**

Project Name/#: Quinn's Cafe' stop/26016 ALS Quote #:

☒ Normal-Standard TAT is 10-12 business days.  
☐ Rush-Subject to ALS approval and surcharges.

mail?	X	149:1991102@prtextstudies-com
-------	---	-------------------------------

Y No.

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time
1 116 - 0605 - HW 6A		6.5.17	0935
2 116 - 0605 - HW 6B		6.5.17	0950
3 116 - 0605 - HW 7A		6.5.17	1254
4 116 - 0605 - HW 7B		6.7.17	1345
5 116 - 0605 - HW 8A		6.5.17	1222
6 116 - 0605 - HW 8B		6.7.17	1007
7 116 - 0605 - HW 9A		6.5.17	1023
8 116 - 0605 - HW 9B		6.5.17	1035

**Project Comments:**

**SAMPLED BY (Please Print):**

Kevin Cuyana / Parents

Relinquished By / Company Name

Relinquished By / Company Name

Relinquished By / Company Name	Date	Time
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Relinquished By / Company Name	Date	Time	Received By
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Relinquished By / Company Name	Date	Time	Received By / Company
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Relinquished By / Company Name	Date	Time	Received By / Company Name
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Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
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[illegible]

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time

[illegible][illegible][illegible]

## ALS





34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

# Environmetal

## CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Page 2 of 2  
Courier: **FED EX**  
Tracking #: **81131101**  
**6140**

Co. Name: **PENNSYLVANIA TETRAVICS, INC.**

Contact (for report): **MARTIN GILLIGAN**

Address: **723 MAIN STREET**

**ARLBAID PA 18403**

Phone: **570.487.8589**

Bill to (different from Report to):

PO#:

Project Name/ID: **Quinn's Case Stop / 26116ALS Quote #:**

TAT: ☒ Normal-Standard TAT is 10-12 business days.

☐ Rush-Subject to ALS approval and surcharges.

Email? ☒ Y ☐ N Fax? ☒ Y ☐ N

Sample Description/Location (as it will appear on the lab report)

COC Comments

Sample Date

Military Time

Enter Number of Containers Per Analysis

Container Size

Preservative Method

ANALYSES/METHOD REQUESTED

Notes:

No. of Coolers:

Therm. ID:

Cooler Temp:

Receipt Information (provided by Sample Provider)

Performance

Container ID

ALS Field Services

Rev 01-2013

ALS

Wednesday, June 14, 2017 4:23:38 PM

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Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

\* G-Grab; C-Composite

\*\*Matrix: AL=Air; DW=Drinking Water; GW=Groundwater; O=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wage; WW=Wastewater

\*\*\*Container Type: AG=Amber Glass; CG=Clear Glass; PL=Plastic; Container Size: 250ml, 500ml, 1L, 5gal., etc. Preservative: HCl, HNO3, NaOH, etc.

DO NOT WRITE IN THESE AREAS

DO NOT WRITE IN THESE AREAS

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DO NOT WRITE IN THESE AREAS

## APPENDIX O-5

### Laboratory Analytical Data Sheets

Soil Sampling Activities – August 2017 Storm Sewer Investigation



September 20, 2017

Mr. Marty Gilgallon  
LaBella-Dunmore  
723 Main Street  
Archbald, PA 18403

## Certificate of Analysis

Project Name: **26116/QUINN'S CAFE**Workorder: **2261933**

Purchase Order:

Workorder ID: **26116/QUINN'S CAFE**

Dear Mr. Gilgallon:

Enclosed are the analytical results for samples received by the laboratory on Friday, September 15, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

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ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Kevin Cucura

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

Ms. Amy K Borden  
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 2261933 26116/QUINN'S CAFE

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2261933001	116-0825-Storm 1	Solid	8/25/2017 13:30	9/15/2017 08:48	Mr. Kevin Cucura
2261933002	116-0828-Storm 2	Solid	8/28/2017 10:13	9/15/2017 08:48	Mr. Kevin Cucura
2261933003	116-0828-Sidewall 1	Solid	8/28/2017 11:05	9/15/2017 08:48	Mr. Kevin Cucura
2261933004	116-0828-Under Storm	Solid	8/28/2017 11:00	9/15/2017 08:48	Mr. Kevin Cucura

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**SAMPLE SUMMARY**

Workorder: 2261933 26116/QUINN'S CAFE

**Notes**

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

**Standard Acronyms/Flags**

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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### ANALYTICAL RESULTS

Workorder: 2261933 26116/QUINN'S CAFE

Lab ID: 2261933001

Date Collected: 8/25/2017 13:30

Matrix: Solid

Sample ID: 116-0825-Storm 1

Date Received: 9/15/2017 08:48

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	317		ug/kg	74.2	SW846 8260B	8/25/17 13:30	DD	9/19/17 17:22	DD	A
Ethylbenzene	388		ug/kg	74.2	SW846 8260B	8/25/17 13:30	DD	9/19/17 17:22	DD	A
Isopropylbenzene	ND		ug/kg	74.2	SW846 8260B	8/25/17 13:30	DD	9/19/17 17:22	DD	A
Methyl t-Butyl Ether	ND		ug/kg	74.2	SW846 8260B	8/25/17 13:30	DD	9/19/17 17:22	DD	A
Naphthalene	548		ug/kg	148	SW846 8260B	8/25/17 13:30	DD	9/19/17 17:22	DD	A
Toluene	1550		ug/kg	74.2	SW846 8260B	8/25/17 13:30	DD	9/19/17 17:22	DD	A
Total Xylenes	3580		ug/kg	223	SW846 8260B	8/25/17 13:30	DD	9/19/17 17:22	DD	A
1,2,4-Trimethylbenzene	1500		ug/kg	74.2	SW846 8260B	8/25/17 13:30	DD	9/19/17 17:22	DD	A
1,3,5-Trimethylbenzene	250		ug/kg	74.2	SW846 8260B	8/25/17 13:30	DD	9/19/17 17:22	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	83.6		%	71 - 146	SW846 8260B	8/25/17 13:30	DD	9/19/17 17:22	DD	A
4-Bromofluorobenzene (S)	82.7		%	46 - 138	SW846 8260B	8/25/17 13:30	DD	9/19/17 17:22	DD	A
Dibromofluoromethane (S)	67.2		%	42 - 143	SW846 8260B	8/25/17 13:30	DD	9/19/17 17:22	DD	A
Toluene-d8 (S)	80.5		%	54 - 141	SW846 8260B	8/25/17 13:30	DD	9/19/17 17:22	DD	A
<b>WET CHEMISTRY</b>										
Moisture	33.7		%	0.1	S2540G-11			9/18/17 10:48	AXD	
Total Solids	66.3	2	%	0.1	S2540G-11			9/18/17 10:48	AXD	



Ms. Amy K Borden  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2261933 26116/QUINN'S CAFE

Lab ID: 2261933002  
Sample ID: 116-0828-Storm 2

Date Collected: 8/28/2017 10:13 Matrix: Solid  
Date Received: 9/15/2017 08:48

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	46.2	SW846 8260B	8/28/17 10:13	DD	9/19/17 14:21	DD	A
Ethylbenzene	ND		ug/kg	46.2	SW846 8260B	8/28/17 10:13	DD	9/19/17 14:21	DD	A
Isopropylbenzene	ND		ug/kg	46.2	SW846 8260B	8/28/17 10:13	DD	9/19/17 14:21	DD	A
Methyl t-Butyl Ether	ND		ug/kg	46.2	SW846 8260B	8/28/17 10:13	DD	9/19/17 14:21	DD	A
Naphthalene	ND		ug/kg	92.5	SW846 8260B	8/28/17 10:13	DD	9/19/17 14:21	DD	A
Toluene	ND		ug/kg	46.2	SW846 8260B	8/28/17 10:13	DD	9/19/17 14:21	DD	A
Total Xylenes	ND		ug/kg	139	SW846 8260B	8/28/17 10:13	DD	9/19/17 14:21	DD	A
1,2,4-Trimethylbenzene	ND		ug/kg	46.2	SW846 8260B	8/28/17 10:13	DD	9/19/17 14:21	DD	A
1,3,5-Trimethylbenzene	ND		ug/kg	46.2	SW846 8260B	8/28/17 10:13	DD	9/19/17 14:21	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	75.9		%	71 - 146	SW846 8260B	8/28/17 10:13	DD	9/19/17 14:21	DD	A
4-Bromofluorobenzene (S)	77.2		%	46 - 138	SW846 8260B	8/28/17 10:13	DD	9/19/17 14:21	DD	A
Dibromofluoromethane (S)	59.7		%	42 - 143	SW846 8260B	8/28/17 10:13	DD	9/19/17 14:21	DD	A
Toluene-d8 (S)	76.2		%	54 - 141	SW846 8260B	8/28/17 10:13	DD	9/19/17 14:21	DD	A
<b>WET CHEMISTRY</b>										
Moisture	17.8		%	0.1	S2540G-11			9/18/17 10:48	AXD	
Total Solids	82.2	2	%	0.1	S2540G-11			9/18/17 10:48	AXD	



Ms. Amy K Borden  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2261933 26116/QUINN'S CAFE

Lab ID: 2261933003  
Sample ID: 116-0828-Sidewall 1

Date Collected: 8/28/2017 11:05 Matrix: Solid  
Date Received: 9/15/2017 08:48

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	45.4	SW846 8260B	8/28/17 11:05	DD	9/18/17 17:56	DD	A
Ethylbenzene	ND		ug/kg	45.4	SW846 8260B	8/28/17 11:05	DD	9/18/17 17:56	DD	A
Isopropylbenzene	ND		ug/kg	45.4	SW846 8260B	8/28/17 11:05	DD	9/18/17 17:56	DD	A
Methyl t-Butyl Ether	ND		ug/kg	45.4	SW846 8260B	8/28/17 11:05	DD	9/18/17 17:56	DD	A
Naphthalene	ND	1	ug/kg	90.9	SW846 8260B	8/28/17 11:05	DD	9/18/17 17:56	DD	A
Toluene	ND		ug/kg	45.4	SW846 8260B	8/28/17 11:05	DD	9/18/17 17:56	DD	A
Total Xylenes	ND		ug/kg	136	SW846 8260B	8/28/17 11:05	DD	9/18/17 17:56	DD	A
1,2,4-Trimethylbenzene	49.2		ug/kg	45.4	SW846 8260B	8/28/17 11:05	DD	9/18/17 17:56	DD	A
1,3,5-Trimethylbenzene	ND		ug/kg	45.4	SW846 8260B	8/28/17 11:05	DD	9/18/17 17:56	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	126		%	71 - 146	SW846 8260B	8/28/17 11:05	DD	9/18/17 17:56	DD	A
4-Bromofluorobenzene (S)	131		%	46 - 138	SW846 8260B	8/28/17 11:05	DD	9/18/17 17:56	DD	A
Dibromofluoromethane (S)	102		%	42 - 143	SW846 8260B	8/28/17 11:05	DD	9/18/17 17:56	DD	A
Toluene-d8 (S)	123		%	54 - 141	SW846 8260B	8/28/17 11:05	DD	9/18/17 17:56	DD	A
<b>WET CHEMISTRY</b>										
Moisture	10.7		%	0.1	S2540G-11			9/18/17 10:48	AXD	
Total Solids	89.3	2	%	0.1	S2540G-11			9/18/17 10:48	AXD	



Ms. Amy K Borden  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2261933 26116/QUINN'S CAFE

Lab ID: 2261933004  
Sample ID: 116-0828-Under Storm

Date Collected: 8/28/2017 11:00 Matrix: Solid  
Date Received: 9/15/2017 08:48

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	170		ug/kg	58.6	SW846 8260B	8/28/17 11:00	DD	9/19/17 15:06	DD	A
Ethylbenzene	917		ug/kg	58.6	SW846 8260B	8/28/17 11:00	DD	9/19/17 15:06	DD	A
Isopropylbenzene	559		ug/kg	58.6	SW846 8260B	8/28/17 11:00	DD	9/19/17 15:06	DD	A
Methyl t-Butyl Ether	ND		ug/kg	58.6	SW846 8260B	8/28/17 11:00	DD	9/19/17 15:06	DD	A
Naphthalene	1880		ug/kg	117	SW846 8260B	8/28/17 11:00	DD	9/19/17 15:06	DD	A
Toluene	159		ug/kg	58.6	SW846 8260B	8/28/17 11:00	DD	9/19/17 15:06	DD	A
Total Xylenes	934		ug/kg	176	SW846 8260B	8/28/17 11:00	DD	9/19/17 15:06	DD	A
1,2,4-Trimethylbenzene	8480		ug/kg	58.6	SW846 8260B	8/28/17 11:00	DD	9/19/17 15:06	DD	A
1,3,5-Trimethylbenzene	485		ug/kg	58.6	SW846 8260B	8/28/17 11:00	DD	9/19/17 15:06	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	101		%	71 - 146	SW846 8260B	8/28/17 11:00	DD	9/19/17 15:06	DD	A
4-Bromofluorobenzene (S)	99.2		%	46 - 138	SW846 8260B	8/28/17 11:00	DD	9/19/17 15:06	DD	A
Dibromofluoromethane (S)	78.3		%	42 - 143	SW846 8260B	8/28/17 11:00	DD	9/19/17 15:06	DD	A
Toluene-d8 (S)	97.7		%	54 - 141	SW846 8260B	8/28/17 11:00	DD	9/19/17 15:06	DD	A
<b>WET CHEMISTRY</b>										
Moisture	23.3		%	0.1	S2540G-11			9/18/17 10:48	AXD	
Total Solids	76.7	1	%	0.1	S2540G-11			9/18/17 10:48	AXD	



Ms. Amy K Borden  
Project Coordinator

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**PARAMETER QUALIFIERS**

Lab ID	#	Sample ID	Analytical Method	Analyte
2261933001	2	116-0825-Storm 1	S2540G-11	Total Solids
Analyte was analyzed past the 14 day holding time.				
2261933002	2	116-0828-Storm 2	S2540G-11	Total Solids
Analyte was analyzed past the 14 day holding time.				
2261933003	1	116-0828-Sidewall 1	SW846 8260B	Naphthalene
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 196 and the control limits were 46 to 142.				
2261933003	2	116-0828-Sidewall 1	S2540G-11	Total Solids
Analyte was analyzed past the 14 day holding time.				
2261933004	1	116-0828-Under Storm	S2540G-11	Total Solids
Analyte was analyzed past the 14 day holding time.				

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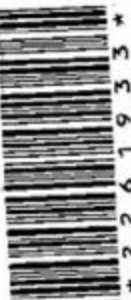
34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

# Environmetal

## CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/  
SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 1  
Courier: FEDEX  
Tracking #: 8117 5117  
6901



Co. Name: PENNSYLVANIA TECTONICS INC

Contact (Report to): MARTIN GILGALLON

Address: 723 MAIN STREET  
ARCHBALD PA 18403

Phone: 570-487-1959

Bill to (if different than Report to):

PO#:

Project Name/ID: 2011/Quinn's Cafe

ALS Quote #:

TAT: ☒ Normal-Standard TAT is 10-12 business days.  
☐ Rush-Subject to ALS approval and surcharges.

Date Required:  
Approved By:

Email? ☒ Y ☐ N  
Fax? ☐ Y ☐ N

Y No: mcgilgallon@patectionics.com

Sample Description/Location  
(as it will appear on the lab report)

COC Comments

Sample Date

Military Time

G or C

Matrix

Enter Number of Containers Per Analysis

ANALYSES/METHOD REQUESTED

Notes:

No. of Coolers:

Therm ID: 309

Cooler Temp: 5

Received In: 5/16/17

Container Information  
(Complete for each container)

Correct container?

Correct sample volume?

Correct preservation?

Headspace/Volatility?

Container in good condition?

COC Labels complete/accurate?

Received on ice?

(If present) Seals intact?

Custody seals Present?

ALS FIELD SERVICES

Standard

CLP-300

NU-Reduced

NU-Full

SWA Form 100

SWA Samples Collected in?

MD

NY

PA

Other

EDS

Required?

DOO Criteria Required?

Project Comments:

SAMPLED BY (Please Print):

Relinquished By / Company Name

Date

Received By / Company Name

Date

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

Time

## APPENDIX O-6

Laboratory Analytical Data Sheets

Soil Sampling Activities – November 2017

November 27, 2017

Mr. Marty Gilgallon  
LaBella-Dunmore  
1000 Dunham Drive  
Suite B  
Scranton, PA 18512

## Certificate of Analysis

Project Name: **Quinns' Cefe/2171853**Workorder: **2276532**

Purchase Order:

Workorder ID: **Quinns' Cefe/2171853**

Dear Mr. Gilgallon:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, November 14, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

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ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Kevin Cucura

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*



Ms. Amy K Borden  
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 2276532 Quinns' Cefe/2171853

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2276532001	116-1109-TB12A	Solid	11/9/2017 09:50	11/14/2017 14:02	Mr. Dean Cruciani
2276532002	116-1109-TB12B	Solid	11/9/2017 10:36	11/14/2017 14:02	Mr. Dean Cruciani
2276532003	116-1109-TB11A	Solid	11/9/2017 11:10	11/14/2017 14:02	Mr. Dean Cruciani
2276532004	116-1109-TB11B	Solid	11/9/2017 11:25	11/14/2017 14:02	Mr. Dean Cruciani
2276532005	116-1109-TB10A	Solid	11/9/2017 12:06	11/14/2017 14:02	Mr. Dean Cruciani
2276532006	116-1109-TB10B	Solid	11/9/2017 12:23	11/14/2017 14:02	Mr. Dean Cruciani
2276532007	116-1109-TB9A	Solid	11/9/2017 13:44	11/14/2017 14:02	Mr. Dean Cruciani
2276532008	116-1109-TB9B	Solid	11/9/2017 14:40	11/14/2017 14:02	Mr. Dean Cruciani
2276532009	116-1109-TB8A	Solid	11/9/2017 15:35	11/14/2017 14:02	Mr. Dean Cruciani
2276532010	116-1109-TB8B	Solid	11/9/2017 15:42	11/14/2017 14:02	Mr. Dean Cruciani
2276532011	116-1109-PW12A	Solid	11/10/2017 10:10	11/14/2017 14:02	Mr. Dean Cruciani
2276532012	116-1109-PW12B	Solid	11/10/2017 10:17	11/14/2017 14:02	Mr. Dean Cruciani
2276532013	116-1109-PW13A	Solid	11/10/2017 08:45	11/14/2017 14:02	Mr. Dean Cruciani

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## SAMPLE SUMMARY

Workorder: 2276532 Quinns' Cefe/2171853

### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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## ANALYTICAL RESULTS

Workorder: 2276532 Quinns' Cefe/2171853

Lab ID: 2276532001  
Sample ID: 116-1109-TB12A

Date Collected: 11/9/2017 09:50 Matrix: Solid  
Date Received: 11/14/2017 14:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	28.4	SW846 8260B	11/9/17 09:50	JAH	11/20/17 17:03	DD	A
Ethylbenzene	ND		ug/kg	28.4	SW846 8260B	11/9/17 09:50	JAH	11/20/17 17:03	DD	A
Isopropylbenzene	ND		ug/kg	28.4	SW846 8260B	11/9/17 09:50	JAH	11/20/17 17:03	DD	A
Methyl t-Butyl Ether	ND		ug/kg	28.4	SW846 8260B	11/9/17 09:50	JAH	11/20/17 17:03	DD	A
Naphthalene	ND		ug/kg	56.8	SW846 8260B	11/9/17 09:50	JAH	11/20/17 17:03	DD	A
Toluene	ND		ug/kg	28.4	SW846 8260B	11/9/17 09:50	JAH	11/20/17 17:03	DD	A
Total Xylenes	ND		ug/kg	85.2	SW846 8260B	11/9/17 09:50	JAH	11/20/17 17:03	DD	A
1,2,4-Trimethylbenzene	ND		ug/kg	28.4	SW846 8260B	11/9/17 09:50	JAH	11/20/17 17:03	DD	A
1,3,5-Trimethylbenzene	ND		ug/kg	28.4	SW846 8260B	11/9/17 09:50	JAH	11/20/17 17:03	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	77.3		%	71 - 146	SW846 8260B	11/9/17 09:50	JAH	11/20/17 17:03	DD	A
4-Bromofluorobenzene (S)	74.9		%	46 - 138	SW846 8260B	11/9/17 09:50	JAH	11/20/17 17:03	DD	A
Dibromofluoromethane (S)	75		%	42 - 143	SW846 8260B	11/9/17 09:50	JAH	11/20/17 17:03	DD	A
Toluene-d8 (S)	85.5		%	54 - 141	SW846 8260B	11/9/17 09:50	JAH	11/20/17 17:03	DD	A
<b>WET CHEMISTRY</b>										
Moisture	11.2		%	0.1	S2540G-11			11/19/17 18:11	MLM	
Total Solids	88.8		%	0.1	S2540G-11			11/19/17 18:11	MLM	



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## ANALYTICAL RESULTS

Workorder: 2276532 Quinns' Cefe/2171853

Lab ID: 2276532002  
Sample ID: 116-1109-TB12B

Date Collected: 11/9/2017 10:36 Matrix: Solid  
Date Received: 11/14/2017 14:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	38.2	SW846 8260B	11/9/17 10:36	JAH	11/20/17 18:09	DD	A
Ethylbenzene	ND		ug/kg	38.2	SW846 8260B	11/9/17 10:36	JAH	11/20/17 18:09	DD	A
Isopropylbenzene	ND		ug/kg	38.2	SW846 8260B	11/9/17 10:36	JAH	11/20/17 18:09	DD	A
Methyl t-Butyl Ether	ND		ug/kg	38.2	SW846 8260B	11/9/17 10:36	JAH	11/20/17 18:09	DD	A
Naphthalene	ND		ug/kg	76.4	SW846 8260B	11/9/17 10:36	JAH	11/20/17 18:09	DD	A
Toluene	50.8		ug/kg	38.2	SW846 8260B	11/9/17 10:36	JAH	11/20/17 18:09	DD	A
Total Xylenes	ND		ug/kg	115	SW846 8260B	11/9/17 10:36	JAH	11/20/17 18:09	DD	A
1,2,4-Trimethylbenzene	ND		ug/kg	38.2	SW846 8260B	11/9/17 10:36	JAH	11/20/17 18:09	DD	A
1,3,5-Trimethylbenzene	ND		ug/kg	38.2	SW846 8260B	11/9/17 10:36	JAH	11/20/17 18:09	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	63.2	1	%	71 - 146	SW846 8260B	11/9/17 10:36	JAH	11/20/17 18:09	DD	A
4-Bromofluorobenzene (S)	45.6	2	%	46 - 138	SW846 8260B	11/9/17 10:36	JAH	11/20/17 18:09	DD	A
Dibromofluoromethane (S)	63.1		%	42 - 143	SW846 8260B	11/9/17 10:36	JAH	11/20/17 18:09	DD	A
Toluene-d8 (S)	67.2		%	54 - 141	SW846 8260B	11/9/17 10:36	JAH	11/20/17 18:09	DD	A
<b>WET CHEMISTRY</b>										
Moisture	20.1		%	0.1	S2540G-11			11/19/17 18:11	MLM	
Total Solids	79.9		%	0.1	S2540G-11			11/19/17 18:11	MLM	



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## ANALYTICAL RESULTS

Workorder: 2276532 Quinns' Cefe/2171853

Lab ID: 2276532003  
Sample ID: 116-1109-TB11A

Date Collected: 11/9/2017 11:10 Matrix: Solid  
Date Received: 11/14/2017 14:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	1190		ug/kg	33.6	SW846 8260B	11/9/17 11:10	JAH	11/20/17 18:31	DD	A
Ethylbenzene	52.2		ug/kg	33.6	SW846 8260B	11/9/17 11:10	JAH	11/20/17 18:31	DD	A
Isopropylbenzene	149		ug/kg	33.6	SW846 8260B	11/9/17 11:10	JAH	11/20/17 18:31	DD	A
Methyl t-Butyl Ether	ND		ug/kg	33.6	SW846 8260B	11/9/17 11:10	JAH	11/20/17 18:31	DD	A
Naphthalene	ND		ug/kg	67.3	SW846 8260B	11/9/17 11:10	JAH	11/20/17 18:31	DD	A
Toluene	58.8		ug/kg	33.6	SW846 8260B	11/9/17 11:10	JAH	11/20/17 18:31	DD	A
Total Xylenes	674		ug/kg	101	SW846 8260B	11/9/17 11:10	JAH	11/20/17 18:31	DD	A
1,2,4-Trimethylbenzene	120		ug/kg	33.6	SW846 8260B	11/9/17 11:10	JAH	11/20/17 18:31	DD	A
1,3,5-Trimethylbenzene	54.8		ug/kg	33.6	SW846 8260B	11/9/17 11:10	JAH	11/20/17 18:31	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	88.5		%	71 - 146	SW846 8260B	11/9/17 11:10	JAH	11/20/17 18:31	DD	A
4-Bromofluorobenzene (S)	85.1		%	46 - 138	SW846 8260B	11/9/17 11:10	JAH	11/20/17 18:31	DD	A
Dibromofluoromethane (S)	83.2		%	42 - 143	SW846 8260B	11/9/17 11:10	JAH	11/20/17 18:31	DD	A
Toluene-d8 (S)	94.8		%	54 - 141	SW846 8260B	11/9/17 11:10	JAH	11/20/17 18:31	DD	A
<b>WET CHEMISTRY</b>										
Moisture	11.7		%	0.1	S2540G-11			11/19/17 18:11	MLM	
Total Solids	88.3		%	0.1	S2540G-11			11/19/17 18:11	MLM	



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## ANALYTICAL RESULTS

Workorder: 2276532 Quinns' Cefe/2171853

Lab ID: 2276532004  
Sample ID: 116-1109-TB11B

Date Collected: 11/9/2017 11:25 Matrix: Solid  
Date Received: 11/14/2017 14:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	697		ug/kg	179	SW846 8260B	11/9/17 11:25	CJG	11/18/17 04:31	CJG	A
Ethylbenzene	4270		ug/kg	179	SW846 8260B	11/9/17 11:25	CJG	11/18/17 04:31	CJG	A
Isopropylbenzene	2680		ug/kg	179	SW846 8260B	11/9/17 11:25	CJG	11/18/17 04:31	CJG	A
Methyl t-Butyl Ether	ND		ug/kg	179	SW846 8260B	11/9/17 11:25	CJG	11/18/17 04:31	CJG	A
Naphthalene	12400		ug/kg	359	SW846 8260B	11/9/17 11:25	CJG	11/18/17 04:31	CJG	A
Toluene	260		ug/kg	179	SW846 8260B	11/9/17 11:25	CJG	11/18/17 04:31	CJG	A
Total Xylenes	3520		ug/kg	538	SW846 8260B	11/9/17 11:25	CJG	11/18/17 04:31	CJG	A
1,2,4-Trimethylbenzene	3650		ug/kg	179	SW846 8260B	11/9/17 11:25	CJG	11/18/17 04:31	CJG	A
1,3,5-Trimethylbenzene	ND		ug/kg	179	SW846 8260B	11/9/17 11:25	CJG	11/18/17 04:31	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	93.9		%	71 - 146	SW846 8260B	11/9/17 11:25	CJG	11/18/17 04:31	CJG	A
4-Bromofluorobenzene (S)	101		%	46 - 138	SW846 8260B	11/9/17 11:25	CJG	11/18/17 04:31	CJG	A
Dibromofluoromethane (S)	78.1		%	42 - 143	SW846 8260B	11/9/17 11:25	CJG	11/18/17 04:31	CJG	A
Toluene-d8 (S)	98.1		%	54 - 141	SW846 8260B	11/9/17 11:25	CJG	11/18/17 04:31	CJG	A
<b>WET CHEMISTRY</b>										
Moisture	18.8		%	0.1	S2540G-11			11/19/17 18:11	MLM	
Total Solids	81.2		%	0.1	S2540G-11			11/19/17 18:11	MLM	



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## ANALYTICAL RESULTS

Workorder: 2276532 Quinns' Cefe/2171853

Lab ID: 2276532005  
Sample ID: 116-1109-TB10A

Date Collected: 11/9/2017 12:06 Matrix: Solid  
Date Received: 11/14/2017 14:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	29.7	SW846 8260B	11/9/17 12:06	JAH	11/20/17 17:25	DD	A
Ethylbenzene	ND		ug/kg	29.7	SW846 8260B	11/9/17 12:06	JAH	11/20/17 17:25	DD	A
Isopropylbenzene	ND		ug/kg	29.7	SW846 8260B	11/9/17 12:06	JAH	11/20/17 17:25	DD	A
Methyl t-Butyl Ether	ND		ug/kg	29.7	SW846 8260B	11/9/17 12:06	JAH	11/20/17 17:25	DD	A
Naphthalene	ND		ug/kg	59.4	SW846 8260B	11/9/17 12:06	JAH	11/20/17 17:25	DD	A
Toluene	ND		ug/kg	29.7	SW846 8260B	11/9/17 12:06	JAH	11/20/17 17:25	DD	A
Total Xylenes	ND		ug/kg	89.1	SW846 8260B	11/9/17 12:06	JAH	11/20/17 17:25	DD	A
1,2,4-Trimethylbenzene	ND		ug/kg	29.7	SW846 8260B	11/9/17 12:06	JAH	11/20/17 17:25	DD	A
1,3,5-Trimethylbenzene	ND		ug/kg	29.7	SW846 8260B	11/9/17 12:06	JAH	11/20/17 17:25	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	76.1		%	71 - 146	SW846 8260B	11/9/17 12:06	JAH	11/20/17 17:25	DD	A
4-Bromofluorobenzene (S)	75.4		%	46 - 138	SW846 8260B	11/9/17 12:06	JAH	11/20/17 17:25	DD	A
Dibromofluoromethane (S)	71.8		%	42 - 143	SW846 8260B	11/9/17 12:06	JAH	11/20/17 17:25	DD	A
Toluene-d8 (S)	83.3		%	54 - 141	SW846 8260B	11/9/17 12:06	JAH	11/20/17 17:25	DD	A
<b>WET CHEMISTRY</b>										
Moisture	13.5		%	0.1	S2540G-11			11/19/17 18:11	MLM	
Total Solids	86.5		%	0.1	S2540G-11			11/19/17 18:11	MLM	



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## ANALYTICAL RESULTS

Workorder: 2276532 Quinns' Cefe/2171853

Lab ID: 2276532006  
Sample ID: 116-1109-TB10B

Date Collected: 11/9/2017 12:23 Matrix: Solid  
Date Received: 11/14/2017 14:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	275		ug/kg	221	SW846 8260B	11/9/17 12:23	CJG	11/18/17 05:15	CJG	A
Ethylbenzene	1340		ug/kg	221	SW846 8260B	11/9/17 12:23	CJG	11/18/17 05:15	CJG	A
Isopropylbenzene	1040		ug/kg	221	SW846 8260B	11/9/17 12:23	CJG	11/18/17 05:15	CJG	A
Methyl t-Butyl Ether	ND		ug/kg	221	SW846 8260B	11/9/17 12:23	CJG	11/18/17 05:15	CJG	A
Naphthalene	6370		ug/kg	442	SW846 8260B	11/9/17 12:23	CJG	11/18/17 05:15	CJG	A
Toluene	762		ug/kg	221	SW846 8260B	11/9/17 12:23	CJG	11/18/17 05:15	CJG	A
Total Xylenes	1700		ug/kg	662	SW846 8260B	11/9/17 12:23	CJG	11/18/17 05:15	CJG	A
1,2,4-Trimethylbenzene	923		ug/kg	221	SW846 8260B	11/9/17 12:23	CJG	11/18/17 05:15	CJG	A
1,3,5-Trimethylbenzene	ND		ug/kg	221	SW846 8260B	11/9/17 12:23	CJG	11/18/17 05:15	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	86.6		%	71 - 146	SW846 8260B	11/9/17 12:23	CJG	11/18/17 05:15	CJG	A
4-Bromofluorobenzene (S)	82.3		%	46 - 138	SW846 8260B	11/9/17 12:23	CJG	11/18/17 05:15	CJG	A
Dibromofluoromethane (S)	75.7		%	42 - 143	SW846 8260B	11/9/17 12:23	CJG	11/18/17 05:15	CJG	A
Toluene-d8 (S)	88		%	54 - 141	SW846 8260B	11/9/17 12:23	CJG	11/18/17 05:15	CJG	A
<b>WET CHEMISTRY</b>										
Moisture	26.7		%	0.1	S2540G-11			11/19/17 18:11	MLM	
Total Solids	73.3		%	0.1	S2540G-11			11/19/17 18:11	MLM	



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## ANALYTICAL RESULTS

Workorder: 2276532 Quinns' Cefe/2171853

Lab ID: 2276532007  
Sample ID: 116-1109-TB9A

Date Collected: 11/9/2017 13:44 Matrix: Solid  
Date Received: 11/14/2017 14:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	33.4	SW846 8260B	11/9/17 13:44	JAH	11/20/17 17:47	DD	A
Ethylbenzene	ND		ug/kg	33.4	SW846 8260B	11/9/17 13:44	JAH	11/20/17 17:47	DD	A
Isopropylbenzene	ND		ug/kg	33.4	SW846 8260B	11/9/17 13:44	JAH	11/20/17 17:47	DD	A
Methyl t-Butyl Ether	ND		ug/kg	33.4	SW846 8260B	11/9/17 13:44	JAH	11/20/17 17:47	DD	A
Naphthalene	ND		ug/kg	66.7	SW846 8260B	11/9/17 13:44	JAH	11/20/17 17:47	DD	A
Toluene	ND		ug/kg	33.4	SW846 8260B	11/9/17 13:44	JAH	11/20/17 17:47	DD	A
Total Xylenes	ND		ug/kg	100	SW846 8260B	11/9/17 13:44	JAH	11/20/17 17:47	DD	A
1,2,4-Trimethylbenzene	ND		ug/kg	33.4	SW846 8260B	11/9/17 13:44	JAH	11/20/17 17:47	DD	A
1,3,5-Trimethylbenzene	ND		ug/kg	33.4	SW846 8260B	11/9/17 13:44	JAH	11/20/17 17:47	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	74.5		%	71 - 146	SW846 8260B	11/9/17 13:44	JAH	11/20/17 17:47	DD	A
4-Bromofluorobenzene (S)	68.9		%	46 - 138	SW846 8260B	11/9/17 13:44	JAH	11/20/17 17:47	DD	A
Dibromofluoromethane (S)	72.5		%	42 - 143	SW846 8260B	11/9/17 13:44	JAH	11/20/17 17:47	DD	A
Toluene-d8 (S)	82.1		%	54 - 141	SW846 8260B	11/9/17 13:44	JAH	11/20/17 17:47	DD	A
<b>WET CHEMISTRY</b>										
Moisture	16.0		%	0.1	S2540G-11			11/19/17 18:11	MLM	
Total Solids	84.0		%	0.1	S2540G-11			11/19/17 18:11	MLM	



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## ANALYTICAL RESULTS

Workorder: 2276532 Quinns' Cefe/2171853

Lab ID: 2276532008  
Sample ID: 116-1109-TB9B

Date Collected: 11/9/2017 14:40 Matrix: Solid  
Date Received: 11/14/2017 14:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	30.4	SW846 8260B	11/9/17 14:40	DD	11/23/17 01:10	CJG	A
Ethylbenzene	ND		ug/kg	30.4	SW846 8260B	11/9/17 14:40	DD	11/23/17 01:10	CJG	A
Isopropylbenzene	ND		ug/kg	30.4	SW846 8260B	11/9/17 14:40	DD	11/23/17 01:10	CJG	A
Methyl t-Butyl Ether	ND		ug/kg	30.4	SW846 8260B	11/9/17 14:40	DD	11/23/17 01:10	CJG	A
Naphthalene	518		ug/kg	60.7	SW846 8260B	11/9/17 14:40	DD	11/23/17 01:10	CJG	A
Toluene	ND		ug/kg	30.4	SW846 8260B	11/9/17 14:40	DD	11/23/17 01:10	CJG	A
Total Xylenes	ND		ug/kg	91.1	SW846 8260B	11/9/17 14:40	DD	11/23/17 01:10	CJG	A
1,2,4-Trimethylbenzene	ND		ug/kg	30.4	SW846 8260B	11/9/17 14:40	DD	11/23/17 01:10	CJG	A
1,3,5-Trimethylbenzene	ND		ug/kg	30.4	SW846 8260B	11/9/17 14:40	DD	11/23/17 01:10	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	74.1		%	71 - 146	SW846 8260B	11/9/17 14:40	DD	11/23/17 01:10	CJG	A
4-Bromofluorobenzene (S)	85		%	46 - 138	SW846 8260B	11/9/17 14:40	DD	11/23/17 01:10	CJG	A
Dibromofluoromethane (S)	74.4		%	42 - 143	SW846 8260B	11/9/17 14:40	DD	11/23/17 01:10	CJG	A
Toluene-d8 (S)	89.6		%	54 - 141	SW846 8260B	11/9/17 14:40	DD	11/23/17 01:10	CJG	A
<b>WET CHEMISTRY</b>										
Moisture	14.8		%	0.1	S2540G-11			11/19/17 18:11	MLM	
Total Solids	85.2		%	0.1	S2540G-11			11/19/17 18:11	MLM	

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## ANALYTICAL RESULTS

Workorder: 2276532 Quinns' Cefe/2171853

Lab ID: 2276532009  
Sample ID: 116-1109-TB8A

Date Collected: 11/9/2017 15:35 Matrix: Solid  
Date Received: 11/14/2017 14:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	31.8	SW846 8260B	11/9/17 15:35	CJG	11/20/17 23:00	CJG	A
Ethylbenzene	ND		ug/kg	31.8	SW846 8260B	11/9/17 15:35	CJG	11/20/17 23:00	CJG	A
Isopropylbenzene	ND		ug/kg	31.8	SW846 8260B	11/9/17 15:35	CJG	11/20/17 23:00	CJG	A
Methyl t-Butyl Ether	ND		ug/kg	31.8	SW846 8260B	11/9/17 15:35	CJG	11/20/17 23:00	CJG	A
Naphthalene	ND		ug/kg	63.6	SW846 8260B	11/9/17 15:35	CJG	11/20/17 23:00	CJG	A
Toluene	ND		ug/kg	31.8	SW846 8260B	11/9/17 15:35	CJG	11/20/17 23:00	CJG	A
Total Xylenes	ND		ug/kg	95.4	SW846 8260B	11/9/17 15:35	CJG	11/20/17 23:00	CJG	A
1,2,4-Trimethylbenzene	ND		ug/kg	31.8	SW846 8260B	11/9/17 15:35	CJG	11/20/17 23:00	CJG	A
1,3,5-Trimethylbenzene	ND		ug/kg	31.8	SW846 8260B	11/9/17 15:35	CJG	11/20/17 23:00	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	91		%	71 - 146	SW846 8260B	11/9/17 15:35	CJG	11/20/17 23:00	CJG	A
4-Bromofluorobenzene (S)	104		%	46 - 138	SW846 8260B	11/9/17 15:35	CJG	11/20/17 23:00	CJG	A
Dibromofluoromethane (S)	91.8		%	42 - 143	SW846 8260B	11/9/17 15:35	CJG	11/20/17 23:00	CJG	A
Toluene-d8 (S)	106		%	54 - 141	SW846 8260B	11/9/17 15:35	CJG	11/20/17 23:00	CJG	A
<b>WET CHEMISTRY</b>										
Moisture	13.6		%	0.1	S2540G-11			11/19/17 18:11	MLM	
Total Solids	86.4		%	0.1	S2540G-11			11/19/17 18:11	MLM	



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## ANALYTICAL RESULTS

Workorder: 2276532 Quinns' Cefe/2171853

Lab ID: 2276532010  
Sample ID: 116-1109-TB8B

Date Collected: 11/9/2017 15:42 Matrix: Solid  
Date Received: 11/14/2017 14:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	33.0	SW846 8260B	11/9/17 15:42	CJG	11/20/17 23:22	CJG	A
Ethylbenzene	ND		ug/kg	33.0	SW846 8260B	11/9/17 15:42	CJG	11/20/17 23:22	CJG	A
Isopropylbenzene	ND		ug/kg	33.0	SW846 8260B	11/9/17 15:42	CJG	11/20/17 23:22	CJG	A
Methyl t-Butyl Ether	ND		ug/kg	33.0	SW846 8260B	11/9/17 15:42	CJG	11/20/17 23:22	CJG	A
Naphthalene	ND		ug/kg	66.0	SW846 8260B	11/9/17 15:42	CJG	11/20/17 23:22	CJG	A
Toluene	ND		ug/kg	33.0	SW846 8260B	11/9/17 15:42	CJG	11/20/17 23:22	CJG	A
Total Xylenes	ND		ug/kg	99.0	SW846 8260B	11/9/17 15:42	CJG	11/20/17 23:22	CJG	A
1,2,4-Trimethylbenzene	ND		ug/kg	33.0	SW846 8260B	11/9/17 15:42	CJG	11/20/17 23:22	CJG	A
1,3,5-Trimethylbenzene	ND		ug/kg	33.0	SW846 8260B	11/9/17 15:42	CJG	11/20/17 23:22	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	93.8		%	71 - 146	SW846 8260B	11/9/17 15:42	CJG	11/20/17 23:22	CJG	A
4-Bromofluorobenzene (S)	106		%	46 - 138	SW846 8260B	11/9/17 15:42	CJG	11/20/17 23:22	CJG	A
Dibromofluoromethane (S)	92.6		%	42 - 143	SW846 8260B	11/9/17 15:42	CJG	11/20/17 23:22	CJG	A
Toluene-d8 (S)	111		%	54 - 141	SW846 8260B	11/9/17 15:42	CJG	11/20/17 23:22	CJG	A
<b>WET CHEMISTRY</b>										
Moisture	11.0		%	0.1	S2540G-11			11/19/17 18:11	MLM	
Total Solids	89.0		%	0.1	S2540G-11			11/19/17 18:11	MLM	



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## ANALYTICAL RESULTS

Workorder: 2276532 Quinns' Cefe/2171853

Lab ID: 2276532011

Date Collected: 11/10/2017 10:10

Matrix: Solid

Sample ID: 116-1109-PW12A

Date Received: 11/14/2017 14:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	35.7	SW846 8260B	11/10/17 10:10	CJG	11/20/17 23:44	CJG	A
Ethylbenzene	ND		ug/kg	35.7	SW846 8260B	11/10/17 10:10	CJG	11/20/17 23:44	CJG	A
Isopropylbenzene	ND		ug/kg	35.7	SW846 8260B	11/10/17 10:10	CJG	11/20/17 23:44	CJG	A
Methyl t-Butyl Ether	ND		ug/kg	35.7	SW846 8260B	11/10/17 10:10	CJG	11/20/17 23:44	CJG	A
Naphthalene	ND		ug/kg	71.4	SW846 8260B	11/10/17 10:10	CJG	11/20/17 23:44	CJG	A
Toluene	ND		ug/kg	35.7	SW846 8260B	11/10/17 10:10	CJG	11/20/17 23:44	CJG	A
Total Xylenes	ND		ug/kg	107	SW846 8260B	11/10/17 10:10	CJG	11/20/17 23:44	CJG	A
1,2,4-Trimethylbenzene	ND		ug/kg	35.7	SW846 8260B	11/10/17 10:10	CJG	11/20/17 23:44	CJG	A
1,3,5-Trimethylbenzene	ND		ug/kg	35.7	SW846 8260B	11/10/17 10:10	CJG	11/20/17 23:44	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	93.3		%	71 - 146	SW846 8260B	11/10/17 10:10	CJG	11/20/17 23:44	CJG	A
4-Bromofluorobenzene (S)	105		%	46 - 138	SW846 8260B	11/10/17 10:10	CJG	11/20/17 23:44	CJG	A
Dibromofluoromethane (S)	91.9		%	42 - 143	SW846 8260B	11/10/17 10:10	CJG	11/20/17 23:44	CJG	A
Toluene-d8 (S)	109		%	54 - 141	SW846 8260B	11/10/17 10:10	CJG	11/20/17 23:44	CJG	A
<b>WET CHEMISTRY</b>										
Moisture	11.7		%	0.1	S2540G-11			11/19/17 18:11	MLM	
Total Solids	88.3		%	0.1	S2540G-11			11/19/17 18:11	MLM	



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## ANALYTICAL RESULTS

Workorder: 2276532 Quinns' Cefe/2171853

Lab ID: 2276532012  
Sample ID: 116-1109-PW12B

Date Collected: 11/10/2017 10:17 Matrix: Solid  
Date Received: 11/14/2017 14:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	38.2	SW846 8260B	11/10/17 10:17	CJG	11/21/17 00:06	CJG	A
Ethylbenzene	ND		ug/kg	38.2	SW846 8260B	11/10/17 10:17	CJG	11/21/17 00:06	CJG	A
Isopropylbenzene	ND		ug/kg	38.2	SW846 8260B	11/10/17 10:17	CJG	11/21/17 00:06	CJG	A
Methyl t-Butyl Ether	ND		ug/kg	38.2	SW846 8260B	11/10/17 10:17	CJG	11/21/17 00:06	CJG	A
Naphthalene	ND		ug/kg	76.4	SW846 8260B	11/10/17 10:17	CJG	11/21/17 00:06	CJG	A
Toluene	ND		ug/kg	38.2	SW846 8260B	11/10/17 10:17	CJG	11/21/17 00:06	CJG	A
Total Xylenes	ND		ug/kg	115	SW846 8260B	11/10/17 10:17	CJG	11/21/17 00:06	CJG	A
1,2,4-Trimethylbenzene	ND		ug/kg	38.2	SW846 8260B	11/10/17 10:17	CJG	11/21/17 00:06	CJG	A
1,3,5-Trimethylbenzene	ND		ug/kg	38.2	SW846 8260B	11/10/17 10:17	CJG	11/21/17 00:06	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	76.9		%	71 - 146	SW846 8260B	11/10/17 10:17	CJG	11/21/17 00:06	CJG	A
4-Bromofluorobenzene (S)	79.7		%	46 - 138	SW846 8260B	11/10/17 10:17	CJG	11/21/17 00:06	CJG	A
Dibromofluoromethane (S)	74.9		%	42 - 143	SW846 8260B	11/10/17 10:17	CJG	11/21/17 00:06	CJG	A
Toluene-d8 (S)	87.3		%	54 - 141	SW846 8260B	11/10/17 10:17	CJG	11/21/17 00:06	CJG	A
<b>WET CHEMISTRY</b>										
Moisture	21.1		%	0.1	S2540G-11			11/19/17 18:11	MLM	
Total Solids	78.9		%	0.1	S2540G-11			11/19/17 18:11	MLM	



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## ANALYTICAL RESULTS

Workorder: 2276532 Quinns' Cefe/2171853

Lab ID: 2276532013  
Sample ID: 116-1109-PW13A

Date Collected: 11/10/2017 08:45 Matrix: Solid  
Date Received: 11/14/2017 14:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	31.6	SW846 8260B	11/10/17 08:45	CJG	11/21/17 00:28	CJG	A
Ethylbenzene	ND		ug/kg	31.6	SW846 8260B	11/10/17 08:45	CJG	11/21/17 00:28	CJG	A
Isopropylbenzene	ND		ug/kg	31.6	SW846 8260B	11/10/17 08:45	CJG	11/21/17 00:28	CJG	A
Methyl t-Butyl Ether	ND		ug/kg	31.6	SW846 8260B	11/10/17 08:45	CJG	11/21/17 00:28	CJG	A
Naphthalene	ND		ug/kg	63.1	SW846 8260B	11/10/17 08:45	CJG	11/21/17 00:28	CJG	A
Toluene	ND		ug/kg	31.6	SW846 8260B	11/10/17 08:45	CJG	11/21/17 00:28	CJG	A
Total Xylenes	ND		ug/kg	94.7	SW846 8260B	11/10/17 08:45	CJG	11/21/17 00:28	CJG	A
1,2,4-Trimethylbenzene	ND		ug/kg	31.6	SW846 8260B	11/10/17 08:45	CJG	11/21/17 00:28	CJG	A
1,3,5-Trimethylbenzene	ND		ug/kg	31.6	SW846 8260B	11/10/17 08:45	CJG	11/21/17 00:28	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	108		%	71 - 146	SW846 8260B	11/10/17 08:45	CJG	11/21/17 00:28	CJG	A
4-Bromofluorobenzene (S)	120		%	46 - 138	SW846 8260B	11/10/17 08:45	CJG	11/21/17 00:28	CJG	A
Dibromofluoromethane (S)	105		%	42 - 143	SW846 8260B	11/10/17 08:45	CJG	11/21/17 00:28	CJG	A
Toluene-d8 (S)	122		%	54 - 141	SW846 8260B	11/10/17 08:45	CJG	11/21/17 00:28	CJG	A
<b>WET CHEMISTRY</b>										
Moisture	15.0		%	0.1	S2540G-11			11/19/17 18:11	MLM	
Total Solids	85.0		%	0.1	S2540G-11			11/19/17 18:11	MLM	



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**ANALYTICAL RESULTS**

Workorder: 2276532 Quinns' Cefe/2171853

**PARAMETER QUALIFIERS**

Lab ID	#	Sample ID	Analytical Method	Analyte
2276532002	1	116-1109-TB12B	SW846 8260B	1,2-Dichloroethane-d4
The surrogate 1,2-Dichloroethane-d4 for method SW846 8260B was outside of control limits. The % Recovery was reported as 63.2 and the control limits were 71 to 146. This result was reported at a dilution of 50.				
2276532002	2	116-1109-TB12B	SW846 8260B	4-Bromofluorobenzene
The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 45.6 and the control limits were 46 to 138. This result was reported at a dilution of 50.				

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Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

**Environmental**

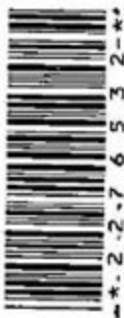
# CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADDED AREAS MUST BE COMPLETED BY THE CLIENT/  
SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 2

Container: Hard

Tracking #:



Co. Name: LABELL ASSOCIATES, PC  
Contact (Person): MARTIN GIKENBA Phone: 570-342-3101  
Address: 1000 DUNHAM DR.  
SUITE B  
DUNMORE, PA 18512

Bill to (if different than Report to):

PO#:

SAME

Project Name/ID: QUINN'S CAFE / 2171853 ALS Quote #:

TAT: ☒ Normal-Standard TAT is 10-12 business days.  
☐ Rush-Subject to ALS approval and surcharges.

Email? ☒ Y ☐ N Fax? ☐ Y ☐ N

Sample Description/Location

1116-1109-TB12A

2116-1109-TB12B

3116-1109-TB11A

4116-1109-TB11B

5116-1109-TB10A

6116-1109-TB10B

7116-1109-TB9A

8116-1109-TB9B

COC Comments

Samples

Date

Military

Time

Enter Number of Containers Per Analysis

Matrix

Container

Type

Size

Preservative

ANALYSIS METHOD REQUESTED

No. of Coolers:

Therm ID:

Notes:

Correct container?

Correct sample volume?

Received on ice?

COC labels complete/accurate?

Container in good condition?

Circle appropriate Y or N.

ALS FIELD SERVICES

Pickup

Lab

Composite Sampling

Rental Equipment

Other:

Standard

CLP-like

NU-Reduced

NU-Full

Size Samples

Collected by?

NO

NO

NO

NO

NO

NO

Standard

CLP-like

NU-Reduced

NU-Full

Size Samples

Collected by?

NO

NO

NO

NO

NO

NO

Standard

CLP-like

NU-Reduced

NU-Full

Size Samples

Collected by?

NO

NO

NO

NO

NO

NO

Standard

CLP-like

NU-Reduced

NU-Full

Size Samples

Collected by?

NO

NO

NO

NO

NO

NO

Standard

CLP-like

NU-Reduced

NU-Full

Size Samples

Collected by?

NO

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NO

NO

NO

NO

Standard

CLP-like

NU-Reduced

NU-Full

Size Samples

Collected by?

NO

NO

NO

NO

NO

NO

Standard

CLP-like

NU-Reduced

NU-Full

Size Samples

Collected by?

NO

NO

NO

NO

NO

NO

Standard

CLP-like

NU-Reduced

NU-Full

Size Samples

Collected by?

NO

NO

NO

NO

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NO

Standard

CLP-like

NU-Reduced

NU-Full

Size Samples

Collected by?

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Size Samples

Collected by?

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NU-Full

Size Samples

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Size Samples

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Size Samples

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NU-Full

Size Samples

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NU-Full

Size Samples

Collected by?

NO

NO

NO

NO

NO

NO

Standard

CLP-like

NU-Reduced

NU-Full

Size Samples

Collected by?

NO

NO

NO

NO

NO

NO

Standard

CLP-like

NU-Reduced

NU-Full

Size Samples

Collected by?

NO





34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

# Environmental

Co. Name: Ladella Associates, PC  
Contact (Person): MATTHEW GILGALLAN  
Address: 1000 DUNHAM DRIVE  
SUITE B  
DUMORE, PA 18512

Phone: 570.342-3101

Bill to (if different than Requestor): Same PO#: \_\_\_\_\_

Project Name/ID: Quinn's Care/217853 ALS Quote #: \_\_\_\_\_

TAT: ☒ Normal-Standard TAT is 10-12 business days.  
☐ Rush-Subject to ALS approval and surcharges.

Email? ☒ Y ☐ N Fax? ☐ Y ☐ N

Sample Description/Location (see it will appear on the lab report)

COC Comments

Simple Date Military Time

1116 - 1109 - T88A 11/9/17 1535 1 1

2116 - 1109 - T88B 11/9/17 1542 1 1

3116 - 1109 - PW12A 11/10/17 1010 1 1

4116 - 1109 - PW12B 11/10/17 1017 1 1

5116 - 1109 - PW13A 11/10/17 0845 1 1

6 \_\_\_\_\_

7 \_\_\_\_\_

8 \_\_\_\_\_

9 \_\_\_\_\_

10 \_\_\_\_\_

11 \_\_\_\_\_

12 \_\_\_\_\_

13 \_\_\_\_\_

14 \_\_\_\_\_

15 \_\_\_\_\_

16 \_\_\_\_\_

17 \_\_\_\_\_

18 \_\_\_\_\_

19 \_\_\_\_\_

20 \_\_\_\_\_

## CHAIN OF CUSTODY/

## REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK

Container Type CG CG

Container ID 402

Preservative None

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis

USP PARAMETERS

USP PARAMETERS

USP PARAMETERS

USP PARAMETERS

USP PARAMETERS

USP PARAMETERS

USP PARAMETERS

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USP PARAMETERS

USP PARAMETERS

Page 2 of 2

Counter: Hand BCL

Tracking #: \_\_\_\_\_

RECEIPT INFORMATION  
(For Client Use Only)  
Received by: Hand BCL  
Cooler Temp: 3  
Therm ID: 4102  
No. of Coolers: \_\_\_\_\_  
Notes: \_\_\_\_\_

Correct containers? ☒ N  
Correct sample volume? ☒ N  
Correct preservation? ☒ N  
Headspace/Volatiles? ☒ N  
Container in good condition? ☒ N

COC Labels complete/accurate? ☒ N  
Received on ice? ☒ N  
(If present) Seals intact? ☒ N  
Custody seals Present? ☒ N

ALS FIELD SERVICES  
☐ Pickup  
☐ Labor  
☐ Composite Sampling  
☐ Rental Equipment  
☐ Other: \_\_\_\_\_

SWA Form 7-0 ☐ yes ☐ no  
Data Deliverables  
☒ Standard  
☐ CLP-009  
☐ NJ-Reduced  
☐ NJ-F-01  
If yes, format type: Other

SWA Samples Collected in? ☐ NO ☐ NJ ☐ NY ☒ PA

Requester ID: 0000000000

DOO Criteria Required? ☐

Project Comments: \_\_\_\_\_

SAMPLED BY (Please Print): D. Cariani

Relinquished By / Company Name Ladella Associates, PC

Date 11/13/17 Time 1400

Received By / Company Name D. Cariani

Date 11/14/17 Time 1402

2 \_\_\_\_\_

4 \_\_\_\_\_

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10 \_\_\_\_\_

11 \_\_\_\_\_

12 \_\_\_\_\_

13 \_\_\_\_\_

14 \_\_\_\_\_

15 \_\_\_\_\_

16 \_\_\_\_\_

17 \_\_\_\_\_

18 \_\_\_\_\_

19 \_\_\_\_\_

20 \_\_\_\_\_

21 \_\_\_\_\_

November 27, 2017

Mr. Marty Gilgallon  
LaBella-Dunmore  
1000 Dunham Drive  
Suite B  
Scranton, PA 18512

## Certificate of Analysis

Project Name: **Quinn's Cafe/2171853**Workorder: **2277566**

Purchase Order:

Workorder ID: **Quinn's Cafe/2171853**

Dear Mr. Gilgallon:

Enclosed are the analytical results for samples received by the laboratory on Friday, November 17, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Kevin Cucura

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*



Ms. Amy K Borden  
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 2277566 Quinn's Cafe/2171853

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2277566001	116-1109-TB10C	Solid	11/15/2017 13:51	11/17/2017 09:20	Collected by Client
2277566002	116-1109-TB11C	Solid	11/15/2017 14:14	11/17/2017 09:20	Collected by Client
2277566003	116-1109-TB12C	Solid	11/15/2017 14:24	11/17/2017 09:20	Collected by Client
2277566004	116-1109-PW13B	Solid	11/15/2017 15:38	11/17/2017 09:20	Collected by Client

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## SAMPLE SUMMARY

Workorder: 2277566 Quinn's Cafe/2171853

### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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## PROJECT SUMMARY

Workorder: 2277566 Quinn's Cafe/2171853

### Sample Comments

Lab ID: 2277566001      Sample ID: 116-1109-TB10C      Sample Type: SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

Lab ID: 2277566002      Sample ID: 116-1109-TB11C      Sample Type: SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

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Vancouver Waterloo · Winnipeg · Yellowknife      United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York      Mexico: Monterrey



## ANALYTICAL RESULTS

Workorder: 2277566 Quinn's Cafe/2171853

Lab ID: 2277566001  
Sample ID: 116-1109-TB10C

Date Collected: 11/15/2017 13:51 Matrix: Solid  
Date Received: 11/17/2017 09:20

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	553	SW846 8260B	11/15/17 13:51	CJG	11/22/17 05:10	CJG	A
Ethylbenzene	3610		ug/kg	553	SW846 8260B	11/15/17 13:51	CJG	11/22/17 05:10	CJG	A
Isopropylbenzene	1060		ug/kg	553	SW846 8260B	11/15/17 13:51	CJG	11/22/17 05:10	CJG	A
Methyl t-Butyl Ether	ND		ug/kg	553	SW846 8260B	11/15/17 13:51	CJG	11/22/17 05:10	CJG	A
Naphthalene	27900		ug/kg	1110	SW846 8260B	11/15/17 13:51	CJG	11/22/17 05:10	CJG	A
Toluene	ND		ug/kg	553	SW846 8260B	11/15/17 13:51	CJG	11/22/17 05:10	CJG	A
Total Xylenes	6570		ug/kg	1660	SW846 8260B	11/15/17 13:51	CJG	11/22/17 05:10	CJG	A
1,2,4-Trimethylbenzene	30800		ug/kg	553	SW846 8260B	11/15/17 13:51	CJG	11/22/17 05:10	CJG	A
1,3,5-Trimethylbenzene	ND		ug/kg	553	SW846 8260B	11/15/17 13:51	CJG	11/22/17 05:10	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	136		%	71 - 146	SW846 8260B	11/15/17 13:51	CJG	11/22/17 05:10	CJG	A
4-Bromofluorobenzene (S)	120		%	46 - 138	SW846 8260B	11/15/17 13:51	CJG	11/22/17 05:10	CJG	A
Dibromofluoromethane (S)	113		%	42 - 143	SW846 8260B	11/15/17 13:51	CJG	11/22/17 05:10	CJG	A
Toluene-d8 (S)	134		%	54 - 141	SW846 8260B	11/15/17 13:51	CJG	11/22/17 05:10	CJG	A
<b>WET CHEMISTRY</b>										
Moisture	23.6		%	0.1	S2540G-11			11/21/17 09:49	AXD	
Total Solids	76.4		%	0.1	S2540G-11			11/21/17 09:49	AXD	



Ms. Amy K Borden  
Project Coordinator

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### ANALYTICAL RESULTS

Workorder: 2277566 Quinn's Cafe/2171853

Lab ID: 2277566002  
Sample ID: 116-1109-TB11C

Date Collected: 11/15/2017 14:14 Matrix: Solid  
Date Received: 11/17/2017 09:20

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	1260		ug/kg	169	SW846 8260B	11/15/17 14:14	CJG	11/22/17 05:32	CJG	A
Ethylbenzene	5170		ug/kg	169	SW846 8260B	11/15/17 14:14	CJG	11/22/17 05:32	CJG	A
Isopropylbenzene	1150		ug/kg	169	SW846 8260B	11/15/17 14:14	CJG	11/22/17 05:32	CJG	A
Methyl t-Butyl Ether	ND	1	ug/kg	169	SW846 8260B	11/15/17 14:14	CJG	11/22/17 05:32	CJG	A
Naphthalene	5390		ug/kg	339	SW846 8260B	11/15/17 14:14	CJG	11/22/17 05:32	CJG	A
Toluene	546		ug/kg	169	SW846 8260B	11/15/17 14:14	CJG	11/22/17 05:32	CJG	A
Total Xylenes	12900		ug/kg	508	SW846 8260B	11/15/17 14:14	CJG	11/22/17 05:32	CJG	A
1,2,4-Trimethylbenzene	9540		ug/kg	169	SW846 8260B	11/15/17 14:14	CJG	11/22/17 05:32	CJG	A
1,3,5-Trimethylbenzene	1700		ug/kg	169	SW846 8260B	11/15/17 14:14	CJG	11/22/17 05:32	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	119		%	71 - 146	SW846 8260B	11/15/17 14:14	CJG	11/22/17 05:32	CJG	A
4-Bromofluorobenzene (S)	105		%	46 - 138	SW846 8260B	11/15/17 14:14	CJG	11/22/17 05:32	CJG	A
Dibromofluoromethane (S)	97		%	42 - 143	SW846 8260B	11/15/17 14:14	CJG	11/22/17 05:32	CJG	A
Toluene-d8 (S)	118		%	54 - 141	SW846 8260B	11/15/17 14:14	CJG	11/22/17 05:32	CJG	A
<b>WET CHEMISTRY</b>										
Moisture	18.1		%	0.1	S2540G-11			11/21/17 09:49	AXD	
Total Solids	81.9		%	0.1	S2540G-11			11/21/17 09:49	AXD	



Ms. Amy K Borden  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2277566 Quinn's Cafe/2171853

Lab ID: 2277566003  
Sample ID: 116-1109-TB12C

Date Collected: 11/15/2017 14:24 Matrix: Solid  
Date Received: 11/17/2017 09:20

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	62.0	SW846 8260B	11/15/17 14:24	CJG	11/23/17 01:54	CJG	A
Ethylbenzene	ND		ug/kg	62.0	SW846 8260B	11/15/17 14:24	CJG	11/23/17 01:54	CJG	A
Isopropylbenzene	ND		ug/kg	62.0	SW846 8260B	11/15/17 14:24	CJG	11/23/17 01:54	CJG	A
Methyl t-Butyl Ether	ND		ug/kg	62.0	SW846 8260B	11/15/17 14:24	CJG	11/23/17 01:54	CJG	A
Naphthalene	ND		ug/kg	124	SW846 8260B	11/15/17 14:24	CJG	11/23/17 01:54	CJG	A
Toluene	ND		ug/kg	62.0	SW846 8260B	11/15/17 14:24	CJG	11/23/17 01:54	CJG	A
Total Xylenes	ND		ug/kg	186	SW846 8260B	11/15/17 14:24	CJG	11/23/17 01:54	CJG	A
1,2,4-Trimethylbenzene	ND		ug/kg	62.0	SW846 8260B	11/15/17 14:24	CJG	11/23/17 01:54	CJG	A
1,3,5-Trimethylbenzene	ND		ug/kg	62.0	SW846 8260B	11/15/17 14:24	CJG	11/23/17 01:54	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	77		%	71 - 146	SW846 8260B	11/15/17 14:24	CJG	11/23/17 01:54	CJG	A
4-Bromofluorobenzene (S)	83		%	46 - 138	SW846 8260B	11/15/17 14:24	CJG	11/23/17 01:54	CJG	A
Dibromofluoromethane (S)	76.6		%	42 - 143	SW846 8260B	11/15/17 14:24	CJG	11/23/17 01:54	CJG	A
Toluene-d8 (S)	91.7		%	54 - 141	SW846 8260B	11/15/17 14:24	CJG	11/23/17 01:54	CJG	A
<b>WET CHEMISTRY</b>										
Moisture	23.2		%	0.1	S2540G-11			11/21/17 09:49	AXD	
Total Solids	76.8		%	0.1	S2540G-11			11/21/17 09:49	AXD	



Ms. Amy K Borden  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2277566 Quinn's Cafe/2171853

Lab ID: 2277566004

Date Collected: 11/15/2017 15:38

Matrix: Solid

Sample ID: 116-1109-PW13B

Date Received: 11/17/2017 09:20

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/kg	31.6	SW846 8260B	11/15/17 15:38	CJG	11/22/17 06:16	CJG	A
Ethylbenzene	ND		ug/kg	31.6	SW846 8260B	11/15/17 15:38	CJG	11/22/17 06:16	CJG	A
Isopropylbenzene	ND		ug/kg	31.6	SW846 8260B	11/15/17 15:38	CJG	11/22/17 06:16	CJG	A
Methyl t-Butyl Ether	ND		ug/kg	31.6	SW846 8260B	11/15/17 15:38	CJG	11/22/17 06:16	CJG	A
Naphthalene	ND		ug/kg	63.3	SW846 8260B	11/15/17 15:38	CJG	11/22/17 06:16	CJG	A
Toluene	ND		ug/kg	31.6	SW846 8260B	11/15/17 15:38	CJG	11/22/17 06:16	CJG	A
Total Xylenes	ND		ug/kg	94.9	SW846 8260B	11/15/17 15:38	CJG	11/22/17 06:16	CJG	A
1,2,4-Trimethylbenzene	ND		ug/kg	31.6	SW846 8260B	11/15/17 15:38	CJG	11/22/17 06:16	CJG	A
1,3,5-Trimethylbenzene	ND		ug/kg	31.6	SW846 8260B	11/15/17 15:38	CJG	11/22/17 06:16	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	124		%	71 - 146	SW846 8260B	11/15/17 15:38	CJG	11/22/17 06:16	CJG	A
4-Bromofluorobenzene (S)	116		%	46 - 138	SW846 8260B	11/15/17 15:38	CJG	11/22/17 06:16	CJG	A
Dibromofluoromethane (S)	115		%	42 - 143	SW846 8260B	11/15/17 15:38	CJG	11/22/17 06:16	CJG	A
Toluene-d8 (S)	131		%	54 - 141	SW846 8260B	11/15/17 15:38	CJG	11/22/17 06:16	CJG	A
<b>WET CHEMISTRY</b>										
Moisture	8.8		%	0.1	S2540G-11			11/21/17 09:49	AXD	
Total Solids	91.2		%	0.1	S2540G-11			11/21/17 09:49	AXD	



Ms. Amy K Borden  
Project Coordinator

### ALS Environmental Laboratory Locations Across North America

Canada: Burlington • Calgary • Centre of Excellence • Edmonton • Fort McMurray • Fort St. John • Grande Prairie • London • Mississauga • Richmond Hill • Saskatoon • Thunder Bay  
Vancouver Waterloo • Winnipeg • Yellowknife United States: Cincinnati • Everett • Fort Collins • Holland • Houston • Middletown • Salt Lake City • Spring City • York Mexico: Monterrey

## ANALYTICAL RESULTS

Workorder: 2277566 Quinn's Cafe/2171853

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### PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2277566002	1	116-1109-TB11C	SW846 8260B	Methyl t-Butyl Ether

The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl t-Butyl Ether. The % Recovery was reported as 123 and the control limits were 65 to 120.

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### ALS Environmental Laboratory Locations Across North America

**Canada:** Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey





34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

# Environmetal

## CHAIN OF CUSTODY/

## REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/  
SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 1

Carrier: **Fox**

Tracking #: **8/21 9577 9800**



Co. Name: **Labella Associates, PC**

Contact (Report to): **MARTIN GILGALLON**

Address: **1000 DUKHAM DR.**

Phone:

**570-342-3101**

Suite B

**Duwmore, PA 18512**

Bill to (if different than Report to):

**SAME**

PO#:

Project Name/ID: **QUINN'S CAFE / 2171 853** ALS Quote #:

TAT: ☒ Normal-Standard TAT is 10-12 business days.

☐ Rush-Subject to ALS approval and surcharges.

Email? ☒ Fax? ☐ **MG@GILGALLONPC.COM**

Sample Description/Location

(as it will appear on the job report)

COC Comments

Sample Date

Military Time

11/16-1109-TBAC

2116-1109-TB11C

3116-1109-TB12C

4116-1109-PW138

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Container Type

CG CG

Container Size

40m 4oz

Preservative

MEDIA ANALYSIS

US7 PARAMETERS

US7 PARAMETERS

US7 PARAMETERS

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## ANALYSIS METHOD REQUESTED

Enter Number of Containers Per Analysis

Container in good condition?

COC Labels complete/accurate?

Received on ice?

(If present) Seals intact?

Custody seals Present?

Correct containers?

Correct sample volume?

Correct preservation?

Headspace/volume?

Circle appropriate Y or N.

Notes:

No. of Coolers:

Therm. ID:

Cooler Temp:

Personnel:

Signature:

Date:

Time:

Received By / Company Name

Date

Time

Received By / Company Name

Date

Time

Received By / Company Name

Date

Time

Received By / Company Name

ALS FIELD SERVICES

Pickup ☐ Labor ☐ Composite Sampling ☐ Rental Equipment ☐ Other: ☐

SDWA Form 700 ☐ yes ☐ no ☐ yes ☐ no ☐ yes ☐ no ☐ yes ☐ no

Standard ☒ CLP-like ☐ NJ-Reduced ☐ NJ-Full ☐ Other: ☐

Scrub Samples Collected by: ☐ MD ☐ NJ ☐ NY ☒ PA

EOS Required? ☐ yes, format type: ☐ Other: ☐

DOD Criteria Required? ☐

Signature: **MG**

Date: **11/16/17**

Time: **1600**

Received By / Company Name: **Labella Associates, PC**

Project Comments:

Relinquished By / Company Name

Date

Time

Project Comments:

Relinquished By / Company Name

Date

Time

Project Comments:

Relinquished By / Company Name

Date

Time

Project Comments:

Relinquished By / Company Name

Date

Time

## APPENDIX P

Groundwater Analytical Summary Table

&

Laboratory Analytical Data Sheets

## APPENDIX P-1

### Groundwater Analytical Summary Table

Table P-1  
Site Characterization Activities  
Quinn's Cafe Stop Property  
Summary of Groundwater Analytical Data (ug/l)  
Groundwater Monitoring Wells

Well Number	Date Sampled	Well Head Elevation (feet)	Depth to Groundwater (feet) <sup>1</sup>	Relative Groundwater Elevation (feet)	Product Thickness (feet)	Remediation Status	Benzene (ug/L)	Ethylbenzene (ug/L)	Cumene (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	Toluene (ug/L)	Xylenes (ug/L)	1,2,4-TMB (ug/L)	1,3,5-TMB (ug/L)
MW-1  Screened Interval: 2.73' - 14.73' Total Depth: 14.73'	2/15/2017	952.41	4.00	948.41	0.00	Characterization	5.0	700.0	3,500.0	20.0	100.0	1,000.0	10,000.0	82.0	1,200.0
	6/27/2017	952.41	4.46	947.95	0.00	Characterization	3.9	4.9	2.8	<1.0	4.5	1.8	12.8	21.8	10.0
	9/11/2017	952.41	3.88	948.43	0.00	Characterization	2.3	2.3	<1.0	<1.0	<2.0	<1.0	<3.0	2.8	<1.0
	11/30/2017	952.41	5.45	948.96	0.00	Characterization	1.3	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	7.0	1.7
	1/23/2018	952.41	5.53	948.88	0.00	Characterization	<1.0	<1.0	1.7	<1.0	<2.0	<1.0	<3.0	1.3	<1.0
	4/10/2018	952.41	4.92	947.49	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	7/10/2018	952.41	5.21	947.20	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
MW-2  Screened Interval: 2.84' - 14.84' Total Depth: 14.84'	2/15/2017	951.84	4.41	947.43	Trace	Characterization	82.7	342	49.3	<5.0	159	26.1	298	132	26.8
	6/28/2017	951.84	4.91	946.93	Trace	Characterization	85.4	324	45.2	<5.0	217	22.7	254	120	26.0
	9/11/2017	951.84	4.30	947.54	0.00	Characterization	82.5	462	55.2	<5.0	181	31.0	374	243	56.7
	1/21/2017	951.84	5.39	946.45	0.00	Characterization	69.5	291	49.2	<5.0	169	23.0	167	64	13.6
	1/23/2018	951.84	5.33	946.41	0.00	Characterization	50.5	192	44.5	<5.0	125	14.1	99.9	30.5	7.1
	4/10/2018	951.84	4.80	947.04	0.00	Characterization	48.6	248	41.2	<5.0	96.7	19.4	169	43.5	8.1
	7/10/2018	951.84	5.39	946.45	0.00	Characterization	77.2	190	41.0	<5.0	130	18.7	115	38.0	6.7
MW-3  Screened Interval: 3.48' - 15.48' Total Depth: 15.48'	2/15/2017	951.10	3.70	947.40	0.00	Characterization	3.76	62.2	6.1	15.0	14.4	535	236	75.6	24.2
	6/27/2017	951.10	4.63	946.47	0.00	Characterization	593	1210	98.6	67.7	545	44.1	1450	830	72.8
	9/11/2017	951.10	3.73	947.37	0.00	Characterization	208	13.1	6.7	9.6	15.7	<5.0	<15.0	15.9	<5.0
	12/1/2017	951.10	5.28	945.82	0.00	Characterization	679	1090	124.0	40.3	520	44	696	309	<5.0
	1/23/2018	951.10	5.18	945.92	0.00	Characterization	585	1110	90.1	47.1	243	42	344	49	<25.0
	4/10/2018	951.10	4.29	946.81	0.00	Characterization	277	425	34.0	11.7	79.9	20.8	349	195	<5.0
	7/10/2018	951.10	4.88	946.12	0.00	Characterization	670	1160	94.1	74.6	394	43.2	553	178	18.9

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer TDS <3,500 mg/l setting

NM Not Measured  
MTBE Methyl Tert Butyl Ether  
1,2,4-TMB 1,2,4-Trimethybenzene  
1,3,5-TMB 1,3,5-Trimethybenzene

Notes:  
1.) Screened Interval and Total Depth measurements from grade

2.) Well Head Elevation and Depth to Groundwater measured from Top of Casing

NS Not Sampled  
NA Not Applicable  
E Estimated Value

**Table P-1**  
**Site Characterization Activities**  
**Quinn's Cafe Stop Property**  
**Summary of Groundwater Analytical Data (ug/l)**  
**Groundwater Monitoring Wells**

Well Number	Date Sampled	Well Head Elevation (feet)	Depth to Groundwater (feet) <sup>1</sup>	Relative Groundwater Elevation (feet)	Product Thickness (feet)	Remediation Status	Benzene (ug/L)	Ethylbenzene (ug/L)	Cumene (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	Toluene (ug/L)	Xylenes (ug/L)	1,2,4-TMB (ug/L)	1,3,5-TMB (ug/L)
<b>MW-4</b>  Screened Interval: 3.26' - 15.26' Total Depth: 15.26'	2/15/2017	950.71	4.44	946.27	0.00	Characterization	5.0	700.0	3,500.0	20.0	100.0	1,000.0	10,000.0	62.0	1,200.0
	6/28/2017	950.71	4.88	945.83	0.00	Characterization	49	5.1	2.7	189	3.1	7.1	19.5	6.9	2.8
	9/11/2017	950.71	5.15	945.56	0.00	Characterization	128	5.6	6.7	280	8.5	6.2	12.3	3.9	<1.0
	12/1/2017	950.71	5.24	945.47	0.00	Characterization	37.6	<1.0	3.4	315	3.4	<1.0	3.2	<1.0	<1.0
	1/23/2018	950.71	5.32	945.39	0.00	Characterization	<5.0	<5.0	<5.0	306	<10.0	<5.0	<15.0	<5.0	<5.0
	4/10/2018	950.71	5.21	945.50	0.00	Characterization	9.5	<5.0	<5.0	234	<10.0	<5.0	<15.0	<5.0	<5.0
	7/10/2018	950.71	5.30	945.41	0.00	Characterization	30.0	9.9	<5.0	218	<10.0	<5.0	<15.0	<5.0	<5.0
<b>MW-5</b>  Screened Interval: 3.50' - 15.50' Total Depth: 15.50'	2/15/2017	950.65	3.34	947.31	0.00	Characterization	182	854	116	6.1	264	46.2	843	1100	59.9
	6/28/2017	950.65	4.78	945.87	0.00	Characterization	227	476	76.1	6.7	235	71.9	487	707	40.9
	9/11/2017	950.65	3.32	947.33	0.00	Characterization	330	610	82.0	10.3	210	41.7	628	649	43.4
	12/1/2017	950.65	4.28	946.37	0.00	Characterization	209	422	67.5	<5.0	249	30.0	313	353	32.6
	1/23/2018	950.65	4.28	946.37	0.00	Characterization	133	415	65.3	<5.0	134	22.0	289	330	22.1
	4/10/2018	950.65	3.68	946.97	0.00	Characterization	468	691	81.6	<5.0	164	29.6	686	746	<5.0
	7/10/2018	950.65	4.28	946.37	0.00	Characterization	264.0	282	38.4	11.3	109	6.9	251	373	<5.0
<b>MW-6</b>  Screened Interval: 3.25' - 15.25' Total Depth: 15.25'	2/15/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/27/2017	950.38	4.27	946.11	0.00	Characterization	13.1	1.3	3.7	20.7	2.8	<1.0	<3.0	<1.0	<1.0
	9/11/2017	950.38	3.64	946.74	0.00	Characterization	5.9	<1.0	3.3	11.4	<2.0	<1.0	<3.0	<1.0	<1.0
	12/1/2017	950.38	4.71	945.67	0.00	Characterization	6.0	<1.0	3.4	6.0	<2.0	<1.0	<3.0	<1.0	<1.0
	1/23/2018	950.38	2.94	947.44	0.00	Characterization	<1.0	<1.0	1.4	4.1	<2.0	<1.0	<3.0	<1.0	<1.0
	4/10/2018	950.38	3.34	946.44	0.00	Characterization	4.1	<1.0	1.4	4.6	<2.0	<1.0	<3.0	<1.0	<1.0
	7/10/2018	950.38	4.78	945.60	0.00	Characterization	6.9	<1.0	3.0	10.9	<2.0	<1.0	<3.0	<1.0	<1.0

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer TDS &lt;3,500 mg/l setting

Shaded values indicate Act 2 Statewide Health Standard exceedances

1.) Screened Interval and Total Depth measurements from grade

2.) Well Head Elevation and Depth to Groundwater measured from Top of Casing

Notes:

Not Measured  
Methyl Tert Butyl Ether  
1,2,4-Trimethylbenzene  
1,3,5-Trimethylbenzene

Not Sampled  
Not Applicable  
Estimated Value



**Table P-1**  
**Site Characterization Activities**  
**Quinn's Cafe Stop Property**  
**Summary of Groundwater Analytical Data (ug/l)**  
**Groundwater Monitoring Wells**

Well Number	Date Sampled	Well Head Elevation (feet)	Depth to Groundwater (feet) <sup>1</sup>	Relative Groundwater Elevation (feet)	Product Thickness (feet)	Remediation Status	Benzene (ug/L)	Ethylbenzene (ug/L)	Cumene (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	Toluene (ug/L)	Xylenes (ug/L)	1,2,4-TMB (ug/L)	1,3,5-TMB (ug/L)
MW-7  Screened Interval: 3.10' - 17.10' Total Depth: 17.10'	2/15/2017	NM	NM	NM	0.00	Characterization	5.0	700.0	3,500.0	20.0	100.0	1,000.0	10,000.0	62.0	1,200.0
	6/27/2017	952.77	7.49	945.28	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2017	952.77	7.23	945.54	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	12/1/2017	952.77	7.71	945.06	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	1/22/2018	952.77	7.58	945.19	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	4/9/2018	952.77	7.14	945.63	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	7/9/2018	952.77	7.78	944.99	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
MW-8  Screened Interval: 3.56' - 17.56' Total Depth: 17.56'	2/15/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/27/2017	951.98	6.27	945.71	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	9/11/2017	951.98	5.02	946.96	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	11/30/2017	951.98	6.05	945.93	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	1/22/2018	951.98	6.05	945.93	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	4/9/2018	951.98	5.13	946.85	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	7/9/2018	951.98	6.56	945.32	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
MW-9  Screened Interval: 3.17' - 17.17' Total Depth: 17.17'	2/15/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/27/2017	951.73	6.12	945.61	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	9/11/2017	951.73	5.05	946.68	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	11/30/2017	951.73	6.04	945.69	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	1/22/2018	951.73	5.97	945.76	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	4/9/2018	951.73	5.04	946.69	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	7/9/2018	951.73	6.48	945.25	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer TDS <3,500 mg/l setting

Shaded values indicate Act 2 Statewide Health Standard exceedances

1.) Screened Interval and Total Depth measurements from grade

2.) Well Head Elevation and Depth to Groundwater measured from Top of Casing

Notes:

Not Measured  
Methyl Tert Butyl Ether  
1,2,4-Trimethylbenzene  
1,3,5-Trimethylbenzene

Not Sampled  
Not Applicable  
Estimated Value

Table P-1  
Site Characterization Activities  
Quinn's Cafe Stop Property  
Summary of Groundwater Analytical Data (ug/l)  
Groundwater Monitoring Wells

Well Number	Date Sampled	Well Head Elevation (feet)	Depth to Groundwater (feet) <sup>1</sup>	Relative Groundwater Elevation (feet)	Product Thickness (feet)	Remediation Status	Benzene (ug/L)	Ethylbenzene (ug/L)	Cumene (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	Toluene (ug/L)	Xylenes (ug/L)	1,2,4-TMB (ug/L)	1,3,5-TMB (ug/L)
MW-10  Screened Interval: 3.89' - 23.89' Total Depth: 23.89'	2/15/2017	NM	NM	NM	0.00	Characterization	5.0	700.0	3,500.0	20.0	100.0	1,000.0	10,000.0	62.0	1,200.0
	6/28/2017	957.32	15.32	942.00	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2017	957.32	8.17	949.15	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	12/1/2017	957.32	9.47	947.85	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	1/23/2018	957.32	8.43	948.89	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	4/10/2018	957.32	8.03	949.29	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	7/10/2018	957.32	9.76	947.56	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
MW-11  Screened Interval: 3.03' - 17.03' Total Depth: 23.89'	2/15/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/28/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	1/21/2017	953.36	6.26	947.10	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	1/22/2018	953.36	5.80	947.56	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	4/9/2018	953.36	4.66	948.70	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	1.2	<3.0	<1.0	<1.0
	7/9/2018	953.36	6.78	946.58	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
MW-12  Screened Interval: 2.57' - 19.57' Total Depth: 19.57'	2/15/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/28/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	1/21/2017	941.59	5.89	935.60	0.00	Characterization	<1.0	<1.0	<1.0	1.4	<2.0	<1.0	<3.0	<1.0	<1.0
	1/22/2018	941.59	5.74	935.85	0.00	Characterization	<1.0	<1.0	<1.0	1.5	<2.0	<1.0	<3.0	<1.0	<1.0
	4/9/2018	941.59	4.85	936.84	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	7/9/2018	941.59	6.53	935.06	0.00	Characterization	<1.0	<1.0	<1.0	1.2	<2.0	<1.0	<3.0	<1.0	<1.0

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer TDS <3,500 mg/l setting

Shaded values indicate Act 2 Statewide Health Standard exceedances

1.) Screened Interval and Total Depth measurements from grade

2.) Well Head Elevation and Depth to Groundwater measured from Top of Casing

Notes:

Not Measured  
Methyl Tert Butyl Ether  
1,2,4-Trimethylbenzene  
1,3,5-Trimethylbenzene

Not Sampled  
Not Applicable  
Estimated Value

Table P-1  
Site Characterization Activities  
Quinn's Cafe Stop Property  
Summary of Groundwater Analytical Data (ug/l)  
Groundwater Monitoring Wells

Well Number	Date Sampled	Well Head Elevation (feet)	Depth to Groundwater (feet) <sup>1</sup>	Relative Groundwater Elevation (feet)	Product Thickness (feet)	Remediation Status	Benzene (ug/L)	Ethylbenzene (ug/L)	Cumene (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	Toluene (ug/L)	Xylenes (ug/L)	1,2,4-TMB (ug/L)	1,3,5-TMB (ug/L)
MW-43  Screened Interval: 2.64' - 16.64' Total Depth: 16.64'	2/15/2017	NM	NM	NM	0.00	Characterization	5.0	700.0	3,500.0	20.0	100.0	1,000.0	10,000.0	62.0	1,200.0
	5/26/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/30/2017	954.76	13.54	941.22	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	1.0	<3.0	<1.0	<1.0
	1/22/2018	954.76	12.63	942.13	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	4/9/2018	954.76	10.93	943.83	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	7/9/2018	954.76	12.59	944.17	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0

NM Not Measured  
MTBE Methyl Tert Butyl Ether  
1,2,4-TMB 1,2,4-Trimethylbenzene  
1,3,5-TMB 1,3,5-Trimethylbenzene

NS Not Sampled  
NA Not Applicable  
E Estimated Value

PA Act 2 Statewide Health Standards for Non-Residential Used Aquifer TDS <2,500 mg/l setting

Shaded values indicate Act 2 Statewide Health Standard exceedances

1.) Screened Interval and Total Depth measurements from grade  
2.) Well Head Elevation and Depth to Groundwater measured from Top of Casing

Notes:

## APPENDIX P-2

### Laboratory Analytical Data Sheets

Groundwater Sampling Activities – August 2017 Storm Sewer Investigation

September 21, 2017

Mr. Marty Gilgallon  
LaBella-Dunmore  
723 Main Street  
Archbald, PA 18403

## Certificate of Analysis

Project Name: **26116/QUINN'S CAFE**Workorder: **2261932**

Purchase Order:

Workorder ID: **26116/QUINN'S CAFE**

Dear Mr. Gilgallon:

Enclosed are the analytical results for samples received by the laboratory on Friday, September 15, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Kevin Cucura

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

Ms. Amy K Borden  
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 2261932 26116/QUINN'S CAFE

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2261932001	116-0825-GW1	Ground Water	8/25/2017 13:40	9/15/2017 08:48	Mr. Kevin Cucura

---

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Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

## SAMPLE SUMMARY

Workorder: 2261932 26116/QUINN'S CAFE

### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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## PROJECT SUMMARY

Workorder: 2261932 26116/QUINN'S CAFE

### Sample Comments

Lab ID: 2261932001

Sample ID: 116-0825-GW1

Sample Type: SAMPLE

Methods for the analysis of volatile organics require that the sample be preserved to a pH less than 2 using HCl. This sample had a pH greater than 2 when received by the lab.

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## ANALYTICAL RESULTS

Workorder: 2261932 26116/QUINN'S CAFE

Lab ID: 2261932001  
Sample ID: 116-0825-GW1

Date Collected: 8/25/2017 13:40 Matrix: Ground Water  
Date Received: 9/15/2017 08:48

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	75.8		ug/L	5.0	SW846 8260B			9/19/17 17:52	TMP	A
Ethylbenzene	65.0		ug/L	5.0	SW846 8260B			9/19/17 17:52	TMP	A
Isopropylbenzene	10.8		ug/L	5.0	SW846 8260B			9/19/17 17:52	TMP	A
Methyl t-Butyl Ether	5.4		ug/L	5.0	SW846 8260B			9/19/17 17:52	TMP	A
Naphthalene	21.0		ug/L	10.0	SW846 8260B			9/19/17 17:52	TMP	A
Toluene	ND		ug/L	5.0	SW846 8260B			9/19/17 17:52	TMP	A
Total Xylenes	40.6		ug/L	15.0	SW846 8260B			9/19/17 17:52	TMP	A
1,2,4-Trimethylbenzene	35.1		ug/L	5.0	SW846 8260B			9/19/17 17:52	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	5.0	SW846 8260B			9/19/17 17:52	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	85.4		%	62 - 133	SW846 8260B			9/19/17 17:52	TMP	A
4-Bromofluorobenzene (S)	96.1		%	79 - 114	SW846 8260B			9/19/17 17:52	TMP	A
Dibromofluoromethane (S)	88.5		%	78 - 116	SW846 8260B			9/19/17 17:52	TMP	A
Toluene-d8 (S)	95.6		%	76 - 127	SW846 8260B			9/19/17 17:52	TMP	A

Ms. Amy K Borden  
Project Coordinator

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34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

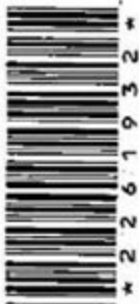
**Environmental**

Co. Name: **PENNSYLVANIA TECTONICS INC**  
Contact (Report to): **MARTIN GILGALLON**  
Address: **723 MAIN STREET**  
**ARCHBALD PA 18403**

Phone:  
**570-487-1459**

**CHAIN OF CUSTODY/  
REQUEST FOR ANALYSIS**  
ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/  
SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 1  
Courier: **FedEx**  
Tracking #: **8117 5117**  
**6901**



Receipt information  
Inscribed by Smith (Printed)  
Revised by: **SLW**  
Cooler Temp: **5**  
Therm ID: **309**  
No. of Coolers:  
Notes:

**ANALYSES/METHOD REQUESTED**

Bill to (if different than Report to):

PO#:

Project Name/ID: **26116/Quinn's Cafe** ALS Quote #:

TAT: ☒ Normal-Standard TAT is 10-12 business days.  
☐ Rush-Subject to ALS approval and surcharges.

Email? ☒ Y ☐ N No. **mcgilgallon@patectonics.com**

Sample Description/Location  
(as it will appear on the lab report)

COC Comments

Sample Date

Military Time

Enter Number of Containers Per Analysis

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UNLEADED GASOLINE

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September 21, 2017

Mr. Marty Gilgallon  
LaBella-Dunmore  
723 Main Street  
Archbald, PA 18403

## Certificate of Analysis

Project Name: **26116/QUINN'S CAFE**Workorder: **2261931**

Purchase Order:

Workorder ID: **26116/QUINN'S CAFE**

Dear Mr. Gilgallon:

Enclosed are the analytical results for samples received by the laboratory on Friday, September 15, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Kevin Cucura

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

Ms. Amy K Borden  
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 2261932 26116/QUINN'S CAFE

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2261931001	116-0828-PIPE WATER	Water	8/28/2017 13:05	9/15/2017 08:48	Mr. Kevin Cucura

---

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## SAMPLE SUMMARY

Workorder: 2261932 26116/QUINN'S CAFE

### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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## ANALYTICAL RESULTS

Workorder: 2261931 26116/QUINN'S CAFE

Lab ID: **2261931001**  
Sample ID: **116-0828-PIPE WATER**

Date Collected: 8/28/2017 13:05 Matrix: Water  
Date Received: 9/15/2017 08:48

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	5.0	SW846 8260B			9/19/17 18:10	TMP	A
Ethylbenzene	ND		ug/L	5.0	SW846 8260B			9/19/17 18:10	TMP	A
Isopropylbenzene	ND		ug/L	5.0	SW846 8260B			9/19/17 18:10	TMP	A
Methyl t-Butyl Ether	9.5		ug/L	5.0	SW846 8260B			9/19/17 18:10	TMP	A
Naphthalene	ND		ug/L	10.0	SW846 8260B			9/19/17 18:10	TMP	A
Toluene	ND		ug/L	5.0	SW846 8260B			9/19/17 18:10	TMP	A
Total Xylenes	ND		ug/L	15.0	SW846 8260B			9/19/17 18:10	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	5.0	SW846 8260B			9/19/17 18:10	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	5.0	SW846 8260B			9/19/17 18:10	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	90.1		%	62 - 133	SW846 8260B			9/19/17 18:10	TMP	A
4-Bromofluorobenzene (S)	95.8		%	79 - 114	SW846 8260B			9/19/17 18:10	TMP	A
Dibromofluoromethane (S)	87.7		%	78 - 116	SW846 8260B			9/19/17 18:10	TMP	A
Toluene-d8 (S)	93.7		%	76 - 127	SW846 8260B			9/19/17 18:10	TMP	A



Ms. Amy K Borden  
Project Coordinator

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34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

# Environmetal

Co. Name: PENNSYLVANIA TECTONICS INC  
Contact (Report to): MARTIN GILGALLON  
Address: 723 MAIN STREET  
ARCHBALD PA 18403

Phone:  
570-487-1959

Bill to (if different than Report to):

PO#:

Project Name: Quinn's Cafe ALS Quote #: \_\_\_\_\_

TAT: ☒ Normal Standard TAT is 10-12 business days.  
☐ Rush-Subject to ALS approval and surcharges.

Email? ☒ Y ☐ N Fax? ☐ Y ☐ N No: \_\_\_\_\_

Sample Description/Location  
(as it will appear on the lab report)

COC Comments

Sample Date

Military Time

1 114-0828-PIPE WATER

8/28/17

1305

6 61 2

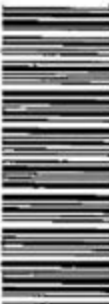
Enter Number of Containers Per Analysis

UNLEADED GASOLINE

## CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/  
SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 1  
Courier: FedEx  
Tracking #: 817 517 6901



Container Type: CG  
Container Size: 400mL  
Preservatives: H21  
Cooler Temp: 5  
Therm ID: 309  
No. of Coolers: \_\_\_\_\_  
Notes: \_\_\_\_\_

ANALYSES/METHOD REQUESTED

Correct container?	Y	N	Correct sample volume?	Y	N	Correct preservation?	Y	N	Headspace/Volatiles?	Y	N	Container in good condition?	Y	N
Correct container?	Y	N	Correct sample volume?	Y	N	Correct preservation?	Y	N	Headspace/Volatiles?	Y	N	Container in good condition?	Y	N

Custody seals Present?	Y	N	(If present) Seals intact?	Y	N	Received on ice?	Y	N	COC Labels complete/accurate?	Y	N	Container in good condition?	Y	N
------------------------	---	---	----------------------------	---	---	------------------	---	---	-------------------------------	---	---	------------------------------	---	---

ALS FIELD SERVICES	Pickup	Lab	Composite Sampling	Rental Equipment	Other:
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Standard	CLP-400	NU-Reduced	NU-Full	Other
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

State Samples Collected In?	MD	NY	PA	Other
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SAMPLED BY (Please Print):	
KEVIN CUCURA/PATECTONICS	
Relinquished By / Company Name	
1 K Cucura	PATECTONICS
3	
5	
7	
9	

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY  
\* G=Grab; C=Composite  
\*\* Mat'd: AP=Air; DW=Drinking Water; GW=Groundwater; O=Oil; OL=Other Liquid; SL=Sludge; SQ=Soil; WP=Wipe; WW=Wastewater  
\*\*\* Container Type: AG=Amber Glass; CG=Clear Glass; PL=Plastic. Container Size: 250ml, 500ml, 1L, 5oz, etc. Preservative: HCl, HNO3, NaOH, etc.



## APPENDIX P-3

### Laboratory Analytical Data Sheets

Groundwater Sampling Activities – February 2017

February 21, 2017

Mr. Marty Gilgallon  
PA Tectonics  
723 Main Street  
Archbald, PA 18403

## Certificate of Analysis

Project Name: **Quinn's Cafe Stop/26116**Workorder: **2209267**

Purchase Order:

Workorder ID: **Quinn's Cafe Stop/26116**

Dear Mr. Gilgallon:

Enclosed are the analytical results for samples received by the laboratory on Friday, February 17, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

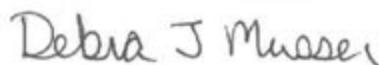
If you have any questions regarding this certificate of analysis, please contact Ms. Debra J. Musser (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

Ms. Debra J. Musser  
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 2209267 Quinn's Cafe Stop/26116

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2209267001	116-0215-MW1	Water	2/15/2017 09:42	2/17/2017 08:42	Collected by Client
2209267002	116-0215-MW2	Water	2/15/2017 12:35	2/17/2017 08:42	Collected by Client
2209267003	116-0215-MW3	Water	2/15/2017 10:23	2/17/2017 08:42	Collected by Client
2209267004	116-0215-MW4	Water	2/15/2017 14:00	2/17/2017 08:42	Collected by Client
2209267005	116-0215-MW5	Water	2/15/2017 14:25	2/17/2017 08:42	Collected by Client
2209267006	116-0215-FB1	Water	2/15/2017 14:40	2/17/2017 08:42	Collected by Client

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**SAMPLE SUMMARY**

Workorder: 2209267 Quinn's Cafe Stop/26116

**Notes**

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

**Standard Acronyms/Flags**

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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## PROJECT SUMMARY

Workorder: 2209267 Quinn's Cafe Stop/26116

---

### Sample Comments

---

**Lab ID:** 2209267002      **Sample ID:** 116-0215-MW2      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

**Lab ID:** 2209267003      **Sample ID:** 116-0215-MW3      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

**Lab ID:** 2209267005      **Sample ID:** 116-0215-MW5      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

---

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### ANALYTICAL RESULTS

Workorder: 2209267 Quinn's Cafe Stop/26116

Lab ID: 2209267001  
Sample ID: 116-0215-MW1

Date Collected: 2/15/2017 09:42 Matrix: Water  
Date Received: 2/17/2017 08:42

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	3.9		ug/L	1.0	SW846 8260B			2/20/17 15:00	TMP	A
Ethylbenzene	4.9		ug/L	1.0	SW846 8260B			2/20/17 15:00	TMP	A
Isopropylbenzene	2.8		ug/L	1.0	SW846 8260B			2/20/17 15:00	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			2/20/17 15:00	TMP	A
Naphthalene	4.5		ug/L	2.0	SW846 8260B			2/20/17 15:00	TMP	A
Toluene	1.8		ug/L	1.0	SW846 8260B			2/20/17 15:00	TMP	A
Total Xylenes	12.6		ug/L	3.0	SW846 8260B			2/20/17 15:00	TMP	A
1,2,4-Trimethylbenzene	21.6		ug/L	1.0	SW846 8260B			2/20/17 15:00	TMP	A
1,3,5-Trimethylbenzene	10.0		ug/L	1.0	SW846 8260B			2/20/17 15:00	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	109		%	62 - 133	SW846 8260B			2/20/17 15:00	TMP	A
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B			2/20/17 15:00	TMP	A
Dibromofluoromethane (S)	97.2		%	78 - 116	SW846 8260B			2/20/17 15:00	TMP	A
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B			2/20/17 15:00	TMP	A



Ms. Debra J. Musser  
Project Coordinator

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### ANALYTICAL RESULTS

Workorder: 2209267 Quinn's Cafe Stop/26116

Lab ID: 2209267002  
Sample ID: 116-0215-MW2

Date Collected: 2/15/2017 12:35 Matrix: Water  
Date Received: 2/17/2017 08:42

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	82.7		ug/L	5.0	SW846 8260B			2/20/17 15:44	TMP	A
Ethylbenzene	342		ug/L	5.0	SW846 8260B			2/20/17 15:44	TMP	A
Isopropylbenzene	49.3		ug/L	5.0	SW846 8260B			2/20/17 15:44	TMP	A
Methyl t-Butyl Ether	ND		ug/L	5.0	SW846 8260B			2/20/17 15:44	TMP	A
Naphthalene	158		ug/L	10.0	SW846 8260B			2/20/17 15:44	TMP	A
Toluene	26.1		ug/L	5.0	SW846 8260B			2/20/17 15:44	TMP	A
Total Xylenes	298		ug/L	15.0	SW846 8260B			2/20/17 15:44	TMP	A
1,2,4-Trimethylbenzene	132		ug/L	5.0	SW846 8260B			2/20/17 15:44	TMP	A
1,3,5-Trimethylbenzene	26.8		ug/L	5.0	SW846 8260B			2/20/17 15:44	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	104		%	62 - 133	SW846 8260B			2/20/17 15:44	TMP	A
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B			2/20/17 15:44	TMP	A
Dibromofluoromethane (S)	94.2		%	78 - 116	SW846 8260B			2/20/17 15:44	TMP	A
Toluene-d8 (S)	101		%	76 - 127	SW846 8260B			2/20/17 15:44	TMP	A



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### ANALYTICAL RESULTS

Workorder: 2209267 Quinn's Cafe Stop/26116

Lab ID: 2209267003  
Sample ID: 116-0215-MW3

Date Collected: 2/15/2017 10:23 Matrix: Water  
Date Received: 2/17/2017 08:42

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	376		ug/L	5.0	SW846 8260B			2/20/17 16:06	TMP	A
Ethylbenzene	62.2		ug/L	5.0	SW846 8260B			2/20/17 16:06	TMP	A
Isopropylbenzene	6.1		ug/L	5.0	SW846 8260B			2/20/17 16:06	TMP	A
Methyl t-Butyl Ether	15.0		ug/L	5.0	SW846 8260B			2/20/17 16:06	TMP	A
Naphthalene	14.4		ug/L	10.0	SW846 8260B			2/20/17 16:06	TMP	A
Toluene	535		ug/L	5.0	SW846 8260B			2/20/17 16:06	TMP	A
Total Xylenes	236		ug/L	15.0	SW846 8260B			2/20/17 16:06	TMP	A
1,2,4-Trimethylbenzene	75.6		ug/L	5.0	SW846 8260B			2/20/17 16:06	TMP	A
1,3,5-Trimethylbenzene	24.2		ug/L	5.0	SW846 8260B			2/20/17 16:06	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	107		%	62 - 133	SW846 8260B			2/20/17 16:06	TMP	A
4-Bromofluorobenzene (S)	102		%	79 - 114	SW846 8260B			2/20/17 16:06	TMP	A
Dibromofluoromethane (S)	96.1		%	78 - 116	SW846 8260B			2/20/17 16:06	TMP	A
Toluene-d8 (S)	100		%	76 - 127	SW846 8260B			2/20/17 16:06	TMP	A



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Project Coordinator

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### ANALYTICAL RESULTS

Workorder: 2209267 Quinn's Cafe Stop/26116

Lab ID: 2209267004  
Sample ID: 116-0215-MW4

Date Collected: 2/15/2017 14:00 Matrix: Water  
Date Received: 2/17/2017 08:42

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	49.0		ug/L	1.0	SW846 8260B			2/20/17 15:22	TMP	A
Ethylbenzene	6.1		ug/L	1.0	SW846 8260B			2/20/17 15:22	TMP	A
Isopropylbenzene	2.7		ug/L	1.0	SW846 8260B			2/20/17 15:22	TMP	A
Methyl t-Butyl Ether	189		ug/L	1.0	SW846 8260B			2/20/17 15:22	TMP	A
Naphthalene	3.1		ug/L	2.0	SW846 8260B			2/20/17 15:22	TMP	A
Toluene	7.1		ug/L	1.0	SW846 8260B			2/20/17 15:22	TMP	A
Total Xylenes	19.5		ug/L	3.0	SW846 8260B			2/20/17 15:22	TMP	A
1,2,4-Trimethylbenzene	5.9		ug/L	1.0	SW846 8260B			2/20/17 15:22	TMP	A
1,3,5-Trimethylbenzene	2.8		ug/L	1.0	SW846 8260B			2/20/17 15:22	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	108		%	62 - 133	SW846 8260B			2/20/17 15:22	TMP	A
4-Bromofluorobenzene (S)	99		%	79 - 114	SW846 8260B			2/20/17 15:22	TMP	A
Dibromofluoromethane (S)	95.2		%	78 - 116	SW846 8260B			2/20/17 15:22	TMP	A
Toluene-d8 (S)	99.4		%	76 - 127	SW846 8260B			2/20/17 15:22	TMP	A



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Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2209267 Quinn's Cafe Stop/26116

Lab ID: 2209267005  
Sample ID: 116-0215-MW5

Date Collected: 2/15/2017 14:25 Matrix: Water  
Date Received: 2/17/2017 08:42

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	162		ug/L	5.0	SW846 8260B			2/20/17 16:28	TMP	A
Ethylbenzene	854		ug/L	5.0	SW846 8260B			2/20/17 16:28	TMP	A
Isopropylbenzene	116		ug/L	5.0	SW846 8260B			2/20/17 16:28	TMP	A
Methyl t-Butyl Ether	6.1		ug/L	5.0	SW846 8260B			2/20/17 16:28	TMP	A
Naphthalene	294		ug/L	10.0	SW846 8260B			2/20/17 16:28	TMP	A
Toluene	46.2		ug/L	5.0	SW846 8260B			2/20/17 16:28	TMP	A
Total Xylenes	843		ug/L	15.0	SW846 8260B			2/20/17 16:28	TMP	A
1,2,4-Trimethylbenzene	1130		ug/L	5.0	SW846 8260B			2/20/17 16:28	TMP	A
1,3,5-Trimethylbenzene	59.9		ug/L	5.0	SW846 8260B			2/20/17 16:28	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	107		%	62 - 133	SW846 8260B			2/20/17 16:28	TMP	A
4-Bromofluorobenzene (S)	98.9		%	79 - 114	SW846 8260B			2/20/17 16:28	TMP	A
Dibromofluoromethane (S)	92.1		%	78 - 116	SW846 8260B			2/20/17 16:28	TMP	A
Toluene-d8 (S)	99.7		%	76 - 127	SW846 8260B			2/20/17 16:28	TMP	A

Ms. Debra J. Musser  
Project Coordinator

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### ANALYTICAL RESULTS

Workorder: 2209267 Quinn's Cafe Stop/26116

Lab ID: 2209267006  
Sample ID: 116-0215-FB1

Date Collected: 2/15/2017 14:40 Matrix: Water  
Date Received: 2/17/2017 08:42

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			2/20/17 11:22	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			2/20/17 11:22	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			2/20/17 11:22	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			2/20/17 11:22	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			2/20/17 11:22	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			2/20/17 11:22	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			2/20/17 11:22	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			2/20/17 11:22	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			2/20/17 11:22	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	110		%	62 - 133	SW846 8260B			2/20/17 11:22	TMP	A
4-Bromofluorobenzene (S)	99.4		%	79 - 114	SW846 8260B			2/20/17 11:22	TMP	A
Dibromofluoromethane (S)	95.6		%	78 - 116	SW846 8260B			2/20/17 11:22	TMP	A
Toluene-d8 (S)	96.7		%	76 - 127	SW846 8260B			2/20/17 11:22	TMP	A



Ms. Debra J. Musser  
Project Coordinator

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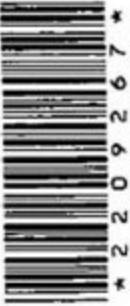


34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

# Environmetal

## CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Page 1 of 1  
Courier: **FED EX**  
Tracking #: **8110 0423**



Co. Name: **Pennsylvania Tectonics, Inc.**  
Contact (Report to): **Martin Gilgallon** Phone: **(570) 487-1959**  
Address: **723 main Street  
Archbald, PA 18403**

Bill to (if different than Report to):

PO#:

Project Name/ID: **Quinn's Life Stop/26114** ALS Quote #:

TAT: ☒ Normal-Standard TAT is 10-12 business days  
☐ Rush-Subject to ALS approval and surcharges.

Email? ☒ Fax? ☐ **mgilgallon@patectonics.com**

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time
1 116 - 0215 - mw1		2/15/17	0942
2 116 - 0215 - mw2		2/15/17	1235
3 116 - 0215 - mw3		2/15/17	1023
4 116 - 0215 - mw4		2/15/17	1400
5 116 - 0215 - mw5		2/15/17	1425
6 116 - 0215 - FBI		2/15/17	1440
7			
8			

Project Comments:

SAMPLED BY (Please Print):

**Chris Herman**

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 <b>Chris Herman / PA Tectonics</b>	2/16/17	0700	2 <b>FED EX #811004231812</b>	2/16/17	
3			4 <b>mgilgallon</b>	2/17/17	
5			6		
7			8		
9			10		

\* Q=Grab; C=Composites

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Matrix: A=Air; D=Drinking Water; G=Groundwater; O=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater  
Container Type: AG=Amber Glass; CG=Clear Glass; PL=Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservatives: HCL, HNO3, NaOH, etc.

Rev 01-2013

APPENDIX P-4

Laboratory Analytical Data Sheets

Groundwater Sampling Activities – June 2017



July 11, 2017

Mr. Marty Gilgallon  
PA Tectonics  
723 Main Street  
Archbald, PA 18403

## Certificate of Analysis

Project Name: **Quinns Cafe Stop/26116**Workorder: **2242599**

Purchase Order:

Workorder ID: **Quinns Cafe Stop/26116**

Dear Mr. Gilgallon:

Enclosed are the analytical results for samples received by the laboratory on Friday, June 30, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

Ms. Amy K Borden

Project Coordinator

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

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**SAMPLE SUMMARY**

Workorder: 2242599 Quinns Cafe Stop/26116

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2242599001	116-0627-MW1	Water	6/27/2017 11:27	6/30/2017 08:22	Collected by Client
2242599002	116-0627-MW2	Water	6/28/2017 09:00	6/30/2017 08:22	Collected by Client
2242599003	116-0627-MW3	Water	6/27/2017 13:14	6/30/2017 08:22	Collected by Client
2242599004	116-0627-MW4	Water	6/28/2017 11:01	6/30/2017 08:22	Collected by Client
2242599005	116-0627-MW5	Water	6/28/2017 10:34	6/30/2017 08:22	Collected by Client
2242599006	116-0627-MW6	Water	6/27/2017 12:32	6/30/2017 08:22	Collected by Client
2242599007	116-0627-MW7	Water	6/27/2017 15:45	6/30/2017 08:22	Collected by Client
2242599008	116-0627-MW8	Water	6/27/2017 15:30	6/30/2017 08:22	Collected by Client
2242599009	116-0627-MW9	Water	6/27/2017 14:30	6/30/2017 08:22	Collected by Client
2242599010	116-0627-MW10	Water	6/28/2017 10:02	6/30/2017 08:22	Collected by Client
2242599011	116-0627-FB1	Water	6/27/2017 15:47	6/30/2017 08:22	Collected by Client
2242599012	116-0627-FB2	Water	6/27/2017 11:15	6/30/2017 08:22	Collected by Client

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**SAMPLE SUMMARY**

Workorder: 2242599 Quinns Cafe Stop/26116

**Notes**

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

**Standard Acronyms/Flags**

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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## PROJECT SUMMARY

Workorder: 2242599 Quinns Cafe Stop/26116

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### Sample Comments

---

**Lab ID:** 2242599002      **Sample ID:** 116-0627-MW2      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

**Lab ID:** 2242599003      **Sample ID:** 116-0627-MW3      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

The dilution of the sample was run from a vial with headspace. The method requires that samples be collected without headspace in order to prevent the loss of volatile organics. Results should be considered estimated.

**Lab ID:** 2242599004      **Sample ID:** 116-0627-MW4      **Sample Type:** SAMPLE

The dilution of the sample was run from a vial with headspace. The method requires that samples be collected without headspace in order to prevent the loss of volatile organics. Results should be considered estimated.

**Lab ID:** 2242599005      **Sample ID:** 116-0627-MW5      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

---

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## ANALYTICAL RESULTS

Workorder: 2242599 Quinns Cafe Stop/26116

Lab ID: 2242599001  
Sample ID: 116-0627-MW1

Date Collected: 6/27/2017 11:27 Matrix: Water  
Date Received: 6/30/2017 08:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	3.2		ug/L	1.0	SW846 8260B			7/7/17 02:07	CJG	A
Ethylbenzene	1.5		ug/L	1.0	SW846 8260B			7/7/17 02:07	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 02:07	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			7/7/17 02:07	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			7/7/17 02:07	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			7/7/17 02:07	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			7/7/17 02:07	CJG	A
1,2,4-Trimethylbenzene	2.8		ug/L	1.0	SW846 8260B			7/7/17 02:07	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 02:07	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	117		%	62 - 133	SW846 8260B			7/7/17 02:07	CJG	A
4-Bromofluorobenzene (S)	109		%	79 - 114	SW846 8260B			7/7/17 02:07	CJG	A
Dibromofluoromethane (S)	92.1		%	78 - 116	SW846 8260B			7/7/17 02:07	CJG	A
Toluene-d8 (S)	95.2		%	76 - 127	SW846 8260B			7/7/17 02:07	CJG	A



Ms. Amy K Borden  
Project Coordinator

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### ANALYTICAL RESULTS

Workorder: 2242599 Quinns Cafe Stop/26116

Lab ID: 2242599002  
Sample ID: 116-0627-MW2

Date Collected: 6/28/2017 09:00 Matrix: Water  
Date Received: 6/30/2017 08:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	85.4		ug/L	5.0	SW846 8260B			7/7/17 02:30	CJG	A
Ethylbenzene	324		ug/L	5.0	SW846 8260B			7/7/17 02:30	CJG	A
Isopropylbenzene	45.2		ug/L	5.0	SW846 8260B			7/7/17 02:30	CJG	A
Methyl t-Butyl Ether	ND		ug/L	5.0	SW846 8260B			7/7/17 02:30	CJG	A
Naphthalene	217		ug/L	10.0	SW846 8260B			7/7/17 02:30	CJG	A
Toluene	22.7		ug/L	5.0	SW846 8260B			7/7/17 02:30	CJG	A
Total Xylenes	254		ug/L	15.0	SW846 8260B			7/7/17 02:30	CJG	A
1,2,4-Trimethylbenzene	120		ug/L	5.0	SW846 8260B			7/7/17 02:30	CJG	A
1,3,5-Trimethylbenzene	26.0		ug/L	5.0	SW846 8260B			7/7/17 02:30	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	114		%	62 - 133	SW846 8260B			7/7/17 02:30	CJG	A
4-Bromofluorobenzene (S)	108		%	79 - 114	SW846 8260B			7/7/17 02:30	CJG	A
Dibromofluoromethane (S)	89.6		%	78 - 116	SW846 8260B			7/7/17 02:30	CJG	A
Toluene-d8 (S)	93.8		%	76 - 127	SW846 8260B			7/7/17 02:30	CJG	A



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### ANALYTICAL RESULTS

Workorder: 2242599 Quinns Cafe Stop/26116

Lab ID: 2242599003  
Sample ID: 116-0627-MW3

Date Collected: 6/27/2017 13:14 Matrix: Water  
Date Received: 6/30/2017 08:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	583		ug/L	5.0	SW846 8260B			7/7/17 02:53	CJG	A
Ethylbenzene	1210		ug/L	25.0	SW846 8260B			7/10/17 15:51	DD	A
Isopropylbenzene	98.6		ug/L	5.0	SW846 8260B			7/7/17 02:53	CJG	A
Methyl t-Butyl Ether	57.7		ug/L	5.0	SW846 8260B			7/7/17 02:53	CJG	A
Naphthalene	545		ug/L	10.0	SW846 8260B			7/7/17 02:53	CJG	A
Toluene	44.1		ug/L	5.0	SW846 8260B			7/7/17 02:53	CJG	A
Total Xylenes	1460		ug/L	15.0	SW846 8260B			7/7/17 02:53	CJG	A
1,2,4-Trimethylbenzene	830		ug/L	25.0	SW846 8260B			7/10/17 15:51	DD	A
1,3,5-Trimethylbenzene	72.9		ug/L	5.0	SW846 8260B			7/7/17 02:53	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	98		%	62 - 133	SW846 8260B			7/10/17 15:51	DD	A
1,2-Dichloroethane-d4 (S)	111		%	62 - 133	SW846 8260B			7/7/17 02:53	CJG	A
4-Bromofluorobenzene (S)	98.1		%	79 - 114	SW846 8260B			7/10/17 15:51	DD	A
4-Bromofluorobenzene (S)	105		%	79 - 114	SW846 8260B			7/7/17 02:53	CJG	A
Dibromofluoromethane (S)	93		%	78 - 116	SW846 8260B			7/10/17 15:51	DD	A
Dibromofluoromethane (S)	89		%	78 - 116	SW846 8260B			7/7/17 02:53	CJG	A
Toluene-d8 (S)	90		%	76 - 127	SW846 8260B			7/7/17 02:53	CJG	A
Toluene-d8 (S)	91.6		%	76 - 127	SW846 8260B			7/10/17 15:51	DD	A



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### ANALYTICAL RESULTS

Workorder: 2242599 Quinns Cafe Stop/26116

Lab ID: 2242599004  
Sample ID: 116-0627-MW4

Date Collected: 6/28/2017 11:01 Matrix: Water  
Date Received: 6/30/2017 08:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	128		ug/L	1.0	SW846 8260B			7/7/17 03:16	CJG	A
Ethylbenzene	5.6		ug/L	1.0	SW846 8260B			7/7/17 03:16	CJG	A
Isopropylbenzene	6.7		ug/L	1.0	SW846 8260B			7/7/17 03:16	CJG	A
Methyl t-Butyl Ether	280		ug/L	5.0	SW846 8260B			7/10/17 15:29	DD	A
Naphthalene	8.6		ug/L	2.0	SW846 8260B			7/7/17 03:16	CJG	A
Toluene	6.2		ug/L	1.0	SW846 8260B			7/7/17 03:16	CJG	A
Total Xylenes	12.3		ug/L	3.0	SW846 8260B			7/7/17 03:16	CJG	A
1,2,4-Trimethylbenzene	3.9		ug/L	1.0	SW846 8260B			7/7/17 03:16	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 03:16	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	96.1		%	62 - 133	SW846 8260B			7/10/17 15:29	DD	A
1,2-Dichloroethane-d4 (S)	111		%	62 - 133	SW846 8260B			7/7/17 03:16	CJG	A
4-Bromofluorobenzene (S)	112		%	79 - 114	SW846 8260B			7/7/17 03:16	CJG	A
4-Bromofluorobenzene (S)	98.9		%	79 - 114	SW846 8260B			7/10/17 15:29	DD	A
Dibromofluoromethane (S)	93		%	78 - 116	SW846 8260B			7/10/17 15:29	DD	A
Dibromofluoromethane (S)	91.9		%	78 - 116	SW846 8260B			7/7/17 03:16	CJG	A
Toluene-d8 (S)	94.9		%	76 - 127	SW846 8260B			7/7/17 03:16	CJG	A
Toluene-d8 (S)	94.2		%	76 - 127	SW846 8260B			7/10/17 15:29	DD	A



Ms. Amy K Borden  
Project Coordinator

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### ANALYTICAL RESULTS

Workorder: 2242599 Quinns Cafe Stop/26116

Lab ID: 2242599005  
Sample ID: 116-0627-MW5

Date Collected: 6/28/2017 10:34 Matrix: Water  
Date Received: 6/30/2017 08:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	227		ug/L	5.0	SW846 8260B			7/7/17 03:38	CJG	A
Ethylbenzene	475		ug/L	5.0	SW846 8260B			7/7/17 03:38	CJG	A
Isopropylbenzene	76.1		ug/L	5.0	SW846 8260B			7/7/17 03:38	CJG	A
Methyl t-Butyl Ether	6.7		ug/L	5.0	SW846 8260B			7/7/17 03:38	CJG	A
Naphthalene	235		ug/L	10.0	SW846 8260B			7/7/17 03:38	CJG	A
Toluene	71.9		ug/L	5.0	SW846 8260B			7/7/17 03:38	CJG	A
Total Xylenes	487		ug/L	15.0	SW846 8260B			7/7/17 03:38	CJG	A
1,2,4-Trimethylbenzene	707		ug/L	5.0	SW846 8260B			7/7/17 03:38	CJG	A
1,3,5-Trimethylbenzene	40.9		ug/L	5.0	SW846 8260B			7/7/17 03:38	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	109		%	62 - 133	SW846 8260B			7/7/17 03:38	CJG	A
4-Bromofluorobenzene (S)	109		%	79 - 114	SW846 8260B			7/7/17 03:38	CJG	A
Dibromofluoromethane (S)	89.6		%	78 - 116	SW846 8260B			7/7/17 03:38	CJG	A
Toluene-d8 (S)	93.2		%	76 - 127	SW846 8260B			7/7/17 03:38	CJG	A



Ms. Amy K Borden  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2242599 Quinns Cafe Stop/26116

Lab ID: 2242599006  
Sample ID: 116-0627-MW6

Date Collected: 6/27/2017 12:32 Matrix: Water  
Date Received: 6/30/2017 08:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	13.1		ug/L	1.0	SW846 8260B			7/7/17 04:01	CJG	A
Ethylbenzene	1.3		ug/L	1.0	SW846 8260B			7/7/17 04:01	CJG	A
Isopropylbenzene	3.7		ug/L	1.0	SW846 8260B			7/7/17 04:01	CJG	A
Methyl t-Butyl Ether	20.7		ug/L	1.0	SW846 8260B			7/7/17 04:01	CJG	A
Naphthalene	2.8		ug/L	2.0	SW846 8260B			7/7/17 04:01	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			7/7/17 04:01	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			7/7/17 04:01	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 04:01	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 04:01	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	111		%	62 - 133	SW846 8260B			7/7/17 04:01	CJG	A
4-Bromofluorobenzene (S)	113		%	79 - 114	SW846 8260B			7/7/17 04:01	CJG	A
Dibromofluoromethane (S)	93.4		%	78 - 116	SW846 8260B			7/7/17 04:01	CJG	A
Toluene-d8 (S)	95.7		%	76 - 127	SW846 8260B			7/7/17 04:01	CJG	A

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Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2242599 Quinns Cafe Stop/26116

Lab ID: 2242599007  
Sample ID: 116-0627-MW7

Date Collected: 6/27/2017 15:45 Matrix: Water  
Date Received: 6/30/2017 08:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			7/7/17 04:24	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 04:24	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 04:24	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			7/7/17 04:24	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			7/7/17 04:24	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			7/7/17 04:24	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			7/7/17 04:24	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 04:24	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 04:24	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	111		%	62 - 133	SW846 8260B			7/7/17 04:24	CJG	A
4-Bromofluorobenzene (S)	114		%	79 - 114	SW846 8260B			7/7/17 04:24	CJG	A
Dibromofluoromethane (S)	90.8		%	78 - 116	SW846 8260B			7/7/17 04:24	CJG	A
Toluene-d8 (S)	95.7		%	76 - 127	SW846 8260B			7/7/17 04:24	CJG	A



Ms. Amy K Borden  
Project Coordinator

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### ANALYTICAL RESULTS

Workorder: 2242599 Quinns Cafe Stop/26116

Lab ID: 2242599008  
Sample ID: 116-0627-MW8

Date Collected: 6/27/2017 15:30 Matrix: Water  
Date Received: 6/30/2017 08:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			7/7/17 04:47	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 04:47	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 04:47	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			7/7/17 04:47	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			7/7/17 04:47	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			7/7/17 04:47	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			7/7/17 04:47	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 04:47	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 04:47	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	110		%	62 - 133	SW846 8260B			7/7/17 04:47	CJG	A
4-Bromofluorobenzene (S)	110		%	79 - 114	SW846 8260B			7/7/17 04:47	CJG	A
Dibromofluoromethane (S)	89.3		%	78 - 116	SW846 8260B			7/7/17 04:47	CJG	A
Toluene-d8 (S)	96.5		%	76 - 127	SW846 8260B			7/7/17 04:47	CJG	A



Ms. Amy K Borden  
Project Coordinator

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### ANALYTICAL RESULTS

Workorder: 2242599 Quinns Cafe Stop/26116

Lab ID: 2242599009  
Sample ID: 116-0627-MW9

Date Collected: 6/27/2017 14:30 Matrix: Water  
Date Received: 6/30/2017 08:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			7/7/17 05:09	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 05:09	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 05:09	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			7/7/17 05:09	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			7/7/17 05:09	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			7/7/17 05:09	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			7/7/17 05:09	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 05:09	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 05:09	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	113		%	62 - 133	SW846 8260B			7/7/17 05:09	CJG	A
4-Bromofluorobenzene (S)	112		%	79 - 114	SW846 8260B			7/7/17 05:09	CJG	A
Dibromofluoromethane (S)	92.3		%	78 - 116	SW846 8260B			7/7/17 05:09	CJG	A
Toluene-d8 (S)	95.8		%	76 - 127	SW846 8260B			7/7/17 05:09	CJG	A



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### ANALYTICAL RESULTS

Workorder: 2242599 Quinns Cafe Stop/26116

Lab ID: 2242599010  
Sample ID: 116-0627-MW10

Date Collected: 6/28/2017 10:02 Matrix: Water  
Date Received: 6/30/2017 08:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			7/7/17 05:32	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 05:32	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 05:32	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			7/7/17 05:32	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			7/7/17 05:32	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			7/7/17 05:32	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			7/7/17 05:32	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 05:32	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 05:32	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	116		%	62 - 133	SW846 8260B			7/7/17 05:32	CJG	A
4-Bromofluorobenzene (S)	113		%	79 - 114	SW846 8260B			7/7/17 05:32	CJG	A
Dibromofluoromethane (S)	94.9		%	78 - 116	SW846 8260B			7/7/17 05:32	CJG	A
Toluene-d8 (S)	95.6		%	76 - 127	SW846 8260B			7/7/17 05:32	CJG	A



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## ANALYTICAL RESULTS

Workorder: 2242599 Quinns Cafe Stop/26116

Lab ID: 2242599011  
Sample ID: 116-0627-FB1

Date Collected: 6/27/2017 15:47 Matrix: Water  
Date Received: 6/30/2017 08:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			7/7/17 21:59	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 21:59	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 21:59	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			7/7/17 21:59	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			7/7/17 21:59	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			7/7/17 21:59	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			7/7/17 21:59	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 21:59	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 21:59	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	110		%	62 - 133	SW846 8260B			7/7/17 21:59	CJG	A
4-Bromofluorobenzene (S)	111		%	79 - 114	SW846 8260B			7/7/17 21:59	CJG	A
Dibromofluoromethane (S)	91.2		%	78 - 116	SW846 8260B			7/7/17 21:59	CJG	A
Toluene-d8 (S)	97.2		%	76 - 127	SW846 8260B			7/7/17 21:59	CJG	A

Ms. Amy K Borden  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2242599 Quinns Cafe Stop/26116

Lab ID: 2242599012  
Sample ID: 116-0627-FB2

Date Collected: 6/27/2017 11:15 Matrix: Water  
Date Received: 6/30/2017 08:22

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			7/7/17 22:22	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 22:22	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 22:22	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			7/7/17 22:22	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			7/7/17 22:22	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			7/7/17 22:22	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			7/7/17 22:22	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 22:22	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/7/17 22:22	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	109		%	62 - 133	SW846 8260B			7/7/17 22:22	CJG	A
4-Bromofluorobenzene (S)	110		%	79 - 114	SW846 8260B			7/7/17 22:22	CJG	A
Dibromofluoromethane (S)	92.5		%	78 - 116	SW846 8260B			7/7/17 22:22	CJG	A
Toluene-d8 (S)	96		%	76 - 127	SW846 8260B			7/7/17 22:22	CJG	A

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Project Coordinator

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34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

# Environmetal

## CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /  
SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 2  
Counter: FedEx  
Tracking #: 817 5117  
0658

Co. Name: Pennsylvania Tectonics, Inc.  
Contact (Report to): Martin Gilgallon Phone: 570-487-1959  
Address: 723 Main Street  
Archbald PA 18403  
PO#:

Project Name: Quina's Left Stop / 26116 ALS Quote #:

TAT: ☒ Normal-Standard TAT is 10-12 business days. Date Required:  
☐ Rush-Subject to ALS approval and surcharges. Approved By:

Email? ☒ Y ☐ N Fax? ☐ Y ☐ N  
Y/N No: mgilgallon@pa.tectonics.com

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time
1 116 - 0627 - MW1		6/27/17	1127
2 116 - 0627 - MW2		6/28/17	0900
3 116 - 0627 - MW3		6/27/17	1314
4 116 - 0627 - MW4		6/28/17	1101
5 116 - 0627 - MW5		6/28/17	1054
6 116 - 0627 - MW6		6/27/17	1232
7 116 - 0627 - MW7		6/27/17	1545
8 116 - 0627 - MW8		6/27/17	1530

Project Comments:

SAMPLED BY (Please Print):

Chris Herman

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Chris Herman / PA Tectonics	6/24/17	1300	2 FedEx	6/27/17	5117
3			4 J. C. ...	6/28/17	911
5			6		
7			8		
9			10		

\* G-Gmb; C-Composite

\*\*Matrix: A=Air; D=Drilling Water; GW=Groundwater; D=Oil; O=Other Liquid; SL=Shale; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL, CANARY - CUSTOMER COPY

\*\*\*Container Type: AG-Ambur Glass; CG-Clear Glass; PL-Plastic. Container Size: 250ml, 500ml, 1L, 2oz, etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 01-2013

ANALYSES/METHOD REQUESTED

Container: CG, Type: 40mL, Size: 40mL, Preservative: HCl

Enter Number of Containers Per Analysis

Unleaded Gasoline

OK to transfer client

Notes: Samples rec'd 5/9/2

Therm ID: 241

Correct containers? (Y/N) Correct sample volume? (Y/N) Correct preservation? (Y/N) Headspace/Volatiles? (Y/N) COC Labels complete/accurate? (Y/N) Received on ice? (Y/N) (If present) Seals intact? (Y/N) Custody seals Present? (Y/N) Container in good condition? (Y/N)

ALS FIELD SERVICES: Pickup, Labor, Composite Sampling, Rental Equipment, Other.

SWA: Format: yes, no; CLP-like: yes, no; NJ-Reduced: yes, no; NJ-Full: yes, no; If yes, format type: Other.

SOA Samples: Collected in? MO, NJ, NY, PA.

DOE Criteria Required?





34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

# Environmental

Co. Name: Pennsylvania Technics Inc.  
Contact (Report to): Martin Gilgallon  
Address: 723 Main Street  
Archbald-PA 18403

Phone:  
570-487-1959

Bill To (if different than Report to):

PO#:

Project Name/ID: Quinn's Cafe Stop 126110 ALS Quote #:

TAT: ☒ Normal-Standard TAT is 10-12 business days.  
☐ Rush-Subject to ALS approval and surcharges.

Date Required:  
Approved By:

Email? ☒ Y ☐ N Fax? ☐ Y ☐ N No: [m.gilgallon@patectonics.com](mailto:m.gilgallon@patectonics.com)

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time
1 116 - 0627 - MW9		6/27/17	1430 GFW 2
2 116 - 0627 - MW10		6/28/17	1002 GFW 2
3 116 - 0627 - FB1		6/27/17	1547 GDF 2
4 116 - 0627 - FB2		6/28/17	1115 GDF 2
5			
6			
7			
8			

SAMPLED BY (Please Print):

Chris Herman

Relinquished By / Company Name

Chris Herman / PA Technics

Date

6/27/17

Time

1300

Received By / Company Name

2 Fed Ex 817 510 6658

Date

6/28/17

Time

0130 PM

Signature

Chris Herman

## CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/  
SAMPLER. INSTRUCTIONS ON THE BACK.

Page 2 of 2  
Courier: Fed Ex  
Tracking #: 817 5117  
6658

COC#

Container Type	CG
Container Site	441
Preservative	HCl

### ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis	Unleaded Gasoline
---	-------------------

Correct containers?	Y	Correct sample volume?	Y	Correct preservation?	Y	Headspace/Volatiles?	Y	Container in good condition?	Y
Correct containers?	N	Correct sample volume?	N	Correct preservation?	N	Headspace/Volatiles?	N	Container in good condition?	N

Standard	CLP-like	NJ-Reduced	NJ-Full	Other
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

State Samples Collected in?	MD	NY	PA
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ALS FIELD SERVICES	Pickup	Lab	Composite Sampling	Rental Equipment	Other
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX P-5

Laboratory Analytical Data Sheets

Groundwater Sampling Activities – September 2017

September 27, 2017

Mr. Marty Gilgallon  
LaBella-Dunmore  
723 Main Street  
Archbald, PA 18403

## Certificate of Analysis

Project Name:	<b>Quinn's Cafe Stop/2171853</b>	Workorder:	<b>2261115</b>
Purchase Order:		Workorder ID:	<b>Quinn's Cafe Stop/2171853</b>

Dear Mr. Gilgallon:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, September 13, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Kevin Cucura

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

Ms. Amy K Borden  
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 2261115 Quinn's Cafe Stop/2171853

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2261115001	116-0911-MW1	Water	9/11/2017 12:41	9/13/2017 09:02	Collected by Client
2261115002	116-0911-MW2	Water	9/11/2017 12:06	9/13/2017 09:02	Collected by Client
2261115003	116-0911-MW3	Water	9/11/2017 13:20	9/13/2017 09:02	Collected by Client
2261115004	116-0911-MW4	Water	9/11/2017 15:00	9/13/2017 09:02	Collected by Client
2261115005	116-0911-MW5	Water	9/11/2017 14:32	9/13/2017 09:02	Collected by Client
2261115006	116-0911-MW6	Water	9/11/2017 14:04	9/13/2017 09:02	Collected by Client
2261115007	116-0911-MW7	Water	9/11/2017 10:36	9/13/2017 09:02	Collected by Client
2261115008	116-0911-MW8	Water	9/11/2017 10:06	9/13/2017 09:02	Collected by Client
2261115009	116-0911-MW9	Water	9/11/2017 09:07	9/13/2017 09:02	Collected by Client
2261115010	116-0911-MW10	Water	9/11/2017 11:03	9/13/2017 09:02	Collected by Client
2261115011	116-0911-FB1	Water	9/11/2017 15:10	9/13/2017 09:02	Collected by Client

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## SAMPLE SUMMARY

Workorder: 2261115 Quinn's Cafe Stop/2171853

### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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### PROJECT SUMMARY

Workorder: 2261115 Quinn's Cafe Stop/2171853

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#### Sample Comments

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**Lab ID:** 2261115002      **Sample ID:** 116-0911-MW2      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

**Lab ID:** 2261115003      **Sample ID:** 116-0911-MW3      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

**Lab ID:** 2261115005      **Sample ID:** 116-0911-MW5      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

---

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### ANALYTICAL RESULTS

Workorder: 2261115 Quinn's Cafe Stop/2171853

Lab ID: 2261115001  
Sample ID: 116-0911-MW1

Date Collected: 9/11/2017 12:41 Matrix: Water  
Date Received: 9/13/2017 09:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	2.3		ug/L	1.0	SW846 8260B			9/19/17 12:43	TMP	A
Ethylbenzene	2.3		ug/L	1.0	SW846 8260B			9/19/17 12:43	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			9/19/17 12:43	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			9/19/17 12:43	TMP	A
Naphthalene	ND	1,2,3	ug/L	2.0	SW846 8260B			9/19/17 12:43	TMP	A
Toluene	1.1		ug/L	1.0	SW846 8260B			9/19/17 12:43	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			9/19/17 12:43	TMP	A
1,2,4-Trimethylbenzene	7.0		ug/L	1.0	SW846 8260B			9/19/17 12:43	TMP	A
1,3,5-Trimethylbenzene	1.7		ug/L	1.0	SW846 8260B			9/19/17 12:43	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	90		%	62 - 133	SW846 8260B			9/19/17 12:43	TMP	A
4-Bromofluorobenzene (S)	95.8		%	79 - 114	SW846 8260B			9/19/17 12:43	TMP	A
Dibromofluoromethane (S)	91.5		%	78 - 116	SW846 8260B			9/19/17 12:43	TMP	A
Toluene-d8 (S)	94		%	76 - 127	SW846 8260B			9/19/17 12:43	TMP	A



Ms. Amy K Borden  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2261115 Quinn's Cafe Stop/2171853

Lab ID: 2261115002  
Sample ID: 116-0911-MW2

Date Collected: 9/11/2017 12:06 Matrix: Water  
Date Received: 9/13/2017 09:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	82.5		ug/L	5.0	SW846 8260B			9/19/17 13:01	TMP	A
Ethylbenzene	462		ug/L	5.0	SW846 8260B			9/19/17 13:01	TMP	A
Isopropylbenzene	55.2		ug/L	5.0	SW846 8260B			9/19/17 13:01	TMP	A
Methyl t-Butyl Ether	ND		ug/L	5.0	SW846 8260B			9/19/17 13:01	TMP	A
Naphthalene	181		ug/L	10.0	SW846 8260B			9/19/17 13:01	TMP	A
Toluene	31.0		ug/L	5.0	SW846 8260B			9/19/17 13:01	TMP	A
Total Xylenes	374		ug/L	15.0	SW846 8260B			9/19/17 13:01	TMP	A
1,2,4-Trimethylbenzene	243		ug/L	5.0	SW846 8260B			9/19/17 13:01	TMP	A
1,3,5-Trimethylbenzene	56.7		ug/L	5.0	SW846 8260B			9/19/17 13:01	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	87.4		%	62 - 133	SW846 8260B			9/19/17 13:01	TMP	A
4-Bromofluorobenzene (S)	96.7		%	79 - 114	SW846 8260B			9/19/17 13:01	TMP	A
Dibromofluoromethane (S)	87.9		%	78 - 116	SW846 8260B			9/19/17 13:01	TMP	A
Toluene-d8 (S)	98.9		%	76 - 127	SW846 8260B			9/19/17 13:01	TMP	A



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### ANALYTICAL RESULTS

Workorder: 2261115 Quinn's Cafe Stop/2171853

Lab ID: 2261115003  
Sample ID: 116-0911-MW3

Date Collected: 9/11/2017 13:20 Matrix: Water  
Date Received: 9/13/2017 09:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	208		ug/L	5.0	SW846 8260B			9/19/17 13:55	TMP	A
Ethylbenzene	13.1		ug/L	5.0	SW846 8260B			9/19/17 13:55	TMP	A
Isopropylbenzene	6.7		ug/L	5.0	SW846 8260B			9/19/17 13:55	TMP	A
Methyl t-Butyl Ether	9.6		ug/L	5.0	SW846 8260B			9/19/17 13:55	TMP	A
Naphthalene	15.7		ug/L	10.0	SW846 8260B			9/19/17 13:55	TMP	A
Toluene	ND		ug/L	5.0	SW846 8260B			9/19/17 13:55	TMP	A
Total Xylenes	ND		ug/L	15.0	SW846 8260B			9/19/17 13:55	TMP	A
1,2,4-Trimethylbenzene	15.9		ug/L	5.0	SW846 8260B			9/19/17 13:55	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	5.0	SW846 8260B			9/19/17 13:55	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	85.7		%	62 - 133	SW846 8260B			9/19/17 13:55	TMP	A
4-Bromofluorobenzene (S)	98.5		%	79 - 114	SW846 8260B			9/19/17 13:55	TMP	A
Dibromofluoromethane (S)	85.9		%	78 - 116	SW846 8260B			9/19/17 13:55	TMP	A
Toluene-d8 (S)	95.5		%	76 - 127	SW846 8260B			9/19/17 13:55	TMP	A



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## ANALYTICAL RESULTS

Workorder: 2261115 Quinn's Cafe Stop/2171853

Lab ID: 2261115004  
Sample ID: 116-0911-MW4

Date Collected: 9/11/2017 15:00 Matrix: Water  
Date Received: 9/13/2017 09:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	37.6		ug/L	1.0	SW846 8260B			9/19/17 14:14	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			9/19/17 14:14	TMP	A
Isopropylbenzene	3.4		ug/L	1.0	SW846 8260B			9/19/17 14:14	TMP	A
Methyl t-Butyl Ether	315		ug/L	5.0	SW846 8260B			9/22/17 00:53	CJG	B
Naphthalene	3.4		ug/L	2.0	SW846 8260B			9/19/17 14:14	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			9/19/17 14:14	TMP	A
Total Xylenes	3.2		ug/L	3.0	SW846 8260B			9/19/17 14:14	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			9/19/17 14:14	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			9/19/17 14:14	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	86.6		%	62 - 133	SW846 8260B			9/19/17 14:14	TMP	A
1,2-Dichloroethane-d4 (S)	90.6		%	62 - 133	SW846 8260B			9/22/17 00:53	CJG	B
4-Bromofluorobenzene (S)	97.3		%	79 - 114	SW846 8260B			9/22/17 00:53	CJG	B
4-Bromofluorobenzene (S)	102		%	79 - 114	SW846 8260B			9/19/17 14:14	TMP	A
Dibromofluoromethane (S)	87.8		%	78 - 116	SW846 8260B			9/19/17 14:14	TMP	A
Dibromofluoromethane (S)	90.9		%	78 - 116	SW846 8260B			9/22/17 00:53	CJG	B
Toluene-d8 (S)	98.1		%	76 - 127	SW846 8260B			9/22/17 00:53	CJG	B
Toluene-d8 (S)	101		%	76 - 127	SW846 8260B			9/19/17 14:14	TMP	A

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**ANALYTICAL RESULTS**

Workorder: 2261115 Quinn's Cafe Stop/2171853

Lab ID: 2261115005  
Sample ID: 116-0911-MW5Date Collected: 9/11/2017 14:32 Matrix: Water  
Date Received: 9/13/2017 09:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	330		ug/L	5.0	SW846 8260B			9/19/17 13:19	TMP	A
Ethylbenzene	610		ug/L	5.0	SW846 8260B			9/19/17 13:19	TMP	A
Isopropylbenzene	82.0		ug/L	5.0	SW846 8260B			9/19/17 13:19	TMP	A
Methyl t-Butyl Ether	10.3		ug/L	5.0	SW846 8260B			9/19/17 13:19	TMP	A
Naphthalene	210		ug/L	10.0	SW846 8260B			9/19/17 13:19	TMP	A
Toluene	41.7		ug/L	5.0	SW846 8260B			9/19/17 13:19	TMP	A
Total Xylenes	528		ug/L	15.0	SW846 8260B			9/19/17 13:19	TMP	A
1,2,4-Trimethylbenzene	646		ug/L	5.0	SW846 8260B			9/19/17 13:19	TMP	A
1,3,5-Trimethylbenzene	43.4		ug/L	5.0	SW846 8260B			9/19/17 13:19	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	83.7		%	62 - 133	SW846 8260B			9/19/17 13:19	TMP	A
4-Bromofluorobenzene (S)	93.7		%	79 - 114	SW846 8260B			9/19/17 13:19	TMP	A
Dibromofluoromethane (S)	87.8		%	78 - 116	SW846 8260B			9/19/17 13:19	TMP	A
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B			9/19/17 13:19	TMP	A

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Project Coordinator**ALS Environmental Laboratory Locations Across North America**Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
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### ANALYTICAL RESULTS

Workorder: 2261115 Quinn's Cafe Stop/2171853

Lab ID: 2261115006  
Sample ID: 116-0911-MW6

Date Collected: 9/11/2017 14:04 Matrix: Water  
Date Received: 9/13/2017 09:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	5.9		ug/L	1.0	SW846 8260B			9/22/17 00:17	CJG	B
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			9/22/17 00:17	CJG	B
Isopropylbenzene	3.3		ug/L	1.0	SW846 8260B			9/22/17 00:17	CJG	B
Methyl t-Butyl Ether	11.4		ug/L	1.0	SW846 8260B			9/22/17 00:17	CJG	B
Naphthalene	ND		ug/L	2.0	SW846 8260B			9/22/17 00:17	CJG	B
Toluene	ND		ug/L	1.0	SW846 8260B			9/22/17 00:17	CJG	B
Total Xylenes	ND		ug/L	3.0	SW846 8260B			9/22/17 00:17	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			9/22/17 00:17	CJG	B
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			9/22/17 00:17	CJG	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	92.2		%	62 - 133	SW846 8260B			9/22/17 00:17	CJG	B
4-Bromofluorobenzene (S)	96.3		%	79 - 114	SW846 8260B			9/22/17 00:17	CJG	B
Dibromofluoromethane (S)	91		%	78 - 116	SW846 8260B			9/22/17 00:17	CJG	B
Toluene-d8 (S)	100		%	76 - 127	SW846 8260B			9/22/17 00:17	CJG	B



Ms. Amy K Borden  
Project Coordinator

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### ANALYTICAL RESULTS

Workorder: 2261115 Quinn's Cafe Stop/2171853

Lab ID: 2261115007  
Sample ID: 116-0911-MW7

Date Collected: 9/11/2017 10:36 Matrix: Water  
Date Received: 9/13/2017 09:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			9/21/17 23:58	CJG	B
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			9/21/17 23:58	CJG	B
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			9/21/17 23:58	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			9/21/17 23:58	CJG	B
Naphthalene	ND		ug/L	2.0	SW846 8260B			9/21/17 23:58	CJG	B
Toluene	ND		ug/L	1.0	SW846 8260B			9/21/17 23:58	CJG	B
Total Xylenes	ND		ug/L	3.0	SW846 8260B			9/21/17 23:58	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			9/21/17 23:58	CJG	B
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			9/21/17 23:58	CJG	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	94		%	62 - 133	SW846 8260B			9/21/17 23:58	CJG	B
4-Bromofluorobenzene (S)	97.8		%	79 - 114	SW846 8260B			9/21/17 23:58	CJG	B
Dibromofluoromethane (S)	91.6		%	78 - 116	SW846 8260B			9/21/17 23:58	CJG	B
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B			9/21/17 23:58	CJG	B



Ms. Amy K Borden  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2261115 Quinn's Cafe Stop/2171853

Lab ID: 2261115008  
Sample ID: 116-0911-MW8

Date Collected: 9/11/2017 10:06 Matrix: Water  
Date Received: 9/13/2017 09:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			9/21/17 23:40	CJG	B
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			9/21/17 23:40	CJG	B
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			9/21/17 23:40	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			9/21/17 23:40	CJG	B
Naphthalene	ND		ug/L	2.0	SW846 8260B			9/21/17 23:40	CJG	B
Toluene	ND		ug/L	1.0	SW846 8260B			9/21/17 23:40	CJG	B
Total Xylenes	ND		ug/L	3.0	SW846 8260B			9/21/17 23:40	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			9/21/17 23:40	CJG	B
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			9/21/17 23:40	CJG	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	94.7		%	62 - 133	SW846 8260B			9/21/17 23:40	CJG	B
4-Bromofluorobenzene (S)	97.2		%	79 - 114	SW846 8260B			9/21/17 23:40	CJG	B
Dibromofluoromethane (S)	90.9		%	78 - 116	SW846 8260B			9/21/17 23:40	CJG	B
Toluene-d8 (S)	101		%	76 - 127	SW846 8260B			9/21/17 23:40	CJG	B

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Project Coordinator

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### ANALYTICAL RESULTS

Workorder: 2261115 Quinn's Cafe Stop/2171853

Lab ID: 2261115009  
Sample ID: 116-0911-MW9

Date Collected: 9/11/2017 09:07 Matrix: Water  
Date Received: 9/13/2017 09:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			9/25/17 12:41	TMP	B
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			9/25/17 12:41	TMP	B
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			9/25/17 12:41	TMP	B
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			9/25/17 12:41	TMP	B
Naphthalene	ND		ug/L	2.0	SW846 8260B			9/25/17 12:41	TMP	B
Toluene	ND		ug/L	1.0	SW846 8260B			9/25/17 12:41	TMP	B
Total Xylenes	ND		ug/L	3.0	SW846 8260B			9/25/17 12:41	TMP	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			9/25/17 12:41	TMP	B
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			9/25/17 12:41	TMP	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	93.2		%	62 - 133	SW846 8260B			9/25/17 12:41	TMP	B
4-Bromofluorobenzene (S)	98.4		%	79 - 114	SW846 8260B			9/25/17 12:41	TMP	B
Dibromofluoromethane (S)	89.4		%	78 - 116	SW846 8260B			9/25/17 12:41	TMP	B
Toluene-d8 (S)	97.2		%	76 - 127	SW846 8260B			9/25/17 12:41	TMP	B



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Project Coordinator

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### ANALYTICAL RESULTS

Workorder: 2261115 Quinn's Cafe Stop/2171853

Lab ID: 2261115010  
Sample ID: 116-0911-MW10

Date Collected: 9/11/2017 11:03 Matrix: Water  
Date Received: 9/13/2017 09:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			9/19/17 17:33	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			9/19/17 17:33	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			9/19/17 17:33	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			9/19/17 17:33	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			9/19/17 17:33	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			9/19/17 17:33	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			9/19/17 17:33	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			9/19/17 17:33	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			9/19/17 17:33	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	92.2		%	62 - 133	SW846 8260B			9/19/17 17:33	TMP	A
4-Bromofluorobenzene (S)	94.4		%	79 - 114	SW846 8260B			9/19/17 17:33	TMP	A
Dibromofluoromethane (S)	90.1		%	78 - 116	SW846 8260B			9/19/17 17:33	TMP	A
Toluene-d8 (S)	96.2		%	76 - 127	SW846 8260B			9/19/17 17:33	TMP	A



Ms. Amy K Borden  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2261115 Quinn's Cafe Stop/2171853

Lab ID: 2261115011  
Sample ID: 116-0911-FB1

Date Collected: 9/11/2017 15:10 Matrix: Water  
Date Received: 9/13/2017 09:02

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	1.1		ug/L	1.0	SW846 8260B			9/22/17 00:35	CJG	B
Ethylbenzene	1.3		ug/L	1.0	SW846 8260B			9/22/17 00:35	CJG	B
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			9/22/17 00:35	CJG	B
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			9/22/17 00:35	CJG	B
Naphthalene	ND		ug/L	2.0	SW846 8260B			9/22/17 00:35	CJG	B
Toluene	13.1		ug/L	1.0	SW846 8260B			9/22/17 00:35	CJG	B
Total Xylenes	7.4		ug/L	3.0	SW846 8260B			9/22/17 00:35	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			9/22/17 00:35	CJG	B
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			9/22/17 00:35	CJG	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	96		%	62 - 133	SW846 8260B			9/22/17 00:35	CJG	B
4-Bromofluorobenzene (S)	99.5		%	79 - 114	SW846 8260B			9/22/17 00:35	CJG	B
Dibromofluoromethane (S)	93.7		%	78 - 116	SW846 8260B			9/22/17 00:35	CJG	B
Toluene-d8 (S)	103		%	76 - 127	SW846 8260B			9/22/17 00:35	CJG	B

Ms. Amy K Borden  
Project Coordinator

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**PARAMETER QUALIFIERS**

Lab ID	#	Sample ID	Analytical Method	Analyte
2261115001	1	116-0911-MW1	SW846 8260B	Naphthalene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 515 and the control limits were 56 to 134.				
2261115001	2	116-0911-MW1	SW846 8260B	Naphthalene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 239 and the control limits were 56 to 134.				
2261115001	3	116-0911-MW1	SW846 8260B	Naphthalene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Naphthalene. The RPD was reported as 72.3 and the upper control limit is 40.				

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34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

**Environmental**

# CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/  
SAMPLER. INSTRUCTIONS ON THE BACK.

Co. Name: **LaBella Associates**  
Contact (report to): **Martin Gilgallon**  
Address: **1000 Dunham Drive Suite B**  
**Dunmore, PA 18512**  
Phone: **570-487-1959**  
Bill to (if different than report to): **LaBella Associates PO#:**  
**Lynn Henrichak**  
**1000 Dunham Drive Suite B**  
**Dunmore, PA 18512**  
Project Name/ID: **Quinn's Cafe Stop / 2171853** ALS Quote #:  
TAT: ☒ Normal-Standard TAT is 10-12 business days. Date Required:  
☐ Rush-Subject to ALS approval and surcharges. Approved By:

Email? ☒ Y ☐ N No. **mgilgallon@labella.pc.com**  
Fax? ☐ Y ☒ N

Sample Description/Location (see 3. will appear on the lab report)	COC Comments	Sample Date	Military Time
1 116-0911-mw1		9/14/17	1241
2 116-0911-mw2		9/11/17	1206
3 116-0911-mw3		9/11/17	1320
4 116-0911-mw4		9/11/17	1500
5 116-0911-mw5		9/11/17	1432
6 116-0911-mw6		9/11/17	1404
7 116-0911-mw7		9/11/17	1036
8 116-0911-mw8		9/11/17	1006

SAMPLER BY (Please Print):		Project Comments:	
<b>Chris Herman</b>			
Refinishing By / Company Name	Date	Time	Received By / Company Name
1 <b>Chris Herman / LaBella</b>	9/11/17	1530	2 <b>FED EX 8117 5117 6886</b>
3			4 <b>2171853</b>
5			6
7			8
9			10

Container Type: **CG**  
Container Size: **40ml**  
Preservative: **HCL**  
Therm ID: **309**  
No. of Coolers: **1**  
Notes:

## ANALYSIS METHOD REQUESTED

Enter Number of Containers Per Analysis	
Unleaded Gasoline	2
	2
	2
	2
	2
	2
	2

Correct containers? ☒ Y ☐ N  
Correct sample volume? ☒ Y ☐ N  
Correct preservation? ☒ Y ☐ N  
Headspace/Volatiles? ☒ Y ☐ N  
Container in good condition? ☒ Y ☐ N

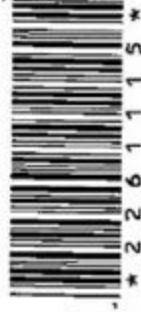
ALS FIELD SERVICES  
Pickup ☐  
Labor ☐  
Composite Sampling ☐  
Rental Equipment ☐  
Other: ☐

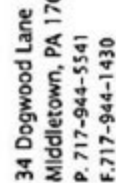
SWA Form 7-0 ☐ YES ☐ NO  
Standard ☒ CLP-like ☐ NL-Reduced ☐ NL-Full ☐ Other: ☐

Site Sample Collected by? ☐ NO ☐ YES ☐ YES ☒ YES ☐ YES

DOO Criteria Required? ☐ YES ☐ NO

Page 1 of 2  
Courier: **FED EX**  
Tracking #: **8117 5117 6886**





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Middletown, PA 17057  
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**CHAIN OF CUSTODY/  
REQUEST FOR ANALYSIS**

Page 2 of 2  
 Courier: FED EX  
 Tracking #: 8117 5117

#000111

<b>Co. Name:</b> LaBella Associates <b>Contact (Report to):</b> Martin Gilgallon <b>Address:</b> 1000 Dunham Drive Suite B Dunmore, PA 16812 <b>Phone:</b> 570-487-1454				<b>PO#:</b> Lynn Hanichole 1000 Dunham Drive Suite B Dunmore, PA 16812 <b>Project Name/ID:</b> Quinn's Cafe Stop/2171853 ALS Quote #:			
<b>TAT:</b> <input checked="" type="checkbox"/> Normal-Standard TAT is 10-12 business days. <input type="checkbox"/> Rush-Subject to ALS approval and surcharge.				<b>Date Required:</b> <b>Approved By:</b>			
<b>Email?</b> <input checked="" type="checkbox"/> <b>Fax?</b> <input type="checkbox"/> <b>Y/N</b> <input checked="" type="checkbox"/> <b>mgilgallon@labella.pc.com</b>				<b>Sample Description/Location</b> (eg. I will provide on the job report)			
1 116 - 0911 - MN9				2 116 - 0911 - MN10			
3 116 - 0911 - FB1				4			
5				6			
7				8			
9				10			

SAMPLED BY (Please Print):			Project Comments:		
Chris Herman					
Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
Chris Herman / LaBella	9/11/17	1530	2 FEDEX	8/11/17 5117 4886	9/11/17 1500
			4	9/11/17	9/11/17 1500
			6		
			8		
			10		

ANALYSES/METHOD REQUESTED		Enter Number of Containers Per Analysis	
Unleaded Gasoline			

Container Type CG	Container Size 40L	Preservative HCL	Receipt Information (Indicate by checkmark)
Cooler Temp: 6	Therm ID: 304	No. of Coolers:	Notes:

ALS FIELD SERVICES		Data Deliverables		SOWA		State Samples	
<input type="checkbox"/> Pickup <input type="checkbox"/> Labor <input type="checkbox"/> Composite Sampling <input type="checkbox"/> Rental Equipment <input type="checkbox"/> Other:	(If present) Seats intact? Custody seals Present?	<input checked="" type="checkbox"/> Standard <input type="checkbox"/> CLP-like <input type="checkbox"/> NJ-Reduced <input type="checkbox"/> NJ-Full	Format to: yes no	MO NJ NY PA	MO NJ NY PA	MO NJ NY PA	MO NJ NY PA

Rev 01-2013

2 ml, 1 L, 50 L, etc. Preservative: HCl, HNO<sub>3</sub>, NaOH, etc.

\*\*\*\*Container Type: AQ-Amber Glass; CQ-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml

OVER COPY

**Color: WHITE - ORIGINAL CANARY - CUSTOM**

## ALS



APPENDIX P-6

Laboratory Analytical Data Sheets

Groundwater Sampling Activities – November 2017

December 14, 2017

Mr. Marty Gilgallon  
LaBella-Dunmore  
1000 Dunham Drive  
Suite B  
Scranton, PA 18512

## Certificate of Analysis

Project Name: <b>2171853/Quinn's Cafe' Stop</b>	Workorder: <b>2280472</b>
Purchase Order:	Workorder ID: <b>2171853/Quinn's Cafe' Stop</b>

Dear Mr. Gilgallon:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, December 5, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Kevin Cucura

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*



Ms. Amy K Borden  
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 2280472 2171853/Quinn's Cafe' Stop

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2280472001	116-1130-MW1	Water	11/30/2017 13:25	12/5/2017 09:05	Collected by Client
2280472002	116-1130-MW2	Water	12/1/2017 14:14	12/5/2017 09:05	Collected by Client
2280472003	116-1130-MW3	Water	12/1/2017 13:29	12/5/2017 09:05	Collected by Client
2280472004	116-1130-MW4	Water	12/1/2017 10:54	12/5/2017 09:05	Collected by Client
2280472005	116-1130-MW5	Water	12/1/2017 10:35	12/5/2017 09:05	Collected by Client
2280472006	116-1130-MW6	Water	12/1/2017 12:39	12/5/2017 09:05	Collected by Client
2280472007	116-1130-MW7	Water	12/1/2017 09:33	12/5/2017 09:05	Collected by Client
2280472008	116-1130-MW8	Water	11/30/2017 14:20	12/5/2017 09:05	Collected by Client
2280472009	116-1130-MW9	Water	11/30/2017 14:53	12/5/2017 09:05	Collected by Client
2280472010	116-1130-MW10	Water	12/1/2017 10:07	12/5/2017 09:05	Collected by Client
2280472011	116-1130-MW11	Water	12/1/2017 09:00	12/5/2017 09:05	Collected by Client
2280472012	116-1130-MW12	Water	12/1/2017 11:42	12/5/2017 09:05	Collected by Client
2280472013	116-1130-MW13	Water	11/30/2017 13:50	12/5/2017 09:05	Collected by Client
2280472014	116-1130-FB1	Water	11/30/2017 15:00	12/5/2017 09:05	Collected by Client
2280472015	116-1130-FB2	Water	12/1/2017 14:20	12/5/2017 09:05	Collected by Client

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## SAMPLE SUMMARY

Workorder: 2280472 2171853/Quinn's Cafe' Stop

### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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## PROJECT SUMMARY

Workorder: 2280472 2171853/Quinn's Cafe' Stop

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### Sample Comments

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**Lab ID:** 2280472002      **Sample ID:** 116-1130-MW2      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

**Lab ID:** 2280472003      **Sample ID:** 116-1130-MW3      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

**Lab ID:** 2280472004      **Sample ID:** 116-1130-MW4      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

**Lab ID:** 2280472005      **Sample ID:** 116-1130-MW5      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

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### ANALYTICAL RESULTS

Workorder: 2280472 2171853/Quinn's Cafe' Stop

Lab ID: 2280472001  
Sample ID: 116-1130-MW1

Date Collected: 11/30/2017 13:25 Matrix: Water  
Date Received: 12/5/2017 09:05

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	1.3		ug/L	1.0	SW846 8260B			12/13/17 01:35	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 01:35	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 01:35	TMP	A
Methyl t-Butyl Ether	ND	2,3,4	ug/L	1.0	SW846 8260B			12/13/17 01:35	TMP	A
Naphthalene	ND	1	ug/L	2.0	SW846 8260B			12/13/17 01:35	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			12/13/17 01:35	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			12/13/17 01:35	TMP	A
1,2,4-Trimethylbenzene	1.3		ug/L	1.0	SW846 8260B			12/13/17 01:35	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 01:35	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	93.9		%	62 - 133	SW846 8260B			12/13/17 01:35	TMP	A
4-Bromofluorobenzene (S)	107		%	79 - 114	SW846 8260B			12/13/17 01:35	TMP	A
Dibromofluoromethane (S)	101		%	78 - 116	SW846 8260B			12/13/17 01:35	TMP	A
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B			12/13/17 01:35	TMP	A



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### ANALYTICAL RESULTS

Workorder: 2280472 2171853/Quinn's Cafe' Stop

Lab ID: 2280472002  
Sample ID: 116-1130-MW2

Date Collected: 12/1/2017 14:14 Matrix: Water  
Date Received: 12/5/2017 09:05

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	69.5		ug/L	5.0	SW846 8260B			12/13/17 05:49	TMP	A
Ethylbenzene	291		ug/L	5.0	SW846 8260B			12/13/17 05:49	TMP	A
Isopropylbenzene	49.2		ug/L	5.0	SW846 8260B			12/13/17 05:49	TMP	A
Methyl t-Butyl Ether	ND		ug/L	5.0	SW846 8260B			12/13/17 05:49	TMP	A
Naphthalene	169		ug/L	10.0	SW846 8260B			12/13/17 05:49	TMP	A
Toluene	23.0		ug/L	5.0	SW846 8260B			12/13/17 05:49	TMP	A
Total Xylenes	157		ug/L	15.0	SW846 8260B			12/13/17 05:49	TMP	A
1,2,4-Trimethylbenzene	53.5		ug/L	5.0	SW846 8260B			12/13/17 05:49	TMP	A
1,3,5-Trimethylbenzene	13.6		ug/L	5.0	SW846 8260B			12/13/17 05:49	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	93		%	62 - 133	SW846 8260B			12/13/17 05:49	TMP	A
4-Bromofluorobenzene (S)	107		%	79 - 114	SW846 8260B			12/13/17 05:49	TMP	A
Dibromofluoromethane (S)	101		%	78 - 116	SW846 8260B			12/13/17 05:49	TMP	A
Toluene-d8 (S)	105		%	76 - 127	SW846 8260B			12/13/17 05:49	TMP	A



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## ANALYTICAL RESULTS

Workorder: 2280472 2171853/Quinn's Cafe' Stop

Lab ID: 2280472003  
Sample ID: 116-1130-MW3

Date Collected: 12/1/2017 13:29 Matrix: Water  
Date Received: 12/5/2017 09:05

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	679		ug/L	5.0	SW846 8260B			12/13/17 06:07	TMP	A
Ethylbenzene	1080		ug/L	25.0	SW846 8260B			12/14/17 02:59	CJG	B
Isopropylbenzene	124		ug/L	5.0	SW846 8260B			12/13/17 06:07	TMP	A
Methyl t-Butyl Ether	40.3		ug/L	5.0	SW846 8260B			12/13/17 06:07	TMP	A
Naphthalene	520		ug/L	10.0	SW846 8260B			12/13/17 06:07	TMP	A
Toluene	44.0		ug/L	5.0	SW846 8260B			12/13/17 06:07	TMP	A
Total Xylenes	696		ug/L	15.0	SW846 8260B			12/13/17 06:07	TMP	A
1,2,4-Trimethylbenzene	309		ug/L	5.0	SW846 8260B			12/13/17 06:07	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	5.0	SW846 8260B			12/13/17 06:07	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	119		%	62 - 133	SW846 8260B			12/14/17 02:59	CJG	B
1,2-Dichloroethane-d4 (S)	91		%	62 - 133	SW846 8260B			12/13/17 06:07	TMP	A
4-Bromofluorobenzene (S)	100		%	79 - 114	SW846 8260B			12/14/17 02:59	CJG	B
4-Bromofluorobenzene (S)	103		%	79 - 114	SW846 8260B			12/13/17 06:07	TMP	A
Dibromofluoromethane (S)	94.9		%	78 - 116	SW846 8260B			12/14/17 02:59	CJG	B
Dibromofluoromethane (S)	97		%	78 - 116	SW846 8260B			12/13/17 06:07	TMP	A
Toluene-d8 (S)	103		%	76 - 127	SW846 8260B			12/13/17 06:07	TMP	A
Toluene-d8 (S)	94.4		%	76 - 127	SW846 8260B			12/14/17 02:59	CJG	B



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## ANALYTICAL RESULTS

Workorder: 2280472 2171853/Quinn's Cafe' Stop

Lab ID: 2280472004  
Sample ID: 116-1130-MW4

Date Collected: 12/1/2017 10:54 Matrix: Water  
Date Received: 12/5/2017 09:05

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	5.0	SW846 8260B			12/14/17 03:21	CJG	B
Ethylbenzene	ND		ug/L	5.0	SW846 8260B			12/14/17 03:21	CJG	B
Isopropylbenzene	ND		ug/L	5.0	SW846 8260B			12/14/17 03:21	CJG	B
Methyl t-Butyl Ether	306		ug/L	5.0	SW846 8260B			12/14/17 03:21	CJG	B
Naphthalene	ND		ug/L	10.0	SW846 8260B			12/14/17 03:21	CJG	B
Toluene	ND		ug/L	5.0	SW846 8260B			12/14/17 03:21	CJG	B
Total Xylenes	ND		ug/L	15.0	SW846 8260B			12/14/17 03:21	CJG	B
1,2,4-Trimethylbenzene	ND		ug/L	5.0	SW846 8260B			12/14/17 03:21	CJG	B
1,3,5-Trimethylbenzene	ND		ug/L	5.0	SW846 8260B			12/14/17 03:21	CJG	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	121		%	62 - 133	SW846 8260B			12/14/17 03:21	CJG	B
4-Bromofluorobenzene (S)	104		%	79 - 114	SW846 8260B			12/14/17 03:21	CJG	B
Dibromofluoromethane (S)	95.5		%	78 - 116	SW846 8260B			12/14/17 03:21	CJG	B
Toluene-d8 (S)	96.9		%	76 - 127	SW846 8260B			12/14/17 03:21	CJG	B

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**ANALYTICAL RESULTS**

Workorder: 2280472 2171853/Quinn's Cafe' Stop

Lab ID: 2280472005  
Sample ID: 116-1130-MW5Date Collected: 12/1/2017 10:35 Matrix: Water  
Date Received: 12/5/2017 09:05

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	209		ug/L	5.0	SW846 8260B			12/13/17 06:44	TMP	A
Ethylbenzene	422		ug/L	5.0	SW846 8260B			12/13/17 06:44	TMP	A
Isopropylbenzene	57.5		ug/L	5.0	SW846 8260B			12/13/17 06:44	TMP	A
Methyl t-Butyl Ether	ND		ug/L	5.0	SW846 8260B			12/13/17 06:44	TMP	A
Naphthalene	249		ug/L	10.0	SW846 8260B			12/13/17 06:44	TMP	A
Toluene	30.0		ug/L	5.0	SW846 8260B			12/13/17 06:44	TMP	A
Total Xylenes	313		ug/L	15.0	SW846 8260B			12/13/17 06:44	TMP	A
1,2,4-Trimethylbenzene	353		ug/L	5.0	SW846 8260B			12/13/17 06:44	TMP	A
1,3,5-Trimethylbenzene	32.6		ug/L	5.0	SW846 8260B			12/13/17 06:44	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	96.9		%	62 - 133	SW846 8260B			12/13/17 06:44	TMP	A
4-Bromofluorobenzene (S)	104		%	79 - 114	SW846 8260B			12/13/17 06:44	TMP	A
Dibromofluoromethane (S)	103		%	78 - 116	SW846 8260B			12/13/17 06:44	TMP	A
Toluene-d8 (S)	107		%	76 - 127	SW846 8260B			12/13/17 06:44	TMP	A

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### ANALYTICAL RESULTS

Workorder: 2280472 2171853/Quinn's Cafe' Stop

Lab ID: 2280472006  
Sample ID: 116-1130-MW6

Date Collected: 12/1/2017 12:39 Matrix: Water  
Date Received: 12/5/2017 09:05

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	6.0		ug/L	1.0	SW846 8260B			12/13/17 03:06	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 03:06	TMP	A
Isopropylbenzene	3.4		ug/L	1.0	SW846 8260B			12/13/17 03:06	TMP	A
Methyl t-Butyl Ether	6.0		ug/L	1.0	SW846 8260B			12/13/17 03:06	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			12/13/17 03:06	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			12/13/17 03:06	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			12/13/17 03:06	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 03:06	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 03:06	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	95.5		%	62 - 133	SW846 8260B			12/13/17 03:06	TMP	A
4-Bromofluorobenzene (S)	105		%	79 - 114	SW846 8260B			12/13/17 03:06	TMP	A
Dibromofluoromethane (S)	103		%	78 - 116	SW846 8260B			12/13/17 03:06	TMP	A
Toluene-d8 (S)	105		%	76 - 127	SW846 8260B			12/13/17 03:06	TMP	A



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## ANALYTICAL RESULTS

Workorder: 2280472 2171853/Quinn's Cafe' Stop

Lab ID: 2280472007  
Sample ID: 116-1130-MW7

Date Collected: 12/1/2017 09:33 Matrix: Water  
Date Received: 12/5/2017 09:05

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			12/13/17 02:30	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 02:30	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 02:30	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			12/13/17 02:30	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			12/13/17 02:30	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			12/13/17 02:30	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			12/13/17 02:30	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 02:30	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 02:30	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	96.5		%	62 - 133	SW846 8260B			12/13/17 02:30	TMP	A
4-Bromofluorobenzene (S)	105		%	79 - 114	SW846 8260B			12/13/17 02:30	TMP	A
Dibromofluoromethane (S)	104		%	78 - 116	SW846 8260B			12/13/17 02:30	TMP	A
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B			12/13/17 02:30	TMP	A



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## ANALYTICAL RESULTS

Workorder: 2280472 2171853/Quinn's Cafe' Stop

Lab ID: 2280472008  
Sample ID: 116-1130-MW8

Date Collected: 11/30/2017 14:20 Matrix: Water  
Date Received: 12/5/2017 09:05

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			12/13/17 01:53	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 01:53	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 01:53	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			12/13/17 01:53	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			12/13/17 01:53	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			12/13/17 01:53	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			12/13/17 01:53	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 01:53	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 01:53	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	96.1		%	62 - 133	SW846 8260B			12/13/17 01:53	TMP	A
4-Bromofluorobenzene (S)	105		%	79 - 114	SW846 8260B			12/13/17 01:53	TMP	A
Dibromofluoromethane (S)	106		%	78 - 116	SW846 8260B			12/13/17 01:53	TMP	A
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B			12/13/17 01:53	TMP	A



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### ANALYTICAL RESULTS

Workorder: 2280472 2171853/Quinn's Cafe' Stop

Lab ID: 2280472009  
Sample ID: 116-1130-MW9

Date Collected: 11/30/2017 14:53 Matrix: Water  
Date Received: 12/5/2017 09:05

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			12/13/17 02:12	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 02:12	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 02:12	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			12/13/17 02:12	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			12/13/17 02:12	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			12/13/17 02:12	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			12/13/17 02:12	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 02:12	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 02:12	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	97.6		%	62 - 133	SW846 8260B			12/13/17 02:12	TMP	A
4-Bromofluorobenzene (S)	106		%	79 - 114	SW846 8260B			12/13/17 02:12	TMP	A
Dibromofluoromethane (S)	104		%	78 - 116	SW846 8260B			12/13/17 02:12	TMP	A
Toluene-d8 (S)	103		%	76 - 127	SW846 8260B			12/13/17 02:12	TMP	A



Ms. Amy K Borden  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2280472 2171853/Quinn's Cafe' Stop

Lab ID: 2280472010  
Sample ID: 116-1130-MW10

Date Collected: 12/1/2017 10:07 Matrix: Water  
Date Received: 12/5/2017 09:05

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			12/13/17 02:48	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 02:48	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 02:48	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			12/13/17 02:48	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			12/13/17 02:48	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			12/13/17 02:48	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			12/13/17 02:48	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 02:48	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 02:48	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	97.3		%	62 - 133	SW846 8260B			12/13/17 02:48	TMP	A
4-Bromofluorobenzene (S)	105		%	79 - 114	SW846 8260B			12/13/17 02:48	TMP	A
Dibromofluoromethane (S)	106		%	78 - 116	SW846 8260B			12/13/17 02:48	TMP	A
Toluene-d8 (S)	100		%	76 - 127	SW846 8260B			12/13/17 02:48	TMP	A

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## ANALYTICAL RESULTS

Workorder: 2280472 2171853/Quinn's Cafe' Stop

Lab ID: 2280472011

Date Collected: 12/1/2017 09:00

Matrix: Water

Sample ID: 116-1130-MW11

Date Received: 12/5/2017 09:05

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			12/13/17 04:55	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 04:55	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 04:55	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			12/13/17 04:55	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			12/13/17 04:55	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			12/13/17 04:55	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			12/13/17 04:55	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 04:55	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 04:55	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	93.7		%	62 - 133	SW846 8260B			12/13/17 04:55	TMP	A
4-Bromofluorobenzene (S)	103		%	79 - 114	SW846 8260B			12/13/17 04:55	TMP	A
Dibromofluoromethane (S)	98.6		%	78 - 116	SW846 8260B			12/13/17 04:55	TMP	A
Toluene-d8 (S)	99.2		%	76 - 127	SW846 8260B			12/13/17 04:55	TMP	A

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Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2280472 2171853/Quinn's Cafe' Stop

Lab ID: 2280472012  
Sample ID: 116-1130-MW12

Date Collected: 12/1/2017 11:42 Matrix: Water  
Date Received: 12/5/2017 09:05

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			12/13/17 04:19	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 04:19	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 04:19	TMP	A
Methyl t-Butyl Ether	1.4		ug/L	1.0	SW846 8260B			12/13/17 04:19	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			12/13/17 04:19	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			12/13/17 04:19	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			12/13/17 04:19	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 04:19	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 04:19	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	99.7		%	62 - 133	SW846 8260B			12/13/17 04:19	TMP	A
4-Bromofluorobenzene (S)	107		%	79 - 114	SW846 8260B			12/13/17 04:19	TMP	A
Dibromofluoromethane (S)	105		%	78 - 116	SW846 8260B			12/13/17 04:19	TMP	A
Toluene-d8 (S)	103		%	76 - 127	SW846 8260B			12/13/17 04:19	TMP	A



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### ANALYTICAL RESULTS

Workorder: 2280472 2171853/Quinn's Cafe' Stop

Lab ID: 2280472013  
Sample ID: 116-1130-MW13

Date Collected: 11/30/2017 13:50 Matrix: Water  
Date Received: 12/5/2017 09:05

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			12/13/17 04:37	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 04:37	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 04:37	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			12/13/17 04:37	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			12/13/17 04:37	TMP	A
Toluene	1.0		ug/L	1.0	SW846 8260B			12/13/17 04:37	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			12/13/17 04:37	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 04:37	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 04:37	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	95.9		%	62 - 133	SW846 8260B			12/13/17 04:37	TMP	A
4-Bromofluorobenzene (S)	106		%	79 - 114	SW846 8260B			12/13/17 04:37	TMP	A
Dibromofluoromethane (S)	105		%	78 - 116	SW846 8260B			12/13/17 04:37	TMP	A
Toluene-d8 (S)	105		%	76 - 127	SW846 8260B			12/13/17 04:37	TMP	A



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### ANALYTICAL RESULTS

Workorder: 2280472 2171853/Quinn's Cafe' Stop

Lab ID: 2280472014  
Sample ID: 116-1130-FB1

Date Collected: 11/30/2017 15:00 Matrix: Water  
Date Received: 12/5/2017 09:05

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			12/13/17 00:22	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 00:22	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 00:22	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			12/13/17 00:22	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			12/13/17 00:22	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			12/13/17 00:22	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			12/13/17 00:22	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 00:22	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 00:22	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	95.9		%	62 - 133	SW846 8260B			12/13/17 00:22	TMP	A
4-Bromofluorobenzene (S)	105		%	79 - 114	SW846 8260B			12/13/17 00:22	TMP	A
Dibromofluoromethane (S)	102		%	78 - 116	SW846 8260B			12/13/17 00:22	TMP	A
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B			12/13/17 00:22	TMP	A



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## ANALYTICAL RESULTS

Workorder: 2280472 2171853/Quinn's Cafe' Stop

Lab ID: 2280472015  
Sample ID: 116-1130-FB2

Date Collected: 12/1/2017 14:20 Matrix: Water  
Date Received: 12/5/2017 09:05

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			12/13/17 00:40	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 00:40	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 00:40	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			12/13/17 00:40	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			12/13/17 00:40	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			12/13/17 00:40	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			12/13/17 00:40	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 00:40	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			12/13/17 00:40	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	96.3		%	62 - 133	SW846 8260B			12/13/17 00:40	TMP	A
4-Bromofluorobenzene (S)	105		%	79 - 114	SW846 8260B			12/13/17 00:40	TMP	A
Dibromofluoromethane (S)	102		%	78 - 116	SW846 8260B			12/13/17 00:40	TMP	A
Toluene-d8 (S)	103		%	76 - 127	SW846 8260B			12/13/17 00:40	TMP	A

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Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 2280472 2171853/Quinn's Cafe' Stop

**PARAMETER QUALIFIERS**

Lab ID	#	Sample ID	Analytical Method	Analyte
2280472001	1	116-1130-MW1	SW846 8260B	Naphthalene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Naphthalene. The % Recovery was reported as 139 and the control limits were 56 to 134.				
2280472001	2	116-1130-MW1	SW846 8260B	Methyl t-Butyl Ether
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Methyl t-Butyl Ether. The % Recovery was reported as 40.9 and the control limits were 69 to 115.				
2280472001	3	116-1130-MW1	SW846 8260B	Methyl t-Butyl Ether
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methyl t-Butyl Ether. The % Recovery was reported as 54.4 and the control limits were 69 to 115.				
2280472001	4	116-1130-MW1	SW846 8260B	Methyl t-Butyl Ether
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methyl t-Butyl Ether. The RPD was reported as 28.3 and the upper control limit is 20.				

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34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

**Environmental**

# CHAIN OF CUSTODY/

## REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /  
SAMPLER. INSTRUCTIONS ON THE BACK.

Client Name: LaBella Associates, P.C.		Container Type	CG	1 of 2	
Address: 1000 Dunham Drive, Suite B		Container Size	40 ml	2	
Dunmore, PA 18512		Preservative	HCL		
Contact: Martin Giallagon		ANALYSES/METHOD REQUESTED			
Phone#: (570) 487-1959 / (570) 342-3101					
Project Name#: 2171853 / Curim's Café Stop					
Bill To: Lynn Hanichak					
<input checked="" type="checkbox"/> Normal-Standard TAT is 10-12 business days. <input type="checkbox"/> Rush-Subject to ALS approval and surcharges.					
Date Required: _____ Approved By: _____					
Email? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N mgilgallon@labellapc.com					
Fax? <input type="checkbox"/> Y <input type="checkbox"/> N					
Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	Matrix	Enter Number of Containers Per Sample or Field Results Below.	Initial
1) 116-1130-MW1	12/20/17	1325	G	2	GW
2) 116-1130-MW2	12/1/17	1414	G	2	GW
3) 116-1130-MW3	12/1/17	1329	G	2	GW
4) 116-1130-MW4	12/1/17	1054	G	2	GW
5) 116-1130-MW5	12/1/17	1035	G	2	GW
6) 116-1130-MW6	12/1/17	1234	G	2	GW
7) 116-1130-MW7	12/1/17	0933	G	2	GW
8) 116-1130-MW8	12/30/17	1420	G	2	GW
9) 116-1130-MW9	12/30/17	1453	G	2	GW
10) 116-1130-MW10	12/1/17	1007	G	2	GW
Project Comments: FedEx #8121 9377 9833		LOGGED BY (signature): _____			
RECEIVED BY (signature): _____		RECEIVED BY (signature): _____			
Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Chris Gorman / LaBella	12/14/17	0710	2 FED EX #8121 9377 9833	12/14/17	1400
3			4 David N	12/15	0905
5			6		
7			8		
9			10		
Cooler Temp: 3 Therm ID: 4162		No. of Coolers: Y N Initial			
Custody Seals Present?		Received on Ice?			
(If present) Seals Intact?		COC Labels Complete/Accurate?			
Cont. In Good Cond.?		Correct Containers?			
Correct Sample Volumes?		Correct Preservation?			
Headspace Volatiles?		Courier Tracking #: 8/21 9377 9533			
Sample/COC Comments		ALS Field Services: <input type="checkbox"/> Pickup <input type="checkbox"/> Labor <input type="checkbox"/> Composite Sampling <input type="checkbox"/> Rental Equipment <input type="checkbox"/> Other			
Data Deliverables		Special Processing		State Samples Collected In	
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> CLP-like <input type="checkbox"/> USACE		<input type="checkbox"/> USACE <input type="checkbox"/> Navy		<input type="checkbox"/> NY <input type="checkbox"/> NJ	
Reportable to PADEP?		Sample Disposal		<input checked="" type="checkbox"/> PA <input type="checkbox"/> NC	
Yes <input type="checkbox"/> No <input type="checkbox"/>		Lab <input type="checkbox"/> Special <input type="checkbox"/>			
PWSID #		EDDS: Formal Type-			



**CHAIN OF CUSTODY/  
REQUEST FOR ANALYSIS**  
ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /  
SAMPLER. INSTRUCTIONS ON THE BACK.

COC #:	0472	2 of 2
ALS Quote #:	Cont'd	

Container Type		CG	ANALYSIS METHOD REQUESTED										Cooler Temp: 3 Therm ID: 4102		Mo. of Coolers: Y N Initial DW		Custody Seals Present? (If present) Seals Intact? Rectified on Ice? COC/Labels Complete/Accurate? Cont. In Good Cond.? Correct Containers? Correct Sample Volumes? Correct Preservation? Headspace/Violations?		Courier Tracking #: 6121 9377 9833	
Container Type	CG	40 lbs																		
Preservative	HCL																			
Unleaded Gasoline																				
Matrix																				
G or C	Matrix																			
G	GW	2																		
G	GW	2																		
G	GW	2																		
G	DI	2																		
G	DI	2																		
Project Comments: FedEx #8121 9377 9833																				
Relinquished By / Company Name			Date		Time		Received By / Company Name		Date		Time		LOGGED BY (signature):		REVIEWED BY (signature):					
1 Chris Quinn / La Bella			12/1/17		0710		2 FedEx #8121 9377 9833		12/4/17		1400									
3							4		12/5		905									
5							6													
7							8													
9							10													

APPENDIX P-7

Laboratory Analytical Data Sheets

Groundwater Sampling Activities – January 2018

January 26, 2018

Mr. Marty Gilgallon  
LaBella-Dunmore  
1000 Dunham Drive  
Suite B  
Scranton, PA 18512

## Certificate of Analysis

Project Name: <b>2171853/Quinn's Cafe Stop</b>	Workorder: <b>2290375</b>
Purchase Order:	Workorder ID: <b>2171853/Quinn's Cafe Stop</b>

Dear Mr. Gilgallon:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, January 24, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

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ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. William Sisco, Mr. Kevin Cucura

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*



Ms. Amy K Borden  
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 2290375 2171853/Quinn's Cafe Stop

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2290375001	116-0122-MW1	Water	1/23/2018 00:00	1/24/2018 09:55	Collected by Client
2290375002	116-0122-MW2	Water	1/23/2018 00:00	1/24/2018 09:55	Collected by Client
2290375003	116-0122-MW3	Water	1/23/2018 00:00	1/24/2018 09:55	Collected by Client
2290375004	116-0122-MW4	Water	1/23/2018 00:00	1/24/2018 09:55	Collected by Client
2290375005	116-0122-MW5	Water	1/23/2018 00:00	1/24/2018 09:55	Collected by Client
2290375006	116-0122-MW6	Water	1/23/2018 00:00	1/24/2018 09:55	Collected by Client
2290375007	116-0122-MW7	Water	1/22/2018 00:00	1/24/2018 09:55	Collected by Client
2290375008	116-0122-MW8	Water	1/22/2018 00:00	1/24/2018 09:55	Collected by Client
2290375009	116-0122-MW9	Water	1/22/2018 00:00	1/24/2018 09:55	Collected by Client
2290375010	116-0122-MW10	Water	1/23/2018 00:00	1/24/2018 09:55	Collected by Client
2290375011	116-0122-MW11	Water	1/22/2018 13:24	1/24/2018 09:55	Collected by Client
2290375012	116-0122-MW12	Water	1/22/2018 10:04	1/24/2018 09:55	Collected by Client
2290375013	116-0122-MW13	Water	1/22/2018 14:50	1/24/2018 09:55	Collected by Client
2290375014	116-0122-FB1	Water	1/22/2018 15:30	1/24/2018 09:55	Collected by Client
2290375015	116-0122-FB2	Water	1/23/2018 13:15	1/24/2018 09:55	Collected by Client

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## SAMPLE SUMMARY

Workorder: 2290375 2171853/Quinn's Cafe Stop

### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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## PROJECT SUMMARY

Workorder: 2290375 2171853/Quinn's Cafe Stop

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### Sample Comments

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**Lab ID:** 2290375002      **Sample ID:** 116-0122-MW2      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

**Lab ID:** 2290375003      **Sample ID:** 116-0122-MW3      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

**Lab ID:** 2290375004      **Sample ID:** 116-0122-MW4      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

**Lab ID:** 2290375005      **Sample ID:** 116-0122-MW5      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

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## ANALYTICAL RESULTS

Workorder: 2290375 2171853/Quinn's Cafe Stop

Lab ID: 2290375001  
Sample ID: 116-0122-MW1

Date Collected: 1/23/2018 00:00 Matrix: Water  
Date Received: 1/24/2018 09:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			1/25/18 01:00	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 01:00	CJG	A
Isopropylbenzene	1.7		ug/L	1.0	SW846 8260B			1/25/18 01:00	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			1/25/18 01:00	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			1/25/18 01:00	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			1/25/18 01:00	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			1/25/18 01:00	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 01:00	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 01:00	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	101		%	62 - 133	SW846 8260B			1/25/18 01:00	CJG	A
4-Bromofluorobenzene (S)	105		%	79 - 114	SW846 8260B			1/25/18 01:00	CJG	A
Dibromofluoromethane (S)	92.4		%	78 - 116	SW846 8260B			1/25/18 01:00	CJG	A
Toluene-d8 (S)	101		%	76 - 127	SW846 8260B			1/25/18 01:00	CJG	A

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## ANALYTICAL RESULTS

Workorder: 2290375 2171853/Quinn's Cafe Stop

Lab ID: 2290375002  
Sample ID: 116-0122-MW2

Date Collected: 1/23/2018 00:00 Matrix: Water  
Date Received: 1/24/2018 09:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	50.5		ug/L	5.0	SW846 8260B			1/25/18 01:22	CJG	A
Ethylbenzene	192		ug/L	5.0	SW846 8260B			1/25/18 01:22	CJG	A
Isopropylbenzene	44.5		ug/L	5.0	SW846 8260B			1/25/18 01:22	CJG	A
Methyl t-Butyl Ether	ND		ug/L	5.0	SW846 8260B			1/25/18 01:22	CJG	A
Naphthalene	125		ug/L	10.0	SW846 8260B			1/25/18 01:22	CJG	A
Toluene	14.1		ug/L	5.0	SW846 8260B			1/25/18 01:22	CJG	A
Total Xylenes	99.7		ug/L	15.0	SW846 8260B			1/25/18 01:22	CJG	A
1,2,4-Trimethylbenzene	30.5		ug/L	5.0	SW846 8260B			1/25/18 01:22	CJG	A
1,3,5-Trimethylbenzene	7.1		ug/L	5.0	SW846 8260B			1/25/18 01:22	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	100		%	62 - 133	SW846 8260B			1/25/18 01:22	CJG	A
4-Bromofluorobenzene (S)	102		%	79 - 114	SW846 8260B			1/25/18 01:22	CJG	A
Dibromofluoromethane (S)	89.3		%	78 - 116	SW846 8260B			1/25/18 01:22	CJG	A
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B			1/25/18 01:22	CJG	A

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### ANALYTICAL RESULTS

Workorder: 2290375 2171853/Quinn's Cafe Stop

Lab ID: 2290375003  
Sample ID: 116-0122-MW3

Date Collected: 1/23/2018 00:00 Matrix: Water  
Date Received: 1/24/2018 09:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	585		ug/L	25.0	SW846 8260B			1/25/18 01:44	CJG	A
Ethylbenzene	1110		ug/L	25.0	SW846 8260B			1/25/18 01:44	CJG	A
Isopropylbenzene	90.1		ug/L	25.0	SW846 8260B			1/25/18 01:44	CJG	A
Methyl t-Butyl Ether	47.1		ug/L	25.0	SW846 8260B			1/25/18 01:44	CJG	A
Naphthalene	243		ug/L	50.0	SW846 8260B			1/25/18 01:44	CJG	A
Toluene	42.0		ug/L	25.0	SW846 8260B			1/25/18 01:44	CJG	A
Total Xylenes	344		ug/L	75.0	SW846 8260B			1/25/18 01:44	CJG	A
1,2,4-Trimethylbenzene	49.0		ug/L	25.0	SW846 8260B			1/25/18 01:44	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	25.0	SW846 8260B			1/25/18 01:44	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	102		%	62 - 133	SW846 8260B			1/25/18 01:44	CJG	A
4-Bromofluorobenzene (S)	105		%	79 - 114	SW846 8260B			1/25/18 01:44	CJG	A
Dibromofluoromethane (S)	91.1		%	78 - 116	SW846 8260B			1/25/18 01:44	CJG	A
Toluene-d8 (S)	101		%	76 - 127	SW846 8260B			1/25/18 01:44	CJG	A



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## ANALYTICAL RESULTS

Workorder: 2290375 2171853/Quinn's Cafe Stop

Lab ID: 2290375004  
Sample ID: 116-0122-MW4

Date Collected: 1/23/2018 00:00 Matrix: Water  
Date Received: 1/24/2018 09:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	9.5		ug/L	5.0	SW846 8260B			1/25/18 02:06	CJG	A
Ethylbenzene	ND		ug/L	5.0	SW846 8260B			1/25/18 02:06	CJG	A
Isopropylbenzene	ND		ug/L	5.0	SW846 8260B			1/25/18 02:06	CJG	A
Methyl t-Butyl Ether	234		ug/L	5.0	SW846 8260B			1/25/18 02:06	CJG	A
Naphthalene	ND		ug/L	10.0	SW846 8260B			1/25/18 02:06	CJG	A
Toluene	ND		ug/L	5.0	SW846 8260B			1/25/18 02:06	CJG	A
Total Xylenes	ND		ug/L	15.0	SW846 8260B			1/25/18 02:06	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	5.0	SW846 8260B			1/25/18 02:06	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	5.0	SW846 8260B			1/25/18 02:06	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	99.6		%	62 - 133	SW846 8260B			1/25/18 02:06	CJG	A
4-Bromofluorobenzene (S)	105		%	79 - 114	SW846 8260B			1/25/18 02:06	CJG	A
Dibromofluoromethane (S)	91.5		%	78 - 116	SW846 8260B			1/25/18 02:06	CJG	A
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B			1/25/18 02:06	CJG	A



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## ANALYTICAL RESULTS

Workorder: 2290375 2171853/Quinn's Cafe Stop

Lab ID: 2290375005  
Sample ID: 116-0122-MW5

Date Collected: 1/23/2018 00:00 Matrix: Water  
Date Received: 1/24/2018 09:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	133		ug/L	5.0	SW846 8260B			1/25/18 02:27	CJG	A
Ethylbenzene	415		ug/L	5.0	SW846 8260B			1/25/18 02:27	CJG	A
Isopropylbenzene	65.3		ug/L	5.0	SW846 8260B			1/25/18 02:27	CJG	A
Methyl t-Butyl Ether	ND		ug/L	5.0	SW846 8260B			1/25/18 02:27	CJG	A
Naphthalene	134		ug/L	10.0	SW846 8260B			1/25/18 02:27	CJG	A
Toluene	22.0		ug/L	5.0	SW846 8260B			1/25/18 02:27	CJG	A
Total Xylenes	289		ug/L	15.0	SW846 8260B			1/25/18 02:27	CJG	A
1,2,4-Trimethylbenzene	330		ug/L	5.0	SW846 8260B			1/25/18 02:27	CJG	A
1,3,5-Trimethylbenzene	22.1		ug/L	5.0	SW846 8260B			1/25/18 02:27	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	105		%	62 - 133	SW846 8260B			1/25/18 02:27	CJG	A
4-Bromofluorobenzene (S)	103		%	79 - 114	SW846 8260B			1/25/18 02:27	CJG	A
Dibromofluoromethane (S)	88.9		%	78 - 116	SW846 8260B			1/25/18 02:27	CJG	A
Toluene-d8 (S)	100		%	76 - 127	SW846 8260B			1/25/18 02:27	CJG	A

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## ANALYTICAL RESULTS

Workorder: 2290375 2171853/Quinn's Cafe Stop

Lab ID: 2290375006  
Sample ID: 116-0122-MW6

Date Collected: 1/23/2018 00:00 Matrix: Water  
Date Received: 1/24/2018 09:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			1/25/18 02:49	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 02:49	CJG	A
Isopropylbenzene	1.4		ug/L	1.0	SW846 8260B			1/25/18 02:49	CJG	A
Methyl t-Butyl Ether	4.1		ug/L	1.0	SW846 8260B			1/25/18 02:49	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			1/25/18 02:49	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			1/25/18 02:49	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			1/25/18 02:49	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 02:49	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 02:49	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	99.3		%	62 - 133	SW846 8260B			1/25/18 02:49	CJG	A
4-Bromofluorobenzene (S)	105		%	79 - 114	SW846 8260B			1/25/18 02:49	CJG	A
Dibromofluoromethane (S)	90.7		%	78 - 116	SW846 8260B			1/25/18 02:49	CJG	A
Toluene-d8 (S)	99.7		%	76 - 127	SW846 8260B			1/25/18 02:49	CJG	A

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### ANALYTICAL RESULTS

Workorder: 2290375 2171853/Quinn's Cafe Stop

Lab ID: 2290375007  
Sample ID: 116-0122-MW7

Date Collected: 1/22/2018 00:00 Matrix: Water  
Date Received: 1/24/2018 09:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			1/25/18 03:12	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 03:12	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 03:12	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			1/25/18 03:12	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			1/25/18 03:12	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			1/25/18 03:12	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			1/25/18 03:12	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 03:12	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 03:12	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	100		%	62 - 133	SW846 8260B			1/25/18 03:12	CJG	A
4-Bromofluorobenzene (S)	104		%	79 - 114	SW846 8260B			1/25/18 03:12	CJG	A
Dibromofluoromethane (S)	90.6		%	78 - 116	SW846 8260B			1/25/18 03:12	CJG	A
Toluene-d8 (S)	99.3		%	76 - 127	SW846 8260B			1/25/18 03:12	CJG	A



Ms. Amy K Borden  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2290375 2171853/Quinn's Cafe Stop

Lab ID: 2290375008  
Sample ID: 116-0122-MW8

Date Collected: 1/22/2018 00:00 Matrix: Water  
Date Received: 1/24/2018 09:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			1/25/18 03:33	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 03:33	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 03:33	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			1/25/18 03:33	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			1/25/18 03:33	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			1/25/18 03:33	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			1/25/18 03:33	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 03:33	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 03:33	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	102		%	62 - 133	SW846 8260B			1/25/18 03:33	CJG	A
4-Bromofluorobenzene (S)	105		%	79 - 114	SW846 8260B			1/25/18 03:33	CJG	A
Dibromofluoromethane (S)	93		%	78 - 116	SW846 8260B			1/25/18 03:33	CJG	A
Toluene-d8 (S)	99.3		%	76 - 127	SW846 8260B			1/25/18 03:33	CJG	A



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## ANALYTICAL RESULTS

Workorder: 2290375 2171853/Quinn's Cafe Stop

Lab ID: 2290375009  
Sample ID: 116-0122-MW9

Date Collected: 1/22/2018 00:00 Matrix: Water  
Date Received: 1/24/2018 09:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			1/25/18 03:55	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 03:55	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 03:55	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			1/25/18 03:55	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			1/25/18 03:55	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			1/25/18 03:55	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			1/25/18 03:55	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 03:55	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 03:55	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	101		%	62 - 133	SW846 8260B			1/25/18 03:55	CJG	A
4-Bromofluorobenzene (S)	105		%	79 - 114	SW846 8260B			1/25/18 03:55	CJG	A
Dibromofluoromethane (S)	93.1		%	78 - 116	SW846 8260B			1/25/18 03:55	CJG	A
Toluene-d8 (S)	99.9		%	76 - 127	SW846 8260B			1/25/18 03:55	CJG	A

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### ANALYTICAL RESULTS

Workorder: 2290375 2171853/Quinn's Cafe Stop

Lab ID: 2290375010  
Sample ID: 116-0122-MW10

Date Collected: 1/23/2018 00:00 Matrix: Water  
Date Received: 1/24/2018 09:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			1/26/18 00:47	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			1/26/18 00:47	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			1/26/18 00:47	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			1/26/18 00:47	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			1/26/18 00:47	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			1/26/18 00:47	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			1/26/18 00:47	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/26/18 00:47	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/26/18 00:47	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	103		%	62 - 133	SW846 8260B			1/26/18 00:47	CJG	A
4-Bromofluorobenzene (S)	105		%	79 - 114	SW846 8260B			1/26/18 00:47	CJG	A
Dibromofluoromethane (S)	93.8		%	78 - 116	SW846 8260B			1/26/18 00:47	CJG	A
Toluene-d8 (S)	100		%	76 - 127	SW846 8260B			1/26/18 00:47	CJG	A



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### ANALYTICAL RESULTS

Workorder: 2290375 2171853/Quinn's Cafe Stop

Lab ID: 2290375011  
Sample ID: 116-0122-MW11

Date Collected: 1/22/2018 13:24 Matrix: Water  
Date Received: 1/24/2018 09:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			1/26/18 01:09	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			1/26/18 01:09	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			1/26/18 01:09	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			1/26/18 01:09	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			1/26/18 01:09	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			1/26/18 01:09	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			1/26/18 01:09	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/26/18 01:09	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/26/18 01:09	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	101		%	62 - 133	SW846 8260B			1/26/18 01:09	CJG	A
4-Bromofluorobenzene (S)	103		%	79 - 114	SW846 8260B			1/26/18 01:09	CJG	A
Dibromofluoromethane (S)	91.7		%	78 - 116	SW846 8260B			1/26/18 01:09	CJG	A
Toluene-d8 (S)	98.3		%	76 - 127	SW846 8260B			1/26/18 01:09	CJG	A



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## ANALYTICAL RESULTS

Workorder: 2290375 2171853/Quinn's Cafe Stop

Lab ID: 2290375012  
Sample ID: 116-0122-MW12

Date Collected: 1/22/2018 10:04 Matrix: Water  
Date Received: 1/24/2018 09:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			1/26/18 01:30	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			1/26/18 01:30	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			1/26/18 01:30	CJG	A
Methyl t-Butyl Ether	1.5		ug/L	1.0	SW846 8260B			1/26/18 01:30	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			1/26/18 01:30	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			1/26/18 01:30	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			1/26/18 01:30	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/26/18 01:30	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/26/18 01:30	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	99.5		%	62 - 133	SW846 8260B			1/26/18 01:30	CJG	A
4-Bromofluorobenzene (S)	105		%	79 - 114	SW846 8260B			1/26/18 01:30	CJG	A
Dibromofluoromethane (S)	92.9		%	78 - 116	SW846 8260B			1/26/18 01:30	CJG	A
Toluene-d8 (S)	101		%	76 - 127	SW846 8260B			1/26/18 01:30	CJG	A



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## ANALYTICAL RESULTS

Workorder: 2290375 2171853/Quinn's Cafe Stop

Lab ID: 2290375013  
Sample ID: 116-0122-MW13

Date Collected: 1/22/2018 14:50 Matrix: Water  
Date Received: 1/24/2018 09:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			1/26/18 01:52	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			1/26/18 01:52	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			1/26/18 01:52	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			1/26/18 01:52	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			1/26/18 01:52	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			1/26/18 01:52	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			1/26/18 01:52	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/26/18 01:52	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/26/18 01:52	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	102		%	62 - 133	SW846 8260B			1/26/18 01:52	CJG	A
4-Bromofluorobenzene (S)	105		%	79 - 114	SW846 8260B			1/26/18 01:52	CJG	A
Dibromofluoromethane (S)	92.1		%	78 - 116	SW846 8260B			1/26/18 01:52	CJG	A
Toluene-d8 (S)	99.9		%	76 - 127	SW846 8260B			1/26/18 01:52	CJG	A



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### ANALYTICAL RESULTS

Workorder: 2290375 2171853/Quinn's Cafe Stop

Lab ID: 2290375014  
Sample ID: 116-0122-FB1

Date Collected: 1/22/2018 15:30 Matrix: Water  
Date Received: 1/24/2018 09:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			1/25/18 23:41	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 23:41	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 23:41	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			1/25/18 23:41	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			1/25/18 23:41	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			1/25/18 23:41	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			1/25/18 23:41	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 23:41	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/25/18 23:41	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	98.5		%	62 - 133	SW846 8260B			1/25/18 23:41	CJG	A
4-Bromofluorobenzene (S)	105		%	79 - 114	SW846 8260B			1/25/18 23:41	CJG	A
Dibromofluoromethane (S)	90.3		%	78 - 116	SW846 8260B			1/25/18 23:41	CJG	A
Toluene-d8 (S)	101		%	76 - 127	SW846 8260B			1/25/18 23:41	CJG	A



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## ANALYTICAL RESULTS

Workorder: 2290375 2171853/Quinn's Cafe Stop

Lab ID: 2290375015  
Sample ID: 116-0122-FB2

Date Collected: 1/23/2018 13:15 Matrix: Water  
Date Received: 1/24/2018 09:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			1/26/18 00:03	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			1/26/18 00:03	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			1/26/18 00:03	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			1/26/18 00:03	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			1/26/18 00:03	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			1/26/18 00:03	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			1/26/18 00:03	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/26/18 00:03	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			1/26/18 00:03	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	99.5		%	62 - 133	SW846 8260B			1/26/18 00:03	CJG	A
4-Bromofluorobenzene (S)	107		%	79 - 114	SW846 8260B			1/26/18 00:03	CJG	A
Dibromofluoromethane (S)	92.3		%	78 - 116	SW846 8260B			1/26/18 00:03	CJG	A
Toluene-d8 (S)	101		%	76 - 127	SW846 8260B			1/26/18 00:03	CJG	A

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**CHAIN OF CUSTODY/  
REQUEST FOR ANALYSIS**

[illegible]



34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

Environmental

CHAIN OF CUSTODY/  
REQUEST FOR ANALYSIS  
ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /  
SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: 2296375 2 of 2  
ALS Quote #:

Client Name: LaBella Associates, P.C.		Container Type: CG	Receipt Information (completed by Receiving Lab)	
Address: 1000 Dunham Drive, Suite B		40 ml	Cooler Temp: 4 Therm ID: 402	
Dunmore, PA 18512		Preservative: HCL	No. of Coolers: Y N Initial	
Contact: Martin Gilligallon		Custody Seals Present? (If present) Seals Intact? Received on Ice? COC Labels Complete/Accurate? Cont. in Good Cond.? Correct Containers? Correct Sample Volumes? Correct Preservation? Headspace/Volatiles?		
Phone#: (570) 487-1959 / (570) 342-3101		COC Tracking #: 8121 9378 0138		
Project Name/ID: 2171853 / Quinn's Cafe Shop		Sample/COC Comments: NO COLLECTION TAT'S ON SAMPLES. ALL COLLECTION TAT'S ON TOP OF SAMPLES. -SAS 1/14/18		
Bill To: Lynn Hanichak		ALS Field Services: Pickup Labor Composite Sampling Rental Equipment Other:		
TAT <input checked="" type="checkbox"/> Normal-Standard TAT is 10-12 business days. <input type="checkbox"/> Rush-Subject to ALS approval and surcharges.				
Date Required: Approved By:				
Email? Y Y mgilligallon@labellapc.com				
Fax? Y Y No.:				
Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	Enter Number of Containers Per Sample or Field Results Below.	
11) 116-0122-MW11	1/22/18	1324	2	
12) 116-0122-MW12	1/22/18	1004	2	
13) 116-0122-MW13	1/22/18	1450	2	
14) 116-0122-FB1	1/22/18	1530	2	
15) 116-0122-FB2	1/23/18	1315	2	
Project Comments: 8121 9378 0138		LOGGED BY (signature):		
FedEx #640000000000		REVIEWED BY (signature):		
Relinquished By / Company Name	Date	Time	Received By / Company Name	Date
1) Chris Seppala / LaBella	1/23/18	1421	2) FedEx	1/23/18
3			4) J. Quinn	1/24 955
5			6	
7			8	
9			10	
Special Processing		State Samples Collected In		
USACE Navy		NY NJ PA NC		
Sample Disposal		Lab Special		
Reportable to PADEP? Yes		PWSID #		
EDDS: Format Type:				



APPENDIX P-8

Laboratory Analytical Data Sheets

Groundwater Sampling Activities – April 2018

April 18, 2018

Mr. Marty Gilgallon  
LaBella-Dunmore  
1000 Dunham Drive  
Suite B  
Scranton, PA 18512

## Certificate of Analysis

Project Name: <b>2171853/Quinns Cafe Stop</b>	Workorder: <b>2308203</b>
Purchase Order:	Workorder ID: <b>2171853/Quinns Cafe Stop</b>

Dear Mr. Gilgallon:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, April 11, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Dean Cruciani, Mr. Kevin Cucura

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*



Ms. Amy K Borden  
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 2308203 2171853/Quinns Cafe Stop

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2308203001	116-0409-MW1	Ground Water	4/10/2018 09:42	4/11/2018 08:58	Collected by Client
2308203002	116-0409-MW2	Ground Water	4/10/2018 10:46	4/11/2018 08:58	Collected by Client
2308203003	116-0409-MW3	Ground Water	4/10/2018 12:01	4/11/2018 08:58	Collected by Client
2308203004	116-0409-MW4	Ground Water	4/10/2018 13:10	4/11/2018 08:58	Collected by Client
2308203005	116-0409-MW5	Ground Water	4/10/2018 13:03	4/11/2018 08:58	Collected by Client
2308203006	116-0409-MW6	Ground Water	4/10/2018 12:37	4/11/2018 08:58	Collected by Client
2308203007	116-0409-MW7	Ground Water	4/9/2018 14:12	4/11/2018 08:58	Collected by Client
2308203008	116-0409-MW8	Ground Water	4/9/2018 14:05	4/11/2018 08:58	Collected by Client
2308203009	116-0409-MW9	Ground Water	4/9/2018 15:19	4/11/2018 08:58	Collected by Client
2308203010	116-0409-MW10	Ground Water	4/10/2018 07:49	4/11/2018 08:58	Collected by Client
2308203011	116-0409-MW11	Ground Water	4/9/2018 14:20	4/11/2018 08:58	Collected by Client
2308203012	116-0409-MW12	Ground Water	4/9/2018 10:12	4/11/2018 08:58	Collected by Client
2308203013	116-0409-MW13	Ground Water	4/9/2018 11:13	4/11/2018 08:58	Collected by Client
2308203014	116-0409-FB1	Ground Water	4/9/2018 10:45	4/11/2018 08:58	Collected by Client
2308203015	116-0409-FB2	Ground Water	4/10/2018 09:30	4/11/2018 08:58	Collected by Client

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## SAMPLE SUMMARY

Workorder: 2308203 2171853/Quinns Cafe Stop

### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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### PROJECT SUMMARY

Workorder: 2308203 2171853/Quinns Cafe Stop

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#### Sample Comments

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**Lab ID:** 2308203002      **Sample ID:** 116-0409-MW2      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

**Lab ID:** 2308203004      **Sample ID:** 116-0409-MW4      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

**Lab ID:** 2308203005      **Sample ID:** 116-0409-MW5      **Sample Type:** SAMPLE

The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.

---

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## ANALYTICAL RESULTS

Workorder: 2308203 2171853/Quinns Cafe Stop

Lab ID: 2308203001  
Sample ID: 116-0409-MW1

Date Collected: 4/10/2018 09:42 Matrix: Ground Water  
Date Received: 4/11/2018 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			4/13/18 23:06	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			4/13/18 23:06	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			4/13/18 23:06	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			4/13/18 23:06	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			4/13/18 23:06	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			4/13/18 23:06	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			4/13/18 23:06	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/13/18 23:06	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/13/18 23:06	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	101		%	62 - 133	SW846 8260B			4/13/18 23:06	CJG	A
4-Bromofluorobenzene (S)	99.7		%	79 - 114	SW846 8260B			4/13/18 23:06	CJG	A
Dibromofluoromethane (S)	96.4		%	78 - 116	SW846 8260B			4/13/18 23:06	CJG	A
Toluene-d8 (S)	93.2		%	76 - 127	SW846 8260B			4/13/18 23:06	CJG	A



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### ANALYTICAL RESULTS

Workorder: 2308203 2171853/Quinns Cafe Stop

Lab ID: 2308203002  
Sample ID: 116-0409-MW2

Date Collected: 4/10/2018 10:46 Matrix: Ground Water  
Date Received: 4/11/2018 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	46.6		ug/L	5.0	SW846 8260B			4/14/18 04:26	CJG	A
Ethylbenzene	248		ug/L	5.0	SW846 8260B			4/14/18 04:26	CJG	A
Isopropylbenzene	41.2		ug/L	5.0	SW846 8260B			4/14/18 04:26	CJG	A
Methyl t-Butyl Ether	ND		ug/L	5.0	SW846 8260B			4/14/18 04:26	CJG	A
Naphthalene	95.7		ug/L	10.0	SW846 8260B			4/14/18 04:26	CJG	A
Toluene	19.4		ug/L	5.0	SW846 8260B			4/14/18 04:26	CJG	A
Total Xylenes	159		ug/L	15.0	SW846 8260B			4/14/18 04:26	CJG	A
1,2,4-Trimethylbenzene	43.5		ug/L	5.0	SW846 8260B			4/14/18 04:26	CJG	A
1,3,5-Trimethylbenzene	8.1		ug/L	5.0	SW846 8260B			4/14/18 04:26	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	98.9		%	62 - 133	SW846 8260B			4/14/18 04:26	CJG	A
4-Bromofluorobenzene (S)	96.4		%	79 - 114	SW846 8260B			4/14/18 04:26	CJG	A
Dibromofluoromethane (S)	92.2		%	78 - 116	SW846 8260B			4/14/18 04:26	CJG	A
Toluene-d8 (S)	94.9		%	76 - 127	SW846 8260B			4/14/18 04:26	CJG	A



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## ANALYTICAL RESULTS

Workorder: 2308203 2171853/Quinns Cafe Stop

Lab ID: 2308203003  
Sample ID: 116-0409-MW3

Date Collected: 4/10/2018 12:01 Matrix: Ground Water  
Date Received: 4/11/2018 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	277		ug/L	5.0	SW846 8260B			4/17/18 15:10	TMP	B
Ethylbenzene	425		ug/L	5.0	SW846 8260B			4/17/18 15:10	TMP	B
Isopropylbenzene	34.0		ug/L	5.0	SW846 8260B			4/17/18 15:10	TMP	B
Methyl t-Butyl Ether	11.7		ug/L	5.0	SW846 8260B			4/17/18 15:10	TMP	B
Naphthalene	79.9		ug/L	10.0	SW846 8260B			4/17/18 15:10	TMP	B
Toluene	20.8		ug/L	5.0	SW846 8260B			4/17/18 15:10	TMP	B
Total Xylenes	349		ug/L	15.0	SW846 8260B			4/17/18 15:10	TMP	B
1,2,4-Trimethylbenzene	195		ug/L	5.0	SW846 8260B			4/17/18 15:10	TMP	B
1,3,5-Trimethylbenzene	ND		ug/L	5.0	SW846 8260B			4/17/18 15:10	TMP	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	95.3		%	62 - 133	SW846 8260B			4/17/18 15:10	TMP	B
4-Bromofluorobenzene (S)	98.5		%	79 - 114	SW846 8260B			4/17/18 15:10	TMP	B
Dibromofluoromethane (S)	93.5		%	78 - 116	SW846 8260B			4/17/18 15:10	TMP	B
Toluene-d8 (S)	94.3		%	76 - 127	SW846 8260B			4/17/18 15:10	TMP	B

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## ANALYTICAL RESULTS

Workorder: 2308203 2171853/Quinns Cafe Stop

Lab ID: 2308203004  
Sample ID: 116-0409-MW4

Date Collected: 4/10/2018 13:10 Matrix: Ground Water  
Date Received: 4/11/2018 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	38.0		ug/L	5.0	SW846 8260B			4/14/18 04:49	CJG	A
Ethylbenzene	9.9		ug/L	5.0	SW846 8260B			4/14/18 04:49	CJG	A
Isopropylbenzene	ND		ug/L	5.0	SW846 8260B			4/14/18 04:49	CJG	A
Methyl t-Butyl Ether	218		ug/L	5.0	SW846 8260B			4/14/18 04:49	CJG	A
Naphthalene	ND		ug/L	10.0	SW846 8260B			4/14/18 04:49	CJG	A
Toluene	ND		ug/L	5.0	SW846 8260B			4/14/18 04:49	CJG	A
Total Xylenes	ND		ug/L	15.0	SW846 8260B			4/14/18 04:49	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	5.0	SW846 8260B			4/14/18 04:49	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	5.0	SW846 8260B			4/14/18 04:49	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	101		%	62 - 133	SW846 8260B			4/14/18 04:49	CJG	A
4-Bromofluorobenzene (S)	99.2		%	79 - 114	SW846 8260B			4/14/18 04:49	CJG	A
Dibromofluoromethane (S)	95.8		%	78 - 116	SW846 8260B			4/14/18 04:49	CJG	A
Toluene-d8 (S)	94		%	76 - 127	SW846 8260B			4/14/18 04:49	CJG	A

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### ANALYTICAL RESULTS

Workorder: 2308203 2171853/Quinns Cafe Stop

Lab ID: 2308203005  
Sample ID: 116-0409-MW5

Date Collected: 4/10/2018 13:03 Matrix: Ground Water  
Date Received: 4/11/2018 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	468		ug/L	5.0	SW846 8260B			4/14/18 05:12	CJG	A
Ethylbenzene	591		ug/L	5.0	SW846 8260B			4/14/18 05:12	CJG	A
Isopropylbenzene	81.6		ug/L	5.0	SW846 8260B			4/14/18 05:12	CJG	A
Methyl t-Butyl Ether	ND		ug/L	5.0	SW846 8260B			4/14/18 05:12	CJG	A
Naphthalene	164		ug/L	10.0	SW846 8260B			4/14/18 05:12	CJG	A
Toluene	29.6		ug/L	5.0	SW846 8260B			4/14/18 05:12	CJG	A
Total Xylenes	586		ug/L	15.0	SW846 8260B			4/14/18 05:12	CJG	A
1,2,4-Trimethylbenzene	766		ug/L	5.0	SW846 8260B			4/14/18 05:12	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	5.0	SW846 8260B			4/14/18 05:12	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	94.4		%	62 - 133	SW846 8260B			4/14/18 05:12	CJG	A
4-Bromofluorobenzene (S)	93.3		%	79 - 114	SW846 8260B			4/14/18 05:12	CJG	A
Dibromofluoromethane (S)	88.6		%	78 - 116	SW846 8260B			4/14/18 05:12	CJG	A
Toluene-d8 (S)	93.8		%	76 - 127	SW846 8260B			4/14/18 05:12	CJG	A



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### ANALYTICAL RESULTS

Workorder: 2308203 2171853/Quinns Cafe Stop

Lab ID: 2308203006  
Sample ID: 116-0409-MW6

Date Collected: 4/10/2018 12:37 Matrix: Ground Water  
Date Received: 4/11/2018 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	4.1		ug/L	1.0	SW846 8260B			4/13/18 23:29	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			4/13/18 23:29	CJG	A
Isopropylbenzene	1.4		ug/L	1.0	SW846 8260B			4/13/18 23:29	CJG	A
Methyl t-Butyl Ether	4.6		ug/L	1.0	SW846 8260B			4/13/18 23:29	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			4/13/18 23:29	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			4/13/18 23:29	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			4/13/18 23:29	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/13/18 23:29	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/13/18 23:29	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	101		%	62 - 133	SW846 8260B			4/13/18 23:29	CJG	A
4-Bromofluorobenzene (S)	100		%	79 - 114	SW846 8260B			4/13/18 23:29	CJG	A
Dibromofluoromethane (S)	94.9		%	78 - 116	SW846 8260B			4/13/18 23:29	CJG	A
Toluene-d8 (S)	93.5		%	76 - 127	SW846 8260B			4/13/18 23:29	CJG	A



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### ANALYTICAL RESULTS

Workorder: 2308203 2171853/Quinns Cafe Stop

Lab ID: 2308203007  
Sample ID: 116-0409-MW7

Date Collected: 4/9/2018 14:12 Matrix: Ground Water  
Date Received: 4/11/2018 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			4/13/18 23:51	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			4/13/18 23:51	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			4/13/18 23:51	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			4/13/18 23:51	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			4/13/18 23:51	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			4/13/18 23:51	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			4/13/18 23:51	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/13/18 23:51	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/13/18 23:51	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	104		%	62 - 133	SW846 8260B			4/13/18 23:51	CJG	A
4-Bromofluorobenzene (S)	97.2		%	79 - 114	SW846 8260B			4/13/18 23:51	CJG	A
Dibromofluoromethane (S)	98.8		%	78 - 116	SW846 8260B			4/13/18 23:51	CJG	A
Toluene-d8 (S)	94.2		%	76 - 127	SW846 8260B			4/13/18 23:51	CJG	A



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## ANALYTICAL RESULTS

Workorder: 2308203 2171853/Quinns Cafe Stop

Lab ID: 2308203008  
Sample ID: 116-0409-MW8

Date Collected: 4/9/2018 14:05 Matrix: Ground Water  
Date Received: 4/11/2018 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			4/14/18 00:14	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 00:14	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 00:14	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			4/14/18 00:14	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			4/14/18 00:14	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			4/14/18 00:14	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			4/14/18 00:14	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 00:14	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 00:14	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	103		%	62 - 133	SW846 8260B			4/14/18 00:14	CJG	A
4-Bromofluorobenzene (S)	98.9		%	79 - 114	SW846 8260B			4/14/18 00:14	CJG	A
Dibromofluoromethane (S)	94.4		%	78 - 116	SW846 8260B			4/14/18 00:14	CJG	A
Toluene-d8 (S)	94.3		%	76 - 127	SW846 8260B			4/14/18 00:14	CJG	A



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## ANALYTICAL RESULTS

Workorder: 2308203 2171853/Quinns Cafe Stop

Lab ID: 2308203009  
Sample ID: 116-0409-MW9

Date Collected: 4/9/2018 15:19 Matrix: Ground Water  
Date Received: 4/11/2018 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			4/14/18 00:37	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 00:37	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 00:37	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			4/14/18 00:37	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			4/14/18 00:37	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			4/14/18 00:37	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			4/14/18 00:37	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 00:37	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 00:37	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	105		%	62 - 133	SW846 8260B			4/14/18 00:37	CJG	A
4-Bromofluorobenzene (S)	95.8		%	79 - 114	SW846 8260B			4/14/18 00:37	CJG	A
Dibromofluoromethane (S)	98.4		%	78 - 116	SW846 8260B			4/14/18 00:37	CJG	A
Toluene-d8 (S)	93.2		%	76 - 127	SW846 8260B			4/14/18 00:37	CJG	A

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**ANALYTICAL RESULTS**

Workorder: 2308203 2171853/Quinns Cafe Stop

Lab ID: 2308203010  
Sample ID: 116-0409-MW10Date Collected: 4/10/2018 07:49 Matrix: Ground Water  
Date Received: 4/11/2018 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			4/14/18 01:00	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 01:00	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 01:00	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			4/14/18 01:00	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			4/14/18 01:00	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			4/14/18 01:00	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			4/14/18 01:00	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 01:00	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 01:00	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	104		%	62 - 133	SW846 8260B			4/14/18 01:00	CJG	A
4-Bromofluorobenzene (S)	99		%	79 - 114	SW846 8260B			4/14/18 01:00	CJG	A
Dibromofluoromethane (S)	100		%	78 - 116	SW846 8260B			4/14/18 01:00	CJG	A
Toluene-d8 (S)	92.8		%	76 - 127	SW846 8260B			4/14/18 01:00	CJG	A

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### ANALYTICAL RESULTS

Workorder: 2308203 2171853/Quinns Cafe Stop

Lab ID: 2308203011  
Sample ID: 116-0409-MW11

Date Collected: 4/9/2018 14:20 Matrix: Ground Water  
Date Received: 4/11/2018 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			4/14/18 01:23	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 01:23	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 01:23	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			4/14/18 01:23	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			4/14/18 01:23	CJG	A
Toluene	1.2		ug/L	1.0	SW846 8260B			4/14/18 01:23	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			4/14/18 01:23	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 01:23	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 01:23	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	106		%	62 - 133	SW846 8260B			4/14/18 01:23	CJG	A
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B			4/14/18 01:23	CJG	A
Dibromofluoromethane (S)	99.1		%	78 - 116	SW846 8260B			4/14/18 01:23	CJG	A
Toluene-d8 (S)	90.3		%	76 - 127	SW846 8260B			4/14/18 01:23	CJG	A



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## ANALYTICAL RESULTS

Workorder: 2308203 2171853/Quinns Cafe Stop

Lab ID: 2308203012  
Sample ID: 116-0409-MW12

Date Collected: 4/9/2018 10:12 Matrix: Ground Water  
Date Received: 4/11/2018 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			4/14/18 01:46	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 01:46	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 01:46	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			4/14/18 01:46	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			4/14/18 01:46	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			4/14/18 01:46	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			4/14/18 01:46	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 01:46	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 01:46	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	103		%	62 - 133	SW846 8260B			4/14/18 01:46	CJG	A
4-Bromofluorobenzene (S)	98.2		%	79 - 114	SW846 8260B			4/14/18 01:46	CJG	A
Dibromofluoromethane (S)	96.5		%	78 - 116	SW846 8260B			4/14/18 01:46	CJG	A
Toluene-d8 (S)	94.5		%	76 - 127	SW846 8260B			4/14/18 01:46	CJG	A

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### ANALYTICAL RESULTS

Workorder: 2308203 2171853/Quinns Cafe Stop

Lab ID: 2308203013  
Sample ID: 116-0409-MW13

Date Collected: 4/9/2018 11:13 Matrix: Ground Water  
Date Received: 4/11/2018 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			4/14/18 02:09	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 02:09	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 02:09	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			4/14/18 02:09	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			4/14/18 02:09	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			4/14/18 02:09	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			4/14/18 02:09	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 02:09	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/14/18 02:09	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	105		%	62 - 133	SW846 8260B			4/14/18 02:09	CJG	A
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B			4/14/18 02:09	CJG	A
Dibromofluoromethane (S)	97.5		%	78 - 116	SW846 8260B			4/14/18 02:09	CJG	A
Toluene-d8 (S)	91.8		%	76 - 127	SW846 8260B			4/14/18 02:09	CJG	A



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## ANALYTICAL RESULTS

Workorder: 2308203 2171853/Quinns Cafe Stop

Lab ID: 2308203014  
Sample ID: 116-0409-FB1

Date Collected: 4/9/2018 10:45 Matrix: Ground Water  
Date Received: 4/11/2018 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			4/13/18 22:20	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			4/13/18 22:20	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			4/13/18 22:20	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			4/13/18 22:20	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			4/13/18 22:20	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			4/13/18 22:20	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			4/13/18 22:20	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/13/18 22:20	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/13/18 22:20	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	103		%	62 - 133	SW846 8260B			4/13/18 22:20	CJG	A
4-Bromofluorobenzene (S)	94.7		%	79 - 114	SW846 8260B			4/13/18 22:20	CJG	A
Dibromofluoromethane (S)	96.3		%	78 - 116	SW846 8260B			4/13/18 22:20	CJG	A
Toluene-d8 (S)	92.6		%	76 - 127	SW846 8260B			4/13/18 22:20	CJG	A



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## ANALYTICAL RESULTS

Workorder: 2308203 2171853/Quinns Cafe Stop

Lab ID: 2308203015  
Sample ID: 116-0409-FB2

Date Collected: 4/10/2018 09:30 Matrix: Ground Water  
Date Received: 4/11/2018 08:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			4/13/18 22:43	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			4/13/18 22:43	CJG	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			4/13/18 22:43	CJG	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			4/13/18 22:43	CJG	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			4/13/18 22:43	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B			4/13/18 22:43	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			4/13/18 22:43	CJG	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/13/18 22:43	CJG	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			4/13/18 22:43	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	105		%	62 - 133	SW846 8260B			4/13/18 22:43	CJG	A
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B			4/13/18 22:43	CJG	A
Dibromofluoromethane (S)	97.3		%	78 - 116	SW846 8260B			4/13/18 22:43	CJG	A
Toluene-d8 (S)	94.5		%	76 - 127	SW846 8260B			4/13/18 22:43	CJG	A

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### REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /  
SAMPLER. INSTRUCTIONS ON THE BACK.

COC #:	4203	2 of 2
ALS Quote #:		

<b>Client Name:</b> LaBella Associates, P.C. <b>Address:</b> 1000 Dunham Drive, Suite B Dunmore, PA 18512 <b>Contact:</b> Martin Gilgallon <b>Phone#:</b> (570) 487-1959 / (570) 342-3101 <b>Project Name#:</b> 2171853 / Quinn's Café Stop <b>Bill To:</b> Lynn Hanichak		<b>Receipt Information (completed by Receiving Lab)</b> <b>Cooler Temp:</b> 1 <b>Therm ID:</b> 319 <b>No. of Coolers:</b> Y N Initial <i>DM</i> Custody Seal's Present? <input checked="" type="checkbox"/> (if present) Seals Intact? <input checked="" type="checkbox"/> Received on Ice? <input checked="" type="checkbox"/> COC/Labels Complete/Accurate? <input checked="" type="checkbox"/> Cont. in Good Cond.? <input checked="" type="checkbox"/> Correct Containers? <input checked="" type="checkbox"/> Correct Sample Volumes? <input checked="" type="checkbox"/> Correct Preservation? <input checked="" type="checkbox"/> Headspace/Volatiles? <input checked="" type="checkbox"/> <b>Courier/Tracking #:</b> 130 3583 0560 <b>Sample/COC Comments:</b>																																														
<b>ANALYSES/METHOD REQUESTED</b> CG 40 ml HCL Preservative Unleaded Gasoline		Enter Number of Containers Per Sample or Field Results Below.																																														
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Sample Description/Location (as it will appear on the lab report)</th> <th>Sample Date</th> <th>Time</th> <th>Matrix</th> <th>Containers</th> </tr> <tr> <td>11) 116-0409-MW11</td> <td>4/9/16</td> <td>1420</td> <td>GW</td> <td>2</td> </tr> <tr> <td>12) 116-0409-MW12</td> <td>4/9/16</td> <td>1012</td> <td>GW</td> <td>2</td> </tr> <tr> <td>13) 116-0409-MW13</td> <td>4/9/16</td> <td>1113</td> <td>GW</td> <td>2</td> </tr> <tr> <td>14) 116-0409-FB1</td> <td>4/9/16</td> <td>1045</td> <td>DI</td> <td>2</td> </tr> <tr> <td>15) 116-0409-FB2</td> <td>4/10/16</td> <td>0930</td> <td>DI</td> <td>2</td> </tr> </table>		Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	Matrix	Containers	11) 116-0409-MW11	4/9/16	1420	GW	2	12) 116-0409-MW12	4/9/16	1012	GW	2	13) 116-0409-MW13	4/9/16	1113	GW	2	14) 116-0409-FB1	4/9/16	1045	DI	2	15) 116-0409-FB2	4/10/16	0930	DI	2	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>State Samples Collected In</th> <th>Special Processing</th> <th>State Samples Collected In</th> </tr> <tr> <td>USACE <input type="checkbox"/></td> <td>USACE <input type="checkbox"/></td> <td>NY <input type="checkbox"/></td> </tr> <tr> <td>Navy <input type="checkbox"/></td> <td>Navy <input type="checkbox"/></td> <td>NJ <input type="checkbox"/></td> </tr> <tr> <td>PA <input checked="" type="checkbox"/></td> <td>PA <input checked="" type="checkbox"/></td> <td>NC <input type="checkbox"/></td> </tr> <tr> <td>Lab <input type="checkbox"/></td> <td>Lab <input type="checkbox"/></td> <td>Special <input type="checkbox"/></td> </tr> </table>		State Samples Collected In	Special Processing	State Samples Collected In	USACE <input type="checkbox"/>	USACE <input type="checkbox"/>	NY <input type="checkbox"/>	Navy <input type="checkbox"/>	Navy <input type="checkbox"/>	NJ <input type="checkbox"/>	PA <input checked="" type="checkbox"/>	PA <input checked="" type="checkbox"/>	NC <input type="checkbox"/>	Lab <input type="checkbox"/>	Lab <input type="checkbox"/>	Special <input type="checkbox"/>
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11) 116-0409-MW11	4/9/16	1420	GW	2																																												
12) 116-0409-MW12	4/9/16	1012	GW	2																																												
13) 116-0409-MW13	4/9/16	1113	GW	2																																												
14) 116-0409-FB1	4/9/16	1045	DI	2																																												
15) 116-0409-FB2	4/10/16	0930	DI	2																																												
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PA <input checked="" type="checkbox"/>	PA <input checked="" type="checkbox"/>	NC <input type="checkbox"/>																																														
Lab <input type="checkbox"/>	Lab <input type="checkbox"/>	Special <input type="checkbox"/>																																														
<b>Project Comments:</b> FedEx #8130 3583 0560		ALS Field Services: <input type="checkbox"/> Pickup <input type="checkbox"/> Labor <input type="checkbox"/> Composite Sampling <input type="checkbox"/> Rental Equipment <input type="checkbox"/> Other:																																														
<b>Relinquished By / Company Name</b> Chris Stam / LaBella		<b>Received By / Company Name</b> FedEx 8130 3583 0560																																														
<b>Date</b> 4/10/16 <b>Time</b> 1445		<b>Date</b> 4/10/16 <b>Time</b> 1445																																														
<b>LOGGED BY (signature):</b>		<b>LOGGED BY (signature):</b>																																														
<b>REVIEWED BY (signature):</b>		<b>REVIEWED BY (signature):</b>																																														
<b>Date</b> 4/10/16 <b>Time</b> 1445		<b>Date</b> 4/10/16 <b>Time</b> 1445																																														
<b>Reportable to PADEP?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		<b>Reportable to PADEP?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																																														
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ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

APPENDIX P-9

Laboratory Analytical Data Sheets

Groundwater Sampling Activities – July 2018



July 18, 2018

Mr. Marty Gilgallon  
LaBella-Dunmore  
1000 Dunham Drive  
Suite B  
Scranton, PA 18512

## Certificate of Analysis

Project Name: <b>2171853/Quinn's Cafe Shop</b>	Workorder: <b>2325597</b>
Purchase Order:	Workorder ID: <b>2171853/Quinn's Cafe Shop</b>

Dear Mr. Gilgallon:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, July 11, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Dean Cruciani, Mr. Kevin Cucura

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*



Ms. Amy K Borden  
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 2325597 2171853/Quinn's Cafe Shop

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2325597001	116-0709-MW1	Water	7/10/2018 09:58	7/11/2018 08:54	Collected by Client
2325597002	116-0709-MW2	Water	7/10/2018 12:10	7/11/2018 08:54	Collected by Client
2325597003	116-0709-MW3	Water	7/10/2018 11:35	7/11/2018 08:54	Collected by Client
2325597004	116-0709-MW4	Water	7/10/2018 13:03	7/11/2018 08:54	Collected by Client
2325597005	116-0709-MW5	Water	7/10/2018 13:24	7/11/2018 08:54	Collected by Client
2325597006	116-0709-MW6	Water	7/10/2018 10:58	7/11/2018 08:54	Collected by Client
2325597007	116-0709-MW7	Water	7/9/2018 13:42	7/11/2018 08:54	Collected by Client
2325597008	116-0709-MW8	Water	7/9/2018 13:45	7/11/2018 08:54	Collected by Client
2325597009	116-0709-MW9	Water	7/9/2018 12:41	7/11/2018 08:54	Collected by Client
2325597010	116-0709-MW10	Water	7/10/2018 09:40	7/11/2018 08:54	Collected by Client
2325597011	116-0709-MW11	Water	7/9/2018 11:22	7/11/2018 08:54	Collected by Client
2325597012	116-0709-MW12	Water	7/9/2018 10:53	7/11/2018 08:54	Collected by Client
2325597013	116-0709-MW13	Water	7/9/2018 13:21	7/11/2018 08:54	Collected by Client
2325597014	116-0709-FB1	Water	7/9/2018 11:00	7/11/2018 08:54	Collected by Client
2325597015	116-0709-FB2	Water	7/10/2018 10:00	7/11/2018 08:54	Collected by Client

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## SAMPLE SUMMARY

Workorder: 2325597 2171853/Quinn's Cafe Shop

### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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### ANALYTICAL RESULTS

Workorder: 2325597 2171853/Quinn's Cafe Shop

Lab ID: 2325597001  
Sample ID: 116-0709-MW1

Date Collected: 7/10/2018 09:58 Matrix: Water  
Date Received: 7/11/2018 08:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			7/16/18 17:11	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 17:11	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 17:11	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			7/16/18 17:11	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			7/16/18 17:11	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			7/16/18 17:11	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			7/16/18 17:11	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 17:11	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 17:11	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	90.6		%	62 - 133	SW846 8260B			7/16/18 17:11	TMP	A
4-Bromofluorobenzene (S)	111		%	79 - 114	SW846 8260B			7/16/18 17:11	TMP	A
Dibromofluoromethane (S)	97.5		%	78 - 116	SW846 8260B			7/16/18 17:11	TMP	A
Toluene-d8 (S)	90.6		%	76 - 127	SW846 8260B			7/16/18 17:11	TMP	A



Ms. Amy K Borden  
Project Coordinator

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### ANALYTICAL RESULTS

Workorder: 2325597 2171853/Quinn's Cafe Shop

Lab ID: 2325597002  
Sample ID: 116-0709-MW2

Date Collected: 7/10/2018 12:10 Matrix: Water  
Date Received: 7/11/2018 08:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	77.2	2	ug/L	5.0	SW846 8260B			7/16/18 21:12	TMP	A
Ethylbenzene	190		ug/L	5.0	SW846 8260B			7/16/18 21:12	TMP	A
Isopropylbenzene	41.0		ug/L	5.0	SW846 8260B			7/16/18 21:12	TMP	A
Methyl t-Butyl Ether	ND	1	ug/L	5.0	SW846 8260B			7/16/18 21:12	TMP	A
Naphthalene	130		ug/L	10.0	SW846 8260B			7/16/18 21:12	TMP	A
Toluene	18.7		ug/L	5.0	SW846 8260B			7/16/18 21:12	TMP	A
Total Xylenes	115		ug/L	15.0	SW846 8260B			7/16/18 21:12	TMP	A
1,2,4-Trimethylbenzene	38.0		ug/L	5.0	SW846 8260B			7/16/18 21:12	TMP	A
1,3,5-Trimethylbenzene	6.7		ug/L	5.0	SW846 8260B			7/16/18 21:12	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	90		%	62 - 133	SW846 8260B			7/16/18 21:12	TMP	A
4-Bromofluorobenzene (S)	105		%	79 - 114	SW846 8260B			7/16/18 21:12	TMP	A
Dibromofluoromethane (S)	93.7		%	78 - 116	SW846 8260B			7/16/18 21:12	TMP	A
Toluene-d8 (S)	87.1		%	76 - 127	SW846 8260B			7/16/18 21:12	TMP	A



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## ANALYTICAL RESULTS

Workorder: 2325597 2171853/Quinn's Cafe Shop

Lab ID: 2325597003  
Sample ID: 116-0709-MW3

Date Collected: 7/10/2018 11:35 Matrix: Water  
Date Received: 7/11/2018 08:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	670	3	ug/L	10.0	SW846 8260B			7/18/18 02:19	PDK	B
Ethylbenzene	1160		ug/L	10.0	SW846 8260B			7/18/18 02:19	PDK	B
Isopropylbenzene	94.1		ug/L	10.0	SW846 8260B			7/18/18 02:19	PDK	B
Methyl t-Butyl Ether	74.9		ug/L	10.0	SW846 8260B			7/18/18 02:19	PDK	B
Naphthalene	394		ug/L	20.0	SW846 8260B			7/18/18 02:19	PDK	B
Toluene	43.2		ug/L	10.0	SW846 8260B			7/18/18 02:19	PDK	B
Total Xylenes	553		ug/L	30.0	SW846 8260B			7/18/18 02:19	PDK	B
1,2,4-Trimethylbenzene	176		ug/L	10.0	SW846 8260B			7/18/18 02:19	PDK	B
1,3,5-Trimethylbenzene	18.9		ug/L	10.0	SW846 8260B			7/18/18 02:19	PDK	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	92.9		%	62 - 133	SW846 8260B			7/18/18 02:19	PDK	B
4-Bromofluorobenzene (S)	115	2	%	79 - 114	SW846 8260B			7/18/18 02:19	PDK	B
Dibromofluoromethane (S)	95.6		%	78 - 116	SW846 8260B			7/18/18 02:19	PDK	B
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B			7/18/18 02:19	PDK	B

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**ANALYTICAL RESULTS**

Workorder: 2325597 2171853/Quinn's Cafe Shop

Lab ID: 2325597004  
Sample ID: 116-0709-MW4Date Collected: 7/10/2018 13:03 Matrix: Water  
Date Received: 7/11/2018 08:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	11.6	2	ug/L	5.0	SW846 8260B			7/18/18 01:33	PDK	B
Ethylbenzene	ND		ug/L	5.0	SW846 8260B			7/18/18 01:33	PDK	B
Isopropylbenzene	ND		ug/L	5.0	SW846 8260B			7/18/18 01:33	PDK	B
Methyl t-Butyl Ether	225		ug/L	5.0	SW846 8260B			7/18/18 01:33	PDK	B
Naphthalene	ND		ug/L	10.0	SW846 8260B			7/18/18 01:33	PDK	B
Toluene	ND		ug/L	5.0	SW846 8260B			7/18/18 01:33	PDK	B
Total Xylenes	ND		ug/L	15.0	SW846 8260B			7/18/18 01:33	PDK	B
1,2,4-Trimethylbenzene	ND		ug/L	5.0	SW846 8260B			7/18/18 01:33	PDK	B
1,3,5-Trimethylbenzene	ND		ug/L	5.0	SW846 8260B			7/18/18 01:33	PDK	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	97.5		%	62 - 133	SW846 8260B			7/18/18 01:33	PDK	B
4-Bromofluorobenzene (S)	112		%	79 - 114	SW846 8260B			7/18/18 01:33	PDK	B
Dibromofluoromethane (S)	96.5		%	78 - 116	SW846 8260B			7/18/18 01:33	PDK	B
Toluene-d8 (S)	104		%	76 - 127	SW846 8260B			7/18/18 01:33	PDK	B

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### ANALYTICAL RESULTS

Workorder: 2325597 2171853/Quinn's Cafe Shop

Lab ID: 2325597005  
Sample ID: 116-0709-MW5

Date Collected: 7/10/2018 13:24 Matrix: Water  
Date Received: 7/11/2018 08:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	264	2	ug/L	5.0	SW846 8260B			7/18/18 01:56	PDK	B
Ethylbenzene	282		ug/L	5.0	SW846 8260B			7/18/18 01:56	PDK	B
Isopropylbenzene	38.4		ug/L	5.0	SW846 8260B			7/18/18 01:56	PDK	B
Methyl t-Butyl Ether	11.3		ug/L	5.0	SW846 8260B			7/18/18 01:56	PDK	B
Naphthalene	109		ug/L	10.0	SW846 8260B			7/18/18 01:56	PDK	B
Toluene	6.9		ug/L	5.0	SW846 8260B			7/18/18 01:56	PDK	B
Total Xylenes	251		ug/L	15.0	SW846 8260B			7/18/18 01:56	PDK	B
1,2,4-Trimethylbenzene	373		ug/L	5.0	SW846 8260B			7/18/18 01:56	PDK	B
1,3,5-Trimethylbenzene	ND		ug/L	5.0	SW846 8260B			7/18/18 01:56	PDK	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	96.6		%	62 - 133	SW846 8260B			7/18/18 01:56	PDK	B
4-Bromofluorobenzene (S)	110		%	79 - 114	SW846 8260B			7/18/18 01:56	PDK	B
Dibromofluoromethane (S)	95.1		%	78 - 116	SW846 8260B			7/18/18 01:56	PDK	B
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B			7/18/18 01:56	PDK	B



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### ANALYTICAL RESULTS

Workorder: 2325597 2171853/Quinn's Cafe Shop

Lab ID: 2325597006  
Sample ID: 116-0709-MW6

Date Collected: 7/10/2018 10:58 Matrix: Water  
Date Received: 7/11/2018 08:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	6.9		ug/L	1.0	SW846 8260B			7/18/18 00:47	PDK	B
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			7/18/18 00:47	PDK	B
Isopropylbenzene	3.0		ug/L	1.0	SW846 8260B			7/18/18 00:47	PDK	B
Methyl t-Butyl Ether	10.9		ug/L	1.0	SW846 8260B			7/18/18 00:47	PDK	B
Naphthalene	ND		ug/L	2.0	SW846 8260B			7/18/18 00:47	PDK	B
Toluene	ND		ug/L	1.0	SW846 8260B			7/18/18 00:47	PDK	B
Total Xylenes	ND		ug/L	3.0	SW846 8260B			7/18/18 00:47	PDK	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/18/18 00:47	PDK	B
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/18/18 00:47	PDK	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	98.2		%	62 - 133	SW846 8260B			7/18/18 00:47	PDK	B
4-Bromofluorobenzene (S)	114		%	79 - 114	SW846 8260B			7/18/18 00:47	PDK	B
Dibromofluoromethane (S)	96.4		%	78 - 116	SW846 8260B			7/18/18 00:47	PDK	B
Toluene-d8 (S)	104		%	76 - 127	SW846 8260B			7/18/18 00:47	PDK	B



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## ANALYTICAL RESULTS

Workorder: 2325597 2171853/Quinn's Cafe Shop

Lab ID: 2325597007  
Sample ID: 116-0709-MW7

Date Collected: 7/9/2018 13:42 Matrix: Water  
Date Received: 7/11/2018 08:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			7/16/18 17:55	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 17:55	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 17:55	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			7/16/18 17:55	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			7/16/18 17:55	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			7/16/18 17:55	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			7/16/18 17:55	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 17:55	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 17:55	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	93.2		%	62 - 133	SW846 8260B			7/16/18 17:55	TMP	A
4-Bromofluorobenzene (S)	114		%	79 - 114	SW846 8260B			7/16/18 17:55	TMP	A
Dibromofluoromethane (S)	98.9		%	78 - 116	SW846 8260B			7/16/18 17:55	TMP	A
Toluene-d8 (S)	89.8		%	76 - 127	SW846 8260B			7/16/18 17:55	TMP	A

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### ANALYTICAL RESULTS

Workorder: 2325597 2171853/Quinn's Cafe Shop

Lab ID: 2325597008  
Sample ID: 116-0709-MW8

Date Collected: 7/9/2018 13:45 Matrix: Water  
Date Received: 7/11/2018 08:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			7/16/18 18:17	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 18:17	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 18:17	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			7/16/18 18:17	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			7/16/18 18:17	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			7/16/18 18:17	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			7/16/18 18:17	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 18:17	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 18:17	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	93.1		%	62 - 133	SW846 8260B			7/16/18 18:17	TMP	A
4-Bromofluorobenzene (S)	112		%	79 - 114	SW846 8260B			7/16/18 18:17	TMP	A
Dibromofluoromethane (S)	97.5		%	78 - 116	SW846 8260B			7/16/18 18:17	TMP	A
Toluene-d8 (S)	87.9		%	76 - 127	SW846 8260B			7/16/18 18:17	TMP	A



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### ANALYTICAL RESULTS

Workorder: 2325597 2171853/Quinn's Cafe Shop

Lab ID: 2325597009  
Sample ID: 116-0709-MW9

Date Collected: 7/9/2018 12:41 Matrix: Water  
Date Received: 7/11/2018 08:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			7/16/18 18:39	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 18:39	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 18:39	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			7/16/18 18:39	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			7/16/18 18:39	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			7/16/18 18:39	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			7/16/18 18:39	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 18:39	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 18:39	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	89.4		%	62 - 133	SW846 8260B			7/16/18 18:39	TMP	A
4-Bromofluorobenzene (S)	108		%	79 - 114	SW846 8260B			7/16/18 18:39	TMP	A
Dibromofluoromethane (S)	96.4		%	78 - 116	SW846 8260B			7/16/18 18:39	TMP	A
Toluene-d8 (S)	89.5		%	76 - 127	SW846 8260B			7/16/18 18:39	TMP	A



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### ANALYTICAL RESULTS

Workorder: 2325597 2171853/Quinn's Cafe Shop

Lab ID: 2325597010  
Sample ID: 116-0709-MW10

Date Collected: 7/10/2018 09:40 Matrix: Water  
Date Received: 7/11/2018 08:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			7/16/18 19:01	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 19:01	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 19:01	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			7/16/18 19:01	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			7/16/18 19:01	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			7/16/18 19:01	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			7/16/18 19:01	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 19:01	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 19:01	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	89.2		%	62 - 133	SW846 8260B			7/16/18 19:01	TMP	A
4-Bromofluorobenzene (S)	113		%	79 - 114	SW846 8260B			7/16/18 19:01	TMP	A
Dibromofluoromethane (S)	98.8		%	78 - 116	SW846 8260B			7/16/18 19:01	TMP	A
Toluene-d8 (S)	90.3		%	76 - 127	SW846 8260B			7/16/18 19:01	TMP	A



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### ANALYTICAL RESULTS

Workorder: 2325597 2171853/Quinn's Cafe Shop

Lab ID: 2325597011  
Sample ID: 116-0709-MW11

Date Collected: 7/9/2018 11:22 Matrix: Water  
Date Received: 7/11/2018 08:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			7/16/18 19:23	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 19:23	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 19:23	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			7/16/18 19:23	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			7/16/18 19:23	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			7/16/18 19:23	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			7/16/18 19:23	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 19:23	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 19:23	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	92.8		%	62 - 133	SW846 8260B			7/16/18 19:23	TMP	A
4-Bromofluorobenzene (S)	111		%	79 - 114	SW846 8260B			7/16/18 19:23	TMP	A
Dibromofluoromethane (S)	99.2		%	78 - 116	SW846 8260B			7/16/18 19:23	TMP	A
Toluene-d8 (S)	86.9		%	76 - 127	SW846 8260B			7/16/18 19:23	TMP	A



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**ANALYTICAL RESULTS**

Workorder: 2325597 2171853/Quinn's Cafe Shop

Lab ID: 2325597012  
Sample ID: 116-0709-MW12Date Collected: 7/9/2018 10:53 Matrix: Water  
Date Received: 7/11/2018 08:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			7/18/18 01:10	PDK	B
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			7/18/18 01:10	PDK	B
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			7/18/18 01:10	PDK	B
Methyl t-Butyl Ether	1.2		ug/L	1.0	SW846 8260B			7/18/18 01:10	PDK	B
Naphthalene	ND		ug/L	2.0	SW846 8260B			7/18/18 01:10	PDK	B
Toluene	ND		ug/L	1.0	SW846 8260B			7/18/18 01:10	PDK	B
Total Xylenes	ND		ug/L	3.0	SW846 8260B			7/18/18 01:10	PDK	B
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/18/18 01:10	PDK	B
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/18/18 01:10	PDK	B
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	99.5		%	62 - 133	SW846 8260B			7/18/18 01:10	PDK	B
4-Bromofluorobenzene (S)	114		%	79 - 114	SW846 8260B			7/18/18 01:10	PDK	B
Dibromofluoromethane (S)	98.6		%	78 - 116	SW846 8260B			7/18/18 01:10	PDK	B
Toluene-d8 (S)	105		%	76 - 127	SW846 8260B			7/18/18 01:10	PDK	B

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### ANALYTICAL RESULTS

Workorder: 2325597 2171853/Quinn's Cafe Shop

Lab ID: 2325597013  
Sample ID: 116-0709-MW13

Date Collected: 7/9/2018 13:21 Matrix: Water  
Date Received: 7/11/2018 08:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			7/16/18 20:06	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 20:06	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 20:06	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			7/16/18 20:06	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			7/16/18 20:06	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			7/16/18 20:06	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			7/16/18 20:06	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 20:06	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 20:06	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	92.9		%	62 - 133	SW846 8260B			7/16/18 20:06	TMP	A
4-Bromofluorobenzene (S)	110		%	79 - 114	SW846 8260B			7/16/18 20:06	TMP	A
Dibromofluoromethane (S)	101		%	78 - 116	SW846 8260B			7/16/18 20:06	TMP	A
Toluene-d8 (S)	88.3		%	76 - 127	SW846 8260B			7/16/18 20:06	TMP	A



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## ANALYTICAL RESULTS

Workorder: 2325597 2171853/Quinn's Cafe Shop

Lab ID: 2325597014  
Sample ID: 116-0709-FB1

Date Collected: 7/9/2018 11:00 Matrix: Water  
Date Received: 7/11/2018 08:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			7/16/18 16:27	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 16:27	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 16:27	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			7/16/18 16:27	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			7/16/18 16:27	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			7/16/18 16:27	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			7/16/18 16:27	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 16:27	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 16:27	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	91		%	62 - 133	SW846 8260B			7/16/18 16:27	TMP	A
4-Bromofluorobenzene (S)	113		%	79 - 114	SW846 8260B			7/16/18 16:27	TMP	A
Dibromofluoromethane (S)	96.5		%	78 - 116	SW846 8260B			7/16/18 16:27	TMP	A
Toluene-d8 (S)	91		%	76 - 127	SW846 8260B			7/16/18 16:27	TMP	A



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Project Coordinator

### ALS Environmental Laboratory Locations Across North America

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey





## ANALYTICAL RESULTS

Workorder: 2325597 2171853/Quinn's Cafe Shop

Lab ID: 2325597015  
Sample ID: 116-0709-FB2

Date Collected: 7/10/2018 10:00 Matrix: Water  
Date Received: 7/11/2018 08:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND		ug/L	1.0	SW846 8260B			7/16/18 16:49	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 16:49	TMP	A
Isopropylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 16:49	TMP	A
Methyl t-Butyl Ether	ND		ug/L	1.0	SW846 8260B			7/16/18 16:49	TMP	A
Naphthalene	ND		ug/L	2.0	SW846 8260B			7/16/18 16:49	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			7/16/18 16:49	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			7/16/18 16:49	TMP	A
1,2,4-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 16:49	TMP	A
1,3,5-Trimethylbenzene	ND		ug/L	1.0	SW846 8260B			7/16/18 16:49	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	92.2		%	62 - 133	SW846 8260B			7/16/18 16:49	TMP	A
4-Bromofluorobenzene (S)	116	1	%	79 - 114	SW846 8260B			7/16/18 16:49	TMP	A
Dibromofluoromethane (S)	98.9		%	78 - 116	SW846 8260B			7/16/18 16:49	TMP	A
Toluene-d8 (S)	90.9		%	76 - 127	SW846 8260B			7/16/18 16:49	TMP	A

Ms. Amy K Borden  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 2325597 2171853/Quinn's Cafe Shop

### PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2325597002	1	116-0709-MW2	SW846 8260B	Methyl t-Butyl Ether
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methyl t-Butyl Ether. The % Recovery was reported as 120 and the control limits were 69 to 115.				
2325597002	2	116-0709-MW2	SW846 8260B	Benzene
The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.				
2325597003	2	116-0709-MW3	SW846 8260B	4-Bromofluorobenzene
The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 115 and the control limits were 79 to 114. This result was reported at a dilution of 10.				
2325597003	3	116-0709-MW3	SW846 8260B	Benzene
The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.				
2325597004	2	116-0709-MW4	SW846 8260B	Benzene
The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.				
2325597005	2	116-0709-MW5	SW846 8260B	Benzene
The GCMS volatiles analysis was performed at a dilution due to the level of target compounds.				
2325597015	1	116-0709-FB2	SW846 8260B	4-Bromofluorobenzene
The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 116 and the control limits were 79 to 114. This result was reported at a dilution of 1.				

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Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey

**ANALYSIS - PREP METHOD CROSS REFERENCE TABLE**

Workorder: 2325597 2171853/Quinn's Cafe Shop

Lab ID	Sample ID	Analysis Method	Prep Method
2325597001	116-0709-MW1	SW846 8260B	
2325597002	116-0709-MW2	SW846 8260B	
2325597003	116-0709-MW3	SW846 8260B	
2325597004	116-0709-MW4	SW846 8260B	
2325597005	116-0709-MW5	SW846 8260B	
2325597006	116-0709-MW6	SW846 8260B	
2325597007	116-0709-MW7	SW846 8260B	
2325597008	116-0709-MW8	SW846 8260B	
2325597009	116-0709-MW9	SW846 8260B	
2325597010	116-0709-MW10	SW846 8260B	
2325597011	116-0709-MW11	SW846 8260B	
2325597012	116-0709-MW12	SW846 8260B	
2325597013	116-0709-MW13	SW846 8260B	
2325597014	116-0709-FB1	SW846 8260B	
2325597015	116-0709-FB2	SW846 8260B	

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Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey



**CHAIN OF CUSTODY/  
REQUEST FOR ANALYSIS**

COC #	1 of 2
ALSO	

Client Name: LaBella Associates, P.C.		CG										Receipt number (if any) _____ Lab)	
Address: 1000 Dunham Drive, Suite B Dunmore, PA 15512		40 ml										Cooler Temp: 2 Therm ID: 407	
Contact: Martin Gligallon		HCL										No. of Coolers: Y N Initial <u>W</u>	
Phone: (570) 487-1959 / (570) 342-3101		ANALYSES/METHOD REQUESTED										Custody Seals Present? <input checked="" type="checkbox"/>	
Project Name: 2171853 / Quinn's Café Stop												(if present) Seals Intact? <input checked="" type="checkbox"/>	
Bill To: Lynn Hanichak												Received on Ice? <input checked="" type="checkbox"/>	
												COCLabels Complete/Accurate? <input checked="" type="checkbox"/>	
TAT <input checked="" type="checkbox"/> Normal-Standard TAT is 10-12 business days. <input type="checkbox"/> Rush-Subject to ALS approval and surcharges.		Date Required: _____ Approved By: _____										Cont. In Good Cond.? <input checked="" type="checkbox"/>	
Email? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N mgilgallon@labellapc.com												Correct Containers? <input checked="" type="checkbox"/>	
Fax? <input type="checkbox"/> Y <input type="checkbox"/> N												Correct Sample Volumes? <input checked="" type="checkbox"/>	
												Correct Preservation? <input checked="" type="checkbox"/>	
												Headspace/Volatiles? <input checked="" type="checkbox"/>	
												Courier Tracking #: 813357027381	
												Sample/COC Comments <u>No dates/times</u> <u>W4-11-18</u>	

Sample Description/Location (see it will appear on the lab report)	Sample Date	Time	Matrix	G	C	Enter Number of Containers Per Sample or Field Results Below.		ALS Field Services: <input type="checkbox"/> Pickup <input type="checkbox"/> Labor <input type="checkbox"/> Composite Sampling <input type="checkbox"/> Rental Equipment <input type="checkbox"/> Other: _____		Special Processing		Slate Samples Collected In	
						Standard	CLP-like	USACE	USACE	USACE	Navy	NY	NJ
1) 116-0709-MW1	7/10/18	0958	GW	2									
2) 116-0709-MW2	7/10/18	1240	GW	2									
3) 116-0709-MW3	7/10/18	1135	GW	2									
4) 116-0709-MW4	7/10/18	1363	GW	2									
5) 116-0709-MW5	7/10/18	1324	GW	2									
6) 116-0709-MW6	7/10/18	1658	GW	2									
7) 116-0709-MW7	7/9/18	1342	GW	2									
8) 116-0709-MW8	7/9/18	1345	GW	2									
9) 116-0709-MW9	7/9/18	1241	GW	2									
10) 116-0709-MW10	7/10/18	0940	GW	2									

Project Comments: FedEx # 8133 5702 7381		LOGGED BY (signature): <u>[Signature]</u>		REVIEWED BY (signature): <u>[Signature]</u>	
Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1) Chris Y. [Signature]	7/10/18	1500	2) Fedex 8133 5702 7381	7/10/18	
3) COMMON COURIER / ALS COURIER			3) Lynn Hanichak	7/10/18	0854
5)			6)		
7)			8)		
9)			10)		

Reportable to PADEP?		Sample Disposal		Slate Samples Collected In	
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Lab <input type="checkbox"/>	Special <input type="checkbox"/>	USACE <input type="checkbox"/>	Navy <input type="checkbox"/>
PWSID #		EDDS: Format Type			



34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

**Environmental**

**CHAIN OF CUSTODY/  
REQUEST FOR ANALYSIS**  
**ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /  
SAMPLER. INSTRUCTIONS ON THE BACK.**

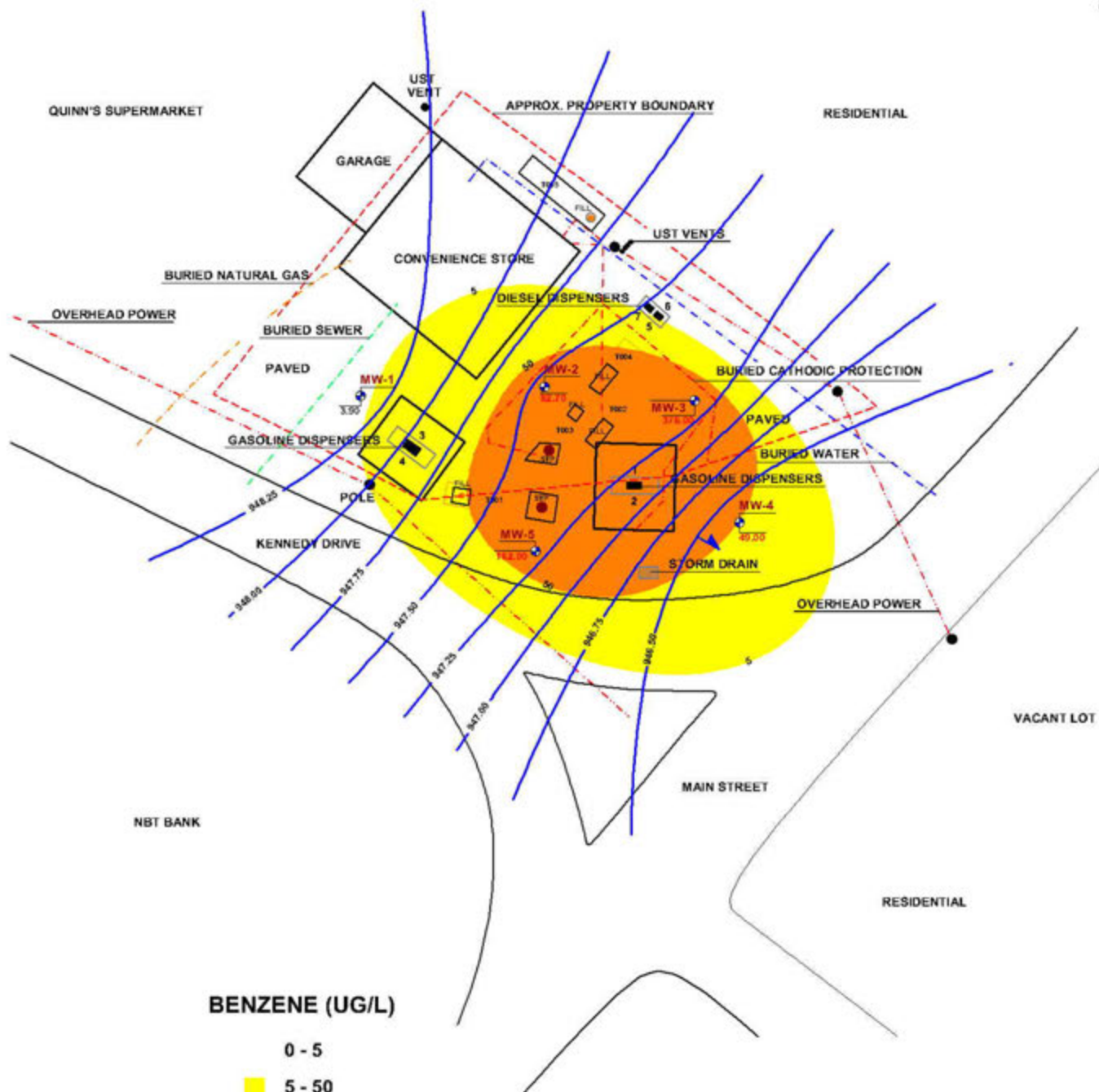
COC #: 2325597 2 of 2  
ALS Quote #: 2325597

Client Name: LaBella Associates, P.C.		Container Type: CG	Receipt Information (completed by Receiving Lab)	
Address: 1000 Dunham Drive, Suite B		Container Size: 40 ml	Cooler Temp: <u>2</u> Therm ID: <u>462</u>	
Dunmore, PA 18512		Preservative: HCL	No. of Coolers: Y N Initial: <u>lu</u>	
Contact: Martin Gilgallon		Custody Seals Present? <input checked="" type="checkbox"/>		
Phone#: (570) 487-1959 / (570) 342-3101		(If present) Seals Intact? <input checked="" type="checkbox"/>		
Project Name#: 2171653 / Quinn's Café Stop		Received on Ice? <input checked="" type="checkbox"/>		
Bill To: Lynn Hanichak		COC Labels Complete/Accurate? <input checked="" type="checkbox"/>		
TAT <input checked="" type="checkbox"/> Normal-Standard TAT is 10-12 business days.		Cont. in Good Cond.? <input checked="" type="checkbox"/>		
Date Required: <input type="checkbox"/> Rush-Subject to ALS approval and surcharges.		Correct Containers? <input checked="" type="checkbox"/>		
Approved By: _____		Correct Sample Volumes? <input checked="" type="checkbox"/>		
Email? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <u>mgilgallon@labellapc.com</u>		Correct Preservation? <input checked="" type="checkbox"/>		
Fax? <input type="checkbox"/> Y <input type="checkbox"/> N _____		Headspace/Volatiles? <input checked="" type="checkbox"/>		
Sample Description/Location (as it will appear on the lab report)		Sample Date	Time	Enter Number of Containers Per Sample or Field Results Below.
11) 116-0709-MW11	7/6/18	1122	G	GW 2
12) 116-0709-MW12	7/9/18	1053	G	GW 2
13) 116-0709-MW13	7/9/18	1321	G	GW 2
14) 116-0709-FB1	7/9/18	1100	G	DI 2
15) 116-0709-FB2	7/10/18	1000	G	DI 2
ALS Field Services: <u>  </u> Pickup <u>  </u> Labor <u>  </u> <u>  </u> Composite Sampling <u>  </u> Rental Equipment <u>  </u> Other: <u>  </u>				
Project Comments: FedEx # 8133 5702 7381		LOGGED BY (signature): _____		
Relinquished By / Company Name		Date	Time	Received By / Company Name
1) <u>Quinn's Café Stop / LaBella</u>	7/10/18	1500	2	FedEx 8133 5702 7381
3) <u>COMMON COURIER / ALS COURIER</u>			4	<u>Quinn's Café Stop</u>
5) _____			6	
7) _____			8	
9) _____			10	
Date		Time	Date	Time
Reportable to PADEP? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		PWSID # _____		
Special Processing		State Samples Collected In		
USACE <input type="checkbox"/> Navy <input type="checkbox"/> USACE <input type="checkbox"/>		NY <input type="checkbox"/> NJ <input type="checkbox"/> PA <input checked="" type="checkbox"/> NC <input type="checkbox"/>		
Sample Disposal		Lab <input type="checkbox"/> Special <input type="checkbox"/>		
EDDS: Format Type: _____		_____		



## APPENDIX Q

### Groundwater Isopleth Maps



### BENZENE (UG/L)

0 - 5

5 - 50

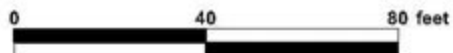
50 - 500

1.) FEBRUARY 15, 2017 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL = 0.25'.

2.) BENZENE MSC = 5.0 UG/L. EXCEEDANCES IN RED.



MONITORING WELL LOCATION

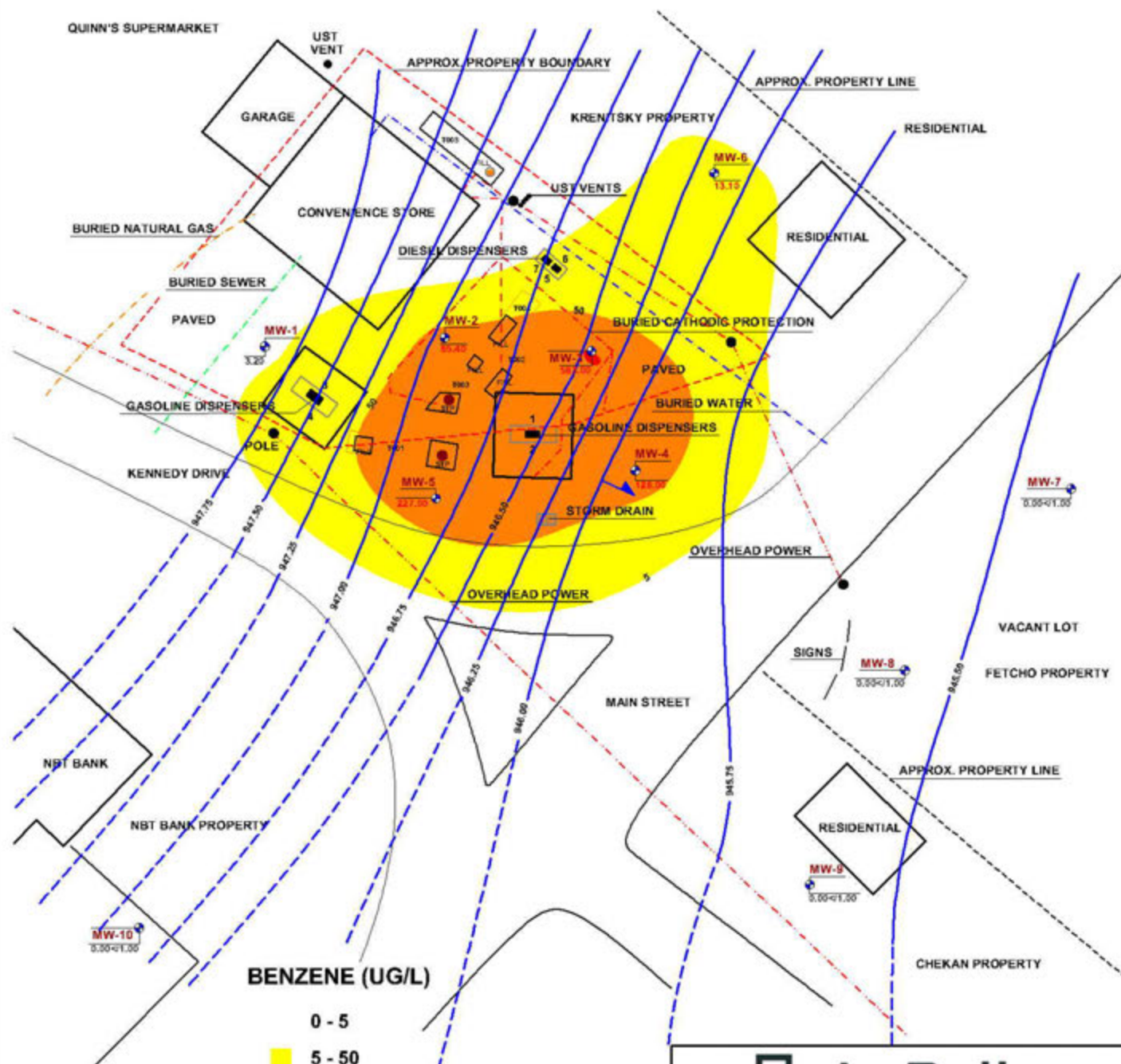


**GROUNDWATER ISOPLETH MAP  
BENZENE - FEBRUARY 2017  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBALD,  
LACKAWANNA COUNTY, PENNSYLVANIA**

DRAWN BY: KC

DATE: 03/02/2017

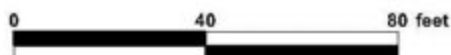
SCALE: 1" = 40'



- 1.) JUNE 27, 2017 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL = 0.25'.
- 2.) BENZENE MSC = 5.0 UG/L. EXCEEDANCES IN RED.



**MONITORING WELL LOCATION**



**GROUNDWATER ISOPLETH MAP  
BENZENE - JUNE 2017  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBALD,  
LACKAWANNA COUNTY, PENNSYLVANIA**

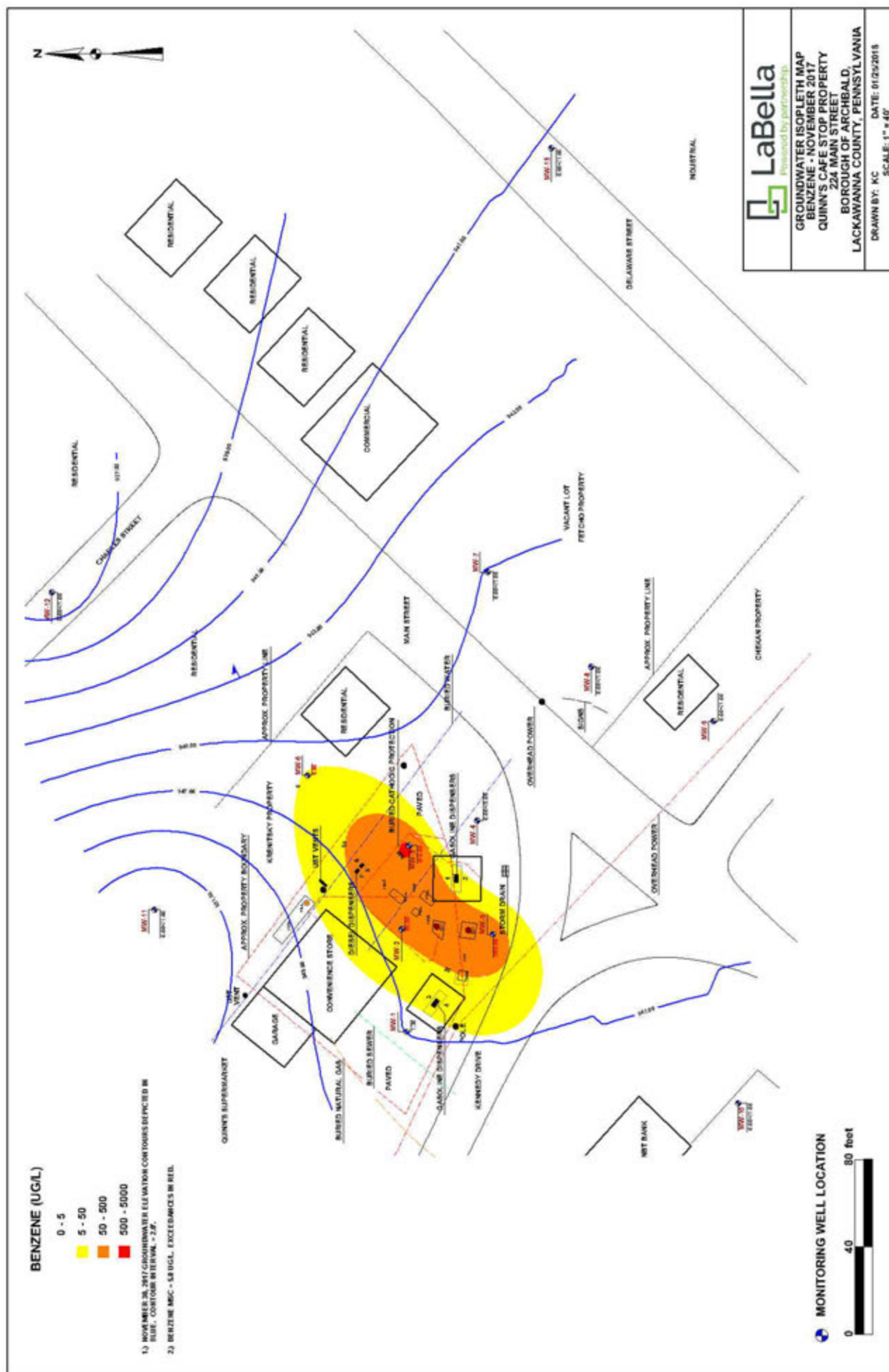
DRAWN BY: KC

DATE: 07/28/2017

SCALE: 1" = 40'







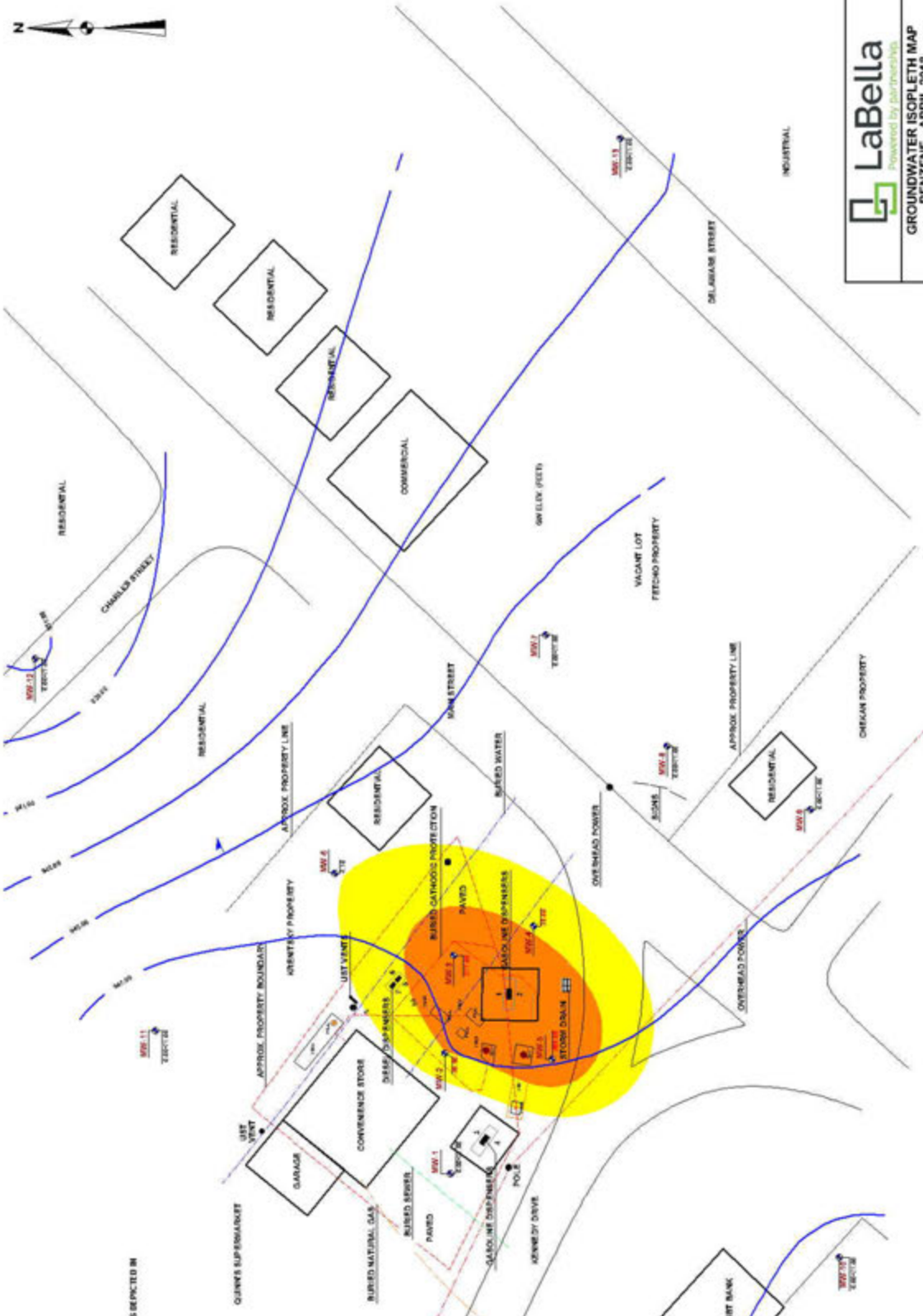




# **BENZENE (UG/L)**



1.) APRIL 1, 2018 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL = 2.0'.  
2.) BENZENE MEC = 0.5 UG/L. EXCEEDANCES IN RED.



**MONITORING WELL LOCATION**

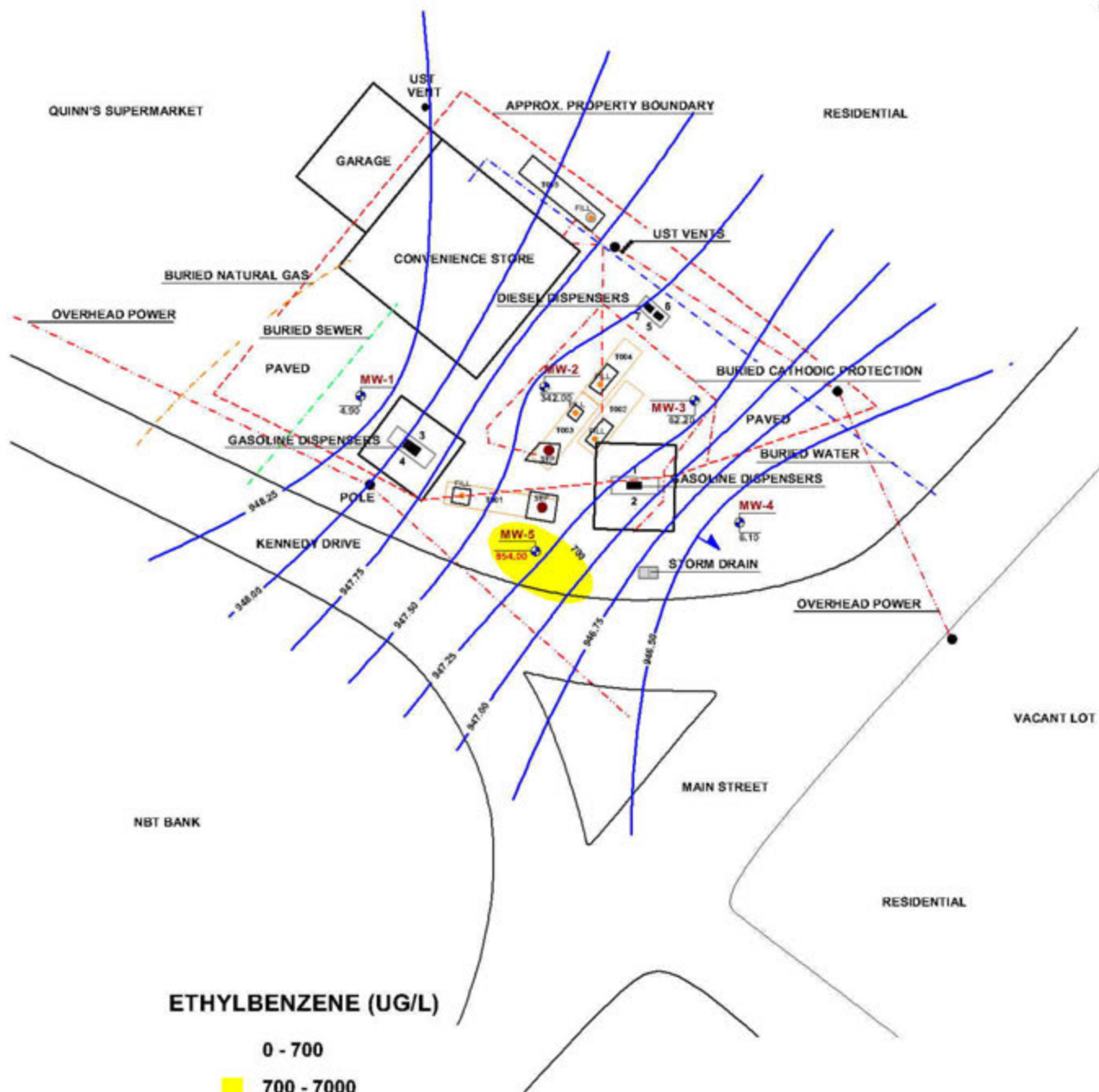


GROUNDWATER ISOPLETH MAP  
BENZENE - APRIL 2018  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBALD,  
LACKAWANNA COUNTY, PENNSYLVANIA

DRAWN BY: KC DATE: 07/23/2015  
SCALE: 1" = 40'







### ETHYLBENZENE (UG/L)

0 - 700

700 - 7000

7000 - 70000

1.) FEBRUARY 15, 2017 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL = 0.25'.

2.) ETHYLBENZENE MSC = 700.0 UG/L. EXCEEDANCES IN RED.



MONITORING WELL LOCATION

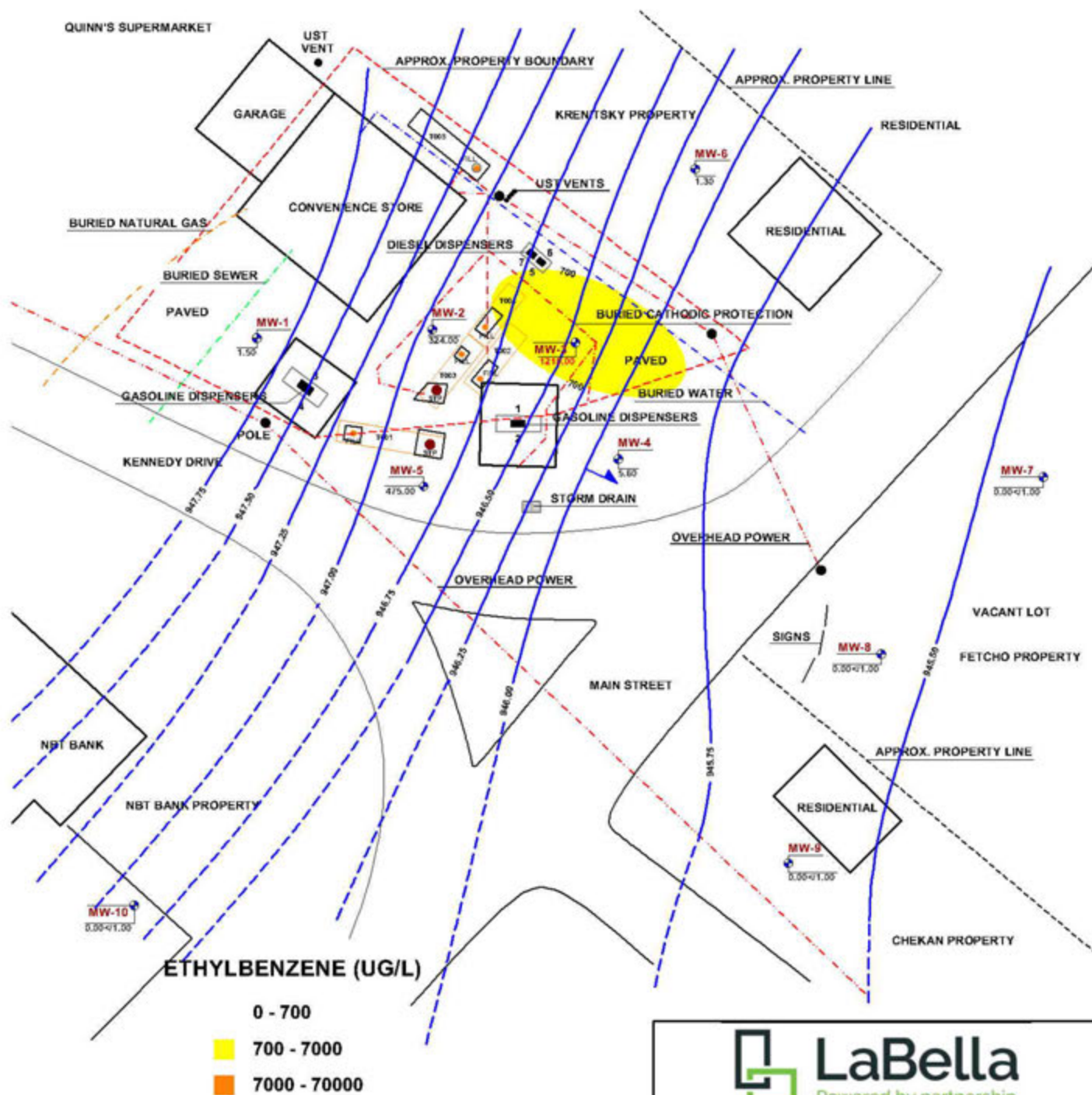


**GROUNDWATER ISOPLETH MAP  
ETHYLBENZENE - FEBRUARY 2017  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBALD,  
LACKAWANNA COUNTY, PENNSYLVANIA**

DRAWN BY: KC

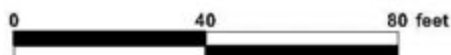
DATE: 03/02/2017

SCALE: 1" = 40'



1.) JUNE 27, 2017 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL = 0.25'.

2.) ETHYLBENZENE MSC = 700.0 UG/L. EXCEEDANCES IN RED.

 MONITORING WELL LOCATION

**LaBella**  
Powered by partnership.

GROUNDWATER ISOPLETH MAP  
ETHYLBENZENE - JUNE 2017  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBALD,  
LACKAWANNA COUNTY, PENNSYLVANIA

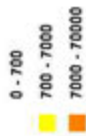
DRAWN BY: KC

DATE: 07/28/2017

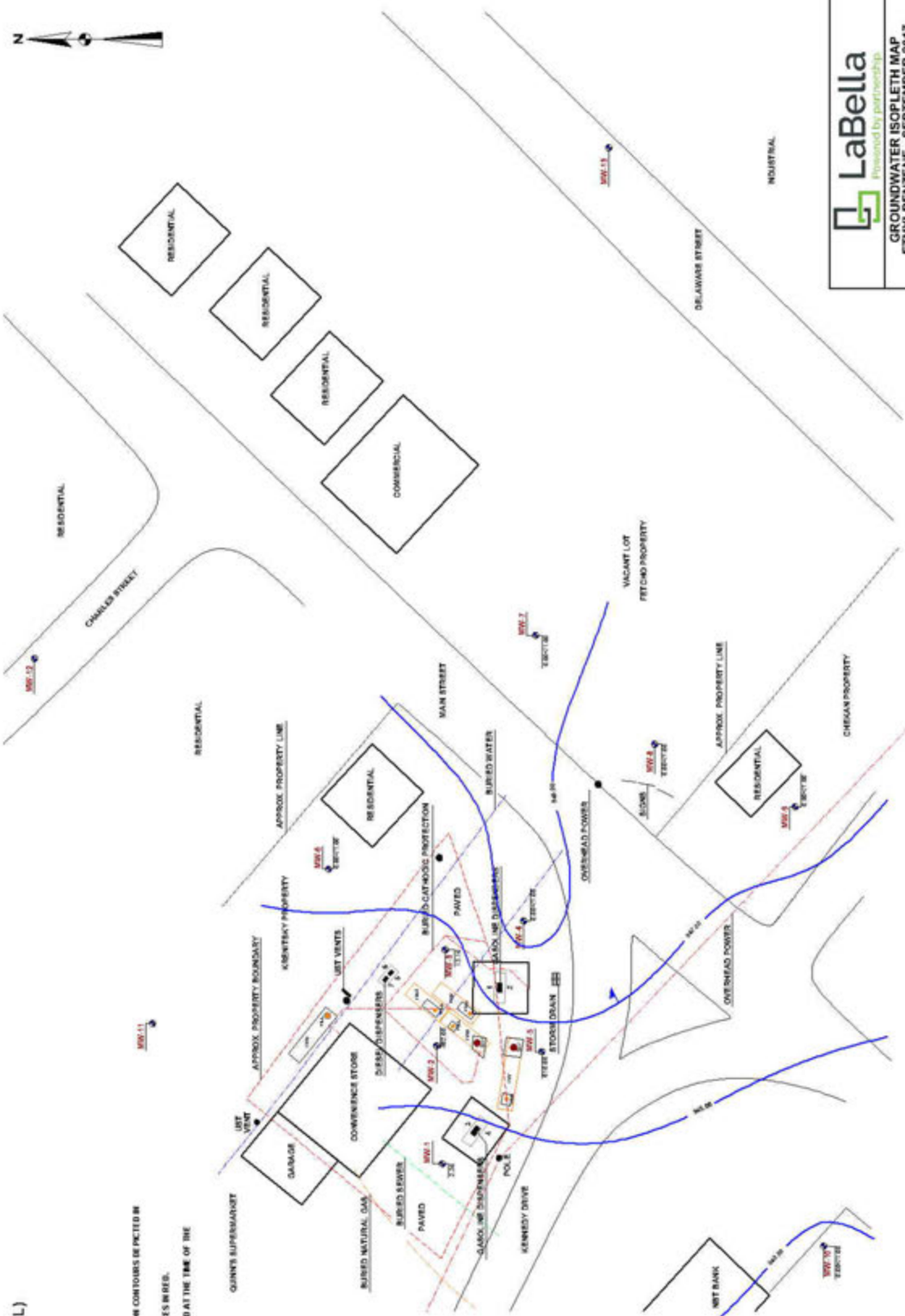
SCALE: 1" = 40'



# ETHYLBENZENE (UGL)



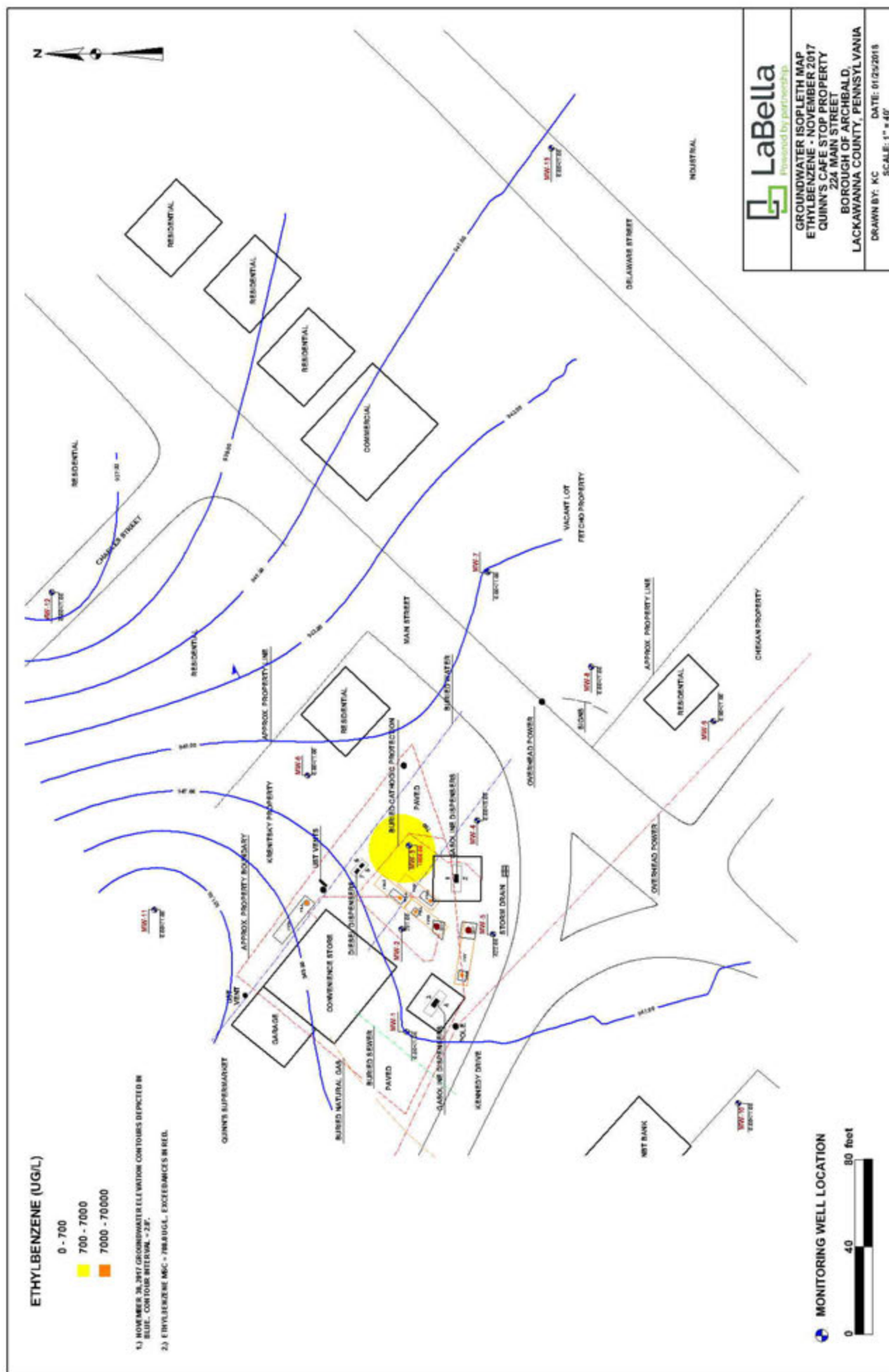
- 1) SEPTEMBER 11, 2017 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL = 1'.
- 2) ETHYLBENZENE MISC - 7000 UGL. EXCEEDANCES IN RED.
- 3) MW-11, MW-12 AND MW-13 WERE NOT INSTALLED AT THE TIME OF THE SEPTEMBER 2017 SAMPLING EVENT.



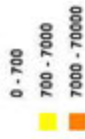
## MONITORING WELL LOCATION



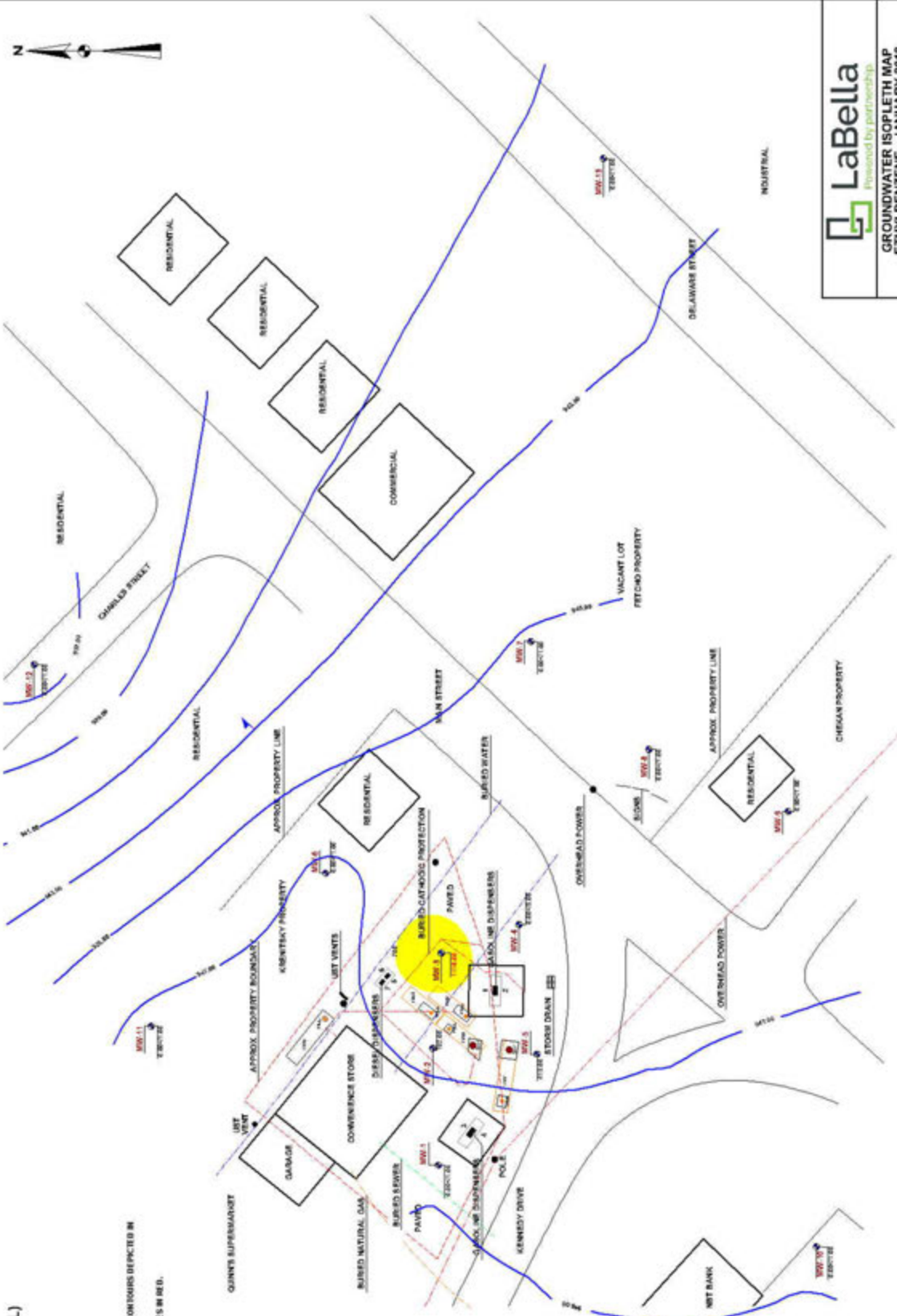
GROUNDWATER ISOPLETH MAP  
ETHYLBENZENE - SEPTEMBER 2017  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBOLD  
LACKAWANNA COUNTY, PENNSYLVANIA  
DRAWN BY: KC DATE: 01/25/2018  
SCALE: 1" = 40'



# ETHYLBENZENE (UG/L)



- 1.) JANUARY 22, 2018 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL = 2.0'.
- 2.) ETHYLBENZENE ME: MGC = 198.8 UG/L. EXCEEDANCES IN RED.



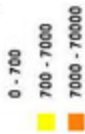
## MONITORING WELL LOCATION



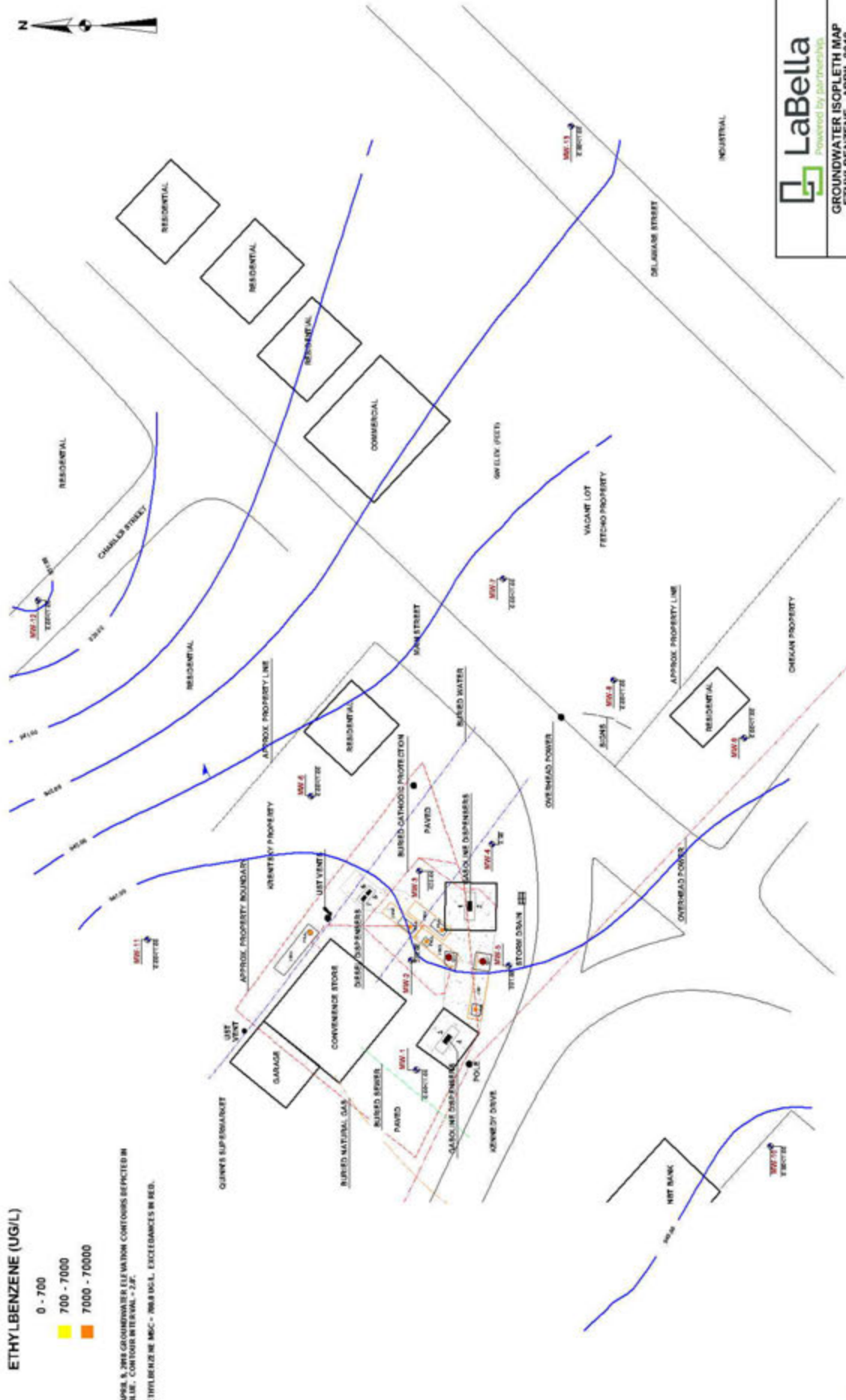
GROUNDWATER ISOPLETH MAP  
ETHYLBENZENE - JANUARY 2018  
QUINN'S CAFE STOP PROPERTY  
324 MAIN STREET  
BOROUGH OF ARCHBOLD  
LACKAWANNA COUNTY, PENNSYLVANIA  
DRAWN BY: KC DATE: 01/25/2018  
SCALE: 1" = 40'



# ETHYL BENZENE (UG/L)



- APRIL 5, 2018 GROUNDWATER ELUTION CONTOURS REPORTED IN BLUE. CONTOUR INTERVAL = 2.0.
- ETHYL BENZENE IN MFC - 700.0 UG/L. EXCEEDANCES IN RED.

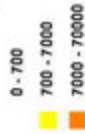


## MONITORING WELL LOCATION

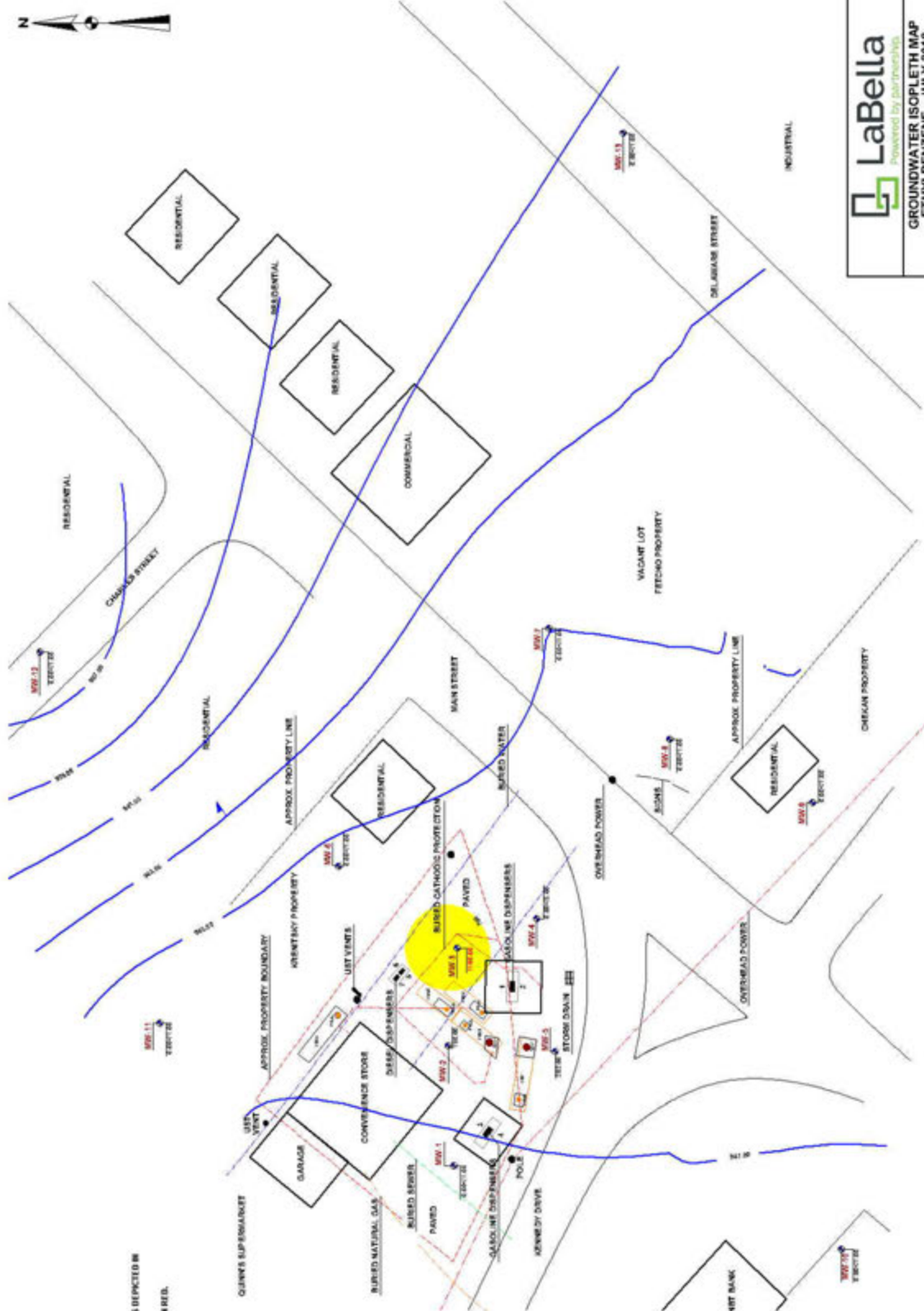


GROUNDWATER ISOPLETH MAP  
ETHYL BENZENE - APRIL 2018  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBOLD,  
LACKAWANNA COUNTY, PENNSYLVANIA  
DRAWN BY: KC DATE: 07/23/2018  
SCALE: 1" = 40'

# ETHYL BENZENE (UG/L)



- 1.) JULY 8, 2018 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL = 2'.  
2.) ETHYL BENZENE IMC - TMSUGL. EXCEEDANCES IN RED.



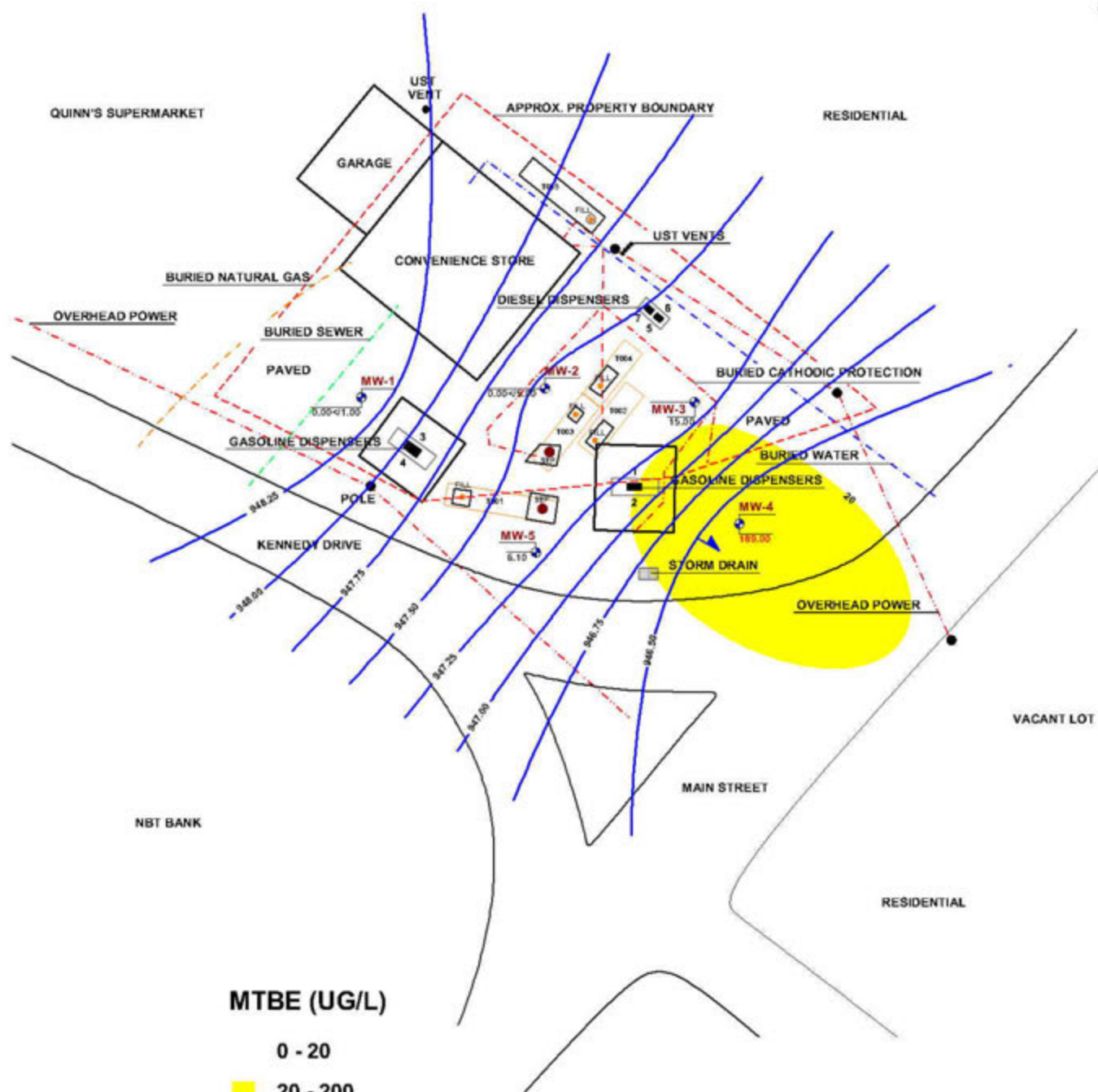
## MONITORING WELL LOCATION



GROUNDWATER ISOPLETH MAP  
ETHYL BENZENE - JULY 2018  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBOLD,  
LACKAWANNA COUNTY, PENNSYLVANIA

DRAWN BY: KC DATE: 07/23/2018  
SCALE: 1" = 40'





**MTBE (UG/L)**

**0 - 20**

20 - 200

200 - 2000

- 1.) FEBRUARY 15, 2017 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL = 0.25'.  
2.) MTBE MSC = 20.0 UG/L. EXCEEDANCES IN RED.



### MONITORING WELL LOCATION



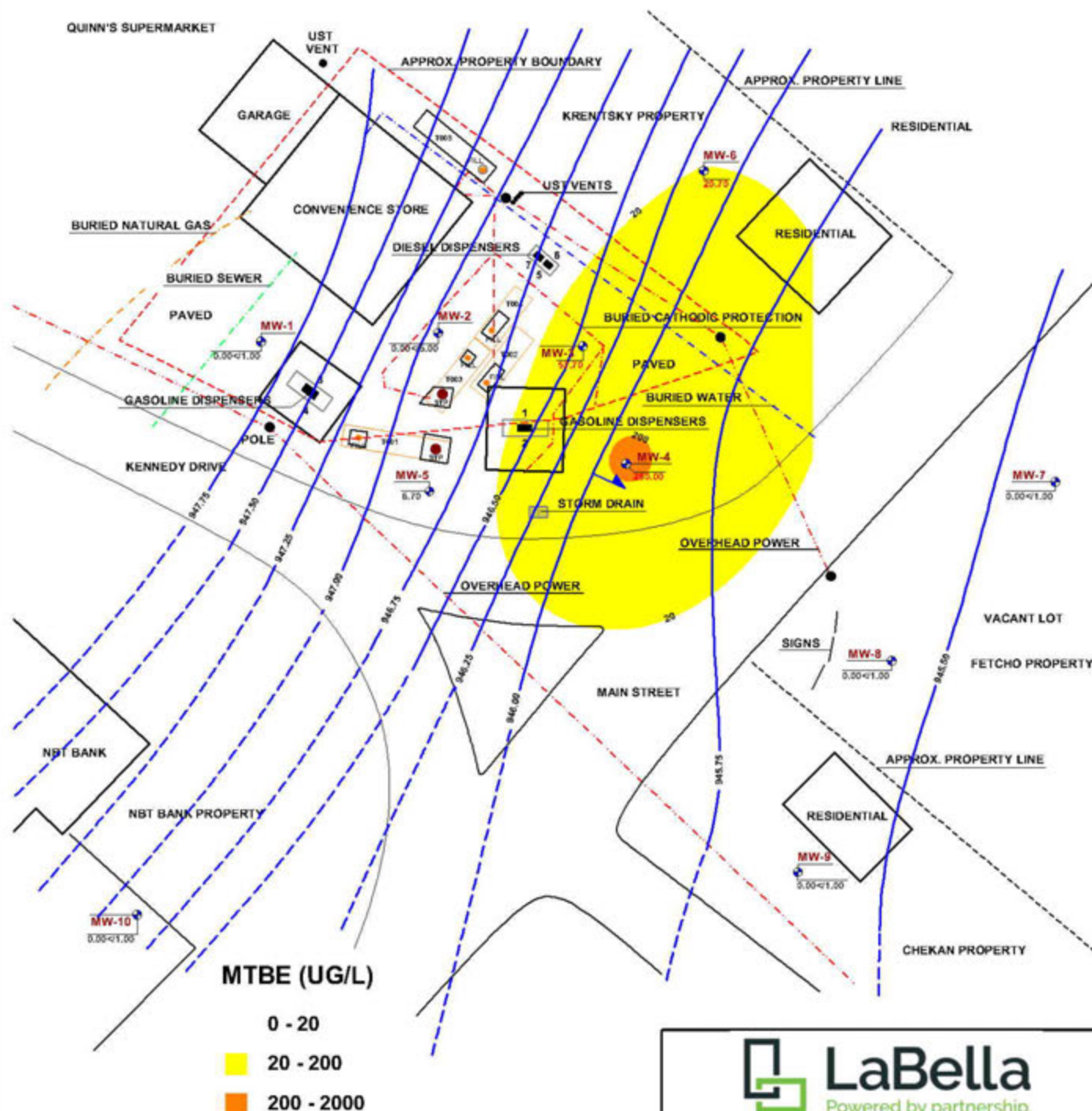
**LaBella**  
Powered by partnership.

GROUNDWATER ISOPLETH MAP  
MTBE - FEBRUARY 2017  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBALD,  
LACKAWANNA COUNTY, PENNSYLVANIA

DRAWN BY: KC

DATE: 03/02/2017

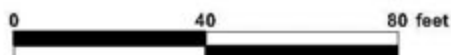
SCALE: 1" = 40'



- 1.) JUNE 27, 2017 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL = 0.25'.
- 2.) MTBE MSC = 20.0 UG/L. EXCEEDANCES IN RED.



**MONITORING WELL LOCATION**



**GROUNDWATER ISOPLETH MAP  
MTBE - JUNE 2017  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBALD,  
LACKAWANNA COUNTY, PENNSYLVANIA**

**DRAWN BY: KC**

**DATE: 07/28/2017**

**SCALE: 1" = 40'**

# MTBE (UG/L)

0 - 20

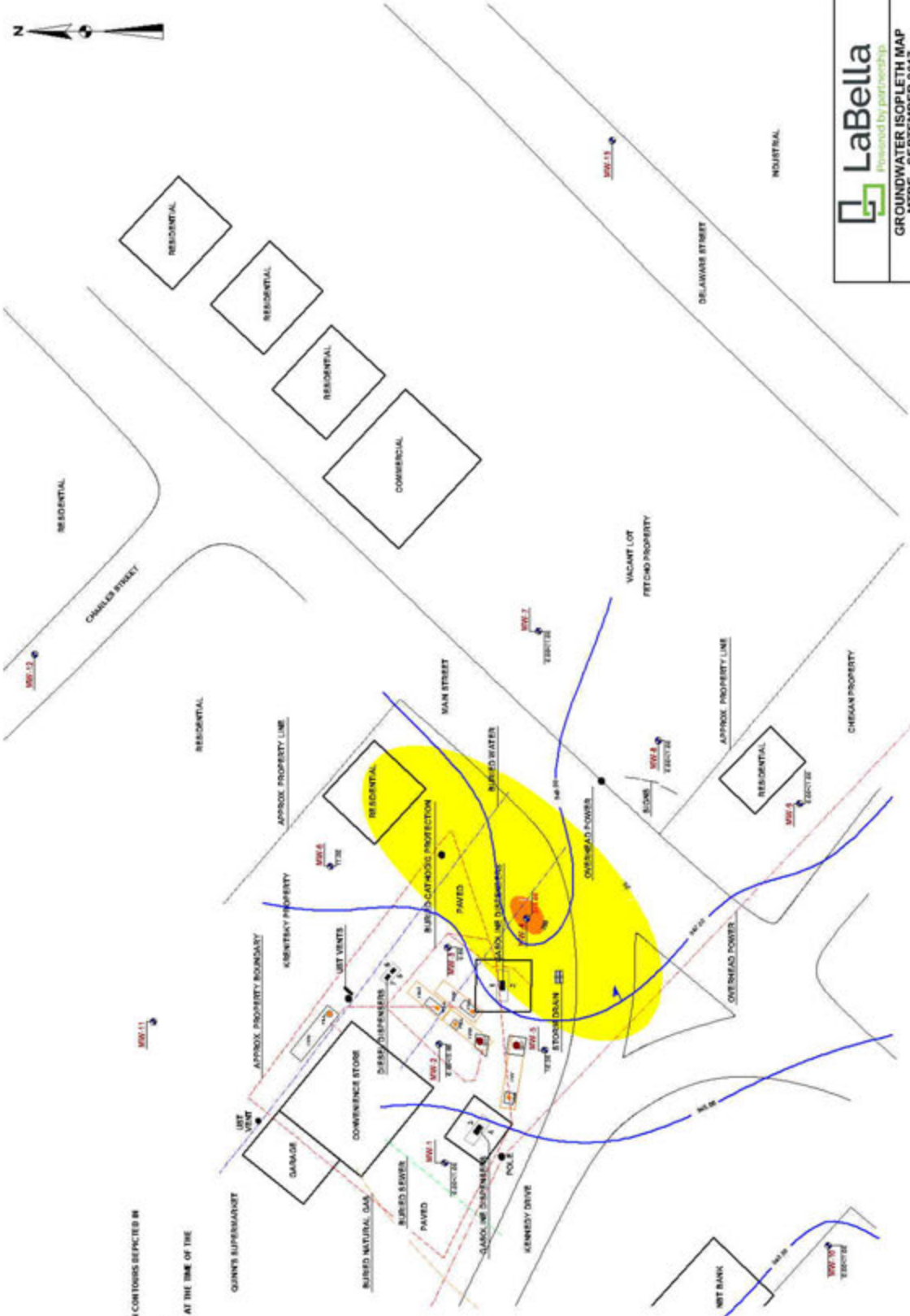
20 - 200

200 - 2000

1.1 SEPTEMBER 11, 2017 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL = 1'.

2.1 MTBE MSC - 26.8 UG/L. EXCEEDANCES IN RED.

3.1 MW 11, MW 12 AND MW 13 WERE NOT INSTALLED AT THE TIME OF THE SEPTEMBER 2017 SAMPLING EVENT.

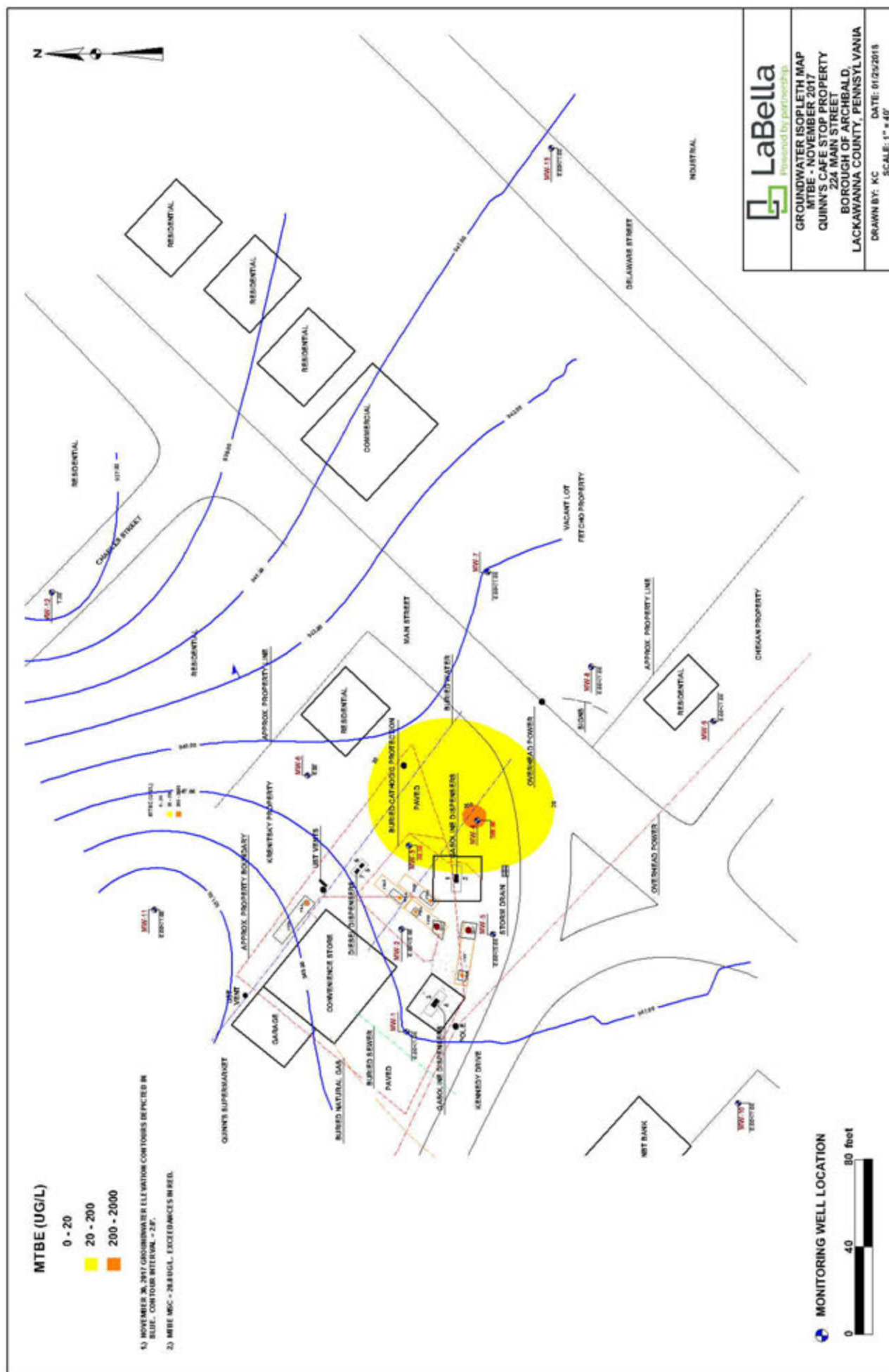


MONITORING WELL LOCATION



GROUNDWATER ISOPLETH MAP  
MTBE - SEPTEMBER 2017  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBOLD  
LACKAWANNA COUNTY, PENNSYLVANIA  
DRAWN BY: KC DATE: 01/25/2018  
SCALE: 1" = 40'





# MTBE (UG/L)

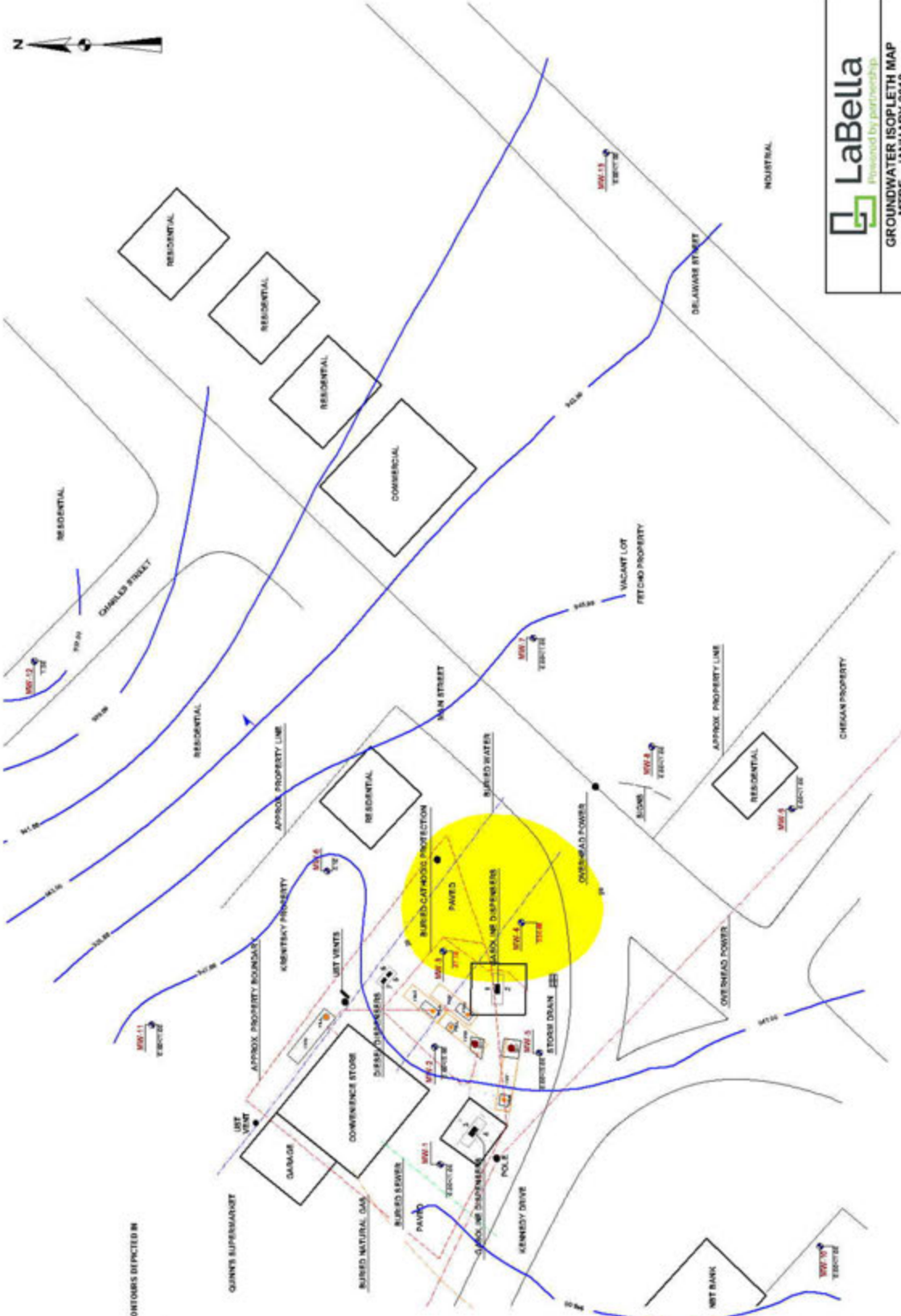
0 - 20

20 - 200

200 - 2000

1.1 JANUARY 23, 2016 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL = 2 FT.

2.1 MTBE MSC - 26.8 UG/L. EXCEEDANCES IN RED.



GROUNDWATER ISOPLETH MAP  
MTBE - JANUARY 2016  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBOLD,  
LACKAWANNA COUNTY, PENNSYLVANIA  
DRAWN BY: KC DATE: 01/25/2016  
SCALE: 1" = 40'

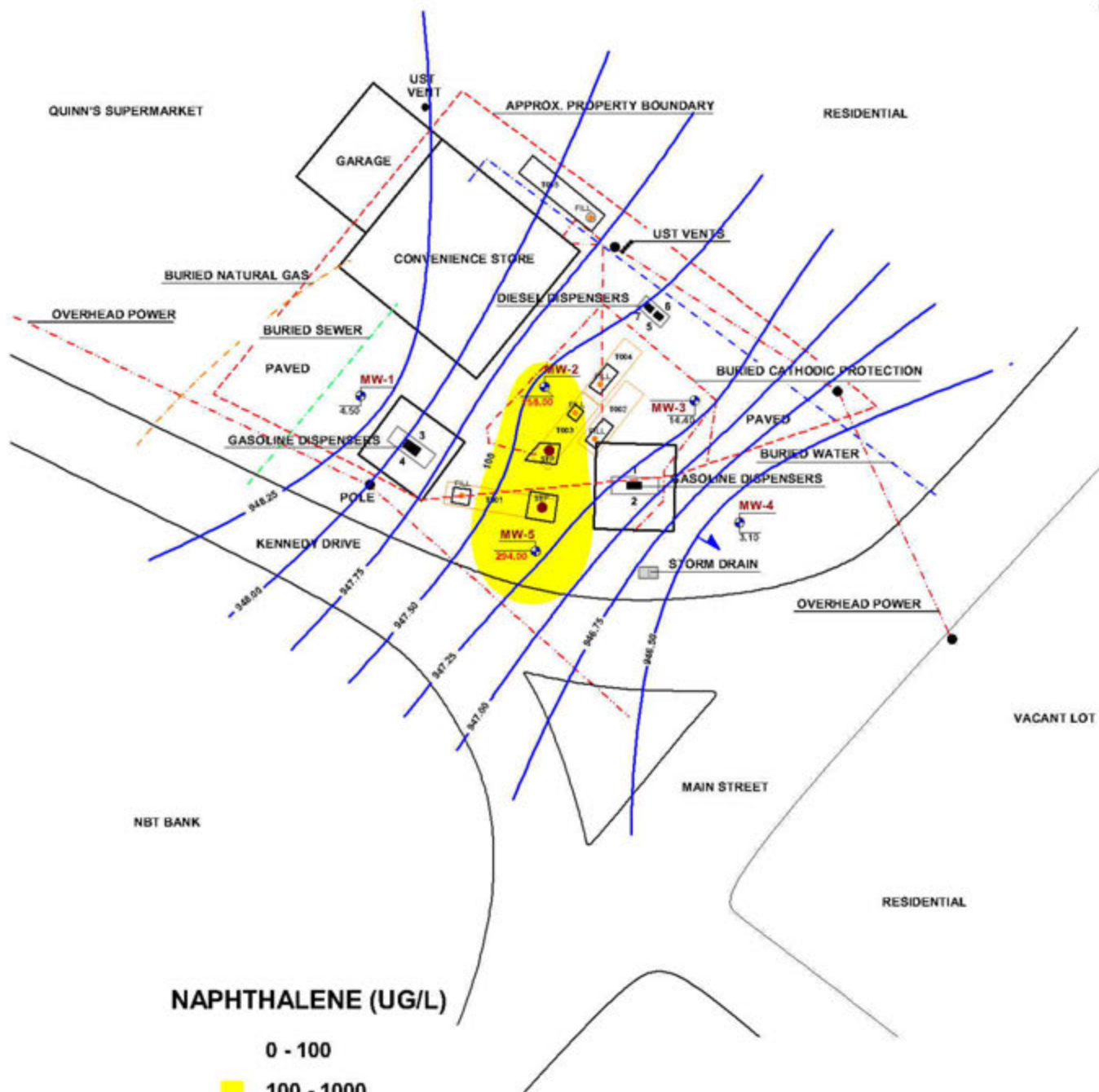
## MONITORING WELL LOCATION











### NAPHTHALENE (UG/L)

0 - 100

100 - 1000

1000 - 10000

1.) FEBRUARY 15, 2017 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL = 0.25'.

2.) NAPHTHALENE MSC = 100.0 UG/L. EXCEEDANCES IN RED.

 MONITORING WELL LOCATION



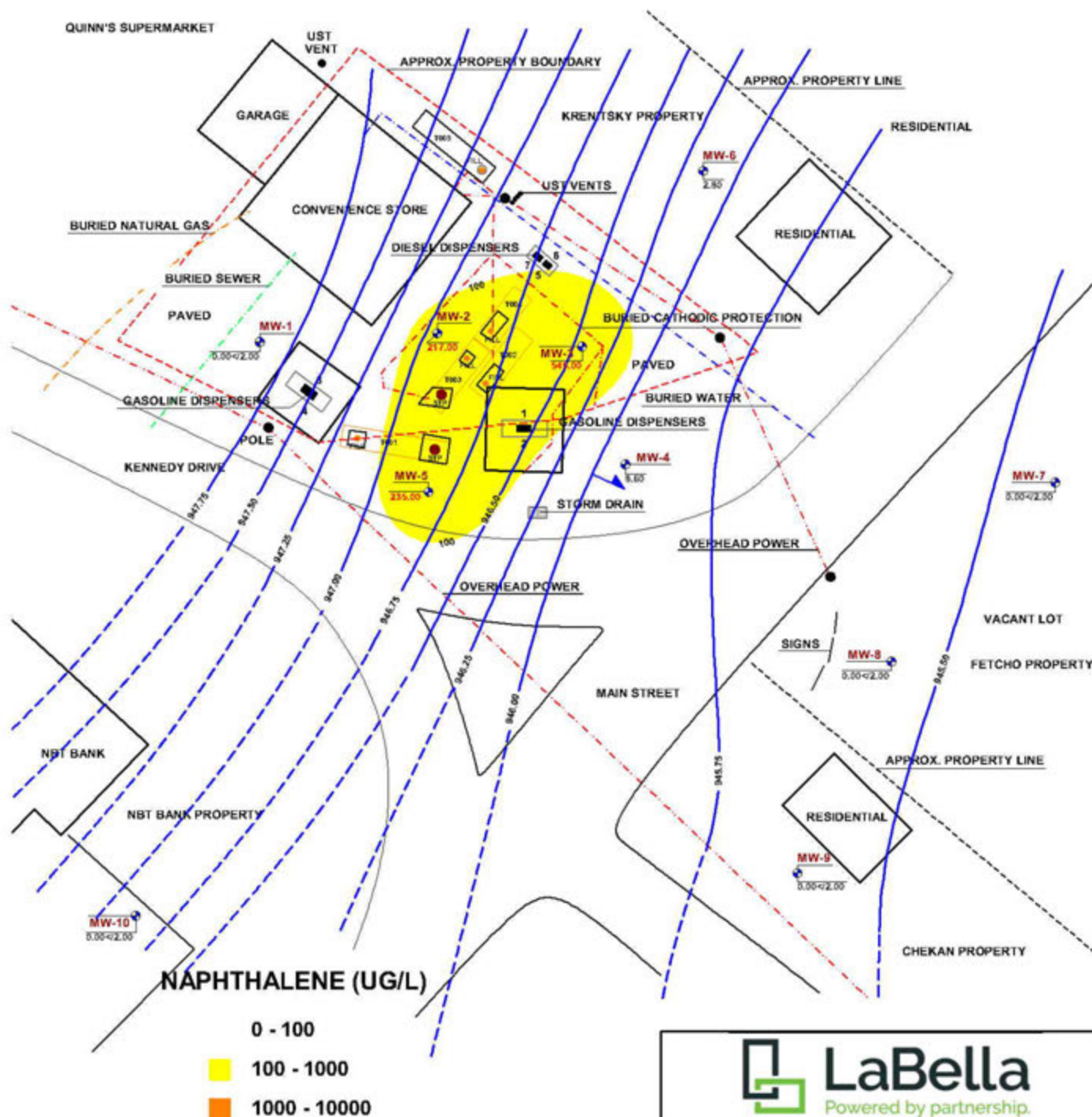
**GROUNDWATER ISOPLETH MAP  
NAPHTHALENE - FEBRUARY 2017  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBALD,  
LACKAWANNA COUNTY, PENNSYLVANIA**

DRAWN BY: KC

DATE: 03/02/2017

SCALE: 1" = 40'





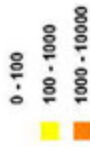
**GROUNDWATER ISOPLETH MAP  
NAPHTHALENE - JUNE 2017  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBALD,  
LACKAWANNA COUNTY, PENNSYLVANIA**

DRAWN BY: KC

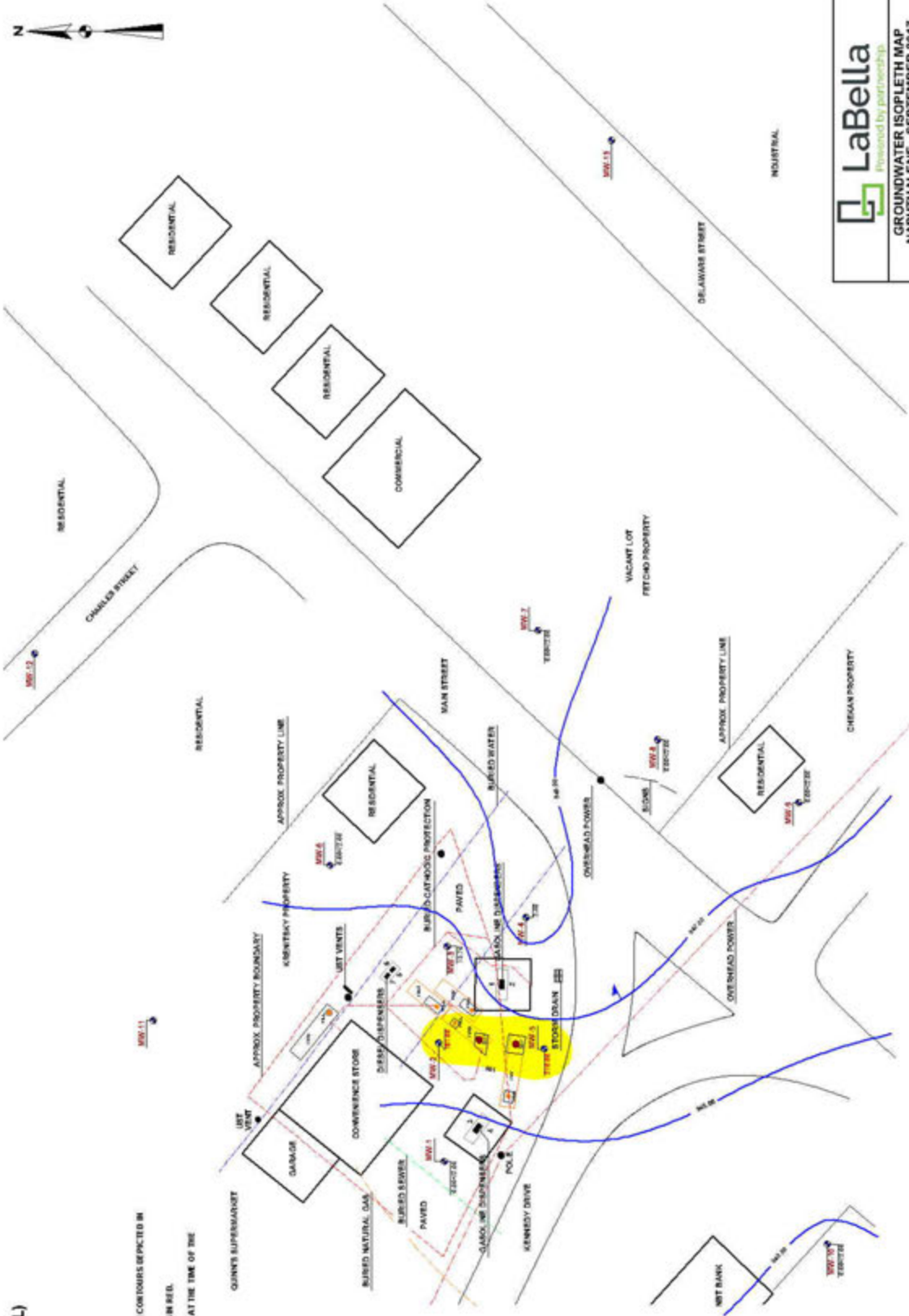
DATE: 07/28/2017

SCALE: 1" = 40'

# NAPHTHALENE (UG/L)



- 1) SEPTEMBER 11, 2017 GROUNDWATER ELEVATION CONTOURS REPORTED IN BLUE. CONTOUR INTERVAL = 1.0'.
- 2) NAPHTHALENE MEC = 1800 UG/L. EXCEEDANCE SHOWN IN RED.
- 3) MW-11, MW-12 AND MW-13 WERE NOT INSTALLED AT THE TIME OF THE SEPTEMBER 2017 SAMPLING EVENT.



## MONITORING WELL LOCATION

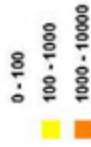


GROUNDWATER ISOPLETH MAP  
NAPHTHALENE - SEPTEMBER 2017  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBOLD  
LACKAWANNA COUNTY, PENNSYLVANIA  
DRAWN BY: KC DATE: 01/25/2018  
SCALE: 1" = 40'

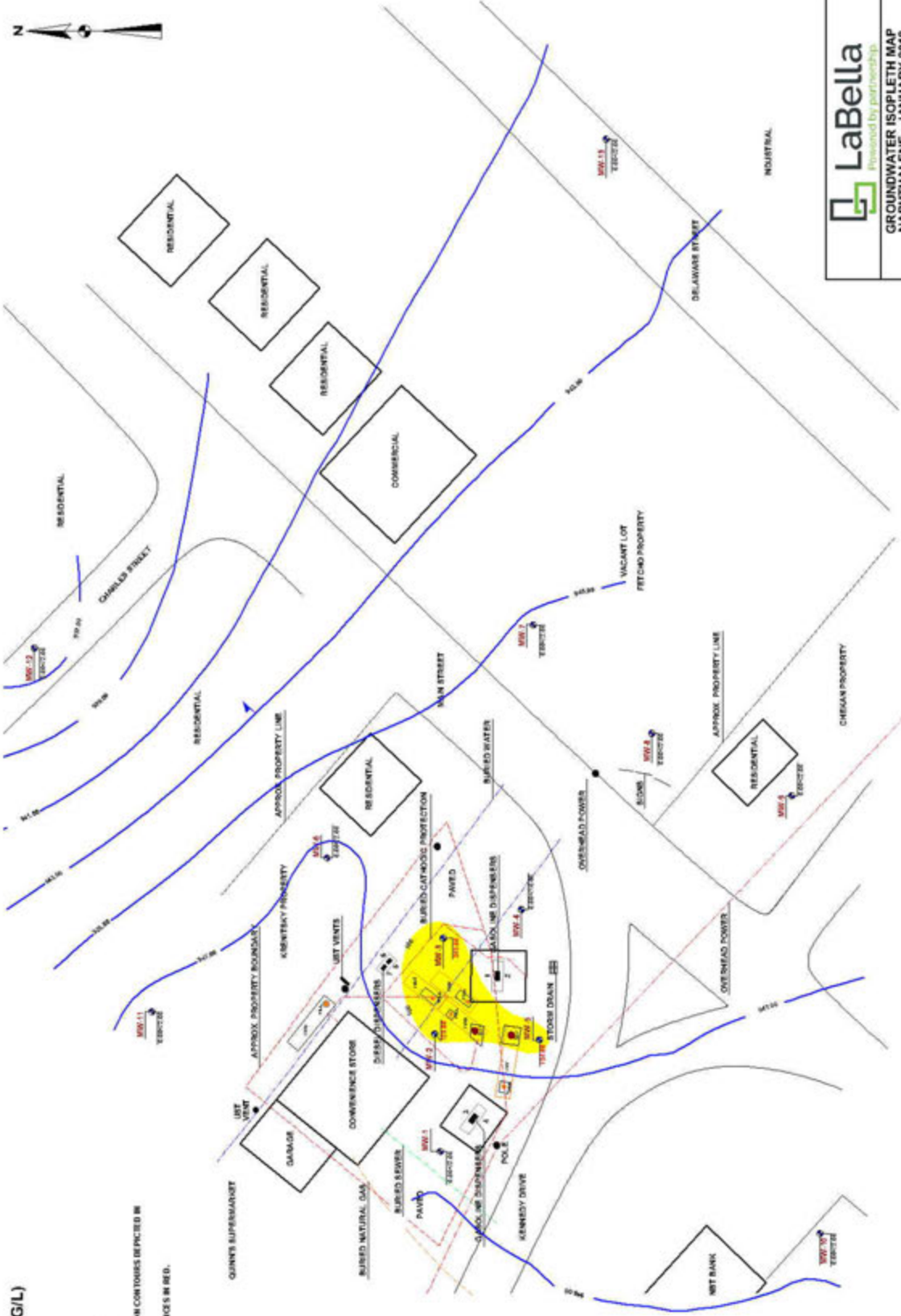




# NAPHTHALENE (UG/L)



- 1.) JANUARY 22, 2018 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL = 2.0'.
- 2.) NAPHTHALENE MEC = 98.9 UG/L. EXCEEDANCES IN RED.

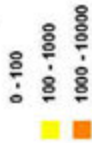


## MONITORING WELL LOCATION

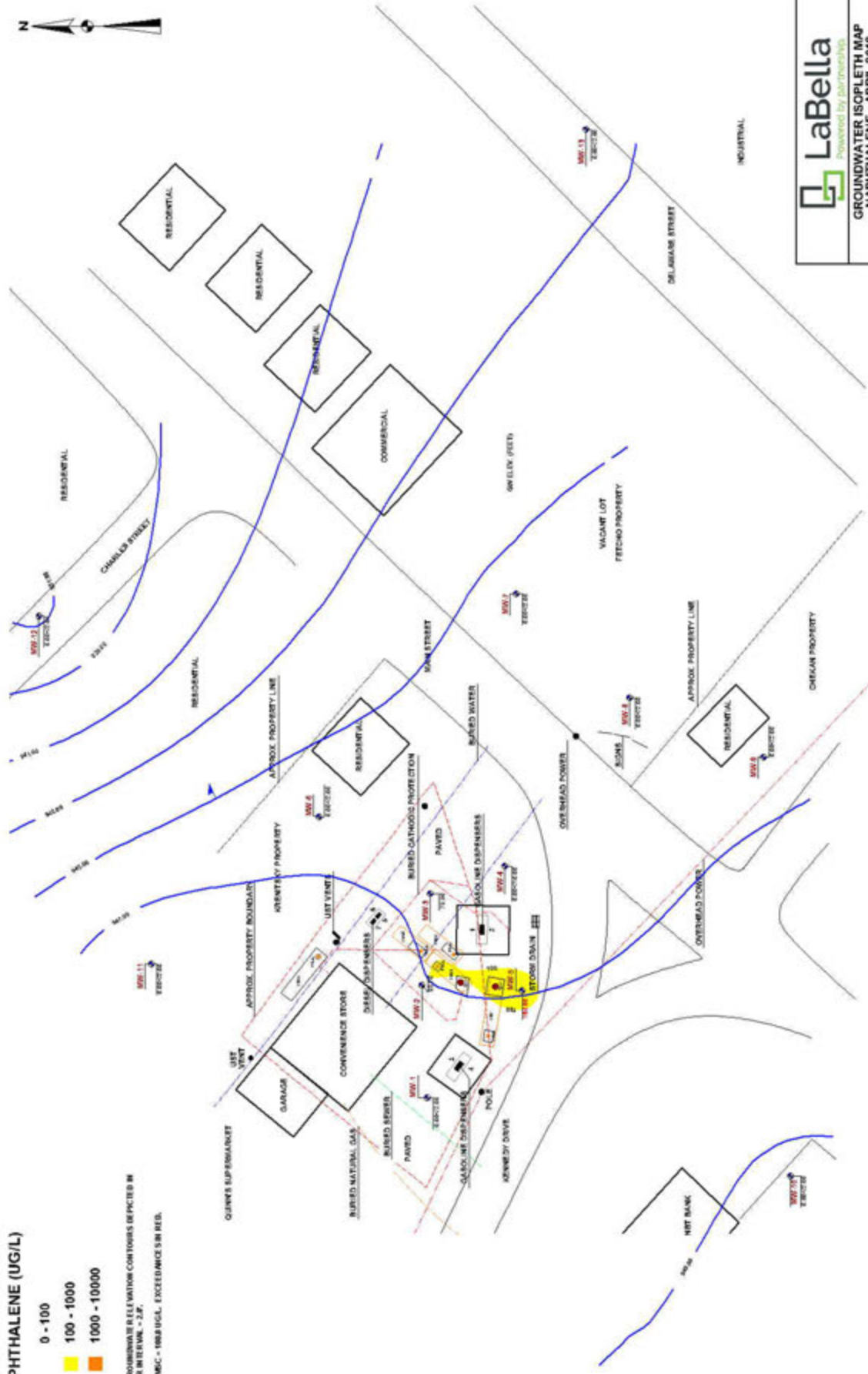


GROUNDWATER ISOPLETH MAP  
NAPHTHALENE - JANUARY 2018  
QUINN'S CAFE STOP PROPERTY  
324 MAIN STREET  
BOROUGH OF ARCHBOLD  
LACKAWANNA COUNTY, PENNSYLVANIA  
DRAWN BY: KC DATE: 01/25/2018  
SCALE: 1" = 40'

# NAPHTHALENE (UG/L)



1.) APRIL 5, 2018 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL = 2.0'.  
 2.) NAPHTHALENE MGC = 1000 UG/L. EXCEEDANCE SHOWN.



## MONITORING WELL LOCATION



GROUNDWATER ISOPLETH MAP  
 NAPHTHALENE - APRIL 2018  
 QUINN'S CAFE STOP PROPERTY  
 224 MAIN STREET  
 BOROUGH OF ARCHBOLD,  
 LACKAWANNA COUNTY, PENNSYLVANIA

DRAWN BY: KC DATE: 07/23/2018  
 SCALE: 1" = 40'



# NAPHTHALENE (UG/L)

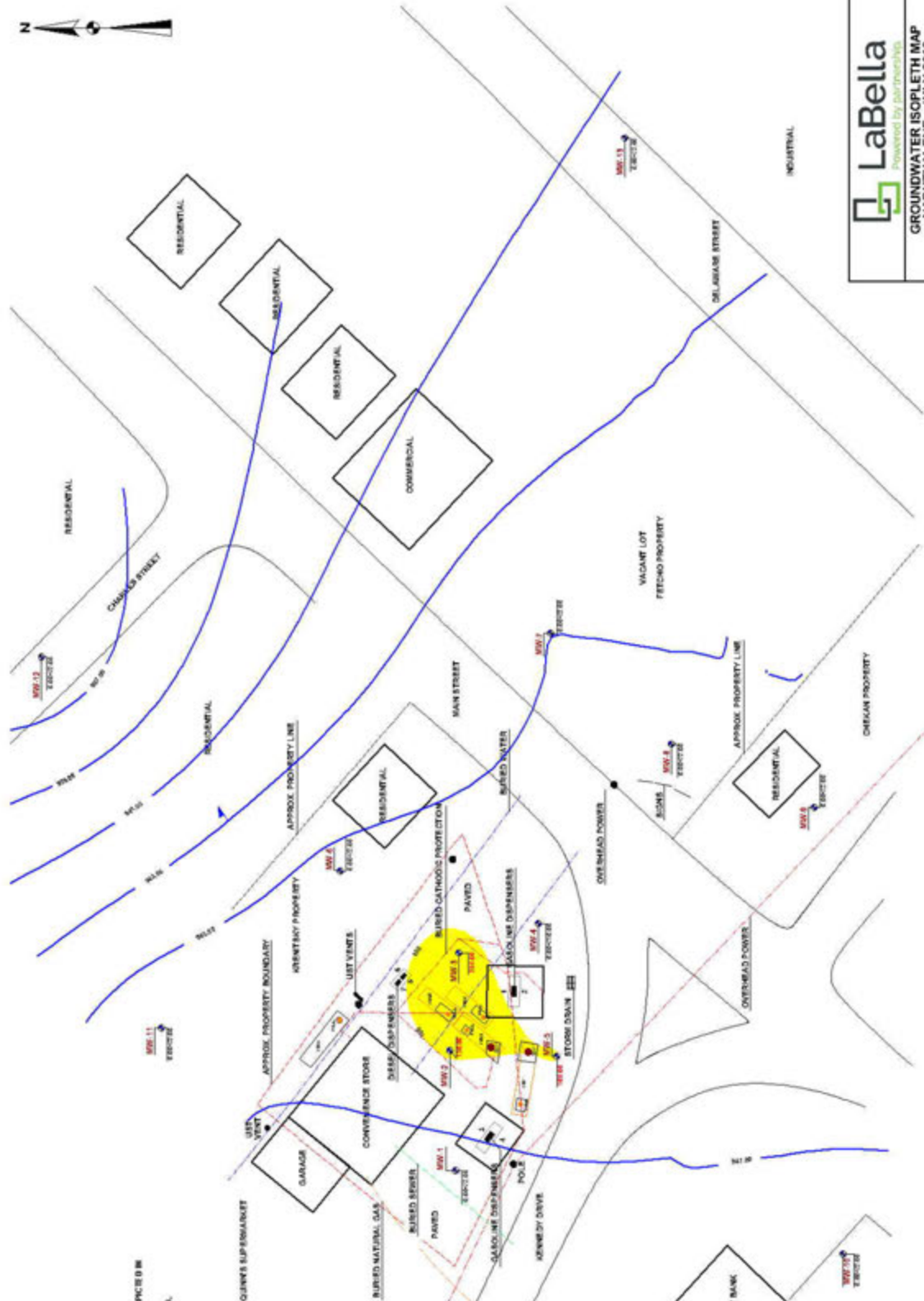
0 - 100

100 - 1000

1000 - 10000

1) JULY 9, 2018 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL - 2'F.

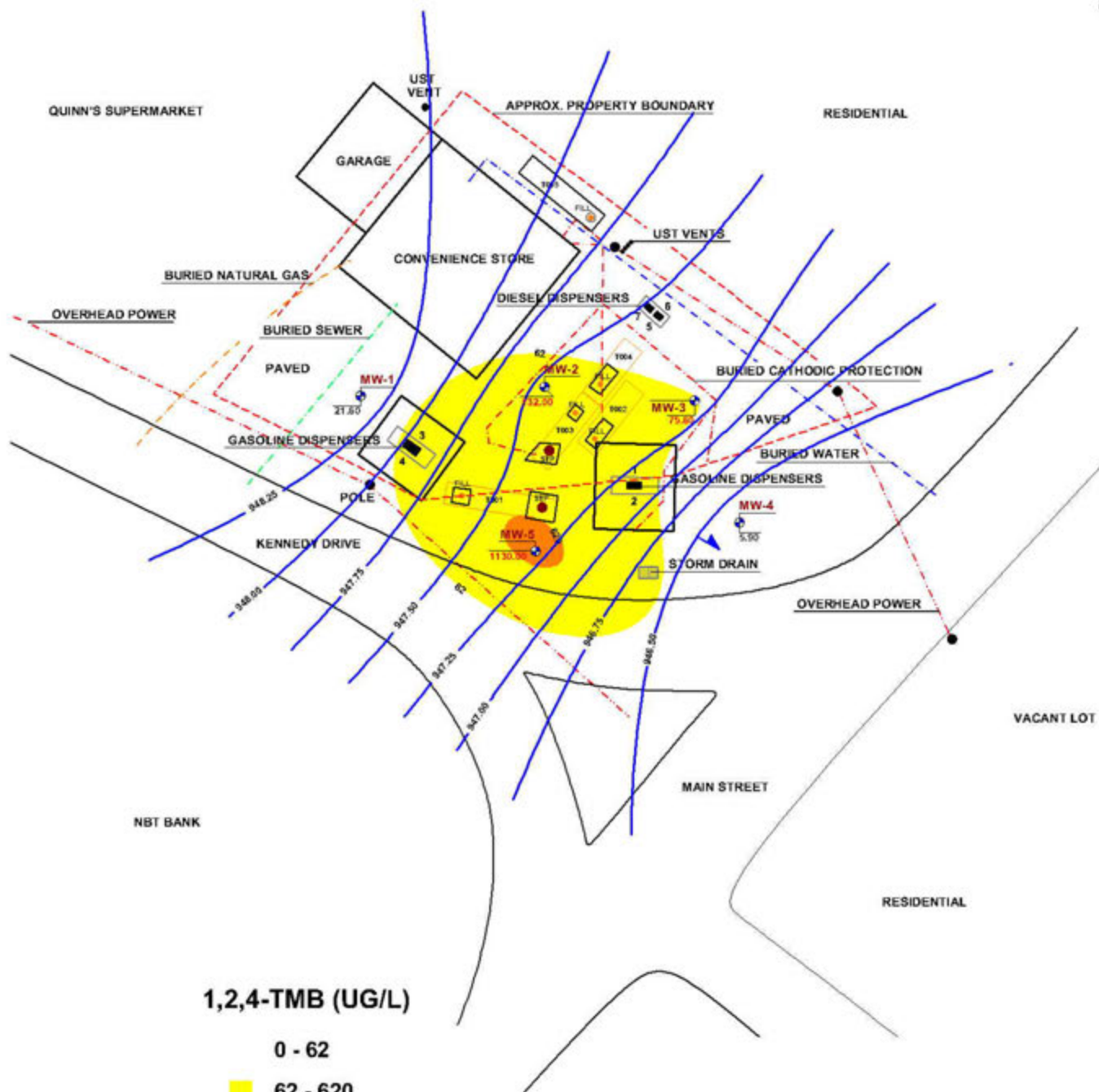
2) NAPHTHALENE MGC - 1000 UG/L. EXCEEDANCES IN RED.



## MONITORING WELL LOCATION



GROUNDWATER ISOPLETH MAP  
NAPHTHALENE - JULY 2018  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBOLD,  
LACKAWANNA COUNTY, PENNSYLVANIA  
DRAWN BY: KC DATE: 07/23/2018  
SCALE: 1" = 40'



1.) FEBRUARY 15, 2017 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL = 0.25'.

2.) 1,2,4-TMB MSC = 62.0 UG/L. EXCEEDANCES IN RED.

 MONITORING WELL LOCATION



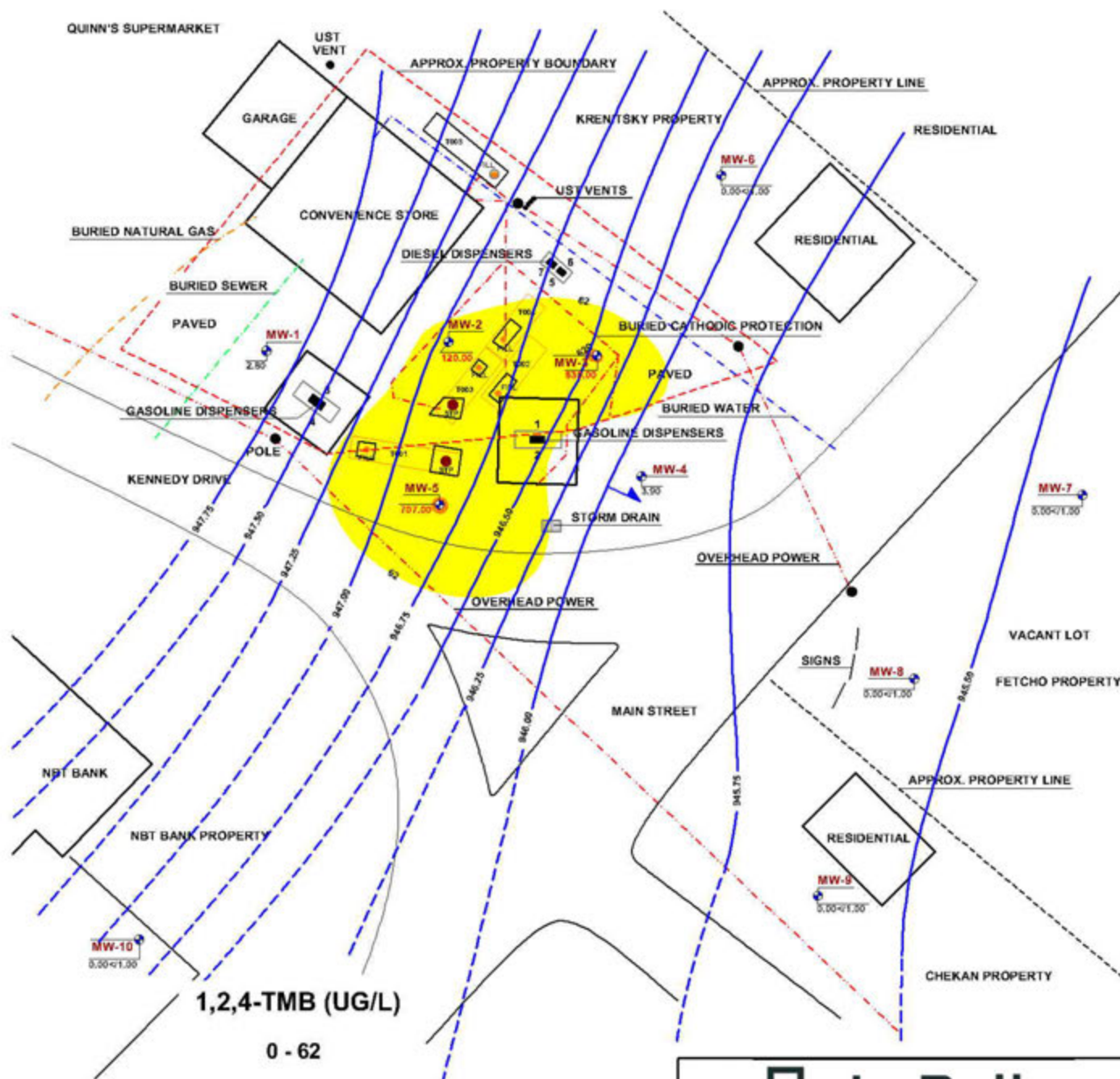
**GROUNDWATER ISOPLETH MAP**  
**1,2,4-TMB - FEBRUARY 2017**  
**QUINN'S CAFE STOP PROPERTY**  
**224 MAIN STREET**  
**BOROUGH OF ARCHBALD,**  
**LACKAWANNA COUNTY, PENNSYLVANIA**

DRAWN BY: KC

DATE: 03/02/2017

SCALE: 1" = 40'





1,2,4-TMB (UG/L)

0 - 62

62 - 620

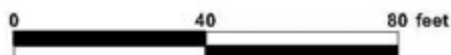
620 - 6200

1.) JUNE 27, 2017 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL = 0.25'.

2.) 1,2,4-TMB MSC = 62.0 UG/L. EXCEEDANCES IN RED.



MONITORING WELL LOCATION



GROUNDWATER ISOPLETH MAP  
1,2,4-TMB - JUNE 2017  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBALD,  
LACKAWANNA COUNTY, PENNSYLVANIA

DRAWN BY: KC

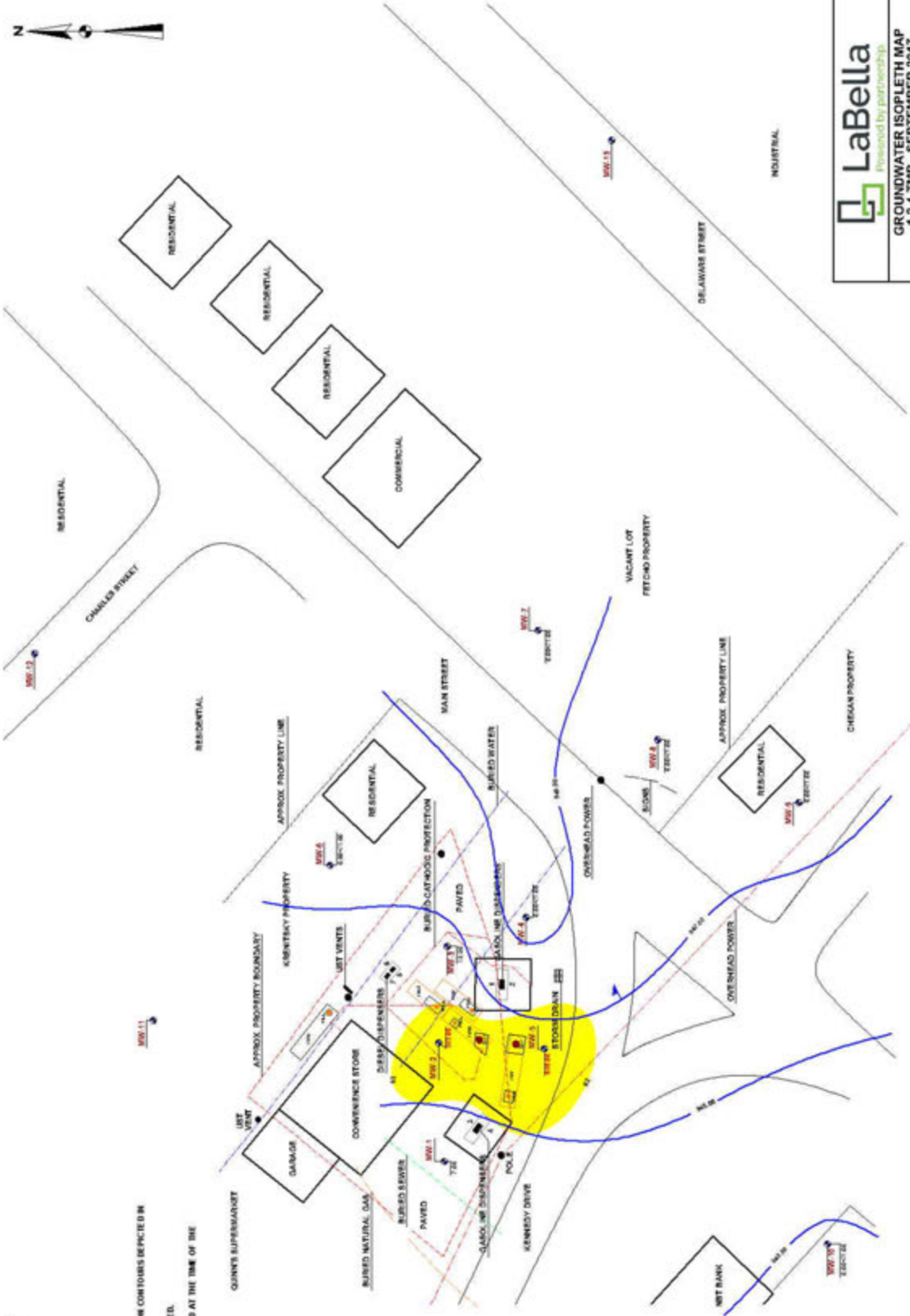
DATE: 07/28/2017

SCALE: 1" = 40'

# 1,2,4-TMB (UG/L)

- 0 - 62
- 62 - 620
- 620 - 6200

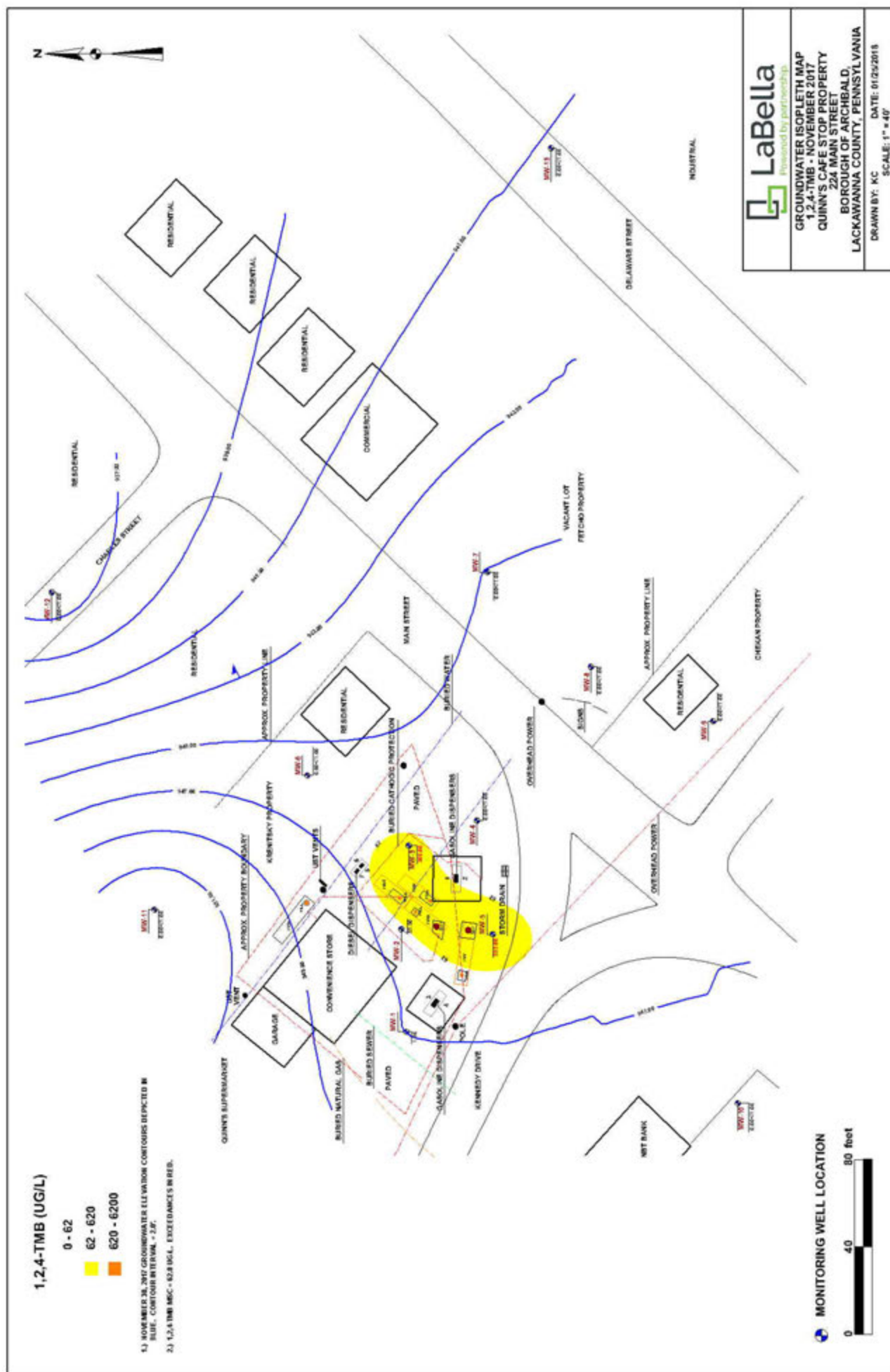
- 1) SEPTEMBER 15, 2017 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL - 1.0'.
- 2) 1,2,4-TMB MCC - 62.0 UGL. EXCEEDANCES IN RED.
- 3) MW 15, MW 12 AND MW 13 WERE NOT INSTALLED AT THE TIME OF THE SEPTEMBER 2017 SAMPLING EVENT.



MONITORING WELL LOCATION



GROUNDWATER ISOPLETH MAP  
1,2,4-TMB - SEPTEMBER 2017  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBOLD  
LACKAWANNA COUNTY, PENNSYLVANIA  
DRAWN BY: KC DATE: 01/25/2018  
SCALE: 1" = 40'

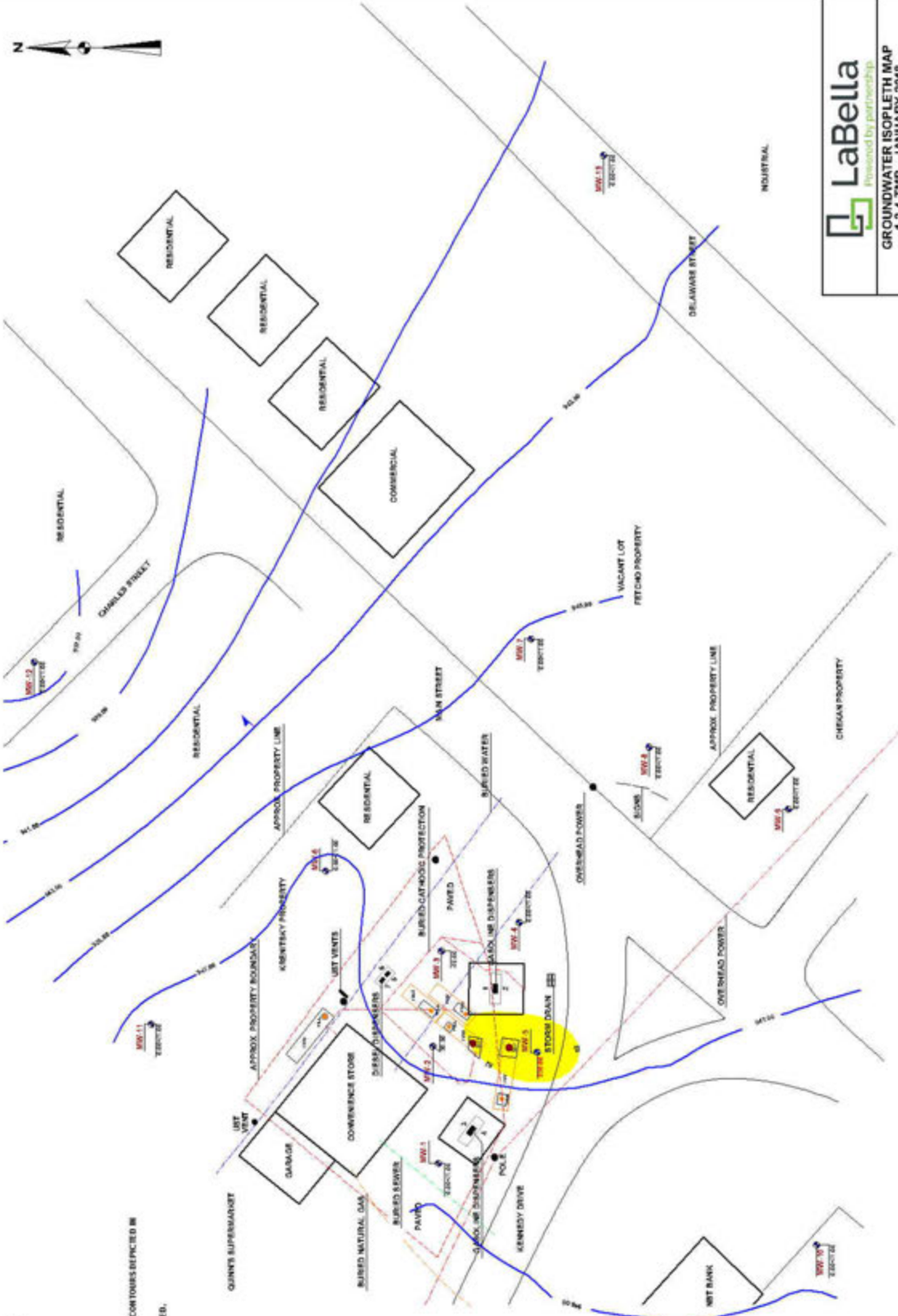




# 1,2,4-TMB (UG/L)

- 0 - 62
- 62 - 620
- 620 - 6200

1.) JANUARY 22, 2018 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL = 2.0'.  
2.) 1,2,4-TMB MGC - 62.0 UG/L. EXCEEDANCES IN RED.



## MONITORING WELL LOCATION

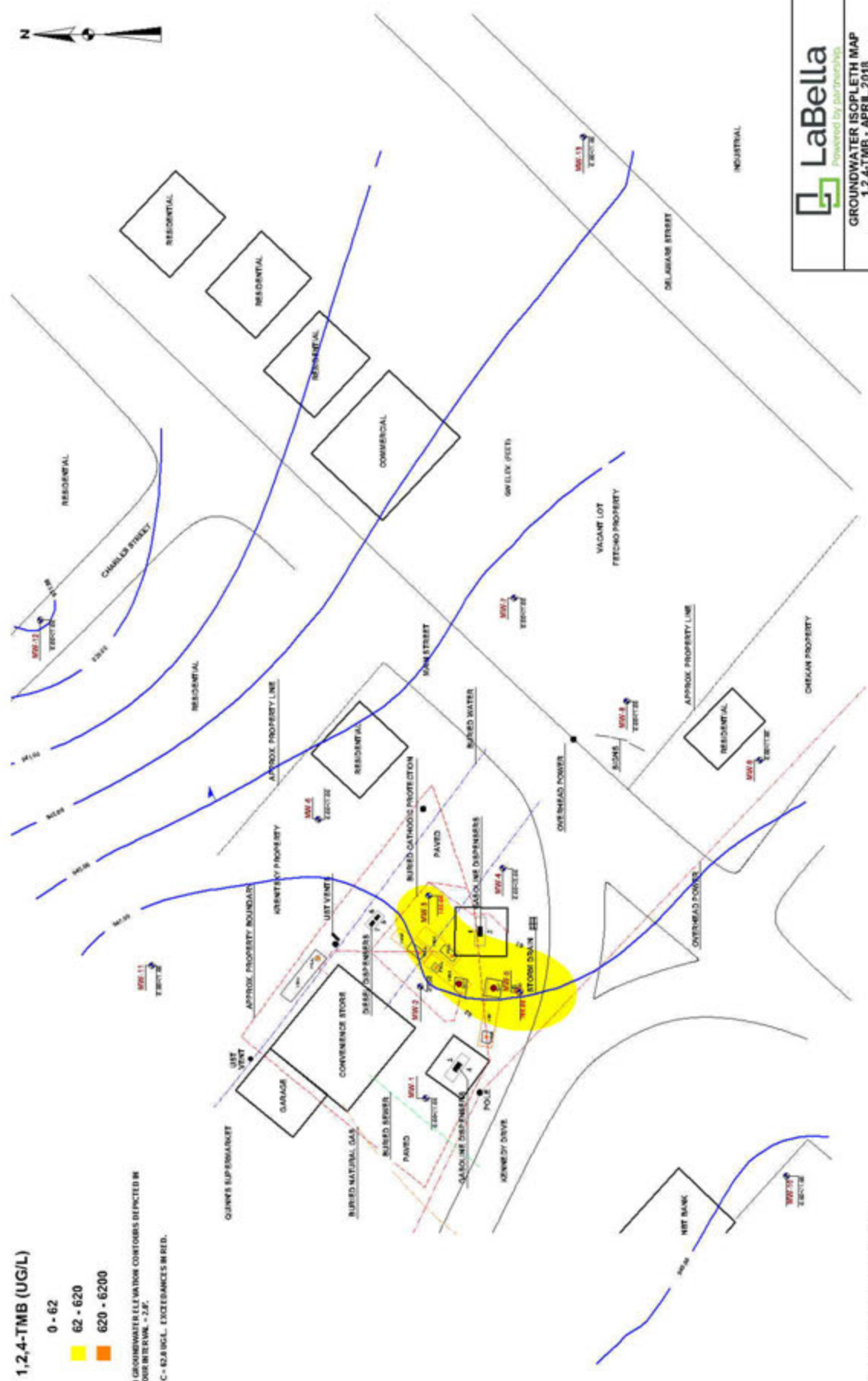


GROUNDWATER ISOPLETH MAP  
1,2,4-TMB - JANUARY 2018  
QUINN'S CASE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBOLD  
LACKAWANNA COUNTY, PENNSYLVANIA  
DRAWN BY: KC DATE: 01/25/2018  
SCALE: 1" = 40'

# 1,2,4-TMB (UG/L)



1.) APRIL 9, 2015 GROUNDWATER ELEVATION CONTOURS DEPICTED IN BLUE. CONTOUR INTERVAL = 2.0'.  
2.) 1,2,4 TMB MEC = 62.0 UG/L. EXCEEDANCES IN RED.



## MONITORING WELL LOCATION



GROUNDWATER ISOPLETH MAP  
1,2,4-TMB - APRIL 2015  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBOLD,  
LACKAWANNA COUNTY, PENNSYLVANIA  
DRAWN BY: KC DATE: 07/23/2015  
SCALE: 1" = 40'





## APPENDIX R

### Soil Data vs. Vapor Intrusion Screening Values

**Table R-1**  
**Site Characterization Activities**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data vs VI Screening Values (mg/kg)**

Parameter	T001 - Fill	T001 - STP	T002 - Fill	T003 - Fill	Screening Value	Horizontal Proximity Distance
Depth	2.0'	2.0'	2.0'	1.5'		
Distance to Nearest Bld.	29.0'	35.0'	30.0'	24.0'		
Sample Date	10/17/2016	10/17/2016	10/17/2016	10/17/2016		
% Moisture	14.5%	12.9%	12.4%	12.2%		
Benzene	1.69	0.251	0.699	0.148	0.13	30.0'
Ethylbenzene	5.13	0.704	6.92	2.77	46.0	30.0'
Cumene	0.728	0.148	2.38	0.673	600.0	30.0'
MTBE	<0.0406	<0.0462	<0.0498	<0.0455	0.28	100.0'
Naphthalene	2.05	0.253	23.3	8.8	25.0	30.0'
Toluene	49.5	5.0	8.57	2.73	44.0	30.0'
Total Xylenes	40.7	6.2	80.1	51.3	990.0	30.0'
1,2,4-TMB	6.39	0.977	109	62.8	8.4	30.0'
1,3,5-TMB	3.44	0.445	32.5	26.9	74.0	30.0'

MTBE  
1,2,4-TMB  
1,3,5-TMB

Residential Soil Statewide Health Standard Screening Values Included in Table 2 of the  
Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings  
From Groundwater and Soil Under Act 2 (Document #261-0300-101) dated January 18, 2017

Shaded Values indicate Exceedance of the Screening Value  
within the Applicable Horizontal Proximity Distance

**Table R-1**  
**Site Characterization Activities**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data vs VI Screening Values (mg/kg)**

Parameter	T003 - STP	T004 - Fill	TB-1	TB-2A	Screening Value	Horizontal Proximity Distance
Depth	2.5'	1.5'	1.5' - 2.5'	1.5' - 2.5'		
Distance to Nearest Bld.	23.0'	25.0'	32.0'	10.0'		
Sample Date	10/17/2016	10/17/2016	1/31/2017	1/30/2017		
% Moisture	8.2%	4.9%	5.2%	11.8%		
Benzene	<0.0416	<0.0369	<0.0464	<0.0615	0.13	30.0'
Ethylbenzene	<0.0416	<0.0369	<0.0464	<0.0615	46.0	30.0'
Cumene	<0.0416	<0.0369	<0.0464	<0.0615	600.0	30.0'
MTBE	<0.0416	<0.0369	<0.0464	<0.0615	0.28	100.0'
Naphthalene	<0.0831	<0.0738	<0.0928	<0.123	25.0	30.0'
Toluene	<b>0.0981</b>	<0.0369	<0.0464	<0.0615	44.0	30.0'
Total Xylenes	<b>0.144</b>	<0.111	<0.139	<0.185	990.0	30.0'
1,2,4-TMB	<0.0416	<0.0369	<0.0464	<0.0615	8.4	30.0'
1,3,5-TMB	<0.0416	<0.0369	<0.0464	<0.0615	74.0	30.0'

MTBE  
1,2,4-TMB  
1,3,5-TMB

Residential Soil Statewide Health Standard Screening Values Included in Table 2 of the  
Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings  
From Groundwater and Soil Under Act 2 (Document #261-0300-101) dated January 18, 2017

Shaded Values indicate Exceedance of the Screening Value  
within the Applicable Horizontal Proximity Distance

**Table R-1**  
**Site Characterization Activities**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data vs VI Screening Values (mg/kg)**

Parameter	TB-2B	TB-3A	TB-3B	TB-4A	Screening Value	Horizontal Proximity Distance
Depth	4.0' - 5.0'	1.5' - 2.5'	4.0' - 5.0'	1.5' - 2.5'		
Distance to Nearest Bld.	10.0'	27.0'	27.0'	38.0'		
Sample Date	1/30/2017	1/30/2017	1/30/2017	1/31/2017		
% Moisture	9.0%	10.7%	34.4%	15.1%		
Benzene	<0.0367	<0.0367	0.0639	<0.0373	0.13	30.0'
Ethylbenzene	<0.0367	<0.0367	<0.0560	<0.0373	46.0	30.0'
Cumene	<0.0367	<0.0367	<0.0560	<0.0373	600.0	30.0'
MTBE	<0.0367	<0.0367	<0.0560	<0.0373	0.28	100.0'
Naphthalene	<0.0734	<0.0734	<0.112	<0.0745	25.0	30.0'
Toluene	<0.0367	<0.0367	0.273	<0.0373	44.0	30.0'
Total Xylenes	<0.110	<0.110	0.220	<0.112	990.0	30.0'
1,2,4-TMB	<0.0367	<0.0367	<0.0560	<0.0373	8.4	30.0'
1,3,5-TMB	<0.0367	<0.0367	<0.0560	<0.0373	74.0	30.0'

MTBE  
1,2,4-TMB  
1,3,5-TMB

Residential Soil Statewide Health Standard Screening Values Included in Table 2 of the  
Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings  
From Groundwater and Soil Under Act 2 (Document #261-0300-101) dated January 18, 2017

Shaded Values indicate Exceedance of the Screening Value  
within the Applicable Horizontal Proximity Distance



**Table R-1**  
**Site Characterization Activities**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data vs VI Screening Values (mg/kg)**

Parameter	TB-4B	TB-5A	TB-5B	TB-6A	Screening Value	Horizontal Proximity Distance
Depth	5.0' - 6.0'	1.5' - 2.5'	4.0' - 5.0'	1.5' - 2.5'		
Distance to Nearest Bld.	38.0'	42.0'	42.0'	67.0'		
Sample Date	1/31/2017	1/30/2017	1/30/2017	1/31/2017		
% Moisture	5.0%	9.1%	25.4%	17.0%		
Benzene	<0.0385	0.229	<0.470	<0.0404	0.13	30.0'
Ethylbenzene	5.22	<0.0381	19.0	<0.0404	46.0	30.0'
Cumene	2.18	0.0787	5.25	<0.0404	600.0	30.0'
MTBE	<0.0385	<0.0381	<0.470	<0.0404	0.28	100.0'
Naphthalene	14.4	<0.0762	30.3	<0.0808	25.0	30.0'
Toluene	<0.0385	<0.0381	0.498	<0.0404	44.0	30.0'
Total Xylenes	12.4	0.305	101.0	<0.121	990.0	30.0'
1,2,4-TMB	83.9	0.0647	277.0	<0.0404	8.4	30.0'
1,3,5-TMB	0.187	<0.0381	43.8	<0.0404	74.0	30.0'

MTBE  
1,2,4-TMB  
1,3,5-TMB

Residential Soil Statewide Health Standard Screening Values Included in Table 2 of the  
Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings  
From Groundwater and Soil Under Act 2 (Document #261-0300-101) dated January 18, 2017

Shaded Values indicate Exceedance of the Screening Value  
within the Applicable Horizontal Proximity Distance

**Table R-1**  
**Site Characterization Activities**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data vs VI Screening Values (mg/kg)**

Parameter	TB-6B	TB-7A	TB-7B	MW-1	Screening Value	Horizontal Proximity Distance
Depth	4.0' - 5.0'	1.5' - 2.5'	3.5' - 4.5'	1.5' - 2.5'		
Distance to Nearest Bld.	67.0'	60.0'	60.0'	22.0'		
Sample Date	1/31/2017	1/31/2017	1/31/2017	1/31/2017		
% Moisture	16.4%	11.1%	22.1%	8.2%		
Benzene	0.233	<0.0361	0.338	<0.0358	0.13	30.0'
Ethylbenzene	0.185	<0.0361	0.679	<0.0358	46.0	30.0'
Cumene	0.182	<0.0361	0.567	<0.0358	600.0	30.0'
MTBE	<0.0400	<0.0361	<0.0472	<0.0358	0.28	100.0'
Naphthalene	<0.0800	<0.0722	0.734	<0.0717	25.0	30.0'
Toluene	0.331	<0.0361	0.102	<0.0358	44.0	30.0'
Total Xylenes	1.150	<0.108	0.853	<0.107	990.0	30.0'
1,2,4-TMB	0.294	<0.0361	0.180	<0.0358	8.4	30.0'
1,3,5-TMB	0.178	<0.0361	<0.0472	<0.0358	74.0	30.0'

MTBE  
1,2,4-TMB  
1,3,5-TMB

Residential Soil Statewide Health Standard Screening Values Included in Table 2 of the  
Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings  
From Groundwater and Soil Under Act 2 (Document #261-0300-101) dated January 18, 2017

Shaded Values indicate Exceedance of the Screening Value  
within the Applicable Horizontal Proximity Distance

**Table R-1**  
**Site Characterization Activities**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data vs VI Screening Values (mg/kg)**

Parameter	MW-2A	MW-2B	MW-3A	MW-3B	Screening Value	Horizontal Proximity Distance
Depth	1.5' - 2.5'	4.0' - 5.0'	1.5' - 2.5'	4.0' - 5.0'		
Distance to Nearest Bld.	15.0'	15.0'	46.0'	46.0'		
Sample Date	1/30/2017	1/30/2017	1/30/2017	1/30/2017		
% Moisture	6.7%	11.9%	9.4%	27.3%		
Benzene	<0.0597	<0.369	<0.0397	0.551	0.13	30.0'
Ethylbenzene	<0.0597	11.1	<0.0397	4.01	46.0	30.0'
Cumene	<0.0597	2.12	<0.0397	0.819	600.0	30.0'
MTBE	<0.0597	<0.369	<0.0397	<0.0617	0.28	100.0'
Naphthalene	<0.119	20.8	<0.0794	5.27	25.0	30.0'
Toluene	<0.0597	0.432	<0.0397	0.411	44.0	30.0'
Total Xylenes	<0.179	41.8	0.146	8.88	990.0	30.0'
1,2,4-TMB	0.0698	69.1	0.057	10.9	8.4	30.0'
1,3,5-TMB	<0.0597	13.5	<0.0397	1.57	74.0	30.0'

MTBE  
1,2,4-TMB  
1,3,5-TMB

Residential Soil Statewide Health Standard Screening Values Included in Table 2 of the  
Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings  
From Groundwater and Soil Under Act 2 (Document #261-0300-101) dated January 18, 2017

Shaded Values indicate Exceedance of the Screening Value  
within the Applicable Horizontal Proximity Distance

**Table R-1**  
**Site Characterization Activities**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data vs VI Screening Values (mg/kg)**

Parameter	MW-4A	MW-4B	MW-5A	MW-5B	Screening Value	Horizontal Proximity Distance
Depth	1.5' - 2.5'	4.0' - 5.0'	1.5' - 2.5'	3.5' - 4.5'		
Distance to Nearest Bld.	75.0'	75.0'	47.0'	47.0'		
Sample Date	1/31/2017	1/31/2017	1/31/2017	1/31/2017		
% Moisture	10.0%	14.9%	13.1%	19.5%		
Benzene	<0.0513	<0.0450	<0.0388	<0.0450	0.13	30.0'
Ethylbenzene	<0.0513	<0.0450	<0.0388	<0.0450	46.0	30.0'
Cumene	<0.0513	<0.0450	<0.0388	<0.0450	600.0	30.0'
MTBE	<0.0513	<0.0450	<0.0388	<0.0450	0.28	100.0'
Naphthalene	<0.103	<0.0900	<0.0776	<0.0900	25.0	30.0'
Toluene	<0.0513	<0.0450	<0.0388	<0.0450	44.0	30.0'
Total Xylenes	<0.154	<0.135	<0.116	<0.135	990.0	30.0'
1,2,4-TMB	<0.0513	<0.0450	<0.0388	<0.0450	8.4	30.0'
1,3,5-TMB	<0.0513	<0.0450	<0.0388	<0.0450	74.0	30.0'

MTBE  
1,2,4-TMB  
1,3,5-TMB

Residential Soil Statewide Health Standard Screening Values Included in Table 2 of the  
Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings  
From Groundwater and Soil Under Act 2 (Document #261-0300-101) dated January 18, 2017

Shaded Values indicate Exceedance of the Screening Value  
within the Applicable Horizontal Proximity Distance

**Table R-1**  
**Site Characterization Activities**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data vs VI Screening Values (mg/kg)**

Parameter	MW-6A	MW-6B	MW-7A	MW-7B	Screening Value	Horizontal Proximity Distance
Depth	1.5' - 2.5'	4.0' - 5.0'	1.5' - 2.5'	5.5' - 6.5'		
Distance to Nearest Bld.	17.0'	17.0'	63.0'	63.0'		
Sample Date	6/5/2017	6/5/2017	6/5/2017	6/7/2017		
% Moisture	9.3%	24.2%	11.5%	19.6%		
Benzene	<0.0384	<0.0263	<0.0332	<0.0561	0.13	30.0'
Ethylbenzene	<0.0384	<0.0263	<0.0332	<0.0561	46.0	30.0'
Cumene	<0.0384	<0.0263	<0.0332	<0.0561	600.0	30.0'
MTBE	<0.0384	<0.0263	<0.0332	<0.0561	0.28	100.0'
Naphthalene	<0.0768	<0.0526	<0.0663	<0.112	25.0	30.0'
Toluene	<0.0384	<0.0263	<0.0332	<0.0561	44.0	30.0'
Total Xylenes	<0.115	<0.0790	<0.0995	<0.168	990.0	30.0'
1,2,4-TMB	<0.0384	<0.0263	<0.0332	<0.0561	8.4	30.0'
1,3,5-TMB	<0.0384	<0.0263	<0.0332	<0.0561	74.0	30.0'

MTBE  
1,2,4-TMB  
1,3,5-TMB

Residential Soil Statewide Health Standard Screening Values Included in Table 2 of the  
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Shaded Values indicate Exceedance of the Screening Value  
within the Applicable Horizontal Proximity Distance



**Table R-1**  
**Site Characterization Activities**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data vs VI Screening Values (mg/kg)**

Parameter	MW-8A	MW-8B	MW-9A	MW-9B	Screening Value	Horizontal Proximity Distance
Depth	1.5' - 2.5'	5.5' - 6.5'	1.5' - 2.5'	3.0' - 4.0'		
Distance to Nearest Bld.	30.0'	30.0'	10.0'	10.0'		
Sample Date	6/5/2017	6/7/2017	6/5/2017	6/5/2017		
% Moisture	12.5%	11.0%	14.0%	10.6%		
Benzene	<0.0432	<0.0428	<0.0373	<0.0366	0.13	30.0'
Ethylbenzene	<0.0432	<0.0428	<0.0373	<0.0366	46.0	30.0'
Cumene	<0.0432	<0.0428	<0.0373	<0.0366	600.0	30.0'
MTBE	<0.0432	<0.0428	<0.0373	<0.0366	0.28	100.0'
Naphthalene	<0.0864	<0.0855	<0.0746	<0.0732	25.0	30.0'
Toluene	<0.0432	<0.0428	<0.0373	<0.0366	44.0	30.0'
Total Xylenes	<0.130	<0.128	<0.112	<0.110	990.0	30.0'
1,2,4-TMB	<0.0432	<0.0428	<0.0373	<0.0366	8.4	30.0'
1,3,5-TMB	<0.0432	<0.0428	<0.0373	<0.0366	74.0	30.0'

MTBE  
1,2,4-TMB  
1,3,5-TMB

Residential Soil Statewide Health Standard Screening Values Included in Table 2 of the  
Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings  
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Shaded Values indicate Exceedance of the Screening Value  
within the Applicable Horizontal Proximity Distance

**Table R-1**  
**Site Characterization Activities**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data vs VI Screening Values (mg/kg)**

Parameter	MW-10A	MW-10B	Screening Value	Horizontal Proximity Distance
Depth	1.5' - 2.5'	7.5' - 8.5'		
Distance to Nearest Bld.	30.0'	30.0'		
Sample Date	6/5/2017	6/5/2017		
% Moisture	10.2%	8.7%		
Benzene	<0.0424	<0.0431	0.13	30.0'
Ethylbenzene	<0.0424	<0.0431	46.0	30.0'
Cumene	<0.0424	<0.0431	600.0	30.0'
MTBE	<0.0424	<0.0431	0.28	100.0'
Naphthalene	<0.0848	<0.0863	25.0	30.0'
Toluene	<0.0424	<0.0431	44.0	30.0'
Total Xylenes	<0.127	<0.129	990.0	30.0'
1,2,4-TMB	<0.0424	<0.0431	8.4	30.0'
1,3,5-TMB	<0.0424	<0.0431	74.0	30.0'

Residential Soil Statewide Health Standard Screening Values Included in Table 2 of the  
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**MTBE** Methyl Tert Butyl Ether  
**1,2,4-TMB** 1,2,4-Trimethylbenzene  
**1,3,5-TMB** 1,3,5-Trimethylbenzene

Shaded Values Indicate Exceedance of the Screening Value  
within the Applicable Horizontal Proximity Distance

**Table R-1**  
**Site Characterization Activities**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data vs VI Screening Values (mg/kg)**

Parameter	Storm 1	Storm 2	Sidewall 1	Under Storm	Screening Value	Horizontal Proximity Distance
Depth	7.0'	5.0'	6.5'	6.0'		
Distance to Nearest Bld.	43.0'	NA	NA	72.0'		
Sample Date	8/25/2017	8/28/2017	8/28/2017	8/28/2017		
% Moisture	33.7%	17.8%	10.7%	23.3%		
Benzene	0.317	<0.0462	<0.0454	0.17	0.13	30.0'
Ethylbenzene	0.388	<0.0462	<0.0454	0.917	46.0	30.0'
Cumene	<0.0742	<0.0462	<0.0454	0.559	600.0	30.0'
MTBE	<0.0742	<0.0462	<0.0454	<0.0586	0.28	100.0'
Naphthalene	0.548	<0.0925	<0.0909	1.880	25.0	30.0'
Toluene	1.55	<0.0462	<0.0454	0.159	44.0	30.0'
Total Xylenes	3.58	<0.139	<0.136	0.934	990.0	30.0'
1,2,4-TMB	1.5	<0.0462	0.0492	8.48	8.4	30.0'
1,3,5-TMB	0.25	<0.0462	<0.0454	0.485	74.0	30.0'

MTBE  
1,2,4-TMB  
1,3,5-TMB

Residential Soil Statewide Health Standard Screening Values Included in Table 2 of the  
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Shaded Values indicate Exceedance of the Screening Value  
within the Applicable Horizontal Proximity Distance

**Table R-1**  
**Site Characterization Activities**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data vs VI Screening Values (mg/kg)**

Parameter	TB-8A	TB-8B	TB-9A	TB-9B	Screening Value	Horizontal Proximity Distance
Depth	3.0' - 3.3'	5.5' - 6.0'	2.0' - 2.5'	3.0' - 3.3'		
Distance to Nearest Bld.	60.0'	60.0'	5.0'	5.0'		
Sample Date	11/9/2017	11/9/2017	11/9/2017	11/9/2017		
% Moisture	13.6%	11.0%	16.0%	14.8%		
Benzene	<0.0318	<0.033	<0.0334	<0.0304	0.13	30.0'
Ethylbenzene	<0.0318	<0.033	<0.0334	<0.0304	46.0	30.0'
Cumene	<0.0318	<0.033	<0.0334	<0.0304	600.0	30.0'
MTBE	<0.0318	<0.033	<0.0334	<0.0304	0.28	100.0'
Naphthalene	<0.0636	<0.066	<0.0667	0.518	25.0	30.0'
Toluene	<0.0318	<0.033	<0.0334	<0.0304	44.0	30.0'
Total Xylenes	<0.0954	<0.099	<0.100	<0.0911	990.0	30.0'
1,2,4-TMB	<0.0318	<0.033	<0.0334	<0.0304	8.4	30.0'
1,3,5-TMB	<0.0318	<0.033	<0.0334	<0.0304	74.0	30.0'

MTBE  
1,2,4-TMB  
1,3,5-TMB

Residential Soil Statewide Health Standard Screening Values Included in Table 2 of the  
Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings  
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Shaded Values indicate Exceedance of the Screening Value  
within the Applicable Horizontal Proximity Distance

**Table R-1**  
**Site Characterization Activities**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data vs VI Screening Values (mg/kg)**

Parameter	TB-10A	TB-10B	TB-10C	TB-11A	Screening Value	Horizontal Proximity Distance
Depth	2.0' - 2.5'	4.0' - 4.5'	6.0' - 6.5'	2.0' - 2.5'		
Distance to Nearest Bld.	36.0'	36.0'	36.0'	45.0'		
Sample Date	11/9/2017	11/9/2017	11/15/2017	11/9/2017		
% Moisture	13.5%	26.7%	23.6%	11.7%		
Benzene	<0.0297	0.275	<0.553	1.19	0.13	30.0'
Ethylbenzene	<0.0297	1.34	3.61	0.0522	46.0	30.0'
Cumene	<0.0297	1.04	1.06	0.149	600.0	30.0'
MTBE	<0.0297	<0.221	<0.553	<0.0336	0.28	100.0'
Naphthalene	<0.0594	6.37	27.9	<0.0673	25.0	30.0'
Toluene	<0.0297	0.762	<0.553	0.0588	44.0	30.0'
Total Xylenes	<0.0891	1.7	6.57	0.674	990.0	30.0'
1,2,4-TMB	<0.0297	0.923	30.8	0.12	8.4	30.0'
1,3,5-TMB	<0.0297	<0.221	<0.553	0.0548	74.0	30.0'

MTBE  
1,2,4-TMB  
1,3,5-TMB

Residential Soil Statewide Health Standard Screening Values Included in Table 2 of the  
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Shaded Values indicate Exceedance of the Screening Value  
within the Applicable Horizontal Proximity Distance



**Table R-1**  
**Site Characterization Activities**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data vs VI Screening Values (mg/kg)**

Parameter	TB-11B	TB-11C	TB-12A	TB-12B	Screening Value	Horizontal Proximity Distance
Depth	4.0' - 5.0'	6.0' - 6.5'	2.0' - 2.5'	4.0' - 5.0'		
Distance to Nearest Bld.	45.0'	45.0'	32.0'	32.0'		
Sample Date	11/9/2017	11/15/2017	11/9/2017	11/9/2017		
% Moisture	18.8%	18.1%	11.2%	20.1%		
Benzene	0.697	1.26	<0.0284	<0.0382	0.13	30.0'
Ethylbenzene	4.27	5.17	<0.0284	<0.0382	46.0	30.0'
Cumene	2.68	1.15	<0.0284	<0.0382	600.0	30.0'
MTBE	<0.179	<0.169	<0.0284	<0.0382	0.28	100.0'
Naphthalene	12.4	5.39	<0.0568	<0.0764	25.0	30.0'
Toluene	0.26	0.546	<0.0284	<b>0.0508</b>	44.0	30.0'
Total Xylenes	3.52	12.9	<0.0852	<0.115	990.0	30.0'
1,2,4-TMB	3.65	9.54	<0.0284	<0.0382	8.4	30.0'
1,3,5-TMB	<0.179	1.7	<0.0284	<0.0382	74.0	30.0'

MTBE  
1,2,4-TMB  
1,3,5-TMB

Residential Soil Statewide Health Standard Screening Values Included in Table 2 of the  
Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings  
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Shaded Values indicate Exceedance of the Screening Value  
within the Applicable Horizontal Proximity Distance

**Table R-1**  
**Site Characterization Activities**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data vs VI Screening Values (mg/kg)**

Parameter	TB-12C	PW-12A	PW-12B	PW-13A	Screening Value	Horizontal Proximity Distance
Depth	6.0' - 6.5'	2.2' - 2.7'	4.0' - 5.0'	2.0' - 2.5'		
Distance to Nearest Bld.	32.0'	40.0'	40.0'	120.0'		
Sample Date	11/15/2017	11/10/2017	11/10/2017	11/10/2017		
% Moisture	23.2%	11.7%	21.1%	15.0%		
Benzene	<0.062	<0.0357	<0.0382	<0.0316	0.13	30.0'
Ethylbenzene	<0.062	<0.0357	<0.0382	<0.0316	46.0	30.0'
Cumene	<0.062	<0.0357	<0.0382	<0.0316	600.0	30.0'
MTBE	<0.062	<0.0357	<0.0382	<0.0316	0.28	100.0'
Naphthalene	<0.124	<0.0714	<0.0764	<0.0631	25.0	30.0'
Toluene	<0.062	<0.0357	<0.0382	<0.0316	44.0	30.0'
Total Xylenes	<0.186	<0.107	<0.115	<0.0947	990.0	30.0'
1,2,4-TMB	<0.062	<0.0357	<0.0382	<0.0316	8.4	30.0'
1,3,5-TMB	<0.062	<0.0357	<0.0382	<0.0316	74.0	30.0'

MTBE  
1,2,4-TMB  
1,3,5-TMB

Residential Soil Statewide Health Standard Screening Values Included in Table 2 of the  
Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings  
From Groundwater and Soil Under Act 2 (Document #261-0300-101) dated January 18, 2017

Shaded Values indicate Exceedance of the Screening Value  
within the Applicable Horizontal Proximity Distance

Table R-1  
Site Characterization Activities  
Quinn's Café Stop Property  
Soil Sample Analytical Data vs VI Screening Values (mg/kg)

Parameter	PW-13B	Screening Value	Horizontal Proximity Distance
Depth	5.0' - 5.5'		
Distance to Nearest Bld.	120.0'		
Sample Date	11/15/2017		
% Moisture	8.8%		
Benzene	<0.0316	0.13	30.0'
Ethylbenzene	<0.0316	46.0	30.0'
Cumene	<0.0316	600.0	30.0'
MTBE	<0.0316	0.28	100.0'
Naphthalene	<0.0633	25.0	30.0'
Toluene	<0.0136	44.0	30.0'
Total Xylenes	<0.0949	990.0	30.0'
1,2,4-TMB	<0.0316	8.4	30.0'
1,3,5-TMB	<0.0316	74.0	30.0'

**MTBE** Residential Soil Statewide Health Standard Screening Values Included in Table 2 of the  
**1,2,4-TMB** Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings  
**1,3,5-TMB** From Groundwater and Soil Under Act 2 (Document #261-0300-101) dated January 18, 2017

Shaded Values indicate Exceedance of the Screening Value within the Applicable Horizontal Proximity Distance

**Table R-1**  
**Site Characterization Activities**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data vs VI Screening Values (mg/kg)**

Parameter	TB-13A	TB-13B	TB-14A	TB-14B	Screening Value	Horizontal Proximity Distance
Depth	1.5' - 2.5'	5.0' - 6.0'	1.5' - 2.5'	5.0' - 6.0'		
Distance to Nearest Bld.	5.0'	5.0'	10.0'	10.0'		
Sample Date	8/23/2018	8/23/2018	8/23/2018	8/23/2018		
% Moisture	9.8%	4.8%	10.5%	28.3%		
Benzene	<0.0373	<0.0296	<0.0468	<0.0324	0.13	30.0'
Ethylbenzene	<0.0373	<0.0296	<0.0468	<0.0324	46.0	30.0'
Cumene	<0.0373	0.0496	<0.0468	<0.0324	600.0	30.0'
MTBE	<0.0373	<0.0296	<0.0468	<0.0324	0.28	100.0'
Naphthalene	<0.0746	0.235	<0.0937	<0.0648	25.0	30.0'
Toluene	<0.0373	<0.0296	<0.0468	<0.0324	44.0	30.0'
Total Xylenes	<0.112	<0.0889	<0.141	<0.0973	990.0	30.0'
1,2,4-TMB	<0.0373	<0.0296	<0.0468	<0.0324	8.4	30.0'
1,3,5-TMB	<0.0373	<0.0296	<0.0468	<0.0324	74.0	30.0'

**MTBE**  
**1,2,4-TMB**  
**1,3,5-TMB**

Residential Soil Statewide Health Standard Screening Values Included in Table 2 of the  
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Shaded Values indicate Exceedance of the Screening Value  
within the Applicable Horizontal Proximity Distance

**Table Q-1**  
**Site Characterization Activities**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data vs VI Screening Values (mg/kg)**

Parameter	TB-15A	TB-15B	TB-16A	TB-16B	Screening Value	Horizontal Proximity Distance
Depth	1.5' - 2.5'	5.0' - 6.0'	1.5' - 2.5'	5.0' - 6.0'		
Distance to Nearest Bld.	16.0'	16.0'	26.0'	26.0'		
Sample Date	8/23/2018	8/23/2018	8/23/2018	8/23/2018		
% Moisture	17.5%	10.3%	21.9%	25.9%		
Benzene	<0.0314	<0.0294	<0.0390	0.0826	0.13	30.0'
Ethylbenzene	<0.0314	<0.0294	<0.0390	0.126	46.0	30.0'
Cumene	<0.0314	<0.0294	<0.0390	<0.0326	600.0	30.0'
MTBE	<0.0314	<0.0294	<0.0390	<0.0326	0.28	100.0'
Naphthalene	<0.0629	<0.0588	<0.0780	<0.0652	25.0	30.0'
Toluene	<0.0314	<0.0294	<0.0390	0.315	44.0	30.0'
Total Xylenes	<0.0943	<0.0883	<0.117	0.530	990.0	30.0'
1,2,4-TMB	0.388	0.0448	<0.0390	0.204	8.4	30.0'
1,3,5-TMB	0.202	<0.0294	<0.0390	0.0582	74.0	30.0'

**MTBE**  
**1,2,4-TMB**  
**1,3,5-TMB**

Residential Soil Statewide Health Standard Screening Values Included in Table 2 of the  
Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings  
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Shaded Values indicate Exceedance of the Screening Value  
within the Applicable Horizontal Proximity Distance



**Table R-1**  
**Site Characterization Activities**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data vs VI Screening Values (mg/kg)**

Parameter	TB-17A	TB-17B	TB-18A	TB-18B	Screening Value	Horizontal Proximity Distance
Depth	1.5' - 2.5'	5.0' - 6.0'	1.5' - 2.5'	5.0' - 6.0'		
Distance to Nearest Bld.	20.0'	20.0'	44.0'	44.0'		
Sample Date	8/23/2018	8/23/2018	8/23/2018	8/23/2018		
% Moisture	11.1%	17.6%	17.7%	30.0%		
Benzene	<0.0265	<0.0284	<0.0323	<0.0376	0.13	30.0'
Ethylbenzene	<0.0265	<0.0284	<0.0323	<0.0376	46.0	30.0'
Cumene	<0.0265	<0.0284	<0.0323	<0.0376	600.0	30.0'
MTBE	<0.0265	<0.0284	<0.0323	<0.0376	0.28	100.0'
Naphthalene	<0.0531	<0.0567	<0.0647	<0.0752	25.0	30.0'
Toluene	<0.0265	<0.0284	<0.0323	<0.0376	44.0	30.0'
Total Xylenes	<0.0796	<0.0851	<0.0970	<0.113	990.0	30.0'
1,2,4-TMB	<0.0265	<0.0284	<0.0323	<0.0376	8.4	30.0'
1,3,5-TMB	<0.0265	<0.0284	<0.0323	<0.0376	74.0	30.0'

**MTBE**  
**1,2,4-TMB**  
**1,3,5-TMB**

Residential Soil Statewide Health Standard Screening Values Included in Table 2 of the  
Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings  
From Groundwater and Soil Under Act 2 (Document #261-0300-101) dated January 18, 2017

Shaded Values indicate Exceedance of the Screening Value  
within the Applicable Horizontal Proximity Distance

**Table R-1**  
**Site Characterization Activities**  
**Quinn's Café Stop Property**  
**Soil Sample Analytical Data vs VI Screening Values (mg/kg)**

Parameter	TB-19A	TB-19B	TB-20A	TB-20B	Screening Value	Horizontal Proximity Distance
Depth	1.5' - 2.5'	5.0' - 6.0'	1.5' - 2.5'	5.0' - 6.0'		
Distance to Nearest Bld.	42.0'	42.0'	36.0'	36.0'		
Sample Date	8/23/2018	8/23/2018	8/23/2018	8/23/2018		
% Moisture	14.8%	11.6%	9.7%	4.6%		
Benzene	<0.0345	<0.201	<0.0405	<0.0347	0.13	30.0'
Ethylbenzene	<0.0345	16.8	<0.0405	0.0712	46.0	30.0'
Cumene	<0.0345	6.19	<0.0405	<0.0347	600.0	30.0'
MTBE	<0.0345	<0.201	<0.0405	<0.0347	0.28	100.0'
Naphthalene	<0.0689	14.0	<0.0811	<0.0694	25.0	30.0'
Toluene	<0.0345	0.262	<0.0405	<0.0347	44.0	30.0'
Total Xylenes	<0.103	42.3	<0.122	<0.104	990.0	30.0'
1,2,4-TMB	<0.0345	307.0	<0.0405	<0.0347	8.4	30.0'
1,3,5-TMB	<0.0345	13.8	<0.0405	<0.0347	74.0	30.0'

**MTBE**  
**1,2,4-TMB**  
**1,3,5-TMB**

Residential Soil Statewide Health Standard Screening Values Included in Table 2 of the  
Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings  
From Groundwater and Soil Under Act 2 (Document #261-0300-101) dated January 18, 2017

Shaded Values indicate Exceedance of the Screening Value  
within the Applicable Horizontal Proximity Distance

## APPENDIX S

### Groundwater Data vs. Vapor Intrusion Screening Values

Table S-1  
Site Characterization Activities  
Quinn's Cafe Stop Property  
Groundwater Analytical Data vs VI Screening Values (ug/l)  
Groundwater Monitoring Wells

Well Number	Date Sampled	Well Head Elevation (feet)	Depth to Groundwater (feet) <sup>a</sup>	Relative Groundwater Elevation (feet)	Product Thickness (feet)	Remediation Status	Benzene (ug/L)	Ethylbenzene (ug/L)	Cumene (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	Toluene (ug/L)	Xylenes (ug/L)	1,2,4-TMB (ug/L)	1,3,5-TMB (ug/L)
MW-1  Distance to Nearest Building = 22.0'	2/15/2017	951.41	4.00	948.41	0.00	Characterization	23.0	700.0	1,900.0	5,300.0	100.0	34,000.0	10,000.0	59.0	420.0
	6/27/2017	951.41	4.46	947.95	0.00	Characterization	3.9	4.9	2.8	<1.0	4.5	1.8	12.8	21.8	10.0
	9/11/2017	952.41	3.88	948.43	0.00	Characterization	3.2	1.5	<1.0	<1.0	<2.0	<1.0	<3.0	2.8	<1.0
	11/30/2017	952.41	5.45	946.96	0.00	Characterization	2.3	2.3	<1.0	<1.0	<2.0	<1.0	<3.0	7.0	1.7
	1/23/2018	952.41	5.53	946.88	0.00	Characterization	1.3	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	1.3	<1.0
	4/10/2018	952.41	4.92	946.88	0.00	Characterization	<1.0	<1.0	1.7	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
MW-2  Distance to Nearest Building = 15.0'	7/10/2018	952.41	5.21	947.20	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
MW-3  Distance to Nearest Building = 45.0'	2/15/2017	951.84	4.41	947.43	Trace	Characterization	82.7	342	49.3	<5.0	158	36.1	298	132	26.8
	6/28/2017	951.84	4.81	946.03	Trace	Characterization	85.4	324	45.2	<5.0	217	22.7	254	120	26.0
	9/11/2017	951.84	4.30	947.54	0.00	Characterization	82.5	462	55.2	<5.0	181	31.0	374	243	56.7
	12/1/2017	951.84	5.39	946.45	0.00	Characterization	69.5	291	49.2	<5.0	169	23.0	167	53.5	13.6
	1/23/2018	951.84	5.43	946.41	0.00	Characterization	50.5	192	44.5	<5.0	125	14.1	99.9	30.5	7.1
	4/10/2018	951.84	4.80	946.41	0.00	Characterization	45.8	248	41.2	<5.0	96.7	19.4	159	43.5	8.1
MW-3  Distance to Nearest Building = 45.0'	7/10/2018	951.84	5.39	946.45	0.00	Characterization	77.2	190	41.0	<5.0	130	18.7	115	38.0	6.7
MW-3  Distance to Nearest Building = 45.0'	2/15/2017	951.10	3.70	947.40	0.00	Characterization	376	62.2	6.1	15.0	14.4	535	236	75.6	24.2
	6/27/2017	951.10	4.53	946.47	0.00	Characterization	553	1210	98.5	67.7	545	44.1	1450	830	77.9
	9/11/2017	951.10	3.73	947.37	0.00	Characterization	208	13.1	6.7	9.6	15.7	<5.0	<15.0	15.9	<5.0
	12/1/2017	951.10	5.28	945.82	0.00	Characterization	679	1080	124.0	40.3	520	44	696	309	<5.0
	1/23/2018	951.10	5.18	945.92	0.00	Characterization	595	1110	90.1	47.1	243	42	344	49	<25.0
	4/10/2018	951.10	4.79	945.92	0.00	Characterization	277	425	34.0	11.7	79.9	20.8	349	195	<5.0
MW-3  Distance to Nearest Building = 45.0'	7/10/2018	951.10	4.88	946.12	0.00	Characterization	670	1160	94.1	74.9	394	43.2	553	176	19.9

Not Measured  
Methyl Tert Butyl Ether  
1,2,4-Trimethylbenzene  
1,3,5-Trimethylbenzene

NS Not Sampled  
NA Not Applicable  
E Estimated Value

Residential Groundwater Statewide Health Standard Screening Values Included in Table 1 of the PACDP's Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings from Groundwater and Soil under Act 2 (Document #261-0300-101) dated January 18, 2017.  
Shaded values indicate Exceedance of the Screening Values within applicable horizontal proximity distance  
Horizontal Proximity Distance = 30.0' with exception of MTBE (100.0')

Table S-1  
Site Characterization Activities  
Quinn's Cafe Stop Property  
Groundwater Analytical Data vs VI Screening Values (ug/l)  
Groundwater Monitoring Wells

Well Number	Date Sampled	Well Head Elevation (feet)	Depth to Groundwater (feet)	Relative Groundwater Elevation (feet)	Product Thickness (feet)	Remediation Status	Benzene (ug/L)	Ethylbenzene (ug/L)	Cumene (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	Toluene (ug/L)	Xylenes (ug/L)	1,2,4-TMB (ug/L)	1,3,5-TMB (ug/L)
MW-4	2/15/2017	950.71	4.44	946.27	0.00	Characterization	23.0	700.0	1,900.0	5,300.0	100.0	34,000.0	10,000.0	59.0	420.0
	6/28/2017	950.71	4.88	945.83	0.00	Characterization	49	5.1	2.7	189	3.1	7.1	19.5	5.9	2.8
	9/11/2017	950.71	5.15	945.56	0.00	Characterization	128	5.6	6.7	280	8.5	6.2	12.3	3.9	2.8
	12/1/2017	950.71	5.24	945.47	0.00	Characterization	37.6	3.4	3.4	315	3.4	<1.0	<1.0	<1.0	<1.0
	1/23/2018	950.71	5.32	945.39	0.00	Characterization	<5.0	<5.0	<5.0	306	<10.0	<5.0	<15.0	<5.0	<5.0
	4/10/2018	950.71	5.21	945.39	0.00	Characterization	9.5	<5.0	<5.0	234	<10.0	<5.0	<15.0	<5.0	<5.0
Distance to Nearest Building = 75.0'	7/10/2018	950.71	5.30	945.41	0.00	Characterization	30.0	9.9	<5.0	218	<10.0	<5.0	<15.0	<5.0	<5.0
							11.6	<5.0	<5.0	225	<10.0	<5.0	<15.0	<5.0	<5.0
MW-5	2/15/2017	950.65	3.34	947.31	0.00	Characterization	162	854	116	6.1	294	46.2	843	1130	59.9
	6/28/2017	950.65	4.78	945.87	0.00	Characterization	227	476	76.1	6.7	235	71.9	487	707	40.9
	9/11/2017	950.65	3.52	947.33	0.00	Characterization	350	610	82.0	10.3	210	41.7	528	648	43.4
	12/1/2017	950.65	4.28	946.37	0.00	Characterization	209	422	67.5	<5.0	249	30.0	313	353	32.6
	1/23/2018	950.65	4.28	946.37	0.00	Characterization	133	415	65.3	<5.0	134	22.0	289	330	22.1
	4/10/2018	950.65	3.88	946.37	0.00	Characterization	468	591	81.6	<5.0	164	29.6	586	766	<5.0
Distance to Nearest Building = 47.0'	7/10/2018	950.65	4.28	946.37	0.00	Characterization	264	282	38.4	11.3	109	6.9	251	373	<5.0
MW-6	2/15/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/27/2017	950.38	4.27	946.11	0.00	Characterization	13.1	1.3	3.7	20.7	2.8	<1.0	<3.0	<1.0	<1.0
	9/11/2017	950.38	3.64	946.74	0.00	Characterization	5.9	<1.0	3.3	11.4	<2.0	<1.0	<3.0	<1.0	<1.0
	12/1/2017	950.38	4.11	945.67	0.00	Characterization	5.0	<1.0	3.4	5.0	<2.0	<1.0	<3.0	<1.0	<1.0
	1/23/2018	950.38	2.94	947.44	0.00	Characterization	<1.0	<1.0	1.4	4.1	<2.0	<1.0	<3.0	<1.0	<1.0
	4/10/2018	950.38	3.94	947.44	0.00	Characterization	4.1	<1.0	1.4	4.8	<2.0	<1.0	<3.0	<1.0	<1.0
Distance to Nearest Building = 17.0'	7/10/2018	950.38	4.78	945.60	0.00	Characterization	5.9	<1.0	3.0	10.9	<2.0	<1.0	<3.0	<1.0	<1.0
NM	2/15/2017	950.71	4.44	946.27	0.00	Characterization	23.0	700.0	1,900.0	5,300.0	100.0	34,000.0	10,000.0	59.0	420.0
	6/28/2017	950.71	4.88	945.83	0.00	Characterization	49	5.1	2.7	189	3.1	7.1	19.5	5.9	2.8
	9/11/2017	950.71	5.15	945.56	0.00	Characterization	128	5.6	6.7	280	8.5	6.2	12.3	3.9	2.8
	12/1/2017	950.71	5.24	945.47	0.00	Characterization	37.6	3.4	3.4	315	3.4	<1.0	<1.0	<1.0	<1.0
	1/23/2018	950.71	5.32	945.39	0.00	Characterization	<5.0	<5.0	<5.0	306	<10.0	<5.0	<15.0	<5.0	<5.0
	4/10/2018	950.71	5.21	945.39	0.00	Characterization	9.5	<5.0	<5.0	234	<10.0	<5.0	<15.0	<5.0	<5.0

Not Measured  
Methyl Tert Butyl Ether  
1,2,4-Trimethylbenzene  
1,3,5-Trimethylbenzene

NS  
NA  
E

Residential Groundwater Statewide Health Standard Screening Values Included in Table 1 of the PACEP's Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings from Groundwater and Soil under Act 2 (Document #261-0300-101) dated January 18, 2017.

Shaded values indicate Exceedance of the Screening Values within applicable horizontal proximity distance  
Horizontal Proximity Distance = 30.0' with exception of MTBE (100.0')



Table S-1  
Site Characterization Activities  
Quinn's Cafe Stop Property  
Groundwater Analytical Data vs VI Screening Values (ug/l)  
Groundwater Monitoring Wells

Well Number	Date Sampled	Well Head Elevation (feet)	Depth to Groundwater (feet)	Relative Groundwater Elevation (feet)	Product Thickness (feet)	Remediation Status	Benzene (ug/L)	Ethylbenzene (ug/L)	Cumene (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	Toluene (ug/L)	Xylenes (ug/L)	1,2,4-TMB (ug/L)	1,3,5-TMB (ug/L)
MW-7  Distance to Nearest Building = 65.0'	2/15/2017	NM	NM	NM	0.00	Characterization	23.0	700.0	1,900.0	5,300.0	100.0	34,000.0	10,000.0	59.0	420.0
	6/27/2017	951.77	7.49	945.28	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2017	951.77	7.23	945.54	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	12/1/2017	952.77	7.71	945.06	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	1/22/2018	952.77	7.58	945.19	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	4/9/2018	952.77	7.14	945.19	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	7/9/2018	952.77	7.18	944.99	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
MW-9  Distance to Nearest Building = 30.0'	2/15/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/27/2017	951.98	6.27	945.71	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	9/11/2017	951.98	5.02	946.96	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	11/30/2017	951.98	6.05	945.83	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	1/22/2018	951.98	6.05	945.83	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	4/9/2018	951.98	5.13	945.93	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	7/9/2018	951.98	6.66	945.32	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
MW-9  Distance to Nearest Building = 10.0'	2/15/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/27/2017	951.73	6.12	945.61	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	9/11/2017	951.73	5.05	946.68	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	11/30/2017	951.73	6.04	945.69	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	1/22/2018	951.73	5.97	945.78	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	4/9/2018	951.73	5.04	945.78	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	7/9/2018	951.73	6.48	945.25	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0

Not Measured  
Methyl Tert Butyl Ether  
1,2,4-Trimethylbenzene  
1,3,5-Trimethylbenzene

Not Sampled  
Not Applicable  
Estimated Value

Residential Groundwater Statewide Health Standard Screening Values Included in Table 1 of the PACEP's Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings from Groundwater and Soil under Act 2 (Document #261-0300-101) dated January 18, 2017.

Shaded values indicate Exceedance of the Screening Values within applicable horizontal proximity distance  
Horizontal Proximity Distance = 30.0' with exception of MTBE (100.0')

Table S-1  
Site Characterization Activities  
Quinn's Cafe Stop Property  
Groundwater Analytical Data vs VI Screening Values (ug/l)  
Groundwater Monitoring Wells

Well Number	Date Sampled	Well Head Elevation (feet)	Depth to Groundwater (feet)	Relative Groundwater Elevation (feet)	Product Thickness (feet)	Remediation Status	Benzene (ug/L)	Ethylbenzene (ug/L)	Cumene (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	Toluene (ug/L)	Xylenes (ug/L)	1,2,4-TMB (ug/L)	1,3,5-TMB (ug/L)
MW-10  Distance to Nearest Building = 30.0'	2/15/2017	NM	NM	NM	0.00	Characterization	23.0	700.0	1,900.0	5,300.0	100.0	34,000.0	10,000.0	59.0	420.0
	6/28/2017	957.32	15.32	942.00	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2017	957.32	8.17	949.15	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	12/1/2017	957.32	9.47	947.85	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	1/23/2018	957.32	8.43	948.89	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	4/10/2018	957.32	8.03	948.89	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	7/10/2018	957.32	9.76	947.56	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
MW-11  Distance to Nearest Building = 63.0'	2/15/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/28/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/1/2017	953.36	6.26	947.10	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	1/22/2018	953.36	5.80	947.56	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	4/9/2018	953.36	4.86	947.56	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	1.2	<3.0	<1.0	<1.0
	7/9/2018	953.36	6.78	946.58	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
MW-12  Distance to Nearest Building = 32.0'	2/15/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/28/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/1/2017	941.59	5.09	935.60	0.00	Characterization	<1.0	<1.0	<1.0	1.4	<2.0	<1.0	<3.0	<1.0	<1.0
	1/22/2018	941.59	5.74	935.65	0.00	Characterization	<1.0	<1.0	<1.0	1.5	<2.0	<1.0	<3.0	<1.0	<1.0
	4/9/2018	941.59	4.95	935.65	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	7/9/2018	941.59	6.53	935.06	0.00	Characterization	<1.0	<1.0	<1.0	1.2	<2.0	<1.0	<3.0	<1.0	<1.0

Not Measured  
Methyl Tert Butyl Ether  
1,2,4-Trimethylbenzene  
1,3,5-Trimethylbenzene

Not Sampled  
Not Applicable  
Estimated Value

Residential Groundwater Statewide Health Standard Screening Values Included in Table 1 of the PACER's Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings from Groundwater and Soil under Act 2 (Document #261-0300-101) dated January 18, 2017.

Shaded values indicate Exceedance of the Screening Values within applicable horizontal proximity distance  
Horizontal Proximity Distance = 30.0' with exception of MTBE (100.0')

Table S-1  
Site Characterization Activities  
Quinn's Cafe Stop Property  
Groundwater Analytical Data vs VI Screening Values (ug/l)  
Groundwater Monitoring Wells & Storm Sewer Investigation

Well Number	Date Sampled	Well Head Elevation (feet)	Depth to Groundwater (feet)	Relative Groundwater Elevation (feet)	Product Thickness (feet)	Remediation Status	Benzene (ug/L)	Ethylbenzene (ug/L)	Cumene (ug/L)	MTBE (ug/L)	Naphthalene (ug/L)	Toluene (ug/L)	Xylenes (ug/L)	1,2,4-TMB (ug/L)	1,3,5-TMB (ug/L)
MW-13  Distance to Nearest Building = 120.0'	2/15/2017	NM	NM	NM	0.00	Characterization	23.0	700.0	1,900.0	5,300.0	100.0	34,000.0	10,000.0	59.0	420.0
	5/28/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/11/2017	NM	NM	NM	0.00	Characterization	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/30/2017	954.76	13.54	941.22	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	1.0	<3.0	<1.0	<1.0
	1/22/2018	954.76	12.63	942.13	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	4/9/2018	954.76	10.93	942.13	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
GW-1  Distance to Nearest Building = 50.0'	7/9/2018	954.76	12.59	944.17	0.00	Characterization	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	<1.0	<1.0
	8/25/2017	NA	NA	NA	0.00	Characterization	75.8	65.0	10.8	5.4	21.0	<5.0	40.6	36.1	<5.0

Not Measured  
Methyl Tert Butyl Ether  
1,2,4-Trimethylbenzene  
1,3,5-Trimethylbenzene

Not Sampled  
Not Applicable  
Estimated Value

Non-Residential Groundwater Statewide Health Standard Screening Values Included in Table 1 of the PADEP's Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings from Groundwater and Soil under Act 2 (Document #261-0300-101) dated January 18, 2017.

Shaded values indicate Exceedance of the Screening Values within applicable horizontal proximity distance  
Horizontal Proximity Distance = 30.0' with exception of MTBE (100.0')

## APPENDIX T

Sub Slab Vapor Analytical Summary Table

&

Laboratory Analytical Data Sheets

## APPENDIX T-1

### Sub-Slab Vapor Analytical Summary Table



Table T-1  
Quinn's Café Stop Property  
Soil - Vapor Analytical Table  
December 1, 2017

Parameter	Molecular Wt.	SS-1 [ug/m <sup>3</sup> ]	SS-1DUP [ug/m <sup>3</sup> ]	SS-2 [ug/m <sup>3</sup> ]	SVss [ug/m <sup>3</sup> ]
Benzene	78	3	3	4	2,000
Ethylbenzene	106	8	8	7	6,300
Isopropylbenzene (Cumene)	120.19	<1.0	<1.0	<1.0	220,000
Methyl t-butyl ether (MTBE)	88	<0.7	<0.7	<0.7	61,000
Naphthalene	128.17	<1.0	<1.0	<1.0	460
Toluene	92	39	38	48	2,800,000
Total Xylenes	106	44	42	38	56,000
1,2,4-Trimethylbenzene	120	6	5	4	3,900
1,3,5-Trimethylbenzene	120	2	1	1	3,900

Non-Residential Sub-Slab Vapor Intrusion Screening Values (SVss) - Samples Collected From Quinn's Café Stop

Table 4 of the January 18, 2017 Final Guidance Manual for Vapor Intrusion into Buildings from GW & Soil Under Act 2

SS-1DUP = Duplicate sample collected from SS-1

Exceedance of the SVss

Table T-1  
 Quinn's Café Stop Property  
 Soil - Vapor Analytical Table  
 January 24, 2018

Parameter	Molecular Wt.	SS-1 [ug/m <sup>3</sup> ]	SS-1DUP [ug/m <sup>3</sup> ]	SS-2 [ug/m <sup>3</sup> ]	SVss [ug/m <sup>3</sup> ]
Benzene	78	1	0.7	<0.6	2,000
Ethylbenzene	106	<0.9	<0.9	<0.9	6,300
Isopropylbenzene (Cumene)	120.19	<1.0	<1.0	<1.0	220,000
Methyl t-butyl ether (MTBE)	88	<0.7	<0.7	<0.7	61,000
Naphthalene	128.17	<1.0	1	<1.0	460
Toluene	92	4	2	2	2,800,000
Total Xylenes	106	3	3	3	56,000
1,2,4-Trimethylbenzene	120	1	2	2	3,900
1,3,5-Trimethylbenzene	120	<1.0	<1.0	<1.0	3,900

Non-Residential Sub-Slab Vapor Intrusion Screening Values (SVss) - Samples Collected from Quinn's Café Stop

Table 4 of the January 18, 2017 Final Guidance Manual for Vapor Intrusion into Buildings from GW & Soil Under Act 2

SS-1DUP = Duplicate sample collected from SS-1

Exceedance of the SVss

Table T-1  
Quinn's Café Stop Property  
Soil - Vapor Analytical Table  
April 19, 2018

Parameter	Molecular Wt.	VP-1 [ug/m <sup>3</sup> ]	VP-2 [ug/m <sup>3</sup> ]	VP-2 Dup [ug/m <sup>3</sup> ]	SVss [ug/m <sup>3</sup> ]
Benzene	78	1	0.7	0.7	120
Ethylbenzene	106	21	20	22	370
Isopropylbenzene (Cumene)	120.19	<1	<1	<1	16,000
Methyl t-butyl ether (MTBE)	88	<0.7	<0.7	<0.7	3,600
Naphthalene	128.17	<1	<1	1	28
Toluene	92	8	7	7	200,000
Total Xylenes	106	99	100	120	4,000
1,2,4-Trimethylbenzene	120	2	3	4	280
1,3,5-Trimethylbenzene	120	<1	<1	<1	280

Residential Sub-Slab Vapor Intrusion Screening Values (SVss) - Samples Collected from Residence at 232 South Main Street

Table 4 of the January 18, 2017 Final Guidance Manual for Vapor Intrusion into Buildings from GW & Soil Under Act 2

VP-2 DUP = Duplicate sample collected from VP-2

Exceedance of the SVss

Table T-1  
Quinn's Café Stop Property  
Soil - Vapor Analytical Table  
August 3, 2018

Parameter	Molecular Wt.	VP-1 [ug/m <sup>3</sup> ]	VP-2 [ug/m <sup>3</sup> ]	VP-2 Dup [ug/m <sup>3</sup> ]	SVss [ug/m <sup>3</sup> ]
Benzene	78	<0.67	<0.77	1.6	120
Ethylbenzene	106	<0.67	1.6	3.8	370
Isopropylbenzene (Cumene)	120.19	<0.67	<0.77	<0.80	16,000
Methyl t-butyl ether (MTBE)	88	<0.68	<0.79	<0.82	3,600
Naphthalene	128.17	<0.67	<0.77	1.1	28
Toluene	92	3.4	15	22	200,000
Total Xylenes	106	3.69	8.3	22.5	4,000
1,2,4-Trimethylbenzene	120	1.2	3.8	6.3	280
1,3,5-Trimethylbenzene	120	<0.66	1.2	1.5	280

Residential Sub-Slab Vapor Intrusion Screening Values (SVss) - Samples Collected from Residence at 232 South Main Street

Table 4 of the January 18, 2017 Final Guidance Manual for Vapor Intrusion into Buildings from GW & Soil Under Act 2

VP-2 DUP = Duplicate sample collected from VP-2

Exceedance of the SVss

## APPENDIX T-2

### Laboratory Analytical Data Sheets

Sub-Slab Vapor Sampling Activities – December 2017



December 14, 2017

Mr. Marty Gilgallon  
LaBella-Dunmore  
1000 Dunham Drive  
Suite B  
Scranton, PA 18512

## Certificate of Analysis

Project Name:	<b>Air - Unleaded Gasoline List</b>	Workorder:	<b>2280730</b>
Purchase Order:		Workorder ID:	<b>Quinns Cafe Stop/2171853</b>

Dear Mr. Gilgallon:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, December 5, 2017.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Kevin Cucura

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*



Ms. Amy K Borden  
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 2280730 Quinns Cafe Stop/2171853

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2280730001	116-1201-SS1	Air	12/1/2017 12:20	12/5/2017 09:05	Collected by Client
2280730002	116-1201-SS1 DUP	Air	12/1/2017 12:20	12/5/2017 09:05	Collected by Client
2280730003	116-1201-SS2	Air	12/1/2017 12:40	12/5/2017 09:05	Collected by Client

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## SAMPLE SUMMARY

Workorder: 2280730 Quinns Cafe Stop/2171853

### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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### ANALYTICAL RESULTS

Workorder: 2280730 Quinns Cafe Stop/2171853

Lab ID: 2280730001  
Sample ID: 116-1201-SS1

Date Collected: 12/1/2017 12:20 Matrix: Air  
Date Received: 12/5/2017 09:05

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS @ STP</b>										
Benzene	3		ug/m3	0.6	TO-15			12/13/17 21:19	CHS	A
Ethylbenzene	8		ug/m3	0.9	TO-15			12/13/17 21:19	CHS	A
Isopropylbenzene	ND		ug/m3	1	TO-15			12/13/17 21:19	CHS	A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15			12/13/17 21:19	CHS	A
Naphthalene	ND		ug/m3	1	TO-15			12/13/17 21:19	CHS	A
Toluene	39		ug/m3	0.8	TO-15			12/13/17 21:19	CHS	A
Total Xylenes	44		ug/m3	3	TO-15			12/13/17 21:19	CHS	A
1,2,4-Trimethylbenzene	6		ug/m3	1	TO-15			12/13/17 21:19	CHS	A
1,3,5-Trimethylbenzene	2		ug/m3	1	TO-15			12/13/17 21:19	CHS	A
Benzene	1.1		ppbv	0.20	TO-15			12/13/17 21:19	CHS	A
Ethylbenzene	1.8		ppbv	0.20	TO-15			12/13/17 21:19	CHS	A
Isopropylbenzene	ND		ppbv	0.20	TO-15			12/13/17 21:19	CHS	A
Methyl t-Butyl Ether	ND		ppbv	0.20	TO-15			12/13/17 21:19	CHS	A
Naphthalene	ND		ppbv	0.20	TO-15			12/13/17 21:19	CHS	A
Toluene	10		ppbv	0.20	TO-15			12/13/17 21:19	CHS	A
Total Xylenes	10		ppbv	0.60	TO-15			12/13/17 21:19	CHS	A
1,2,4-Trimethylbenzene	1.2		ppbv	0.20	TO-15			12/13/17 21:19	CHS	A
1,3,5-Trimethylbenzene	0.33		ppbv	0.20	TO-15			12/13/17 21:19	CHS	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
4-Bromofluorobenzene (S)	98		%	70 - 130	TO-15			12/13/17 21:19	CHS	A



Ms. Amy K Borden  
Project Coordinator

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### ANALYTICAL RESULTS

Workorder: 2280730 Quinns Cafe Stop/2171853

Lab ID: 2280730002  
Sample ID: 116-1201-SS1 DUP

Date Collected: 12/1/2017 12:20 Matrix: Air  
Date Received: 12/5/2017 09:05

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS @ STP</b>										
Benzene	3		ug/m3	0.6	TO-15			12/13/17 22:05	CHS	A
Ethylbenzene	8		ug/m3	0.9	TO-15			12/13/17 22:05	CHS	A
Isopropylbenzene	ND		ug/m3	1	TO-15			12/13/17 22:05	CHS	A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15			12/13/17 22:05	CHS	A
Naphthalene	ND		ug/m3	1	TO-15			12/13/17 22:05	CHS	A
Toluene	38		ug/m3	0.8	TO-15			12/13/17 22:05	CHS	A
Total Xylenes	42		ug/m3	3	TO-15			12/13/17 22:05	CHS	A
1,2,4-Trimethylbenzene	5		ug/m3	1	TO-15			12/13/17 22:05	CHS	A
1,3,5-Trimethylbenzene	1		ug/m3	1	TO-15			12/13/17 22:05	CHS	A
Benzene	1.0		ppbv	0.20	TO-15			12/13/17 22:05	CHS	A
Ethylbenzene	1.7		ppbv	0.20	TO-15			12/13/17 22:05	CHS	A
Isopropylbenzene	ND		ppbv	0.20	TO-15			12/13/17 22:05	CHS	A
Methyl t-Butyl Ether	ND		ppbv	0.20	TO-15			12/13/17 22:05	CHS	A
Naphthalene	ND		ppbv	0.20	TO-15			12/13/17 22:05	CHS	A
Toluene	10		ppbv	0.20	TO-15			12/13/17 22:05	CHS	A
Total Xylenes	9.8		ppbv	0.60	TO-15			12/13/17 22:05	CHS	A
1,2,4-Trimethylbenzene	1.0		ppbv	0.20	TO-15			12/13/17 22:05	CHS	A
1,3,5-Trimethylbenzene	0.27		ppbv	0.20	TO-15			12/13/17 22:05	CHS	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
4-Bromofluorobenzene (S)	97		%	70 - 130	TO-15			12/13/17 22:05	CHS	A



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## ANALYTICAL RESULTS

Workorder: 2280730 Quinns Cafe Stop/2171853

Lab ID: 2280730003  
Sample ID: 116-1201-SS2

Date Collected: 12/1/2017 12:40 Matrix: Air  
Date Received: 12/5/2017 09:05

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS @ STP</b>										
Benzene	4		ug/m3	0.6	TO-15			12/13/17 22:52	CHS	A
Ethylbenzene	7		ug/m3	0.9	TO-15			12/13/17 22:52	CHS	A
Isopropylbenzene	ND		ug/m3	1	TO-15			12/13/17 22:52	CHS	A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15			12/13/17 22:52	CHS	A
Naphthalene	ND		ug/m3	1	TO-15			12/13/17 22:52	CHS	A
Toluene	48		ug/m3	0.8	TO-15			12/13/17 22:52	CHS	A
Total Xylenes	38		ug/m3	3	TO-15			12/13/17 22:52	CHS	A
1,2,4-Trimethylbenzene	4		ug/m3	1	TO-15			12/13/17 22:52	CHS	A
1,3,5-Trimethylbenzene	1		ug/m3	1	TO-15			12/13/17 22:52	CHS	A
Benzene	1.4		ppbv	0.20	TO-15			12/13/17 22:52	CHS	A
Ethylbenzene	1.6		ppbv	0.20	TO-15			12/13/17 22:52	CHS	A
Isopropylbenzene	ND		ppbv	0.20	TO-15			12/13/17 22:52	CHS	A
Methyl t-Butyl Ether	ND		ppbv	0.20	TO-15			12/13/17 22:52	CHS	A
Naphthalene	ND		ppbv	0.20	TO-15			12/13/17 22:52	CHS	A
Toluene	13		ppbv	0.20	TO-15			12/13/17 22:52	CHS	A
Total Xylenes	8.8		ppbv	0.60	TO-15			12/13/17 22:52	CHS	A
1,2,4-Trimethylbenzene	0.81		ppbv	0.20	TO-15			12/13/17 22:52	CHS	A
1,3,5-Trimethylbenzene	0.28		ppbv	0.20	TO-15			12/13/17 22:52	CHS	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
4-Bromofluorobenzene (S)	99		%	70 - 130	TO-15			12/13/17 22:52	CHS	A



Ms. Amy K Borden  
Project Coordinator

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34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

Environmental

# AIR ANALYSIS

## CHAIN-OF-CUSTODY/FIELD TEST DATA SHEET

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/SAMPLER.

INSTRUCTIONS ON THE BACK.

AMY

COC #:

ALS Q1



2-2-8-0-7-3-0

1. CLIENT INFORMATION		2. ANALYSES/METHOD REQUESTED		3. LABORATORY INFORMATION	
Client Name/Address: <b>Labella Associates</b> <b>1000 Dunham Drive Suite B Dunmore PA 16832</b> Contact: <b>Martin Gilgallon</b> Phone #: <b></b> Project Name: <b>Quinn's Cafe Stop/2171853</b> Bill To: <b>Lynn Harschak</b> TAT <input checked="" type="checkbox"/> Normal Standard TAT is 10-12 business days. Rush-TAT subject to ALS approval and surcharges. Client Email: <b>mgilgallon@labella.com</b> Fax: <b></b>		STO LIST 1 <input checked="" type="checkbox"/> <b>Unleaded</b> 2 <input checked="" type="checkbox"/> <b>Unleaded</b> 3 <input checked="" type="checkbox"/> <b>Unleaded</b> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/>		LABORATORY CANISTER CERTIFIED BY: <b>GC/MS Analyst Signatures:</b> <b>Labella Associates</b> CANISTERS PREPARED BY: <b>Labella Associates</b> Name: <b>Labella Associates</b> Title: <b>AIR ANALYST</b> Canister Sealed Date/Time: <b>11/21/17 12:00</b> Date Shipped to Client: <b>11/21/17</b> Canister Seal # (s): <b>2818</b> Canister Tracking #: <b>8121 9373987A</b>	

4. FIELD DATA SHEET				TO-15 FIELD DATA				LABORATORY RECORD						
Sample Description/Location (as it will appear on the lab report)	Sample Date	Start Time	Stop Time	Temp Deg C	1L	6L	Canister No.	Flow Controller No.	Canister Pressure (Psi)	Canister Certification File	Canister Pressure (Psi)	Flow Controller		
												Out	In	Setpoint (mL/min)
1 1116 - 1201 - SS1	12/1/17	0800	1220				2622	AD19555-4	-29.5	-5.0	2110916	-29.7	-5.5	21.0
2 1116 - 1201 - SS1 Dup	12/1/17	0800	1220				2945	7266437	-29.0	-5.0		-29.6	-3.6	
3 1116 - 1201 - SS2	12/1/17	0840	1240				1840	ALS152	-29.0	-4.5		-29.7	-4.9	20.9
4														
5														
6														
7														
8														
9														
10														

5. SAMPLED BY (Please Print):				6. PROJECT INFORMATION			
LOGGED BY (signature): <b>Chris Herman</b>				State Samples Collected In			
REVIEWED BY (signature): <b>Chris Herman</b>				Standard <input type="checkbox"/> CLP-like <input type="checkbox"/> TO-15 <input checked="" type="checkbox"/>			
Relinquished By / Company Name: <b>Chris Herman / Labella</b>				DOD <input type="checkbox"/> Other <input type="checkbox"/>			
Date: <b>12/1/17</b>				Deliverables: <input type="checkbox"/> Pickup <input type="checkbox"/> Labor			
Time: <b>0710</b>				EDS- Type: <input type="checkbox"/> PA <input type="checkbox"/> NC <input type="checkbox"/> other			
Received By / Company Name: <b>Quinn's Cafe Stop / ALS</b>				ALS Field Services: <input type="checkbox"/> Pickup <input type="checkbox"/> Labor			
Date: <b>12/1/17</b>				Other: <b></b>			
Time: <b>0905</b>				Other: <b></b>			

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

Phone: 1-717-944-5541

Rev 01/Mar/2011

ALS



# ALS-Middletown

## TO-15 Sample Receipt Checklist

Client ID: LABELLA ASSOC Project Name/#: Quinn's Cafe Stop/217K653  
 Horizon WO#: \_\_\_\_\_ Date/Time received: 12/5/17  
 Sample Delivery Group ID: \_\_\_\_\_ Received By: J. SMITH  
 Log In By/Date: \_\_\_\_\_ Project Manager Review (date) \_\_\_\_\_  
 (signature) \_\_\_\_\_ (signature) \_\_\_\_\_  
 Number of Shipping containers received: 1 Courier: Fedex

Circle the response below as appropriate.

1. Did kit(s) come with a shipping slip (airbill, etc.)? YES NO NA  
 If YES, enter airbill numbers: 8121 9877 9877

### Shipping Container Information:

2. Were shipping containers received without signs of tampering? YES NO NA  
 Comments: \_\_\_\_\_  
 3. Were custody seals present and intact? YES NO NA  
 4. Were custody seals numbers present? YES NO NA  
 List Custody Seal Numbers: \_\_\_\_\_

### Sample Condition:

5. Were sample containers received intact without signs of tampering? YES NO NA  
 Comments: \_\_\_\_\_

### Chain of Custody:

6. Did COC arrive with the samples? YES NO NA  
 7. Do sample ID/Sample Description(s) match samples submitted? YES NO NA  
 8. Is date and time of collection listed on the COC for all samples? YES NO NA  
 9. Is identification of sampler on COC? YES NO NA  
 10. Are requested test method(s) on COC? YES NO NA  
 11. Are necessary signatures on COC? YES NO NA  
 12. Was Internal COC initiated? (should always be YES) YES NO NA

### Sample Integrity Usability:

13. Do sample containers match the COC? YES NO NA  
 14. Were sample canisters received within 15 days of shipment to client? YES NO NA

### Anomalies or Non-Conformances:

## APPENDIX T-3

### Laboratory Analytical Data Sheets

Sub-Slab Vapor Sampling Activities – January 2018

January 31, 2018

Mr. Marty Gilgallon  
LaBella-Dunmore  
1000 Dunham Drive  
Suite B  
Scranton, PA 18512

## Certificate of Analysis

Project Name:	<b>Air - Unleaded Gasoline List</b>	Workorder:	<b>2291044</b>
Purchase Order:		Workorder ID:	<b>Quinn's Cafe Stop/2171853</b>

Dear Mr. Gilgallon:

Enclosed are the analytical results for samples received by the laboratory on Friday, January 26, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. William Sisco, Mr. Kevin Cucura

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*



Ms. Amy K Borden  
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 2291044 Quinn's Cafe Stop/2171853

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2291044001	116-0124-SS1	Air	1/24/2018 09:43	1/26/2018 10:42	Collected by Client
2291044002	116-0124-SS1 DUP	Air	1/24/2018 12:26	1/26/2018 10:42	Collected by Client
2291044003	116-0124-SS2	Air	1/24/2018 12:08	1/26/2018 10:42	Collected by Client

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## SAMPLE SUMMARY

Workorder: 2291044 Quinn's Cafe Stop/2171853

### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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## ANALYTICAL RESULTS

Workorder: 2291044 Quinn's Cafe Stop/2171853

Lab ID: 2291044001  
Sample ID: 116-0124-SS1

Date Collected: 1/24/2018 09:43 Matrix: Air  
Date Received: 1/26/2018 10:42

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS @ STP</b>										
Benzene	1		ug/m3	0.6	TO-15			1/29/18 22:43	CHS	A
Ethylbenzene	ND		ug/m3	0.9	TO-15			1/29/18 22:43	CHS	A
Isopropylbenzene	ND		ug/m3	1	TO-15			1/29/18 22:43	CHS	A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15			1/29/18 22:43	CHS	A
Naphthalene	ND		ug/m3	1	TO-15			1/29/18 22:43	CHS	A
Toluene	4		ug/m3	0.8	TO-15			1/29/18 22:43	CHS	A
Total Xylenes	3		ug/m3	3	TO-15			1/29/18 22:43	CHS	A
1,2,4-Trimethylbenzene	1		ug/m3	1	TO-15			1/29/18 22:43	CHS	A
1,3,5-Trimethylbenzene	ND		ug/m3	1	TO-15			1/29/18 22:43	CHS	A
Benzene	0.46		ppbv	0.20	TO-15			1/29/18 22:43	CHS	A
Ethylbenzene	ND		ppbv	0.20	TO-15			1/29/18 22:43	CHS	A
Isopropylbenzene	ND		ppbv	0.20	TO-15			1/29/18 22:43	CHS	A
Methyl t-Butyl Ether	ND		ppbv	0.20	TO-15			1/29/18 22:43	CHS	A
Naphthalene	ND		ppbv	0.20	TO-15			1/29/18 22:43	CHS	A
Toluene	1.0		ppbv	0.20	TO-15			1/29/18 22:43	CHS	A
Total Xylenes	0.70		ppbv	0.60	TO-15			1/29/18 22:43	CHS	A
1,2,4-Trimethylbenzene	0.25		ppbv	0.20	TO-15			1/29/18 22:43	CHS	A
1,3,5-Trimethylbenzene	ND		ppbv	0.20	TO-15			1/29/18 22:43	CHS	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
4-Bromofluorobenzene (S)	101		%	70 - 130	TO-15			1/29/18 22:43	CHS	A



Ms. Amy K Borden  
Project Coordinator

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### ANALYTICAL RESULTS

Workorder: 2291044 Quinn's Cafe Stop/2171853

Lab ID: 2291044002  
Sample ID: 116-0124-SS1 DUP

Date Collected: 1/24/2018 12:26 Matrix: Air  
Date Received: 1/26/2018 10:42

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS @ STP</b>										
Benzene	0.7		ug/m3	0.6	TO-15			1/29/18 23:29	CHS	A
Ethylbenzene	ND		ug/m3	0.9	TO-15			1/29/18 23:29	CHS	A
Isopropylbenzene	ND		ug/m3	1	TO-15			1/29/18 23:29	CHS	A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15			1/29/18 23:29	CHS	A
Naphthalene	1		ug/m3	1	TO-15			1/29/18 23:29	CHS	A
Toluene	2		ug/m3	0.8	TO-15			1/29/18 23:29	CHS	A
Total Xylenes	3		ug/m3	3	TO-15			1/29/18 23:29	CHS	A
1,2,4-Trimethylbenzene	2		ug/m3	1	TO-15			1/29/18 23:29	CHS	A
1,3,5-Trimethylbenzene	ND		ug/m3	1	TO-15			1/29/18 23:29	CHS	A
Benzene	0.21		ppbv	0.20	TO-15			1/29/18 23:29	CHS	A
Ethylbenzene	ND		ppbv	0.20	TO-15			1/29/18 23:29	CHS	A
Isopropylbenzene	ND		ppbv	0.20	TO-15			1/29/18 23:29	CHS	A
Methyl t-Butyl Ether	ND		ppbv	0.20	TO-15			1/29/18 23:29	CHS	A
Naphthalene	0.27		ppbv	0.20	TO-15			1/29/18 23:29	CHS	A
Toluene	0.56		ppbv	0.20	TO-15			1/29/18 23:29	CHS	A
Total Xylenes	0.76		ppbv	0.60	TO-15			1/29/18 23:29	CHS	A
1,2,4-Trimethylbenzene	0.44		ppbv	0.20	TO-15			1/29/18 23:29	CHS	A
1,3,5-Trimethylbenzene	ND		ppbv	0.20	TO-15			1/29/18 23:29	CHS	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
4-Bromofluorobenzene (S)	99		%	70 - 130	TO-15			1/29/18 23:29	CHS	A



Ms. Amy K Borden  
Project Coordinator

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### ANALYTICAL RESULTS

Workorder: 2291044 Quinn's Cafe Stop/2171853

Lab ID: 2291044003  
Sample ID: 116-0124-SS2

Date Collected: 1/24/2018 12:08 Matrix: Air  
Date Received: 1/26/2018 10:42

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS @ STP</b>										
Benzene	ND		ug/m3	0.6	TO-15			1/30/18 00:16	CHS	A
Ethylbenzene	ND		ug/m3	0.9	TO-15			1/30/18 00:16	CHS	A
Isopropylbenzene	ND		ug/m3	1	TO-15			1/30/18 00:16	CHS	A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15			1/30/18 00:16	CHS	A
Naphthalene	ND		ug/m3	1	TO-15			1/30/18 00:16	CHS	A
Toluene	2		ug/m3	0.8	TO-15			1/30/18 00:16	CHS	A
Total Xylenes	3		ug/m3	3	TO-15			1/30/18 00:16	CHS	A
1,2,4-Trimethylbenzene	2		ug/m3	1	TO-15			1/30/18 00:16	CHS	A
1,3,5-Trimethylbenzene	ND		ug/m3	1	TO-15			1/30/18 00:16	CHS	A
Benzene	ND		ppbv	0.20	TO-15			1/30/18 00:16	CHS	A
Ethylbenzene	ND		ppbv	0.20	TO-15			1/30/18 00:16	CHS	A
Isopropylbenzene	ND		ppbv	0.20	TO-15			1/30/18 00:16	CHS	A
Methyl t-Butyl Ether	ND		ppbv	0.20	TO-15			1/30/18 00:16	CHS	A
Naphthalene	ND		ppbv	0.20	TO-15			1/30/18 00:16	CHS	A
Toluene	0.61		ppbv	0.20	TO-15			1/30/18 00:16	CHS	A
Total Xylenes	0.80		ppbv	0.60	TO-15			1/30/18 00:16	CHS	A
1,2,4-Trimethylbenzene	0.35		ppbv	0.20	TO-15			1/30/18 00:16	CHS	A
1,3,5-Trimethylbenzene	ND		ppbv	0.20	TO-15			1/30/18 00:16	CHS	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
4-Bromofluorobenzene (S)	100		%	70 - 130	TO-15			1/30/18 00:16	CHS	A



Ms. Amy K Borden  
Project Coordinator

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34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

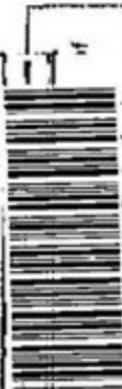
Environmental

# AIR ANALYSIS

## CHAIN-OF-CUSTODY/FIELD TEST DATA SHEET

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/SAMPLER.  
INSTRUCTIONS ON THE BACK.

COC #:  
ALS Quo



\* 2 2 - 9 1 0 4 4 \*

1. CLIENT INFORMATION		2. ANALYSES/METHOD REQUESTED		3. LABORATORY	
Client Name/Address: <b>LABELLA ASSOCIATES</b> <b>1000 DUNHAM DR. SUITE B DUNHAM PA 18012</b>		STD LIST 1. <input checked="" type="checkbox"/> X 2. <input checked="" type="checkbox"/> X 3. <input checked="" type="checkbox"/> X 4. <input type="checkbox"/> 5. <input type="checkbox"/> 6. <input type="checkbox"/> 7. <input type="checkbox"/> 8. <input type="checkbox"/> 9. <input type="checkbox"/> 10. <input type="checkbox"/>		LABORATORY CANISTER CERTIFIED BY: GC/MS Analyst Signature: <i>Paul K. Dismore</i> CANISTERS PREPARED BY: Name: <i>Carol H. Simms</i> Title: <i>AIR ANALYST</i> Custody Sealed Date/Time: <i>1/19/18 0830</i> Date Shipped to Client: <i>1/19/18</i> Custody Seal #s: <i>2857</i> Courier/Tracking #:	
Contact: <b>MARTIN GIBBELLON</b> Phone #:		OTHER 1. <input checked="" type="checkbox"/> UNGRADED 2. <input checked="" type="checkbox"/> UNGRADED 3. <input checked="" type="checkbox"/> UNGRADED 4. <input type="checkbox"/> 5. <input type="checkbox"/> 6. <input type="checkbox"/> 7. <input type="checkbox"/> 8. <input type="checkbox"/> 9. <input type="checkbox"/> 10. <input type="checkbox"/>		RECEIVING INFORMATION: COC Complete/Accurate? <input type="checkbox"/> Labels Complete/Accurate? <input type="checkbox"/> Cont. In Good Cond.? <input type="checkbox"/> Custody Seals Present? <input type="checkbox"/> (If present) Seals Intact? <input type="checkbox"/> Returned in <u>5</u> 15 days? <input type="checkbox"/> Custody Seal #s: <input type="checkbox"/> Courier/Tracking #: <input type="checkbox"/>	
Project Name/Address: <b>QUINN'S CAFE STOP 271853</b> Bill To: <b>LYNN HANICHAK</b> TAT <input checked="" type="checkbox"/> Normal Standard TAT is 10-12 business days. <input checked="" type="checkbox"/> Rush-TAT subject to ALS approval and surcharges. Ship Method: <input checked="" type="checkbox"/> <i>major delivery</i> Email: <i>major@alltel.com</i> Fax: <i>212-666-6666</i>		APPROPRIATE TEST CODE/ANALYTE LIST: 1. <input type="checkbox"/> 2. <input type="checkbox"/> 3. <input type="checkbox"/> 4. <input type="checkbox"/> 5. <input type="checkbox"/> 6. <input type="checkbox"/> 7. <input type="checkbox"/> 8. <input type="checkbox"/> 9. <input type="checkbox"/> 10. <input type="checkbox"/>		LABORATORY CANISTER CERTIFIED BY: GC/MS Analyst Signature: <i>Paul K. Dismore</i> CANISTERS PREPARED BY: Name: <i>Carol H. Simms</i> Title: <i>AIR ANALYST</i> Custody Sealed Date/Time: <i>1/19/18 0830</i> Date Shipped to Client: <i>1/19/18</i> Custody Seal #s: <i>2857</i> Courier/Tracking #: <input type="checkbox"/>	

4. FIELD DATA SHEET											
SAMPLE INFORMATION FOR TO-15											
Sample Description/Location (as it will appear on the lab report)	Sample Type: Choose one: <input type="checkbox"/> Ambient Air <input type="checkbox"/> Exhaust <input type="checkbox"/> Other	Sample Date	Start Time	Stop Time	Temp Deg C	Flow Controller No.	Canister Pressure (Psi)	Canister Certification		Flow Controller Setpoint (mL/min)	
								File	Out		
1. 116 - 0124 - SS1	SS	24 Jan 18	0828	0913		1053	40.95534	27.5	0.0	21010815	21.0
2. 116 - 0124 - SS1 DUP	SS	24 Jan 18	0828	1226		7781	72.88477	30.0	3.5	29.7	21.1
3. 116 - 0124 - SS2	SS	24 Jan 18	0808	1208		1125	46.512	29.0	4.0	29.6	21.1
4.											
5.											
6.											
7.											
8.											
9.											
10.											

5. SAMPLED BY (Please Print):				6. PROJECT INFORMATION				State Samples	
Relinquished By / Company Name: <b>MATHEW MOORE</b>				Data Deliverables: <input type="checkbox"/> Standard <input type="checkbox"/> DOD <input checked="" type="checkbox"/> TO-15				Collected In: <input type="checkbox"/> NY <input type="checkbox"/> NJ <input checked="" type="checkbox"/> PA <input type="checkbox"/> NC <input type="checkbox"/> other	
Relinquished By / Company Name: <i>Matthew Moore - Labelle</i>				EDS- Type: <input type="checkbox"/> Pickup <input type="checkbox"/> Labor					
Date: <i>25 Jan 18</i>				ALS Field Services: <input type="checkbox"/> Pickup <input type="checkbox"/> Labor					
Date: <i>25 Jan 18</i>				Other: <input type="checkbox"/>					
Date: <i>25 Jan 18</i>									
Date: <i>25 Jan 18</i>									
Date: <i>25 Jan 18</i>									
Date: <i>25 Jan 18</i>									
Date: <i>25 Jan 18</i>									
Date: <i>25 Jan 18</i>									

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057  
Phone: 1-717-944-5541  
Rev 03Mar2011

# ALS-Middletown

## TO-15 Sample Receipt Checklist

Client ID: LA BELLA Project Name/#: QUINAS CAFE  
 Horizon WO#: \_\_\_\_\_ Date/Time received: \_\_\_\_\_  
 Sample Delivery Group ID: \_\_\_\_\_ Received By: \_\_\_\_\_  
 Log In By/Date: \_\_\_\_\_ Project Manager Review (date) \_\_\_\_\_  
 (signature) \_\_\_\_\_ (signature) \_\_\_\_\_  
 Number of Shipping containers received: 1 Courier: FED Ex

Circle the response below as appropriate.

1. Did kit(s) come with a shipping slip (airbill, etc.)? YES NO NA  
 If YES, enter airbill numbers: 7713 1360 3574

### Shipping Container Information:

2. Were shipping containers received without signs of tampering? YES NO NA  
 Comments: \_\_\_\_\_  
 3. Were custody seals present and intact? YES NO NA  
 4. Were custody seals numbers present? YES NO NA  
 List Custody Seal Numbers: \_\_\_\_\_

### Sample Condition:

5. Were sample containers received intact without signs of tampering? YES NO NA  
 Comments: \_\_\_\_\_

### Chain of Custody:

6. Did COC arrive with the samples? YES NO NA  
 7. Do sample ID/Sample Description(s) match samples submitted? YES NO NA  
 8. Is date and time of collection listed on the COC for all samples? YES NO NA  
 9. Is identification of sampler on COC? YES NO NA  
 10. Are requested test method(s) on COC? YES NO NA  
 11. Are necessary signatures on COC? YES NO NA  
 12. Was Internal COC initiated? (should always be YES) YES NO NA

### Sample Integrity Usability:

13. Do sample containers match the COC? YES NO NA  
 14. Were sample canisters received within 15 days of shipment to client? YES NO NA

### Anomalies or Non-Conformances:

## APPENDIX T-4

### Laboratory Analytical Data Sheets

Sub-Slab Vapor Sampling Activities – April 2018



April 27, 2018

Mr. Marty Gilgallon  
LaBella-Dunmore  
1000 Dunham Drive  
Suite B  
Scranton, PA 18512

## Certificate of Analysis

Revised Report - 4/27/2018 12:17:02 PM - See workorder comment section for explanation

Project Name:	<b>Quinns Cafe Stop/2171853</b>	Workorder:	<b>2310561</b>
Purchase Order:		Workorder ID:	<b>Quinns Cafe Stop/2171853</b>

Dear Mr. Gilgallon:

Enclosed are the analytical results for samples received by the laboratory on Monday, April 23, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Dean Cruciani, Mr. Kevin Cucura

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*



Ms. Amy K Borden  
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 2310561 Quinns Cafe Stop/2171853

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2310561001	116-0419-VP1	Air	4/19/2018 11:20	4/23/2018 16:07	Collected by Client
2310561002	116-0419-VP2	Air	4/19/2018 11:15	4/23/2018 16:07	Collected by Client
2310561003	116-0419-VP2 DUP	Air	4/19/2018 11:15	4/23/2018 16:07	Collected by Client

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## SAMPLE SUMMARY

Workorder: 2310561 Quinns Cafe Stop/2171853

### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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**ALS Environmental**



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34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ [www.alsglobal.com](http://www.alsglobal.com)

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NELAP Certifications: NJ PA010, NY 11759, PA 22-293 DoD ELAP: A2LA 0818.01  
State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

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## PROJECT SUMMARY

Workorder: 2310561 Quinns Cafe Stop/2171853

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### Workorder Comments

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Report modified to report unleaded parameters only. AKB 04/27/18

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### ANALYTICAL RESULTS

Workorder: 2310561 Quinns Cafe Stop/2171853

Lab ID: 2310561001  
Sample ID: 116-0419-VP1

Date Collected: 4/19/2018 11:20 Matrix: Air  
Date Received: 4/23/2018 16:07

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS @ STP</b>										
Benzene	1		ug/m3	0.6	TO-15			4/24/18 15:03	CHS	A
Ethylbenzene	21		ug/m3	0.9	TO-15			4/24/18 15:03	CHS	A
Isopropylbenzene	ND		ug/m3	1	TO-15			4/24/18 15:03	CHS	A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15			4/24/18 15:03	CHS	A
Naphthalene	ND		ug/m3	1	TO-15			4/24/18 15:03	CHS	A
Toluene	8		ug/m3	0.8	TO-15			4/24/18 15:03	CHS	A
Total Xylenes	99		ug/m3	3	TO-15			4/24/18 15:03	CHS	A
1,2,4-Trimethylbenzene	2		ug/m3	1	TO-15			4/24/18 15:03	CHS	A
1,3,5-Trimethylbenzene	ND		ug/m3	1	TO-15			4/24/18 15:03	CHS	A
Benzene	0.31		ppbv	0.20	TO-15			4/24/18 15:03	CHS	A
Ethylbenzene	4.8		ppbv	0.20	TO-15			4/24/18 15:03	CHS	A
Isopropylbenzene	ND		ppbv	0.20	TO-15			4/24/18 15:03	CHS	A
Methyl t-Butyl Ether	ND		ppbv	0.20	TO-15			4/24/18 15:03	CHS	A
Naphthalene	ND		ppbv	0.20	TO-15			4/24/18 15:03	CHS	A
Toluene	2.1		ppbv	0.20	TO-15			4/24/18 15:03	CHS	A
Total Xylenes	23		ppbv	0.60	TO-15			4/24/18 15:03	CHS	A
1,2,4-Trimethylbenzene	0.34		ppbv	0.20	TO-15			4/24/18 15:03	CHS	A
1,3,5-Trimethylbenzene	ND		ppbv	0.20	TO-15			4/24/18 15:03	CHS	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
4-Bromofluorobenzene (S)	95		%	70 - 130	TO-15			4/24/18 15:03	CHS	A



Ms. Amy K Borden  
Project Coordinator

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### ANALYTICAL RESULTS

Workorder: 2310561 Quinns Cafe Stop/2171853

Lab ID: 2310561002  
Sample ID: 116-0419-VP2

Date Collected: 4/19/2018 11:15 Matrix: Air  
Date Received: 4/23/2018 16:07

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS @ STP</b>										
Benzene	0.7		ug/m3	0.6	TO-15			4/24/18 15:50	CHS	A
Ethylbenzene	20		ug/m3	0.9	TO-15			4/24/18 15:50	CHS	A
Isopropylbenzene	ND		ug/m3	1	TO-15			4/24/18 15:50	CHS	A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15			4/24/18 15:50	CHS	A
Naphthalene	ND		ug/m3	1	TO-15			4/24/18 15:50	CHS	A
Toluene	7		ug/m3	0.8	TO-15			4/24/18 15:50	CHS	A
Total Xylenes	100		ug/m3	3	TO-15			4/24/18 15:50	CHS	A
1,2,4-Trimethylbenzene	3		ug/m3	1	TO-15			4/24/18 15:50	CHS	A
1,3,5-Trimethylbenzene	ND		ug/m3	1	TO-15			4/24/18 15:50	CHS	A
Benzene	0.22		ppbv	0.20	TO-15			4/24/18 15:50	CHS	A
Ethylbenzene	4.6		ppbv	0.20	TO-15			4/24/18 15:50	CHS	A
Isopropylbenzene	ND		ppbv	0.20	TO-15			4/24/18 15:50	CHS	A
Methyl t-Butyl Ether	ND		ppbv	0.20	TO-15			4/24/18 15:50	CHS	A
Naphthalene	ND		ppbv	0.20	TO-15			4/24/18 15:50	CHS	A
Toluene	1.8		ppbv	0.20	TO-15			4/24/18 15:50	CHS	A
Total Xylenes	24		ppbv	0.60	TO-15			4/24/18 15:50	CHS	A
1,2,4-Trimethylbenzene	0.53		ppbv	0.20	TO-15			4/24/18 15:50	CHS	A
1,3,5-Trimethylbenzene	ND		ppbv	0.20	TO-15			4/24/18 15:50	CHS	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
4-Bromofluorobenzene (S)	97		%	70 - 130	TO-15			4/24/18 15:50	CHS	A



Ms. Amy K Borden  
Project Coordinator

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### ANALYTICAL RESULTS

Workorder: 2310561 Quinns Cafe Stop/2171853

Lab ID: 2310561003  
Sample ID: 116-0419-VP2 DUP

Date Collected: 4/19/2018 11:15 Matrix: Air  
Date Received: 4/23/2018 16:07

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS @ STP</b>										
Benzene	0.7		ug/m3	0.6	TO-15			4/24/18 16:36	CHS	A
Ethylbenzene	22		ug/m3	0.9	TO-15			4/24/18 16:36	CHS	A
Isopropylbenzene	ND		ug/m3	1	TO-15			4/24/18 16:36	CHS	A
Methyl t-Butyl Ether	ND		ug/m3	0.7	TO-15			4/24/18 16:36	CHS	A
Naphthalene	1		ug/m3	1	TO-15			4/24/18 16:36	CHS	A
Toluene	7		ug/m3	0.8	TO-15			4/24/18 16:36	CHS	A
Total Xylenes	120		ug/m3	3	TO-15			4/24/18 16:36	CHS	A
1,2,4-Trimethylbenzene	4		ug/m3	1	TO-15			4/24/18 16:36	CHS	A
1,3,5-Trimethylbenzene	ND		ug/m3	1	TO-15			4/24/18 16:36	CHS	A
Benzene	0.23		ppbv	0.20	TO-15			4/24/18 16:36	CHS	A
Ethylbenzene	5.0		ppbv	0.20	TO-15			4/24/18 16:36	CHS	A
Isopropylbenzene	ND		ppbv	0.20	TO-15			4/24/18 16:36	CHS	A
Methyl t-Butyl Ether	ND		ppbv	0.20	TO-15			4/24/18 16:36	CHS	A
Naphthalene	0.26		ppbv	0.20	TO-15			4/24/18 16:36	CHS	A
Toluene	2.0		ppbv	0.20	TO-15			4/24/18 16:36	CHS	A
Total Xylenes	27		ppbv	0.60	TO-15			4/24/18 16:36	CHS	A
1,2,4-Trimethylbenzene	0.72		ppbv	0.20	TO-15			4/24/18 16:36	CHS	A
1,3,5-Trimethylbenzene	ND		ppbv	0.20	TO-15			4/24/18 16:36	CHS	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
4-Bromofluorobenzene (S)	97		%	70 - 130	TO-15			4/24/18 16:36	CHS	A



Ms. Amy K Borden  
Project Coordinator

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34 Dogwood Lane  
Middletown, PA 17057  
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# AIR ANALYSIS

## CHAIN-OF-CUSTODY/FIELD TEST DATA SHEET

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT/SAMPLER.

### Environmetal

INSTRUCTIONS ON THE BACK.

1. CLIENT INFORMATION		2. ANALYSES/METHOD REQUESTED		3. LABORATORY INFORMATION	
Client Name/Address: <b>LABELLA ASSOCIATES</b>		LABORATORY CANISTER CERTIFIED BY:		RECEIVING INFORMATION:	
Contact: <b>200 DUNHAM DRIVE SUITE B, DUNMORE PA</b>		GC/MS Analyst Signature: <i>[Signature]</i>		COC Complete/Accurate? <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N Initial <i>W</i>	
Phone: <b>570-241-4020</b>		CANISTERS PREPARED BY: <i>[Signature]</i>		Labels Complete/Accurate? <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	
Project Name/ID: <b>QUINN'S CARESTOP 2171853</b>		Name: <b>Carol H. Simon</b>		Canister in Good Cond? <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	
Bill To: <b>LYNN HANICHAK</b>		Title: <b>AIR ANALYST</b>		Custody Seals Present? <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	
TAT <input checked="" type="checkbox"/> Homebased Standard TAT is 10-12 business days.		Custody Sealed Date/Time: <b>4/19/18 0830</b>		If present Seals Intact? <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	
TAT <input type="checkbox"/> Fresh TAT subject to ALS approval and surcharges.		Date Shipped to Client: <b>4/19/18</b>		Returned in 15 days? <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N	
Can Fresh: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N		Custody Seal #1: <b>2921</b>		Custody Seal #2: <b>720 2746 8440</b>	
Email: <b>Y. majigallon@labella.com</b>		Custody Seal #3: <b>2921</b>		Courier/Tracking #: <b>720 2746 8440</b>	
Fax: <b>Y. No.</b>					

4. FIELD DATA SHEET															
SAMPLE INFORMATION FOR TO-15															
Sample Description/Location (as it will appear on the lab report)	Sample Type	Sample Date	Start Time	Stop Time	Temp Deg C	1L	6L	Canister No.	Flow Controller No.						
										Pressure (Psi)	Start	Stop	Canister Certification File	Canister Pressure (Psi)	Flow Controller Setpoint (mL/min)
1 116-0419-VP1	SS	17 APR 2018 0720	1120					X 1840	ALS1 #2	-28.0	-4.0	21032706	-29.7	-5.0	21.1
2 116-0419-VP2	SS	17 APR 2018 1115						X 1831	72884956	-30.0	-8.0			-5.5	21.3
3 116-0419-VP2 DUP	SS	17 APR 2018 1115						X 11793	AD195530	-28.5	-5.0	21032808		-6.0	81.1
4															
5															
6															
7															
8															
9															
10															

5. SAMPLED BY (Please Print):		LOGGED BY (signature):		REVIEWED BY (signature):	
Relinquished By / Company Name	Date	Time	Date	Time	Date
<b>MATTHEW D. MORELL</b>					
<i>Matthew D. Morell</i>	<b>17 APR 2018</b>	<b>1400</b>	<b>21 APR 2018</b>	<b>0840</b>	<b>1400</b>

6. PROJECT INFORMATION		State Samples Collected In	
Standard	CLP-like	NY	PA
<input checked="" type="checkbox"/> Standard	<input checked="" type="checkbox"/> CLP-like	<input type="checkbox"/> NY	<input checked="" type="checkbox"/> PA
<input type="checkbox"/> DOD	<input checked="" type="checkbox"/> TO-15	<input type="checkbox"/> NJ	<input type="checkbox"/> NC
<input type="checkbox"/> Other		<input type="checkbox"/> other	
EDDI-Type: <input type="checkbox"/> Pickup <input type="checkbox"/> Labor			
ALS Field Services: <input type="checkbox"/> Pickup <input type="checkbox"/> Labor			
Other: <b>10</b>			

Phone: 1-717-944-5541 ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

Rev 03Mar2011

# ALS-Middletown

## TO-15 Sample Receipt Checklist

Client ID: LaBella Associates Project Name/#: Quinn's Cafe stop 2171853  
 Horizon WO#: \_\_\_\_\_ Date/Time received: 4-23-18 1607  
 Sample Delivery Group ID: \_\_\_\_\_ Received By: Chelsey Wickham  
 Log In By/Date: \_\_\_\_\_ Project Manager Review (date) \_\_\_\_\_  
 (signature) \_\_\_\_\_ (signature) \_\_\_\_\_  
 Number of Shipping containers received: \_\_\_\_\_ Courier: \_\_\_\_\_

Circle the response below as appropriate.

1. Did kit(s) come with a shipping slip (airbill, etc.)? YES NO NA  
 If YES, enter airbill numbers: 7720 2746 8940

### Shipping Container Information:

2. Were shipping containers received without signs of tampering? YES NO NA  
 Comments: \_\_\_\_\_  
 3. Were custody seals present and intact? YES NO NA  
 4. Were custody seals numbers present? YES NO NA  
 List Custody Seal Numbers: \_\_\_\_\_

### Sample Condition:

5. Were sample containers received intact without signs of tampering? YES NO NA  
 Comments: \_\_\_\_\_

### Chain of Custody:

6. Did COC arrive with the samples? YES NO NA  
 7. Do sample ID/Sample Description(s) match samples submitted? YES NO NA  
 8. Is date and time of collection listed on the COC for all samples? YES NO NA  
 9. Is identification of sampler on COC? YES NO NA  
 10. Are requested test method(s) on COC? YES NO NA  
 11. Are necessary signatures on COC? YES NO NA  
 12. Was Internal COC initiated? (should always be YES) YES NO NA

### Sample Integrity Usability:

13. Do sample containers match the COC? YES NO NA  
 14. Were sample canisters received within 15 days of shipment to client? YES NO NA

### Anomalies or Non-Conformances:

APPENDIX T-5

Laboratory Analytical Data Sheets

Sub-Slab Vapor Sampling Activities – August 2018





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F: +1 805 526 7270  
[www.alsglobal.com](http://www.alsglobal.com)

## LABORATORY REPORT

August 22, 2018

Martin Gilgallon  
Labella Associates, PC  
1000 Dunhame Drive, Suite B  
Dunmore, PA 18512

**RE: Quinn's Cafe Stop / 2171853**

Dear Martin:

Enclosed are the results of the samples submitted to our laboratory on August 9, 2018. For your reference, these analyses have been assigned our service request number P1804104.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at [www.alsglobal.com](http://www.alsglobal.com). Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

**ALS | Environmental**

By Kate Kaneko at 8:37 am, 08/23/18

Kate Kaneko  
Project Manager



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[www.alsglobal.com](http://www.alsglobal.com)

Client: Labella Associates, PC  
Project: Quinn's Cafe Stop / 2171853

Service Request No: P1804104

---

## CASE NARRATIVE

The samples were received intact under chain of custody on August 9, 2018 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

### Volatile Organic Compound Analysis

The samples were analyzed for selected volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The containers were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.1 compliance canisters were cleaned to <1/2 the MRL. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

---

*The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.*

*Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.*





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# ALS Environmental – Simi Valley

## CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
Alaska DEC	<a href="http://dec.alaska.gov/eh/lab.aspx">http://dec.alaska.gov/eh/lab.aspx</a>	17-019
Arizona DHS	<a href="http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home">http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home</a>	AZ0694
Florida DOH (NELAP)	<a href="http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html">http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html</a>	E871020
Louisiana DEQ (NELAP)	<a href="http://www.deq.louisiana.gov/page/la-lab-accreditation">http://www.deq.louisiana.gov/page/la-lab-accreditation</a>	05071
Maine DHHS	<a href="http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml">http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml</a>	2016036
Minnesota DOH (NELAP)	<a href="http://www.health.state.mn.us/accreditation">http://www.health.state.mn.us/accreditation</a>	1347317
New Jersey DEP (NELAP)	<a href="http://www.nj.gov/dep/enforcement/oqa.html">http://www.nj.gov/dep/enforcement/oqa.html</a>	CA009
New York DOH (NELAP)	<a href="http://www.wadsworth.org/labcert/elap/elap.html">http://www.wadsworth.org/labcert/elap/elap.html</a>	11221
Oregon PHD (NELAP)	<a href="http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx">http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx</a>	4068-005
Pennsylvania DEP	<a href="http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx">http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx</a>	68-03307 (Registration)
PJLA (DoD ELAP)	<a href="http://www.pjllabs.com/search-accredited-labs">http://www.pjllabs.com/search-accredited-labs</a>	65818 (Testing)
Texas CEQ (NELAP)	<a href="http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html">http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html</a>	T104704413-18-9
Utah DOH (NELAP)	<a href="http://health.utah.gov/lab/lab_cert_env">http://health.utah.gov/lab/lab_cert_env</a>	CA016272017-8
Washington DOE	<a href="http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html">http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html</a>	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at [www.alsglobal.com](http://www.alsglobal.com), or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

# ALS ENVIRONMENTAL

## DETAIL SUMMARY REPORT

Client: Labella Associates, PC  
Project ID: Quinn's Cafe Stop / 2171853

Service Request: P1804104

Date Received: 8/9/2018  
Time Received: 09:30

TO-15 - VOC Cans

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pfi (psig)	
116-0803-VP1	P1804104-001	Air	8/3/2018	09:15	AS00548	-0.13	3.66	X
116-0803-VP2	P1804104-002	Air	8/3/2018	09:15	AS00658	-2.05	3.75	X
116-0803-VP2 DUP	P1804104-003	Air	8/3/2018	00:00	AS00879	-2.52	3.65	X

## Air - Chain of Custody Record & Analytical Service Request

2655 Park Center Drive, Suite A  
Simi Valley, California 93065  
Phone (805) 526-7161  
Fax (805) 526-7270

Page { of

[illegible]

# **ALS Environmental Sample Acceptance Check Form**

Client: Labella Associates, PC Work order: P1804104  
 Project: Quinn's Cafe Stop / 2171853  
 Sample(s) received on: 8/9/18 Date opened: 8/9/18 by: AARON GONZALEZ

**Note:** This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

- |   | <u>Yes</u>                          | <u>No</u>                           | <u>N/A</u>                          |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1 Were <b>sample containers</b> properly marked with client sample ID?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 2 Did <b>sample containers</b> arrive in good condition?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 3 Were <b>chain-of-custody</b> papers used and filled out?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 4 Did <b>sample container labels</b> and/or tags agree with custody papers?                                     | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 5 Was <b>sample volume</b> received adequate for analysis?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 6 Are samples within specified holding times?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 7 Was proper <b>temperature</b> (thermal preservation) of cooler at receipt adhered to?                         | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 8 Were <b>custody seals</b> on outside of cooler/Box/Container?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Location of seal(s)? _____ Sealing Lid?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were signature and date included?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were seals intact?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 9 Do containers have appropriate <b>preservation</b> , according to method/SOP or Client specified information? | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Is there a client indication that the submitted samples are <b>pH</b> preserved?                                | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were <b>VOA vials</b> checked for presence/absence of air bubbles?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Does the client/method/SOP require that the analyst check the sample pH and <u>if necessary</u> alter it?       | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 10 <b>Tubes:</b> Are the tubes capped and intact?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 11 <b>Badges:</b> Are the badges properly capped and intact?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Are dual bed badges separated and individually capped and intact?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1804104-001.01	6.0 L Silonite Can					
P1804104-002.01	6.0 L Silonite Can					
P1804104-003.01	6.0 L Silonite Can					

Explain any discrepancies: (include lab sample ID numbers): \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Labella Associates, PC  
**Client Sample ID:** 116-0803-VP1  
**Client Project ID:** Quinn's Cafe Stop / 2171853

ALS Project ID: P1804104  
 ALS Sample ID: P1804104-001

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9  
**Analyst:** Simon Cao  
**Sample Type:** 6.0 L Silonite Canister  
**Test Notes:**  
**Container ID:** AS00548

**Date Collected:** 8/3/18  
**Date Received:** 8/9/18  
**Date Analyzed:** 8/13/18  
**Volume(s) Analyzed:** 1.00 Liter(s)

**Initial Pressure (psig):** -0.13      **Final Pressure (psig):** 3.66

**Container Dilution Factor:** 1.26

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
1634-04-4	Methyl tert-Butyl Ether	ND	0.68	ND	0.19	
71-43-2	Benzene	ND	0.67	ND	0.21	
108-88-3	Toluene	<b>3.4</b>	0.67	<b>0.89</b>	0.18	
100-41-4	Ethylbenzene	ND	0.67	ND	0.15	
179601-23-1	m,p-Xylenes	<b>2.7</b>	1.4	<b>0.63</b>	0.32	
95-47-6	o-Xylene	<b>0.99</b>	0.67	<b>0.23</b>	0.15	
98-82-8	Cumene	ND	0.67	ND	0.14	
108-67-8	1,3,5-Trimethylbenzene	ND	0.66	ND	0.13	
95-63-6	1,2,4-Trimethylbenzene	<b>1.2</b>	0.67	<b>0.25</b>	0.14	
91-20-3	Naphthalene	ND	0.67	ND	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.



# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Labella Associates, PC  
**Client Sample ID:** 116-0803-VP2  
**Client Project ID:** Quinn's Cafe Stop / 2171853

ALS Project ID: P1804104  
 ALS Sample ID: P1804104-002

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9  
 Analyst: Simon Cao  
 Sample Type: 6.0 L Silonite Canister  
 Test Notes:  
 Container ID: AS00658

Date Collected: 8/3/18  
 Date Received: 8/9/18  
 Date Analyzed: 8/13/18  
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.05 Final Pressure (psig): 3.75

Container Dilution Factor: 1.46

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
1634-04-4	Methyl tert-Butyl Ether	ND	0.79	ND	0.22	
71-43-2	Benzene	ND	0.77	ND	0.24	
108-88-3	Toluene	15	0.77	4.0	0.21	
100-41-4	Ethylbenzene	1.6	0.77	0.37	0.18	
179601-23-1	m,p-Xylenes	6.6	1.6	1.5	0.37	
95-47-6	o-Xylene	2.1	0.77	0.49	0.18	
98-82-8	Cumene	ND	0.77	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	1.2	0.76	0.24	0.15	
95-63-6	1,2,4-Trimethylbenzene	3.8	0.77	0.78	0.16	
91-20-3	Naphthalene	ND	0.77	ND	0.15	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Labella Associates, PC  
**Client Sample ID:** 116-0803-VP2 DUP  
**Client Project ID:** Quinn's Cafe Stop / 2171853

ALS Project ID: P1804104  
 ALS Sample ID: P1804104-003

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9  
**Analyst:** Simon Cao  
**Sample Type:** 6.0 L Silonite Canister  
**Test Notes:**  
**Container ID:** AS00879

**Date Collected:** 8/3/18  
**Date Received:** 8/9/18  
**Date Analyzed:** 8/13/18  
**Volume(s) Analyzed:** 1.00 Liter(s)

**Initial Pressure (psig):** -2.52      **Final Pressure (psig):** 3.65

**Container Dilution Factor:** 1.51

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
1634-04-4	Methyl tert-Butyl Ether	ND	0.82	ND	0.23	
71-43-2	Benzene	1.6	0.80	0.50	0.25	
108-88-3	Toluene	22	0.80	5.7	0.21	
100-41-4	Ethylbenzene	3.8	0.80	0.87	0.18	
179601-23-1	m,p-Xylenes	17	1.7	3.8	0.38	
95-47-6	o-Xylene	5.5	0.80	1.3	0.18	
98-82-8	Cumene	ND	0.80	ND	0.16	
108-67-8	1,3,5-Trimethylbenzene	1.5	0.79	0.31	0.16	
95-63-6	1,2,4-Trimethylbenzene	6.3	0.80	1.3	0.16	
91-20-3	Naphthalene	1.1	0.80	0.21	0.15	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Labella Associates, PC  
**Client Sample ID:** Method Blank  
**Client Project ID:** Quinn's Cafe Stop / 2171853

ALS Project ID: P1804104  
 ALS Sample ID: P180813-MB

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9  
**Analyst:** Simon Cao  
**Sample Type:** 6.0 L Silonite Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 8/13/18  
**Volume(s) Analyzed:** 1.00 Liter(s)

Container Dilution Factor: 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
1634-04-4	Methyl tert-Butyl Ether	ND	0.54	ND	0.15	
71-43-2	Benzene	ND	0.53	ND	0.17	
108-88-3	Toluene	ND	0.53	ND	0.14	
100-41-4	Ethylbenzene	ND	0.53	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.1	ND	0.25	
95-47-6	o-Xylene	ND	0.53	ND	0.12	
98-82-8	Cumene	ND	0.53	ND	0.11	
108-67-8	1,3,5-Trimethylbenzene	ND	0.52	ND	0.11	
95-63-6	1,2,4-Trimethylbenzene	ND	0.53	ND	0.11	
91-20-3	Naphthalene	ND	0.53	ND	0.10	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

# ALS ENVIRONMENTAL

## SURROGATE SPIKE RECOVERY RESULTS

Page 1 of 1

**Client:** Labella Associates, PC  
**Client Project ID:** Quinn's Cafe Stop / 2171853

ALS Project ID: P1804104

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9  
**Analyst:** Simon Cao  
**Sample Type:** 6.0 L Silonite Canister(s)  
**Test Notes:**

**Date(s) Collected:** 8/3/18  
**Date(s) Received:** 8/9/18  
**Date(s) Analyzed:** 8/13/18

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4	Toluene-d8	Bromofluorobenzene	Acceptance Limits	Data Qualifier
		Percent Recovered	Percent Recovered	Percent Recovered		
Method Blank	P180813-MB	123	105	92	70-130	
Lab Control Sample	P180813-LCS	100	104	93	70-130	
116-0803-VP1	P1804104-001	128	105	93	70-130	
116-0803-VP2	P1804104-002	121	105	93	70-130	
116-0803-VP2 DUP	P1804104-003	120	104	93	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

# ALS ENVIRONMENTAL

## LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 1

**Client:** Labella Associates, PC  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Quinn's Cafe Stop / 2171853

ALS Project ID: P1804104  
 ALS Sample ID: P180813-LCS

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9  
**Analyst:** Simon Cao  
**Sample Type:** 6.0 L Silonite Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 8/13/18  
**Volume(s) Analyzed:** 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m <sup>3</sup>	Result µg/m <sup>3</sup>	% Recovery	ALS Acceptance Limits	Data Qualifier
1634-04-4	Methyl tert-Butyl Ether	213	207	97	60-123	
71-43-2	Benzene	213	205	96	66-111	
108-88-3	Toluene	211	213	101	66-114	
100-41-4	Ethylbenzene	212	220	104	69-117	
179601-23-1	m,p-Xylenes	424	443	104	67-117	
95-47-6	o-Xylene	211	220	104	67-118	
98-82-8	Cumene	212	223	105	68-116	
108-67-8	1,3,5-Trimethylbenzene	212	223	105	65-117	
95-63-6	1,2,4-Trimethylbenzene	212	226	107	67-124	
91-20-3	Naphthalene	209	174	83	71-146	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.  
 Reported results are shown in concentration units and as a result of the calculation, may vary slightly.



## APPENDIX U

### PNDI Report Receipt & Correspondences



March 3, 2017

U.S. Fish and Wildlife Service  
Pennsylvania Field Office  
Endangered Species Section  
110 Radnor Road, Suite 101  
State College, PA 16801

**CERTIFIED MAIL #7015 0640 0006 3736 4523**

**RE: PNDI Receipt – Further Agency Review:**  
**DK & DK, LLC – Quinn's Café Stop Property;**  
224 Main Street  
Borough of Archbald, Lackawanna County, Pennsylvania  
PADEP Facility ID#35-20617  
USTIF Claim Number: #2016-0136  
Pennsylvania Tectonics Project Number: 26116

Dear Sir / Madam

On March 3, 2017, Pennsylvania Tectonics generated a PNDI Receipt through the Pennsylvania DCNR for the above referenced site located in the Borough of Archbald, Lackawanna County, Pennsylvania. As indicated in the report, further review is required by the U.S. Fish and Wildlife Service. As required, the following information is provided:

- Attachment A: PNDI Receipt (Signed)
- Attachment B: Project Narrative
- Attachment C: Project Figures
- Attachment D: Photograph Log
- Attachment E: Information on Wetlands

I trust this information meets your needs. Please do not hesitate to contact me (570-487-1959) if you have any questions or comments concerning the contents of this information package or the project in general.

Sincerely,

A handwritten signature in black ink, appearing to read "Martin Gilgallon".

Martin Gilgallon, P.G.  
Project Director  
Pennsylvania Tectonics, Incorporated

MG/mg – 26116 / U.S. Fish and Wildlife PNDI Review

Attachments

cc: Pennsylvania Tectonics Project File #26116

**environmental consultants**

7015 0640 0006 3736 4523

**U.S. Postal Service™ 26116 PND5**  
**CERTIFIED MAIL® RECEIPT**  
 Domestic Mail Only

For delivery information, visit our website at [www.usps.com](http://www.usps.com)®.

STATE COLLEGE, PA 16801

Certified Mail Fee \$3.35  
 Extra Services & Fees (check box, add fee as appropriate)  
☒ Return Receipt (hardcopy) \$2.75  
☐ Return Receipt (electronic) \$0.00  
☐ Certified Mail Restricted Delivery \$0.00  
☐ Adult Signature Required \$0.00  
☐ Adult Signature Restricted Delivery \$0.00

Postage \$1.82  
 Total Postage and Fees \$7.92



Sent To: US Fish & Wildlife Service  
 Street and Apt. No., or PO Box No.: 110 Radnor Rd, Suite 101  
 City, State, ZIP+4®: State College Pa 16801

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

US Fish & Wildlife Service  
 110 Radnor Rd, Suite 101  
 State College Pa 16801



9590 9402 1939 6123 1284 52

2. Article Number (Transfer from service label)

7015 0640 0006 3736 4523

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature

*[Signature]* ☐ Agent  
☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

3-6-17

D. Is delivery address different from item 1? ☐ Yes  
 If YES, enter delivery address below: ☐ No

3. Service Type

- |  |   |
|--|---|
| <input type="checkbox"/> Adult Signature                         | <input type="checkbox"/> Priority Mail Express®                     |
| <input type="checkbox"/> Adult Signature Restricted Delivery     | <input type="checkbox"/> Registered Mail™                           |
| <input checked="" type="checkbox"/> Certified Mail®              | <input type="checkbox"/> Registered Mail Restricted Delivery        |
| <input type="checkbox"/> Certified Mail Restricted Delivery      | <input type="checkbox"/> Return Receipt for Merchandise             |
| <input type="checkbox"/> Collect on Delivery                     | <input type="checkbox"/> Signature Confirmation™                    |
| <input type="checkbox"/> Collect on Delivery Restricted Delivery | <input type="checkbox"/> Signature Confirmation Restricted Delivery |
| <input type="checkbox"/> Insured Mail                            |   |
| <input type="checkbox"/> Restricted Delivery                     |   |

PS Form 3811, July 2015 PSN 7530-02-000-9053

Domestic Return Receipt

ATTACHMENT A

PNDI Receipt

## 1. PROJECT INFORMATION

Project Name: **Quinn's Cafe Stop**

Date of Review: **3/3/2017 08:32:05 AM**

Project Category: **Hazardous Waste Clean-up, Site Remediation, and Reclamation, Spill (e.g., oil, chemical)**

Project Area: **0.04 acres**

County(s): **Lackawanna**

Township/Municipality(s): **ARCHBALD**

ZIP Code: **18403**

Quadrangle Name(s): **OLYPHANT**

Watersheds HUC 8: **Upper Susquehanna-Lackawanna**

Watersheds HUC 12: **Rush Brook-Lackawanna River**

Decimal Degrees: **41.490887, -75.551721**

Degrees Minutes Seconds: **41° 29' 27.1921" N, 75° 33' 6.1963" W**

## 2. SEARCH RESULTS


Agency	Results	Response
PA Game Commission	<b>Conservation Measure</b>	<b>No Further Review Required, See Agency Comments</b>
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	<b>Potential Impact</b>	<b>FURTHER REVIEW IS REQUIRED, See Agency Response</b>

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.



## Quinn's Cafe Stop



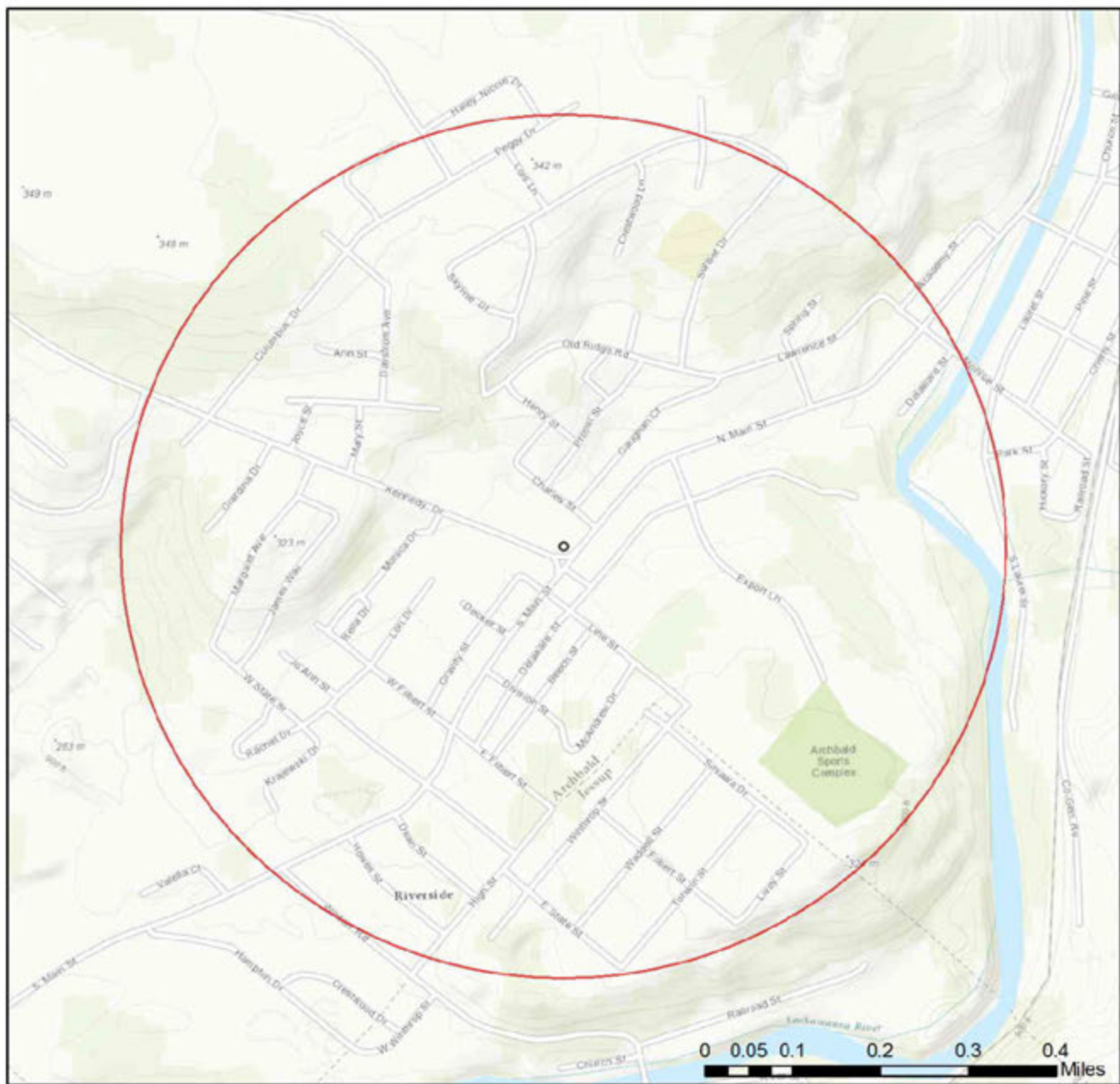
-  Project Boundary
-  Buffered Project Boundary



Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community  
Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user



## Quinn's Cafe Stop



- ☐ Project Boundary
- ☐ Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



## RESPONSE TO QUESTION(S) ASKED

**Q1:** Is tree removal, tree cutting or forest clearing necessary to implement all aspects of this project?

**Your answer is:** No

**Q2:** Will any tree removal be necessary to carry out any part of this project or activity? "Tree removal" is defined as cutting down, harvesting, destroying, trimming, or manipulating trees, saplings, or snags. [Round acres of tree removal up to the nearest acre (e.g., 1.2 acre becomes 2 acres).]

**Your answer is:** No tree removal of any kind will occur.

### 3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

#### PA Game Commission

##### RESPONSE:

Conservation Measure: Potential impacts to state and federally listed species which are under the jurisdiction of both the Pennsylvania Game Commission (PGC) and the U.S. Fish and Wildlife Service may occur as a result of this project. As a result, the PGC defers comments on potential impacts to federally listed species to the U.S. Fish and Wildlife Service. No further coordination with the Pennsylvania Game Commission is required at this time.

#### PA Department of Conservation and Natural Resources

##### RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

#### PA Fish and Boat Commission

##### RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

#### U.S. Fish and Wildlife Service

##### RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).



## WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, upload\* or email\* the following information to the agency(s). Instructions for uploading project materials can be found [here](#). This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies. Alternatively, applicants may email or mail their project materials (see AGENCY CONTACT INFORMATION).

**\*Note:** U.S.Fish and Wildlife Service requires applicants to mail project materials to the USFWS PA field office (see AGENCY CONTACT INFORMATION). USFWS will not accept project materials submitted electronically (by upload or email).

### Check-list of Minimum Materials to be submitted:

\_\_\_\_ Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.

\_\_\_\_ A map with the project boundary and/or a basic site plan (particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)

**In addition to the materials listed above, USFWS REQUIRES the following**

\_\_\_\_ **SIGNED** copy of a Final Project Environmental Review Receipt

### The inclusion of the following information may expedite the review process.

\_\_\_\_ Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)

\_\_\_\_ Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams.

## 4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at <https://conservationexplorer.dcnr.pa.gov/content/resources>.

## 5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page ([www.naturalheritage.state.pa.us](http://www.naturalheritage.state.pa.us)). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

## 6. AGENCY CONTACT INFORMATION

### PA Department of Conservation and Natural Resources

Bureau of Forestry, Ecological Services Section  
400 Market Street, PO Box 8552  
Harrisburg, PA 17105-8552  
Email: [RA-HeritageReview@pa.gov](mailto:RA-HeritageReview@pa.gov)  
Fax: (717) 772-0271

### PA Fish and Boat Commission

Division of Environmental Services  
450 Robinson Lane, Bellefonte, PA 16823  
Email: [RA-FBPACENOTIFY@pa.gov](mailto:RA-FBPACENOTIFY@pa.gov)

### U.S. Fish and Wildlife Service

Pennsylvania Field Office  
Endangered Species Section  
110 Radnor Rd; Suite 101  
State College, PA 16801  
NO Faxes Please

### PA Game Commission

Bureau of Wildlife Habitat Management  
Division of Environmental Planning and Habitat Protection  
2001 Elmerton Avenue, Harrisburg, PA 17110-9797  
Email: [RA-PGC\\_PNDI@pa.gov](mailto:RA-PGC_PNDI@pa.gov)  
NO Faxes Please

## 7. PROJECT CONTACT INFORMATION

Name: MARTIN GUGALLO P.E.  
Company/Business Name: PENNSYLVANIA TECTONICS, INC  
Address: 723 MAIN ST  
City, State, Zip: ARCHBOLD PA 18403  
Phone: (570) 487-1958 Fax: (570) 487-1961  
Email: mgilgallon@tectonics.com

## 8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

applicant/project proponent signature MARTIN GUGALLO

03 March 2017  
date



## ATTACHMENT B

### Project Narrative

## **Project Narrative**

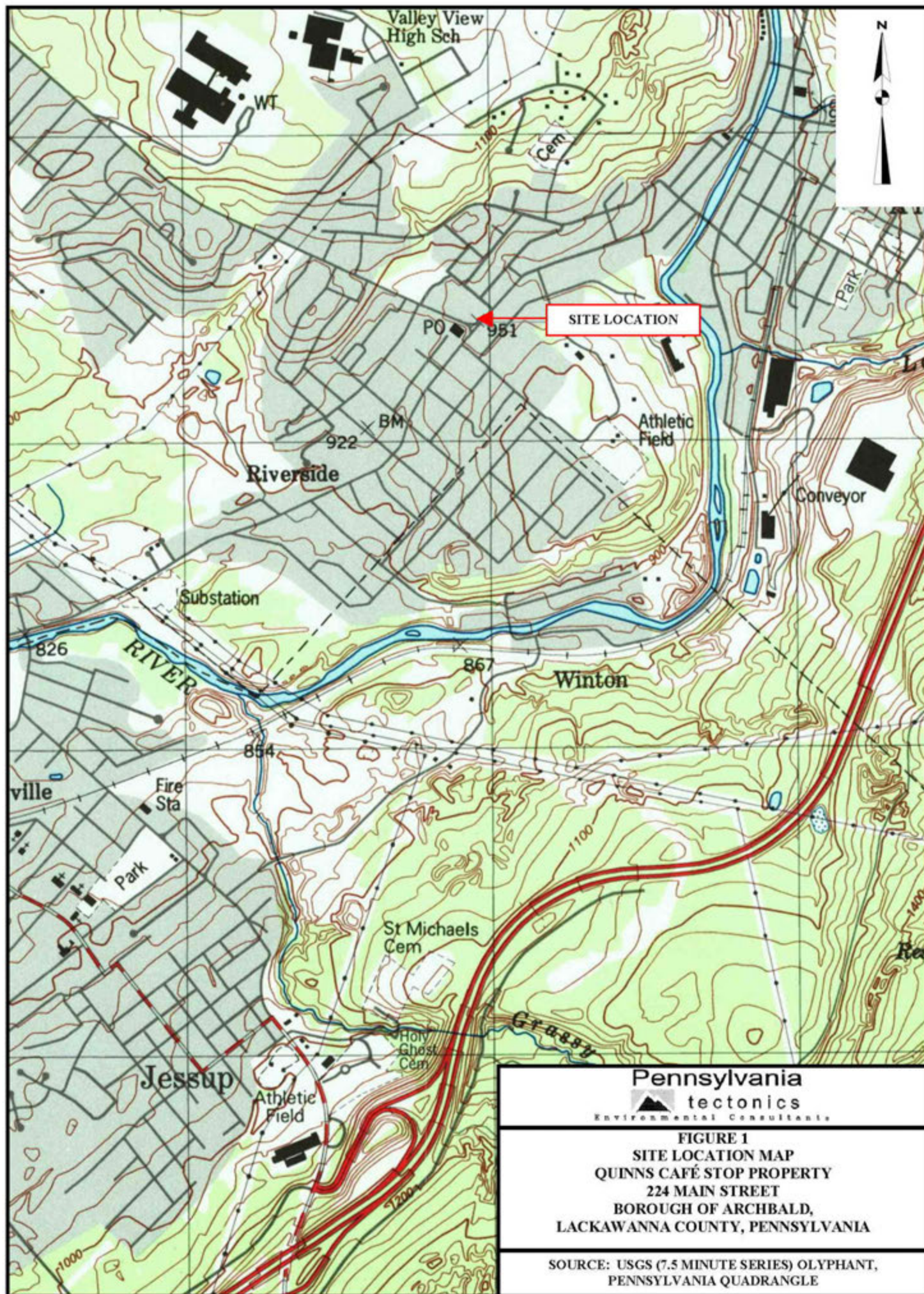
The Quinn's Café Stop Property is a convenience store with the retail sale of unleaded gasoline and diesel fuel. The subject property is located at 224 Main Street in the Borough of Archbald, Lackawanna County, Pennsylvania. On September 9, 2016, a local petroleum services company (Francis Smith & Sons) was completing spill bucket integrity testing on Tanks #001, #002, #003 and #004. All spill buckets failed the testing. On October 17, 2016, Mr. Cody Scott of FSS was onsite replacing the spill buckets. During this work, odor was observed in the backfill around the outsides of the spill buckets. FSS contacted the PADEP to report the contamination. The Claimant contacted Pennsylvania Tectonics to complete soil sampling activities. These sampling activities were conducted on October 17, 2016. The results of the sampling confirmed the presence of soil contamination at concentrations exceeding the applicable PADEP action levels.

In response to the presence of soil contamination, Pennsylvania Tectonics initiated site characterization activities in accordance with PADEP regulations. These activities will include the collection and analysis of soil samples and the installation, development & sampling of shallow groundwater monitoring wells. At present, all site activities are restricted to the subject property. The subject property encompasses approximately 0.35 acres of land and the current study area encompasses approximately 0.16 acres of land. All investigation is being conducted on developed land covered by asphalt or concrete.

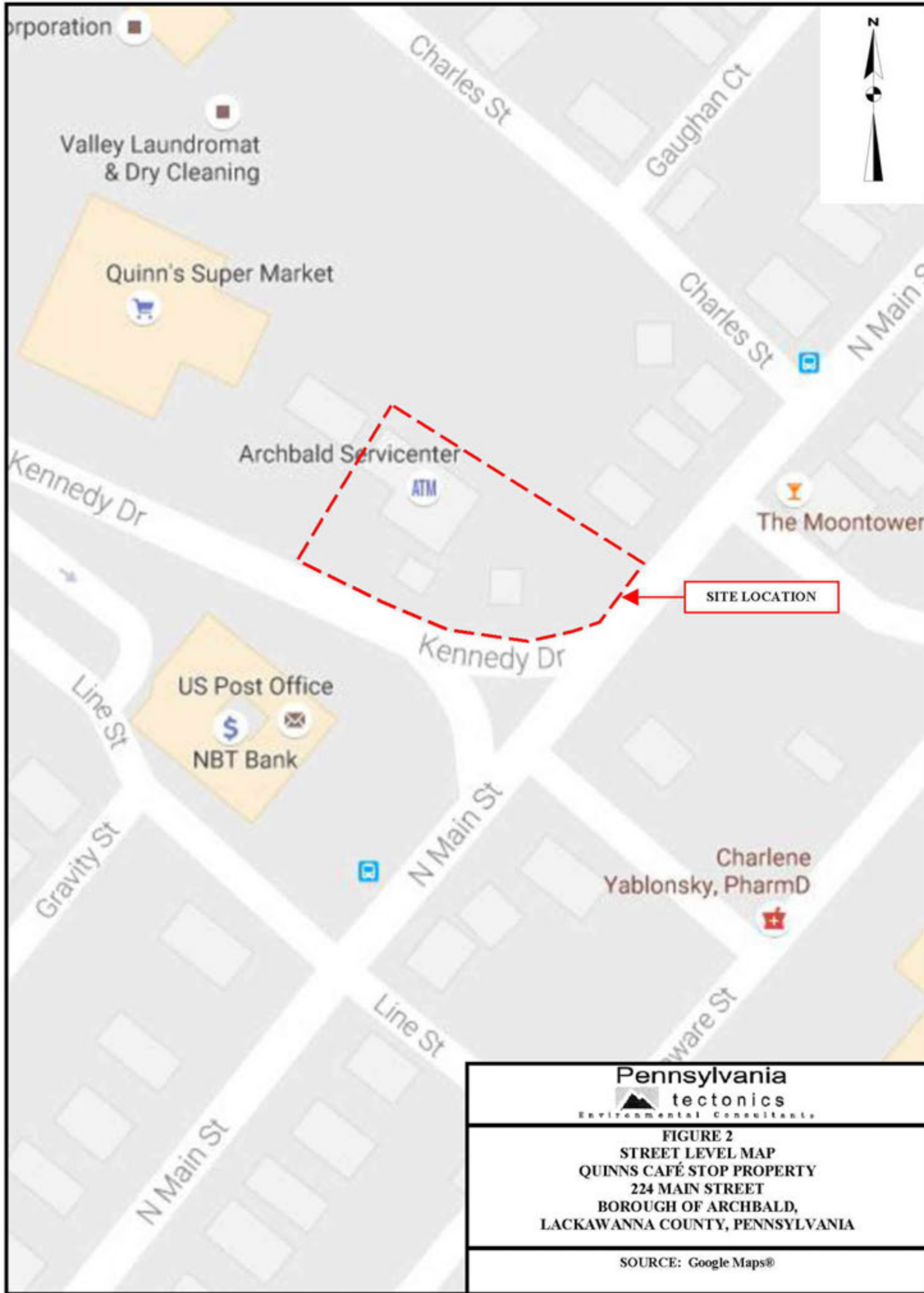
## ATTACHMENT C

### Project Figures

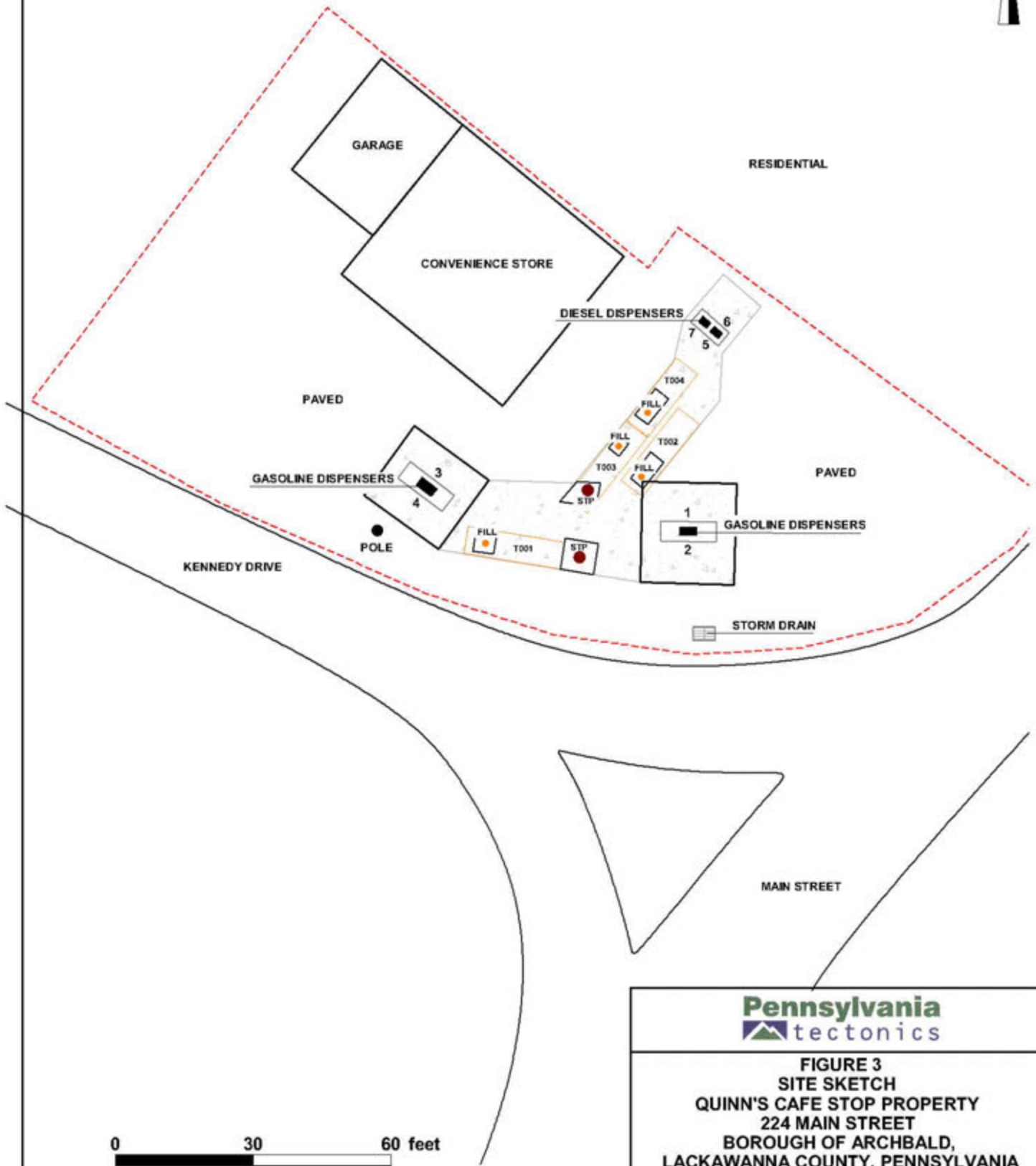












**FIGURE 3**  
**SITE SKETCH**  
**QUINN'S CAFE STOP PROPERTY**  
**224 MAIN STREET**  
**BOROUGH OF ARCHBALD,**  
**LACKAWANNA COUNTY, PENNSYLVANIA**

DRAWN BY: KC

DATE: 10/17/2016

SCALE: 1" = 30'



**Pennsylvania**  
 **tectonics**  
Environmental Consultants

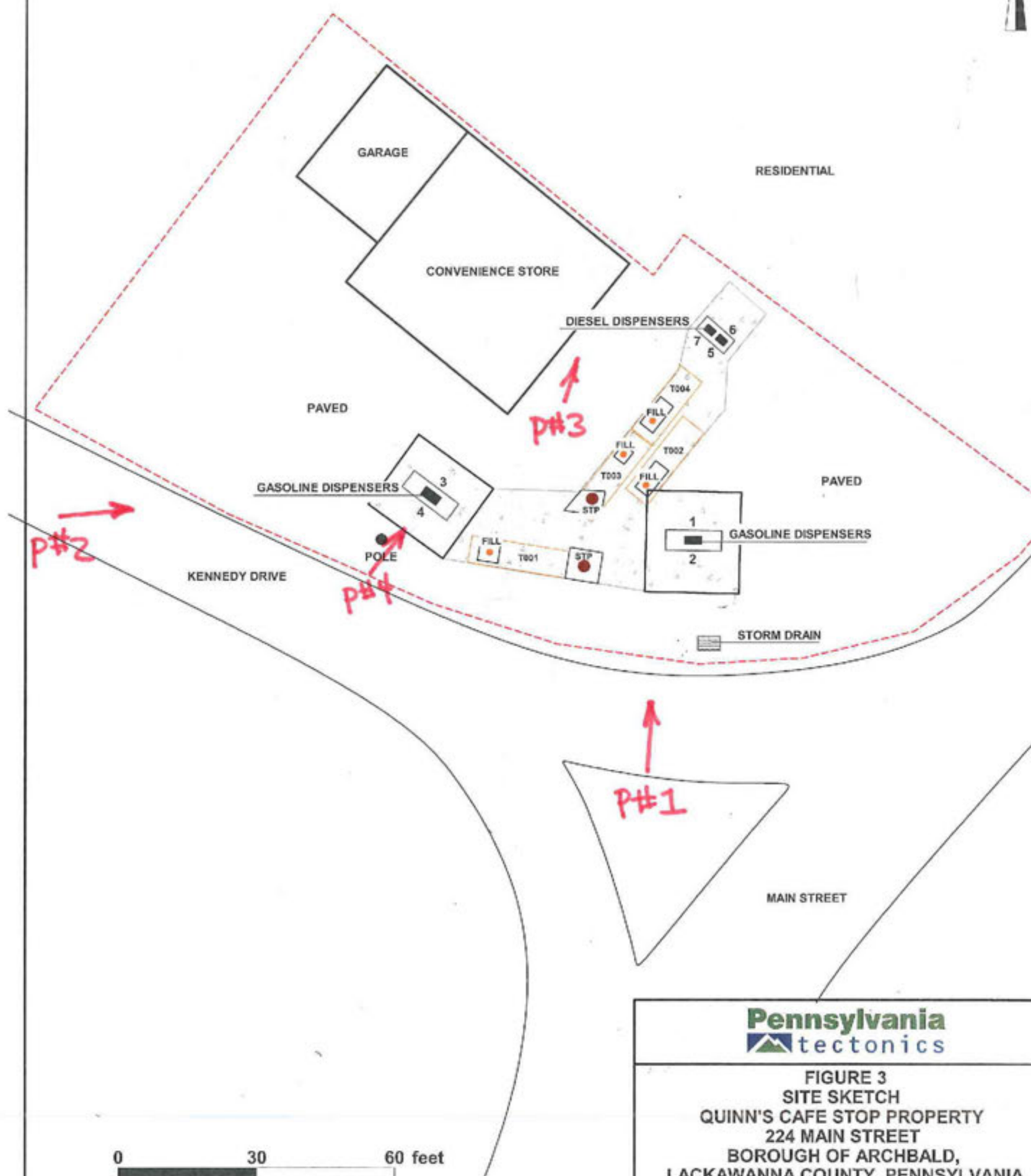
**FIGURE 4**  
**NATIONAL WETLANDS INVENTORY MAP**  
**QUINNS CAFÉ STOP PROPERTY**  
**224 MAIN STREET**  
**BOROUGH OF ARCHBALD,**  
**LACKAWANNA COUNTY, PENNSYLVANIA**

**SOURCE: US Fish & Wildlife Service Wetland Mapper**

ATTACHMENT D

Photograph Log





**Pennsylvania**  
tectonics

FIGURE 3  
SITE SKETCH  
QUINN'S CAFE STOP PROPERTY  
224 MAIN STREET  
BOROUGH OF ARCHBALD,  
LACKAWANNA COUNTY, PENNSYLVANIA

DRAWN BY: KC

DATE: 10/17/2016

SCALE: 1" = 30'

Table D-1

Photograph Log

Photo	Description	Date
1.	View of the subject property, facing north from the intersection of Main Street and Kennedy Drive.	01/30/17
2.	View of the subject property, facing east from the opposite side of Kennedy Drive.	01/30/17
3.	View of the site structure.	01/30/17
4.	Typical view of an onsite dispenser island.	01/30/17



Photo #1

01/30/17

View of the subject property, facing north from the intersection of Main Street and Kennedy Drive.



Photo #2

01/30/17

View of the subject property, facing east from the opposite side of Kennedy Drive.



Photo #3  
01/30/17  
View of the site structure.



Photo #4  
01/30/17  
Typical view of an onsite dispenser island.



ATTACHMENT E

Information on Wetlands

## **Wetland Narrative**

The Quinn's Café Stop Property is a convenience store with the retail sale of unleaded gasoline and diesel fuel. The subject property is 100% developed with the onsite structure and asphalt or concrete finishes. As such, no formal wetland inspection / delineation have been completed.

A review of local drainage patterns indicate the closest surface water to the subject property is the Lackawanna River, which is located approximately 3,000 feet southeast of the subject property. Onsite stormwater drainage is handled via stormwater basins located along Main Street and Kennedy Drive. Pennsylvania Tectonics does not know if these stormwater collection basins are connected to the sanitary sewer, as much of the local sewer system is combined, or if the basins eventually discharge directly to the Lackawanna River. At the time of this letter to U.S. Fish and Wildlife, PennDOT was in the process of reconfiguring the intersection of Main Street and Kennedy Drive. This project includes the installation of new stormwater basins and lines. However, information from PennDOT regarding the configuration of these new lines was not forthcoming.

PNDI # 615122

USFWS Project # 2017-0680

**U.S. FISH AND WILDLIFE SERVICE**  
110 Radnor Road, Suite 101, State College, PA 16801

This responds to your inquiry about a PNDI Internet Database search that resulted in a potential conflict with a federally listed, proposed or candidate species.

**PROJECT LOCATION INFORMATION**

County: Lackawanna  
Township: Archbold

**MISC INFORMATION**

Date received by FWS: 3/6/2017  
☐ ACTIVE      ☐ ARCHIVE

**USFWS COMMENTS**    ☐ FAXED    ☐ MAILEDTo: Martin GilgallonFax #: patectonics@hotmail.comAffiliation: Pennsylvania Tectonics**SPECIFIC PROJECT:** Quinn's Cafe Stop**FISH AND WILDLIFE SERVICE COMMENT(s):**X **NOT LIKELY TO ADVERSELY AFFECT**

The federally listed northern long-eared bat occur or may occur in or near the project area. However, based on our review of the information provided, including the project description and location ( Clean-up is in urban area with asphalt or concrete finishes. ),

no adverse effects to these species are likely to occur. If there is any change in the location, scale, scope, layout or design of the project, further consultation or coordination with the Service will be necessary.

The above determination is valid for two years from the date of this letter. In addition, this response relates only to federally listed, proposed, and candidate species under our jurisdiction, based on an office review of the proposed project's location and anticipated impacts. No field inspection of the project area has been conducted by this office. Consequently, comments on this form are not to be construed as addressing other Service concerns under the Fish and Wildlife Coordination Act or other authorities. *Please reference the above PNDI # and USFWS Project # in any future correspondence regarding this project.*

This review was conducted by the biologist listed below. He/she can be contacted at 814-234-4090.

☐  
☐

Robert Anderson (x7447)  
Jennifer Kagel (x7451)

☐  
☐

Pamela Shellenberger (x7459)  
Melinda Turner (x7449)

☐  
☒

Brian Scofield (x7471)  
Nicole Ranalli (x7455)

SIGNATURE: \_\_\_\_\_  
Supervisor, Pennsylvania Field Office

DATE: 03/31/2017



## APPENDIX V

### Well Inventory Records



PA STATE AGENCIES

ONLINE SERVICES

Search PA

Tom Wolf, Governor Cindy Adams Dunn, Secretary

[DCNR Home](#) : [Geological Survey](#) : [Groundwater](#) : [PaGWIS](#) : [Records](#)

## PaGWIS Records

Geological Survey

About the Survey

Classroom

Collecting

Economic Resources

Geology of PA

Geologic Hazards

Groundwater

Library

PAMAP

Web-Mapping  
ApplicationPublications and  
Digital Data

GeoLinks

Contact the Survey

Search DCNR

Find us on  
Facebook

### Map Search

You must be zoomed to the level where municipality names appear to search.

☐ Multiple Criteria   ☒ Map

☒ Wells   ☐ Springs

Data Packages:   ☒ General Info   ☐ Site Info   ☐ Well Construction   ☐ Hydrogeologic   ☐ Geologic

☒
☐

☐ Include unlocated wells within intersected municipalities

[Explain](#)

[Contact Us](#)

'Download Data Package' creates a data package-specific CSV file that you may open or download. If you choose to open the file, it may open in Excel (if you have Microsoft Office installed). Because of the relational nature of the database, there may be more than 1 line per well in the downloaded data. For data on public water supply wells, or water quality data, please see instructions.

[Instructions](#)


'View Items Below' creates a general list (not data package-specific) that contains links to individual well information. It is based on the search criteria entered. Not all of the records displayed below will necessarily have data corresponding to the data package you have selected.

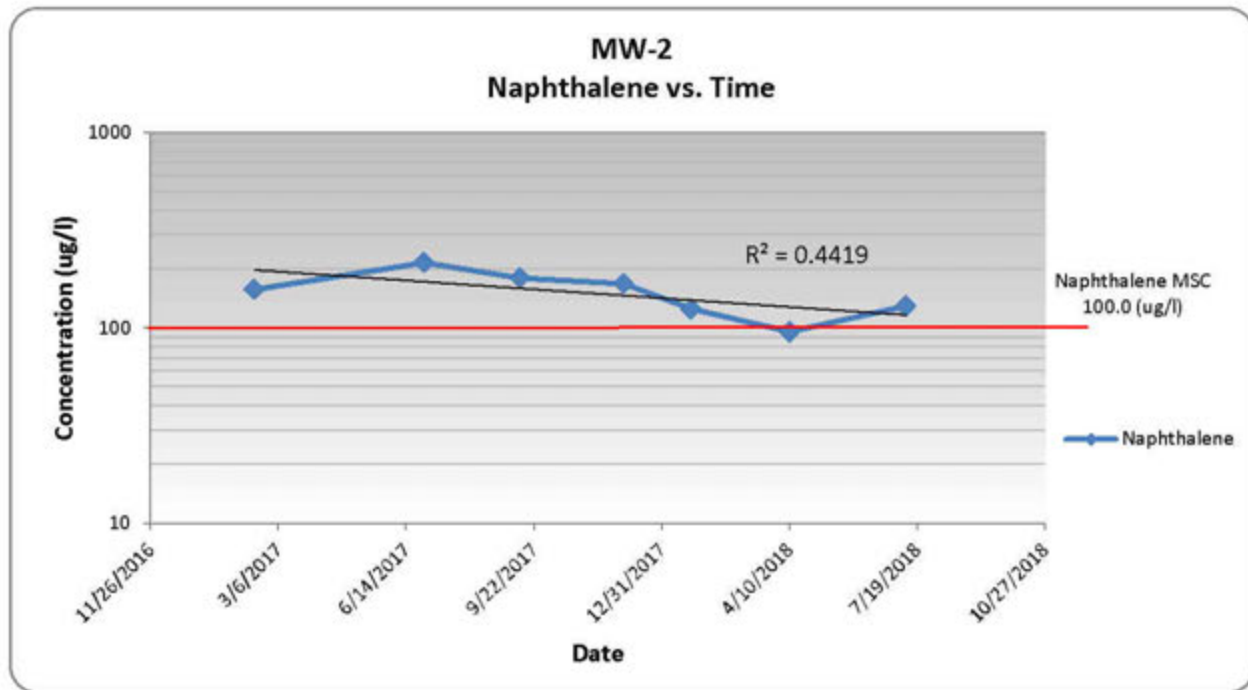
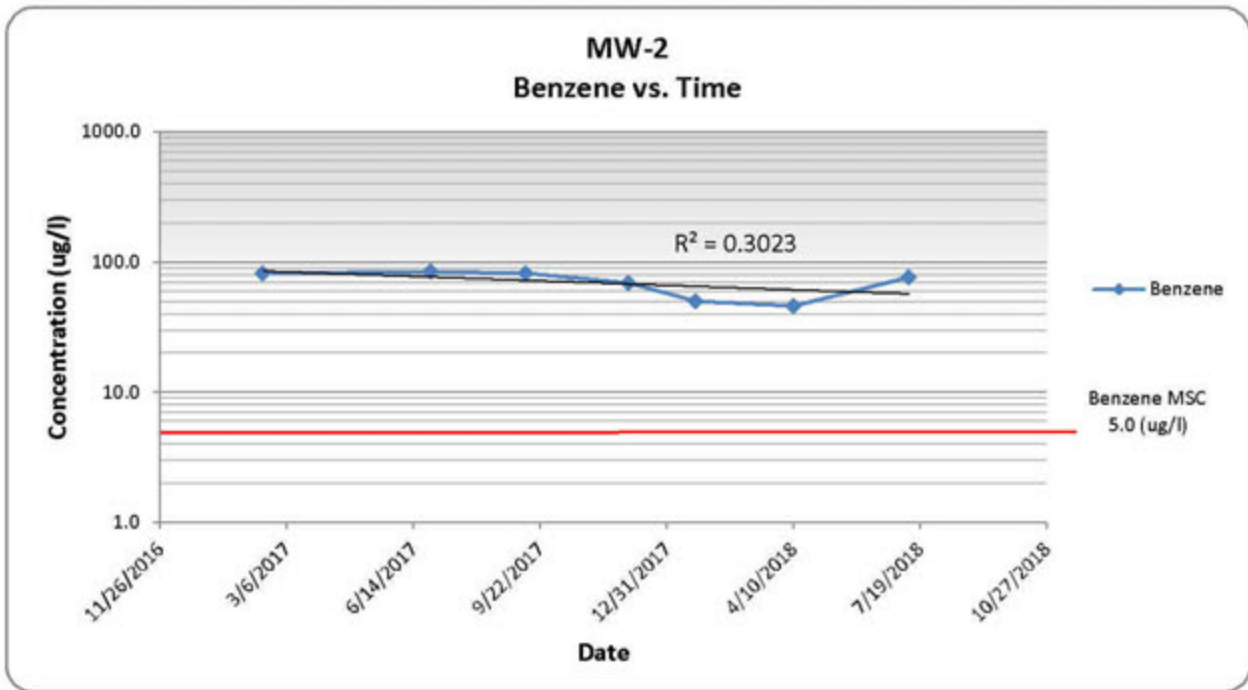
**For correct record counts after changing any search criteria or data package, you must click again on the "View Items Below" button.**

Table V-1  
Quinn's Café Stop  
Well Inventory Records  
February 14, 2017

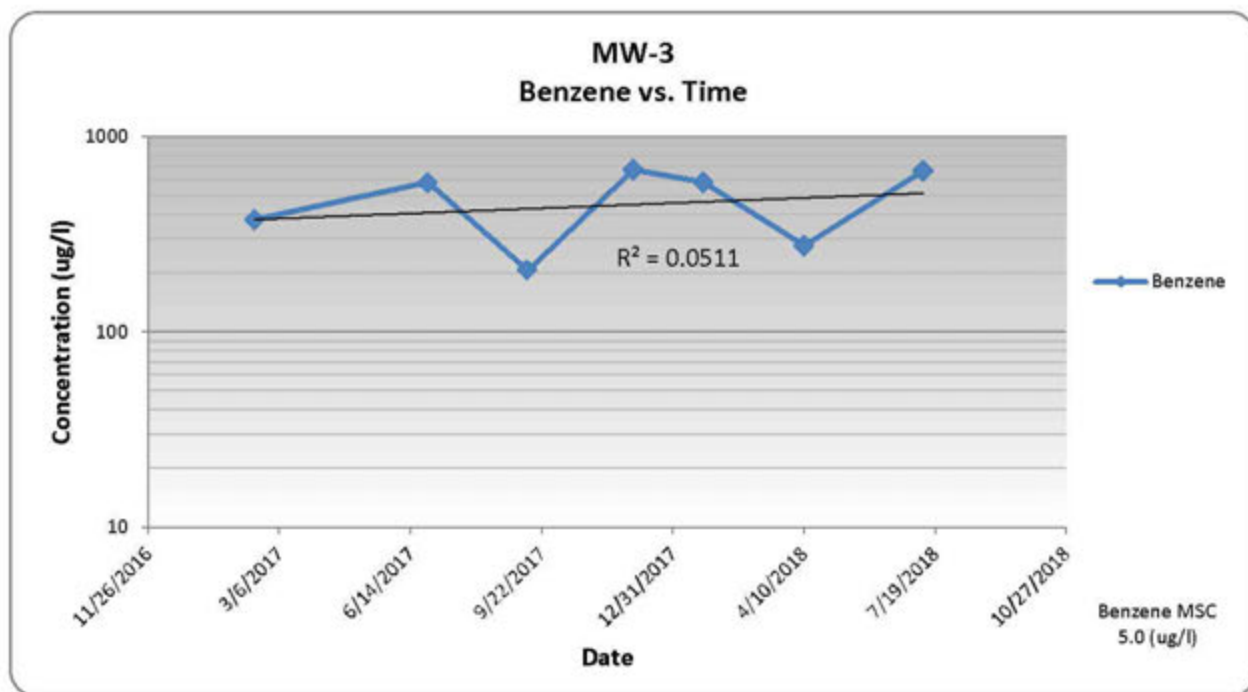
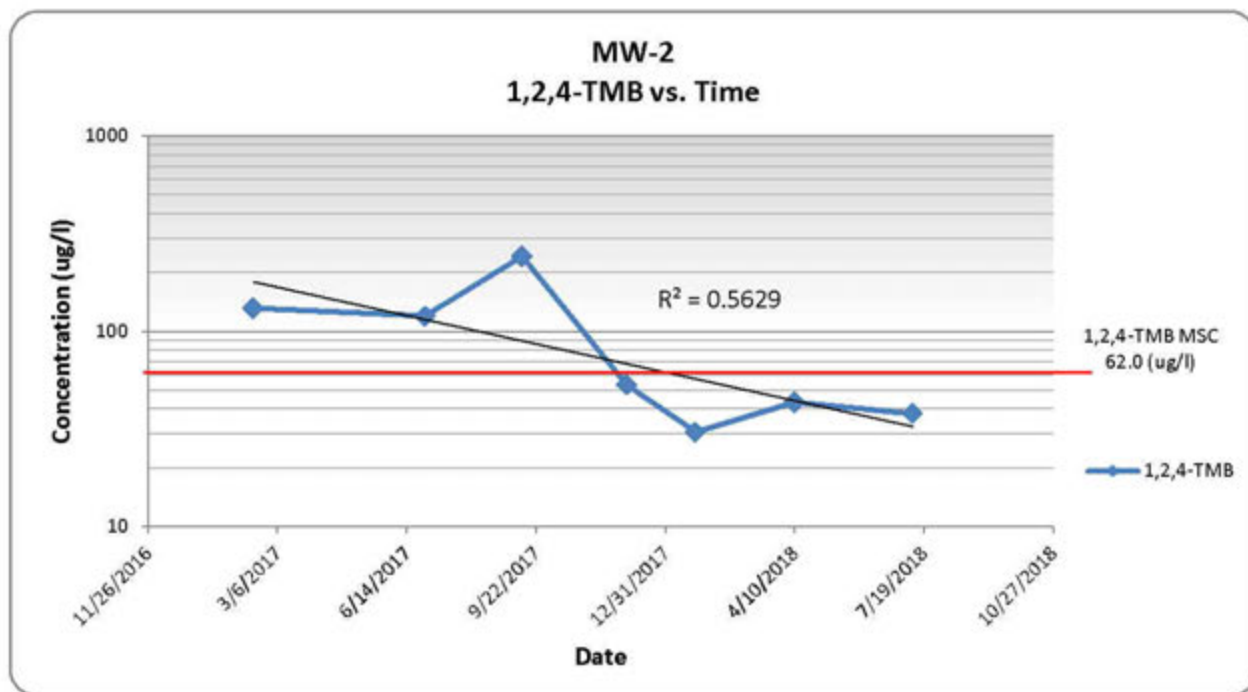
PAW#IID	WellAddress	DateDrilled	TypeOfActivity	Latitude	Longitude	Driller	OriginalOwner	WellUse	WaterUse
644882	377 Main Street	6/30/2016	NEW WELL	41.49407	-75.54421	EICHELBERGERS INC.	Propst Buy Rite	OBSERVATION	UNUSED
644837	377 Main Street	6/30/2016	NEW WELL	41.49399	-75.54411	EICHELBERGERS INC.	Propst Buy Rite	OBSERVATION	UNUSED
618927	369 MAIN ST.	4/30/2009	NEW WELL	41.49194	-75.54917	EICHELBERGERS INC.	KURILLA TRANSMISSIONS	OBSERVATION	UNUSED
617315	377 MAIN ST.	11/10/2008	NEW WELL	41.49222	-75.54917	EICHELBERGERS INC.	ARCHBALD EXPRESS MARKET	OBSERVATION	UNUSED
616479	MAIN AND MONROE STS.	4/30/2009	NEW WELL	41.49444	-75.54361	EICHELBERGERS INC.	ARCHBALD HOSE CO NO 1	OBSERVATION	UNUSED
605169	MAIN AND MONROE STS.	12/8/2009	NEW WELL	41.49389	-75.54371	EICHELBERGERS INC.	ARCHBALD EXPRESS MART	OBSERVATION	UNUSED
605168	MAIN AND MONROE STS.	12/8/2009	NEW WELL	41.49392	-75.54375	EICHELBERGERS INC.	ARCHBALD EXPRESS MART	OBSERVATION	UNUSED
605167	MAIN AND MONROE STS.	12/8/2009	NEW WELL	41.49382	-75.54367	EICHELBERGERS INC.	ARCHBALD EXPRESS MART	OBSERVATION	UNUSED
605166	MAIN AND MONROE STS.	12/8/2009	NEW WELL	41.49392	-75.54362	EICHELBERGERS INC.	ARCHBALD EXPRESS MART	OBSERVATION	UNUSED
604901	377 MAIN ST.	11/10/2008	NEW WELL	41.49222	-75.54917	EICHELBERGERS INC.	ARCHBALD EXPRESS MARKET	OBSERVATION	UNUSED
604900	377 MAIN ST.	11/10/2008	NEW WELL	41.49222	-75.54917	EICHELBERGERS INC.	ARCHBALD EXPRESS MARKET	OBSERVATION	UNUSED
604899	377 MAIN ST.	11/10/2008	NEW WELL	41.49222	-75.54917	EICHELBERGERS INC.	ARCHBALD EXPRESS MARKET	OBSERVATION	UNUSED
604898	377 MAIN ST.	11/10/2008	NEW WELL	41.49222	-75.54917	EICHELBERGERS INC.	ARCHBALD EXPRESS MARKET	OBSERVATION	UNUSED
595817	377 MAIN ST.	12/15/2008	NEW WELL	41.49222	-75.54917	EICHELBERGERS INC.	ARCHBALD EXPRESS MARKET	OBSERVATION	UNUSED
501249	377 Main St	6/18/2010	NEW WELL	41.49461	-75.544	ODYSSEY ENVIRONMENTAL SERVICES INC.	Danyaal LLC	MONITORING	
501204	377 Main St	6/17/2010	NEW WELL	41.49456	-75.54445	ODYSSEY ENVIRONMENTAL SERVICES INC.	Danyaal LLC	MONITORING	

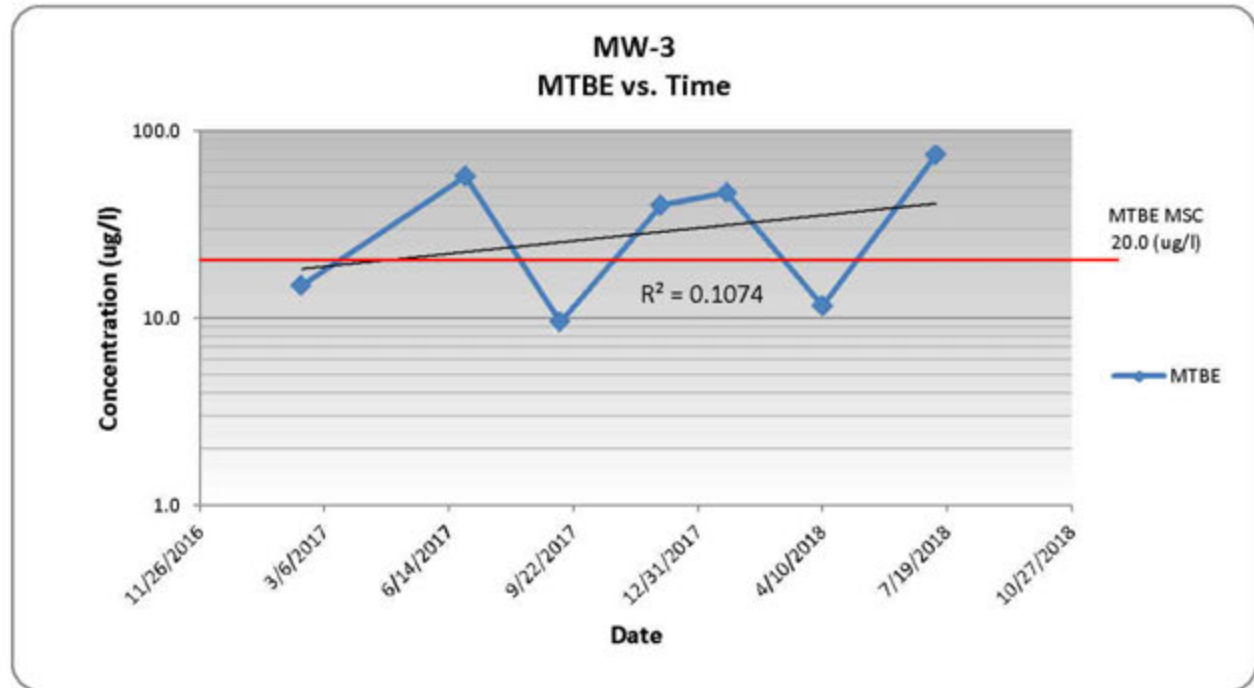
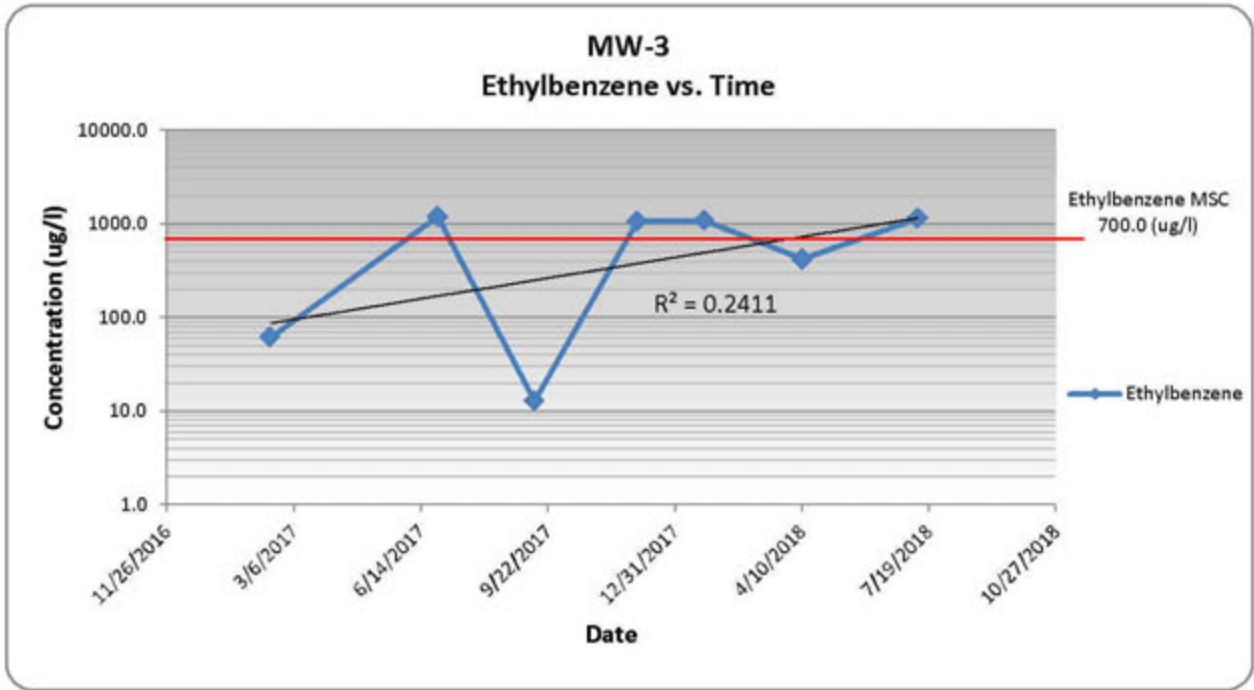
## APPENDIX W

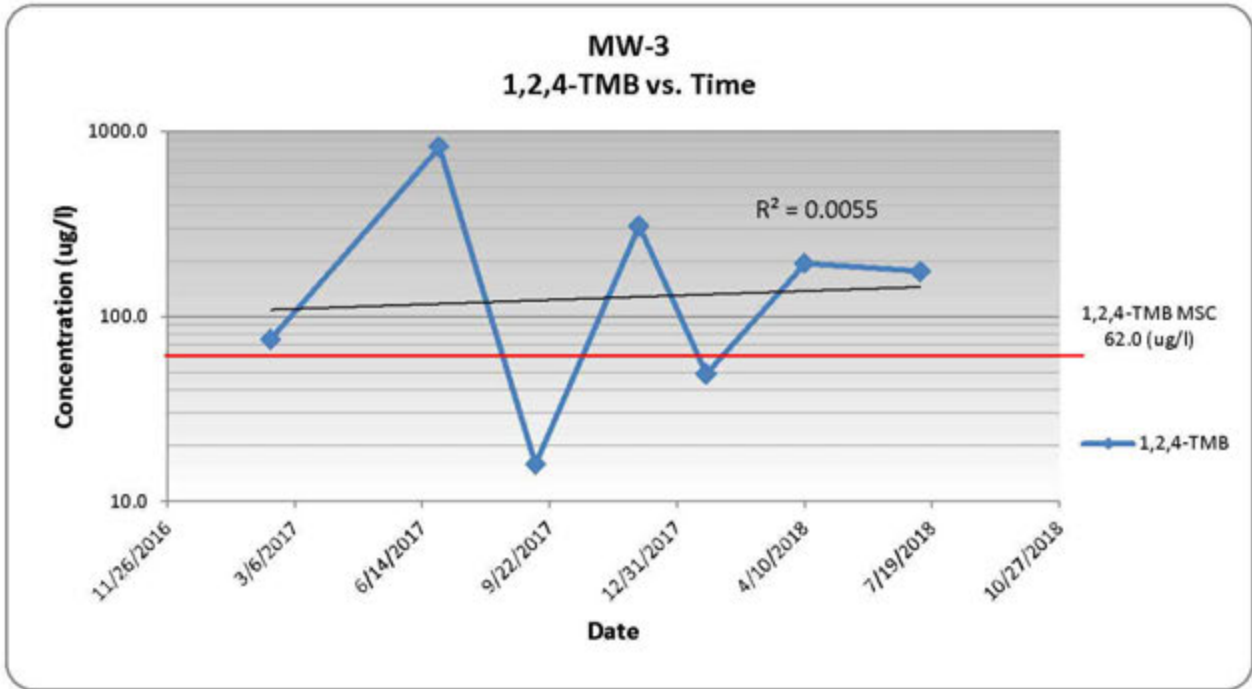
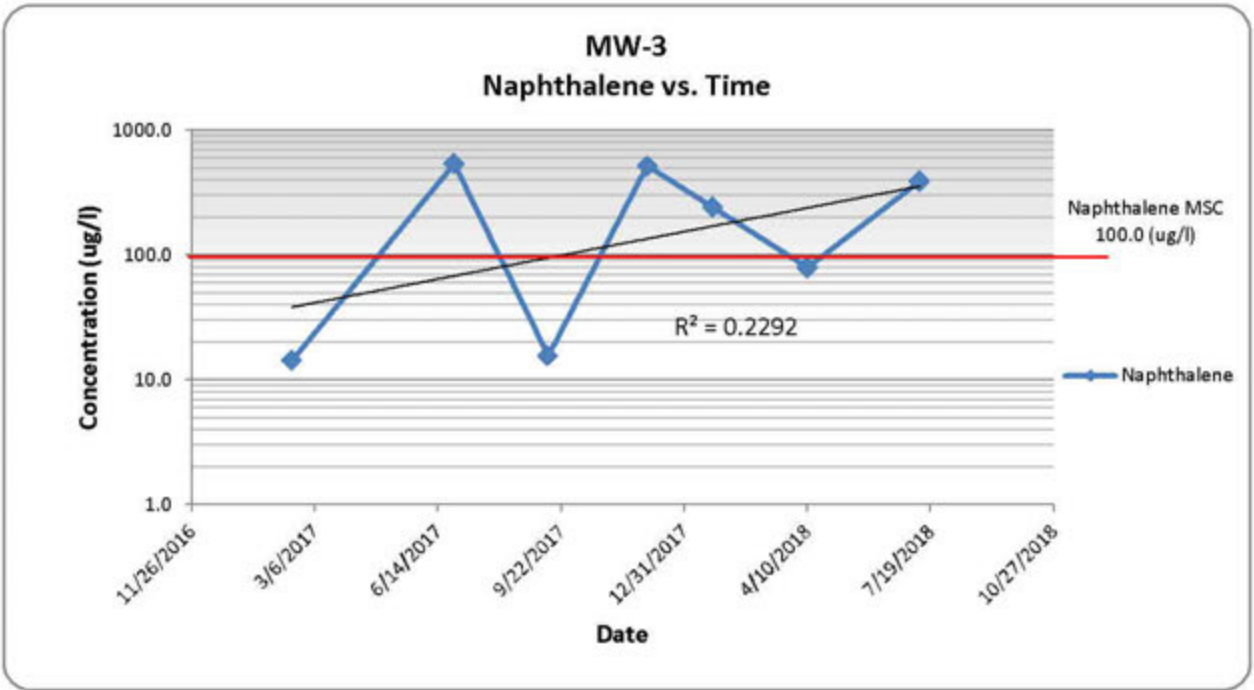
### Temporal Trend Analysis



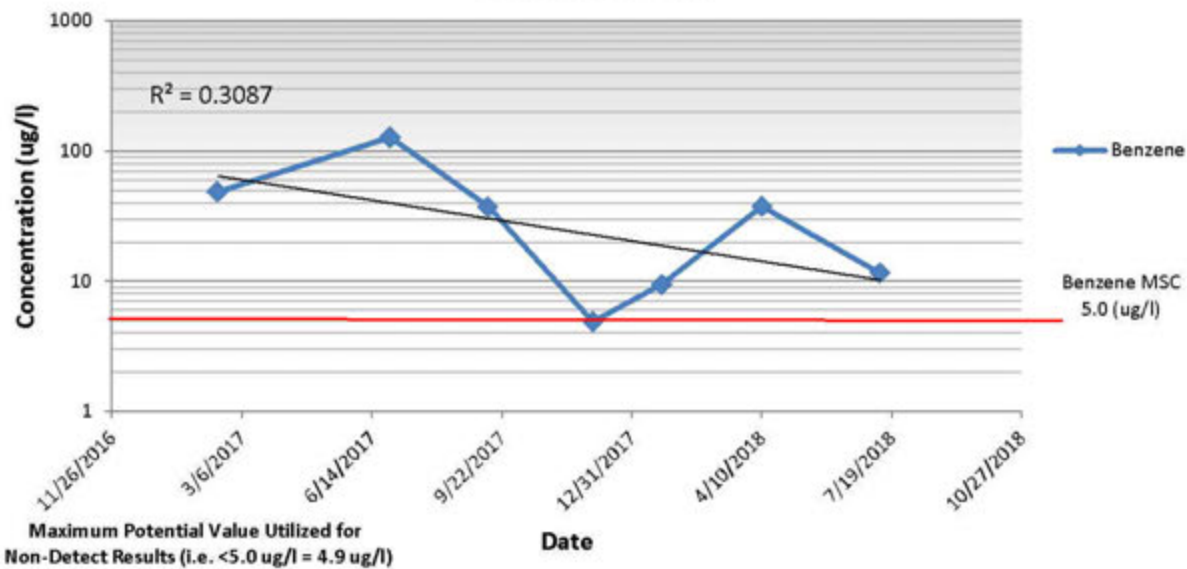








**MW-4**  
**Benzene vs. Time**



**MW-4**  
**MTBE vs. Time**

