FACILITY NAME: Vennard Crossroads Convenience, Inc.

FACILITY ID #: 32-81802

REPORT/PLAN PREPARER: Mountain Research, LLC
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CORRECTIVE ACTION PROGRESS REPORT/PLAN COVER SHEET

CHAPTER 245 STORAGE TANK ACT

- ☐ Site Characterization Report - Section 245.310(b)
- ☐ Site Characterization Report - Section 245.310(c)
- ☐ Site Characterization Report - Site-Specific Standard
- ☐ Site Characterization Report - Statewide Health or Background Standard
- ■ Remedial Action Plan - Statewide Health or Background Standard
- ☐ Remedial Action Plan - Site Specific Standard
- ☐ Remedial Action Progress Report
- ☐ Remedial Action Completion Report - Statewide Health or Background Standard
- ☐ Remedial Action Completion Report - Site-Specific Standard

(Check all that apply to the enclosed submission)

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VENNARD'S\RAP\RAP REPORT APX - 0119
Project No. 4644.15.01

REMEDIAL ACTION PLAN

VENNARD CROSSROADS CONVENIENCE, INC.
4985 LUCERNE ROAD
WHITE TOWNSHIP, INDIANA COUNTY, PENNSYLVANIA
PADEP FACILITY ID #32-81802
USTIF CLAIM #2015-0116(L)

Prepared for

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ALTOONA, PENNSYLVANIA

JANUARY 2019

Prepared by: _____ **Reviewed by:** _____

REMEDIAL ACTION PLAN

VENNARD CROSSROADS CONVENIENCE, INC.
4985 LUCERNE ROAD
WHITE TOWNSHIP, INDIANA COUNTY, PENNSYLVANIA
PADEP FACILITY ID #32-81802
USTIF CLAIM #2015-0116(L)

PROFESSIONAL CERTIFICATION:

Professional Geologist:

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Signature:

Date:

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REGISTERED PROFESSIONAL
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REMEDIAL ACTION PLAN

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PADEP FACILITY ID #32-81802
USTIF CLAIM #2015-0116(L)

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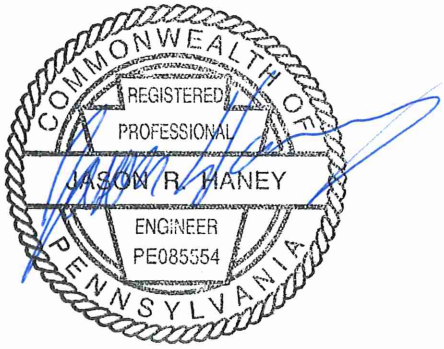

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REMEDIAL ACTION PLAN

VENNARD CROSSROADS CONVENIENCE, INC.
4985 LUCERNE ROAD
WHITE TOWNSHIP, INDIANA COUNTY, PENNSYLVANIA
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1.0 INTRODUCTION

In July 2015, Mountain Research, LLC (Mountain Research) was retained by Vennard Crossroads Convenience, Inc (Vennards) to conduct site characterization activities to delineate identified petroleum impacts at the Vennard facility (the site) located in White Township, Indiana County, PA in both soil and groundwater media. Refer to **Figure 1** for a Site Location Map. A site map outlining site features is presented as **Figure 2**.

A petroleum release occurred at the property impacting site soil and groundwater. The petroleum impacts were first noted during Phase II soil sampling in 2015 near the Underground Storage Tank (UST) field. An initial site characterization was conducted by Mountain Research between September 2015 and November 2016 and included the installation and sampling of 17 soil borings and eight (8) monitoring wells. This characterization was summarized in a November 2016 Site Characterization Report (SCR) that was approved by the Pennsylvania Department of Environmental Protection (PADEP) in February 2017. As part of the SCR, the need for additional characterization was required with access to adjacent private property. Additional characterization efforts were completed between 2016 and 2018 including the installation and sampling of an additional soil boring and the installation and sampling of an additional 10 monitoring wells. The historical and new characterization data were summarized in a September 2018 Supplemental SCR (SSCR) and submitted to the PADEP.

This Remedial Action Plan (RAP) is prepared to meet the regulatory requirements of PADEP §245.311 outlining the plans and details of the soil and groundwater remediation.

2.0 SUMMARY OF SITE CHARACTERIZATION 245.311(A)(1)

The scope of work conducted by Mountain Research for the site characterization included the following:

- Geophysical Investigation for underground utilities or other sources
- Advancement of soil borings
- Collection and analysis of soil samples from soil borings
- Installation of 16 overburden and 9 shallow bedrock monitoring wells

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2.0 SUMMARY OF SITE CHARACTERIZATION 245.311(A)(1) (Continued)

- Collection and analysis of groundwater samples from monitoring wells
- Measurement of groundwater elevations and deriving direction of gradient from these measurements
- Aquifer testing
- Installation of soil vapor sampling points and soil vapor sampling
- Professional site survey
- Remedial feasibility study

Concentrations of benzene, and 1,2,4-TMB currently exceed the Post-March 2008, PADEP NRUA soil to groundwater MSC, and are identified as COC in un-saturated and periodically saturated soil media. Concentrations of 124-TMB, benzene, ethylbenzene, MTBE, naphthalene, and toluene currently exceed the Post-March 2008, PADEP NRUA groundwater MSC, and are identified as COC in groundwater media. The following is a summary of site characterization activities and interpretations:

- Physical and olfactory evidence of a petroleum release identified during Phase 2 activities conducted in September 2015 prompted Site Characterization activities.

- An overburden aquifer and shallow bedrock aquifer are identified at the site. Groundwater gradients within the aquifers are in western directions. The overburden aquifer is interpreted to represent a water table aquifer having no confining characteristics. The bedrock aquifer is interpreted to be a continuation of the water table aquifer within a different lithology.

- Analytical results for groundwater samples collected from overburden and bedrock monitoring wells identified petroleum COC concentrations above their respective PADEP NRUA groundwater MSCs.

- No potable wells are located on the site. Public water is provided to the site and surrounding properties by Central Indiana County Water Authority. Central Indiana County Water Authority obtains water from Yellow Creek Reservoir, located approximately two (2) miles east of the site. White Township has an ordinance in place that requires all properties within 150 feet of a public water supply line to be connected to the public water supply system.

- Fate and transport analysis interpretation indicates dissolved phase migration primarily follows preferential pathways in a northern direction within both the overburden and bedrock aquifers.

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2.0 SUMMARY OF SITE CHARACTERIZATION 245.311(A)(1) (Continued)

- Soils impacted with petroleum above the NRUA soil to groundwater MSC are identified in three separate areas near UST components. Two of the impacted soil areas are interpreted to be periodically saturated or saturated. One impacted soil area is interpreted to be unsaturated soil.

- Preliminary Ecological Screening was completed with a result of no additional ecological investigation is required

- Vapor intrusion into buildings was evaluated through near source soil vapor samples at each site building. The analytical results indicate acceptable near source soil vapor screening concentrations. However, remediation is recommended to further address potential vapor intrusion into the Vennard building.

- The proposed remedial standard for the property is the NRUA statewide health standard (SHS) for soil and groundwater.

- Vacuum enhanced groundwater extraction (VEGE) and soil excavation/disposal are the remedial technologies of choice, feasibility studies are completed and show favorable results for the technology. The soil excavation is to address areas of impacted unsaturated soil and to remove impacted saturated soil to the extent practical as a means to remove contaminant mass.

3.0 HEALTH AND SAFETY AND QUALITY CONTROL 245.311.(a)(2)

The site specific Health and Safety Plan and the Mountain Research Quality Assurance/Quality Control Plan are available to the PADEP upon request.

Any waste soil or groundwater generated during the installation of the remedial system will be containerized in drums, roll off bins, or within contained and covered stockpiles. All wastes will be characterized for proper disposal. The disposal of generated wastes will be reported to the PADEP during the subsequent Remedial Action Progress Report (RAPR).

4.0 INTERIM REMEDIAL ACTION

Interim remedial action conducted at the site include the vacuum extraction of impacted water and product from the tank field sump, MW-2 and sheen from an abandoned sump near the northeast corner of the Vennard building. These vacuum extraction events were conducted on May 17, 2017, June 22, 2017, and August 15, 2017. Each vacuum event yielded between 1790 gallons to 2000 gallons total extracted fluids primarily consisting of groundwater.

5.0 REGULATORY PERMITS OR APPROVALS TO CONDUCT THE REMEDIAL ACTION 245.311.(a)(3)

Regulatory approval of the RAP will be required prior to the remedial action. Any required construction permits will be obtained from White Township or the County of Indiana for the system including mechanical and electrical construction permits.

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5.0 REGULATORY PERMITS OR APPROVALS TO CONDUCT THE REMEDIAL ACTION 245.311.(a)(3) (Continued)

Construction will comply with local codes and regulations. All proposed remedial activities have been designed to avoid the PennDOT right of way and require no entry agreement with PennDOT.

Impacted soil wastes generated during soil excavation will be containerized and transported from the site for proper disposal. Disposal permits for the soil will be obtained following the chosen disposal facility requirements. Extracted groundwater will be discharged under permit to the Borough of Indiana's local sanitary sewer system. A copy of the industrial discharge permit between Vennard's Crossroads Convenience Store and the Borough of Indiana for this discharge is already established. A copy of the permit, listing of the sampling parameters and reporting requirements is represented in **Appendix A**

6.0 CONCEPTUAL REMEDIAL ACTION 245.311.(A)(4)

The remedial goal established for the site is the NRUA SHS for soil and groundwater. The standard will be established through the achievement of the following objectives: a.) removal of unsaturated soil impacts through excavation to a point where attainment may be proven and b.) removal of impacted saturated soil near the UST to limit petroleum source to the groundwater c.)removal of dissolved phase concentrations through VEGE to a point where SHS attainment is met at the points of compliance. Refer to **Section 12.0, Demonstration of Attainment 245.311(a)(11),** for further discussion of the attainment process and closure standard.

6.1 Soil Excavation

Unsaturated soil will be remediated through excavation and disposal. Three distinct areas of impacted soils are identified in site characterization as defined in **Figure 3**. One area, west of the UST, is unsaturated soil. The two other soil impact areas are periodically saturated or saturated soil located near the dispensers and north/east of the UST. The saturated soil located near the dispensers is not interpreted to contribute much dissolved phase impacts and is therefore not proposed to be addressed through excavation. However, the saturated soil identified near the UST is interpreted to contribute continued petroleum mass to groundwater. Therefore this soil is proposed to be remediated through excavation followed by in-situ remediation of groundwater. **Figure 3** defines the proposed area of unsaturated and saturated soil excavations based upon the results of soil sample analytical data.

It is estimated that approximately 44 cubic yards of unsaturated soil will be excavated from the area designated in **Figure 3** west of the UST field. The excavation is performed to remove unsaturated impacted soils to achieve NRUA soil SHS attainment. The excavation will remove the targeted depth between three (3) foot below ground surface (bgs) to six and a half (6.5) foot bgs based off of soil boring sample locations.

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6.1 Soil Excavation (Continued)

Although not identified through soil samples, saturated soil below this depth may be impacted. Additional saturated soil impacts below the 6.5 foot bgs depth may be identified through field screening to be appropriate for further excavation and disposal.

It is estimated that approximately 200 cubic yards of saturated soil will be excavated from the area designated in **Figure 3** north and east near the UST field. The excavation is performed to remove saturated/periodically saturated impacted soils to remove petroleum mass and assist in NRUA groundwater SHS attainment. The excavations will remove the targeted depth estimated to be between approximately seven (7) foot bgs to 12 foot bgs based off of soil boring sample locations and smear zone depth.

Soil from the excavations that is not located within the characterized impacted soil depth will be screened and segregated for either re-use on-site as backfill or removed from the site for proper disposal. Excavated soil, will be screened, segregated, and managed based on photoionization detector (PID) head space readings. Grab samples of soil will be placed into zip-lock bags for screening purposes. Soil exhibiting PID readings of >50 parts per million by volume (ppmv) shall be designated for off-site disposal. Material exhibiting head space readings of ≤50 ppmv will be staged, managed, and reused to backfill the excavation after appropriate testing is completed to confirm soil is acceptable for re-use on-site. Mountain Research will be prepared to extend the excavation beyond the predefined excavation areas if warranted by field screening.

All excavated soil will be directly loaded onto trucks or staged on and covered with 6 mil plastic and sampled prior to transport and pending disposal.

Once excavation activities are completed for the unsaturated soil area, Mountain Research will collect attainment samples in locations obtained from PADEP systematic random sampling workbook. Soil attainment samples for unleaded gasoline and diesel parameters will be analyzed for the post-March 2008 short list of petroleum parameters including: benzene, toluene, ethylbenzene, total xylenes, cumene, MTBE, naphthalene, 1,2,4-TMB, and 1,3,5-TMB via EPA Method 8260B. A more complete discussion of the attainment sampling methods is presented within **Section 12.0**.

Material stockpiled for re-use will be sampled prior to backfilling. Sampling and analysis will be conducted in accordance with PADEP guidance documents. The restoration/backfilling of the excavation will involve a combination of the reused site soil (deemed suitable for fill) and imported quarry stone. Material will be mechanically compacted with in one (1) foot lifts to within five (5) inches of surface grade. The parking lot bituminous pavement will be returned to pre-excavation conditions by asphalt paving the excavated area.

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6.1 Soil Excavation (Continued)

Water will require removal from the saturated soil excavation. The dewatering of the excavation will require constant pumping. Therefore, a temporary treatment system will be required to treat the extracted water prior to discharge to the sanitary sewer system using the discharge permit that is already in place. The treatment system will be designed to meet the required chemical parameters and discharge rate outlined in the industrial permit presented in **Appendix A**.

Care will be taken with regard to underground UST components in the area of the excavation. UST vent lines are in this same area and may be at a depth similar to that of the proposed excavation. A PADEP licensed UST Installer will be required to oversee the operation due to the close proximity of UST components.

6.2 Vacuum Enhanced Groundwater Extraction (VEGE)

VEGE utilizes an applied vacuum on the extraction well to increase the groundwater yield of the well. An evaluation of this method was completed through feasibility studies to determine that groundwater extraction rates will economically increase with application of a vacuum in both overburden and bedrock aquifers. The VEGE system will remove groundwater through submersible pneumatic pumps installed in four (4) inch extraction wells having no more than 15 foot of screened interval in targeted depth of impact. The screened interval will be installed having minimum depth below ground surface (bgs) of 5 foot to limit short circuiting. To increase the yield of the submersible pumps, each well head will be sealed and equipped with a vacuum line plumbed to a vacuum pump housed within a surface remedial structure. While operating, the vacuum pump will create a sub-atmospheric pressure on the formation near the well to aid in facilitating additional groundwater yield from the extraction well. Extraction wells will be designed for one of three aquifer scenarios, shallow overburden, deep overburden, and shallow bedrock.

Extracted groundwater will be discharged to a holding tank in a remedial system enclosure located on the source property. Once in the holding tank, an electrical transfer pump will move the impacted water through activated granular carbon units designed to treat the impacted water by removing site VOCs to meet discharge permit requirement. An adjustable valve will be installed to ensure instantaneous discharge rates are within discharge permit parameters.

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6.2 Vacuum Enhanced Groundwater Extraction (VEGE) (Continued)

The pneumatic pumps will be powered by an appropriately sized air compressor housed within the remedial system enclosure. Each pneumatic pump will have a dedicated pressure line manifolded to the air compressor. Vacuum will be supplied to each extraction well using a vacuum pump installed within the remedial enclosure. Each extraction well will have a dedicated vacuum line manifolded to the vacuum pump. The discharge of the vacuum pump will be run through vapor granulated activated carbon as a safety precaution prior to discharge to the atmosphere. Although the primary goal of the vacuum pump will be to increase groundwater extraction rates and effective influence, a byproduct of the vacuum will be soil vapor extraction (SVE). Although the impacted soils are to be addressed through remedial excavation, any potential smear zone within the UST field or unexcavated area may be remediated through SVE.

Groundwater monitoring wells and the extracted groundwater influent in the remedial system will be sampled to observe reductions in COC concentrations. The remedial system will be run until observations in monitoring wells are interpreted to have reached a point where attainment to the NRUA SHS may be met at all points of compliance.

7.0 FEASIBILITY STUDY 245.311.(A)(5)

Feasibility testing was conducted at the site to evaluate the effectiveness of groundwater extraction and VEGE. Testing was completed March 27th, through March 29th, 2018. Multiple tests were conducted, evaluating the effectiveness of both groundwater extraction and VEGE in both overburden and bedrock aquifers for the remediation of impacted groundwater. Extracted groundwater was treated with granular activated carbon and discharged to the local sanitary sewer system under a permitted discharge. Refer to **Appendix A** for a copy of the Borough of Indiana industrial discharge permit.

7.1 Feasibility Testing Wells

As described in Section 8.2 of the September 2018 Supplemental Site Characterization Report, the bedrock at the site is more shallow in north eastern portions of the site and quickly deepens in areas to the west. This bedrock setting creates a scenario where three aquifer settings are defined; shallow overburden, bedrock, and deep overburden.

Three (3) feasibility testing wells were installed with specific screened intervals to target the three (3) aquifer scenario including: EW-1 (shallow overburden), EW-1BR (bedrock) and MW-14 (deep overburden). Refer to **Figure 2** for the well feasibility extraction well locations and refer to well logs in **Appendix B**.

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7.2 Feasibility Testing Procedures

7.2.1 Groundwater Extraction and VEGE Equipment

The equipment used for the groundwater extraction and VEGE feasibility test was located in a feasibility test trailer which was setup near the feasibility extraction wells and observation monitoring wells. Electrical power was supplied to the equipment through a tow behind electrical generator.

An electric submersible pump was utilized for groundwater extraction during both portions of the testing. A totalizing flow meter was used to monitor the volume of water being extracted. During groundwater and VEGE activities, groundwater elevations in peripheral wells were monitored by both transducers installed in immediately located monitoring wells, while a static water level (SWL) meter was used to monitor groundwater elevations in distant monitoring wells. Vacuum readings were collected during VEGE phases of testing at peripheral wells using magnahelic gauges.

A liquid ring pump was used to produce the vacuum during the VEGE evaluation portion of the feasibility testing. During the VEGE portion of the feasibility testing, airflow and the air-stream temperature were monitored with a digital thermo-anemometer probe. Vapor COC concentrations within the air stream of the VEGE system were monitored with a PID. The vacuum levels produced by the vacuum pump were monitored inside the trailer and were manually adjusted using a dilution valve also located within the feasibility test trailer. Following multiple phases of VEGE testing (EW-14 Low vac, mid vac, high vac, and EW-1BR High vac), summa canisters were utilized for the collection of extracted soil vapor to be sent for laboratory analysis of COCs and C_4-C_{12} aliphatics and aromatics. Refer to **Appendix C** for vapor sampling laboratory data reports.

7.3 Feasibility Testing: MW-14 (Deep Overburden)

7.3.1 Groundwater Extraction (without vacuum) Testing: MW-14

Feasibility testing initiated with a groundwater extraction test at MW-14 on March 27, 2018. The test operated for two (2) hours. Groundwater extraction (without vacuum) was the initial test performed, in an attempt to dewater the immediate area, to enhance the potential of vacuum influence and simulate full scale system operational conditions. Transducers were placed in monitoring wells MW-2, MW-4, MW-7, and MW-8 while hand gauging was performed at monitoring wells MW-11, MW-12, EW-1, MW-9, and MW-2BR. Extracted groundwater was noted to be very silty. An extraction rate of 0.19 gallons per minute (gpm) and a hydraulic radius of influence (ROI) of 30' were measured.

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7.3.1 Groundwater Extraction (without vacuum) Testing: MW-14 (Continued)

At the conclusion of the groundwater extraction test, an influent aqueous sample was collected from the influent stream for analysis of site COCs, total iron, total manganese, total suspended solids, and oil & grease. Refer to **Table 1** for the feasibility testing aqueous analytical summary and to **Appendix D** for aqueous sampling analytical laboratory data reports, and **Appendix E** for the feasibility testing report.

7.3.2 Vacuum Enhanced Groundwater Extraction Testing: MW-14

Feasibility testing continued with multiple phases of vacuum enhanced groundwater extraction testing at MW-14 on March 27, 2018. The testing operated for one (1) hour at low vacuum (5" Hg), two (2) hours at mid vacuum (10" Hg), and an hour and a half (1 ½) hours at high maximum vacuum (~25" Hg). Transducers and hand gauging remained consistent with the groundwater extraction phase of feasibility testing. Similar to the groundwater extraction phase of testing, extracted water was very silty. Measured results are as follows:

Test Well	Extraction	Extraction Rate	Hydraulic Radius of Influence
MW-14	Low Vacuum (≈5"Hg)	0.24 gpm	30'
	Mid Vacuum (≈10" Hg)	0.36 gpm	31'
	High Vacuum (≈29"Hg)	0.24* gpm	41'

*Siphoning from batch tank first encountered

Due to the silty conditions of the extracted groundwater, the totalizer failed as a result of clogging. Attempts to clean out and backflush the totalizer were unsuccessful. Flow rate measurements were then collected from the batch tank volumes located within the testing trailer. In addition to the totalizer failure, syphoning of the batch flow tank within the remedial trailer was observed during the high vacuum VEGE test. The measured extraction rate of 0.24 gpm is believed to significantly lower due to syphoning during the totalizer failure as an unknown volume was treated and discharged. At the conclusion of the groundwater extraction test, an aqueous sample was collected from the influent stream for analysis of site COCs, total iron, total manganese, total suspended solids, and oil & grease, prior to carbon treatment. Refer to **Table 1** for the feasibility testing aqueous analytical summary and to **Appendix D** for aqueous sampling analytical laboratory data reports, and **Appendix E** for the feasibility testing report.

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7.4 Feasibility Testing: EW-1 (Shallow Overburden)

7.4.1 Groundwater Extraction (without vacuum) Testing: EW-1

Feasibility testing continued with a groundwater extraction test at EW-1 on March 28, 2018. The test operated for two (2) hours. Groundwater extraction(without vacuum) was the initial test performed, in an attempt to dewater the immediate area, to enhance the potential of vacuum influence and simulate full scale system operational conditions. Transducers were placed in monitoring wells MW-2, MW-4, MW-8, and MW-9 while hand gauging was performed at monitoring wells MW-13, MW-1BR, and Tank Field Sump. Extracted groundwater was noted to be very silty. An extraction rate of 0.43 gallons per minute (gpm) and a hydraulic radius of influence (ROI) of 21' were measured. At the conclusion of each groundwater extraction test, an aqueous sample was collected from the influent stream for analysis of site COCs, total iron, total manganese, and total suspended solids, prior to carbon treatment. Refer to **Table 1** for the feasibility testing aqueous analytical summary and to **Appendix D** for aqueous sampling analytical laboratory data reports, and **Appendix E** for the feasibility testing report.

7.4.2 Vacuum Enhanced Groundwater Extraction Testing: EW-1

Feasibility testing continued with multiple phases of vacuum enhanced groundwater extraction testing at EW-1 on March 28, 2018. The testing operated for one and a half (1 ½) hours at high, maximum vacuum (~25" Hg), two (2) hours at mid vacuum (10" Hg), and two and a half (2 ½) hours at low (5" Hg). Testing initiated with the high vacuum levels in an attempt to expedite groundwater drawdown and enhance vacuum influence. Transducers and hand gauging remained consistent with the groundwater extraction phase of feasibility testing. Similar to the groundwater extraction phase of testing, extracted water was very silty. Measured results are as follows:

Test Well	Extraction	Extraction Rate	Hydraulic Radius of Influence
EW-1	Low Vacuum (≈5"Hg)	0.77 gpm	30'
	Mid Vacuum (≈10" Hg)	0.6* gpm	46'
	High Vacuum (≈26"Hg)	1.42 gpm	62'

*Siphoning from batch tank encountered

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7.4.2 Vacuum Enhanced Groundwater Extraction Testing: EW-1 (Continued)

Flow rate measurements were again collected from the batch tank volumes located within the testing trailer. Syphoning of the batch flow tank within the remedial trailer was observed only during the mid-vacuum VEGE test. The measured extraction rate of 0.6 gpm is believed to significantly lower due to syphoning during the totalizer failure as an unknown volume was treated and discharged. For design purposes, mid vacuum liquid extraction calculations will use an average of measured mid and high vacuum extraction rates, to ensure adequate equipment sizing. This average is found to be 1.1 gpm. At the conclusion of the groundwater extraction test, an aqueous sample was collected from the influent stream for analysis of site COCs, total iron, total manganese, and total suspended solids, prior to carbon treatment. Refer to **Table 1** for the feasibility testing aqueous analytical summary and to **Appendix D** for aqueous sampling analytical laboratory data reports, and **Appendix E** for the feasibility testing report.

7.5 Feasibility Testing: EW-1BR (Bedrock)

7.5.1 Groundwater Extraction (without vacuum) Testing: EW-1BR

Feasibility testing continued with a groundwater extraction (without vacuum) test at EW-1BR on March 29, 2018. The test operated for two (2) hours. Groundwater extraction was the initial test performed, in an attempt to dewater the immediate area, to enhance the potential of vacuum influence and simulate full scale system operational conditions. Transducers were placed in monitoring wells MW-5BR, MW-1BR, MW-4BR, and MW-8 while hand gauging was performed at monitoring wells MW-9BR, MW-13, and MW-9. Extracted groundwater was noted to be very silty. An extraction rate of 0.45 gallons per minute (gpm) and a hydraulic radius of influence (ROI) of 23' were measured. At the conclusion of each groundwater extraction test, an aqueous sample was collected from the influent stream for analysis of site COCs, total iron, total manganese, total suspended solids, and oil & grease, prior to carbon treatment. Refer to **Table 1** for the feasibility testing aqueous analytical summary and to **Appendix D** for aqueous sampling analytical laboratory data reports, and **Appendix E** for the feasibility testing report.

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7.5.2 Vacuum Enhanced Groundwater Extraction Testing: EW-1BR

Feasibility testing concluded with multiple phases of vacuum enhanced groundwater extraction testing at EW-1BR on March 29, 2018, following the groundwater extraction test. The testing operated for one (1) hour at low vacuum (5" Hg), one (1) hour at mid vacuum (10" Hg), and one (1) hour at high, maximum vacuum (~25" Hg). Transducers and hand gauging remained consistent with the groundwater extraction phase of EW-1BR feasibility testing. Similar to the groundwater extraction phase of testing, extracted water was very silty. Measured results are as follows:

Test Well	Extraction	Extraction Rate	Hydraulic Radius of Influence
EW-1BR	Low Vacuum (≈5"Hg)	0.49	29
	Mid Vacuum (≈10" Hg)	0.56	32
	High Vacuum (≈29"Hg)	0.57	34

Flow rate measurements were again collected from the batch tank volumes located within the testing trailer. At the conclusion of the groundwater extraction test, an aqueous sample was collected from the influent stream for analysis of site COCs, total iron, total manganese, and total suspended solids, prior to carbon treatment. Refer to **Table 1** for the feasibility testing aqueous analytical summary and to **Appendix D** for aqueous sampling analytical laboratory data reports, and **Appendix E** for the feasibility testing report.

7.6 Feasibility Test Conclusions

Based on the accumulated results of the individual feasibility tests, and total contamination of the overburden and bedrock aquifers, the most cost efficient and effective design for a remediation system has been determined to be a VEGE system with an applied vacuum of 10"Hg for the extraction and treatment of petroleum impacted groundwater within the shallow overburden, deep overburden, and bedrock aquifers. All collected aqueous samples at varying vacuum levels and locations demonstrated effective COC removal. Varying levels of total manganese and total iron were detected in all aqueous samples. VEGE wells will need to be located and screened on an individual basis for optimal groundwater extraction, based on historical COC impacts as well as surrounding soil boring and well log observations.

The proposed in-situ system will treat the impacted groundwater with liquid phase Granular Activated Carbon (GAC) within the system's treatment train, prior to permitted discharge to the local sewer system. Vapor sample analysis has determined that extracted vapors resulting from the applied 10"Hg vacuum will require treatment prior to discharge to the atmosphere. Extracted vapors will be treated with vapor phase GAC within the system's treatment train.

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8.0 DESIGN AND CONSTRUCTION DETAILS 245.311.(A)(6)

The sequence of remediation will require the soil excavation to occur first. The excavation will occur in similar areas as those where extraction wells and trenching will occur.

8.1 Excavation of Impacted Unsaturated Soils

Prior to excavation and transportation to disposal facility, disposal sampling and analysis is required. Using direct push methods the appropriate number of soil samples will be obtained from impacted soil depth and analyzed for disposal facility requirements. The number and types of analysis will be specific to the disposal facility chosen.

Monitoring well MW-14 is located within the remedial excavation it will need to be abandoned and later replaced. The well screen on MW-14 starts at a depth of approximately five (5) foot bgs. The remedial excavation will expose this screen due to the approximate six (6) foot target depth. No attempt to work around the monitoring well is proposed as a conservative approach to limit the creation of a preferential pathway that may occur if the well is damaged and not properly abandoned. MW-14 will be abandoned following PADEP guidance using pressure grouting techniques and tremmi pipe application. MW-14 is constructed as a four (4) inch diameter well for feasibility testing. The replacement of MW-14 will be with a two (2) inch diameter monitoring well. The replacement of MW-14 will be conducted after the completion of the excavation while remedial extractions wells are installed.

Because the impacted soils are located proximal to the UST and UST vent lines, a PADEP licensed UST Installer will be required to provide oversite of the excavation. The excavation has a high potential to expose UST vent lines and will be in close proximity of the UST. The UST Installer will need to make the decision if the UST system will require shut-down during the excavation process and have the authority to stop the excavation if safety concerns are identified.

Prior to excavating, a new geophysical survey will be conducted to more accurately identify the location of the edge of the UST, UST vent lines, and any other unidentified utilities in the area. The locations will be marked on the pavement and accurate measurements will be collected to stationary site objects so that the feature locations may be identified if a delay in excavation causes the paint markings to wear away.

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8.1 Excavation of Impacted Unsaturated Soils (Continued)

Excavation will be conducted using conventional excavation equipment sized for the operation. The general procedures for excavation will include:

- Abandon MW-14
- Demarcation of surface for soil impacts based on soil sampling
- Identification of UST vent lines and other utilities and communication of the locations to all workers
- Constant oversight of excavation activities by PADEP licensed UST installer
- Excavation and segregation of non-impacted soils based on field PID response and sensory observations
- Stockpiling of field screened "acceptable" soils on plastic which was covered daily
- Stockpiling of any large pieces of fill for off-site disposal to limit preferential pathways in backfill and landfill disposal costs
- Loading and transportation of field interpreted petroleum-containing soil for disposal at approved disposal facility
- Post-excavation attainment sampling (of unsaturated soil) using systematic random techniques
- Sampling of field screened "acceptable" soil pile prior to using it as backfill
- Backfilling (in compacted lifts) of laboratory confirmed acceptable soils
- Backfilling of remaining excavation to surface with quarry aggregate appropriately sized for the site in compacted lifts
- Replacement of paving
- Replacement of MW-14 with a 2 inch well of similar screen interval

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8.2 Excavation of Impacted Saturated Soils

Prior to excavation and transportation to disposal facility, disposal sampling and analysis is required. Using direct push methods the appropriate number of soil samples will be obtained from impacted soil depth and analyzed for disposal facility requirements. The number and types of analysis will be specific to the disposal facility chosen.

Monitoring wells MW-1BR, MW-8 and feasibility wells EW-1, EW-1BR are located within the remedial excavation. Therefore they will be removed or abandoned with plans to have the monitoring wells later replaced. MW-8 and EW-1 are constructed to a depth similar to that of the remedial excavation and therefore will be removed with the excavation. However, MW-1BR and EW-1BR are deeper and therefore will be abandoned following PADEP guidance using pressure grouting techniques and tremmi pipe application. MW-8 and MW-1BR will be replaced with that of a similar construction after the backfill of the excavation. Extraction wells will be replaced as outlined in later sections of this report.

Sediment and erosion controls will be set up prior to the saturated soil excavation. A dewatering system capable of extracting, treating, and discharging the excavation water to the sanitary sewer will be set up prior to the excavation. The system will be designed to meet the requirements of industrial discharge permit parameters including instantaneous flow.

Because the impacted soils are located proximal to the UST and UST product lines, a PADEP licensed UST Installer will be required to provide oversite of the excavation. The UST Installer will need to make the decision if the UST system will require shut-down during the excavation process and have the authority to stop the excavation if safety concerns are identified.

Prior to excavating, a new geophysical survey will be conducted to more accurately identify the location of the edge of the UST, UST vent lines, and any other unidentified utilities in the area. The locations will be marked on the pavement and accurate measurements will be collected to stationary site objects so that the feature locations may be identified if a delay in excavation causes the paint markings to wear away.

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8.2 Excavation of Impacted Saturated Soils (Continued)

Excavation will be conducted using conventional excavation equipment sized for the operation. The general procedures for excavation will include:

- Abandon MW-1BR and EW-1BR
- Demarcation of surface for soil impacts based on soil sampling
- Identification of UST lines and other utilities and communication of the locations to all workers
- Constant oversight of excavation activities by PADEP licensed UST installer
- Set up of sediment and erosion controls around the excavation and soil piles
- Set up of dewatering and treatment system
- Excavation and segregation of non-impacted soils based on field PID response and sensory observations
- Stockpiling of field screened "acceptable" soils on plastic which was covered daily
- Stockpiling of any large pieces of fill for off-site disposal to limit preferential pathways in backfill and landfill disposal costs
- Loading and transportation of field interpreted petroleum-containing soil for disposal at approved disposal facility
- Sampling of field screened "acceptable" soil pile prior to using it as backfill
- Backfilling (in compacted lifts) of laboratory confirmed acceptable soils
- Backfilling of remaining excavation to surface with quarry aggregate appropriately sized for the site in compacted lifts
- Replacement of paving
- Replacement of monitoring wells with a 2 inch well of similar screen interval

8.3 Installation of VEGE Wells

VEGE wells will be strategically placed to treat groundwater near the areas of highest groundwater COC concentrations and located based upon the ROI calculated from feasibility testing results. Refer to **Appendix E** and **Section 7.0** of this report for information concerning ROI. The feasibility test wells EW-1 and EW-1BR will be used in the system design in addition to new wells EW-2 through EW-6 and EW-2BR. The locations of the proposed remedial wells is presented on **Figure 4.** Refer to **Figure 5** and **Figure 6** for the locations of the overburden and bedrock wells and their associated ROI's and impacted groundwater plumes.

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8.3 Installation of VEGE Wells (Continued)

Extraction wells will be installed using hollow tem auger drilling methods combined with air rotary drilling. The proposed extraction wells will be installed with appropriately screened four (4) inch diameter 0.010-inch wire-wrapped PVC screen followed by schedule 40 four (4) inch riser to the surface. The total depth and length of screen will be specific to the aquifer setting as explained in the following sections. The annulus between the borehole and the pvc screen will be backfilled with appropriately sized clean quartz sand to a level approximately two (2) feet above the top of the screened interval. The next one (1) foot will be backfilled with hydrated bentonite and the remaining annulus will be backfilled with cement grout to avoid vacuum short circuiting. The wells will be finished at the surface with 18 inch diameter steel manways surrounded by a concrete pad. Well heads will be sealed with an air-tight cap. A generalize construction diagram for extraction wells is presented in **Appendix B**.

8.3.1 Shallow Overburden VEGE Wells; EW-1, EW-2, and EW-3

Shallow overburden extraction wells are installed to address groundwater impacts in the shallow overburden aquifer identified in eastern portions of the site. EW-1 has already been installed for feasibility testing as a 14 foot total depth having five (5) foot screened interval. EW-2 and EW-3 will be installed in a similar manner and adjusted for site specific conditions. It is noted that fill material has increased the depth of overburden in the location of EW-2 and EW-3 causing the drilling depth of these wells to be deeper than EW-1.

EW-2 and EW-3 will be drilled to an approximate depth of 20 foot bgs to refusal at bedrock. It is noted that during the installation of MW-10, harder weathered bedrock was encountered at 16-18 foot bgs which was not interpreted as bedrock. A copy of reference wells MW-10 and MW-5BR well logs are presented in **Appendix B** to assist with overburden well depth interpretation. Both wells are to be installed with 10 foot of screened interval and constructed as outlined above.

The specific screened intervals and depth as based upon adjacent reference monitoring wells is as follows:

Extraction Well	Total Depth	Screened Length	Reference Well
EW-2	20 foot bgs	10 foot	MW-10
EW-3	20 foot bgs	10 foot	MW-5BR

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8.3.2 Deep Overburden VEGE Wells; EW-4, EW-5, and EW-6

Deep overburden extraction wells are installed to address groundwater impacts in the deeper overburden aquifer identified in western portions of the site. MW-14 was installed as a feasibility well in this area, however this well is not designed to be used in the remedial system. EW-4, EW-5, and EW-6 will be installed in a similar depth as MW-14 and constructed for site specific conditions.

EW-4, EW-5, and EW-6 will be drilled to an approximate depth of 20 foot bgs to refusal at bedrock. The specific screened intervals and depth as based upon adjacent reference monitoring wells is as follows:

Extraction Well	Total Depth	Screened Length	Reference Well
EW-4	21 foot bgs	15 foot	MW-4
EW-5	20 foot bgs	15 foot	MW-14
EW-6	15 foot bgs	10 foot*	MW-7/MW-2BR

* if bedrock refusal is less than 15 foot, screen interval shall be adjusted to be no less than 5 foot below ground surface to limit short circuiting.

A copy of reference wells MW-4, MW-7, MW-2BR, and MW-14 and MW-5BR well logs are presented in **Appendix B** to assist with overburden well depth interpretation. Both wells are to be installed with 10 foot of screened interval and constructed as outlined above.

8.3.3 Bedrock VEGE Wells; EW- 1BR and EW-2BR

Bedrock extraction wells are installed to address groundwater impacts in the bedrock aquifer identified in eastern portions of the site. EW-1BR was installed as a feasibility well in this area, as a foot total depth extraction well having five (5) foot screened interval. EW-2BR will be installed in a similar depth and constructed for site specific conditions.

EW-2BR will be drilled to an approximate depth of 25 to 30 foot bgs to a depth interpreted to be at least 10 feet below the bedrock/overburden interface. The specific screened intervals and depth as based upon adjacent reference monitoring wells is as follows:

Extraction Well	Total Depth	Screened Length	Reference Well
EW-2BR	25 to 30 foot bgs	5 foot	MW-5BR

A copy of reference wells MW-5BR well logs are presented in **Appendix B** to assist with overburden well depth interpretation.

8.4 Remedial System, Equipment, Construction, Delivery, and Connection

Mountain Research will initiate the construction of a remedial treatment system housed inside a system shed at the site after approval of the RAP and any USTIF contractual set-up obligations. Upon completion of system construction and site preparation, the system shed will be delivered to the site and connected to the completed conduit network.

8.4.1 Remedial System Enclosure

The remedial treatment system will be housed in a wood constructed shed or mobile trailer. The enclosure will be appropriately sized to contain the remedial components. Heating and ventilation will be controlled by a thermostat, which will operate an electric heater and exhaust fan. **Figure 7,** the process flow diagram, depicts the conceptual treatment phases of remedial system.

The remedial system enclosure will be constructed to meet all local and state required codes. The system will be constructed to meet Class I, Division II Hazardous Location requirements. Construction will include the use of totally enclosed fan cooled (TEFC) motors, and isolation of potential ignition sources from possible vapor accumulation.

8.4.1.1 Electrical Compliance

All electrical connections for remedial system components will be made pursuant to applicable electrical codes.

8.4.2 Remedial Treatment System Equipment

Remedial treatment equipment will include an air compressor, vacuum pump, vapor liquid separator (VLS), vapor phase carbon vessels, liquid phase carbon vessels, sediment filters, transfer pumps, telemetry, environmental controls, equalization tanks and automated control equipment.

8.4.2.1 Vacuum Pump

A vacuum extraction pump will operate to induce a vacuum on the groundwater extraction wells and enhance groundwater extraction. As a result petroleum vapors will be pulled through the system and be treated by vapor granular activated carbon. The vacuum pump will be interconnected to VEGE wells EW-1 through EW-6, EW-1BR and EW-2BR through underground PVC conduit and the VLS tank. The vapor GAC units will be installed on the effluent (pressure) end of the vacuum pump system.

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8.4.2.1 Vacuum Pump (Continued)

The vacuum pump will be sized to produce a vacuum of 12.75 inches of Hg at each well head and produce a total vapor flow rate of 218 standard cubic feet per minute (ACFM), based on feasibility testing results. Based on the enclosed design the vacuum pump will be rated for 13 inches of Hg at the pump inlet and produce 220 ACFM at the pump inlet. Refer to **Appendix F** for remedial equipment sizing calculations.

8.4.2.2 Vapor Liquid Separator (VLS)

The VLS design is based on the vacuum level and flow rate of the vacuum pump. The VLS tank will be an 80 gallon aluminum constructed tank capable of withstanding up to 20 inches of Hg vacuum, and be installed on the vacuum side of the vapor treatment process piping directly up stream of the vacuum pump. The VLS will function to protect the vacuum pump from the intake of water from the extraction wells by separating liquids from the vapor stream and containing it for proper treatment through the liquid treatment process within the treatment system. A sight glass equipped with float switches will be installed on the VLS unit, for determination of liquid capacity of the tank.

Collected liquid in the VLS tank will be pumped out by a VLS liquid transfer pump and be discharged to the equalization tank.

Following the liquid separation process, the vapor stream will be pass through the vacuum pump and be treated through vapor GAC vessels on the effluent side of the pump before being discharged to the atmosphere.

8.4.2.3 Air Compressor

An air compressor will be utilized to operate the pneumatic pumps for groundwater extraction from the VEGE wells. Total extraction rate of the liquid phase of the system is calculated utilizing the mid vacuum level extraction rates measured during feasibility testing and the corresponding number of shallow overburden, deep overburden, and bedrock VEGE wells required by the remedial design, as discussed in **Section 8.3**. The eight (8) total pneumatic pumps will be extracting approximately 6.46 gallons per minute (gpm) at peak flow, determined by the feasibility testing results.

The compressor will be sized according to the anticipated compressed air usage to extract these flow rates from the proposed extraction points. Based on these requirements the compressor must be a sized to handle a minimum of 15 scfm at 70 psi.

8.4.2.4 Pneumatic Well Pumps

Pneumatic well pumps will be utilized in all VEGE wells. The bottom loading pneumatic pumps are operated by compressed air from the air compressor located within the remediation system housing. The VEGE well pumps will be capable of extracting the peak flow encountered during VEGE feasibility testing, 1.42 gpm.

8.4.2.5 EQ Tank

An equalization (EQ) tank will be used for influent groundwater collection. Process water / influent in the EQ tank will be pumped through the treatment process as batch flow, to achieve a more constant flow rate. The EQ tank will be sealed off using a lid sealed with a gasket and vented to the exterior of the building using PVC pipe. A tank with a minimum capacity of 300 gallons will be utilized. The tank will also be equipped with an ultrasonic transmitter to monitor liquid levels within the tank for capacity information.

8.4.2.6 Liquid Transfer Pump

A submersible pump located in the EQ tank will be used for transfer of extracted liquid through the liquid phase treatment of the remedial system. A 1HP submersible pump will transfer extracted liquid from the EQ tank through bag filtration and GAC vessels. The pump will be capable of producing 20 gpm at 40 PSI.

8.4.2.7 Sediment Filtration

Sediment filtration of the liquid phase treatment will be accomplished with the use of sediment bag filter units (4 quantity) installed in a parallel-series configuration to accommodate the proposed system flow rate. The first parallel set of bag filters will be 100 micron in filtering size, followed by a second set of bag filter units of 25 micron in filtering size. Bag filters will be located prior to liquid GAC filters to prevent carbon fouling.

8.4.2.8 Carbon Vessels (Vapor and Liquid Phases)

All volatile organic compound (VOC) constituents will be treated by GAC units on the vapor and liquid stream. GAC vessels for vapor and liquid are sized based on the anticipated flow rates and the expected VOC constituent concentrations in the waste streams.

Liquid GAC vessels will be monitored by pressure gauges, flow rates and the collection of samples from the influent, midfluent, and effluent of the treatment process. Along with VOC breakthrough, liquid carbon is susceptible to fouling from hard water and bacterial growth. Increases in pressure within the treatment process will indicate carbon fouling and the need for a carbon change out.

8.4.2.8 Carbon Vessels (Vapor and Liquid Phases) (Continued)

Groundwater treatment will operate under batch flow conditions. It is anticipated that the treatment system flow will controlled to near 15 gpm. To accommodate the 15 gpm flow rate and the anticipated concentration rates, the system will utilize two (2), 1,000 pound liquid GAC units rated at 100 psi. The GAC units will be installed in series. Plumbing will also be set up for backflushing carbon units. Carbon sizing calculations are included in **Appendix F**.

Vapor carbon will be monitored for VOC breakthrough and system clogging due to water condensation and freezing conditions. Vapor carbon will be changed out as needed to prevent VOC breakthrough and maintain proper vapor treatment.

The vapor carbon units will be sized to handle the minimum 250 ACFM flow rate from the vacuum pump. The GAC units will be placed on the pressure side of the vacuum pump. There will be a minimum of two (2), 400 lb vapor GAC vessels. Carbon sizing is based on the design flow rate and the suppliers GAC unit specifications.

8.4.2.9 VLS Transfer Pump

A transfer pump will be required for the VLS tank to transfer groundwater extracted from the vacuum lines to the EQ tank. This pump must be a minimum of ¾ HP to overcome the vacuum produced by the vacuum system.

8.4.2.10 Telemetry

The remedial system operation will be monitored using a remote telemetry system. The telemetry system will be utilized to record data regarding system operation, including backpressure of sediment filter and liquid carbon filters, system flow rate, and vacuum being produced by the vacuum pump. Data will be recorded on two (2) minute intervals and saved onto an internet server where it can be accessed on any computer terminal where internet access is available. Both real time and historical data can be viewed to evaluate system performance trends. The telemetry data will be used to maximize system operation time and efficiency, as well as to diagnose system mechanical issues.

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8.4.2.11 Automated Controls

The remediation system will be controlled by a Programmable Logic Control (PLC) which will receive inputs from float switches from within the equalization tank and VLS and outputs to the vacuum pump, air compressor, transfer pumps and solenoid controls. The PLC will enable the system to operate automatically and without constant oversight. The PLC will be programmed to shut down extraction of the liquid or vapor phase, based on activation of the "high" alarms of the EQ tank and VLS unit, respectively, to avoid overflowing the EQ tank or liquid entering the vacuum pump.

8.4.2.12 Piping Manifolds and Total Fluids Flow Monitoring

A pneumatic regulator will be placed on each individual compressed air line prior to the line exiting the enclosure and entering conduit trench to wells. The total fluids conduits from the VEGE wells will enter the remedial treatment enclosure and will manifold into a common two (2) inch diameter PVC pipe before discharging into the EQ tank. Prior to the manifold, the conduits will have dedicated ball valves to control flow, check valves to avoid liquid backflow, and boiler drains installed for individual extraction samples or backflushing of extraction lines. A magmeter will be used to communicate real time flow rates to the telemetry system and record totalizing flow volume on the effluent stream of the treatment system, prior to discharge.

A vacuum gauge will be installed at each VEGE well head to evaluate the amount of vacuum being applied to each VEGE well. The vacuum lines from each well will be manifolded into a single three (3) inch diameter vacuum line within the remedial enclosure for conveyance through the treatment process. Each extraction line will be equipped with a ball valve and individual sample ports for adjusting and monitoring each vacuum extraction line individually.

Refer to **Figure 8** for the remedial system enclosure layout.

8.4.2.13 Dosing Pump/Iron Sequestering Agent

The equalization tank will have the potential to be outfitted with a dosing pump to deliver an iron sequestering agent to the treatment stream. Aqueous sampling of extracted groundwater during VEGE feasibility testing demonstrated a varied amounts of total iron and manganese in the groundwater. Should iron fouling become an issue during system operation, an iron sequestering agent may be added to the EQ tank. Refer to **Table 1** for the feasibility testing aqueous analytical summary and to **Appendix C** for aqueous sampling analytical laboratory data reports.

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8.5 Underground Conduit Network

An underground conduit network will be constructed to convey the groundwater, and vapors from the VEGE wells to the treatment system. The six (6) overburden VEGE wells (EW-1 through EW-6) and two (2) bedrock VEGE wells (EW-1BR and EW-2BR) will have dedicated two (2) inch inner diameter schedule 40 PVC piping run for vacuum extraction. These two (2) inch diameter PVC lines will be extended back to the remedial system enclosure, so each well is on a designated extraction line and vapor extraction rates can be adjusted from in the remedial building. Each well will be equipped with a dedicated one (1) inch diameter black poly pipe used for groundwater recovery from a bottom loading pneumatic submersible pump to the groundwater extraction manifold in the treatment system enclosure. In addition, dedicated $^{3}/_{8}$ inch rubber hose for compressed air lines will be installed to operate the pneumatic submersible pumps. Refer to **Figure 9** for a copy of a typical VEGE well head construction detail.

The underground conduit network will be constructed as individual trenches from each extraction well branched off of a common trench to the treatment system. Each trench will be constructed to a depth below frost line (approximately 3 feet) and backfilled with a one (1) foot layer of rock dust, followed by 2RC stone, and capped with asphalt or concrete, or topsoil to match existing conditions. Refer to **Figure 4** for the conceptual layout of the conduit trench system and trenching cross section construction detail locations. **Figure 10** illustrates various cross section construction details of the proposed trench lines.

All soils not used for backfill material will be stockpiled on-site, sampled for PADEP Clean Fill parameters, and appropriately disposed of and / or spread out onto the Vennard's property.

8.6 Expected Effectiveness

The combined soil excavation and VEGE approach is expected remediate impacted soil and groundwater to a point that will stabilize the groundwater plume and reduce the COCs to a level that a SHS standard may be attained. The proposed soil excavation may be limited by utilities and the UST system. If this were to occur, a unsaturated SHS soil attainment may not be obtained. If this occurs, an alternative remediation or remediation standard will be proposed for soil.

Performance monitoring will be conducted to determine if adequate hydraulic coverage is met by the remedial extraction design. Groundwater elevations of peripheral monitoring wells will be compared to pre-remedial levels to evaluate an effective cone of depression, created by the VEGE wells. If observations of insufficient coverage is identified, additional extraction wells may be proposed.

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8.6 Expected Effectiveness (Continued)

The system will be operated until a reduction of groundwater impacts is observed that are interpreted to represent conditions favorable for groundwater attainment at points of compliance. Once this condition is met, the remedial system will be turned off for four quarters to continue to observe the groundwater plume without the effects of remediation. If the groundwater plume proves significant rebound in concentration then the system will be re-initiated. If the groundwater plume has stabilized to a point interpreted to be adequate for attainment of point of compliance, the point of compliance wells (and all other monitoring wells) will be sampled on a quarterly basis for attainment purposes.

9.0 OPERATION AND MAINTENANCE FOR REMEDIAL ACTION 245.311.(A)(7)

9.1 Schedule of Remedial Action

9.1.1 Remedial Excavation and System Construction / Initiation

Upon PADEP approval of the RAP and any required USTIF contract obligations, construction of the remediation system will be initiated. The remedial system, housed inside a remedial shed, will be delivered to the site within 90 days of the notice to proceed.

Within the same 90 day timeframe (after notice to proceed), Mountain Research will also conduct the remedial excavation and attainment sampling. Once the remedial excavation is complete installation of all necessary site VEGE wells, trenching, and conduit network components as described in **Section 7.4** of this report will be initiated.

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9.1.1 Remedial Excavation and System Construction / Initiation (Continued)

The following estimated remedial installation/start-up timeframe.

Activity	Time to complete
Sample soils for disposal	1 week
Perform Remedial Soil Excavation	3 weeks
Acquire permits / Purchase equipment / Acquire subcontractors	4 weeks
Install VEGE wells and replacement monitoring wells	3 weeks
Conduit trenching / well head construction	3 weeks
Remedial System Enclosure and system construction	4 weeks
System Install (Remedial Enclosure and Submersible Pumps)	1 week
Install electric service at site	1 week
Startup	1 week
Trouble Shooting	3 weeks

Remediation system upstart will commence immediately following the completion of the treatment system, site component installation, and the acquisition of all required permits as discussed in **Section 4.0** of this report.

9.1.2 System Operational Timeframe

System operation will continue as required to facilitate remediation of the site to satisfy NRUA groundwater SHS attainment. The continued system operation or system modifications will be evaluated semi-annually. System effectiveness and efficiency will be evaluated on a quarterly basis to plan and implement any required system changes or upgrades to ensure the effectiveness of the remedial process. VEGE wells will be sampled on a quarterly basis to evaluate effective COC removal. Wells that demonstrate minimal or no COC removal will be idled to concentrate remedial efforts at impacted locations. Data from quarterly groundwater sampling, bi-weekly system inspections, and telemetry will be evaluated to determine the status of the remedial activities.

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9.1.3 System Inspections / Sampling / Reporting

Remedial system inspections will be executed on a bi-weekly basis (twice per month). Bi-weekly system inspections will include groundwater gauging of monitoring wells, permit discharge sampling (at required frequency), vacuum at each VEGE well head, total and individual VEGE well discharge readings, effluent vapor PID readings, vacuum influence at peripheral monitoring wells, vacuum flow rate, vapor phase influent PID readings, and mechanical inspections.

Groundwater sampling will occur on a quarterly basis. All system inspection and sampling data will be reported quarterly within Remedial Action Progress Reports (RAPR). System inspections, sampling, and quarterly reporting will begin with the initiation of remedial treatment and continue until the remedial system is shut down. After system operation ceases, post-remedial attainment sampling and reporting will begin.

9.2 Characterization and Disposition of Discharge

Discharge from the remediation system will include groundwater and vapors. Concentrations of site COCs in extracted vapor after the initial first quarter are expected to be minimal, however will be treated with vapor granular activated carbon. Extraction will occur at a constant flow rate based on the size of the blower for the VEGE systems, described in earlier sections of this report. Bi-weekly PID readings will be collected to verify that significant levels of COC's are not escaping the system.

The groundwater extracted by the VEGE system will be pre-treated with granular activated carbon and discharged to the local sanitary sewer system as a permitted industrial discharge approved by the Borough of Indiana. Refer to **Appendix A** for a copy of the discharge permit. Bi-weekly aqueous sampling of all required parameters of the permit in the effluent stream will verify compliance with the discharge permit.

9.3 Schedule of Monitoring, Sampling, and Site Inspections

Operation and maintenance of the remediation system will consist of the following:

- Constant remote monitoring of key system parameters
- Daily monitoring of telemetry data for key system parameters
- Biweekly system inspection and maintenance of the VEGE treatment systems
- Biweekly monitoring of field parameters
- Quarterly groundwater and soil vapor sampling

9.3.1 Remote Monitoring

On site telemetry will allow for real-time monitoring of the system and remote control to start or shut down the system as needed. Air compressor pressure, sediment filter pressure, liquid GAC filter pressures, VLS vacuum pressure, and EQ tank liquid levels will all be able available for real time and historic monitoring. Telemetry will be monitored at least once per business day during system operation.

9.3.2 On-Site Remedial System Operation Inspections and Monitoring

Treatment system checks will be executed by Mountain Research on a bi-weekly basis (twice per month). System inspections will include the following:

- a detailed evaluation of system components,
- regular maintenance on system equipment,
- monitoring and sampling of extracted groundwater via influent, midfluent, and effluent sampling ports,
- backwashing of the liquid GAC vessels (if necessary),
- PID monitoring of extracted vapors on the influent, midfluent, and effluent piping of the vapor system, along with flow, to quantify concentrations of vapor phase constituents being removed along with evaluating effectiveness of vapor GAC treatment.

Aqueous samples from influent, midfluent, and effluent sampling ports will be obtained by Mountain Research field staff, field monitored for pH, prior to being placed on ice and transported to the PADEP accredited Mountain Research laboratory. All samples will be analyzed for the March 2008 PADEP shortlist of unleaded petroleum parameters via EPA method 8260B.

Regularly scheduled / necessary carbon changes will occur during or as a result of regular system checks. Total discharge volumes will be recorded from totalizing flow meters, and particulate filters will be checked and changed on an as-needed basis. Telemetry components will be examined during system checks. Specialized system maintenance will be performed at any time when system telemetry indicates irregular function and / or system failure / shut downs. Effluent sampling parameters are established by the industrial discharge permit.

Remedial system inspection data including total discharge volume and analytical results will also be included in quarterly RAPR reports to PADEP.

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9.3.3 Permit Sampling

Sampling will occur on a bi-weekly basis as part of remedial system monitoring. As per the industrial discharge permit issued by the Borough of Indiana, monitoring results will be submitted to the borough twice, annually. Individual parameters to be monitored and reported, as per the permit, include: oil and grease, total suspended solids, volatile organic compounds, pH, and flow. Refer to **Appendix A** for a copy of the industrial discharge permit between Vennards Crossroads Convenience Store and the Borough of Indiana.

9.3.4 Regulatory Monitoring

All on-site and off-site monitoring wells have been sampled at least twice prior to installation of the remedial system. At least one more round of sampling of all wells, or the establishment of quarterly sampling shall be conducted prior to remedial system startup to establish a pre-remediation baseline of site conditions. After the startup of the system, quarterly sampling events will be performed to meet PADEP requirements. Quarterly sampling will occur at MW-1 through MW-16 and MW-1BR through MW-9BR.

All groundwater monitoring wells will be analyzed for the PADEP short-list of unleaded gasoline parameters including 1,2,4-TMB, 1,3,5TMB, benzene, toluene, ethylbenzene, xylenes, MTBE, naphthalene, and cumene by a PADEP accredited laboratory. For quality control purposes, Mountain Research will provide and analyze one (1) trip blank sample.

Upon receipt of the groundwater analytical results from each quarterly sampling event, Mountain Research will prepare and submit a quarterly RAPR signed and sealed by a Pennsylvania Professional Geologist to PADEP. In addition, the evaluation of the remedial system performance will be conducted and the RAPR will be signed by a Pennsylvania Professional Engineer. The RAPR will be written in accordance with Chapter 245, Subchapter D, Section 312. Each RAPR will include:

- Documentation of data collected during the quarter including groundwater analytical results and COC mass extraction estimate.
- Tabulated data on well construction, static water level measurements, groundwater elevations, and historical groundwater analytical results.
- Maps including groundwater elevation contours and gradient interpretation.

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9.3.4 Regulatory Monitoring (Continued)

- Graphical depictions of key COC concentrations trends (including exponential trend-lines projected forward in time) correlated with groundwater elevations, isoconcentration maps for COC exhibiting a PADEP NRUA groundwater MSC exceedance,

- Graphical depictions plotting both COC concentrations and groundwater elevations for each monitoring well where PADEP NRUA groundwater MSC exceedances occur. By plotting both the groundwater elevations and COC concentrations, trends may be observed in COC concentrations in relation to the elevation of the groundwater, especially seasonal variability.

- Quantitative and qualitative evaluation of the groundwater plume stability

- Discussion of the remedial treatment systems, system maintenance / down-time, performance sampling and any trends noted during the reporting period.

- Graphical plots of system telemetry monitoring points for that given quarter of reporting (while system is in operation)

10.0 MEDIA AND PARAMETERS 245.311.(A)(9)

Soil and groundwater are impacted by petroleum constituents and require remediation and attainment sampling to achieve a SHS attainment. Samples from soil borings, groundwater monitoring wells will be tested for the COC (benzene, toluene, ethylbenzene, xylenes, naphthalene, MTBE, cumene, 1,2,4-trimethlybenzene, and 1,3,5-trimethylbenzene).

11.0 ANALYTICAL METHODS 245.311.(A)(10)

Soil and groundwater samples will be analyzed using U.S. Environmental Protection Agency (USEPA) approved methods for the regulated substances related to the release of unleaded gasoline (EPA 8260B).

12.0 DEMONSTRATION OF ATTAINMENT 245.311.(A)(11)

Attainment of a NRUA SHS for the COC's has been identified as the remediation goal. Demonstration of SHS attainment will entail the combination of three key concepts:

- Removal of impacted unsaturated soil through excavation and systematic random attainment unsaturated soil sampling
- Extraction of impacted groundwater and excavation of impacted saturated soil with the goal to achieve groundwater SHS attainment at point of compliance

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12.1 Unsaturated Soil Attainment

Unsaturated soil attainment will be addressed through a PADEP systematic random soil sampling workbook on sidewalls and bottom (if not saturated or removed for saturated soil excavation) of the remedial excavation. The unsaturated soil excavation is estimated to be less than 125 cubic yards, therefore eight (8) samples are required following §250.703(d)(1). The soil attainment samples will be analyzed for unleaded gasoline parameters; benzene, ethylbenzene, toluene, xylenes, naphthalene, cumene, MTBE, 1,2,4-TMB, and 1,3,5-TMB by EPA method 8260B. Saturated soil excavations will not be sampled for attainment.

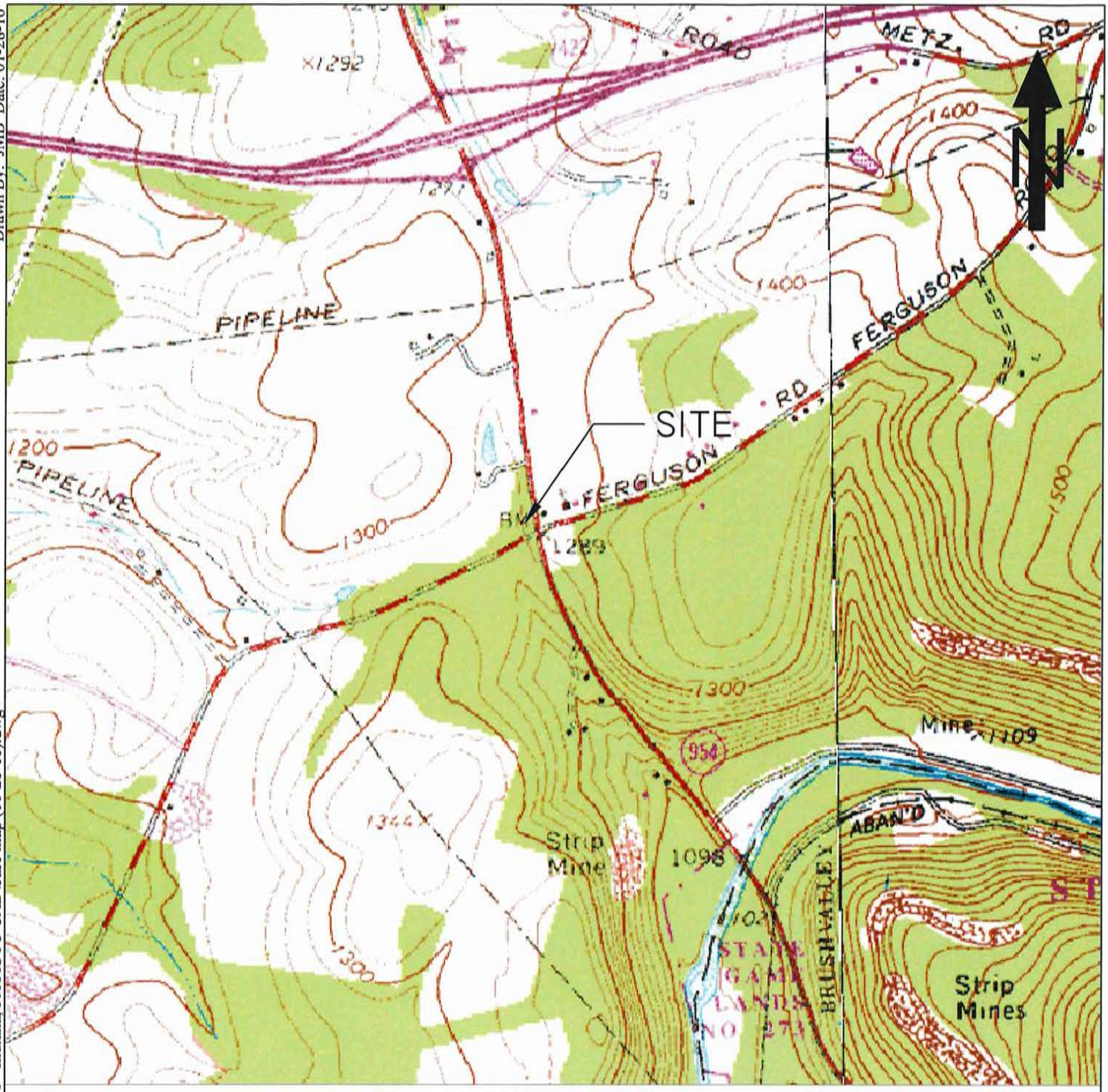
12.2 Groundwater Attainment

Groundwater attainment will be demonstrated through the sampling of groundwater within point of compliance monitoring wells and several non-point of compliance wells on a quarterly basis after the completion of remedial activities. Monitoring wells MW-1, MW-2, MW-3, MW-5, MW-6, MW-7, MW-10, MW-11, MW-2BR, MW-3BR MW-5BR, MW-6BR and MW-8BR are considered point of compliance wells. A total of eight (8) quarters of groundwater attainment sampling will be conducted after the remedial system is turned off. The samples will be analyzed for benzene, toluene, ethylbenzene, xylenes, cumene, naphthalene, 1,2,4-TMB, 1,3,5-TMB and MTBE via EPA Method 8260B.

13.0 POST REMEDIATION CARE REQUIREMENTS 245.311.(A)(12)

Upon attainment of SHS at the site, an evaluation of the need for any post remedial care and subsequent scope of work will be conducted. The results of the evaluation will be included in a Remedial Action Completion Report (RACR) and submitted to PADEP. No post remedial care requirements are anticipated if SHS attainment for soil and groundwater is met.

FIGURES



Portion of the Indiana, PA U.S.G.S 7.5 Minute Topographic Quadrangle.

0 1/2 1 MILE

0 600 1,200 2,400 3,600 4,800 6,000 FEET

0 1/2 1 KILOMETER

1"=1,200'

PENNSYLVANIA
QUADRANGLE LOCATION

Site Coordinates: (40°34'32.97"N & 79° 7'59.25"W)

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Vennard's

4985 Lucerne Road
Indiana, PA

SITE LOCATION MAP

Figure 1

Drawn By: JMB Date: 01-28-16

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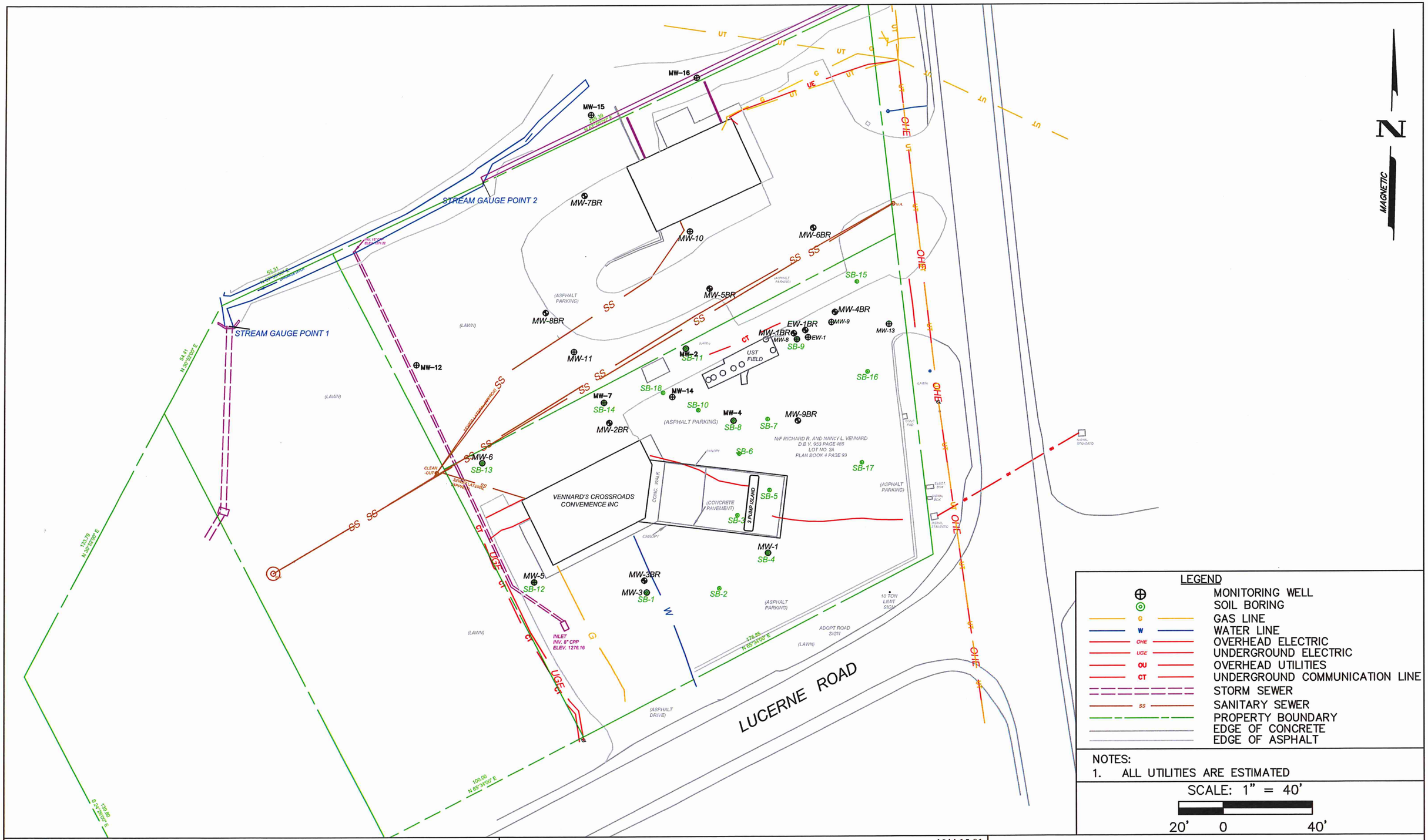

LEGEND

- MONITORING WELL
- SOIL BORING
- G — GAS LINE
- W — WATER LINE
- OHE — OVERHEAD ELECTRIC
- UGE — UNDERGROUND ELECTRIC
- OU — OVERHEAD UTILITIES
- CT — UNDERGROUND COMMUNICATION LINE
- STORM SEWER
- SS — SANITARY SEWER
- PROPERTY BOUNDARY
- EDGE OF CONCRETE
- EDGE OF ASPHALT

NOTES:
1. ALL UTILITIES ARE ESTIMATED

SCALE: 1" = 40'

20' 0 40'

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Submitted By: MK
Project Manager: Mike K
Checked By: MK

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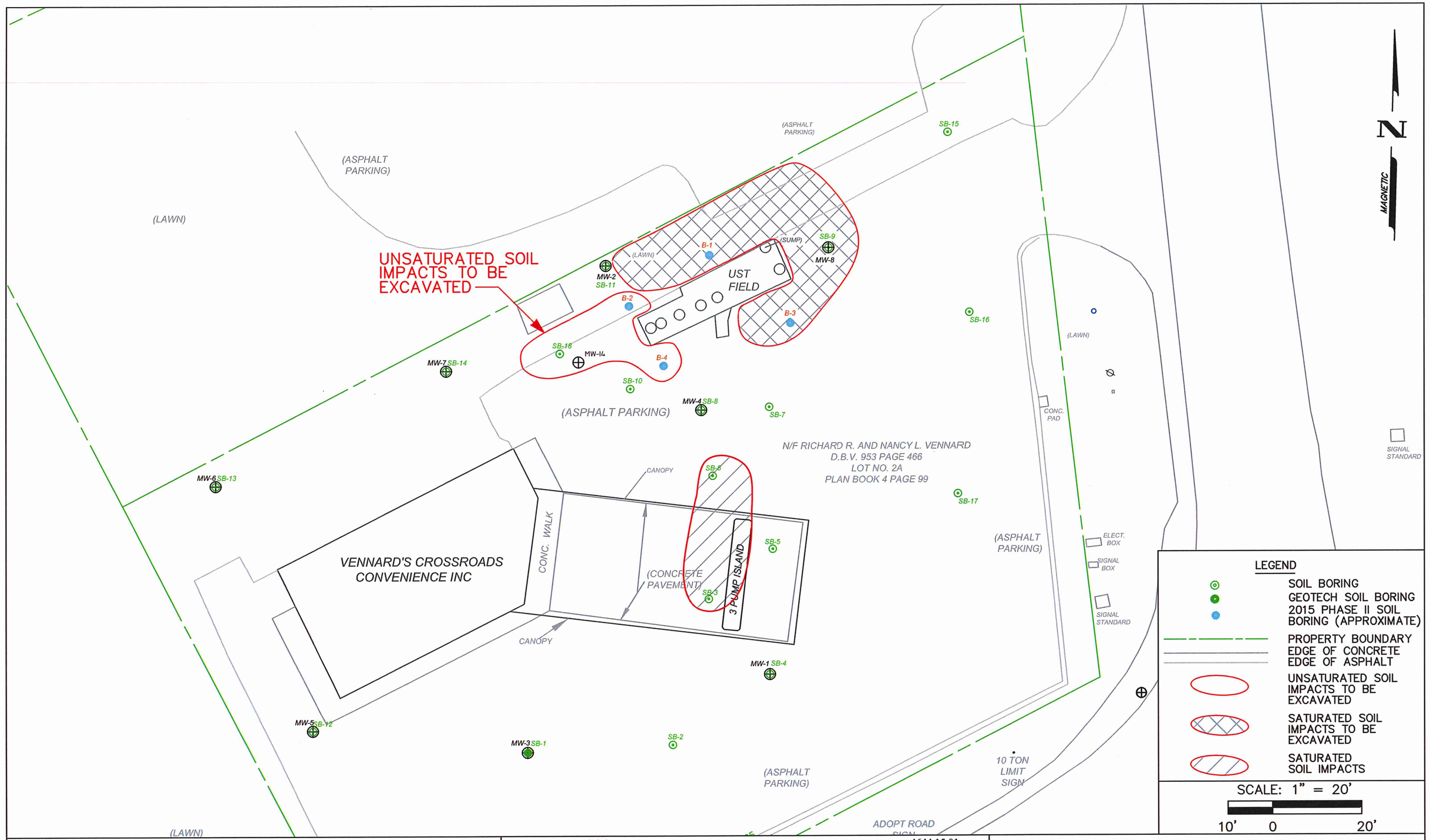
SITE MAP
Figure 2



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H:\V\VENNARD'S CROSSROADS CONVENIENCE INC\4644.15.01 - INDIANA, PA\ACAD DWGS\RAP\FIGURE 3 - REMEDIAL SOIL EXCAVATION-SOIL IMPACT MAP.DWG

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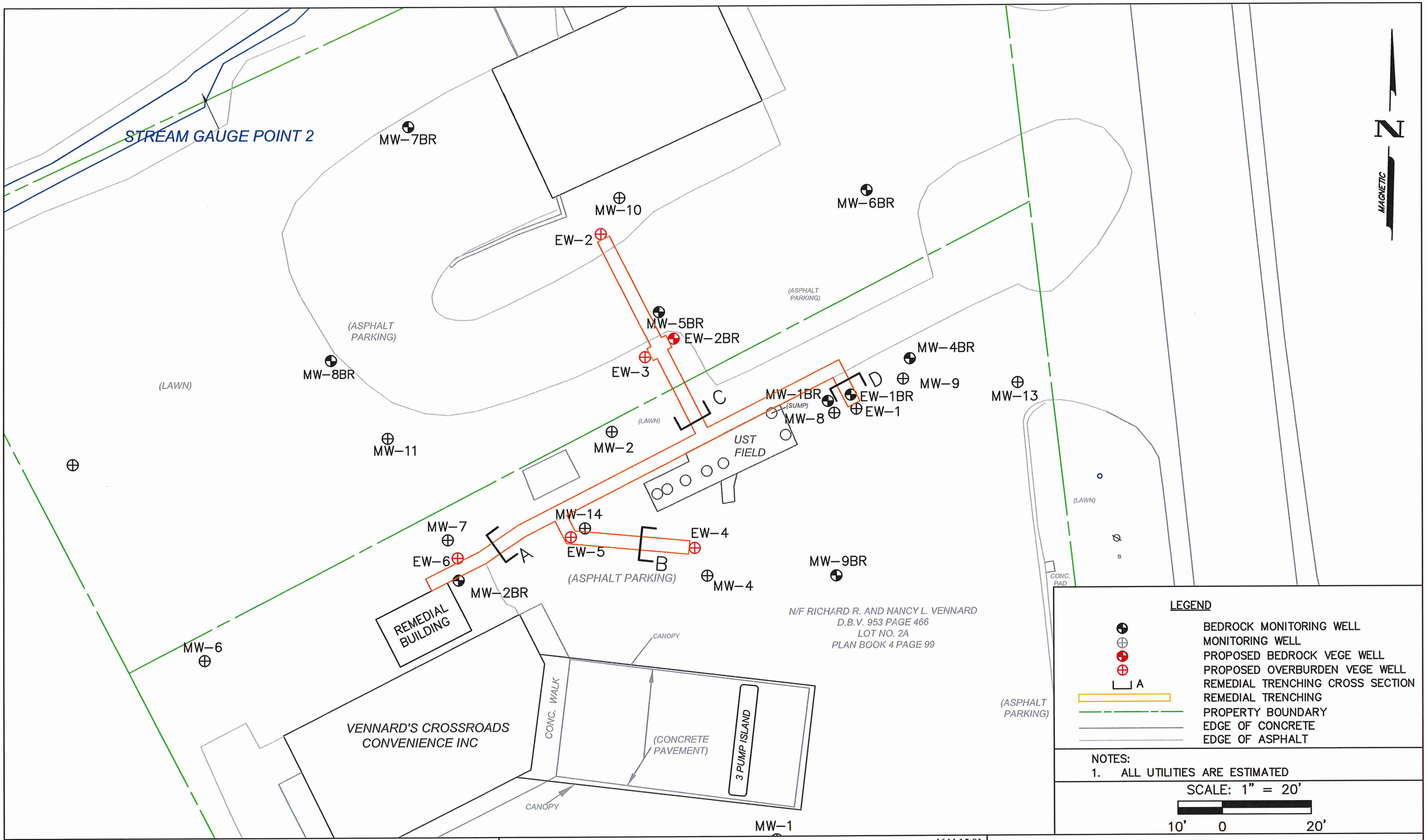
REMEDIAL SOIL EXCAVATION/SOIL IMPACT MAP
Figure 3



LEGEND

- BEDROCK MONITORING WELL
- MONITORING WELL
- PROPOSED BEDROCK VEGE WELL
- PROPOSED OVERBURDEN VEGE WELL
- A — REMEDIAL TRENCHING CROSS SECTION
- REMEDIAL TRENCHING
- PROPERTY BOUNDARY
- EDGE OF CONCRETE
- EDGE OF ASPHALT

NOTES:
1. ALL UTILITIES ARE ESTIMATED

SCALE: 1" = 20'

10' 0 20'

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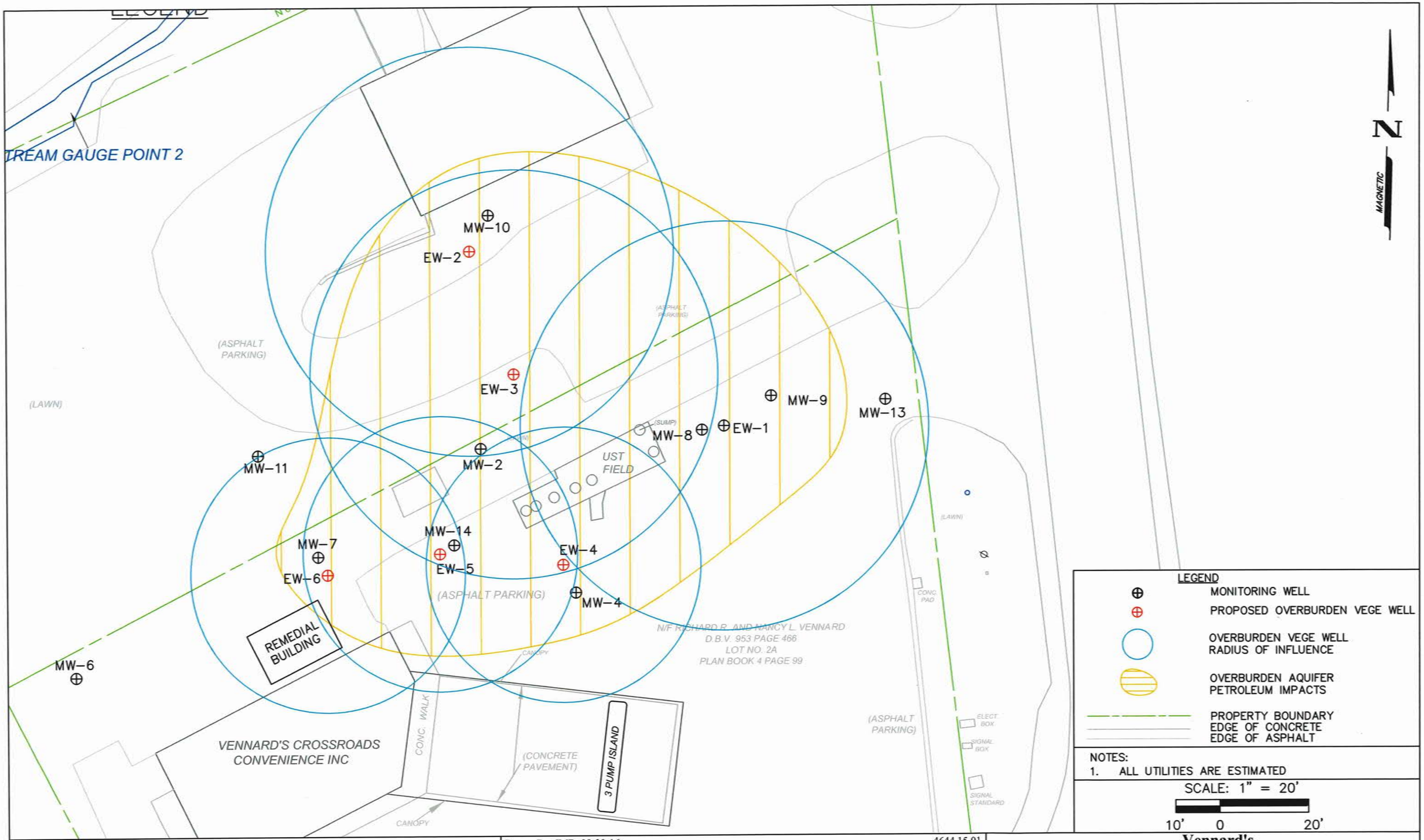
PROPOSED REMEDIAL WELL LOCATION MAP
Figure 4



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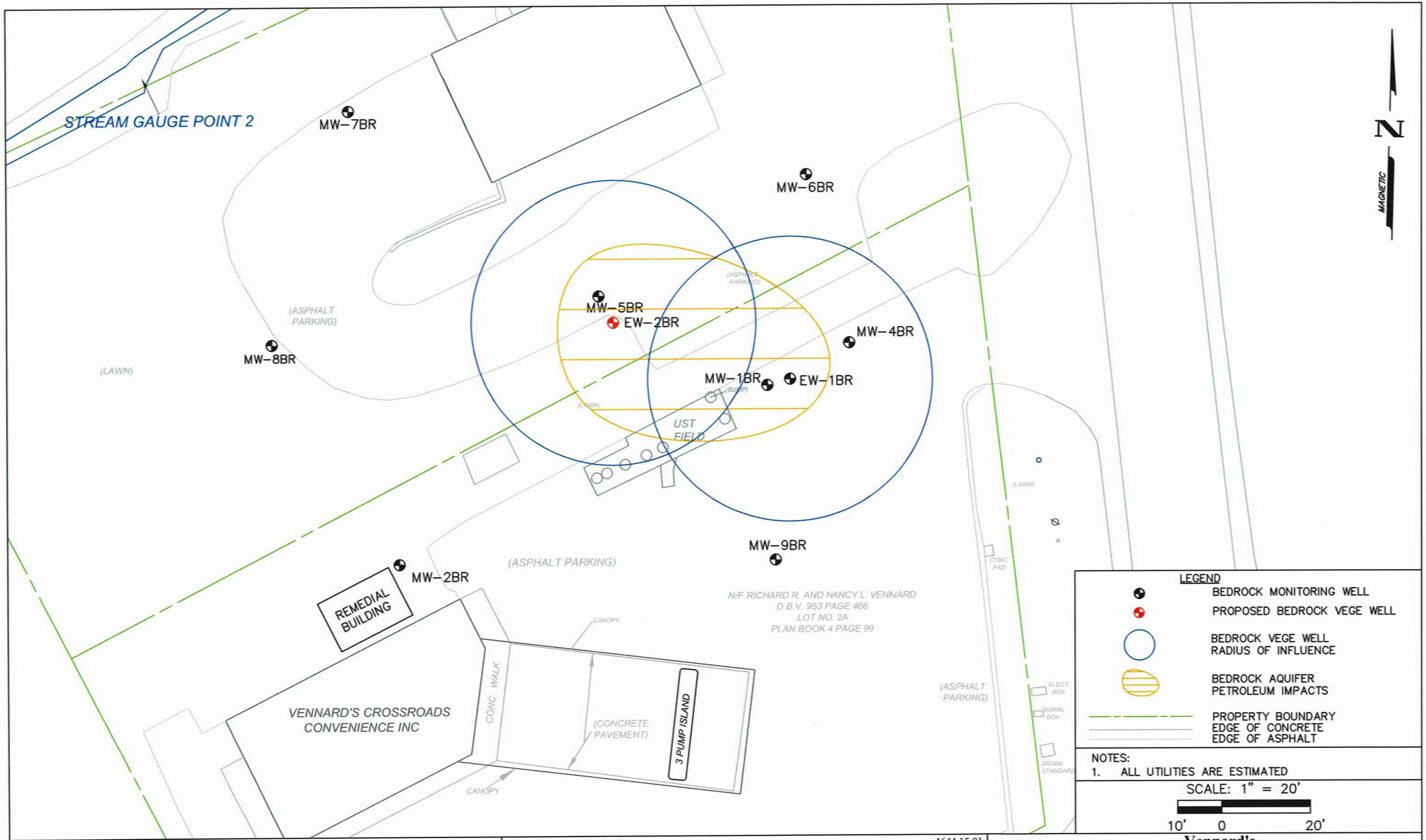
PROPOSED OVERBURDEN VEGE WELL LOCATIONS AND IMPACTED GROUNDWATER PLUME
Figure 5



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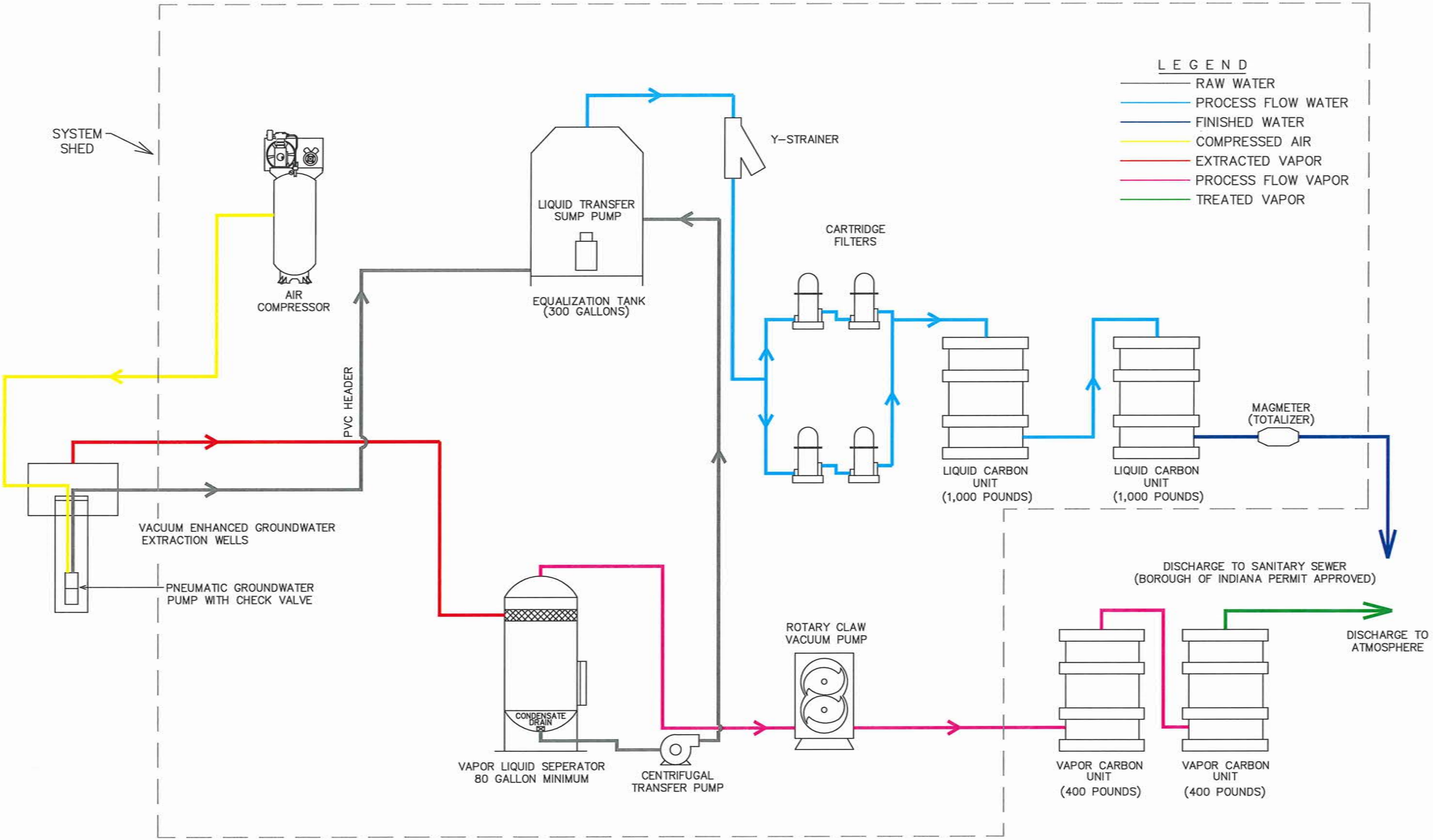
PROPOSED BEDROCK VEGE WELL LOCATION AND IMPACTED GROUNDWATER PLUME
Figure 6



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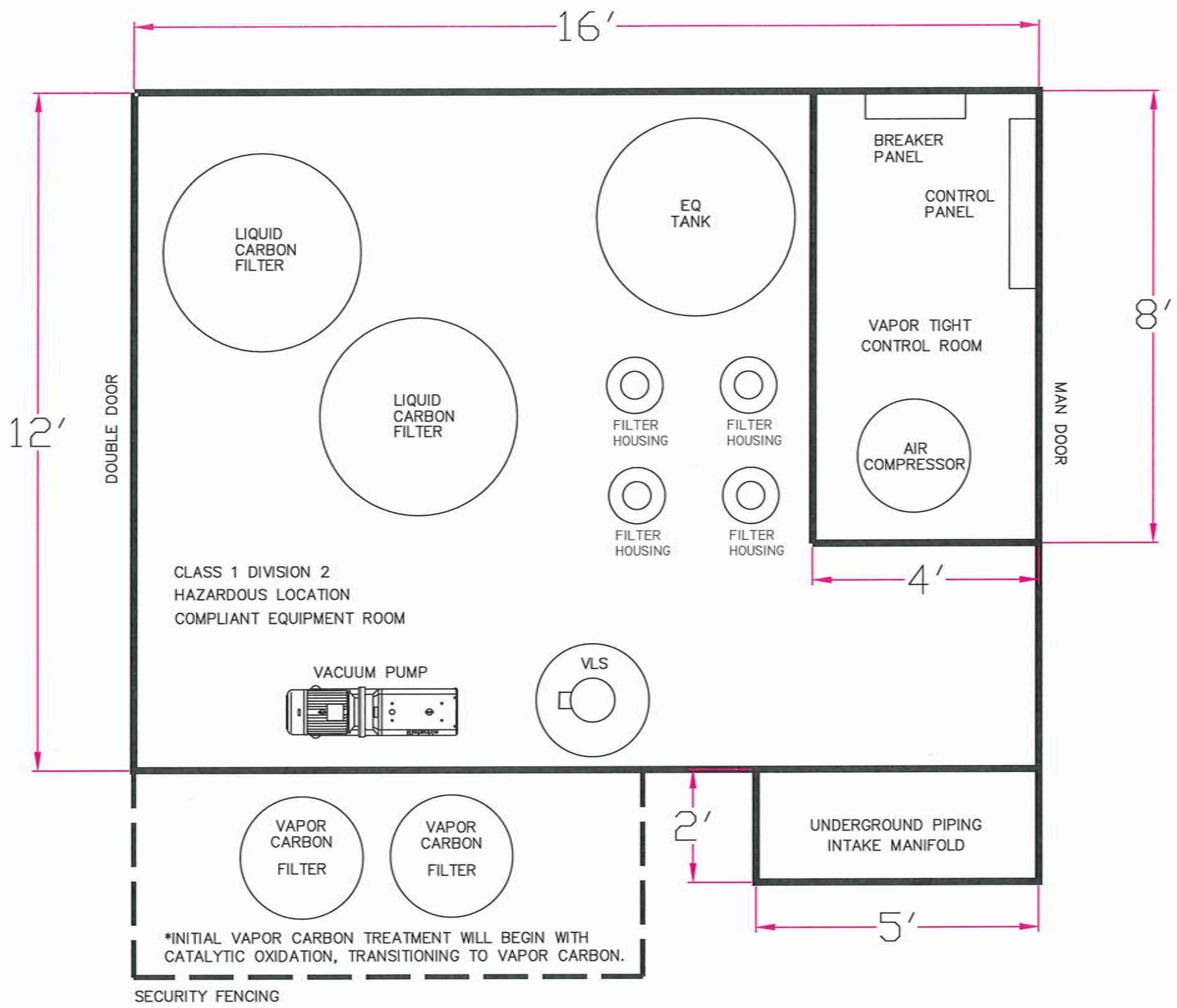
PROCESS FLOW DIAGRAM
Figure 7



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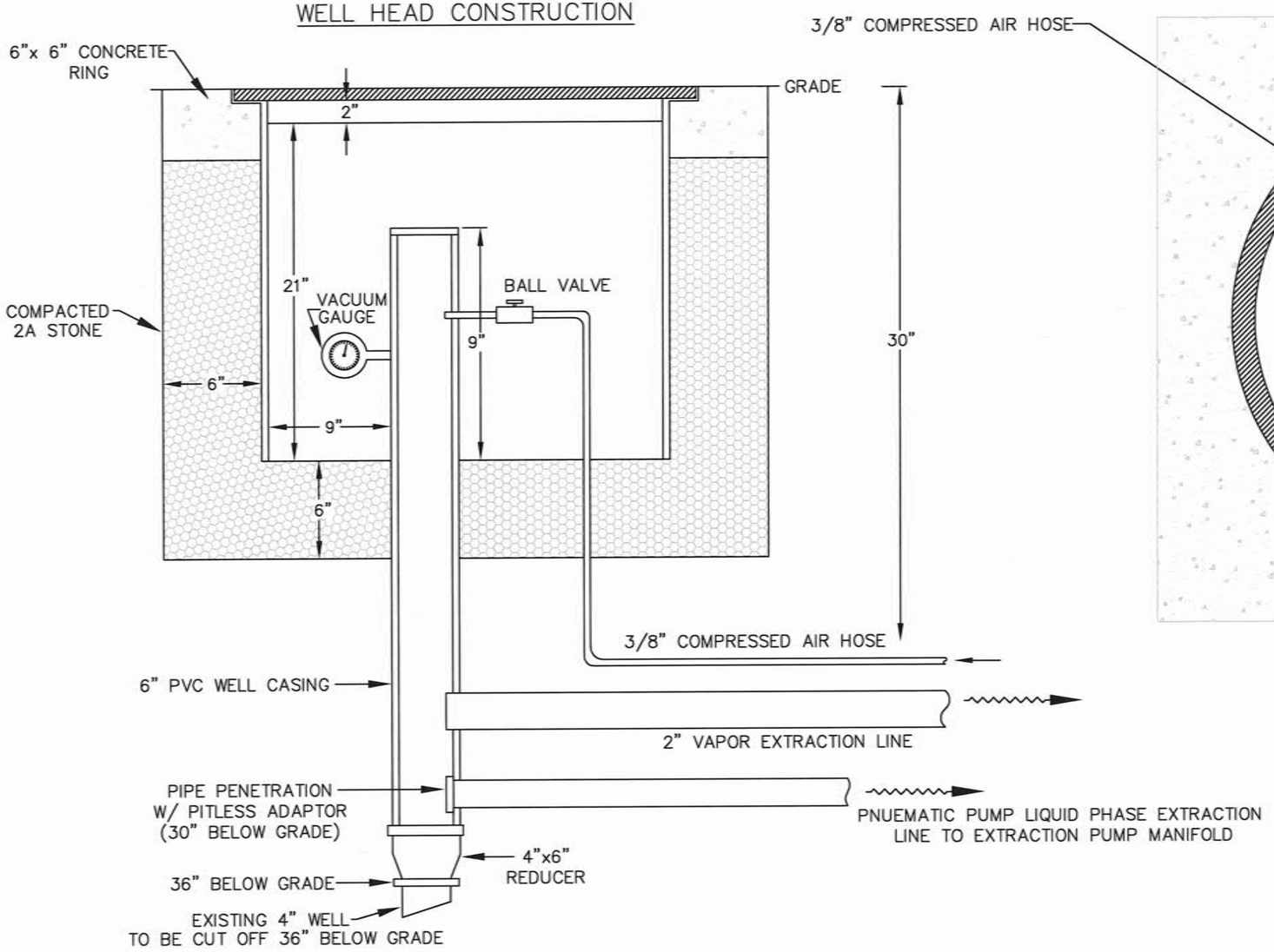
Vennard's Crossroad Convenience Store
4985 Lucerne Road
Indiana, PA

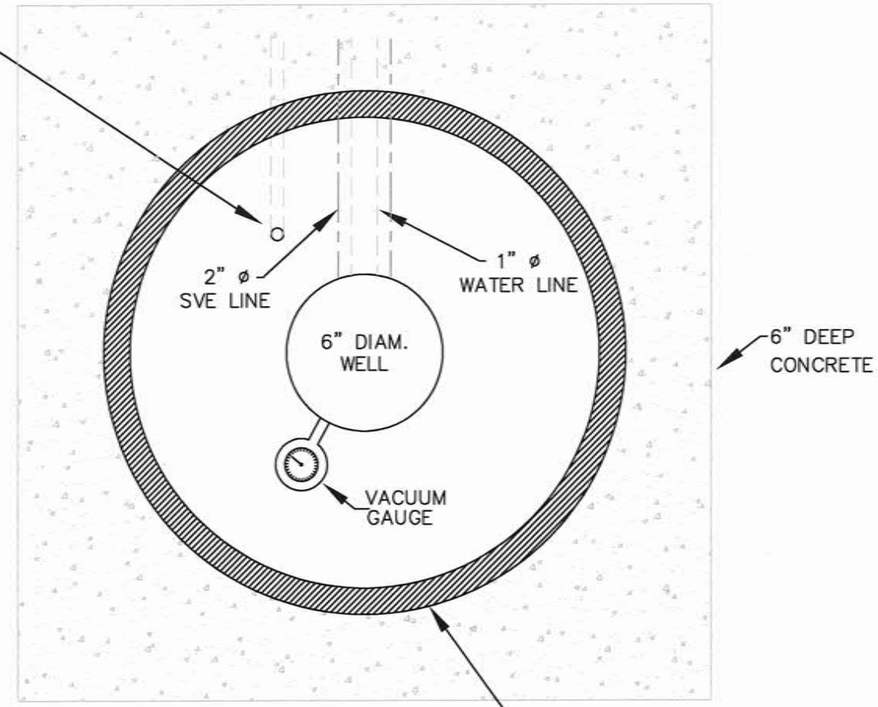
SHED LAYOUT
Figure 8

TYPICAL VACUUM EHHANCED GROUNDWATER EXTRACTION WELL HEAD CONSTRUCTION



NOTE: DRAWING NOT TO SCALE
FOR ILLUSTRATION ONLY

TYPICAL VACUUM EHHANCED GROUNDWATER EXTRACTION WELL HEAD PLAN VIEW



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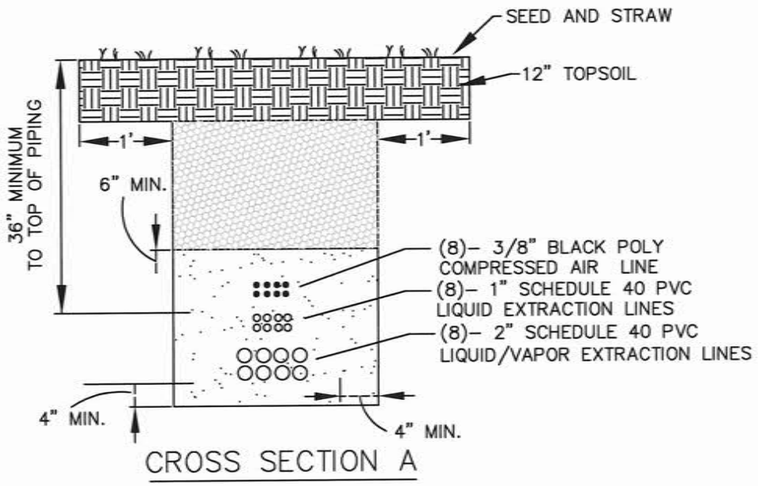
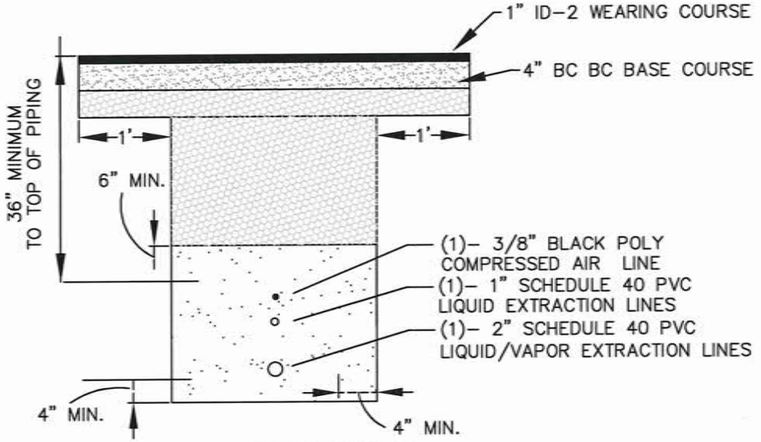
Indiana, PA

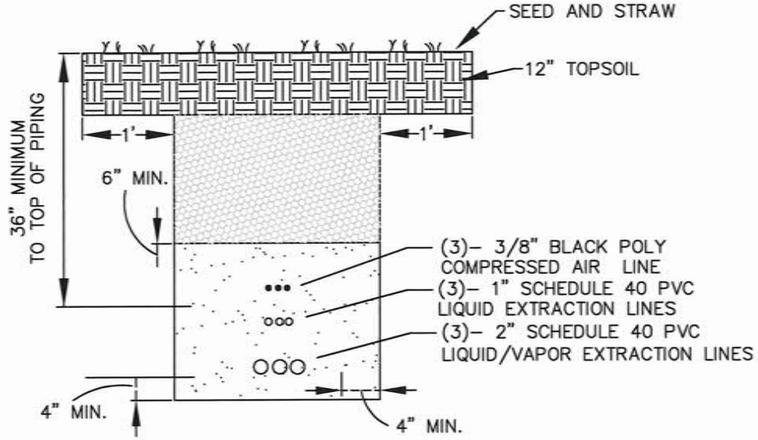
VEGE WELL HEAD CONSTRUCTION DETAIL
Figure 9



CROSS SECTION A



CROSS SECTION B



CROSS SECTION C

LEGEND

TOPSOIL

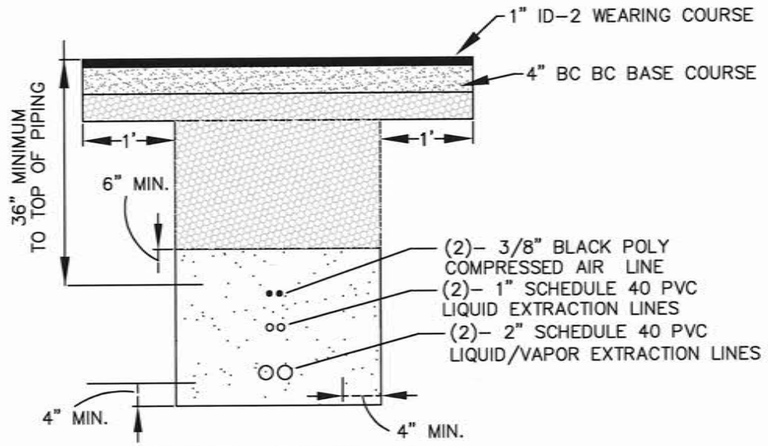
PIPING AREA BEDDING MATERIAL 2RC OR STONE DUST

BACKFILL AREA BEDDING MATERIAL 2RC STONE

PAVING LAYER

NOTES:

1. TRENCHING CROSS SECTIONS ARE NOT DRAWN TO SCALE.
2. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RETURNED TO ORIGINAL CONDITION.
3. ALL TRENCHED AREAS SHALL BE CONSTRUCTED AS INDICATED IN THESE CROSS SECTIONS. NUMBER OF INJECTION, EXTRACTION AND COMPRESSED AIR LINES WILL BE INSTALLED AS NEEDED.



CROSS SECTION D

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Date: 1-4-19

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Vennard's Crossroads Convenience Store
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REMEDIAL TRENCHING CROSS SECTION CONSTRUCTION DETAILS
Figure 10

TABLE

Table 1

GROUNDWATER SAMPLE ANALYTICAL SUMMARY - FEASIBILITY STUDY

VENNARD'S CROSSROADS CONVENIENCE, INC
INDIANA, INDIANA CO., PA

		PADEP Non-Residential Used Aquifer (NRUA) Medium Specific Concentrations (MSC) ug/L										
		62	1,200	5	700	3,500	20	100	1,000	10,000		
		Sample Parameters										
WELL ID	Sample Date	1,2,4 - Trimethylbenzene	1,3,5 - Trimethylbenzene	Benzene	Ethylbenzene	Cumene	MTBE	Naphthalene	Toluene	Total Xylenes	Iron	Manganse
MW-14 GW	03/27/2018	53.7	29.8	440	68.9	11.8	17.5	12	181	229	113	5.2
MW-14 Low Vac	03/27/2019	172	50.4	999	222	18.2	20.6	17.8	624	790	116	5.7
MW-14 Mid Vac	03/27/2020	884	252	1530	653	62.6	25.1	95.6	1870	2910	136	8.7
MW-14 High Vac	03/27/2021	2290	841	1330	1790	202	21.5	389	2650	7440	141	7.7
EW-1 GW	03/28/2021	1340	364	3180	1170	81.7	<2.00	244	3770	5980	35.2	26.8
EW-1 Low Vac	43187.0	882	229	2050	675	60.7	<2.00	141	1991	3680	26.6	17.7
EW-1 High Vac	03/28/2021	1050	284	2100	864	67.7	<2.00	171	3210	4400	21.6	19.7
EW-1BR Post Test	3/29/2018	253	58.8	923	235	22.9	<2.00	52.7	799	1,060	39.6	7.1
EW-BR GW	43188.00	397	80.7	1490	364	32.70	<2.00	69.6	1220	1660	30.3	8.84
Effluent	3/28/2018	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	<6.00		

NS - not sampled; product

Prepared By: JPD 11/9/2018
Checked By: JRH 11/9/2018

APPENDIX A

INDUSTRIAL DISCHARGE PERMIT

MAR 13 2018

March 15, 2018

Dick Vennard, Owner
Vennard's Crossroads Convenience Store
4985 Lucerne Road
Indiana, PA 15701

C/o Janson Haney
Project Engineer
Mountain Research, LLC
825 25th Street
Altoona, PA 16601

RE: Issuance of Industrial User Permit to Vennard's Crossroads Convenience Store, Inc., by: The Borough of Indiana.

Dear Mr. Vennard:

Your application for an industrial user pretreatment permit has been reviewed and processed in accordance with Indiana Borough Ordinance No 1740.

The enclosed permit covers the wastewater discharged from Vennard's Crossroads Convenience Store, Inc. groundwater remediation facility located at 4985 Lucerne Rd into the Indiana Borough/White Township sewer system. All discharges from this facility and actions and reports relating thereto shall be in accordance with the terms and conditions of this permit.

If you wish to appeal or challenge any conditions imposed in this permit, a petition shall be filed for modification or reissuance of this permit in accordance with the requirements of Section 5.3 of Ordinance No 1740, within 30 days of your receipt of this correspondence. Pursuant to Section 5.3 (A), failure to petition for reconsideration of the permit within the allotted time is deemed a waiver by the permittee of his right to challenge the terms of this permit.

BOROUGH OF INDIANA

By: [Signature]
DANA TURGEON, BOROUGH MANAGER

Issued this 15th day of March, 2018

VENNARD'S CROSSROADS CONVENIENCE STORE, INC.
INDUSTRIAL USER PERMIT

In accordance with the provisions of Ordinance 1740

Vennard's Crossroads Convenience Store, Inc
Dick Vennard, Owner
4985 Lucerne Road
Indiana, PA 157011

Is hereby authorized to discharge industrial wastewater from the Vennard's Crossroads Convenience Store, Inc, remediation facility at 4985 Lucerne Road into the Indiana Borough/White Township sewer system through the outfall identified herein and in accordance with the conditions set forth in this permit. Compliance with this permit does not relieve the permittee of its obligation to comply with any or all applicable pretreatment regulations, standards or requirements under local, State, and Federal laws, including any such regulations, standards, requirements, or laws that may become effective during the term of this permit.

Noncompliance with any term or condition of this permit shall constitute a violation of the Borough of Indiana sewer use ordinance.

This permit shall become effective on 03/15/18 and shall expire at midnight on 03/15/20.

If the permittee wishes to continue to discharge after the expiration date of this permit, an application must be filed for a renewal permit in accordance with the requirements of Ordinance 1740, Section 5.7, a minimum of 90 days prior to the expiration date.

[Official Seal]

By: [Signature]
Borough Manager

Issued this 15th day of March, 2018

PART 1 EFFLUENT LIMITATIONS

During the period of March 15, 2018 to March 15, 2020 the permittee is authorized to discharge pretreated wastewater to the Indiana Borough sewer system from the Vennard's Crossroads Convenience Store, Inc remediation facility to the discharge listed below:

Description of outfall:

Outfall	Descriptions
SP - 1	The sanitary sewer sampling port located on the discharge at the remediation station located at 4985 Lucerne Rd.

The discharge to the sanitary sewer shall not exceed the following effluent limitations. The effluent to this outfall shall consist of the wastewater pretreated by twin activated carbon units as described in the permit application.

	EFFLUENT LIMITATIONS
Parameter	Instantaneous Maximum (mg/l)
Oil and Grease (O/G)	20 (mg/l)
Total Suspended Solids (TSS)	100 (mg/l)
Volatile Organic Compounds (VOC)	*REPORT
pH	6-9 SU
Flow	15 (gpm)

*Toxic organics found in quantifiable concentration greater than 0.01 mg/l (10ppb) shall not total more than 2.0 mg/l for any discharge. Any organic compound considered toxic by the Pretreatment Coordinator may be included in the calculations of total toxic organics if detected in any industry's discharge in quantifiable concentration greater than 0.01 mg/l.

The VOC analyte list shall consist of the current Pennsylvania Department of Environmental Protection (PA DEP) unleaded gasoline list. See page 5 of this permit for the compound list.

± List provided by the Borough of Indiana POTW.

During the period of March 15, 2018 to March 15, 2020 the effluent to SP – 1 shall be pretreated wastewater only and shall comply with Section 2 of Ordinance #1740.

The Permittee shall not discharge wastewater containing any of the following substances to the sewer system:

Fats, wax, grease, or oils of petroleum origin, whether emulsified or not, in excess of one-hundred (100) mg/l or containing substances which may solidify or become viscous at temperatures between 32 degrees F (0 degrees C) and 140 degrees F (60 degrees C);

Any gasoline, benzene, naphtha, fuel oil or other flammable or explosive liquids, solids or gases;

Any effluent having a temperature higher than 104 degrees F (40 degrees C);

Any ashes, hair, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, paunch, manure, or any other solids or viscous substances capable of causing obstructions or other interferences with proper operation of the sewer system;

Any pollutant, including oxygen demanding pollutants (BOD etc.) at flow rate and/or concentration which will cause the pollutant to pass through to the receiving waters or interfere with the Indiana Borough wastewater treatment facility. For the purpose of this section, the terms "pass through" and "interference" have the same definitions as appear in the Borough Ordinance 1740

All discharges shall comply with all other applicable laws, regulations, standards, and requirements contained in Ordinance 1740 and any applicable State and Federal pretreatment laws, regulations, standards, and requirements including any such laws, regulations, standards, or requirements that may become effective during the term of this permit.

Notification of changed discharge

All Industrial Users shall promptly notify the POTW in advance of any substantial change in the volume or character of pollutants in their discharge.

The Discharge of Hazardous Waste is strictly prohibited.

Under no circumstance shall any person be allowed to discharge hazardous wastes to any portion of the conveyance system or POTW. Hazardous waste shall be defined as any substance, which, if otherwise disposed of, would be a hazardous waste under 40 CFR part 261. All Industrial Users shall comply with the reporting requires of 40 CFR part 403.12 (p).

PART 2 MONITORING REQUIREMENTS

From the period beginning on the effective date of the permit until March 15, 2020 the permittee shall monitor the backwash discharge at SP -1 for the following parameters, at the indicated frequency:

Parameter (units)	Location	Frequency	Sample Type
Oil and Grease(O/G)	SP -1	2/year	Grab
Total Suspended Solids (TSS)	SP -1	2/year	Grab
Volatile Organic Compounds (VOC)*	SP -1	2/year	Grab
Flow (gpd)	SP -1	2/year	Grab
pH	SP -1	2/year	Grab

Samples must be taken periodically throughout discharge period and be representative of typical discharge conditions. pH samples must be analyzed within 15 minutes of collection.

Instantaneous and total flows are to be recorded on a permanent meter.

All handling and preservation of collected samples and laboratory analyses of samples shall be performed in accordance with 40 CFR Part 136 and amendments thereto unless specified otherwise in the monitoring conditions of this permit.

The Permitee is required to monitor and report as indicated above.

* Volatile Organic Compounds for this permit shall be those listed on the Pennsylvania Department of Environmental Protection (PA DEP) unleaded gasoline analytical suite consisting of: Benzene, Toluene, Ethylbenzene, Xylene (BTEX), Methyl Tertiary-Butyl Ether (MTBE); isopropylBenzelne (Cumene); and Naphthalene.

±List provided by Borough to Indiana POTW.

PART 3 REPORTING REQUIREMENTS

Monitoring Reports

Monitoring results obtained shall be summarized and reported on an Industrial User Monitoring Report Form quarterly. **The reports are due within thirty (30) days of the discharge and are due to the Borough Office within fourteen (14) business days of March 31, June 30, September 30, and December 31 respectively.** The report shall indicate the nature and concentration of all pollutants in the effluent for which sampling and analyses were performed along with the measured maximum flow rate and total daily flows.

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures prescribed in 40 CFR Part 136 or amendments thereto, or otherwise approved by EPA or as specified in this permit, the results of such monitoring shall be included in any calculations of actual daily maximum or monthly average pollutant discharge and results shall be reported in the discharge report submitted to the Borough of Indiana. Such increased monitoring frequency shall also be indicated in the discharge report.

Automatic Resampling

If the result of the permittees wastewater analysis indicates that a violation of this permit has occurred, the permittee must:

Inform the Borough of Indiana of the violation within 24 hours; and

Repeat the sampling and pollutant analysis and submit, in writing, the results of this second analysis within 30 days of the discovery of the violation.

Accidental Discharge Report

The permittee shall notify the Borough of Indiana immediately upon the occurrence of: (1) an accidental discharge of substances prohibited by Section 2 of Ordinance 1740 or any slug loads or spills that may enter the public sewer; or (2) any discharge which could cause anticipated noncompliance for the treatment plant or collection system.

During normal business hours, the Borough of Indiana should be notified by telephone at (724) 465-6691. At all other times, the Indiana Borough Police Department should be notified by telephone at either (724) 349-2121 or (724) 349-2122 after 4:30 p.m. Monday through Friday or weekends and holidays. The notification shall include location of discharge, date and time thereof, type of waste, including concentration and volume, and corrective actions taken. The permittees notification of accidental releases in accordance with this section does not relieve it of other reporting requirements that rise under local, State, or Federal laws.

Within five days following an accidental discharge, the permittee shall submit to the Borough of Indiana a detailed, written report. The report shall specify:

Description and cause of the upset, slug load or accidental discharge, the cause thereof, and the impact on the permittee's compliance status. The description should also include location of discharge, type, concentration and volume of waste.

Duration of noncompliance, including exact dates and times of noncompliance and, if the noncompliance is continuing, the time by which compliance is reasonably expected to occur.

All steps taken or to be taken to reduce, eliminate, and/or prevent recurrence of such an upset, slug load, accidental discharge, or other conditions of noncompliance.

All reports required by this permit shall be submitted to the Borough of Indiana at the following address:
Borough of Indiana, 80 N 8th Street, Indiana, PA 15701
Attn: Roland O. Francis

PART 4 - COSTS

Annual Permit fee:	$1,000.00
Usage Fee	$4.60 per 1000 gallons (payable quarterly)
Reimbursement	Vennard's Crossroads Convenience Store, Inc, is required to reimburse the Borough of Indiana for any sampling and or analytical expense in compliance monitoring.

FINE SCHEDULE

Parameter	Fines/Sample mg/L Limit	>1-10Xdcl	>10-100x	>100x
Oil & Grease (O/G)	20.00	$500	$1000	S
Total Suspended Solids (TSS)	100.00	$100	$1000	S
Total Volatile Organic Compounds (VOC)	*	$1000	S	S
pH	6-9 SU	$100		
Flow	15 (GPM)	$100	S	S

PART 5

SECTION 1 ADDITIONAL/SPECIAL MONITORING REQUIREMENTS. - NONE

SECTION 2 REOPENER CLAUSE

This permit may be reopened and modified to incorporate any new or revised requirements resulting from the Borough of Indiana's reevaluation of its local limits.

This permit may be reopened and modified to incorporate any new or revised requirements developed by the Borough of Indiana as are necessary to ensure POTW compliance with applicable sludge management requirements promulgated by EPA (40 CFR 503).

SAMPLE STANDARD CONDITIONS FOR PERMIT

SECTION A. GENERAL CONDITIONS AND DEFINITIONS

1. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

2. Duty to Comply

The permittee must comply with all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for administrative action, or enforcement proceedings including civil or criminal penalties, injunctive relief, and summary abatements.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or correct any adverse impact to the treatment plant or the environment resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

4. Permit Modification

This permit may be modified for good cause including, but not limited to, the following:

a. To incorporate any new or revised Federal, State, or local pretreatment standards or requirements

b. Material or substantial alterations or additions to the discharger's operation processes, or discharge volume or character which were not considered in drafting the effective permit

c. A change in any condition in either the industrial user or the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge

d. Information indicating that the permitted discharge poses a threat to the Control Authority's collection and treatment systems, POTW personnel or the receiving waters

e. Violation of any terms or conditions of the permit

f. Misrepresentation or failure to disclose fully all relevant facts in the permit application or in any required reporting

g. Revision of or a grant of variance from such categorical standards pursuant to 40 CFR 403.13; or

h. To correct typographical or other errors in the permit

i. To reflect transfer of the facility ownership and/or operation to a new owner/operator

j. Upon request of the permittee, provided such request does not create a violation of any applicable requirements, standards, laws, or rules and regulations.

The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

5. Permit Termination

This permit may be terminated for the following reasons:

a. Falsifying self-monitoring reports

b. Tampering with monitoring equipment

c. Refusing to allow timely access to the facility premises and records

d. Failure to meet effluent limitations

e. Failure to pay fines

f. Failure to pay sewer charges

g. Failure to meet compliance schedules.

6. Permit Appeals

The permittee may petition to appeal the terms of this permit within thirty (30) days of the notice.

> This petition must be in writing. Failure to submit a petition for review shall be deemed to be a waiver of the appeal. In its petition, the permittee must indicate the permit provisions objected to, the reasons for the objections, and the alternative conditions, if any, it seeks to be placed in the permit.

The effectiveness of this permit shall not be stayed pending a reconsideration by the Borough Council. If, after considering the petition and any arguments put forth by the Pretreatment Coordinator, the Borough Council determines that reconsideration is proper, it shall remand the permit back to the Pretreatment Coordinator for reissuance. Those permit provisions being reconsidered by the Pretreatment Coordinator shall be stayed pending reissuance.

A Borough Council decision not to reconsider a final permit shall be considered final administrative action for purposes of judicial review. The permittee seeking judicial review of the Council's final action must do so by filing a complaint with the Court of Common Pleas of Indiana County, Pennsylvania within 30 days after a determination is made by Borough Council.

7. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any violation of Federal, State, or local laws or regulations.

8. Limitation on Permit Transfer

Permits may not be reassigned or transferred to a new owner and/or operator without prior written approval of the Pretreatment Coordinator:

a. The permittee must give at least thirty (30) days advance notice to the Pretreatment Coordinator

b. The notice must include a written certification by the new owner which:

(i) States that the new owner has no immediate intent to change the facility's operations and processes

(ii) Identifies the specific date on which the transfer is to occur

(iii) Acknowledges full responsibility for complying with the existing permit.

9. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must submit an application for a new permit at least ninety (90) days before the expiration date of this permit.

10. Continuation of Expired Permits

An expired permit will continue to be effective and enforceable until the permit is reissued if:

a. The permittee has submitted a complete permit application at least ninety (90) days prior to the expiration date of the user's existing permit.

b. The failure to reissue the permit, prior to expiration of the previous permit, is not due to any act or failure to act on the part of the permittee.

11. Dilution

The permittee shall not increase the use of potable or process water or, in any way, attempt to dilute an effluent as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in this permit.

12. Definitions

a. Daily Maximum - The maximum allowable discharge of pollutant during a calendar day. Where daily maximum limitations are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where daily maximum limitations are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day.

b. Composite Sample - A sample that is collected over time, formed either by continuous sampling or by mixing discrete samples. The sample may be composited either as a time composite sample: composed of discrete sample aliquots collected in one container at constant time intervals providing representative samples irrespective of stream flow; or as a flow proportional composite sample: collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increases while maintaining a constant time interval between the aliquots.

c. Grab Sample - An individual sample collected in less than fifteen (15) minutes, without regard for flow or time.

d. Instantaneous Maximum Concentration - The maximum concentration allowed in any single grab sample.

e. Cooling Water

(1) Uncontaminated: Water used for cooling purposes only which has no direct contact with any raw material, intermediate, or final product and which does not contain a level of contaminants detectably higher than that of the intake water.

(2) Contaminated: Water used for cooling purposes only which may become contaminated either through the use of water treatment chemicals used for corrosion inhibitors or biocides, or by direct contact with process materials and/or wastewater.

f. Monthly Average - The arithmetic mean of the values for effluent samples collected during a calendar month or specified thirty (30) day period (as opposed to a rolling 30 day window).

g. Weekly Average - The arithmetic mean of the values for effluent samples collected over a period of seven (7) consecutive days.

h. Bi-Weekly - Once every other week.

i. Bi-Monthly - Once every other month

j. Upset - Means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee, excluding such factors as operational error, improperly designed or inadequate treatment facilities, or improper operation and maintenance or lack thereof.

k. Bypass - Means the intentional diversion of wastes from any portion of a treatment facility.

13. General Prohibitive Standards

The permittee shall comply with all the general prohibitive discharge standards in Ordinance 1740, Section 2.1. Namely, the industrial user shall not discharge wastewater to the sewer system:

a. Having a temperature higher than 104 degrees F (40 degrees C);

b. Containing more than 100 mg/l by weight of fats, oils, and grease;

c. Containing any gasoline, benzene, naptha, fuel oil or other flammable or explosive liquids, solids or gases; and in no case pollutants with a closed cup flashpoint of less than one hundred forty (140) degrees Fahrenheit (60 degrees centigrade), or pollutants which cause an exceedance of 10 percent of the Lower Explosive Limit (LEL) at any point within the POTW;

d. Containing any garbage that has not been ground by household type or other suitable garbage grinders;

e. Containing any ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, paunch, manure, or any other solids or viscous substances capable of causing obstructions or other interferences with proper operation of the sewer system;

f. Having a pH lower than 6.0 or higher than 9.0, or having any other corrosive property capable of causing damage or hazards to structures, equipment or personnel of the sewer system;

g. Containing toxic or poisonous substances in sufficient quantity to injure or interfere with any wastewater treatment process, to constitute hazards to humans or animals, or to create any hazard in waters which receive treated effluent from the sewer system treatment plant. Toxic wastes shall include, but are not limited to wastes containing cyanide, chromium, cadmium, mercury, copper, and nickel ions;

h. Containing noxious or malodorous gases or substances capable of creating a public nuisance; including pollutants which result in the presence of toxic gases, vapors, or fumes;

i. Containing solids of such character and quantity that special and unusual attention is required for their handling;

j. Containing any substance which may affect the treatment plant's effluent and cause violation of the NPDES permit requirements;

k. Containing any substance which would cause the treatment plant to be in noncompliance with sludge use, recycle or disposal criteria pursuant to guidelines or regulations developed under section 405 of the Federal Act, the Solid Waste Disposal Act, the Clean Air Act, the Toxic Substances Control Act or other regulations or criteria for sludge management and disposal as required by the State;

l. Containing color which is not removed in the treatment process;

m. Containing any medical or infectious wastes;

n. Containing any radioactive wastes or isotopes; or

o. Containing any pollutant, including BOD pollutants, released at a flow rate and/or pollutant concentration which would cause interference with the treatment plant.

14. Compliance with Applicable Pretreatment Standards and Requirements

Compliance with this permit does not relieve the permittee from its obligations regarding compliance with any and all applicable local, State and Federal pretreatment standards and requirements including any such standards or requirements that may become effective during the term of this permit.

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes but is not limited to: effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

2. Duty to Halt or Reduce Activity

Upon reduction of efficiency of operation, or loss or failure of all or part of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control its production or discharges (or both) until operation of the treatment facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Bypass of Treatment Facilities

a. Bypass is prohibited unless it is unavoidable to prevent loss of life, personal injury, or severe property damage or no feasible alternatives exist.

b. The permittee may allow bypass to occur which does not cause effluent limitations to be exceeded, but only if it is necessary for essential maintenance to assure efficient operation.

c. Notification of bypass:

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior written notice, at least ten (10) days before the date of the bypass, to the Borough of Indiana.

(2) Unanticipated bypass. The permittee shall immediately notify the Borough of Indiana and submit a written notice to the POTW within five (5) days. This report shall specify:

(i) A description of the bypass, and its cause, including its duration;

(ii) Whether the bypass has been corrected; and

(iii) The steps being taken or to be taken to reduce, eliminate and prevent a reoccurrence of the bypass.

4. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in accordance with section 405 of the Clean Water Act and Subtitles C and D of the Resource Conservation and Recovery Act along with any other state or local requirements.

SECTION C. MONITORING AND RECORDS

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water or substance. All equipment used for sampling and analysis must be routinely calibrated, inspected and maintained to ensure their accuracy. Monitoring points shall not be changed without notification to and the approval of the Borough of Indiana's Pretreatment Coordinator.

Flow Measurements

If flow measurement is required by this permit, the appropriate flow measurement devices and methods consistent with approved scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10 percent from true discharge rates throughout the range of expected discharge volumes.

3. Analytical Methods to Demonstrate Continued Compliance

All sampling and analysis required by this permit shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto, otherwise approved by EPA, or as specified in this permit.

4. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures identified in Section C.3, the results of this monitoring shall be included in the permittee's self-monitoring reports.

5. Inspection and Entry

The permittee shall allow the Borough of Indiana's Pretreatment Coordinator, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit;

d. Sample or monitor, for the purposes of assuring permit compliance, any substances or parameters at any location; and

e. Inspect any production, manufacturing, fabricating, or storage area where pollutants, regulated under the permit, could originate, be stored, or be discharged to the sewer system.

6. Retention of Records

a. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of The Borough of Indiana at any time.

b. All records that pertain to matters that are the subject of special orders or any other enforcement or litigation activities brought by the Borough of Indiana shall be retained and preserved by the permittee until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

7. Record Contents

Records of sampling and analyses shall include:

a. The date, exact place, time, and methods of sampling or measurements, and sample preservation techniques or procedures;

b. Who performed the sampling or measurements;

c. The date(s) analyses were performed;

d. Who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of such analyses.

8. Falsifying Information

Knowingly making any false statement on any report or other document required by this permit or knowingly rendering any monitoring device or method inaccurate, is a crime and may result in the imposition of criminal sanctions and/or civil penalties.

SECTION D. ADDITIONAL REPORTING REQUIREMENTS

1. Planned Changes

The permittee shall give notice to the Borough of Indiana ninety (90) days prior to any facility expansion, production increase, or process modifications which results in new or substantially increased discharges or a change in the nature of the discharge.

2. Anticipated Noncompliance

The permittee shall give advance notice to the Borough of Indiana of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements or could cause problems for the POTW.

3. Automatic Resampling

If the results of the permittee's wastewater analysis indicates a violation has occurred, the permittee must notify the Borough of Indiana within twenty-four (24) hours of becoming aware of the violation and repeat the sampling and pollutant analysis and submit, in writing, the results of this repeat analysis within thirty (30) days after becoming aware of the violation.

4. Duty to Provide Information

The permittee shall furnish to the Borough of Indiana, within 15 days any information which the Borough may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also, upon request, furnish to the Borough of Indiana within 15 days copies of any records required to be kept by this permit.

5. Signatory Requirements

All applications, reports, or information submitted to the Borough must contain the following certification statement and be signed as required in Sections (a), (b), (c) or (d) below:

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

a. By a responsible corporate officer, if the Industrial User submitting the reports is a corporation. For the purpose of this paragraph, a responsible corporate officer means.

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or

(ii) the manager of one or more manufacturing, production, or operation facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b. By a general partner or proprietor if the Industrial User submitting the reports is a partnership or sole proprietorship respectively.

c. The principal executive officer or director having responsibility for the overall operation of the discharging facility if the Industrial User submitting the reports is a Federal, State, or local governmental entity, or their agents.

d. By a duly authorized representative of the individual designated in paragraph (a), (b), or (c) of this section if:

(i) the authorization is made in writing by the individual described in paragraph (a), (b), or (c);

(ii) the authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the Industrial Discharge originates, such as the position of plant manager, operator of a well, or a well field superintendent, or a position of equivalent responsibility, or having overall responsibility for environmental matters for the company; and

(iii) The written authorization is submitted to the Borough.

e. If an authorization under paragraph (d) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or overall responsibility for the environmental matters for the company, a new authorization satisfying the requirement of paragraph (d) of this section must be submitted to the City prior to or together with any reports to be signed by an authorized representative.

6. Operating Upsets

Any permittee that experiences an upset in operations that places the permittee in a temporary state of noncompliance with the provisions of either this permit or with Section 2 of Ordinance 1740 shall inform the Borough of Indiana within twenty-four (24) hours of becoming aware of the upset at (724) 465-6691 or (724) 349-2121 after 4:30 p.m. Monday - Friday or weekends and holidays.

A written follow-up report of the upset shall be filed by the permittee with the Borough within five (5) days. The report shall specify:

a. Description of the upset, the cause(s) thereof and the upset's impact on the permittee's compliance status;

b. Duration of noncompliance, including exact dates and times of noncompliance, and if not corrected, the anticipated time the noncompliance is expected to continue; and

c. All steps taken or to be taken to reduce, eliminate and prevent recurrence of such an upset.

The report must also demonstrate that the treatment facility was being operated in a prudent and workmanlike manner.

A documented and verified operating upset shall be an affirmative defense to any enforcement action brought against the permittee for violations attributable to the upset event.

7. Annual Publication

A list of all industrial users which were subject to enforcement proceedings during the twelve (12) previous months shall be annually published by the Borough in the largest daily newspaper within its service area. Accordingly, the permittee is apprised that noncompliance with this permit may lead to an enforcement action and may result in publication of its name in an appropriate newspaper in accordance with this section.

8. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil and/or criminal penalties for noncompliance under Section 11 of Ordinance 1740, or State or Federal laws or regulations.

9. Penalties for Violations of Permit Conditions

Pursuant to section 11 of Ordinance 1740, any person who violates a permit condition is subject to a civil penalty of $1000.00 per day of such violation. Any person who willfully or negligently violates permit conditions is subject to criminal penalties of a fine of up to $25,000.00 per day of violation, or by imprisonment for 1 year, or both. The permittee may also be subject to sanctions under State and/or Federal law.

10. Recovery of Costs Incurred

In addition to civil and criminal liability, the permittee violating any of the provisions of this permit or Section 2 of Ordinance 1740 or causing damage to or otherwise inhibiting the Borough of Indiana's wastewater treatment system shall be liable to the Borough of Indiana for any expense, loss, or damage caused by such violation or discharge. The Borough shall bill the permittee for the costs incurred by the Borough of Indiana for any cleaning, repair, or replacement work caused by the violation or discharge. Refusal to pay the assessed costs shall constitute a separate violation of Ordinance 1740.

APPENDIX B

BORING AND WELL CONSTRUCTION LOGS

MOUNTAIN RESEARCH, LLC
MONITORING WELL LOG

WELL NO.: EW-1

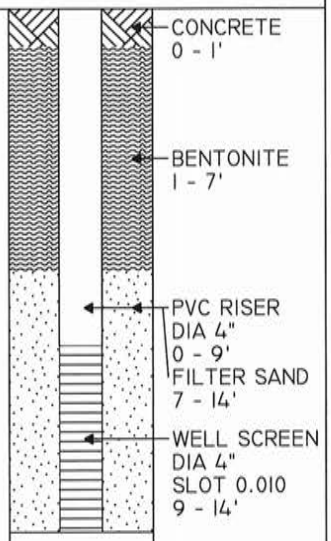
PROJECT NO.: 4644.15.01
PROJECT NAME: SOIL BORING/MW INSTALL
CLIENT: VENNARD'S
LOCATION: INDIANA, PA
DEPTH: REFUSAL - 11.5'/TERMINATED - 14' BGS.
SATURATED ZONE: N/A
TOC ELEVATION:

WEATHER: SUN/60'S
LOGGED BY: BEN AZAR
DRILLING METHOD: HOLLOW STEM AUGER
OPERATOR: DAVE BENNETT
BOREHOLE COMPLETION: EXTRACTION WELL
DATE: 3-29-2017
BOREHOLE DIAMETER: 6.25"

DEPTH SCALE	SAMPLE NO.	PID (PPM)	LITHOLOGY DESCRIPTION
0			0 - 5' - SANDY CLAY (CLS): YELLOW - BROWN; MEDIUM TO HIGH MOISTURE; HIGH PLASTICITY; FINE; NOTE - NOT LOGGED IN SOFT DIG AREA.
5		0	5 - 7' - SANDY CLAY (CLS): YELLOW - ORANGE; HIGH PLASTICITY.
		0	7 - 8' - WEATHERED SANDSTONE: RED/PINK SANDSTONE GRAVEL; ROUNDED.
		4.6	8 - 8.5' - WEATHERED LIMESTONE: LIMESTONE BOULDER.
		17.8	8.5 - 9.5 - SANDY CLAY (CLS): FINE; MEDIUM TO LOW PLASTICITY.
10		20.5	9.5 - 11' - WEATHERED SANDSTONE: SANDSTONE COBBLES.
		244	11 - 14' - WEATHERED SANDSTONE: SANDSTONE COBBLES; STRONG ODOR; EXTREMELY SOFT; TRANSITIONS TO BROWN SANDY CLAY AT BOTTOM OF INTERVAL.
15			14' - TERMINATED AT 14' BG - PINK/RED SANDSTONE.
20			
25			
30			
35			

GRAPHIC LOG

WELL CONSTRUCTION DETAILS



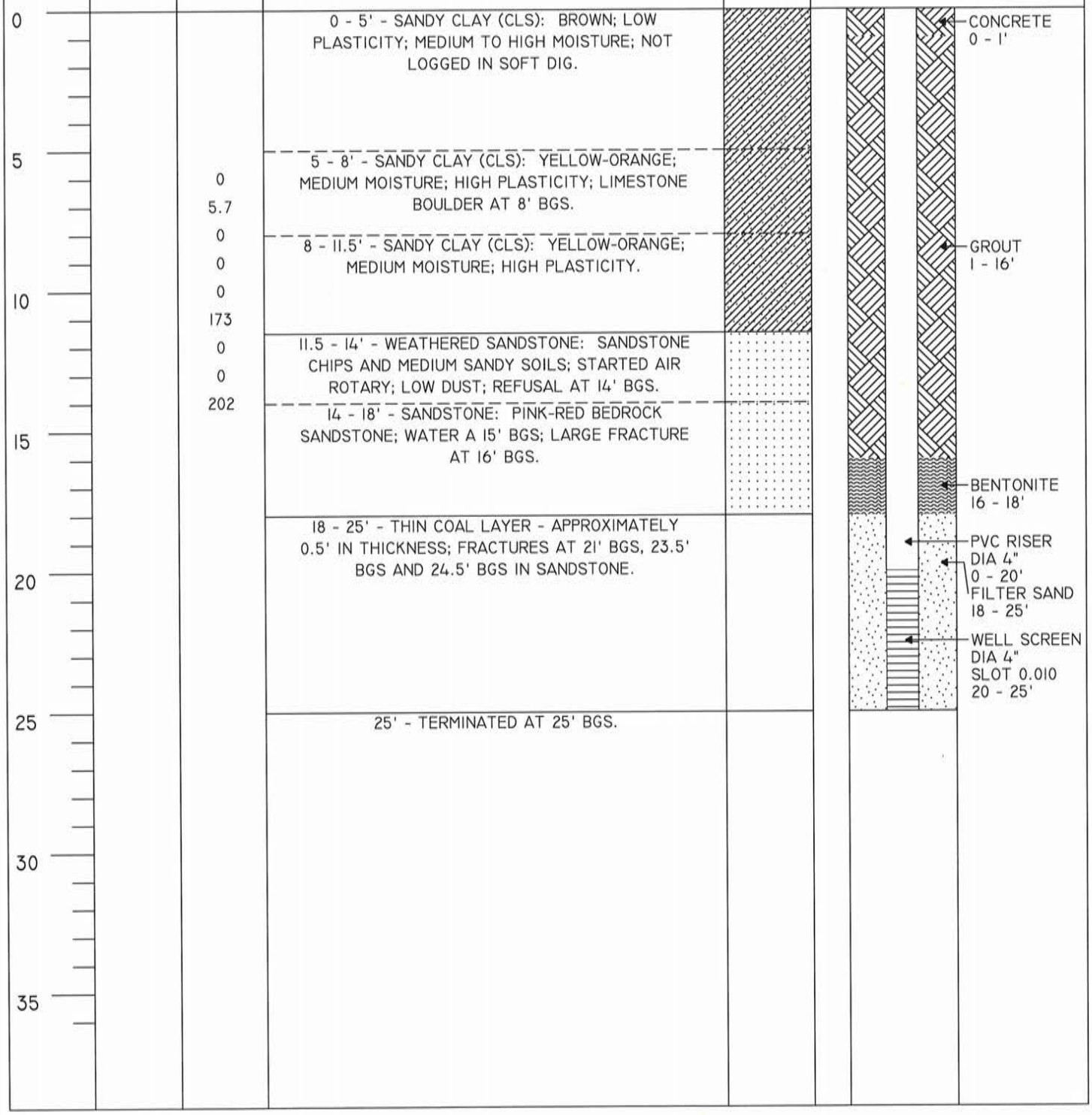
MOUNTAIN RESEARCH, LLC
MONITORING WELL LOG

WELL NO.: EW-1 BR

PROJECT NO.: 4644.15.01
PROJECT NAME: SOIL BORING/MW INSTALL
CLIENT: VENNARD'S
LOCATION: INDIANA, PA
DEPTH: REFUSAL - 14'/TERMINATED - 25' BGS.
SATURATED ZONE: 15' BGS.
TOC ELEVATION:

WEATHER: CLOUDY/40'S
LOGGED BY: BEN AZAR
DRILLING METHOD: HOLLOW STEM AUGER/AIR ROTARY
OPERATOR: DAVE BENNETT
BOREHOLE COMPLETION: MONITORING WELL
DATE: 3-30-2017
BOREHOLE DIAMETER: 6.25"

DEPTH SCALE	SAMPLE NO.	PID (PPM)	LITHOLOGY DESCRIPTION
0 - 5			0 - 5' - SANDY CLAY (CLS): BROWN; LOW PLASTICITY; MEDIUM TO HIGH MOISTURE; NOT LOGGED IN SOFT DIG.
5 - 8		0 5.7 0	5 - 8' - SANDY CLAY (CLS): YELLOW-ORANGE; MEDIUM MOISTURE; HIGH PLASTICITY; LIMESTONE BOULDER AT 8' BGS.
8 - 11.5		0 0 173	8 - 11.5' - SANDY CLAY (CLS): YELLOW-ORANGE; MEDIUM MOISTURE; HIGH PLASTICITY.
11.5 - 14		0 0 202	11.5 - 14' - WEATHERED SANDSTONE: SANDSTONE CHIPS AND MEDIUM SANDY SOILS; STARTED AIR ROTARY; LOW DUST; REFUSAL AT 14' BGS.
14 - 18			14 - 18' - SANDSTONE: PINK-RED BEDROCK SANDSTONE; WATER A 15' BGS; LARGE FRACTURE AT 16' BGS.
18 - 25			18 - 25' - THIN COAL LAYER - APPROXIMATELY 0.5' IN THICKNESS; FRACTURES AT 21' BGS, 23.5' BGS AND 24.5' BGS IN SANDSTONE.
25			25' - TERMINATED AT 25' BGS.



MOUNTAIN RESEARCH, LLC
MONITORING WELL LOG

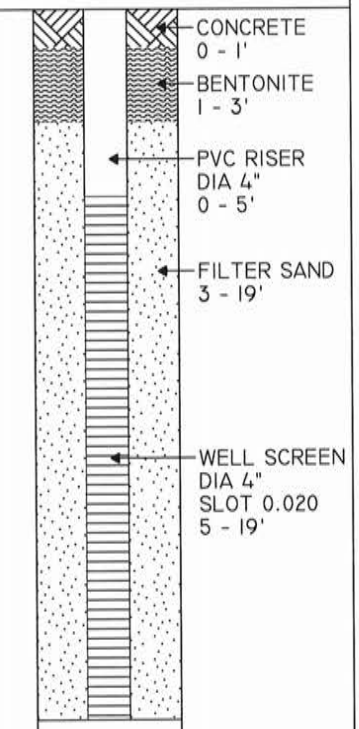
WELL NO.: MW-14

PROJECT NO.: 4644.15.01
PROJECT NAME: SOIL BORING/MW INSTALL
CLIENT: VENNARD'S
LOCATION: INDIANA, PA
DEPTH: REFUSAL AT 20.5' BGS.
SATURATED ZONE: N/A
TOC ELEVATION:

WEATHER: 40'S/RAINY
LOGGED BY: JACOB CLARA
DRILLING METHOD: AUGER
OPERATOR: DREW SNYDER
BOREHOLE COMPLETION: MONITORING WELL
DATE: 3/1/2018
BOREHOLE DIAMETER: 4.25"

DEPTH SCALE	SAMPLE NO.	PID (PPM)	LITHOLOGY DESCRIPTION
0			0 - 0.5' - CONCRETE.
			0.5 - 2' - CLAY (CL): BROWN; FILL STAINING.
			2 - 5' - CLAY (CL): BROWN; MEDIUM PLASTICITY; MEDIUM MOISTURE.
5			5 - 10' - SILTY CLAY (CL-ML): BROWN; MEDIUM PLASTICITY; MEDIUM MOISTURE.
10			10 - 12' - CLAY (CL): BROWN; MEDIUM PLASTICITY; MEDIUM MOISTURE.
			12 - 13' - SANDSTONE LAYER: LIGHTER BROWN AND YELLOW CUTTINGS; HARDER AREA.
			13 - 15' - SANDSTONE: LIGHTER BROWN AND YELLOW CUTTINGS; MEDIUM PLASTICITY; MEDIUM MOISTURE.
15			15 - 18.5' - CLAY (CL): BROWN CLAY BALLS; MEDIUM PLASTICITY; MEDIUM MOISTURE.
			18.5 - 19' - HARDER; GRINDING ON ROCK.
			19 - 20' - CLAY (CL): BROWN; SOFTER.
20			20 - 20.5' - BEDROCK.
			20.5' - AUGER REFUSAL AT 20.5' BGS.
25			
30			
35			

GRAPHIC LOG



WELL CONSTRUCTION DETAILS

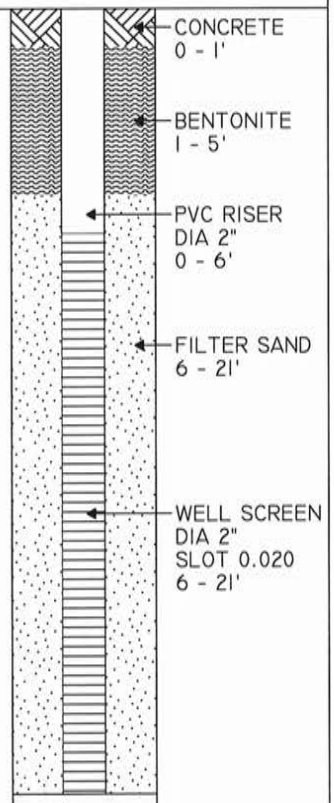
MOUNTAIN RESEARCH, LLC
MONITORING WELL LOG

WELL NO.: SB-8/MW-4

PROJECT NO.: 4644.15.01
PROJECT NAME: SOIL BORING/MW INSTALL
CLIENT: VENNARD'S
LOCATION: INDIANA, PA
DEPTH: REFUSAL AT 21' BGS.
SATURATED ZONE: N/A
TOC ELEVATION:

WEATHER: SUN/80'S
LOGGED BY: BEN AZAR
DRILLING METHOD: DIRECT PUSH
OPERATOR: MATT SNYDER
BOREHOLE COMPLETION: SOIL BORING/MONITORING WELL
DATE: 6/22/2016
BOREHOLE DIAMETER: 2.25"

DEPTH SCALE	SAMPLE NO.	PID (PPM)	LITHOLOGY DESCRIPTION
0		2.7	0 - 0.5' - ASPHALT.
		0.0	0.5 - 1' - FILL: LARGE COBBLES.
		0.0	1 - 2' - CLAYEY SAND (SC): DARK GREY; DRY.
		0.0	2 - 3' - CLAYEY SAND (SC): DARK GREY; LESS SAND AND MORE CLAY THAN PREVIOUS INTERVAL.
5		1.2	3 - 4' - NO RECOVERY: ROCKIER - NO RECOVERABLE MATERIAL IN SIGNIFICANT QUANTITY.
		32	4 - 5' - SANDY CLAY (CLS): ORANGE-BROWN; ROUNDED - SOME SEMI-ANGULAR; LIMITED RECOVERY; STRONG ODOR DURING AIR KNIFING.
		165	
		8.4	5 - 6' - SILTY CLAY (CL-ML): RED/ORANGE IN COLOR; LOW TO NO ODOR; LOW PLASTICITY.
		9.2	
10	SB-8/MW-4	264	6 - 9' - SANDY CLAY (CLS): STRONGER ODOR; 7 - 7.5' BGS - STRONG ODOR; STAINED, DRY SANDY TO GRAVELLY CLAY,
		2.7	
		1.3	9 - 10' - GRAVELLY CLAY (CLG): LOW PLASTICITY; DRY.
		7.0	
		3.4	10 - 21' - SILTY CLAY (CL-ML): TAN/ORANGE; FINE; DRY.
15	SB-8/MW-4	20.3	
		1.2	
		0.3	
		0.1	
20			21' - REFUSAL AT 21' BGS - SILTY CLAY.
25			
30			
35			



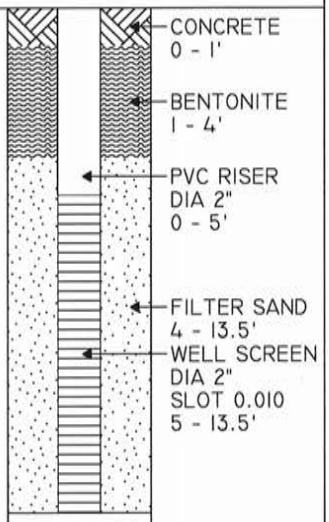
MOUNTAIN RESEARCH, LLC
MONITORING WELL LOG

WELL NO.: SB-14/MW-7

PROJECT NO.: 4644.15.01
PROJECT NAME: SOIL BORING/MW INSTALL
CLIENT: VENNARD'S
LOCATION: INDIANA, PA
DEPTH: REFUSAL AT 13.5' BGS.
SATURATED ZONE: 13' BGS.
TOC ELEVATION:

WEATHER: SUN/80'S
LOGGED BY: BEN AZAR
DRILLING METHOD: DIRECT PUSH
OPERATOR: DAVE BENNETT
BOREHOLE COMPLETION: SOIL BORING/MONITORING WELL
DATE: 9/8/2016
BOREHOLE DIAMETER: 2.25"

DEPTH SCALE	SAMPLE NO.	PID (PPM)	LITHOLOGY DESCRIPTION
0		0	0 - 0.25' - FILL: GRASS/SOD.
		0	0.25 - 1' - FILL.
		0	1 - 2' - SANDY CLAY (CLS): YELLOW-ORANGE.
		0	2 - 3' - SANDY CLAY (CLS): YELLOW-ORANGE; TIGHTER; MORE CLAYEY.
		0	3 - 5' - SANDY CLAY (CLS): YELLOW-ORANGE; LESS CLAYEY - MORE SANDY.
5	SB-14/MW-7	4.1	5 - 10' - SANDY CLAY (CLS): YELLOW-ORANGE; 80% RECOVERY; MEDIUM PLASTICITY; LOW TO MEDIUM MOISTURE.
	SB-14/MW-7	12.2	
		6.3	
		2.2	
		0	
10	SB-14/MW-7	0.3	10 - 13.5' - SANDY CLAY (CLS): YELLOW-ORANGE; MEDIUM PLASTICITY; TRANSITIONS TO WHITE SAND AT 13' BGS; SATURATED.
	SB-14/MW-7	2.1	
		0	
			13.5' - REFUSAL AT 13.5' BGS - SAND.
15			
20			
25			
30			
35			



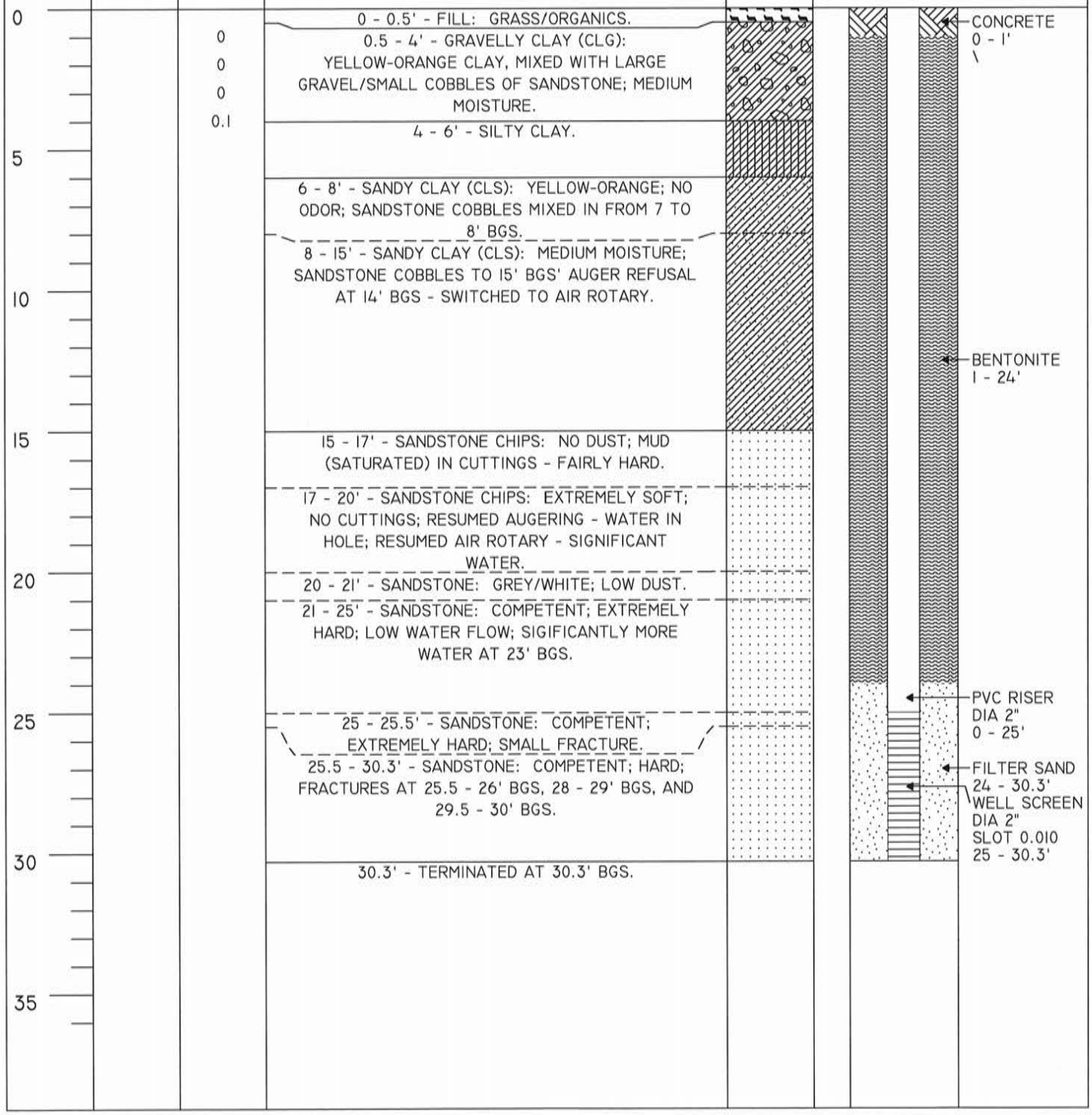
MOUNTAIN RESEARCH, LLC
MONITORING WELL LOG

WELL NO.: MW--2BR

PROJECT NO.: 4644.15.01
PROJECT NAME: SOIL BORING/MW INSTALL
CLIENT: VENNARD'S
LOCATION: INDIANA, PA
DEPTH: REFUSAL-14'/TERMINATED-30.3' BGS.
SATURATED ZONE: N/A
TOC ELEVATION:

WEATHER: SUN/50'S
LOGGED BY: BEN AZAR
DRILLING METHOD: HOLLOW STEM AUGER/AIR ROTARY
OPERATOR: DAMION CANNISTRACI
BOREHOLE COMPLETION: MONITORING WELL
DATE: 11/9/2016
BOREHOLE DIAMETER: 2.25"

DEPTH SCALE	SAMPLE NO.	PID (PPM)	LITHOLOGY DESCRIPTION
0		0	0 - 0.5' - FILL: GRASS/ORGANICS.
		0	0.5 - 4' - GRAVELLY CLAY (CLG): YELLOW-ORANGE CLAY, MIXED WITH LARGE GRAVEL/SMALL COBBLES OF SANDSTONE; MEDIUM MOISTURE.
		0	
		0.1	4 - 6' - SILTY CLAY.
5			6 - 8' - SANDY CLAY (CLS): YELLOW-ORANGE; NO ODOR; SANDSTONE COBBLES MIXED IN FROM 7 TO 8' BGS.
			8 - 15' - SANDY CLAY (CLS): MEDIUM MOISTURE; SANDSTONE COBBLES TO 15' BGS' AUGER REFUSAL AT 14' BGS - SWITCHED TO AIR ROTARY.
10			
15			15 - 17' - SANDSTONE CHIPS: NO DUST; MUD (SATURATED) IN CUTTINGS - FAIRLY HARD.
			17 - 20' - SANDSTONE CHIPS: EXTREMELY SOFT; NO CUTTINGS; RESUMED AUGERING - WATER IN HOLE; RESUMED AIR ROTARY - SIGNIFICANT WATER.
20			20 - 21' - SANDSTONE: GREY/WHITE; LOW DUST.
			21 - 25' - SANDSTONE: COMPETENT; EXTREMELY HARD; LOW WATER FLOW; SIGIFICANTLY MORE WATER AT 23' BGS.
25			25 - 25.5' - SANDSTONE: COMPETENT; EXTREMELY HARD; SMALL FRACTURE.
			25.5 - 30.3' - SANDSTONE: COMPETENT; HARD; FRACTURES AT 25.5 - 26' BGS, 28 - 29' BGS, AND 29.5 - 30' BGS.
30			30.3' - TERMINATED AT 30.3' BGS.
35			



MOUNTAIN RESEARCH, LLC
MONITORING WELL LOG

WELL NO.: MW-5BR

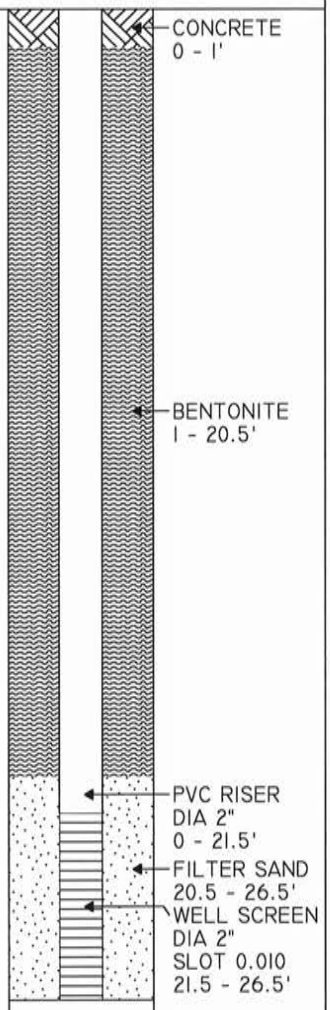
PROJECT NO.: 4644.15.01
PROJECT NAME: SOIL BORING/MW INSTALL
CLIENT: VENNARD'S
LOCATION: INDIANA, PA
DEPTH: REFUSAL-20'/TERMINATED-26.5' BGS.
SATURATED ZONE: N/A
TOC ELEVATION:

WEATHER: SUNNY/70'S
LOGGED BY: LEAH MARKO
DRILLING METHOD: HSA/AIR ROTARY
OPERATOR: DAVE BENNETT
BOREHOLE COMPLETION: MONITORING WELL
DATE: 8/23/2017
BOREHOLE DIAMETER: 4"/4.25"

DEPTH SCALE	SAMPLE NO.	PID (PPM)	LITHOLOGY DESCRIPTION
0		0	0 - 8" - ASPHALT.
		0	8" - 5' - CLAY (CH): BROWN HIGH PLASTICITY CLAY, WITH 20% ORANGE SANDY CLAY MIXED IN; PIECES OF SOIL AND BRICK FILL.
		0	
		0	
		0	
5		0	5 - 7' - SANDY CLAY (CLS): GREENISH-BROWN; HIGHER PLASTICITY AND HIGH MOISTURE CONTENT - DUE POSSIBLY TO RAIN - SUNNY THROUGHOUT SOFT DIG.
		0	
		0	7 - 8' - SANDY CLAY (CLS): MEDIUM BROWN; LESS SAND GRAINS THAN PREVIOUS INTERVAL - 60% INSTEAD OF 80%.
		0	
10		0	8 - 9' - SANDY CLAY (CLS): MEDIUM BROWN; SOME SANDSTONE - POSSIBILY COAL FRAGMENTS FROM FILL.
		0	
		0	9 - 10' - SILTY CLAY (CL-ML): GREENISH - DARK BROWN; NO VISIBLE SANDSTONE FRAGMENTS.
		0	
15		0	10 - 12' - CLAY (CL): MEDIUM BROWN - MIXED WITH 60% LIGHT BROWN TO LIGHT ORANGE SANDY MOTTLES; LOW MOISTURE.
		0	
		0	12 - 13' - CLAY (CL): LIGHT BROWN - MIXED WITH 70% ORANGISH SANDY MOTTLES; LOW MOISTURE.
		0	13 - 14' - SILTY SOIL (ML): ORANGE - WITH MANDY SANDSTONE GRAVEL PIECES MIXED IN.
20		0	14 - 15' - SANDY SOIL (SW): LIGHT TO MEDIUM BROWN; LOW PLASTICITY; MIXED WITH 50% SANDSTONE GRAVEL.
		0	
		0	15 - 16' - SANDY SOIL (SW): VERY SANDY ORANGE SOIL, WITH LOW TO MEDIUM PLASTICITY; SOME SMALL CLAYBALLS FORMING ON AUGER; < 20% SANDSTONE GRAVEL CHUNKS; LOW MOISTURE CONTENT.
		0	
25		0	16 - 20' - SANDY SOIL (SW): VERY SANDY ORANGE SOIL, WITH LOW TO MEDIUM PLASTICITY; NO ODOR; LOW MOISTURE CONTENT.
		0	
		0	20 - 23' - OVERBURDEN REFUSAL AT 20' BGS - SANDSTONE CHIPS; 21' - SANDSTONE CHIPS - LESS DUST THAN 20' BGS; 22' - FRACTURE IN SANDSTONE; STRONG ODOR; WATER AT FRACTURE.
30			23 - 26.5' - SILTSTONE: SOFT - VERY LITTLE HAMMERING SILTSTONE - ASSUMED DUE TO THE SILTY/FRAGMENTED NATURE OF THE HIGHLY SATURATED SOIL COMING UP.
			26.5' - TERMINATED AT 26.5' BGS - THOUGH THERE WAS ODOR AT FRACTURE POINT - NO PID
35			

GRAPHIC LOG

WELL CONSTRUCTION DETAILS



MOUNTAIN RESEARCH, LLC
MONITORING WELL LOG

WELL NO.: MW-5BR

PROJECT NO.: 4644.15.01
PROJECT NAME: SOIL BORING/MW INSTALL
CLIENT: VENNARD'S
LOCATION: INDIANA, PA
DEPTH: REFUSAL-20'/TERMINATED-26.5' BGS.
SATURATED ZONE: N/A
TOC ELEVATION:

WEATHER: SUNNY/70'S
LOGGED BY: LEAH MARKO
DRILLING METHOD: HSA/AIR ROTARY
OPERATOR: DAVE BENNETT
BOREHOLE COMPLETION: MONITORING WELL
DATE: 8/23/2017
BOREHOLE DIAMETER: 4"/4.25"

DEPTH SCALE	SAMPLE NO.	PID (PPM)	LITHOLOGY DESCRIPTION	GRAPHIC LOG	WELL CONSTRUCTION DETAILS
			READING WAS SEEN.		
40					
45					
50					
55					
60					
65					
70					

MOUNTAIN RESEARCH, LLC
MONITORING WELL LOG

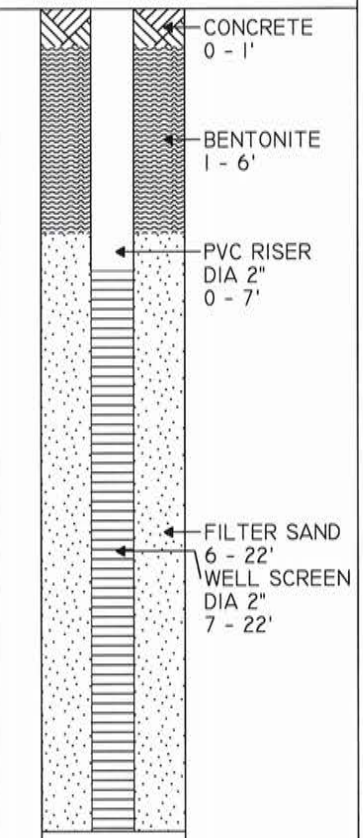
WELL NO.: MW-10

PROJECT NO.: 4644.15.01
PROJECT NAME: SOIL BORING/MW INSTALL
CLIENT: VENNARD'S
LOCATION: INDIANA, PA
DEPTH: REFUSAL AT 22' BGS.
SATURATED ZONE: N/A
TOC ELEVATION:

WEATHER: 20'S/SNOWY
LOGGED BY: JACOB CLARA
DRILLING METHOD: AUGER
OPERATOR: DREW SNYDER
BOREHOLE COMPLETION: MONITORING WELL
DATE: 1/30/2018
BOREHOLE DIAMETER: 4.25"

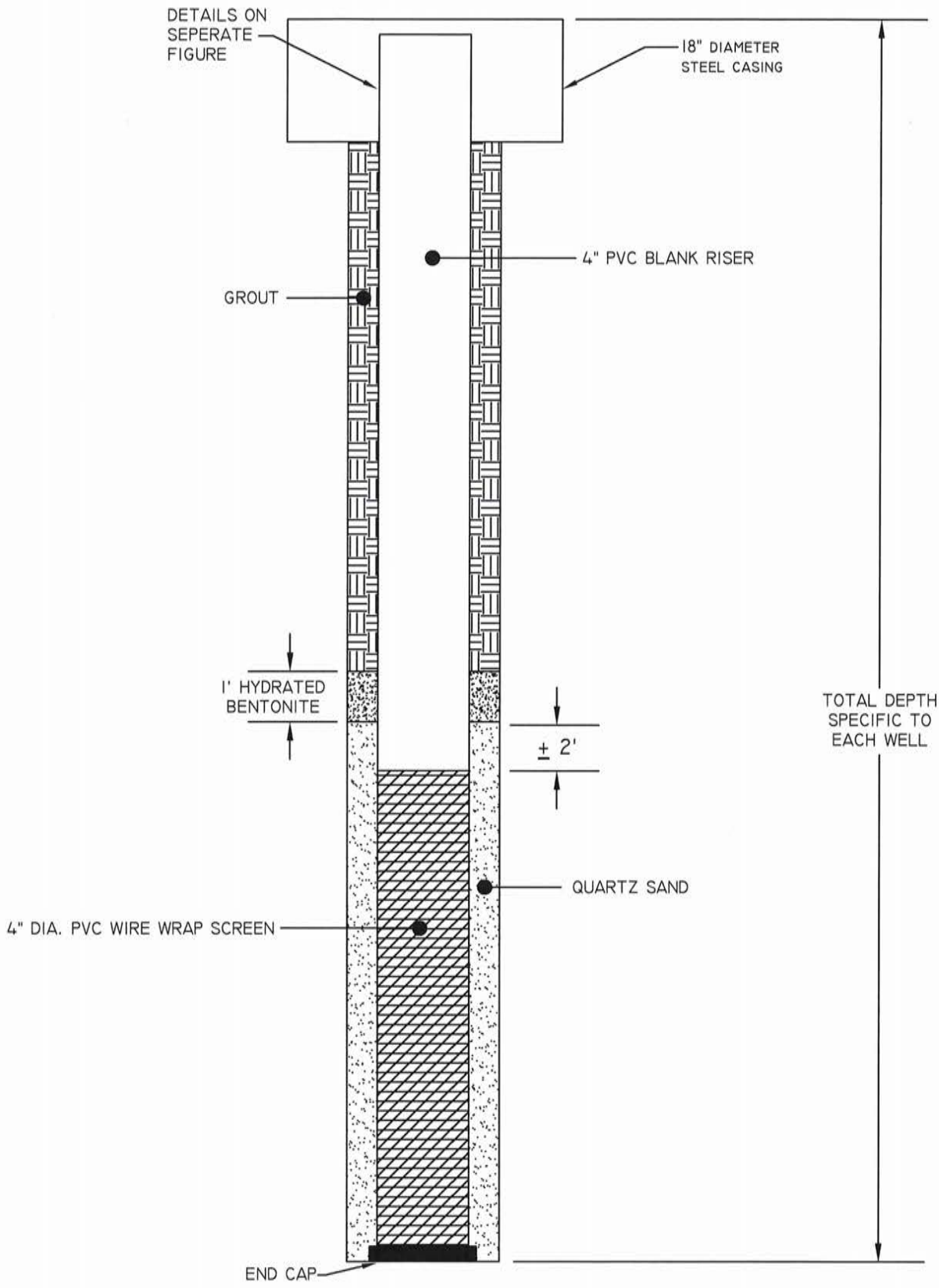
DEPTH SCALE	SAMPLE NO.	PID (PPM)	LITHOLOGY DESCRIPTION
0			0 - 5' - FILL: GRASS/SOD.
			5" - 1.5' - FILL: ORGANIC MATERIAL.
			1.5 - 3' - FILL: DARK ORGANIC FILL - MIXED WITH SLATE FRAGMENTS.
			3 - 5' - SILTY CLAY (CL-ML): LOW PLASTICITY; MEDIUM MOISTURE; MIXED WITH SLATE.
5			5 - 8' - SILTY CLAY (CL-ML): BROWN; MEDIUM PLASTICITY/MOISTURE; MIXED WITH SUBANGULAR GRAVEL.
			8 - 13' - SILTY CLAY (CL-ML): BROWN; MEDIUM PLASTICITY/MOISTURE.
10			
			13 - 16' - CLAY (CH): DARK GREY/BROWN; HIGH PLASTICITY; MEDIUM MOISTURE.
15			16 - 18' - POOR RECOVERY; HARD ROCK AT 17' BGS.
			18 - 20' - CLAY (CL): YELLOW/ORANGE; MIXED WITH SUBANGULAR FRAGMENTS OF SLATE.
20			20 - 21.5' - CLAY (CL): YELLOW/ORANGE; MEDIUM PLASTICITY/MOISTURE.
			21.5 - 22' - FRACTURED BEDROCK.
			22' - AUGER REFUSAL/TERMINATED AT 22' BGS.
25			
30			
35			

GRAPHIC LOG



WELL CONSTRUCTION DETAILS

Drawn By: DJW 11-07-18



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MOUNTAIN RESEARCH, LLC

The Summit of Science & Service

Visit Our Website at:
www.mountainresearch.com
825 25 th Street Altoona, PA 16601
(814) 949-2034 FAX: (814) 949-9591

Vennard's
4985 Lucerne Road
Indiana, PA

TYPICAL VEGE EXTRACTION WELL CONSTRUCTION DIAGRAM

APPENDIX C

LABORATORY DATA REPORTS – VAPOR SAMPLING

con-test®
ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

April 19, 2018

Mike Kern
Mountain Research, LLC
825 25th Street
Altoona, PA 16601

Project Location: Vennard's - Indianna, PA
Client Job Number:
Project Number: 4644.15.01
Laboratory Work Order Number: 18D0293

Enclosed are results of analyses for samples received by the laboratory on April 6, 2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Aaron L. Benoit
Project Manager

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Mountain Research, LLC
825 25th Street
Altoona, PA 16601
ATTN: Mike Kern

REPORT DATE: 4/19/2018

PURCHASE ORDER NUMBER: 25016

PROJECT NUMBER: 4644.15.01

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18D0293

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Vennard's - Indianna, PA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-14 Low Vac	18D0293-01	Soil Gas		EPA TO-15	
				MADEP APH rev 1	
MW-14 Mid Vac	18D0293-02	Soil Gas		EPA TO-15	
				MADEP APH rev 1	
MW-14 High Vac	18D0293-03	Soil Gas		EPA TO-15	
				MADEP APH rev 1	
EW-1BR High Vac	18D0293-04	Soil Gas		EPA TO-15	
				MADEP APH rev 1	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA TO-15

Qualifications:

DL-04

Elevated reporting limit due to high concentration of an interfering analyte(s).

Analyte & Samples(s) Qualified:

18D0293-01[MW-14 Low Vac], 18D0293-02[MW-14 Mid Vac], 18D0293-03[MW-14 High Vac], 18D0293-04[EW-1BR High Vac]

L-01

Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.

Analyte & Samples(s) Qualified:

Naphthalene
B201061-BS1

V-36

Initial calibration verification (ICV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Naphthalene
B201061-BS1

MADEP APH rev 1

Qualifications:

DL-04

Elevated reporting limit due to high concentration of an interfering analyte(s).

Analyte & Samples(s) Qualified:

18D0293-01[MW-14 Low Vac], 18D0293-02[MW-14 Mid Vac], 18D0293-03[MW-14 High Vac], 18D0293-04[EW-1BR High Vac]

MADEP APH rev 1

No significant modifications were made to the APH method.
All performance/acceptance standards for required QA/QC procedures were achieved unless otherwise indicated in this case narrative.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Tod Kopyscinski

Tod E. Kopyscinski
Laboratory Director

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ANALYTICAL RESULTS

Project Location: Vennard's - Indianna, PA
Date Received: 4/6/2018
Field Sample #: MW-14 Low Vac
Sample ID: 18D0293-01
Sample Matrix: Soil Gas
Sampled: 3/27/2018 12:38

Sample Description/Location:
Sub Description/Location:
Canister ID: 1009
Canister Size: 6 liter
Flow Controller ID: 5025
Sample Type: Grab

Work Order: 18D0293
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -5
Receipt Vacuum(in Hg): -5.4
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: Grab

EPA TO-15

Sample Flags: DL-04

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Benzene	14000	150		45000	480	3000	4/14/18 22:58	BRF
Ethylbenzene	2800	150		12000	650	3000	4/14/18 22:58	BRF
Isopropylbenzene (Cumene)	ND	380		ND	1900	3000	4/14/18 22:58	BRF
Methyl tert-Butyl Ether (MTBE)	ND	150		ND	540	3000	4/14/18 22:58	BRF
Naphthalene	ND	150		ND	790	3000	4/14/18 22:58	BRF
Toluene	22000	150		83000	570	3000	4/14/18 22:58	BRF
1,2,4-Trimethylbenzene	ND	150		ND	740	3000	4/14/18 22:58	BRF
1,3,5-Trimethylbenzene	ND	150		ND	740	3000	4/14/18 22:58	BRF
m&p-Xylene	8000	300		35000	1300	3000	4/14/18 22:58	BRF
o-Xylene	2200	150		9400	650	3000	4/14/18 22:58	BRF

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	101	70-130	4/14/18 22:58
4-Bromofluorobenzene (4)	108	70-130	4/14/18 22:58

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ANALYTICAL RESULTS

Project Location: Vennard's - Indianna, PA
Date Received: 4/6/2018
Field Sample #: MW-14 Low Vac
Sample ID: 18D0293-01
Sample Matrix: Soil Gas
Sampled: 3/27/2018 12:38

Sample Description/Location:
Sub Description/Location:
Canister ID: 1009
Canister Size: 6 liter
Flow Controller ID: 5025
Sample Type: Grab

Work Order: 18D0293
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -5
Receipt Vacuum(in Hg): -5.4
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: Grab

MADEP APH rev 1

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
C5-C8 Aliphatics				9200000	100000	12000	4/16/18 8:14	BRF
C9-C10 Aromatics				ND	28000	3000	4/14/18 22:58	BRF
C9-C12 Aliphatics				40000	40000	3000	4/14/18 22:58	BRF

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (4)	108	70-130	4/14/18 22:58
4-Bromofluorobenzene (4)	104	70-130	4/16/18 8:14

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ANALYTICAL RESULTS

Project Location: Vennard's - Indianna, PA
Date Received: 4/6/2018
Field Sample #: MW-14 Mid Vac
Sample ID: 18D0293-02
Sample Matrix: Soil Gas
Sampled: 3/27/2018 14:14

Sample Description/Location:
Sub Description/Location:
Canister ID: 1020
Canister Size: 6 liter
Flow Controller ID: 5059
Sample Type: Grab

Work Order: 18D0293
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -5
Receipt Vacuum(in Hg): -6.4
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: Grab

EPA TO-15

Sample Flags: DL-04

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Benzene	5200	15		17000	48	300	4/14/18 20:54	BRF
Ethylbenzene	2500	15		11000	65	300	4/14/18 20:54	BRF
Isopropylbenzene (Cumene)	140	38		680	190	300	4/14/18 20:54	BRF
Methyl tert-Butyl Ether (MTBE)	ND	15		ND	54	300	4/14/18 20:54	BRF
Naphthalene	ND	15		ND	79	300	4/14/18 20:54	BRF
Toluene	15000	600		57000	2300	12000	4/16/18 8:52	BRF
1,2,4-Trimethylbenzene	620	15		3100	74	300	4/14/18 20:54	BRF
1,3,5-Trimethylbenzene	270	15		1300	74	300	4/14/18 20:54	BRF
m&p-Xylene	10000	1200		44000	5200	12000	4/16/18 8:52	BRF
o-Xylene	2900	15		13000	65	300	4/14/18 20:54	BRF

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	98.9	70-130	4/16/18 8:52
4-Bromofluorobenzene (1)	98.9	70-130	4/14/18 20:54
4-Bromofluorobenzene (4)	105	70-130	4/14/18 20:54

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ANALYTICAL RESULTS

Project Location: Vennard's - Indianna, PA
Date Received: 4/6/2018
Field Sample #: MW-14 Mid Vac
Sample ID: 18D0293-02
Sample Matrix: Soil Gas
Sampled: 3/27/2018 14:14

Sample Description/Location:
Sub Description/Location:
Canister ID: 1020
Canister Size: 6 liter
Flow Controller ID: 5059
Sample Type: Grab

Work Order: 18D0293
Initial Vacuum(in Hg): -28
Final Vacuum(in Hg): -5
Receipt Vacuum(in Hg): -6.4
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: Grab

MADEP APH rev 1

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
C5-C8 Aliphatics				4500000	100000	12000	4/16/18 8:52	BRF
C9-C10 Aromatics				30000	2800	300	4/14/18 20:54	BRF
C9-C12 Aliphatics				11000	4000	300	4/14/18 20:54	BRF

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (4)	105	70-130	4/14/18 20:54
4-Bromofluorobenzene (4)	106	70-130	4/16/18 8:52

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ANALYTICAL RESULTS

Project Location: Vennard's - Indianna, PA
Date Received: 4/6/2018
Field Sample #: MW-14 High Vac
Sample ID: 18D0293-03
Sample Matrix: Soil Gas
Sampled: 3/27/2018 15:32

Sample Description/Location:
Sub Description/Location:
Canister ID: 1025
Canister Size: 6 liter
Flow Controller ID: 5058
Sample Type: Grab

Work Order: 18D0293
Initial Vacuum(in Hg): -10
Final Vacuum(in Hg): -5
Receipt Vacuum(in Hg): -.8
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: Grab

EPA TO-15

Sample Flags: DL-04

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Benzene	4000	15		13000	48	300	4/14/18 21:36	BRF
Ethylbenzene	3900	15		17000	65	300	4/14/18 21:36	BRF
Isopropylbenzene (Cumene)	260	38		1300	190	300	4/14/18 21:36	BRF
Methyl tert-Butyl Ether (MTBE)	ND	15		ND	54	300	4/14/18 21:36	BRF
Naphthalene	ND	15		ND	79	300	4/14/18 21:36	BRF
Toluene	5200	15		20000	57	300	4/14/18 21:36	BRF
1,2,4-Trimethylbenzene	800	15		3900	74	300	4/14/18 21:36	BRF
1,3,5-Trimethylbenzene	440	15		2200	74	300	4/14/18 21:36	BRF
m&p-Xylene	6000	30		26000	130	300	4/14/18 21:36	BRF
o-Xylene	4000	15		17000	65	300	4/14/18 21:36	BRF

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	98.5	70-130	4/14/18 21:36
4-Bromofluorobenzene (4)	105	70-130	4/14/18 21:36

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ANALYTICAL RESULTS

Project Location: Vennard's - Indianna, PA
Date Received: 4/6/2018
Field Sample #: MW-14 High Vac
Sample ID: 18D0293-03
Sample Matrix: Soil Gas
Sampled: 3/27/2018 15:32

Sample Description/Location:
Sub Description/Location:
Canister ID: 1025
Canister Size: 6 liter
Flow Controller ID: 5058
Sample Type: Grab

Work Order: 18D0293
Initial Vacuum(in Hg): -10
Final Vacuum(in Hg): -5
Receipt Vacuum(in Hg): -.8
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: Grab

MADEP APH rev 1

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
C5-C8 Aliphatics				5600000	100000	12000	4/16/18 9:33	BRF
C9-C10 Aromatics				44000	2800	300	4/14/18 21:36	BRF
C9-C12 Aliphatics				43000	4000	300	4/14/18 21:36	BRF

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (4)	105	70-130	4/14/18 21:36
4-Bromofluorobenzene (4)	104	70-130	4/16/18 9:33

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ANALYTICAL RESULTS

Project Location: Vennard's - Indianna, PA
Date Received: 4/6/2018
Field Sample #: EW-1BR High Vac
Sample ID: 18D0293-04
Sample Matrix: Soil Gas
Sampled: 3/29/2018 12:36

Sample Description/Location:
Sub Description/Location:
Canister ID: 1139
Canister Size: 6 liter
Flow Controller ID: 5005
Sample Type: Grab

Work Order: 18D0293
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -5
Receipt Vacuum(in Hg): -7
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: Grab

EPA TO-15

Sample Flags: DL-04

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Benzene	1800	3.0		5600	9.6	60	4/16/18 10:14	BRF
Ethylbenzene	530	3.0		2300	13	60	4/16/18 10:14	BRF
Isopropylbenzene (Cumene)	50	7.6		250	37	60	4/16/18 10:14	BRF
Methyl tert-Butyl Ether (MTBE)	ND	3.0		ND	11	60	4/16/18 10:14	BRF
Naphthalene	ND	3.0		ND	16	60	4/16/18 10:14	BRF
Toluene	1500	15		5600	57	300	4/14/18 22:18	BRF
1,2,4-Trimethylbenzene	950	3.0		4700	15	60	4/16/18 10:14	BRF
1,3,5-Trimethylbenzene	260	3.0		1300	15	60	4/16/18 10:14	BRF
m&p-Xylene	1800	30		7800	130	300	4/14/18 22:18	BRF
o-Xylene	800	3.0		3500	13	60	4/16/18 10:14	BRF

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	98.8	70-130	4/14/18 22:18
4-Bromofluorobenzene (1)	101	70-130	4/16/18 10:14
4-Bromofluorobenzene (4)	108	70-130	4/16/18 10:14

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ANALYTICAL RESULTS

Project Location: Vennard's - Indianna, PA
Date Received: 4/6/2018
Field Sample #: EW-1BR High Vac
Sample ID: 18D0293-04
Sample Matrix: Soil Gas
Sampled: 3/29/2018 12:36

Sample Description/Location:
Sub Description/Location:
Canister ID: 1139
Canister Size: 6 liter
Flow Controller ID: 5005
Sample Type: Grab

Work Order: 18D0293
Initial Vacuum(in Hg): -29
Final Vacuum(in Hg): -5
Receipt Vacuum(in Hg): -7
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: Grab

MADEP APH rev 1

Sample Flags: DL-04

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
C5-C8 Aliphatics				31000	510	60	4/16/18 10:14	BRF
C9-C10 Aromatics				21000	2800	300	4/14/18 22:18	BRF
C9-C12 Aliphatics				3600	800	60	4/16/18 10:14	BRF

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (4)	108	70-130	4/16/18 10:14
4-Bromofluorobenzene (4)	106	70-130	4/14/18 22:18

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Sample Extraction Data

Prep Method: APH Prep-EPA TO-15

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
18D0293-01 [MW-14 Low Vac]	B201061	1.5	200	5	1000	400	400	04/14/18
18D0293-02 [MW-14 Mid Vac]	B201061	1.5	200	5	1000	400	400	04/14/18
18D0293-03 [MW-14 High Vac]	B201061	1.5	200	5	1000	400	400	04/14/18
18D0293-04RE1 [EW-1BR High Vac]	B201061	1.5	200	5	1000	400	400	04/14/18

Prep Method: APH Prep-EPA TO-15

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
18D0293-02RE1 [MW-14 Mid Vac]	B201160	1.5	200	5	1000	400	10	04/15/18
18D0293-04 [EW-1BR High Vac]	B201160	1.5	1	N/A	1000	400	10	04/15/18

Prep Method: APH Prep-MADEP APH rev 1

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
18D0293-01 [MW-14 Low Vac]	B201030	1.5	200	5	1000	400	400	04/14/18
18D0293-02 [MW-14 Mid Vac]	B201030	1.5	200	5	1000	400	400	04/14/18
18D0293-03 [MW-14 High Vac]	B201030	1.5	200	5	1000	400	400	04/14/18
18D0293-04RE1 [EW-1BR High Vac]	B201030	1.5	200	5	1000	400	400	04/14/18

Prep Method: APH Prep-MADEP APH rev 1

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
18D0293-01RE1 [MW-14 Low Vac]	B201176	1.5	200	5	1000	400	10	04/15/18
18D0293-02RE1 [MW-14 Mid Vac]	B201176	1.5	200	5	1000	400	10	04/15/18
18D0293-03RE1 [MW-14 High Vac]	B201176	1.5	200	5	1000	400	10	04/15/18
18D0293-04 [EW-1BR High Vac]	B201176	1.5	200	5	1000	400	10	04/15/18

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QUALITY CONTROL

Air Petroleum Hydrocarbons Analyses - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B201030 - APH Prep											
Blank (B201030-BLK1)					Prepared & Analyzed: 04/14/18						
Decane	ND	0.13									
1,3,5-Trimethylbenzene	ND	0.13									
C5-C8 Aliphatics			ND								
C5-C8 Aliphatics (µg/m³)			ND								
C9-C10 Aromatics			ND								
C9-C10 Aromatics (µg/m³)			ND								
C9-C12 Aliphatics			ND								
C9-C12 Aliphatics (µg/m³)			44								
Surrogate: 4-Bromofluorobenzene (4)	*8.26*				*8.00*		*103*	*70-130*			
LCS (B201030-BS1)					Prepared & Analyzed: 04/14/18						
Decane	11.8				9.38		126	70-130			
Heptane	9.64				9.38		103	70-130			
1,3,5-Trimethylbenzene	10.6				9.38		113	70-130			
Surrogate: 4-Bromofluorobenzene (4)	*8.78*				*8.00*		*110*	*70-130*			
Batch B201176 - APH Prep											
Blank (B201176-BLK1)					Prepared & Analyzed: 04/15/18						
Decane	ND	0.13									
Heptane	ND	0.13									
1,3,5-Trimethylbenzene	ND	0.13									
C5-C8 Aliphatics			ND								
C5-C8 Aliphatics (µg/m³)			ND								
C9-C10 Aromatics			ND								
C9-C10 Aromatics (µg/m³)			ND								
C9-C12 Aliphatics			ND								
C9-C12 Aliphatics (µg/m³)			43								
Surrogate: 4-Bromofluorobenzene (4)	*8.20*				*8.00*		*102*	*70-130*			

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QUALITY CONTROL

Air Petroleum Hydrocarbons Analyses - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B201176 - APH Prep											
LCS (B201176-BS1)					Prepared & Analyzed: 04/15/18						
Decane	10.7				9.38		114	70-130			
Heptane	7.52				9.38		80.2	70-130			
1,3,5-Trimethylbenzene	9.02				9.38		96.2	70-130			
Surrogate: 4-Bromofluorobenzene (4)	*8.70*				*8.00*		*109*	*70-130*			

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC		%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B201061 - APH Prep												
Blank (B201061-BLK1)					Prepared & Analyzed: 04/14/18							
Benzene	ND	0.034										
Ethylbenzene	ND	0.034										
Isopropylbenzene (Cumene)	ND	0.086										
Methyl tert-Butyl Ether (MTBE)	ND	0.034										
Naphthalene	ND	0.034										
Toluene	ND	0.034										
1,2,4-Trimethylbenzene	ND	0.034										
1,3,5-Trimethylbenzene	ND	0.034										
m&p-Xylene	ND	0.068										
o-Xylene	ND	0.034										
Surrogate: 4-Bromofluorobenzene (1)	*7.72*				*8.00*		*96.5*		*70-130*			
Surrogate: 4-Bromofluorobenzene (4)	*8.26*				*8.00*		*103*		*70-130*			
LCS (B201061-BS1)					Prepared & Analyzed: 04/14/18							
Benzene	5.46				5.00		109		70-130			
Ethylbenzene	6.06				5.00		121		70-130			
Isopropylbenzene (Cumene)	10.1				9.38		108		70-130			
Methyl tert-Butyl Ether (MTBE)	6.08				5.00		122		70-130			
Naphthalene	6.57				5.00		**131**	*	70-130			L-01, V-36
Toluene	5.80				5.00		116		70-130			
1,2,4-Trimethylbenzene	6.13				5.00		123		70-130			
1,3,5-Trimethylbenzene	6.04				5.00		121		70-130			
m&p-Xylene	12.1				10.0		121		70-130			
o-Xylene	6.17				5.00		123		70-130			
Surrogate: 4-Bromofluorobenzene (1)	*8.18*				*8.00*		*102*		*70-130*			
Surrogate: 4-Bromofluorobenzene (4)	*8.78*				*8.00*		*110*		*70-130*			

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B201160 - APH Prep											
Blank (B201160-BLK1)					Prepared & Analyzed: 04/15/18						
Benzene	ND	0.034									
Ethylbenzene	ND	0.034									
Isopropylbenzene (Cumene)	ND	0.13									
Methyl tert-Butyl Ether (MTBE)	ND	0.034									
Naphthalene	ND	0.034									
Toluene	ND	0.034									
1,2,4-Trimethylbenzene	ND	0.034									
1,3,5-Trimethylbenzene	ND	0.034									
m&p-Xylene	ND	0.068									
o-Xylene	ND	0.034									
Surrogate: 4-Bromofluorobenzene (1)	*7.65*				*8.00*		*95.6*	*70-130*			
Surrogate: 4-Bromofluorobenzene (4)	*8.20*				*8.00*		*102*	*70-130*			
LCS (B201160-BS1)					Prepared & Analyzed: 04/15/18						
Benzene	5.22				5.00		104	70-130			
Ethylbenzene	5.74				5.00		115	70-130			
Isopropylbenzene (Cumene)	8.56				9.38		91.2	70-130			
Methyl tert-Butyl Ether (MTBE)	5.86				5.00		117	70-130			
Naphthalene	6.14				5.00		123	70-130			
Toluene	5.53				5.00		111	70-130			
1,2,4-Trimethylbenzene	5.85				5.00		117	70-130			
1,3,5-Trimethylbenzene	5.78				5.00		116	70-130			
m&p-Xylene	11.7				10.0		117	70-130			
o-Xylene	6.12				5.00		122	70-130			
Surrogate: 4-Bromofluorobenzene (1)	*8.10*				*8.00*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene (4)	*8.70*				*8.00*		*109*	*70-130*			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
DL-04	Elevated reporting limit due to high concentration of an interfering analyte(s).
L-01	Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
V-36	Initial calibration verification (ICV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

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INTERNAL STANDARD AREA AND RT SUMMARY

MADEP APH rev 1

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
MW-14 Mid Vac (18D0293-02)			Lab File ID: F041343.D			Analyzed: 04/14/18 20:54			
Bromochloromethane (4)	228920	8.405				50 - 200	8.4050	+/-0.50	
1,4-Difluorobenzene (4)	594841	10.145				50 - 200	10.1450	+/-0.50	
Chlorobenzene-d5 (4)	302936	14.479				50 - 200	14.4790	+/-0.50	
MW-14 High Vac (18D0293-03)			Lab File ID: F041344.D			Analyzed: 04/14/18 21:36			
Bromochloromethane (4)	229761	8.405				50 - 200	8.4050	+/-0.50	
1,4-Difluorobenzene (4)	561475	10.145				50 - 200	10.1450	+/-0.50	
Chlorobenzene-d5 (4)	303781	14.479				50 - 200	14.4790	+/-0.50	
EW-1BR High Vac (18D0293-04RE1)			Lab File ID: F041345.D			Analyzed: 04/14/18 22:18			
Bromochloromethane (4)	226676	8.405				50 - 200	8.4050	+/-0.50	
1,4-Difluorobenzene (4)	596796	10.138				50 - 200	10.1380	+/-0.50	
Chlorobenzene-d5 (4)	304617	14.476				50 - 200	14.4760	+/-0.50	
MW-14 Low Vac (18D0293-01)			Lab File ID: F041346.D			Analyzed: 04/14/18 22:58			
Bromochloromethane (4)	218624	8.405				50 - 200	8.4050	+/-0.50	
1,4-Difluorobenzene (4)	575568	10.138				50 - 200	10.1380	+/-0.50	
Chlorobenzene-d5 (4)	270416	14.472				50 - 200	14.4720	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

MADEP APH rev 1

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
MW-14 Low Vac (18D0293-01RE1)			Lab File ID: F041528.D			Analyzed: 04/16/18 08:14			
Bromochloromethane (4)	258230	8.405				50 - 200	8.4050	+/-0.50	
1,4-Difluorobenzene (4)	688444	10.138				50 - 200	10.1380	+/-0.50	
Chlorobenzene-d5 (4)	351373	14.476				50 - 200	14.4760	+/-0.50	
MW-14 Mid Vac (18D0293-02RE1)			Lab File ID: F041529.D			Analyzed: 04/16/18 08:52			
Bromochloromethane (4)	240566	8.402				50 - 200	8.4020	+/-0.50	
1,4-Difluorobenzene (4)	637205	10.135				50 - 200	10.1350	+/-0.50	
Chlorobenzene-d5 (4)	305759	14.473				50 - 200	14.4730	+/-0.50	
MW-14 High Vac (18D0293-03RE1)			Lab File ID: F041530.D			Analyzed: 04/16/18 09:33			
Bromochloromethane (4)	239781	8.405				50 - 200	8.4050	+/-0.50	
1,4-Difluorobenzene (4)	638182	10.138				50 - 200	10.1380	+/-0.50	
Chlorobenzene-d5 (4)	314107	14.476				50 - 200	14.4760	+/-0.50	
EW-1BR High Vac (18D0293-04)			Lab File ID: F041531.D			Analyzed: 04/16/18 10:14			
Bromochloromethane (4)	241221	8.402				50 - 200	8.4020	+/-0.50	
1,4-Difluorobenzene (4)	642495	10.138				50 - 200	10.1380	+/-0.50	
Chlorobenzene-d5 (4)	334597	14.476				50 - 200	14.4760	+/-0.50	

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CONTINUING CALIBRATION CHECK

COMPOUND	TYPE			RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA TO-15 in Air	
Benzene	AIHA,FL,NJ,NY,VA,ME
Ethylbenzene	AIHA,FL,NJ,NY,VA,ME
Isopropylbenzene (Cumene)	AIHA,NJ,NY,ME
Methyl tert-Butyl Ether (MTBE)	AIHA,FL,NJ,NY,VA,ME
Naphthalene	NY,ME
Toluene	AIHA,FL,NJ,NY,VA,ME
1,2,4-Trimethylbenzene	AIHA,NJ,NY,ME
1,3,5-Trimethylbenzene	AIHA,NJ,NY,ME
m&p-Xylene	AIHA,FL,NJ,NY,VA,ME
o-Xylene	AIHA,FL,NJ,NY,VA,ME
MADEP APH rev 1 in Air	
Benzene	ME
Ethylbenzene	ME
Methyl tert-Butyl Ether (MTBE)	ME
Toluene	ME
Naphthalene	ME
m&p-Xylene	ME
o-Xylene	ME
C5-C8 Aliphatics	ME
C9-C10 Aromatics	ME
C9-C12 Aliphatics	ME

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2018
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2019
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2019
RI	Rhode Island Department of Health	LAO00112	12/30/2018
NC	North Carolina Div. of Water Quality	652	12/31/2018
NJ	New Jersey DEP	MA007 NELAP	06/30/2018
FL	Florida Department of Health	E871027 NELAP	06/30/2018
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2018
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2018
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2018
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2018
NC-DW	North Carolina Department of Health	25703	07/31/2018

con-test ANALYTICAL LABORATORY

18D0293

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Fax: 413-525-6405
Email: info@contestlabs.com

http://www.contestlabs.com

Doc #378 Rev 1_03242017

CHAIN OF CUSTODY RECORD (AIR)

39 Spruce Street
East Longmeadow, MA 01028

Company Name:	Mountain Research
Address:	825 25th Street, Altoona, PA 16601
Phone:	814-949-2034
Project Name:	Verrastro
Project Location:	Indiana, PA
Project Number:	4644.16.01 P.O.# 25016
Project Manager:	Mike Kern
Con-Test Quote Name/Number:	
Invoice Recipient:	
Sampled By:	Jason Hurley

Requested Turnaround Time
7-Day ☐ 10-Day ☑
Due Date:

Rush Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☑ EXCEL ☐
Other:
CLP Like Data Pkg Required: ☐
Email To: mkern@mountainresearch.com
Fax To #: jhurley@mountainresearch.com

ANALYSIS REQUESTED

Please fill out completely, sign, date and retain the yellow copy for your records

Summa canisters and flow controllers must be returned within 15 days of receipt or rental fees will apply

For summa canister and flow controller information please refer to Con-Test's Air Media Agreement

Lab Use	Client Use	Collection Data		Duration	Flow Rate	Matrix	Volume	BTEX, Cumene	Naphthalene, MTBE	1,2,4-TMB, 1,3,5-TMB	C4-C12 Hydrocarbons	" Hg				
Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Total Minutes Sampled	☐ m³/min ☐ L/min	Code	☐ Liters ☐ m³					Initial Pressure	Final Pressure	Lab Receipt Pressure	Summa Can ID	Flow Controller ID
01	MW-14 Low Vac	3/27/18 1237	3/27/18 1238			SG		X	X	X	X	-28	-5	5.4	1009	5025
02	MW-14 Mid Vac	3/27/18 1413	3/27/18 1414			SG		X	X	X	X	-28	-5	6.4	1020	5059
03	MW-14 High Vac	3/27/18 1532	3/27/18 1532			SG		X	X	X	X	-10	-5	0.8	1025	5058
04	EW-1BR High Vac	3/29/18 1235	3/29/18 1236			SG		X	X	X	X	-29	-5	.7	1139	5005

Comments:
Concentrations likely high.
Can ID 1025 only had 10"Hg & can ID 1691 had no vacuum.

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Matrix Codes:
SG = SOIL GAS
IA = INDOOR AIR
AMB = AMBIENT
SS = SUB SLAB
D = DUP
BL = BLANK
O = Other_____

Relinquished by: (signature)	Date/Time: 4/2/18 1530
Received by: (signature)	Date/Time: 4/16/18 1131
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Detection Limit Requirements
MA
RCP
Other:

Special Requirements
☐ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ Other

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NELAC and AIHA-LAP, LLC Accredited

Project Entity
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

IMPORTANT!
FedEx is closely monitoring the winter storms across portions of the U.S. Learn More

FedEx® Tracking

771897648887

Ship date:
Wed 4/04/2018

Altoona, PA US

Delivered
Signed for by: RPETRAITIS

Actual delivery:
Fri 4/06/2018 11:31 am

EAST LONGMEADOW, MA US

2 Piece shipment

Travel History

Date/Time	Activity	Location
4/06/2018 - Friday		
11:31 am	Delivered	East Longmeadow, MA
4:01 am	On FedEx vehicle for delivery	CHICOPEE, MA
3:50 am	At local FedEx facility	CHICOPEE, MA
4/05/2018 - Thursday		
8:59 pm	Departed FedEx location	WILLINGTON, CT
6:25 pm	Arrived at FedEx location	WILLINGTON, CT
10:42 am	Departed FedEx location	LEWISBERRY, PA
4:51 am	Arrived at FedEx location	LEWISBERRY, PA
4/04/2018 - Wednesday		
9:08 pm	Left FedEx origin facility	DUNCANSVILLE, PA
5:31 pm	Arrived at FedEx location	DUNCANSVILLE, PA
10:56 am	Picked up	DUNCANSVILLE, PA
4/03/2018 - Tuesday		
8:37 am	Shipment information sent to FedEx	

Shipment Facts

Tracking Number	771897648887	**Service**	FedEx Ground
Reference	4644.15.01	**Master tracking number**	771897648887
Weight	32 lbs / 14.51 kgs	**Dimensions**	21x19x14 in.
Total pieces	2	**Total shipment weight**	40 lbs / 18.14 kgs
Terms	Recipient	**Purchase order number**	25016
Packaging	Package	**Standard transit**	4/06/2018

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Doc# 278 Rev 6 2017

Air Media Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client: Mantain Research

Received By: RLF | Date: 4/16/18 | Time: 1131

How were the samples received? In Cooler: | On Ice: | No Ice:
In Box: T | Ambient: T | Melted Ice:

Were samples within Temperature Compliance? 2-6°C: NA | By Gun #: | Actual Temp -
By Blank #: | Actual Temp -

Was Custody Seal Intact? NA | Were Samples Tampered with? NA

Was COC Relinquished ? T | Does Chain Agree With Samples? T

Are there any loose caps/valves on any samples? F

Is COC in ink/ Legible? T

Did COC Include all Pertinent Information? Client: T | Analysis: T | Sampler Name: T
Project: T | ID's: T | Collection Dates/Times: T

Are Sample Labels filled out and legible? T

Are there Rushes? F | Who was notified?

Samples are received within holding time? T

Proper Media Used? T | Individually Certified Cans? F

Are there Trip Blanks? F | Is there enough Volume? T

Containers:	#	Size	Regulator	Duration	Accessories:			
Summa Cans	5	1L	5		Nut/Ferrule		IC Train	
Tedlar Bags					Tubing			
TO-17 Tubes					T-Connector		Shipping Charges	
Radiello					Syringe			
Pufs/TO-11s					Tedlar			

Can #'s					Reg #'s				
1009					5025				
1080					5059				
1025					5058				
1139					5005				
Unused Media					**Pufs/TO-17's**				
1091	(-26.9)	5026							

Comments:

con-test® ANALYTICAL LABORATORY

Air Sampling Media Certificate of Analysis

Date Analyzed: 2/26/2018 **Batch #:** 18CC079

Certification Type: *Batch Certified* ☑ *Individual Certified* ☐

Media Type: *Summa Canister* ☑ *Flow Controllers* ☐

Media IDs: BC1009

Note:Two ID's grouped together, for example BC2136/BC3145, represents matched pairs of certified summa canisters and flow controllers.

Units: PPBv

<0.80	Propene	<0.04	Vinyl acetate	<0.02	Dibromchloromethane
<0.02	Dichlorodifluoromethane	<0.20	Hexane	<0.02	1,2-Dibromomethane
<0.04	Chloromethane	<0.02	Ethyl acetate	<0.02	Tetrachloroethylene
<0.02	Freon 114	<0.02	Chloroform	<0.02	Chlorobenzene
<0.02	Vinyl chloride	<0.02	Tetrahydrofuran	<0.02	Ethylbenzene
<0.02	1.3-Butadiene	<0.02	1,2-Dichloroethane	<0.04	m,p-Xylenes
<0.02	Bromomethane	<0.02	1,1,1-Trichloroethane	<0.02	Bromoform
<0.02	Chloroethane	<0.02	Benzene	<0.02	Styrene
<0.08	Acrolein	<0.02	Carbon Tetrachloride	<0.02	o-Xylene
<0.80	Acetone	<0.02	Cyclohexane	<0.02	1,1,2,2-Tetrachloroethane
<0.20	Trichlorofluoromethane	<0.02	1,2-Dichloropropane	<0.02	4-Ethyltoluene
<0.80	Ethanol	<0.02	Bromodichloromethane	<0.02	1,3,5-Trimethylbenzene
<0.02	1,1-Dichloroethylene	<0.02	Trichloroethylene	<0.02	1,2,4-Trimethylbenzene
<0.20	Methylene chloride	<0.02	1,4-Dioxane	<0.02	1,3-Dichlorobenzene
<0.20	Freon 113	<0.02	Methylmethacrylate	<0.02	Benzyl chloride
<0.2	Carbon disulfide	<0.02	Heptane	<0.02	1,4-Dichlorobenzene
<0.02	t-1,2-Dichloroethylene	<0.02	MIBK	<0.02	1,2-Dichlorobenzene
<0.02	1,1-Dichloroethane	<0.02	c-1,3-Dichloropropylene	<0.04	1,2,4-Trichlorobenzene
<0.02	MTBE	<0.02	t-1,3-Dichloropropylene	<0.02	Naphthalene
<0.80	IPA	<0.02	1,1,2-Trichloroethylene	<0.02	Hexachlorobutadiene
<0.20	2-Butanone (MEK)	<0.02	Toluene		
<0.02	c-1,2-Dichloroethylene	<0.02	2-Hexanone (MBK)		

Special Notes:

Analyst Initials/Date: BRF 4/17/2018

con-test® ANALYTICAL LABORATORY

Air Sampling Media Certificate of Analysis

Date Analyzed: 2/26/2018 **Batch #:** 18CC079

Certification Type: *Batch Certified* ☑ *Individual Certified* ☐

Media Type: *Summa Canister* ☑ *Flow Controllers* ☐

Media IDs: BC1009

Note:Two ID's grouped together, for example BC2136/BC3145, represents matched pairs of certified summa canisters and flow controllers.

Units: **PPBv**

RL	
<0.08	1,3-Butadiene
<0.08	Methyl tert-butyl Ether
<0.08	Benzene
<0.08	Toluene
<0.08	Ethylbenzene
<0.08	m,p-Xylenes
<0.08	o-Xylene
<0.07	Naphthalene

Ug/M3

RL	
<0.17	1,3-Butadiene
<0.27	Methyl tert-butyl Ether
<0.24	Benzene
<0.28	Toluene
<0.33	Ethylbenzene
<0.33	m,p-Xylenes
<0.33	o-Xylene
<0.39	Naphthalene
<3.4	C5 - C8 Aliphatic Range
<5.3	C9 - C12 Aliphatic Range
<3.8	C9 - C10 Aromatic Range

Special Notes:

Analyst Initials/Date: 4/17/2018

con-test® ANALYTICAL LABORATORY

Air Sampling Media Certificate of Analysis

Date Analyzed: 2/20/2018 **Batch #:** 18CC056

Certification Type: *Batch Certified* ☑ *Individual Certified* ☐

Media Type: *Summa Canister* ☑ *Flow Controllers* ☐

Media IDs: BC1020 BC1025

Note:Two ID's grouped together, for example BC2136/BC3145, represents matched pairs of certified summa canisters and flow controllers.

Units: PPBv

<0.80	Propene	<0.04	Vinyl acetate	<0.02	Dibromchloromethane
<0.02	Dichlorodifluoromethane	<0.20	Hexane	<0.02	1,2-Dibromomethane
<0.04	Chloromethane	<0.02	Ethyl acetate	<0.02	Tetrachloroethylene
<0.02	Freon 114	<0.02	Chloroform	<0.02	Chlorobenzene
<0.02	Vinyl chloride	<0.02	Tetrahydrofuran	<0.02	Ethylbenzene
<0.02	1.3-Butadiene	<0.02	1,2-Dichloroethane	<0.04	m,p-Xylenes
<0.02	Bromomethane	<0.02	1,1,1-Trichloroethane	<0.02	Bromoform
<0.02	Chloroethane	<0.02	Benzene	<0.02	Styrene
<0.08	Acrolein	<0.02	Carbon Tetrachloride	<0.02	o-Xylene
<0.80	Acetone	<0.02	Cyclohexane	<0.02	1,1,2,2-Tetrachloroethane
<0.20	Trichlorofluoromethane	<0.02	1,2-Dichloropropane	<0.02	4-Ethyltoluene
<0.80	Ethanol	<0.02	Bromodichloromethane	<0.02	1,3,5-Trimethylbenzene
<0.02	1,1-Dichloroethylene	<0.02	Trichloroethylene	<0.02	1,2,4-Trimethylbenzene
<0.20	Methylene chloride	<0.02	1,4-Dioxane	<0.02	1,3-Dichlorobenzene
<0.20	Freon 113	<0.02	Methylmethacrylate	<0.02	Benzyl chloride
<0.2	Carbon disulfide	<0.02	Heptane	<0.02	1,4-Dichlorobenzene
<0.02	t-1,2-Dichloroethylene	<0.02	MIBK	<0.02	1,2-Dichlorobenzene
<0.02	1,1-Dichloroethane	<0.02	c-1,3-Dichloropropylene	<0.04	1,2,4-Trichlorobenzene
<0.02	MTBE	<0.02	t-1,3-Dichloropropylene	<0.02	Naphthalene
<0.80	IPA	<0.02	1,1,2-Trichloroethylene	<0.02	Hexachlorobutadiene
<0.20	2-Butanone (MEK)	<0.02	Toluene		
<0.02	c-1,2-Dichloroethylene	<0.02	2-Hexanone (MBK)		

Special Notes:

Analyst Initials/Date: BRF 4/17/2018

con-test® ANALYTICAL LABORATORY

Air Sampling Media Certificate of Analysis

Date Analyzed: 2/20/2018 **Batch #:** 18CC056

Certification Type: *Batch Certified* ☑ *Individual Certified* ☐

Media Type: *Summa Canister* ☑ *Flow Controllers* ☐

Media IDs:

BC1020	BC1025	

Note:Two ID's grouped together, for example BC2136/BC3145, represents matched pairs of certified summa canisters and flow controllers.

Units:

PPBv RL		Ug/M3 RL	
<0.08	1,3-Butadiene	<0.17	1,3-Butadiene
<0.08	Methyl tert-butyl Ether	<0.27	Methyl tert-butyl Ether
<0.08	Benzene	<0.24	Benzene
<0.08	Toluene	<0.28	Toluene
<0.08	Ethylbenzene	<0.33	Ethylbenzene
<0.08	m,p-Xylenes	<0.33	m,p-Xylenes
<0.08	o-Xylene	<0.33	o-Xylene
<0.07	Naphthalene	<0.39	Naphthalene
		<3.4	C5 - C8 Aliphatic Range
		<5.3	C9 - C12 Aliphatic Range
		<3.8	C9 - C10 Aromatic Range

Special Notes:

Analyst Initials/Date: BRF 4/17/2018

con-test® ANALYTICAL LABORATORY

Air Sampling Media Certificate of Analysis

Date Analyzed: 3/4/2018 **Batch #:** 18CC093

Certification Type: *Batch Certified* ☑ *Individual Certified* ☐

Media Type: *Summa Canister* ☑ *Flow Controllers* ☐

Media IDs: BC1139

Note:Two ID's grouped together, for example BC2136/BC3145, represents matched pairs of certified summa canisters and flow controllers.

Units: PPBv

<0.80	Propene	<0.04	Vinyl acetate	<0.02	Dibromchloromethane
<0.02	Dichlorodifluoromethane	<0.20	Hexane	<0.02	1,2-Dibromomethane
<0.04	Chloromethane	<0.02	Ethyl acetate	<0.02	Tetrachloroethylene
<0.02	Freon 114	<0.02	Chloroform	<0.02	Chlorobenzene
<0.02	Vinyl chloride	<0.02	Tetrahydrofuran	<0.02	Ethylbenzene
<0.02	1.3-Butadiene	<0.02	1,2-Dichloroethane	<0.04	m,p-Xylenes
<0.02	Bromomethane	<0.02	1,1,1-Trichloroethane	<0.02	Bromoform
<0.02	Chloroethane	<0.02	Benzene	<0.02	Styrene
<0.08	Acrolein	<0.02	Carbon Tetrachloride	<0.02	o-Xylene
<0.80	Acetone	<0.02	Cyclohexane	<0.02	1,1,2,2-Tetrachloroethane
<0.20	Trichlorofluoromethane	<0.02	1,2-Dichloropropane	<0.02	4-Ethyltoluene
<0.80	Ethanol	<0.02	Bromodichloromethane	<0.02	1,3,5-Trimethylbenzene
<0.02	1,1-Dichloroethylene	<0.02	Trichloroethylene	<0.02	1,2,4-Trimethylbenzene
<0.20	Methylene chloride	<0.02	1,4-Dioxane	<0.02	1,3-Dichlorobenzene
<0.20	Freon 113	<0.02	Methylmethacrylate	<0.02	Benzyl chloride
<0.2	Carbon disulfide	<0.02	Heptane	<0.02	1,4-Dichlorobenzene
<0.02	t-1,2-Dichloroethylene	<0.02	MIBK	<0.02	1,2-Dichlorobenzene
<0.02	1,1-Dichloroethane	<0.02	c-1,3-Dichloropropylene	<0.04	1,2,4-Trichlorobenzene
<0.02	MTBE	<0.02	t-1,3-Dichloropropylene	<0.02	Naphthalene
<0.80	IPA	<0.02	1,1,2-Trichloroethylene	<0.02	Hexachlorobutadiene
<0.20	2-Butanone (MEK)	<0.02	Toluene		
<0.02	c-1,2-Dichloroethylene	<0.02	2-Hexanone (MBK)		

Special Notes:

Analyst Initials/Date: BRF 4/17/2018

con-test® ANALYTICAL LABORATORY

Air Sampling Media Certificate of Analysis

Date Analyzed: 3/4/2018 **Batch #:** 18CC093

Certification Type: *Batch Certified* ☑ *Individual Certified* ☐

Media Type: *Summa Canister* ☑ *Flow Controllers* ☐

Media IDs: BC1139

Note:Two ID's grouped together, for example BC2136/BC3145, represents matched pairs of certified summa canisters and flow controllers.

Units:

PPBv

RL	
<0.08	1,3-Butadiene
<0.08	Methyl tert-butyl Ether
<0.08	Benzene
<0.08	Toluene
<0.08	Ethylbenzene
<0.08	m,p-Xylenes
<0.08	o-Xylene
<0.07	Naphthalene

Ug/M3

RL	
<0.17	1,3-Butadiene
<0.27	Methyl tert-butyl Ether
<0.24	Benzene
<0.28	Toluene
<0.33	Ethylbenzene
<0.33	m,p-Xylenes
<0.33	o-Xylene
<0.39	Naphthalene
<3.4	C5 - C8 Aliphatic Range
<5.3	C9 - C12 Aliphatic Range
<3.8	C9 - C10 Aromatic Range

Special Notes:

Analyst Initials/Date: BRF 4/17/2018

APPENDIX D

LABORATORY DATA REPORTS – AQUEOUS SAMPLING

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EPA Lab #PA00155

04 August 2016

Lab ID #: 1607505

Richard Vennard
Vennard Crossroads Convenience, Inc
5190 White Oak Dr
Indiana, PA 15701

RE: Indiana, PA

Enclosed are the results of analyses for samples received by the laboratory on 07/27/16 13:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Stephen Gampe

Stephen Gampe
Assistant Laboratory Manager

Authorized Reviewer

MOUNTAIN RESEARCH, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1607505
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/04/16 16:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Sample Type	Date Sampled	Date Received
Trip Blank	1607505-01	Aqueous	Grab	07/26/16 14:50	07/27/16 13:30
Stream	1607505-02	Aqueous	Grab	07/27/16 11:10	07/27/16 13:30
MW-1	1607505-03	Aqueous	Grab	07/27/16 10:46	07/27/16 13:30
MW-2	1607505-04	Aqueous	Grab	07/27/16 11:15	07/27/16 13:30
MW-3	1607505-05	Aqueous	Grab	07/27/16 09:55	07/27/16 13:30
MW-4	1607505-06	Aqueous	Grab	07/27/16 11:21	07/27/16 13:30

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1607505
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/04/16 16:53

Trip Blank

1607505-01 (Aqueous) Sampled: 07/26/16 14:50

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	PQL	MDL	Regulatory Limit	Units	Prepared	Analyzed	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	0.240	NA	µg/L	08/02/16 02:17	08/02/16 02:17	EPA 8260 B	A	MTG	
1,3,5-Trimethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/02/16 02:17	08/02/16 02:17	EPA 8260 B	A	MTG	
Benzene	<2.00	2.00	0.260	NA	µg/L	08/02/16 02:17	08/02/16 02:17	EPA 8260 B	A	MTG	
Ethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/02/16 02:17	08/02/16 02:17	EPA 8260 B	A	MTG	
Isopropylbenzene (Cumene)	<2.00	2.00	0.170	NA	µg/L	08/02/16 02:17	08/02/16 02:17	EPA 8260 B	A	MTG	
MTBE	<2.00	2.00	0.123	NA	µg/L	08/02/16 02:17	08/02/16 02:17	EPA 8260 B	A	MTG	
Naphthalene	<2.00	2.00	2.00	NA	µg/L	08/02/16 02:17	08/02/16 02:17	EPA 8260 B	A	MTG	
Toluene	<2.00	2.00	0.230	NA	µg/L	08/02/16 02:17	08/02/16 02:17	EPA 8260 B	A	MTG	
Xylene o	<2.00	2.00	0.330	NA	µg/L	08/02/16 02:17	08/02/16 02:17	EPA 8260 B	A	MTG	
Xylene p/m	<4.00	4.00	0.530	NA	µg/L	08/02/16 02:17	08/02/16 02:17	EPA 8260 B	A	MTG	
Xylenes, Total	<6.00	6.00	NA	NA	µg/L	08/02/16 02:17	08/02/16 02:17	EPA 8260 B	A	MTG	CC
Surrogate: 1,2-Dichloroethane-d4		*103 %*		*80-120*		*08/02/16 02:17*	*08/02/16 02:17*	*EPA 8260 B*			
Surrogate: 4-Bromofluorobenzene		*92.8 %*		*80-120*		*08/02/16 02:17*	*08/02/16 02:17*	*EPA 8260 B*			
Surrogate: Dibromofluoromethane		*108 %*		*80-120*		*08/02/16 02:17*	*08/02/16 02:17*	*EPA 8260 B*			
Surrogate: Toluene-d8		*104 %*		*80-120*		*08/02/16 02:17*	*08/02/16 02:17*	*EPA 8260 B*			

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1607505
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/04/16 16:53

Stream

1607505-02 (Aqueous) Sampled: 07/27/16 11:10

Analyte	Result	PQL	MDL	Regulatory Limit	Units	Prepared	Analyzed	Method	Lab	Analyst	Notes
Mountain Research, LLC											
Volatile Organic Compounds by GC/MS											
1,2,4-Trimethylbenzene	<2.00	2.00	0.240	NA	µg/L	07/29/16 20:38	07/29/16 20:38	EPA 8260 B	A	MTG	
1,3,5-Trimethylbenzene	<2.00	2.00	0.210	NA	µg/L	07/29/16 20:38	07/29/16 20:38	EPA 8260 B	A	MTG	
Benzene	<2.00	2.00	0.260	NA	µg/L	07/29/16 20:38	07/29/16 20:38	EPA 8260 B	A	MTG	
Ethylbenzene	<2.00	2.00	0.210	NA	µg/L	07/29/16 20:38	07/29/16 20:38	EPA 8260 B	A	MTG	
Isopropylbenzene (Cumene)	<2.00	2.00	0.170	NA	µg/L	07/29/16 20:38	07/29/16 20:38	EPA 8260 B	A	MTG	
MTBE	<2.00	2.00	0.123	NA	µg/L	07/29/16 20:38	07/29/16 20:38	EPA 8260 B	A	MTG	
Naphthalene	<2.00	2.00	2.00	NA	µg/L	07/29/16 20:38	07/29/16 20:38	EPA 8260 B	A	MTG	
Toluene	<2.00	2.00	0.230	NA	µg/L	07/29/16 20:38	07/29/16 20:38	EPA 8260 B	A	MTG	
Xylene o	<2.00	2.00	0.330	NA	µg/L	07/29/16 20:38	07/29/16 20:38	EPA 8260 B	A	MTG	
Xylene p/m	<4.00	4.00	0.530	NA	µg/L	07/29/16 20:38	07/29/16 20:38	EPA 8260 B	A	MTG	
Xylenes, Total	<6.00	6.00	NA	NA	µg/L	07/29/16 20:38	07/29/16 20:38	EPA 8260 B	A	MTG	CC
Surrogate: 1,2-Dichloroethane-d4		*100 %*		*80-120*		*07/29/16 20:38*	*07/29/16 20:38*	*EPA 8260 B*			
Surrogate: 4-Bromofluorobenzene		*94.2 %*		*80-120*		*07/29/16 20:38*	*07/29/16 20:38*	*EPA 8260 B*			
Surrogate: Dibromofluoromethane		*98.7 %*		*80-120*		*07/29/16 20:38*	*07/29/16 20:38*	*EPA 8260 B*			
Surrogate: Toluene-d8		*103 %*		*80-120*		*07/29/16 20:38*	*07/29/16 20:38*	*EPA 8260 B*			

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1607505
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/04/16 16:53

MW-1

1607505-03 (Aqueous) Sampled: 07/27/16 10:46

Analyte	Result	PQL	MDL	Regulatory Limit	Units	Prepared	Analyzed	Method	Lab	Analyst	Notes
Mountain Research, LLC											
Volatile Organic Compounds by GC/MS											
1,2,4-Trimethylbenzene	<2.00	2.00	0.240	NA	µg/L	08/02/16 02:43	08/02/16 02:43	EPA 8260 B	A	MTG	
1,3,5-Trimethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/02/16 02:43	08/02/16 02:43	EPA 8260 B	A	MTG	
Benzene	<2.00	2.00	0.260	NA	µg/L	08/02/16 02:43	08/02/16 02:43	EPA 8260 B	A	MTG	
Ethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/02/16 02:43	08/02/16 02:43	EPA 8260 B	A	MTG	
Isopropylbenzene (Cumene)	<2.00	2.00	0.170	NA	µg/L	08/02/16 02:43	08/02/16 02:43	EPA 8260 B	A	MTG	
MTBE	<2.00	2.00	0.123	NA	µg/L	08/02/16 02:43	08/02/16 02:43	EPA 8260 B	A	MTG	
Naphthalene	<2.00	2.00	2.00	NA	µg/L	08/02/16 02:43	08/02/16 02:43	EPA 8260 B	A	MTG	
Toluene	<2.00	2.00	0.230	NA	µg/L	08/02/16 02:43	08/02/16 02:43	EPA 8260 B	A	MTG	
Xylene o	<2.00	2.00	0.330	NA	µg/L	08/02/16 02:43	08/02/16 02:43	EPA 8260 B	A	MTG	
Xylene p/m	<4.00	4.00	0.530	NA	µg/L	08/02/16 02:43	08/02/16 02:43	EPA 8260 B	A	MTG	
Xylenes, Total	<6.00	6.00	NA	NA	µg/L	08/02/16 02:43	08/02/16 02:43	EPA 8260 B	A	MTG	CC
Surrogate: 1,2-Dichloroethane-d4		*104 %*		*80-120*		*08/02/16 02:43*	*08/02/16 02:43*	*EPA 8260 B*			
Surrogate: 4-Bromofluorobenzene		*91.4 %*		*80-120*		*08/02/16 02:43*	*08/02/16 02:43*	*EPA 8260 B*			
Surrogate: Dibromofluoromethane		*108 %*		*80-120*		*08/02/16 02:43*	*08/02/16 02:43*	*EPA 8260 B*			
Surrogate: Toluene-d8		*104 %*		*80-120*		*08/02/16 02:43*	*08/02/16 02:43*	*EPA 8260 B*			

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Stephen Gampe

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1607505
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 08/04/16 16:53
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-2

1607505-04 (Aqueous) Sampled: 07/27/16 11:15

Analyte	Result	PQL	MDL	Regulatory Limit	Units	Prepared	Analyzed	Method	Lab	Analyst	Notes
Mountain Research, LLC											
Volatile Organic Compounds by GC/MS											
1,2,4-Trimethylbenzene	<2.00	2.00	0.240	NA	µg/L	08/02/16 03:09	08/02/16 03:09	EPA 8260 B	A	MTG	
1,3,5-Trimethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/02/16 03:09	08/02/16 03:09	EPA 8260 B	A	MTG	
Benzene	<2.00	2.00	0.260	NA	µg/L	08/02/16 03:09	08/02/16 03:09	EPA 8260 B	A	MTG	
Ethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/02/16 03:09	08/02/16 03:09	EPA 8260 B	A	MTG	
Isopropylbenzene (Cumene)	<2.00	2.00	0.170	NA	µg/L	08/02/16 03:09	08/02/16 03:09	EPA 8260 B	A	MTG	
MTBE	**9.77**	2.00	0.123	NA	µg/L	08/02/16 03:09	08/02/16 03:09	EPA 8260 B	A	MTG	
Naphthalene	<2.00	2.00	2.00	NA	µg/L	08/02/16 03:09	08/02/16 03:09	EPA 8260 B	A	MTG	
Toluene	<2.00	2.00	0.230	NA	µg/L	08/02/16 03:09	08/02/16 03:09	EPA 8260 B	A	MTG	
Xylene o	<2.00	2.00	0.330	NA	µg/L	08/02/16 03:09	08/02/16 03:09	EPA 8260 B	A	MTG	
Xylene p/m	<4.00	4.00	0.530	NA	µg/L	08/02/16 03:09	08/02/16 03:09	EPA 8260 B	A	MTG	
Xylenes, Total	<6.00	6.00	NA	NA	µg/L	08/02/16 03:09	08/02/16 03:09	EPA 8260 B	A	MTG	CC
Surrogate: 1,2-Dichloroethane-d4		*102 %*		*80-120*		*08/02/16 03:09*	*08/02/16 03:09*	*EPA 8260 B*			
Surrogate: 4-Bromofluorobenzene		*93.2 %*		*80-120*		*08/02/16 03:09*	*08/02/16 03:09*	*EPA 8260 B*			
Surrogate: Dibromofluoromethane		*104 %*		*80-120*		*08/02/16 03:09*	*08/02/16 03:09*	*EPA 8260 B*			
Surrogate: Toluene-d8		*104 %*		*80-120*		*08/02/16 03:09*	*08/02/16 03:09*	*EPA 8260 B*			

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1607505
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/04/16 16:53

MW-3

1607505-05 (Aqueous) Sampled: 07/27/16 09:55

Analyte	Result	PQL	MDL	Regulatory Limit	Units	Prepared	Analyzed	Method	Lab	Analyst	Notes
Mountain Research, LLC											
Volatile Organic Compounds by GC/MS											
1,2,4-Trimethylbenzene	<2.00	2.00	0.240	NA	µg/L	08/02/16 03:35	08/02/16 03:35	EPA 8260 B	A	MTG	
1,3,5-Trimethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/02/16 03:35	08/02/16 03:35	EPA 8260 B	A	MTG	
Benzene	<2.00	2.00	0.260	NA	µg/L	08/02/16 03:35	08/02/16 03:35	EPA 8260 B	A	MTG	
Ethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/02/16 03:35	08/02/16 03:35	EPA 8260 B	A	MTG	
Isopropylbenzene (Cumene)	<2.00	2.00	0.170	NA	µg/L	08/02/16 03:35	08/02/16 03:35	EPA 8260 B	A	MTG	
MTBE	**4.76**	2.00	0.123	NA	µg/L	08/02/16 03:35	08/02/16 03:35	EPA 8260 B	A	MTG	
Naphthalene	<2.00	2.00	2.00	NA	µg/L	08/02/16 03:35	08/02/16 03:35	EPA 8260 B	A	MTG	
Toluene	<2.00	2.00	0.230	NA	µg/L	08/02/16 03:35	08/02/16 03:35	EPA 8260 B	A	MTG	
Xylene o	<2.00	2.00	0.330	NA	µg/L	08/02/16 03:35	08/02/16 03:35	EPA 8260 B	A	MTG	
Xylene p/m	<4.00	4.00	0.530	NA	µg/L	08/02/16 03:35	08/02/16 03:35	EPA 8260 B	A	MTG	
Xylenes, Total	<6.00	6.00	NA	NA	µg/L	08/02/16 03:35	08/02/16 03:35	EPA 8260 B	A	MTG	CC
Surrogate: 1,2-Dichloroethane-d4		*103 %*		*80-120*		*08/02/16 03:35*	*08/02/16 03:35*	*EPA 8260 B*			
Surrogate: 4-Bromofluorobenzene		*93.2 %*		*80-120*		*08/02/16 03:35*	*08/02/16 03:35*	*EPA 8260 B*			
Surrogate: Dibromofluoromethane		*102 %*		*80-120*		*08/02/16 03:35*	*08/02/16 03:35*	*EPA 8260 B*			
Surrogate: Toluene-d8		*103 %*		*80-120*		*08/02/16 03:35*	*08/02/16 03:35*	*EPA 8260 B*			

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1607505
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/04/16 16:53

MW-4

1607505-06 (Aqueous) Sampled: 07/27/16 11:21

Mountain Research, LLC

Analyte	Result	PQL	MDL	Regulatory Limit	Units	Prepared	Analyzed	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS											
1,2,4-Trimethylbenzene	<2.00	2.00	0.240	NA	µg/L	08/02/16 04:01	08/02/16 04:01	EPA 8260 B	A	MTG	
1,3,5-Trimethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/02/16 04:01	08/02/16 04:01	EPA 8260 B	A	MTG	
Benzene	**28.7**	2.00	0.260	NA	µg/L	08/02/16 04:01	08/02/16 04:01	EPA 8260 B	A	MTG	
Ethylbenzene	**5.20**	2.00	0.210	NA	µg/L	08/02/16 04:01	08/02/16 04:01	EPA 8260 B	A	MTG	
Isopropylbenzene (Cumene)	<2.00	2.00	0.170	NA	µg/L	08/02/16 04:01	08/02/16 04:01	EPA 8260 B	A	MTG	
MTBE	**22.2**	2.00	0.123	NA	µg/L	08/02/16 04:01	08/02/16 04:01	EPA 8260 B	A	MTG	
Naphthalene	<2.00	2.00	2.00	NA	µg/L	08/02/16 04:01	08/02/16 04:01	EPA 8260 B	A	MTG	
Toluene	**17.7**	2.00	0.230	NA	µg/L	08/02/16 04:01	08/02/16 04:01	EPA 8260 B	A	MTG	
Xylene o	**8.48**	2.00	0.330	NA	µg/L	08/02/16 04:01	08/02/16 04:01	EPA 8260 B	A	MTG	
Xylene p/m	**12.7**	4.00	0.530	NA	µg/L	08/02/16 04:01	08/02/16 04:01	EPA 8260 B	A	MTG	
Xylenes, Total	**21.1**	6.00	NA	NA	µg/L	08/02/16 04:01	08/02/16 04:01	EPA 8260 B	A	MTG	CC
Surrogate: 1,2-Dichloroethane-d4		*99.4 %*		*80-120*		*08/02/16 04:01*	*08/02/16 04:01*	*EPA 8260 B*			
Surrogate: 4-Bromofluorobenzene		*94.9 %*		*80-120*		*08/02/16 04:01*	*08/02/16 04:01*	*EPA 8260 B*			
Surrogate: Dibromofluoromethane		*102 %*		*80-120*		*08/02/16 04:01*	*08/02/16 04:01*	*EPA 8260 B*			
Surrogate: Toluene-d8		*105 %*		*80-120*		*08/02/16 04:01*	*08/02/16 04:01*	*EPA 8260 B*			

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1607505
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/04/16 16:53

Certifications

Code	Description	Number	Expires
MDDOE	Maryland Department of the Environment	257	09/30/2016
PADEP-Altoona	Pennsylvania Department of Environmental Protection	009	03/31/2017
WVDEP	West Virginia Department of Environmental Protection	225	12/31/2016
PADEP-DuBois	Pennsylvania Department of Environmental Protection	008	09/30/2016

Notes and Definitions

CC	Calculated analytes are reported based on unrounded results of the individual analytes used in the calculation. Therefore, using the rounded values of the analytes as reported may lead to a result that varies slightly from the reported result.
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
dry	Sample results reported on a dry weight basis
A	Analysis Performed by Mountain Research Altoona Laboratory - PADEP #07-00418
D	Analysis Performed by Mountain Research DuBois Laboratory - PADEP # 33-00258

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

BALL POINT PEN ONLY

Billing Group:	Phase:	PROJECT NAME
	GW-Sampling	Vennard's
MR Project #		SITE LOCATION
4644.15.01		Indiana, PA
CLIENT		SAMPLER(S)
Vennard's		BA

MOUNTAIN RESEARCH LLC
825 25th Street, Altoona, PA 16601 (814) 949-2034 (800) 83
110 McCracken Run Road, Dubois, PA 15801 (814) 371-6030 Fax (81

CHAIN OF CUSTODY RECORD

NOTES:
Received On Ice: (Y) / N
Sample Temp: 4.0°C
PWSID #:
Seal In Tack: Y / N
Other:
Comments:

MR PROJ. MGR. MK

Shipping Carrier:

Turn Around Time:
10 Day ___X___
3 Day _____
1 Day _____

Comments:

SAMPLE ID.NO.	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	Analyses Requested: 8260B							Preserve	LAB NUMBER
TRIP BLANK	7/26/2016	1450	X		AQ	2 40mL VOA	2A	X							HCl	01
Stream	7/27/2016	1110	X		AQ	2 40mL VOA	2A	X							HCl	02
MW-1	7/27/2016	1046	X		AQ	2 40mL VOA	2A	X							HCl	03
MW-2	7/27/2016	1115	X		AQ	2 40mL VOA	2A	X							HCl	04
MW-3	7/27/2016	955	X		AQ	2 40mL VOA	2A	X							HCl	05
MW-4	7/27/2016	1121	X		AQ	2 40mL VOA	2A	X							HCl	06

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE	TIME	Lab WO #:
[signature]	7/27/16	1330	[signature]	7/27/16	13:30	1607-505
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE	TIME	Labeled By:

Log In Time: 13:51
Staff: KA
Date: 7/26/16
7/27/16

White - Lab; Blue - File; Yellow - Project Manager; Pink - Staff

C:\Users\bazar\Desktop\COC

MOUNTAIN RESEARCH SAMPLE RECEIPT PROTOCOL

WORK ORDER: 1607505

CLIENT: Kennards

DATE SAMPLED: 7/27/16 DATE RECEIVED: 7/27/16 TIME RECEIVED: 13:30

1. CHECK ALL THAT APPLY: PA ☐ WV ☐ MD ☐ PUBLIC WATER SUPPLY ☐ RUSH ☐

2. WERE ANY OF THE SAMPLE CONTAINERS DAMAGED? (ARE CUSTODY SEALS BROKEN?) YES ☐ NO ☑

IF YES, EXPLAIN: _____

3. NUMBER OF CONTAINERS RECEIVED: 12

4. WERE THE SAMPLES RECEIVED ON ICE? YES ☑ NO ☐

IF NO, EXPLAIN: _____

5. RECEIVING TEMPERATURE: 4.0 °C BOTTLE(S) TEMPED: _____

6. WERE THE SAMPLES PROPERLY PRESERVED? YES ☑ NO ☐

IF NO, EXPLAIN: _____

7. WERE THE SAMPLES COLLECTED IN THE CORRECT CONTAINERS? YES ☑ NO ☐

IF NO, EXPLAIN: _____

8. WAS THE COC FILLED OUT PROPERLY? YES ☑ NO ☐

IF NO, EXPLAIN: _____

9. DID THE SAMPLE LABEL(S) CONTAIN ADEQUATE INFO? (CLIENT/DATE/TIME/PRESERVATIVE) YES ☑ NO ☐

IF NO, EXPLAIN: _____

10. WERE ANY OF THE SAMPLES RECEIVED OUTSIDE OF HOLDING TIME? YES ☐ NO ☑

IF YES, EXPLAIN: _____

11. DO THE SAMPLES REQUIRE ANALYSES THAT HAVE A SHORT HOLDING TIME? YES ☐ NO ☑

IF YES, WHAT ANALYSES? _____ **PLEASE NOTIFY LABORATORY ANALYSTS!**

12. IS SUBCONTRACTING REQUIRED? YES ☐ NO ☑

IF YES, WHAT ANALYSES? _____

13. WAS THE CLIENT CONTACTED? YES ☐ NO ☑

IF YES, FILL OUT THE FOLLOWING:

MR EMPLOYEE INITIALS: CLIENT SPOKEN TO: DATE/TIME:

OUTCOME:

SIGNATURE: _____

L60.30 A r0 Sample Receipt Form

For MR Use Only

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PADEP #33-00258
EPA Lab #PA00155

29 August 2016

Lab ID #: 1608400

Richard Vennard
Vennard Crossroads Convenience, Inc
5190 White Oak Dr
Indiana, PA 15701

RE: Indiana, PA

Enclosed are the results of analyses for samples received by the laboratory on 08/18/16 13:41. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Stephen Gampe

Stephen Gampe
Assistant Laboratory Manager

Authorized Reviewer

MOUNTAIN RESEARCH, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1608400
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/29/16 10:25

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Sample Type	Date Sampled	Date Received
Trip Blank	1608400-01	Aqueous	Grab	08/17/16 22:00	08/18/16 13:41
MW-1	1608400-02	Aqueous	Grab	08/18/16 10:30	08/18/16 13:41
MW-2	1608400-03	Aqueous	Grab	08/18/16 10:20	08/18/16 13:41
MW-3	1608400-04	Aqueous	Grab	08/18/16 09:23	08/18/16 13:41
MW-4	1608400-05	Aqueous	Grab	08/18/16 10:37	08/18/16 13:41
Stream Point	1608400-06	Aqueous	Grab	08/18/16 09:33	08/18/16 13:41

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1608400
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/29/16 10:25

Trip Blank

1608400-01 (Aqueous) Sampled: 08/17/16 22:00

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	PQL	MDL	Regulatory Limit	Units	Prepared	Analyzed	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	0.240	NA	µg/L	08/18/16 23:43	08/18/16 23:43	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/18/16 23:43	08/18/16 23:43	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	0.260	NA	µg/L	08/18/16 23:43	08/18/16 23:43	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/18/16 23:43	08/18/16 23:43	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	0.170	NA	µg/L	08/18/16 23:43	08/18/16 23:43	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	0.123	NA	µg/L	08/18/16 23:43	08/18/16 23:43	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	2.00	NA	µg/L	08/18/16 23:43	08/18/16 23:43	EPA 8260 B	A	JMG	C, L
Toluene	<2.00	2.00	0.230	NA	µg/L	08/18/16 23:43	08/18/16 23:43	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	0.330	NA	µg/L	08/18/16 23:43	08/18/16 23:43	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	0.530	NA	µg/L	08/18/16 23:43	08/18/16 23:43	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	NA	NA	µg/L	08/18/16 23:43	08/18/16 23:43	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*100 %*		*80-120*		*08/18/16 23:43*	*08/18/16 23:43*	*EPA 8260 B*			
Surrogate: 4-Bromofluorobenzene		*101 %*		*80-120*		*08/18/16 23:43*	*08/18/16 23:43*	*EPA 8260 B*			
Surrogate: Dibromofluoromethane		*99.2 %*		*80-120*		*08/18/16 23:43*	*08/18/16 23:43*	*EPA 8260 B*			
Surrogate: Toluene-d8		*102 %*		*80-120*		*08/18/16 23:43*	*08/18/16 23:43*	*EPA 8260 B*			

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1608400
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/29/16 10:25

MW-1

1608400-02 (Aqueous) Sampled: 08/18/16 10:30

Mountain Research, LLC

Analyte	Result	PQL	MDL	Regulatory Limit	Units	Prepared	Analyzed	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS											
1,2,4-Trimethylbenzene	<2.00	2.00	0.240	NA	µg/L	08/18/16 16:43	08/18/16 16:43	EPA 8260 B	A	JMG	Na
1,3,5-Trimethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/18/16 16:43	08/18/16 16:43	EPA 8260 B	A	JMG	Na
Benzene	<2.00	2.00	0.260	NA	µg/L	08/18/16 16:43	08/18/16 16:43	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/18/16 16:43	08/18/16 16:43	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	0.170	NA	µg/L	08/18/16 16:43	08/18/16 16:43	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	0.123	NA	µg/L	08/18/16 16:43	08/18/16 16:43	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	2.00	NA	µg/L	08/18/16 16:43	08/18/16 16:43	EPA 8260 B	A	JMG	C, L, N
Toluene	<2.00	2.00	0.230	NA	µg/L	08/18/16 16:43	08/18/16 16:43	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	0.330	NA	µg/L	08/18/16 16:43	08/18/16 16:43	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	0.530	NA	µg/L	08/18/16 16:43	08/18/16 16:43	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	NA	NA	µg/L	08/18/16 16:43	08/18/16 16:43	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*102 %*		*80-120*		*08/18/16 16:43*	*08/18/16 16:43*	*EPA 8260 B*			
Surrogate: 4-Bromofluorobenzene		*101 %*		*80-120*		*08/18/16 16:43*	*08/18/16 16:43*	*EPA 8260 B*			
Surrogate: Dibromofluoromethane		*95.2 %*		*80-120*		*08/18/16 16:43*	*08/18/16 16:43*	*EPA 8260 B*			
Surrogate: Toluene-d8		*102 %*		*80-120*		*08/18/16 16:43*	*08/18/16 16:43*	*EPA 8260 B*			

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1608400
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/29/16 10:25

MW-2

1608400-03 (Aqueous) Sampled: 08/18/16 10:20

Analyte	Result	PQL	MDL	Regulatory Limit	Units	Prepared	Analyzed	Method	Lab	Analyst	Notes
Mountain Research, LLC											
Volatile Organic Compounds by GC/MS											
1,2,4-Trimethylbenzene	<2.00	2.00	0.240	NA	µg/L	08/19/16 00:09	08/19/16 00:09	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/19/16 00:09	08/19/16 00:09	EPA 8260 B	A	JMG	
Benzene	**2.86**	2.00	0.260	NA	µg/L	08/19/16 00:09	08/19/16 00:09	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/19/16 00:09	08/19/16 00:09	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	0.170	NA	µg/L	08/19/16 00:09	08/19/16 00:09	EPA 8260 B	A	JMG	
MTBE	**11.3**	2.00	0.123	NA	µg/L	08/19/16 00:09	08/19/16 00:09	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	2.00	NA	µg/L	08/19/16 00:09	08/19/16 00:09	EPA 8260 B	A	JMG	C, L
Toluene	<2.00	2.00	0.230	NA	µg/L	08/19/16 00:09	08/19/16 00:09	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	0.330	NA	µg/L	08/19/16 00:09	08/19/16 00:09	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	0.530	NA	µg/L	08/19/16 00:09	08/19/16 00:09	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	NA	NA	µg/L	08/19/16 00:09	08/19/16 00:09	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*99.1 %*		*80-120*		*08/19/16 00:09*	*08/19/16 00:09*	*EPA 8260 B*			
Surrogate: 4-Bromofluorobenzene		*100 %*		*80-120*		*08/19/16 00:09*	*08/19/16 00:09*	*EPA 8260 B*			
Surrogate: Dibromofluoromethane		*101 %*		*80-120*		*08/19/16 00:09*	*08/19/16 00:09*	*EPA 8260 B*			
Surrogate: Toluene-d8		*103 %*		*80-120*		*08/19/16 00:09*	*08/19/16 00:09*	*EPA 8260 B*			

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1608400
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/29/16 10:25

MW-3

1608400-04 (Aqueous) Sampled: 08/18/16 09:23

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	PQL	MDL	Regulatory Limit	Units	Prepared	Analyzed	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	0.240	NA	µg/L	08/19/16 15:47	08/19/16 15:47	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/19/16 15:47	08/19/16 15:47	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	0.260	NA	µg/L	08/19/16 15:47	08/19/16 15:47	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/19/16 15:47	08/19/16 15:47	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	0.170	NA	µg/L	08/19/16 15:47	08/19/16 15:47	EPA 8260 B	A	JMG	
MTBE	**6.35**	2.00	0.123	NA	µg/L	08/19/16 15:47	08/19/16 15:47	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	2.00	NA	µg/L	08/19/16 15:47	08/19/16 15:47	EPA 8260 B	A	JMG	Na
Toluene	<2.00	2.00	0.230	NA	µg/L	08/19/16 15:47	08/19/16 15:47	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	0.330	NA	µg/L	08/19/16 15:47	08/19/16 15:47	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	0.530	NA	µg/L	08/19/16 15:47	08/19/16 15:47	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	NA	NA	µg/L	08/19/16 15:47	08/19/16 15:47	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*99.0 %*		*80-120*		*08/19/16 15:47*	*08/19/16 15:47*	*EPA 8260 B*			
Surrogate: 4-Bromofluorobenzene		*99.8 %*		*80-120*		*08/19/16 15:47*	*08/19/16 15:47*	*EPA 8260 B*			
Surrogate: Dibromofluoromethane		*98.0 %*		*80-120*		*08/19/16 15:47*	*08/19/16 15:47*	*EPA 8260 B*			
Surrogate: Toluene-d8		*104 %*		*80-120*		*08/19/16 15:47*	*08/19/16 15:47*	*EPA 8260 B*			

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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814.375.0823 Fax

Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1608400
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/29/16 10:25

MW-4

1608400-05 (Aqueous) Sampled: 08/18/16 10:37

Mountain Research, LLC

Analyte	Result	PQL	MDL	Regulatory Limit	Units	Prepared	Analyzed	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS											
1,2,4-Trimethylbenzene	<2.00	2.00	0.240	NA	µg/L	08/20/16 04:00	08/20/16 04:00	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/20/16 04:00	08/20/16 04:00	EPA 8260 B	A	JMG	
Benzene	**18.2**	2.00	0.260	NA	µg/L	08/20/16 04:00	08/20/16 04:00	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/20/16 04:00	08/20/16 04:00	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	0.170	NA	µg/L	08/20/16 04:00	08/20/16 04:00	EPA 8260 B	A	JMG	
MTBE	**18.0**	2.00	0.123	NA	µg/L	08/20/16 04:00	08/20/16 04:00	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	2.00	NA	µg/L	08/20/16 04:00	08/20/16 04:00	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	0.230	NA	µg/L	08/20/16 04:00	08/20/16 04:00	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	0.330	NA	µg/L	08/20/16 04:00	08/20/16 04:00	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	0.530	NA	µg/L	08/20/16 04:00	08/20/16 04:00	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	NA	NA	µg/L	08/20/16 04:00	08/20/16 04:00	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*98.5 %*		*80-120*		*08/20/16 04:00*	*08/20/16 04:00*	*EPA 8260 B*			
Surrogate: 4-Bromofluorobenzene		*99.2 %*		*80-120*		*08/20/16 04:00*	*08/20/16 04:00*	*EPA 8260 B*			
Surrogate: Dibromofluoromethane		*101 %*		*80-120*		*08/20/16 04:00*	*08/20/16 04:00*	*EPA 8260 B*			
Surrogate: Toluene-d8		*103 %*		*80-120*		*08/20/16 04:00*	*08/20/16 04:00*	*EPA 8260 B*			

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1608400
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/29/16 10:25

Stream Point

1608400-06 (Aqueous) Sampled: 08/18/16 09:33

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	PQL	MDL	Regulatory Limit	Units	Prepared	Analyzed	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	0.240	NA	µg/L	08/20/16 04:27	08/20/16 04:27	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/20/16 04:27	08/20/16 04:27	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	0.260	NA	µg/L	08/20/16 04:27	08/20/16 04:27	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	0.210	NA	µg/L	08/20/16 04:27	08/20/16 04:27	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	0.170	NA	µg/L	08/20/16 04:27	08/20/16 04:27	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	0.123	NA	µg/L	08/20/16 04:27	08/20/16 04:27	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	2.00	NA	µg/L	08/20/16 04:27	08/20/16 04:27	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	0.230	NA	µg/L	08/20/16 04:27	08/20/16 04:27	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	0.330	NA	µg/L	08/20/16 04:27	08/20/16 04:27	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	0.530	NA	µg/L	08/20/16 04:27	08/20/16 04:27	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	NA	NA	µg/L	08/20/16 04:27	08/20/16 04:27	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*97.1 %*		*80-120*		*08/20/16 04:27*	*08/20/16 04:27*	*EPA 8260 B*			
Surrogate: 4-Bromofluorobenzene		*96.6 %*		*80-120*		*08/20/16 04:27*	*08/20/16 04:27*	*EPA 8260 B*			
Surrogate: Dibromofluoromethane		*103 %*		*80-120*		*08/20/16 04:27*	*08/20/16 04:27*	*EPA 8260 B*			
Surrogate: Toluene-d8		*103 %*		*80-120*		*08/20/16 04:27*	*08/20/16 04:27*	*EPA 8260 B*			

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1608400
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/29/16 10:25

Certifications

Code	Description	Number	Expires
MDDOE	Maryland Department of the Environment	257	09/30/2016
PADEP-Altoona	Pennsylvania Department of Environmental Protection	009	03/31/2017
WVDEP	West Virginia Department of Environmental Protection	225	12/31/2016
PADEP-DuBois	Pennsylvania Department of Environmental Protection	008	09/30/2016

Notes and Definitions

Na	Matrix spike recovery was outside of the laboratory acceptance criteria.
N	Matrix spike and matrix duplicate spike recovery was outside of the laboratory acceptance criteria.
L	The laboratory control spike did not meet laboratory acceptance criteria.
CC	Calculated analytes are reported based on unrounded results of the individual analytes used in the calculation. Therefore, using the rounded values of the analytes as reported may lead to a result that varies slightly from the reported result.
C	The associated analytical results may be biased high.
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
dry	Sample results reported on a dry weight basis
A	Analysis Performed by Mountain Research Altoona Laboratory - PADEP #07-00418
D	Analysis Performed by Mountain Research DuBois Laboratory - PADEP # 33-00258

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

Billing Group: | Phase: GW Sampling | PROJECT NAME: Groundwater Sampling

MR Project #: 4644.15.01 | SITE LOCATION: Indiana PA

CLIENT: Vernards | SAMPLER(S): ~~LMM~~ BA CML SIEIN

NOTES:

Received On Ice: (Y) / N

Sample Temp: 5.8

PWSID #:

Comments:

MOUNTAIN RESEARCH LL

825 25th Street, Altoona, PA 16601 (814) 94

110 McCracken Run Road, Dubois, PA 15801 (814) 37

CHAIN OF CUSTODY RECORD

MR PROJ. MGR. MK

Shipping Carrier:

Turn Around Time:
10 Day X
3 Day
1 Day

Comments:

Analyses Requested

SAMPLE ID	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	8260B	Preserve	LAB NUMBER
Trip Blank	8/17/16	2200	X		AQ	240ml VOAS	2A	X	HCl	01
MW-1	8/18/16	1030								02
MW-2		1020								03
MW-3		0923								04
MW-4		1037								05
Stream point		0933								06

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Lab Workorder #:	Log In Time:
[signature]	8/18/16	1341	[signature]	8/18/16 1341	1608400	1652
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Labeled By:	Staff:
					JMG	CML 8/18/16

PY 1 of 1

MOUNTAIN RESEARCH SAMPLE RECEIPT PROTOCOL

WORK ORDER: 1608400

CLIENT: Vennards

DATE SAMPLED: 8/18/16 DATE RECEIVED: 8/18/16 TIME RECEIVED: 1341

1. CHECK ALL THAT APPLY: PA ☒ WV ☐ MD ☐ PUBLIC WATER SUPPLY ☐ RUSH ☐
2. WERE ANY OF THE SAMPLE CONTAINERS DAMAGED? (ARE CUSTODY SEALS BROKEN?) YES ☐ NO ☒

IF YES, EXPLAIN: _____

3. NUMBER OF CONTAINERS RECEIVED: 12
4. IS THERE HEADSPACE PRESENT FOR VOLATILES/ODOR SAMPLES? YES ☐ NO ☒
5. WERE THE SAMPLES RECEIVED ON ICE? YES ☒ NO ☐

IF NO, EXPLAIN: _____

6. RECEIVING TEMPERATURE: 5.8 °C BOTTLE(S) TEMPED: MW4
7. WERE THE SAMPLES PROPERLY PRESERVED? YES ☒ NO ☐

IF NO, EXPLAIN: _____

8. WERE THE SAMPLES COLLECTED IN THE CORRECT CONTAINERS? YES ☒ NO ☐

IF NO, EXPLAIN: _____

9. WAS THE COC FILLED OUT PROPERLY? YES ☒ NO ☐

IF NO, EXPLAIN: _____

10. DID THE SAMPLE LABEL(S) CONTAIN ADEQUATE INFO? (CLIENT/DATE/TIME/PRESERVATIVE) YES ☒ NO ☐

IF NO, EXPLAIN: _____

11. WERE ANY OF THE SAMPLES RECEIVED OUTSIDE OF HOLDING TIME? YES ☐ NO ☒

IF YES, EXPLAIN: _____

12. DO THE SAMPLES REQUIRE ANALYSES THAT HAVE A SHORT HOLDING TIME? YES ☐ NO ☒

IF YES, WHAT ANALYSES? _____ **PLEASE NOTIFY LABORATORY ANALYSTS!**

13. IS SUBCONTRACTING REQUIRED? YES ☐ NO ☒

IF YES, WHAT ANALYSES? _____

14. WAS THE CLIENT CONTACTED? YES ☐ NO ☒ IF YES, FILL OUT THE FOLLOWING:

MR EMPLOYEE INITIALS: CLIENT SPOKEN TO: DATE/TIME:

OUTCOME:

SIGNATURE: Christina L Hman

L60.30 A r1 Sample Receipt Form

For MR Use Only

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PADEP #33-00258
EPA Lab #PA00155

03 October 2016

Lab ID #: 1609382

Richard Vennard
Vennard Crossroads Convenience, Inc
5190 White Oak Dr
Indiana, PA 15701

RE: Indiana, PA

Enclosed are the results of analyses for samples received by the laboratory on 09/19/16 17:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Stephen Gampe

Stephen Gampe
Assistant Laboratory Manager

Authorized Reviewer

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1609382
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/03/16 16:47

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Sample Type	Date Sampled	Date Received
MW-5	1609382-01	Aqueous	Grab	09/19/16 15:49	09/19/16 17:20
MW-6	1609382-02	Aqueous	Grab	09/19/16 15:52	09/19/16 17:20
MW-7	1609382-03	Aqueous	Grab	09/19/16 16:25	09/19/16 17:20
MW-8	1609382-04	Aqueous	Grab	09/19/16 16:12	09/19/16 17:20
Trip Blank	1609382-05	Aqueous	Grab	09/19/16 06:20	09/19/16 17:20

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

MOUNTAIN RESEARCH, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1609382
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/03/16 16:47

MW-5

1609382-01 (Aqueous) Sampled: 09/19/16 15:49

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	09/22/16 19:52	09/22/16 19:52	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	09/22/16 19:52	09/22/16 19:52	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	09/22/16 19:52	09/22/16 19:52	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	09/22/16 19:52	09/22/16 19:52	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	09/22/16 19:52	09/22/16 19:52	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	09/22/16 19:52	09/22/16 19:52	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	09/22/16 19:52	09/22/16 19:52	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	09/22/16 19:52	09/22/16 19:52	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	09/22/16 19:52	09/22/16 19:52	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	09/22/16 19:52	09/22/16 19:52	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	09/22/16 19:52	09/22/16 19:52	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*98.3 %*	*80-120*	*09/22/16 19:52*	*09/22/16 19:52*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*93.9 %*	*80-120*	*09/22/16 19:52*	*09/22/16 19:52*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*106 %*	*80-120*	*09/22/16 19:52*	*09/22/16 19:52*	*EPA 8260 B*				
Surrogate: Toluene-d8		*104 %*	*80-120*	*09/22/16 19:52*	*09/22/16 19:52*	*EPA 8260 B*				

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1609382
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/03/16 16:47

MW-6

1609382-02 (Aqueous) Sampled: 09/19/16 15:52

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	09/22/16 20:18	09/22/16 20:18	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	09/22/16 20:18	09/22/16 20:18	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	09/22/16 20:18	09/22/16 20:18	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	09/22/16 20:18	09/22/16 20:18	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	09/22/16 20:18	09/22/16 20:18	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	09/22/16 20:18	09/22/16 20:18	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	09/22/16 20:18	09/22/16 20:18	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	09/22/16 20:18	09/22/16 20:18	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	09/22/16 20:18	09/22/16 20:18	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	09/22/16 20:18	09/22/16 20:18	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	09/22/16 20:18	09/22/16 20:18	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*98.4 %*	*80-120*	*09/22/16 20:18*	*09/22/16 20:18*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*94.0 %*	*80-120*	*09/22/16 20:18*	*09/22/16 20:18*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*108 %*	*80-120*	*09/22/16 20:18*	*09/22/16 20:18*	*EPA 8260 B*				
Surrogate: Toluene-d8		*104 %*	*80-120*	*09/22/16 20:18*	*09/22/16 20:18*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1609382
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/03/16 16:47

MW-7

1609382-03 (Aqueous) Sampled: 09/19/16 16:25

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	09/22/16 20:44	09/22/16 20:44	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	09/22/16 20:44	09/22/16 20:44	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	09/22/16 20:44	09/22/16 20:44	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	09/22/16 20:44	09/22/16 20:44	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	09/22/16 20:44	09/22/16 20:44	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**2.30**	2.00	µg/L	09/22/16 20:44	09/22/16 20:44	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	09/22/16 20:44	09/22/16 20:44	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	09/22/16 20:44	09/22/16 20:44	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	09/22/16 20:44	09/22/16 20:44	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	09/22/16 20:44	09/22/16 20:44	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	09/22/16 20:44	09/22/16 20:44	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*80-120*	*09/22/16 20:44*	*09/22/16 20:44*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*97.2 %*	*80-120*	*09/22/16 20:44*	*09/22/16 20:44*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*106 %*	*80-120*	*09/22/16 20:44*	*09/22/16 20:44*	*EPA 8260 B*				
Surrogate: Toluene-d8		*105 %*	*80-120*	*09/22/16 20:44*	*09/22/16 20:44*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1609382
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/03/16 16:47

MW-8

1609382-04 (Aqueous) Sampled: 09/19/16 16:12

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**196**	10.0	µg/L	09/22/16 21:10	09/23/16 19:49	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**85.9**	10.0	µg/L	09/22/16 21:10	09/23/16 19:49	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**71.3**	2.00	µg/L	09/22/16 21:10	09/22/16 21:10	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	**36.4**	2.00	µg/L	09/22/16 21:10	09/22/16 21:10	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	**10.8**	2.00	µg/L	09/22/16 21:10	09/22/16 21:10	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	09/22/16 21:10	09/22/16 21:10	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**33.7**	2.00	µg/L	09/22/16 21:10	09/22/16 21:10	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**21.5**	2.00	µg/L	09/22/16 21:10	09/22/16 21:10	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	**64.0**	2.00	µg/L	09/22/16 21:10	09/22/16 21:10	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	**165**	20.0	µg/L	09/22/16 21:10	09/23/16 19:49	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**229**	22.0	µg/L	09/22/16 21:10	09/23/16 19:49	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*99.5 %*	*80-120*	*09/22/16 21:10*	*09/22/16 21:10*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*101 %*	*80-120*	*09/22/16 21:10*	*09/22/16 21:10*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*98.2 %*	*80-120*	*09/22/16 21:10*	*09/22/16 21:10*	*EPA 8260 B*				
Surrogate: Toluene-d8		*107 %*	*80-120*	*09/22/16 21:10*	*09/22/16 21:10*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1609382
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/03/16 16:47

Trip Blank

1609382-05 (Aqueous) Sampled: 09/19/16 06:20

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	09/22/16 21:36	09/22/16 21:36	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	09/22/16 21:36	09/22/16 21:36	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	09/22/16 21:36	09/22/16 21:36	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	09/22/16 21:36	09/22/16 21:36	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	09/22/16 21:36	09/22/16 21:36	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	09/22/16 21:36	09/22/16 21:36	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	09/22/16 21:36	09/22/16 21:36	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	09/22/16 21:36	09/22/16 21:36	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	09/22/16 21:36	09/22/16 21:36	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	09/22/16 21:36	09/22/16 21:36	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	09/22/16 21:36	09/22/16 21:36	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*80-120*	*09/22/16 21:36*	*09/22/16 21:36*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*97.5 %*	*80-120*	*09/22/16 21:36*	*09/22/16 21:36*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*109 %*	*80-120*	*09/22/16 21:36*	*09/22/16 21:36*	*EPA 8260 B*				
Surrogate: Toluene-d8		*105 %*	*80-120*	*09/22/16 21:36*	*09/22/16 21:36*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1609382
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/03/16 16:47

Certifications

Code	Description	Number	Expires
MDDOE	Maryland Department of the Environment	257	09/30/2016
PADEP-Altoona	Pennsylvania Department of Environmental Protection	009	03/31/2017
WVDEP	West Virginia Department of Environmental Protection	225	12/31/2016
PADEP-DuBois	Pennsylvania Department of Environmental Protection	008	09/30/2016

Notes and Definitions

D1	The sample was analyzed at a dilution.
CC	Calculated analytes are reported based on unrounded results of the individual analytes used in the calculation. Therefore, using the rounded values of the analytes as reported may lead to a result that varies slightly from the reported result.
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
dry	Sample results reported on a dry weight basis
A	Analysis Performed by Mountain Research Altoona Laboratory - PADEP #07-00418
D	Analysis Performed by Mountain Research DuBois Laboratory - PADEP # 33-00258

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

MOUNTAIN RESEARCH LLC

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110 McCracken Run Road, Dubois, PA 15801 (814) 371-

CHAIN OF CUSTODY RECORD

Billing Group:	Phase:	PROJECT NAME
	GW Samp	GW Sampling
MR Project #		SITE LOCATION
4644.15.01		Indiana, PA
CLIENT		SAMPLER(S)
Vennards		KB / LM

NOTES:
Received On Ice: (Y) N
Sample Temp: 8.1 °C
PWSID #:
Comments:

SAMPLE ID	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	8260B
MW-5	9-19-16	349pm	X		AQ	2-40mL VOA	ZA	X
MW-6		352pm						
MW-7		425pm						
MW-8		412pm						
Trip Blank		620pm						

Analyses Requested

MR PROJ. MGR.

Shipping Carrier:

Turn Around Time:
10 Day X
3 Day
1 Day

Comments:

Preserve	LAB NUMBER
HCl	01
	02
	03
	04
	05

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Lab Workorder #:
Kristy Coggins	9-19-16	520pm	[illegible]	9/20/16 0700	1609382
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Labeled By:

Log In Time: 0932
Staff: LCA
Date: 9/21/16

Pg 1 of 1

MOUNTAIN RESEARCH SAMPLE RECEIPT PROTOCOL

WORK ORDER: 1609382

CLIENT: Vennards

DATE SAMPLED: 9/19/16 DATE RECEIVED: 9/20/16 TIME RECEIVED: 0700

1. CHECK ALL THAT APPLY: PA ☑ WV ☐ MD ☐ PUBLIC WATER SUPPLY ☐ RUSH ☐

2. WERE ANY OF THE SAMPLE CONTAINERS DAMAGED? (ARE CUSTODY SEALS BROKEN?) YES ☐ NO ☑

IF YES, EXPLAIN: _____

3. NUMBER OF CONTAINERS RECEIVED: 10

4. IS THERE HEADSPACE PRESENT FOR VOLATILES/ODOR SAMPLES? YES ☐ NO

5. WERE THE SAMPLES RECEIVED ON ICE? YES ☑ NO ☐

IF NO, EXPLAIN: _____

6. RECEIVING TEMPERATURE: 8.1 °C BOTTLE(S) TEMPED: _____

7. WERE THE SAMPLES PROPERLY PRESERVED? YES ☐ NO ☑

IF NO, EXPLAIN: _____

8. WERE THE SAMPLES COLLECTED IN THE CORRECT CONTAINERS? YES ☑ NO ☐

IF NO, EXPLAIN: _____

9. WAS THE COC FILLED OUT PROPERLY? YES ☑ NO ☐

IF NO, EXPLAIN: _____

10. DID THE SAMPLE LABEL(S) CONTAIN ADEQUATE INFO? (CLIENT/DATE/TIME/PRESERVATIVE) YES ☑ NO ☐

IF NO, EXPLAIN: _____

11. WERE ANY OF THE SAMPLES RECEIVED OUTSIDE OF HOLDING TIME? YES ☐ NO ☑

IF YES, EXPLAIN: _____

12. DO THE SAMPLES REQUIRE ANALYSES THAT HAVE A SHORT HOLDING TIME? YES ☐ NO ☑

IF YES, WHAT ANALYSES? _____ **PLEASE NOTIFY LABORATORY ANALYSTS!**

13. IS SUBCONTRACTING REQUIRED? YES ☐ NO ☐

IF YES, WHAT ANALYSES? _____

14. WAS THE CLIENT CONTACTED? YES ☐ NO ☑ IF YES, FILL OUT THE FOLLOWING:

MR EMPLOYEE INITIALS: CLIENT SPOKEN TO: DATE/TIME:

OUTCOME:

SIGNATURE:

L60.30 A r1 Sample Receipt Form

For MR Use Only

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PADEP #33-00258
EPA Lab #PA00155

18 October 2016

Lab ID #: 1610058

Richard Vennard
Vennard Crossroads Convenience, Inc
5190 White Oak Dr
Indiana, PA 15701

RE: Indiana, PA

Enclosed are the results of analyses for samples received by the laboratory on 10/04/16 15:01. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Stephen Gampe

Stephen Gampe
Assistant Laboratory Manager

Authorized Reviewer

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610058
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/18/16 16:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Sample Type	Date Sampled	Date Received
Trip Blank	1610058-01	Aqueous	Grab	10/04/16 07:12	10/04/16 15:01
MW-1	1610058-02	Aqueous	Grab	10/04/16 12:22	10/04/16 15:01
MW-2	1610058-03	Aqueous	Grab	10/04/16 12:38	10/04/16 15:01
MW-3	1610058-04	Aqueous	Grab	10/04/16 12:13	10/04/16 15:01
MW-4	1610058-05	Aqueous	Grab	10/04/16 12:48	10/04/16 15:01
MW-5	1610058-06	Aqueous	Grab	10/04/16 12:08	10/04/16 15:01
MW-6	1610058-07	Aqueous	Grab	10/04/16 09:58	10/04/16 15:01
MW-7	1610058-08	Aqueous	Grab	10/04/16 10:23	10/04/16 15:01
MW-8	1610058-09	Aqueous	Grab	10/04/16 12:04	10/04/16 15:01
Stream	1610058-10	Aqueous	Grab	10/04/16 13:00	10/04/16 15:01
Duplicate	1610058-11	Aqueous	Grab	10/04/16 12:48	10/04/16 15:01

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610058
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/18/16 16:51

Trip Blank

1610058-01 (Aqueous) Sampled: 10/04/16 07:12

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	10/06/16 01:41	10/06/16 01:41	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	10/06/16 01:41	10/06/16 01:41	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	10/06/16 01:41	10/06/16 01:41	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	10/06/16 01:41	10/06/16 01:41	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	10/06/16 01:41	10/06/16 01:41	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	10/06/16 01:41	10/06/16 01:41	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	10/06/16 01:41	10/06/16 01:41	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	10/06/16 01:41	10/06/16 01:41	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	10/06/16 01:41	10/06/16 01:41	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	10/06/16 01:41	10/06/16 01:41	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	10/06/16 01:41	10/06/16 01:41	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*80-120*	*10/06/16 01:41*	*10/06/16 01:41*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*94.4 %*	*80-120*	*10/06/16 01:41*	*10/06/16 01:41*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*109 %*	*80-120*	*10/06/16 01:41*	*10/06/16 01:41*	*EPA 8260 B*				
Surrogate: Toluene-d8		*103 %*	*80-120*	*10/06/16 01:41*	*10/06/16 01:41*	*EPA 8260 B*				

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610058
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/18/16 16:51

MW-1

1610058-02 (Aqueous) Sampled: 10/04/16 12:22

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	10/06/16 02:07	10/06/16 02:07	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	10/06/16 02:07	10/06/16 02:07	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	10/06/16 02:07	10/06/16 02:07	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	10/06/16 02:07	10/06/16 02:07	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	10/06/16 02:07	10/06/16 02:07	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**2.40**	2.00	µg/L	10/06/16 02:07	10/06/16 02:07	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	10/06/16 02:07	10/06/16 02:07	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	10/06/16 02:07	10/06/16 02:07	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	10/06/16 02:07	10/06/16 02:07	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	10/06/16 02:07	10/06/16 02:07	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	10/06/16 02:07	10/06/16 02:07	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*103 %*	*80-120*	*10/06/16 02:07*	*10/06/16 02:07*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*94.8 %*	*80-120*	*10/06/16 02:07*	*10/06/16 02:07*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*111 %*	*80-120*	*10/06/16 02:07*	*10/06/16 02:07*	*EPA 8260 B*				
Surrogate: Toluene-d8		*103 %*	*80-120*	*10/06/16 02:07*	*10/06/16 02:07*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610058
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/18/16 16:51

MW-2

1610058-03 (Aqueous) Sampled: 10/04/16 12:38

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	10/06/16 02:33	10/06/16 02:33	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	10/06/16 02:33	10/06/16 02:33	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**14.5**	2.00	µg/L	10/06/16 02:33	10/06/16 02:33	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	**4.84**	2.00	µg/L	10/06/16 02:33	10/06/16 02:33	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	10/06/16 02:33	10/06/16 02:33	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**9.73**	2.00	µg/L	10/06/16 02:33	10/06/16 02:33	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	10/06/16 02:33	10/06/16 02:33	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	10/06/16 02:33	10/06/16 02:33	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	**4.00**	2.00	µg/L	10/06/16 02:33	10/06/16 02:33	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	10/06/16 02:33	10/06/16 02:33	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	10/06/16 02:33	10/06/16 02:33	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*103 %*	*80-120*	*10/06/16 02:33*	*10/06/16 02:33*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*96.4 %*	*80-120*	*10/06/16 02:33*	*10/06/16 02:33*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*104 %*	*80-120*	*10/06/16 02:33*	*10/06/16 02:33*	*EPA 8260 B*				
Surrogate: Toluene-d8		*104 %*	*80-120*	*10/06/16 02:33*	*10/06/16 02:33*	*EPA 8260 B*				

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Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610058
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/18/16 16:51

MW-3

1610058-04 (Aqueous) Sampled: 10/04/16 12:13

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	10/06/16 02:59	10/06/16 02:59	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	10/06/16 02:59	10/06/16 02:59	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	10/06/16 02:59	10/06/16 02:59	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	10/06/16 02:59	10/06/16 02:59	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	10/06/16 02:59	10/06/16 02:59	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**5.92**	2.00	µg/L	10/06/16 02:59	10/06/16 02:59	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	10/06/16 02:59	10/06/16 02:59	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	10/06/16 02:59	10/06/16 02:59	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	10/06/16 02:59	10/06/16 02:59	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	10/06/16 02:59	10/06/16 02:59	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	10/06/16 02:59	10/06/16 02:59	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*80-120*	*10/06/16 02:59*	*10/06/16 02:59*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*94.5 %*	*80-120*	*10/06/16 02:59*	*10/06/16 02:59*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*105 %*	*80-120*	*10/06/16 02:59*	*10/06/16 02:59*	*EPA 8260 B*				
Surrogate: Toluene-d8		*104 %*	*80-120*	*10/06/16 02:59*	*10/06/16 02:59*	*EPA 8260 B*				

Mountain Research, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610058
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/18/16 16:51

MW-4

1610058-05 (Aqueous) Sampled: 10/04/16 12:48

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	10/06/16 03:25	10/06/16 03:25	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	10/06/16 03:25	10/06/16 03:25	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**57.0**	2.00	µg/L	10/06/16 03:25	10/06/16 03:25	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	**5.19**	2.00	µg/L	10/06/16 03:25	10/06/16 03:25	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	10/06/16 03:25	10/06/16 03:25	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**18.9**	2.00	µg/L	10/06/16 03:25	10/06/16 03:25	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	10/06/16 03:25	10/06/16 03:25	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	10/06/16 03:25	10/06/16 03:25	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	10/06/16 03:25	10/06/16 03:25	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	**7.42**	4.00	µg/L	10/06/16 03:25	10/06/16 03:25	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**7.42**	6.00	µg/L	10/06/16 03:25	10/06/16 03:25	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*103 %*	*80-120*	*10/06/16 03:25*	*10/06/16 03:25*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*93.8 %*	*80-120*	*10/06/16 03:25*	*10/06/16 03:25*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*113 %*	*80-120*	*10/06/16 03:25*	*10/06/16 03:25*	*EPA 8260 B*				
Surrogate: Toluene-d8		*102 %*	*80-120*	*10/06/16 03:25*	*10/06/16 03:25*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610058
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/18/16 16:51

MW-5

1610058-06 (Aqueous) Sampled: 10/04/16 12:08

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	10/06/16 03:51	10/06/16 03:51	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	10/06/16 03:51	10/06/16 03:51	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	10/06/16 03:51	10/06/16 03:51	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	10/06/16 03:51	10/06/16 03:51	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	10/06/16 03:51	10/06/16 03:51	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	10/06/16 03:51	10/06/16 03:51	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	10/06/16 03:51	10/06/16 03:51	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	10/06/16 03:51	10/06/16 03:51	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	10/06/16 03:51	10/06/16 03:51	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	10/06/16 03:51	10/06/16 03:51	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	10/06/16 03:51	10/06/16 03:51	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*103 %*	*80-120*	*10/06/16 03:51*	*10/06/16 03:51*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*95.2 %*	*80-120*	*10/06/16 03:51*	*10/06/16 03:51*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*109 %*	*80-120*	*10/06/16 03:51*	*10/06/16 03:51*	*EPA 8260 B*				
Surrogate: Toluene-d8		*103 %*	*80-120*	*10/06/16 03:51*	*10/06/16 03:51*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610058
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/18/16 16:51

MW-6

1610058-07 (Aqueous) Sampled: 10/04/16 09:58

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	10/06/16 04:17	10/06/16 04:17	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	10/06/16 04:17	10/06/16 04:17	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**3.44**	2.00	µg/L	10/06/16 04:17	10/06/16 04:17	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	10/06/16 04:17	10/06/16 04:17	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	10/06/16 04:17	10/06/16 04:17	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	10/06/16 04:17	10/06/16 04:17	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	10/06/16 04:17	10/06/16 04:17	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	10/06/16 04:17	10/06/16 04:17	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	10/06/16 04:17	10/06/16 04:17	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	10/06/16 04:17	10/06/16 04:17	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	10/06/16 04:17	10/06/16 04:17	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*105 %*	*80-120*	*10/06/16 04:17*	*10/06/16 04:17*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*94.1 %*	*80-120*	*10/06/16 04:17*	*10/06/16 04:17*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*111 %*	*80-120*	*10/06/16 04:17*	*10/06/16 04:17*	*EPA 8260 B*				
Surrogate: Toluene-d8		*104 %*	*80-120*	*10/06/16 04:17*	*10/06/16 04:17*	*EPA 8260 B*				

Mountain Research, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610058
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/18/16 16:51

MW-7

1610058-08 (Aqueous) Sampled: 10/04/16 10:23

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	10/06/16 04:43	10/06/16 04:43	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	10/06/16 04:43	10/06/16 04:43	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**18.9**	2.00	µg/L	10/06/16 04:43	10/06/16 04:43	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	**11.1**	2.00	µg/L	10/06/16 04:43	10/06/16 04:43	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	10/06/16 04:43	10/06/16 04:43	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**2.67**	2.00	µg/L	10/06/16 04:43	10/06/16 04:43	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	10/06/16 04:43	10/06/16 04:43	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**13.5**	2.00	µg/L	10/06/16 04:43	10/06/16 04:43	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	**7.34**	2.00	µg/L	10/06/16 04:43	10/06/16 04:43	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	10/06/16 04:43	10/06/16 04:43	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**7.34**	6.00	µg/L	10/06/16 04:43	10/06/16 04:43	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*103 %*	*80-120*	*10/06/16 04:43*	*10/06/16 04:43*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*96.4 %*	*80-120*	*10/06/16 04:43*	*10/06/16 04:43*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*108 %*	*80-120*	*10/06/16 04:43*	*10/06/16 04:43*	*EPA 8260 B*				
Surrogate: Toluene-d8		*103 %*	*80-120*	*10/06/16 04:43*	*10/06/16 04:43*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610058
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/18/16 16:51

MW-8

1610058-09 (Aqueous) Sampled: 10/04/16 12:04

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**440**	20.0	µg/L	10/06/16 06:01	10/06/16 18:02	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**121**	20.0	µg/L	10/06/16 06:01	10/06/16 18:02	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**90.9**	20.0	µg/L	10/06/16 06:01	10/06/16 18:02	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**66.8**	2.00	µg/L	10/06/16 06:01	10/06/16 06:01	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	**20.7**	2.00	µg/L	10/06/16 06:01	10/06/16 06:01	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	10/06/16 06:01	10/06/16 06:01	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**73.6**	2.00	µg/L	10/06/16 06:01	10/06/16 06:01	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**25.9**	2.00	µg/L	10/06/16 06:01	10/06/16 06:01	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	**89.5**	2.00	µg/L	10/06/16 06:01	10/06/16 06:01	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	**298**	40.0	µg/L	10/06/16 06:01	10/06/16 18:02	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**388**	42.0	µg/L	10/06/16 06:01	10/06/16 18:02	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*99.2 %*	*80-120*	*10/06/16 06:01*	*10/06/16 06:01*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*100 %*	*80-120*	*10/06/16 06:01*	*10/06/16 06:01*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*105 %*	*80-120*	*10/06/16 06:01*	*10/06/16 06:01*	*EPA 8260 B*				
Surrogate: Toluene-d8		*103 %*	*80-120*	*10/06/16 06:01*	*10/06/16 06:01*	*EPA 8260 B*				

Mountain Research, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610058
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/18/16 16:51

Stream

1610058-10 (Aqueous) Sampled: 10/04/16 13:00

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	10/06/16 05:09	10/06/16 05:09	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	10/06/16 05:09	10/06/16 05:09	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	10/06/16 05:09	10/06/16 05:09	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	10/06/16 05:09	10/06/16 05:09	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	10/06/16 05:09	10/06/16 05:09	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	10/06/16 05:09	10/06/16 05:09	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	10/06/16 05:09	10/06/16 05:09	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	10/06/16 05:09	10/06/16 05:09	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	10/06/16 05:09	10/06/16 05:09	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	10/06/16 05:09	10/06/16 05:09	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	10/06/16 05:09	10/06/16 05:09	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*80-120*	*10/06/16 05:09*	*10/06/16 05:09*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*93.8 %*	*80-120*	*10/06/16 05:09*	*10/06/16 05:09*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*110 %*	*80-120*	*10/06/16 05:09*	*10/06/16 05:09*	*EPA 8260 B*				
Surrogate: Toluene-d8		*105 %*	*80-120*	*10/06/16 05:09*	*10/06/16 05:09*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610058
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/18/16 16:51

Duplicate

1610058-11 (Aqueous) Sampled: 10/04/16 12:48

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	10/06/16 05:35	10/06/16 05:35	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	10/06/16 05:35	10/06/16 05:35	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**44.3**	2.00	µg/L	10/06/16 05:35	10/06/16 05:35	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	**3.16**	2.00	µg/L	10/06/16 05:35	10/06/16 05:35	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	10/06/16 05:35	10/06/16 05:35	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**17.5**	2.00	µg/L	10/06/16 05:35	10/06/16 05:35	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	10/06/16 05:35	10/06/16 05:35	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	10/06/16 05:35	10/06/16 05:35	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	10/06/16 05:35	10/06/16 05:35	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	**4.42**	4.00	µg/L	10/06/16 05:35	10/06/16 05:35	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	10/06/16 05:35	10/06/16 05:35	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*80-120*	*10/06/16 05:35*	*10/06/16 05:35*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*95.6 %*	*80-120*	*10/06/16 05:35*	*10/06/16 05:35*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*108 %*	*80-120*	*10/06/16 05:35*	*10/06/16 05:35*	*EPA 8260 B*				
Surrogate: Toluene-d8		*102 %*	*80-120*	*10/06/16 05:35*	*10/06/16 05:35*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610058
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/18/16 16:51

Certifications

Code	Description	Number	Expires
MDDOE	Maryland Department of the Environment	257	09/30/2016
PADEP-Altoona	Pennsylvania Department of Environmental Protection	009	03/31/2017
WVDEP	West Virginia Department of Environmental Protection	225	12/31/2016
PADEP-DuBois	Pennsylvania Department of Environmental Protection	008	09/30/2016

Notes and Definitions

D1	The sample was analyzed at a dilution.
CC	Calculated analytes are reported based on unrounded results of the individual analytes used in the calculation. Therefore, using the rounded values of the analytes as reported may lead to a result that varies slightly from the reported result.
RL	Reporting Limit - either the practical quantitation limit or the method detection limit
dry	Sample results reported on a dry weight basis
A	Analysis Performed by Mountain Research Altoona Laboratory - PADEP #07-00418
D	Analysis Performed by Mountain Research DuBois Laboratory - PADEP # 33-00258

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

BALL POINT PEN ONLY

Billing Group:	Phase:	PROJECT NAME
	FA	GW Sampling
MR Project #		SITE LOCATION
4644.15.01		Indiana, Pa
CLIENT		SAMPLER(S)
Vennards		BA/HH

NOTES:
Received On Ice: (Y) / N
Sample Temp: 5.0
PWSID #:
Seal In Tack: Y / N
Other:
Comments:

MOUNTAIN RESEARCH LL
825 25th Street, Altoona, PA 16601 (814) 949-2034 (80
110 McCracken Run Road, Dubois, PA 15801 (814) 371-6030 Fa

CHAIN OF CUSTODY RECORD

MR PROJ. MGR. MK

Shipping Carrier:

Turn Around Time:
10 Day X
3 Day
1 Day

Comments:

SAMPLE ID.NO.	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	Analyses Requested: 8260B	Preserve	LAB NUMBER
TRIP BLANK	10/4/16	0712	X		AQ	2-40ML VOA	2A	X	HCL	01
MW-1	"	1222	"		"	"	"	"	"	02
MW-2		1238								03
MW-3		1213								04
MW-4		1248								05
MW-5		1208								06
MW-6		0958								07
MW-7		1023								08

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE	TIME	Lab WO #:
	10/4/16	1501		10/4/16	15.01	16 10058
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE	TIME	Labeled By:

Log In Time: 10:18
Staff: KD
Date: 10/5/16

Page 1 of 2

White - Lab; Blue - File; Yellow - Project Manager; Pink - Staff

H:\H\HYDRO\Field Forms\C-O-C\Blank COC_v1_04_08

BALL POINT PEN ONLY

00001

Billing Group:	Phase:	PROJECT NAME
	FA	GW Sampling
MR Project #		SITE LOCATION
4644.15.01		Indiana, Pa
CLIENT		SAMPLER(S)
Vennards		BA / HH

NOTES:
Received On Ice: (Y) / N
Sample Temp: 5.0°C
PWSID #:
Seal In Tack: Y / N
Other:
Comments:

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CHAIN OF CUSTODY RECORD

MR PROJ. MGR. MK

Shipping Carrier:

Turn Around Time:
10 Day X
3 Day
1 Day

Comments:

SAMPLE ID.NO.	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	Analyses Requested: 8260B	Preserve	LAB NUMBER
MW-8	10/11/16	1204	X			2-40mL VOA	2A	X	HCL	09
Stream	"	1300	"			"	"	"	"	10
Duplicate	"	n46	"			"	"	"	"	11

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE	TIME	Lab WO #:	Log In Time:
[signature]	10/11/16	1501	[signature] 10/14/16	10/14/16	1301	610058	1018
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE	TIME	Labeled By:	Staff: JCA
							Date: 10/15/16

Page 2 of 2

White - Lab; Blue - File; Yellow - Project Manager; Pink - Staff

H:\H\HYDRO\Field Forms\C-O-C\Blank COC_v1_04_08

MOUNTAIN RESEARCH SAMPLE RECEIPT PROTOCOL

WORK ORDER: 1610058

CLIENT: Kennards

DATE SAMPLED: 10/4/16 DATE RECEIVED: 10/4/16 TIME RECEIVED: 5:01

1. CHECK ALL THAT APPLY: PA ☐ WV ☐ MD ☐ PUBLIC WATER SUPPLY ☐ RUSH ☐
2. WERE ANY OF THE SAMPLE CONTAINERS DAMAGED? (ARE CUSTODY SEALS BROKEN?) YES ☐ NO ☐

IF YES, EXPLAIN: _____

3. NUMBER OF CONTAINERS RECEIVED: 22
4. IS THERE HEADSPACE PRESENT FOR VOLATILES/ODOR SAMPLES? YES ☐ NO
5. WERE THE SAMPLES RECEIVED ON ICE? YES ☐ NO ☐

IF NO, EXPLAIN: _____

6. RECEIVING TEMPERATURE: 5.0 °C BOTTLE(S) TEMPED: _____
7. WERE THE SAMPLES PROPERLY PRESERVED? YES ☐ NO ☐

IF NO, EXPLAIN: _____

8. WERE THE SAMPLES COLLECTED IN THE CORRECT CONTAINERS? YES ☐ NO ☐

IF NO, EXPLAIN: _____

9. WAS THE COC FILLED OUT PROPERLY? YES ☐ NO ☐

IF NO, EXPLAIN: _____

10. DID THE SAMPLE LABEL(S) CONTAIN ADEQUATE INFO? (CLIENT/DATE/TIME/PRESERVATIVE) YES ☐ NO ☐

IF NO, EXPLAIN: _____

11. WERE ANY OF THE SAMPLES RECEIVED OUTSIDE OF HOLDING TIME? YES ☐ NO ☐

IF YES, EXPLAIN: _____

12. DO THE SAMPLES REQUIRE ANALYSES THAT HAVE A SHORT HOLDING TIME? YES ☐ NO ☐

IF YES, WHAT ANALYSES? _____ **PLEASE NOTIFY LABORATORY ANALYSTS!**

13. IS SUBCONTRACTING REQUIRED? YES ☐ NO ☐

IF YES, WHAT ANALYSES? _____

14. WAS THE CLIENT CONTACTED? YES ☐ NO ☐ IF YES, FILL OUT THE FOLLOWING:

MR EMPLOYEE INITIALS: _____ CLIENT SPOKEN TO: _____ DATE/TIME: _____

OUTCOME: _____

SIGNATURE: _____

L60.30 A r1 Sample Receipt Form

For MR Use Only

MOUNTAIN RESEARCH, LLC

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PADEP #33-00258
EPA Lab #PA00155

10 November 2016

Lab ID #: 1610721

Richard Vennard
Vennard Crossroads Convenience, Inc
5190 White Oak Dr
Indiana, PA 15701

RE: Indiana, PA

Enclosed are the results of analyses for samples received by the laboratory on 10/31/16 15:57. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Tegan Schott
Technical Specialist II

Authorized Reviewer

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610721
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	11/10/16 10:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Sample Type	Date Sampled	Date Received
Trip Blank	1610721-01	Aqueous	Grab	10/31/16 06:15	10/31/16 15:57
MW-1	1610721-02	Aqueous	Grab	10/31/16 12:50	10/31/16 15:57
MW-2	1610721-03	Aqueous	Grab	10/31/16 12:30	10/31/16 15:57
MW-3	1610721-04	Aqueous	Grab	10/31/16 13:02	10/31/16 15:57
MW-4	1610721-05	Aqueous	Grab	10/31/16 12:41	10/31/16 15:57
MW-5	1610721-06	Aqueous	Grab	10/31/16 13:10	10/31/16 15:57
MW-6	1610721-07	Aqueous	Grab	10/31/16 12:15	10/31/16 15:57
MW-7	1610721-08	Aqueous	Grab	10/31/16 12:22	10/31/16 15:57
MW-8	1610721-09	Aqueous	Grab	10/31/16 13:20	10/31/16 15:57
Duplicate	1610721-10	Aqueous	Grab	10/31/16 12:30	10/31/16 15:57
Stream	1610721-11	Aqueous	Grab	10/31/16 11:50	10/31/16 15:57

Mountain Research, LLC

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Tegan Schott

Tegan Schott, Technical Specialist II

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610721
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	11/10/16 10:26

Trip Blank

1610721-01 (Aqueous) Sampled: 10/31/16 06:15

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	11/07/16 17:17	11/07/16 17:17	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	11/07/16 17:17	11/07/16 17:17	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	11/07/16 17:17	11/07/16 17:17	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	11/07/16 17:17	11/07/16 17:17	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	11/07/16 17:17	11/07/16 17:17	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	11/07/16 17:17	11/07/16 17:17	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	11/07/16 17:17	11/07/16 17:17	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	11/07/16 17:17	11/07/16 17:17	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	11/07/16 17:17	11/07/16 17:17	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	11/07/16 17:17	11/07/16 17:17	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	11/07/16 17:17	11/07/16 17:17	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*80-120*	*11/07/16 17:17*	*11/07/16 17:17*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*100 %*	*80-120*	*11/07/16 17:17*	*11/07/16 17:17*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*102 %*	*80-120*	*11/07/16 17:17*	*11/07/16 17:17*	*EPA 8260 B*				
Surrogate: Toluene-d8		*104 %*	*80-120*	*11/07/16 17:17*	*11/07/16 17:17*	*EPA 8260 B*				

Mountain Research, LLC

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Tegan Schott, Technical Specialist II

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610721
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	11/10/16 10:26

MW-1

1610721-02 (Aqueous) Sampled: 10/31/16 12:50

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	11/02/16 23:53	11/02/16 23:53	EPA 5030B	EPA 8260 B	A	MTG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	11/02/16 23:53	11/02/16 23:53	EPA 5030B	EPA 8260 B	A	MTG	
Benzene	<2.00	2.00	µg/L	11/02/16 23:53	11/02/16 23:53	EPA 5030B	EPA 8260 B	A	MTG	
Ethylbenzene	<2.00	2.00	µg/L	11/02/16 23:53	11/02/16 23:53	EPA 5030B	EPA 8260 B	A	MTG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	11/02/16 23:53	11/02/16 23:53	EPA 5030B	EPA 8260 B	A	MTG	
MTBE	<2.00	2.00	µg/L	11/02/16 23:53	11/02/16 23:53	EPA 5030B	EPA 8260 B	A	MTG	
Naphthalene	<2.00	2.00	µg/L	11/02/16 23:53	11/02/16 23:53	EPA 5030B	EPA 8260 B	A	MTG	N
Toluene	<2.00	2.00	µg/L	11/02/16 23:53	11/02/16 23:53	EPA 5030B	EPA 8260 B	A	MTG	
Xylene o	<2.00	2.00	µg/L	11/02/16 23:53	11/02/16 23:53	EPA 5030B	EPA 8260 B	A	MTG	
Xylene p/m	<4.00	4.00	µg/L	11/02/16 23:53	11/02/16 23:53	EPA 5030B	EPA 8260 B	A	MTG	
Xylenes, Total	<6.00	6.00	µg/L	11/02/16 23:53	11/02/16 23:53	EPA 5030B	EPA 8260 B	A	MTG	CC
Surrogate: 1,2-Dichloroethane-d4		*103 %*	*80-120*	*11/02/16 23:53*	*11/02/16 23:53*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*98.4 %*	*80-120*	*11/02/16 23:53*	*11/02/16 23:53*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*104 %*	*80-120*	*11/02/16 23:53*	*11/02/16 23:53*	*EPA 8260 B*				
Surrogate: Toluene-d8		*101 %*	*80-120*	*11/02/16 23:53*	*11/02/16 23:53*	*EPA 8260 B*				

Mountain Research, LLC

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Tegan Schott, Technical Specialist II

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610721
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	11/10/16 10:26

MW-2

1610721-03 (Aqueous) Sampled: 10/31/16 12:30

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**6.84**	2.00	µg/L	11/03/16 17:15	11/03/16 17:15	EPA 5030B	EPA 8260 B	A	MTG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	11/03/16 17:15	11/03/16 17:15	EPA 5030B	EPA 8260 B	A	MTG	
Benzene	**49.0**	2.00	µg/L	11/03/16 17:15	11/03/16 17:15	EPA 5030B	EPA 8260 B	A	MTG	
Ethylbenzene	**13.3**	2.00	µg/L	11/03/16 17:15	11/03/16 17:15	EPA 5030B	EPA 8260 B	A	MTG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	11/03/16 17:15	11/03/16 17:15	EPA 5030B	EPA 8260 B	A	MTG	
MTBE	<2.00	2.00	µg/L	11/03/16 17:15	11/03/16 17:15	EPA 5030B	EPA 8260 B	A	MTG	
Naphthalene	<2.00	2.00	µg/L	11/03/16 17:15	11/03/16 17:15	EPA 5030B	EPA 8260 B	A	MTG	
Toluene	**13.0**	2.00	µg/L	11/03/16 17:15	11/03/16 17:15	EPA 5030B	EPA 8260 B	A	MTG	
Xylene o	**16.5**	2.00	µg/L	11/03/16 17:15	11/03/16 17:15	EPA 5030B	EPA 8260 B	A	MTG	
Xylene p/m	**27.2**	4.00	µg/L	11/03/16 17:15	11/03/16 17:15	EPA 5030B	EPA 8260 B	A	MTG	
Xylenes, Total	**43.8**	6.00	µg/L	11/03/16 17:15	11/03/16 17:15	EPA 5030B	EPA 8260 B	A	MTG	CC
Surrogate: 1,2-Dichloroethane-d4		*96.2 %*	*80-120*	*11/03/16 17:15*	*11/03/16 17:15*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*98.8 %*	*80-120*	*11/03/16 17:15*	*11/03/16 17:15*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*102 %*	*80-120*	*11/03/16 17:15*	*11/03/16 17:15*	*EPA 8260 B*				
Surrogate: Toluene-d8		*100 %*	*80-120*	*11/03/16 17:15*	*11/03/16 17:15*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610721
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	11/10/16 10:26

MW-3

1610721-04 (Aqueous) Sampled: 10/31/16 13:02

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	11/07/16 17:43	11/07/16 17:43	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	11/07/16 17:43	11/07/16 17:43	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	11/07/16 17:43	11/07/16 17:43	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	11/07/16 17:43	11/07/16 17:43	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	11/07/16 17:43	11/07/16 17:43	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**6.96**	2.00	µg/L	11/07/16 17:43	11/07/16 17:43	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	11/07/16 17:43	11/07/16 17:43	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	11/07/16 17:43	11/07/16 17:43	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	11/07/16 17:43	11/07/16 17:43	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	11/07/16 17:43	11/07/16 17:43	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	11/07/16 17:43	11/07/16 17:43	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*109 %*	*80-120*	*11/07/16 17:43*	*11/07/16 17:43*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*101 %*	*80-120*	*11/07/16 17:43*	*11/07/16 17:43*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*103 %*	*80-120*	*11/07/16 17:43*	*11/07/16 17:43*	*EPA 8260 B*				
Surrogate: Toluene-d8		*102 %*	*80-120*	*11/07/16 17:43*	*11/07/16 17:43*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610721
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	11/10/16 10:26

MW-4

1610721-05 (Aqueous) Sampled: 10/31/16 12:41

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**17.8**	2.00	µg/L	11/03/16 16:49	11/03/16 16:49	EPA 5030B	EPA 8260 B	A	MTG	
1,3,5-Trimethylbenzene	**6.10**	2.00	µg/L	11/03/16 16:49	11/03/16 16:49	EPA 5030B	EPA 8260 B	A	MTG	
Benzene	**25.2**	2.00	µg/L	11/03/16 16:49	11/03/16 16:49	EPA 5030B	EPA 8260 B	A	MTG	
Ethylbenzene	**36.3**	2.00	µg/L	11/03/16 16:49	11/03/16 16:49	EPA 5030B	EPA 8260 B	A	MTG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	11/03/16 16:49	11/03/16 16:49	EPA 5030B	EPA 8260 B	A	MTG	
MTBE	**8.73**	2.00	µg/L	11/03/16 16:49	11/03/16 16:49	EPA 5030B	EPA 8260 B	A	MTG	
Naphthalene	<2.00	2.00	µg/L	11/03/16 16:49	11/03/16 16:49	EPA 5030B	EPA 8260 B	A	MTG	N
Toluene	**48.2**	2.00	µg/L	11/03/16 16:49	11/03/16 16:49	EPA 5030B	EPA 8260 B	A	MTG	
Xylene o	**45.6**	2.00	µg/L	11/03/16 16:49	11/03/16 16:49	EPA 5030B	EPA 8260 B	A	MTG	
Xylene p/m	**156**	4.00	µg/L	11/03/16 16:49	11/03/16 16:49	EPA 5030B	EPA 8260 B	A	MTG	
Xylenes, Total	**202**	6.00	µg/L	11/03/16 16:49	11/03/16 16:49	EPA 5030B	EPA 8260 B	A	MTG	CC
Surrogate: 1,2-Dichloroethane-d4		*98.1 %*	*80-120*	*11/03/16 16:49*	*11/03/16 16:49*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*99.5 %*	*80-120*	*11/03/16 16:49*	*11/03/16 16:49*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*105 %*	*80-120*	*11/03/16 16:49*	*11/03/16 16:49*	*EPA 8260 B*				
Surrogate: Toluene-d8		*100 %*	*80-120*	*11/03/16 16:49*	*11/03/16 16:49*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610721
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	11/10/16 10:26

MW-5

1610721-06 (Aqueous) Sampled: 10/31/16 13:10

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	11/07/16 18:09	11/07/16 18:09	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	11/07/16 18:09	11/07/16 18:09	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	11/07/16 18:09	11/07/16 18:09	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	11/07/16 18:09	11/07/16 18:09	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	11/07/16 18:09	11/07/16 18:09	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	11/07/16 18:09	11/07/16 18:09	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	11/07/16 18:09	11/07/16 18:09	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	11/07/16 18:09	11/07/16 18:09	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	11/07/16 18:09	11/07/16 18:09	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	11/07/16 18:09	11/07/16 18:09	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	11/07/16 18:09	11/07/16 18:09	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*80-120*	*11/07/16 18:09*	*11/07/16 18:09*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*99.1 %*	*80-120*	*11/07/16 18:09*	*11/07/16 18:09*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*102 %*	*80-120*	*11/07/16 18:09*	*11/07/16 18:09*	*EPA 8260 B*				
Surrogate: Toluene-d8		*102 %*	*80-120*	*11/07/16 18:09*	*11/07/16 18:09*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610721
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	11/10/16 10:26

MW-6

1610721-07 (Aqueous) Sampled: 10/31/16 12:15

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	11/07/16 18:35	11/07/16 18:35	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	11/07/16 18:35	11/07/16 18:35	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	11/07/16 18:35	11/07/16 18:35	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	11/07/16 18:35	11/07/16 18:35	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	11/07/16 18:35	11/07/16 18:35	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	11/07/16 18:35	11/07/16 18:35	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	11/07/16 18:35	11/07/16 18:35	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	11/07/16 18:35	11/07/16 18:35	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	11/07/16 18:35	11/07/16 18:35	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	11/07/16 18:35	11/07/16 18:35	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	11/07/16 18:35	11/07/16 18:35	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*80-120*	*11/07/16 18:35*	*11/07/16 18:35*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*99.0 %*	*80-120*	*11/07/16 18:35*	*11/07/16 18:35*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*107 %*	*80-120*	*11/07/16 18:35*	*11/07/16 18:35*	*EPA 8260 B*				
Surrogate: Toluene-d8		*101 %*	*80-120*	*11/07/16 18:35*	*11/07/16 18:35*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610721
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	11/10/16 10:26

MW-7

1610721-08 (Aqueous) Sampled: 10/31/16 12:22

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**6.12**	2.00	µg/L	11/07/16 19:27	11/07/16 19:27	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	11/07/16 19:27	11/07/16 19:27	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**49.7**	2.00	µg/L	11/07/16 19:27	11/07/16 19:27	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	**10.4**	2.00	µg/L	11/07/16 19:27	11/07/16 19:27	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	11/07/16 19:27	11/07/16 19:27	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**2.39**	2.00	µg/L	11/07/16 19:27	11/07/16 19:27	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	11/07/16 19:27	11/07/16 19:27	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**26.8**	2.00	µg/L	11/07/16 19:27	11/07/16 19:27	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	**23.1**	2.00	µg/L	11/07/16 19:27	11/07/16 19:27	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	**42.1**	4.00	µg/L	11/07/16 19:27	11/07/16 19:27	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**65.2**	6.00	µg/L	11/07/16 19:27	11/07/16 19:27	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*80-120*	*11/07/16 19:27*	*11/07/16 19:27*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*100 %*	*80-120*	*11/07/16 19:27*	*11/07/16 19:27*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*106 %*	*80-120*	*11/07/16 19:27*	*11/07/16 19:27*	*EPA 8260 B*				
Surrogate: Toluene-d8		*101 %*	*80-120*	*11/07/16 19:27*	*11/07/16 19:27*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610721
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	11/10/16 10:26

MW-8

1610721-09 (Aqueous) Sampled: 10/31/16 13:20

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**452**	50.0	µg/L	11/05/16 08:47	11/07/16 19:54	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**124**	50.0	µg/L	11/05/16 08:47	11/07/16 19:54	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**1920**	50.0	µg/L	11/05/16 08:47	11/07/16 19:54	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**354**	50.0	µg/L	11/05/16 08:47	11/07/16 19:54	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**32.9**	2.00	µg/L	11/05/16 08:47	11/05/16 08:47	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**26.4**	2.00	µg/L	11/05/16 08:47	11/05/16 08:47	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**82.9**	50.0	µg/L	11/05/16 08:47	11/07/16 19:54	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**2310**	50.0	µg/L	11/05/16 08:47	11/07/16 19:54	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene o	**799**	50.0	µg/L	11/05/16 08:47	11/07/16 19:54	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene p/m	**1740**	100	µg/L	11/05/16 08:47	11/07/16 19:54	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**2540**	150	µg/L	11/05/16 08:47	11/07/16 19:54	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*81.8 %*	*80-120*	*11/05/16 08:47*	*11/05/16 08:47*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*	*11/05/16 08:47*	*11/05/16 08:47*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*96.9 %*	*80-120*	*11/05/16 08:47*	*11/05/16 08:47*	*EPA 8260 B*				
Surrogate: Toluene-d8		*98.2 %*	*80-120*	*11/05/16 08:47*	*11/05/16 08:47*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610721
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 11/10/16 10:26
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

Duplicate

1610721-10 (Aqueous) Sampled: 10/31/16 12:30

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	11/07/16 19:01	11/07/16 19:01	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	11/07/16 19:01	11/07/16 19:01	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**3.54**	2.00	µg/L	11/07/16 19:01	11/07/16 19:01	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	11/07/16 19:01	11/07/16 19:01	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	11/07/16 19:01	11/07/16 19:01	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	11/07/16 19:01	11/07/16 19:01	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	11/07/16 19:01	11/07/16 19:01	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	11/07/16 19:01	11/07/16 19:01	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	11/07/16 19:01	11/07/16 19:01	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	11/07/16 19:01	11/07/16 19:01	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	11/07/16 19:01	11/07/16 19:01	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*109 %*	*80-120*	*11/07/16 19:01*	*11/07/16 19:01*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*100 %*	*80-120*	*11/07/16 19:01*	*11/07/16 19:01*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*103 %*	*80-120*	*11/07/16 19:01*	*11/07/16 19:01*	*EPA 8260 B*				
Surrogate: Toluene-d8		*103 %*	*80-120*	*11/07/16 19:01*	*11/07/16 19:01*	*EPA 8260 B*				

Mountain Research, LLC

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Tegan Schott, Technical Specialist II

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610721
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 11/10/16 10:26
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

Stream

1610721-11 (Aqueous) Sampled: 10/31/16 11:50

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	11/02/16 01:47	11/02/16 01:47	EPA 5030B	EPA 8260 B	A	MTG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	11/02/16 01:47	11/02/16 01:47	EPA 5030B	EPA 8260 B	A	MTG	
Benzene	<2.00	2.00	µg/L	11/02/16 01:47	11/02/16 01:47	EPA 5030B	EPA 8260 B	A	MTG	
Ethylbenzene	<2.00	2.00	µg/L	11/02/16 01:47	11/02/16 01:47	EPA 5030B	EPA 8260 B	A	MTG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	11/02/16 01:47	11/02/16 01:47	EPA 5030B	EPA 8260 B	A	MTG	
MTBE	<2.00	2.00	µg/L	11/02/16 01:47	11/02/16 01:47	EPA 5030B	EPA 8260 B	A	MTG	
Naphthalene	<2.00	2.00	µg/L	11/02/16 01:47	11/02/16 01:47	EPA 5030B	EPA 8260 B	A	MTG	
Toluene	<2.00	2.00	µg/L	11/02/16 01:47	11/02/16 01:47	EPA 5030B	EPA 8260 B	A	MTG	
Xylene o	<2.00	2.00	µg/L	11/02/16 01:47	11/02/16 01:47	EPA 5030B	EPA 8260 B	A	MTG	
Xylene p/m	<4.00	4.00	µg/L	11/02/16 01:47	11/02/16 01:47	EPA 5030B	EPA 8260 B	A	MTG	
Xylenes, Total	<6.00	6.00	µg/L	11/02/16 01:47	11/02/16 01:47	EPA 5030B	EPA 8260 B	A	MTG	CC
Surrogate: 1,2-Dichloroethane-d4		*105 %*	*80-120*	*11/02/16 01:47*	*11/02/16 01:47*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*99.4 %*	*80-120*	*11/02/16 01:47*	*11/02/16 01:47*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*101 %*	*80-120*	*11/02/16 01:47*	*11/02/16 01:47*	*EPA 8260 B*				
Surrogate: Toluene-d8		*102 %*	*80-120*	*11/02/16 01:47*	*11/02/16 01:47*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1610721
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	11/10/16 10:26

Certifications

Code	Description	Number	Expires
MDDOE	Maryland Department of the Environment	257	06/30/2017
PADEP-Altoona	Pennsylvania Department of Environmental Protection	009	03/31/2017
WVDEP	West Virginia Department of Environmental Protection	225	12/31/2016
PADEP-DuBois	Pennsylvania Department of Environmental Protection	008	09/30/2017

Notes and Definitions

N	Matrix spike and matrix duplicate spike recovery was outside of the laboratory acceptance criteria.
D1	The sample was analyzed at a dilution.
CC	Calculated analytes are reported based on unrounded results of the individual analytes used in the calculation. Therefore, using the rounded values of the analytes as reported may lead to a result that varies slightly from the reported result.
RL	Reporting Limit - either the practical quantitation limit or the method detection limit
dry	Sample results reported on a dry weight basis
A	Analysis Performed by Mountain Research Altoona Laboratory - PADEP #07-00418
D	Analysis Performed by Mountain Research DuBois Laboratory - PADEP # 33-00258

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Tegan Schott, Technical Specialist II

Billing Group:	Phase: GW Sample	PROJECT NAME: Groundwater Sampling
MR Project #: 4644.15.01		SITE LOCATION: Indiana PA
CLIENT: Vernards Crossroads		SAMPLER(S): LMM

MOUNTAIN RESEARCH LLC
825 25th Street, Altoona, PA 16601 (814) 949-20
110 McCracken Run Road, Dubois, PA 15801 (814) 371-60

CHAIN OF CUSTODY RECORD

NOTES:
Received On Ice: (Y) / N
Sample Temp: 4.3
PWSID #:
Comments:

SAMPLE ID	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	8260B	Preserve	LAB NUMBER
Trip Blank	30Oct2016	6:15	X		AQ	240ml VOAs	2A	X	HCl	01
MW-1		12:50								02
MW-2		12:30								03
MW-3		13:02								04
MW-4		12:41								05
MW-5		13:10								06
MW-6		12:15								07
MW-7		12:22								08
MW-8		13:20								09
Duplicate		12:30								10
Stream	LMM	11:50	—		—	—	—	—	—	11

Analyses Requested

MR PROJ. MGR. MK
Shipping Carrier:
Turn Around Time:
10 Day X
3 Day
1 Day
Comments:

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Lab Workorder #:
	31Oct2016	1555		15:57 10/31/16	1610721
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Labeled By:

Log In Time: 17:01
Staff: cd
Date: 10/31/16

1 of 1

MOUNTAIN RESEARCH SAMPLE RECEIPT PROTOCOL

WORK ORDER: 16 16721

CLIENT: Vennards

DATE SAMPLED: 10/30/16 DATE RECEIVED: 10/31/16 TIME RECEIVED: 1557

1. CHECK ALL THAT APPLY: PA ☑ WV ☐ MD ☐ PUBLIC WATER SUPPLY ☐ RUSH ☐

2. WERE ANY OF THE SAMPLE CONTAINERS DAMAGED? (ARE CUSTODY SEALS BROKEN?) YES ☐ NO ☑

IF YES, EXPLAIN: _____

3. NUMBER OF CONTAINERS RECEIVED: 22

4. IS THERE HEADSPACE PRESENT FOR VOLATILES/ODOR SAMPLES? YES ☐ NO

5. WERE THE SAMPLES RECEIVED ON ICE? YES ☑ NO ☐

IF NO, EXPLAIN: _____

6. RECEIVING TEMPERATURE: 4.3 °C BOTTLE(S) TEMPED: _____

7. WERE THE SAMPLES PROPERLY PRESERVED? YES ☐ NO ☐

IF NO, EXPLAIN: _____

8. WERE THE SAMPLES COLLECTED IN THE CORRECT CONTAINERS? YES ☐ NO ☐

IF NO, EXPLAIN: _____

9. WAS THE COC FILLED OUT PROPERLY? YES ☐ NO ☐

IF NO, EXPLAIN: _____

10. DID THE SAMPLE LABEL(S) CONTAIN ADEQUATE INFO? (CLIENT/DATE/TIME/PRESERVATIVE) YES ☐ NO ☐

IF NO, EXPLAIN: _____

11. WERE ANY OF THE SAMPLES RECEIVED OUTSIDE OF HOLDING TIME? YES ☐ NO ☐

IF YES, EXPLAIN: _____

12. DO THE SAMPLES REQUIRE ANALYSES THAT HAVE A SHORT HOLDING TIME? YES ☐ NO ☐

IF YES, WHAT ANALYSES? _____ **PLEASE NOTIFY LABORATORY ANALYSTS!**

13. IS SUBCONTRACTING REQUIRED? YES ☐ NO ☐

IF YES, WHAT ANALYSES? _____

14. WAS THE CLIENT CONTACTED? YES ☐ NO ☐ IF YES, FILL OUT THE FOLLOWING:

MR EMPLOYEE INITIALS: CLIENT SPOKEN TO: DATE/TIME:

OUTCOME:

SIGNATURE: [signature]

L60.30 A r1 Sample Receipt Form

For MR Use Only

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PADEP #33-00258
EPA Lab #PA00155

08 December 2016

Lab ID #: 1611588

Richard Vennard
Vennard Crossroads Convenience, Inc
5190 White Oak Dr
Indiana, PA 15701

RE: Indiana, PA

Enclosed are the results of analyses for samples received by the laboratory on 11/25/16 13:54. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Stephen Gampe

Stephen Gampe
Assistant Laboratory Manager

Authorized Reviewer

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1611588
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	12/08/16 16:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Sample Type	Date Sampled	Date Received
Trip Blank	1611588-01	Aqueous	Grab	11/23/16 06:00	11/25/16 13:54
MW-1BD	1611588-02	Aqueous	Grab	11/25/16 09:05	11/25/16 13:54
MW-2BD	1611588-03	Aqueous	Grab	11/25/16 08:06	11/25/16 13:54
MW-3BD	1611588-04	Aqueous	Grab	11/25/16 10:38	11/25/16 13:54

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1611588
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	12/08/16 16:53

Trip Blank

1611588-01 (Aqueous) Sampled: 11/23/16 06:00

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	11/30/16 23:15	11/30/16 23:15	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	11/30/16 23:15	11/30/16 23:15	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	11/30/16 23:15	11/30/16 23:15	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	11/30/16 23:15	11/30/16 23:15	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	11/30/16 23:15	11/30/16 23:15	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	11/30/16 23:15	11/30/16 23:15	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	11/30/16 23:15	11/30/16 23:15	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	11/30/16 23:15	11/30/16 23:15	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	11/30/16 23:15	11/30/16 23:15	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	11/30/16 23:15	11/30/16 23:15	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	11/30/16 23:15	11/30/16 23:15	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*80-120*	*11/30/16 23:15*	*11/30/16 23:15*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*96.4 %*	*80-120*	*11/30/16 23:15*	*11/30/16 23:15*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*104 %*	*80-120*	*11/30/16 23:15*	*11/30/16 23:15*	*EPA 8260 B*				
Surrogate: Toluene-d8		*104 %*	*80-120*	*11/30/16 23:15*	*11/30/16 23:15*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1611588
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	12/08/16 16:53

MW-1BD

1611588-02 (Aqueous) Sampled: 11/25/16 09:05

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**55.7**	2.00	µg/L	11/30/16 23:41	11/30/16 23:41	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	**12.4**	2.00	µg/L	11/30/16 23:41	11/30/16 23:41	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**376**	20.0	µg/L	11/30/16 23:41	12/01/16 17:36	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**38.8**	2.00	µg/L	11/30/16 23:41	11/30/16 23:41	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	**5.36**	2.00	µg/L	11/30/16 23:41	11/30/16 23:41	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**13.9**	2.00	µg/L	11/30/16 23:41	11/30/16 23:41	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**6.72**	2.00	µg/L	11/30/16 23:41	11/30/16 23:41	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**27.4**	2.00	µg/L	11/30/16 23:41	11/30/16 23:41	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	**64.0**	2.00	µg/L	11/30/16 23:41	11/30/16 23:41	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	**101**	4.00	µg/L	11/30/16 23:41	11/30/16 23:41	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**165**	6.00	µg/L	11/30/16 23:41	11/30/16 23:41	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*91.2 %*	*80-120*	*11/30/16 23:41*	*11/30/16 23:41*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*100 %*	*80-120*	*11/30/16 23:41*	*11/30/16 23:41*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*101 %*	*80-120*	*11/30/16 23:41*	*11/30/16 23:41*	*EPA 8260 B*				
Surrogate: Toluene-d8		*105 %*	*80-120*	*11/30/16 23:41*	*11/30/16 23:41*	*EPA 8260 B*				

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1611588
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	12/08/16 16:53

MW-2BD

1611588-03 (Aqueous) Sampled: 11/25/16 08:06

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	12/01/16 00:07	12/01/16 00:07	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	12/01/16 00:07	12/01/16 00:07	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	12/01/16 00:07	12/01/16 00:07	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	12/01/16 00:07	12/01/16 00:07	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	12/01/16 00:07	12/01/16 00:07	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	12/01/16 00:07	12/01/16 00:07	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	12/01/16 00:07	12/01/16 00:07	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	12/01/16 00:07	12/01/16 00:07	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	12/01/16 00:07	12/01/16 00:07	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	12/01/16 00:07	12/01/16 00:07	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	12/01/16 00:07	12/01/16 00:07	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*103 %*	*80-120*	*12/01/16 00:07*	*12/01/16 00:07*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*101 %*	*80-120*	*12/01/16 00:07*	*12/01/16 00:07*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*103 %*	*80-120*	*12/01/16 00:07*	*12/01/16 00:07*	*EPA 8260 B*				
Surrogate: Toluene-d8		*106 %*	*80-120*	*12/01/16 00:07*	*12/01/16 00:07*	*EPA 8260 B*				

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1611588
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	12/08/16 16:53

MW-3BD

1611588-04 (Aqueous) Sampled: 11/25/16 10:38

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	12/01/16 00:33	12/01/16 00:33	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	12/01/16 00:33	12/01/16 00:33	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**2.74**	2.00	µg/L	12/01/16 00:33	12/01/16 00:33	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	12/01/16 00:33	12/01/16 00:33	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	12/01/16 00:33	12/01/16 00:33	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**11.2**	2.00	µg/L	12/01/16 00:33	12/01/16 00:33	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	12/01/16 00:33	12/01/16 00:33	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	12/01/16 00:33	12/01/16 00:33	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	12/01/16 00:33	12/01/16 00:33	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	12/01/16 00:33	12/01/16 00:33	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	12/01/16 00:33	12/01/16 00:33	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*113 %*	*80-120*	*12/01/16 00:33*	*12/01/16 00:33*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*98.3 %*	*80-120*	*12/01/16 00:33*	*12/01/16 00:33*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*103 %*	*80-120*	*12/01/16 00:33*	*12/01/16 00:33*	*EPA 8260 B*				
Surrogate: Toluene-d8		*105 %*	*80-120*	*12/01/16 00:33*	*12/01/16 00:33*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

MOUNTAIN RESEARCH, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1611588
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	12/08/16 16:53

Certifications

Code	Description	Number	Expires
MDDOE	Maryland Department of the Environment	257	06/30/2017
PADEP-Altoona	Pennsylvania Department of Environmental Protection	009	03/31/2017
WVDEP	West Virginia Department of Environmental Protection	225	10/31/2017
PADEP-DuBois	Pennsylvania Department of Environmental Protection	008	09/30/2017

Notes and Definitions

D1	The sample was analyzed at a dilution.
CC	Calculated analytes are reported based on unrounded results of the individual analytes used in the calculation. Therefore, using the rounded values of the analytes as reported may lead to a result that varies slightly from the reported result.
RL	Reporting Limit - either the practical quantitation limit or the method detection limit
dry	Sample results reported on a dry weight basis
A	Analysis Performed by Mountain Research Altoona Laboratory - PADEP #07-00418
D	Analysis Performed by Mountain Research DuBois Laboratory - PADEP # 33-00258

MOUNTAIN RESEARCH I

825 25th Street, Altoona, PA 16601 (814)
110 McCracken Run Road, Dubois, PA 15801 (814)

CHAIN OF CUSTODY RECO

Billing Group:	Phase: GW Sample	PROJECT NAME: Groundwater Sample
MR Project #: 46044.15.01		SITE LOCATION: Indiana PA
CLIENT: Wynnds		SAMPLER(S): CMM

NOTES:
Received On Ice: (Y) / N
Sample Temp: 3.7°C
PWSID #:
Comments:

SAMPLE ID	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	8260B
Trip Blank	23NOV2016	6:00	X		AQ	2 40ml VOAs	2A	X
MW-1BD	25NOV2016	9:05						
MW-2BD	"	8:08 8:08	"					
MW-3BD		10:38						

Analyses Requested

MR PROJ. MGR. MK
Shipping Carrier:

Turn Around Time:
10 Day X
3 Day
1 Day

Comments:

Preserve	LAB NUMBER
HCl	01
	02
	03
	04

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME
	25NOV2016	1354		13:54 11-25-16
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME

Lab Workorder #: 16115588
Labeled By:

Log In Time: 14:47
Staff: KC
Date: 11/23/16

Page 8 of 9

1 of 1

MOUNTAIN RESEARCH SAMPLE RECEIPT PROTOCOL

WORK ORDER: 1611588

CLIENT: Vennard

DATE SAMPLED: 11/25/16 DATE RECEIVED: 11/25/16 TIME RECEIVED: 1354

1. CHECK ALL THAT APPLY: PA ☑ WV ☐ MD ☐ PUBLIC WATER SUPPLY ☐ RUSH ☐
2. WERE ANY OF THE SAMPLE CONTAINERS DAMAGED? (ARE CUSTODY SEALS BROKEN?) YES ☐ NO ☑

IF YES, EXPLAIN: _____

3. NUMBER OF CONTAINERS RECEIVED: 8
4. IS THERE HEADSPACE PRESENT FOR VOLATILES/ODOR SAMPLES? YES ☐ NO
5. WERE THE SAMPLES RECEIVED ON ICE? YES ☐ NO ☐

IF NO, EXPLAIN: _____

6. RECEIVING TEMPERATURE: 3.7 °C BOTTLE(S) TEMPED: _____
7. WERE THE SAMPLES PROPERLY PRESERVED? YES ☐ NO ☐

IF NO, EXPLAIN: _____

8. WERE THE SAMPLES COLLECTED IN THE CORRECT CONTAINERS? YES ☐ NO ☐

IF NO, EXPLAIN: _____

9. WAS THE COC FILLED OUT PROPERLY? YES ☐ NO ☐

IF NO, EXPLAIN: _____

10. DID THE SAMPLE LABEL(S) CONTAIN ADEQUATE INFO? (CLIENT/DATE/TIME/PRESERVATIVE) YES ☐ NO ☐

IF NO, EXPLAIN: _____

11. WERE ANY OF THE SAMPLES RECEIVED OUTSIDE OF HOLDING TIME? YES ☐ NO ☑

IF YES, EXPLAIN: _____

12. DO THE SAMPLES REQUIRE ANALYSES THAT HAVE A SHORT HOLDING TIME? YES ☐ NO ☑

IF YES, WHAT ANALYSES? _____ **PLEASE NOTIFY LABORATORY ANALYSTS!**

13. IS SUBCONTRACTING REQUIRED? YES ☐ NO ☐

IF YES, WHAT ANALYSES? _____

14. WAS THE CLIENT CONTACTED? YES ☐ NO ☐ IF YES, FILL OUT THE FOLLOWING:

MR EMPLOYEE INITIALS: _____ CLIENT SPOKEN TO: _____ DATE/TIME: _____

OUTCOME: _____

SIGNATURE: _____

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PADEP #33-00258
EPA Lab #PA00155

20 January 2017

Lab ID #: 1701287

Richard Vennard
Vennard Crossroads Convenience, Inc
5190 White Oak Dr
Indiana, PA 15701

RE: Indiana, PA

Enclosed are the results of analyses for samples received by the laboratory on 01/12/17 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Stephen Gampe

Stephen Gampe
Assistant Laboratory Manager

Authorized Reviewer

MOUNTAIN RESEARCH, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1701287
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	01/20/17 16:10

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Sample Type	Date Sampled	Date Received
Trip Blank	1701287-01	Aqueous	Grab	01/11/17 11:00	01/12/17 16:30
MW-1	1701287-02	Aqueous	Grab	01/12/17 13:00	01/12/17 16:30
MW-2	1701287-03	Aqueous	Grab	01/12/17 11:52	01/12/17 16:30
MW-3	1701287-04	Aqueous	Grab	01/12/17 09:20	01/12/17 16:30
MW-4	1701287-05	Aqueous	Grab	01/12/17 13:08	01/12/17 16:30
MW-5	1701287-06	Aqueous	Grab	01/12/17 12:20	01/12/17 16:30
MW-6	1701287-07	Aqueous	Grab	01/12/17 10:40	01/12/17 16:30
MW-7	1701287-08	Aqueous	Grab	01/12/17 10:47	01/12/17 16:30
MW-8	1701287-09	Aqueous	Grab	01/12/17 12:00	01/12/17 16:30
MW-1BD	1701287-10	Aqueous	Grab	01/12/17 12:05	01/12/17 16:30
MW-2BD	1701287-11	Aqueous	Grab	01/12/17 10:30	01/12/17 16:30
MW-3BD	1701287-12	Aqueous	Grab	01/12/17 13:45	01/12/17 16:30
Stream	1701287-13	Aqueous	Grab	01/12/17 13:15	01/12/17 16:30
Duplicate	1701287-14	Aqueous	Grab	01/12/17 12:20	01/12/17 16:30

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1701287
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 01/20/17 16:10
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

Trip Blank

1701287-01 (Aqueous) Sampled: 01/11/17 11:00

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	01/13/17 14:18	01/13/17 14:18	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	01/13/17 14:18	01/13/17 14:18	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	01/13/17 14:18	01/13/17 14:18	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	01/13/17 14:18	01/13/17 14:18	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	01/13/17 14:18	01/13/17 14:18	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	01/13/17 14:18	01/13/17 14:18	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	01/13/17 14:18	01/13/17 14:18	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	01/13/17 14:18	01/13/17 14:18	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	01/13/17 14:18	01/13/17 14:18	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	01/13/17 14:18	01/13/17 14:18	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	01/13/17 14:18	01/13/17 14:18	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*107 %*	*80-120*	*01/13/17 14:18*	*01/13/17 14:18*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*97.0 %*	*80-120*	*01/13/17 14:18*	*01/13/17 14:18*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*112 %*	*80-120*	*01/13/17 14:18*	*01/13/17 14:18*	*EPA 8260 B*				
Surrogate: Toluene-d8		*101 %*	*80-120*	*01/13/17 14:18*	*01/13/17 14:18*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1701287
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	01/20/17 16:10

MW-1

1701287-02 (Aqueous) Sampled: 01/12/17 13:00

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	01/13/17 13:52	01/13/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	01/13/17 13:52	01/13/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	01/13/17 13:52	01/13/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	01/13/17 13:52	01/13/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	01/13/17 13:52	01/13/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**2.18**	2.00	µg/L	01/13/17 13:52	01/13/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	01/13/17 13:52	01/13/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	01/13/17 13:52	01/13/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	01/13/17 13:52	01/13/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	01/13/17 13:52	01/13/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	01/13/17 13:52	01/13/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*103 %*	*80-120*	*01/13/17 13:52*	*01/13/17 13:52*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*95.4 %*	*80-120*	*01/13/17 13:52*	*01/13/17 13:52*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*104 %*	*80-120*	*01/13/17 13:52*	*01/13/17 13:52*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.8 %*	*80-120*	*01/13/17 13:52*	*01/13/17 13:52*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1701287
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	01/20/17 16:10

MW-2

1701287-03 (Aqueous) Sampled: 01/12/17 11:52

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**183**	50.0	µg/L	01/13/17 14:44	01/16/17 12:36	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**47.8**	2.00	µg/L	01/13/17 14:44	01/13/17 14:44	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**1170**	50.0	µg/L	01/13/17 14:44	01/16/17 12:36	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**245**	50.0	µg/L	01/13/17 14:44	01/16/17 12:36	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**19.8**	2.00	µg/L	01/13/17 14:44	01/13/17 14:44	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**15.4**	2.00	µg/L	01/13/17 14:44	01/13/17 14:44	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**47.4**	2.00	µg/L	01/13/17 14:44	01/13/17 14:44	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**1760**	50.0	µg/L	01/13/17 14:44	01/16/17 12:36	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene o	**414**	50.0	µg/L	01/13/17 14:44	01/16/17 12:36	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene p/m	**740**	100	µg/L	01/13/17 14:44	01/16/17 12:36	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**1150**	150	µg/L	01/13/17 14:44	01/16/17 12:36	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*95.6 %*	*80-120*	*01/13/17 14:44*	*01/13/17 14:44*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*98.1 %*	*80-120*	*01/13/17 14:44*	*01/13/17 14:44*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*110 %*	*80-120*	*01/13/17 14:44*	*01/13/17 14:44*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.0 %*	*80-120*	*01/13/17 14:44*	*01/13/17 14:44*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1701287
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 01/20/17 16:10
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-3

1701287-04 (Aqueous) Sampled: 01/12/17 09:20

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	01/16/17 14:20	01/16/17 14:20	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	01/16/17 14:20	01/16/17 14:20	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	01/16/17 14:20	01/16/17 14:20	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	01/16/17 14:20	01/16/17 14:20	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	01/16/17 14:20	01/16/17 14:20	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**3.01**	2.00	µg/L	01/16/17 14:20	01/16/17 14:20	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	01/16/17 14:20	01/16/17 14:20	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	01/16/17 14:20	01/16/17 14:20	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	01/16/17 14:20	01/16/17 14:20	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	01/16/17 14:20	01/16/17 14:20	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	01/16/17 14:20	01/16/17 14:20	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*80-120*	*01/16/17 14:20*	*01/16/17 14:20*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*99.0 %*	*80-120*	*01/16/17 14:20*	*01/16/17 14:20*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*109 %*	*80-120*	*01/16/17 14:20*	*01/16/17 14:20*	*EPA 8260 B*				
Surrogate: Toluene-d8		*101 %*	*80-120*	*01/16/17 14:20*	*01/16/17 14:20*	*EPA 8260 B*				

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

MOUNTAIN RESEARCH, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1701287
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	01/20/17 16:10

MW-4

1701287-05 (Aqueous) Sampled: 01/12/17 13:08

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**61.8**	2.00	µg/L	01/13/17 20:47	01/13/17 20:47	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	**21.0**	2.00	µg/L	01/13/17 20:47	01/13/17 20:47	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**145**	20.0	µg/L	01/13/17 20:47	01/16/17 13:02	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**112**	20.0	µg/L	01/13/17 20:47	01/16/17 13:02	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**6.88**	2.00	µg/L	01/13/17 20:47	01/13/17 20:47	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**14.6**	2.00	µg/L	01/13/17 20:47	01/13/17 20:47	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**13.9**	2.00	µg/L	01/13/17 20:47	01/13/17 20:47	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**12.5**	2.00	µg/L	01/13/17 20:47	01/13/17 20:47	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	**25.6**	2.00	µg/L	01/13/17 20:47	01/13/17 20:47	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	**189**	4.00	µg/L	01/13/17 20:47	01/13/17 20:47	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**214**	6.00	µg/L	01/13/17 20:47	01/13/17 20:47	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*80-120*	*01/13/17 20:47*	*01/13/17 20:47*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*97.2 %*	*80-120*	*01/13/17 20:47*	*01/13/17 20:47*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*106 %*	*80-120*	*01/13/17 20:47*	*01/13/17 20:47*	*EPA 8260 B*				
Surrogate: Toluene-d8		*103 %*	*80-120*	*01/13/17 20:47*	*01/13/17 20:47*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1701287
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 01/20/17 16:10
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-5

1701287-06 (Aqueous) Sampled: 01/12/17 12:20

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	01/13/17 15:35	01/13/17 15:35	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	01/13/17 15:35	01/13/17 15:35	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**3.65**	2.00	µg/L	01/13/17 15:35	01/13/17 15:35	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	01/13/17 15:35	01/13/17 15:35	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	01/13/17 15:35	01/13/17 15:35	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**2.23**	2.00	µg/L	01/13/17 15:35	01/13/17 15:35	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	01/13/17 15:35	01/13/17 15:35	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	01/13/17 15:35	01/13/17 15:35	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	01/13/17 15:35	01/13/17 15:35	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	01/13/17 15:35	01/13/17 15:35	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	01/13/17 15:35	01/13/17 15:35	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*80-120*	*01/13/17 15:35*	*01/13/17 15:35*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*97.7 %*	*80-120*	*01/13/17 15:35*	*01/13/17 15:35*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*108 %*	*80-120*	*01/13/17 15:35*	*01/13/17 15:35*	*EPA 8260 B*				
Surrogate: Toluene-d8		*98.6 %*	*80-120*	*01/13/17 15:35*	*01/13/17 15:35*	*EPA 8260 B*				

Mountain Research, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1701287
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	01/20/17 16:10

MW-6

1701287-07 (Aqueous) Sampled: 01/12/17 10:40

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	01/13/17 16:01	01/13/17 16:01	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	01/13/17 16:01	01/13/17 16:01	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**3.57**	2.00	µg/L	01/13/17 16:01	01/13/17 16:01	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	01/13/17 16:01	01/13/17 16:01	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	01/13/17 16:01	01/13/17 16:01	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	01/13/17 16:01	01/13/17 16:01	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	01/13/17 16:01	01/13/17 16:01	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	01/13/17 16:01	01/13/17 16:01	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	01/13/17 16:01	01/13/17 16:01	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	01/13/17 16:01	01/13/17 16:01	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	01/13/17 16:01	01/13/17 16:01	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*107 %*	*80-120*	*01/13/17 16:01*	*01/13/17 16:01*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*95.4 %*	*80-120*	*01/13/17 16:01*	*01/13/17 16:01*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*108 %*	*80-120*	*01/13/17 16:01*	*01/13/17 16:01*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.8 %*	*80-120*	*01/13/17 16:01*	*01/13/17 16:01*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1701287
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 01/20/17 16:10
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-7

1701287-08 (Aqueous) Sampled: 01/12/17 10:47

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**206**	20.0	µg/L	01/13/17 21:13	01/16/17 13:28	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**51.1**	2.00	µg/L	01/13/17 21:13	01/13/17 21:13	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**458**	20.0	µg/L	01/13/17 21:13	01/16/17 13:28	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**226**	20.0	µg/L	01/13/17 21:13	01/16/17 13:28	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**19.3**	2.00	µg/L	01/13/17 21:13	01/13/17 21:13	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**6.59**	2.00	µg/L	01/13/17 21:13	01/13/17 21:13	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**49.7**	2.00	µg/L	01/13/17 21:13	01/13/17 21:13	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**85.9**	2.00	µg/L	01/13/17 21:13	01/13/17 21:13	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	**27.2**	2.00	µg/L	01/13/17 21:13	01/13/17 21:13	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	**318**	40.0	µg/L	01/13/17 21:13	01/16/17 13:28	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**345**	42.0	µg/L	01/13/17 21:13	01/16/17 13:28	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*89.2 %*	*80-120*	*01/13/17 21:13*	*01/13/17 21:13*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*98.1 %*	*80-120*	*01/13/17 21:13*	*01/13/17 21:13*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*104 %*	*80-120*	*01/13/17 21:13*	*01/13/17 21:13*	*EPA 8260 B*				
Surrogate: Toluene-d8		*102 %*	*80-120*	*01/13/17 21:13*	*01/13/17 21:13*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1701287
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	01/20/17 16:10

MW-8

1701287-09 (Aqueous) Sampled: 01/12/17 12:00

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**1240**	50.0	µg/L	01/13/17 16:27	01/13/17 16:53	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**319**	10.0	µg/L	01/13/17 16:27	01/13/17 16:27	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**5640**	200	µg/L	01/13/17 16:27	01/16/17 13:54	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**1100**	50.0	µg/L	01/13/17 16:27	01/13/17 16:53	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**76.5**	10.0	µg/L	01/13/17 16:27	01/13/17 16:27	EPA 5030B	EPA 8260 B	A	JMG	D1
MTBE	**54.0**	10.0	µg/L	01/13/17 16:27	01/13/17 16:27	EPA 5030B	EPA 8260 B	A	JMG	D1
Naphthalene	**319**	10.0	µg/L	01/13/17 16:27	01/13/17 16:27	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**5960**	200	µg/L	01/13/17 16:27	01/16/17 13:54	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene o	**1690**	50.0	µg/L	01/13/17 16:27	01/13/17 16:53	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene p/m	**3690**	100	µg/L	01/13/17 16:27	01/13/17 16:53	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**5380**	150	µg/L	01/13/17 16:27	01/13/17 16:53	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*98.5 %*	*80-120*	*01/13/17 16:27*	*01/13/17 16:27*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*97.9 %*	*80-120*	*01/13/17 16:27*	*01/13/17 16:27*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*108 %*	*80-120*	*01/13/17 16:27*	*01/13/17 16:27*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.5 %*	*80-120*	*01/13/17 16:27*	*01/13/17 16:27*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1701287
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	01/20/17 16:10

MW-1BD

1701287-10 (Aqueous) Sampled: 01/12/17 12:05

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**24.0**	2.00	µg/L	01/13/17 21:39	01/13/17 21:39	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	**10.9**	2.00	µg/L	01/13/17 21:39	01/13/17 21:39	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**523**	20.0	µg/L	01/13/17 21:39	01/16/17 11:44	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**4.34**	2.00	µg/L	01/13/17 21:39	01/13/17 21:39	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	**6.64**	2.00	µg/L	01/13/17 21:39	01/13/17 21:39	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**6.42**	2.00	µg/L	01/13/17 21:39	01/13/17 21:39	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**17.5**	2.00	µg/L	01/13/17 21:39	01/13/17 21:39	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**13.3**	2.00	µg/L	01/13/17 21:39	01/13/17 21:39	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	**22.0**	2.00	µg/L	01/13/17 21:39	01/13/17 21:39	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	**13.5**	4.00	µg/L	01/13/17 21:39	01/13/17 21:39	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**35.5**	6.00	µg/L	01/13/17 21:39	01/13/17 21:39	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*96.0 %*	*80-120*	*01/13/17 21:39*	*01/13/17 21:39*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*96.8 %*	*80-120*	*01/13/17 21:39*	*01/13/17 21:39*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*104 %*	*80-120*	*01/13/17 21:39*	*01/13/17 21:39*	*EPA 8260 B*				
Surrogate: Toluene-d8		*100 %*	*80-120*	*01/13/17 21:39*	*01/13/17 21:39*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1701287
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	01/20/17 16:10

MW-2BD

1701287-11 (Aqueous) Sampled: 01/12/17 10:30

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	01/13/17 17:19	01/13/17 17:19	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	01/13/17 17:19	01/13/17 17:19	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	01/13/17 17:19	01/13/17 17:19	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	01/13/17 17:19	01/13/17 17:19	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	01/13/17 17:19	01/13/17 17:19	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	01/13/17 17:19	01/13/17 17:19	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	01/13/17 17:19	01/13/17 17:19	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	01/13/17 17:19	01/13/17 17:19	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	01/13/17 17:19	01/13/17 17:19	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	01/13/17 17:19	01/13/17 17:19	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	01/13/17 17:19	01/13/17 17:19	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*80-120*	*01/13/17 17:19*	*01/13/17 17:19*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*97.6 %*	*80-120*	*01/13/17 17:19*	*01/13/17 17:19*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*103 %*	*80-120*	*01/13/17 17:19*	*01/13/17 17:19*	*EPA 8260 B*				
Surrogate: Toluene-d8		*100 %*	*80-120*	*01/13/17 17:19*	*01/13/17 17:19*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1701287
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	01/20/17 16:10

MW-3BD

1701287-12 (Aqueous) Sampled: 01/12/17 13:45

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	01/13/17 17:45	01/13/17 17:45	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	01/13/17 17:45	01/13/17 17:45	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	01/13/17 17:45	01/13/17 17:45	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	01/13/17 17:45	01/13/17 17:45	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	01/13/17 17:45	01/13/17 17:45	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**3.18**	2.00	µg/L	01/13/17 17:45	01/13/17 17:45	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	01/13/17 17:45	01/13/17 17:45	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	01/13/17 17:45	01/13/17 17:45	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	01/13/17 17:45	01/13/17 17:45	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	01/13/17 17:45	01/13/17 17:45	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	01/13/17 17:45	01/13/17 17:45	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*80-120*	*01/13/17 17:45*	*01/13/17 17:45*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*95.8 %*	*80-120*	*01/13/17 17:45*	*01/13/17 17:45*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*106 %*	*80-120*	*01/13/17 17:45*	*01/13/17 17:45*	*EPA 8260 B*				
Surrogate: Toluene-d8		*100 %*	*80-120*	*01/13/17 17:45*	*01/13/17 17:45*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

MOUNTAIN RESEARCH, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1701287
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	01/20/17 16:10

Stream

1701287-13 (Aqueous) Sampled: 01/12/17 13:15

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	01/13/17 18:11	01/13/17 18:11	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	01/13/17 18:11	01/13/17 18:11	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**3.39**	2.00	µg/L	01/13/17 18:11	01/13/17 18:11	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	01/13/17 18:11	01/13/17 18:11	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	01/13/17 18:11	01/13/17 18:11	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	01/13/17 18:11	01/13/17 18:11	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	01/13/17 18:11	01/13/17 18:11	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	01/13/17 18:11	01/13/17 18:11	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	01/13/17 18:11	01/13/17 18:11	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	01/13/17 18:11	01/13/17 18:11	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	01/13/17 18:11	01/13/17 18:11	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*80-120*	*01/13/17 18:11*	*01/13/17 18:11*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*97.0 %*	*80-120*	*01/13/17 18:11*	*01/13/17 18:11*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*105 %*	*80-120*	*01/13/17 18:11*	*01/13/17 18:11*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.6 %*	*80-120*	*01/13/17 18:11*	*01/13/17 18:11*	*EPA 8260 B*				

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1701287
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	01/20/17 16:10

Duplicate

1701287-14 (Aqueous) Sampled: 01/12/17 12:20

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	01/13/17 18:38	01/13/17 18:38	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	01/13/17 18:38	01/13/17 18:38	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**3.05**	2.00	µg/L	01/13/17 18:38	01/13/17 18:38	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	01/13/17 18:38	01/13/17 18:38	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	01/13/17 18:38	01/13/17 18:38	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**2.23**	2.00	µg/L	01/13/17 18:38	01/13/17 18:38	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	01/13/17 18:38	01/13/17 18:38	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	01/13/17 18:38	01/13/17 18:38	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	01/13/17 18:38	01/13/17 18:38	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	01/13/17 18:38	01/13/17 18:38	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	01/13/17 18:38	01/13/17 18:38	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*80-120*	*01/13/17 18:38*	*01/13/17 18:38*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*97.9 %*	*80-120*	*01/13/17 18:38*	*01/13/17 18:38*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*106 %*	*80-120*	*01/13/17 18:38*	*01/13/17 18:38*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.1 %*	*80-120*	*01/13/17 18:38*	*01/13/17 18:38*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1701287
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	01/20/17 16:10

Certifications

Code	Description	Number	Expires
MDDOE	Maryland Department of the Environment	257	06/30/2017
PADEP-Altoona	Pennsylvania Department of Environmental Protection	009	03/31/2017
WVDEP	West Virginia Department of Environmental Protection	225	10/31/2017
PADEP-DuBois	Pennsylvania Department of Environmental Protection	008	09/30/2017

Notes and Definitions

D1	The sample was analyzed at a dilution.
CC	Calculated analytes are reported based on unrounded results of the individual analytes used in the calculation. Therefore, using the rounded values of the analytes as reported may lead to a result that varies slightly from the reported result.
RL	Reporting Limit - either the practical quantitation limit or the method detection limit
dry	Sample results reported on a dry weight basis
A	Analysis Performed by Mountain Research Altoona Laboratory - PADEP #07-00418
D	Analysis Performed by Mountain Research DuBois Laboratory - PADEP # 33-00258

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

Billing Group:	Phase: GW Sampling	PROJECT NAME: GT Sampling
MR Project #: 4644.15.01		SITE LOCATION: Indiana, PA
CLIENT: Vennard's Crossroads		SAMPLER(S): HC

MOUNTAIN RESEARCH LLC
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110 McCracken Run Road, Dubois, PA 15801 (814) 371-6030

CHAIN OF CUSTODY RECORD

NOTES:
Received On Ice: Y / N
Sample Temp: 3.6°C
PWSID #:
Comments:

MR PROJ. MGR. MK
Shipping Carrier:
Turn Around Time:
10 Day
3 Day
1 Day
Comments:

SAMPLE ID	DATE (1-12-17)	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	8260B	Preserve	LAB NUMBER
Trip Blank	1-11-17	1100	X		AQ	2-40ml Vials	2A	X	HCL	01
MW-1	1-12-17	1300								02
MW-2		1152								03
MW-3		0920								04
MW-4		1309								05
MW-5		1220								06
MW-6		1040								07
MW-7		1047								08
MW-8		1200								09
MW-1BD		1205								10
MW-2BD		1030								11
MW-3BD		1345								12

Analyses Requested

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Lab Workorder #:	Lcg In Time: 0855
	1-12-17	1630		1/12/17 16:30	1701287	Staff:
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Labeled By:	Date: 01/13/17

pg 1 of 2

Billing Group:	Phase: GW Sampling	PROJECT NAME: OT Sampling
MR Project #: 4644.15.01		SITE LOCATION: Indiana, PA
CLIENT: Vennard's Crossroads		SAMPLER(S): HL

NOTES:

Received On Ice: Y / N

Sample Temp: 3.6°C

PWSID #:

Comments:

MOUNTAIN RESEARCH LLC

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110 McCracken Run Road, Dubois, PA 15801 (814) 371-6030 Fax (814) 375-0823

CHAIN OF CUSTODY RECORD

MR PROJ. MGR. MK

Shipping Carrier:

Turn Around Time:
10 Day
3 Day
1 Day

Comments:

SAMPLE ID	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	8260B	Preserve	LAB NUMBER
Stream	1-12-17	1315	X		AQ	2-40ml Vials	2A	X	HCL	13
Duplicate	1	1220	1		1	1	1	1	1	14

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Lab Workorder #:
	1-12-17	1630		1-12-17 16:30	1701287
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Labeled By:

Log In Time: 0855

Staff: DLE

Date: 01/13/17

PJ 2 of 2

MOUNTAIN RESEARCH SAMPLE RECEIPT PROTOCOL

WORK ORDER: 1701287

CLIENT: Kennards

DATE SAMPLED: 1/12/17 DATE RECEIVED: 1/12/17 TIME RECEIVED: 1630

1. CHECK ALL THAT APPLY: PA ☐ WV ☐ MD ☐ P W S ☐ NPDES/COMPLIANCE ☐ DAIRY ☐ RUSH ☐

2. WERE ANY OF THE SAMPLE CONTAINERS DAMAGED/LEAKING? (ARE CUSTODY SEALS BROKEN?) YES ☐ NO ☐

IF YES, EXPLAIN: _____

3. NUMBER OF CONTAINERS RECEIVED: 28

4. WERE THE SAMPLES RECEIVED ON ICE/OTHER ACCEPTABLE REFRIGERANT? YES ☑ NO ☐

IF NO, EXPLAIN: _____

5. RECEIVING TEMP: 3.6 °C TEMP CONTROL(S) PRESENT YES ☐ NO ☐ BOTTLE(S) TEMPED: _____

6. WERE THE SAMPLES PROPERLY PRESERVED? YES ☑ NO ☐

IF NO, EXPLAIN: _____

7. WERE THE SAMPLES COLLECTED IN THE CORRECT CONTAINERS? YES ☑ NO ☐

IF NO, EXPLAIN: _____

8. IS THERE HEADSPACE PRESENT FOR VOLATILES/ODOR SAMPLES? YES ☐ NO ☐ N/A ☑

9. WAS THE COC FILLED OUT PROPERLY? YES ☑ NO ☐

IF NO, EXPLAIN: _____

10. DID THE SAMPLE LABEL(S) CONTAIN ADEQUATE INFO? (CLIENT/DATE/TIME/PRESERVATIVE) YES ☑ NO ☐

IF NO, EXPLAIN: _____

11. WERE ANY OF THE SAMPLES RECEIVED OUTSIDE OF HOLDING TIME? YES ☐ NO ☑

IF YES, EXPLAIN: _____

12. DO THE SAMPLES REQUIRE ANALYSES THAT HAVE A SHORT HOLDING TIME? YES ☐ NO ☑

IF YES, WHAT ANALYSES? _____ **PLEASE NOTIFY LABORATORY ANALYSTS!**

13. IS SUBCONTRACTING REQUIRED? YES ☐ NO ☑

IF YES, WHAT ANALYSES? _____

14. WAS THE CLIENT CONTACTED? YES ☐ NO ☑ IF YES, FILL OUT THE FOLLOWING:

MR EMPLOYEE INITIALS: _____ CLIENT SPOKEN TO: _____ DATE/TIME: _____

OUTCOME: _____

SIGNATURE: _____

L60.30.A r2 Sample Receipt Form

For MR Use Only

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(304) 930-1972
Fax (304) 930-1975

28 April 2017

Lab ID #: 1704413

Richard Vennard
Vennard Crossroads Convenience, Inc
5190 White Oak Dr
Indiana, PA 15701

RE: Indiana, PA

Enclosed are the results of analyses for samples received by the laboratory on 04/18/17 07:25. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Stephen Gampe

Stephen Gampe
Assistant Laboratory Manager

Authorized Reviewer

MOUNTAIN RESEARCH, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1704413
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/28/17 16:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Sample Type	Date Sampled	Date Received
Trip Blank	1704413-01	Aqueous	Grab	04/17/17 06:05	04/18/17 07:25
MW-4BR	1704413-02	Aqueous	Grab	04/17/17 09:01	04/18/17 07:25
MW-9	1704413-03	Aqueous	Grab	04/17/17 09:21	04/18/17 07:25
EW-1BR	1704413-04	Aqueous	Grab	04/17/17 11:00	04/18/17 07:25
EW-1	1704413-05	Aqueous	Grab	04/17/17 10:50	04/18/17 07:25

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1704413
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/28/17 16:27

Trip Blank

1704413-01 (Aqueous) Sampled: 04/17/17 06:05

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	04/25/17 22:37	04/25/17 22:37	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	04/25/17 22:37	04/25/17 22:37	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	04/25/17 22:37	04/25/17 22:37	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	04/25/17 22:37	04/25/17 22:37	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	04/25/17 22:37	04/25/17 22:37	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	04/25/17 22:37	04/25/17 22:37	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	04/25/17 22:37	04/25/17 22:37	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	04/25/17 22:37	04/25/17 22:37	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	04/25/17 22:37	04/25/17 22:37	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	04/25/17 22:37	04/25/17 22:37	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	04/25/17 22:37	04/25/17 22:37	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*80-120*	*04/25/17 22:37*	*04/25/17 22:37*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*99.2 %*	*80-120*	*04/25/17 22:37*	*04/25/17 22:37*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*109 %*	*80-120*	*04/25/17 22:37*	*04/25/17 22:37*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.4 %*	*80-120*	*04/25/17 22:37*	*04/25/17 22:37*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1704413
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 04/28/17 16:27
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-4BR

1704413-02 (Aqueous) Sampled: 04/17/17 09:01

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	04/25/17 23:03	04/25/17 23:03	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	04/25/17 23:03	04/25/17 23:03	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	04/25/17 23:03	04/25/17 23:03	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	04/25/17 23:03	04/25/17 23:03	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	04/25/17 23:03	04/25/17 23:03	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	04/25/17 23:03	04/25/17 23:03	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	04/25/17 23:03	04/25/17 23:03	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	04/25/17 23:03	04/25/17 23:03	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	04/25/17 23:03	04/25/17 23:03	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	04/25/17 23:03	04/25/17 23:03	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	04/25/17 23:03	04/25/17 23:03	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*80-120*	*04/25/17 23:03*	*04/25/17 23:03*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*98.7 %*	*80-120*	*04/25/17 23:03*	*04/25/17 23:03*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*104 %*	*80-120*	*04/25/17 23:03*	*04/25/17 23:03*	*EPA 8260 B*				
Surrogate: Toluene-d8		*100 %*	*80-120*	*04/25/17 23:03*	*04/25/17 23:03*	*EPA 8260 B*				

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1704413
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/28/17 16:27

MW-9

1704413-03 (Aqueous) Sampled: 04/17/17 09:21

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**93.4**	2.00	µg/L	04/25/17 23:29	04/25/17 23:29	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	**29.3**	2.00	µg/L	04/25/17 23:29	04/25/17 23:29	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**89.6**	2.00	µg/L	04/25/17 23:29	04/25/17 23:29	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	**43.4**	2.00	µg/L	04/25/17 23:29	04/25/17 23:29	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	**7.06**	2.00	µg/L	04/25/17 23:29	04/25/17 23:29	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	04/25/17 23:29	04/25/17 23:29	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**11.5**	2.00	µg/L	04/25/17 23:29	04/25/17 23:29	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**163**	20.0	µg/L	04/25/17 23:29	04/26/17 23:33	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene o	**109**	20.0	µg/L	04/25/17 23:29	04/26/17 23:33	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene p/m	**251**	40.0	µg/L	04/25/17 23:29	04/26/17 23:33	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**360**	60.0	µg/L	04/25/17 23:29	04/26/17 23:33	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*98.2 %*	*80-120*	*04/25/17 23:29*	*04/25/17 23:29*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*100 %*	*80-120*	*04/25/17 23:29*	*04/25/17 23:29*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*103 %*	*80-120*	*04/25/17 23:29*	*04/25/17 23:29*	*EPA 8260 B*				
Surrogate: Toluene-d8		*102 %*	*80-120*	*04/25/17 23:29*	*04/25/17 23:29*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1704413
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/28/17 16:27

EW-1BR

1704413-04 (Aqueous) Sampled: 04/17/17 11:00

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**160**	20.0	µg/L	04/25/17 23:56	04/26/17 23:59	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**48.4**	2.00	µg/L	04/25/17 23:56	04/25/17 23:56	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**684**	20.0	µg/L	04/25/17 23:56	04/26/17 23:59	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**148**	20.0	µg/L	04/25/17 23:56	04/26/17 23:59	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**16.8**	2.00	µg/L	04/25/17 23:56	04/25/17 23:56	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**5.19**	2.00	µg/L	04/25/17 23:56	04/25/17 23:56	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**35.6**	2.00	µg/L	04/25/17 23:56	04/25/17 23:56	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**483**	20.0	µg/L	04/25/17 23:56	04/26/17 23:59	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene o	**144**	20.0	µg/L	04/25/17 23:56	04/26/17 23:59	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene p/m	**451**	40.0	µg/L	04/25/17 23:56	04/26/17 23:59	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**594**	60.0	µg/L	04/25/17 23:56	04/26/17 23:59	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*95.9 %*	*80-120*	*04/25/17 23:56*	*04/25/17 23:56*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*99.9 %*	*80-120*	*04/25/17 23:56*	*04/25/17 23:56*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*99.1 %*	*80-120*	*04/25/17 23:56*	*04/25/17 23:56*	*EPA 8260 B*				
Surrogate: Toluene-d8		*98.8 %*	*80-120*	*04/25/17 23:56*	*04/25/17 23:56*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1704413
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 04/28/17 16:27
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

EW-1

1704413-05 (Aqueous) Sampled: 04/17/17 10:50

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**932**	100	µg/L	04/26/17 00:22	04/27/17 00:25	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**242**	100	µg/L	04/26/17 00:22	04/27/17 00:25	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**2990**	100	µg/L	04/26/17 00:22	04/27/17 00:25	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**844**	100	µg/L	04/26/17 00:22	04/27/17 00:25	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**59.7**	2.00	µg/L	04/26/17 00:22	04/26/17 00:22	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**11.6**	2.00	µg/L	04/26/17 00:22	04/26/17 00:22	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**201**	100	µg/L	04/26/17 00:22	04/27/17 00:25	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**4480**	200	µg/L	04/26/17 00:22	04/27/17 00:52	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene o	**1510**	100	µg/L	04/26/17 00:22	04/27/17 00:25	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene p/m	**3670**	200	µg/L	04/26/17 00:22	04/27/17 00:25	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**5180**	300	µg/L	04/26/17 00:22	04/27/17 00:25	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*95.6 %*	*80-120*	*04/26/17 00:22*	*04/26/17 00:22*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*101 %*	*80-120*	*04/26/17 00:22*	*04/26/17 00:22*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*107 %*	*80-120*	*04/26/17 00:22*	*04/26/17 00:22*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.6 %*	*80-120*	*04/26/17 00:22*	*04/26/17 00:22*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1704413
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/28/17 16:27

Certifications

Code	Description	Number	Expires
MDDOE	Maryland Department of the Environment	257	06/30/2017
PADEP-Altoona	Pennsylvania Department of Environmental Protection	009	03/31/2018
WVDEP-Altoona	West Virginia Department of Environmental Protection	225	10/31/2017
PADEP-DuBois	Pennsylvania Department of Environmental Protection	008	09/30/2017
WVDEP-HydroChem	West Virginia Department of Environmental Protection	038	11/01/2017

Notes and Definitions

D1	The sample was analyzed at a dilution.
CC	Calculated analytes are reported based on unrounded results of the individual analytes used in the calculation. Therefore, using the rounded values of the analytes as reported may lead to a result that varies slightly from the reported result.
RL	Reporting Limit - either the practical quantitation limit or the method detection limit
dry	Sample results reported on a dry weight basis
A	Analysis Performed by Mountain Research Altoona Laboratory - PADEP #07-00418, WVDEP #225
D	Analysis Performed by Mountain Research DuBois Laboratory - PADEP # 33-00258
W	Analysis Performed by Mountain Research - HydroChem Laboratory - WVDEP #038

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

Billing Group: | Phase: GW Sample | PROJECT NAME: Groundwater sampling

MR Project #: 4644.1501 | SITE LOCATION: Indiana PA

CLIENT: Vennards | SAMPLER(S): CMM

NOTES:

Received On Ice: (Y) / N

Sample Temp: 5.1°C

PWSID #:

Comments:

MOUNTAIN RESEARCH LL

825 25th Street, Altoona, PA 16601 (814) 94

110 McCracken Run Road, Dubois, PA 15801 (814) 37

CHAIN OF CUSTODY RECORD

SAMPLE ID	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	8260B	Preserve	LAB NUMBER
Trip Blank	17Apr2017	6:05	X		AQ	2 VOM VOAs	ZA	X	HCl	01
MW-4BR		9:01								02
MW-9		9:21								03
EW-1BR		11:00								04
EW-1		10:50								05

Analyses Requested

MR PROJ. MGR.

Shipping Carrier:

Turn Around Time:
10 Day X
3 Day
1 Day

Comments:

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Lab Workorder #:
	18Apr2017	7:25		04/18/17 0725	1704413
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Labeled By:

Log In Time: 0828

Staff: SME

Date: 04/18/17

Page 9 of 10

1 of 1

MOUNTAIN RESEARCH SAMPLE RECEIPT PROTOCOL

WORK ORDER: 1704413

CLIENT: Vennards

DATE SAMPLED: 04/17/17 DATE RECEIVED: 04/18/17 TIME RECEIVED: 0725

1. CHECK ALL THAT APPLY: PA ☑ WV ☐ MD ☐ P W S ☐ NPDES/COMPLIANCE ☐ DAIRY ☐ RUSH ☐
2. WERE ANY OF THE SAMPLE CONTAINERS DAMAGED/LEAKING? (ARE CUSTODY SEALS BROKEN?) YES ☐ NO ☑

IF YES, EXPLAIN: _____

3. NUMBER OF CONTAINERS RECEIVED: 10
4. WERE THE SAMPLES RECEIVED ON ICE/OTHER ACCEPTABLE REFRIGERANT? YES ☑ NO ☐

IF NO, EXPLAIN: _____

5. RECEIVING TEMP: 5.1 °C TEMP CONTROL(S) PRESENT YES ☐ NO ☐ BOTTLE(S) TEMPED: 1
6. WERE THE SAMPLES PROPERLY PRESERVED? YES ☑ NO ☐

IF NO, EXPLAIN: _____

7. WERE THE SAMPLES COLLECTED IN THE CORRECT CONTAINERS? YES ☑ NO ☐

IF NO, EXPLAIN: _____

8. IS THERE HEADSPACE PRESENT FOR VOLATILES/ODOR SAMPLES? YES ☐ NO ☑ N/A ☐
9. WAS THE COC FILLED OUT PROPERLY? YES ☑ NO ☐

IF NO, EXPLAIN: _____

10. DID THE SAMPLE LABEL(S) CONTAIN ADEQUATE INFO? (CLIENT/DATE/TIME/PRESERVATIVE) YES ☑ NO ☐

IF NO, EXPLAIN: _____

11. WERE ANY OF THE SAMPLES RECEIVED OUTSIDE OF HOLDING TIME? YES ☐ NO ☑

IF YES, EXPLAIN: _____

12. DO THE SAMPLES REQUIRE ANALYSES THAT HAVE A SHORT HOLDING TIME? YES ☐ NO ☑

IF YES, WHAT ANALYSES? _____ **PLEASE NOTIFY LABORATORY ANALYSTS!**

13. IS SUBCONTRACTING REQUIRED? YES ☐ NO ☑

IF YES, WHAT ANALYSES? _____

14. WAS THE CLIENT CONTACTED? YES ☐ NO ☑ IF YES, FILL OUT THE FOLLOWING:

MR EMPLOYEE INITIALS: _____ CLIENT SPOKEN TO: _____ DATE/TIME: _____

OUTCOME: _____

SIGNATURE: Stacy Eckenrode

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09 May 2017

Lab ID #: 1705028

Richard Vennard
Vennard Crossroads Convenience, Inc
5190 White Oak Dr
Indiana, PA 15701

RE: Indiana, PA

Enclosed are the results of analyses for samples received by the laboratory on 05/01/17 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Stephen Gampe

Stephen Gampe
Assistant Laboratory Manager

Authorized Reviewer

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1705028
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 05/09/17 16:16
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Sample Type	Date Sampled	Date Received
Trip Blank	1705028-01	Aqueous	Grab	05/01/17 06:45	05/01/17 16:00
MW-1	1705028-02	Aqueous	Grab	05/01/17 13:25	05/01/17 16:00
MW-3	1705028-03	Aqueous	Grab	05/01/17 13:17	05/01/17 16:00
MW-4	1705028-04	Aqueous	Grab	05/01/17 13:11	05/01/17 16:00
MW-5	1705028-05	Aqueous	Grab	05/01/17 13:30	05/01/17 16:00
MW-6	1705028-06	Aqueous	Grab	05/01/17 10:47	05/01/17 16:00
MW-7	1705028-07	Aqueous	Grab	05/01/17 13:35	05/01/17 16:00
MW-8	1705028-08	Aqueous	Grab	05/01/17 13:46	05/01/17 16:00
MW-9	1705028-09	Aqueous	Grab	05/01/17 13:05	05/01/17 16:00
MW-1BR	1705028-10	Aqueous	Grab	05/01/17 13:42	05/01/17 16:00
MW-2BR	1705028-11	Aqueous	Grab	05/01/17 11:50	05/01/17 16:00
MW-3BR	1705028-12	Aqueous	Grab	05/01/17 13:21	05/01/17 16:00
MW-4BR	1705028-13	Aqueous	Grab	05/01/17 08:56	05/01/17 16:00
EW-1	1705028-14	Aqueous	Grab	05/01/17 13:53	05/01/17 16:00
EW-1BR	1705028-15	Aqueous	Grab	05/01/17 13:49	05/01/17 16:00
Stream	1705028-16	Aqueous	Grab	05/01/17 14:03	05/01/17 16:00

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1705028
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	05/09/17 16:16

Trip Blank

1705028-01 (Aqueous) Sampled: 05/01/17 06:45

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/05/17 05:54	05/05/17 05:54	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/05/17 05:54	05/05/17 05:54	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	05/05/17 05:54	05/05/17 05:54	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/05/17 05:54	05/05/17 05:54	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/05/17 05:54	05/05/17 05:54	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/05/17 05:54	05/05/17 05:54	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/05/17 05:54	05/05/17 05:54	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	05/05/17 05:54	05/05/17 05:54	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	05/05/17 05:54	05/05/17 05:54	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	05/05/17 05:54	05/05/17 05:54	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/05/17 05:54	05/05/17 05:54	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*103 %*	*80-120*	*05/05/17 05:54*	*05/05/17 05:54*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*94.2 %*	*80-120*	*05/05/17 05:54*	*05/05/17 05:54*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*102 %*	*80-120*	*05/05/17 05:54*	*05/05/17 05:54*	*EPA 8260 B*				
Surrogate: Toluene-d8		*101 %*	*80-120*	*05/05/17 05:54*	*05/05/17 05:54*	*EPA 8260 B*				

Mountain Research, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1705028
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 05/09/17 16:16
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-1

1705028-02 (Aqueous) Sampled: 05/01/17 13:25

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/05/17 01:58	05/05/17 01:58	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/05/17 01:58	05/05/17 01:58	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	05/05/17 01:58	05/05/17 01:58	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/05/17 01:58	05/05/17 01:58	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/05/17 01:58	05/05/17 01:58	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**4.89**	2.00	µg/L	05/05/17 01:58	05/05/17 01:58	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/05/17 01:58	05/05/17 01:58	EPA 5030B	EPA 8260 B	A	JMG	Na
Toluene	<2.00	2.00	µg/L	05/05/17 01:58	05/05/17 01:58	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	05/05/17 01:58	05/05/17 01:58	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	05/05/17 01:58	05/05/17 01:58	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/05/17 01:58	05/05/17 01:58	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*80-120*	*05/05/17 01:58*	*05/05/17 01:58*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*94.8 %*	*80-120*	*05/05/17 01:58*	*05/05/17 01:58*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*107 %*	*80-120*	*05/05/17 01:58*	*05/05/17 01:58*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.9 %*	*80-120*	*05/05/17 01:58*	*05/05/17 01:58*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1705028
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	05/09/17 16:16

MW-3

1705028-03 (Aqueous) Sampled: 05/01/17 13:17

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/05/17 06:21	05/05/17 06:21	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/05/17 06:21	05/05/17 06:21	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	05/05/17 06:21	05/05/17 06:21	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/05/17 06:21	05/05/17 06:21	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/05/17 06:21	05/05/17 06:21	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/05/17 06:21	05/05/17 06:21	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/05/17 06:21	05/05/17 06:21	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	05/05/17 06:21	05/05/17 06:21	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	05/05/17 06:21	05/05/17 06:21	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	05/05/17 06:21	05/05/17 06:21	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/05/17 06:21	05/05/17 06:21	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*80-120*	*05/05/17 06:21*	*05/05/17 06:21*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*93.6 %*	*80-120*	*05/05/17 06:21*	*05/05/17 06:21*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*106 %*	*80-120*	*05/05/17 06:21*	*05/05/17 06:21*	*EPA 8260 B*				
Surrogate: Toluene-d8		*100 %*	*80-120*	*05/05/17 06:21*	*05/05/17 06:21*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1705028
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	05/09/17 16:16

MW-4

1705028-04 (Aqueous) Sampled: 05/01/17 13:11

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**52.0**	2.00	µg/L	05/05/17 08:59	05/05/17 08:59	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	**26.1**	2.00	µg/L	05/05/17 08:59	05/05/17 08:59	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**202**	20.0	µg/L	05/05/17 08:59	05/05/17 13:00	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**174**	20.0	µg/L	05/05/17 08:59	05/05/17 13:00	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**13.2**	2.00	µg/L	05/05/17 08:59	05/05/17 08:59	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**17.4**	2.00	µg/L	05/05/17 08:59	05/05/17 08:59	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**22.1**	2.00	µg/L	05/05/17 08:59	05/05/17 08:59	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**3.22**	2.00	µg/L	05/05/17 08:59	05/05/17 08:59	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	**2.76**	2.00	µg/L	05/05/17 08:59	05/05/17 08:59	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	**105**	4.00	µg/L	05/05/17 08:59	05/05/17 08:59	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**107**	6.00	µg/L	05/05/17 08:59	05/05/17 08:59	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*97.0 %*	*80-120*	*05/05/17 08:59*	*05/05/17 08:59*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*	*05/05/17 08:59*	*05/05/17 08:59*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*97.6 %*	*80-120*	*05/05/17 08:59*	*05/05/17 08:59*	*EPA 8260 B*				
Surrogate: Toluene-d8		*98.2 %*	*80-120*	*05/05/17 08:59*	*05/05/17 08:59*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1705028
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 05/09/17 16:16
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-5

1705028-05 (Aqueous) Sampled: 05/01/17 13:30

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/05/17 06:47	05/05/17 06:47	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/05/17 06:47	05/05/17 06:47	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**3.66**	2.00	µg/L	05/05/17 06:47	05/05/17 06:47	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/05/17 06:47	05/05/17 06:47	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/05/17 06:47	05/05/17 06:47	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**9.64**	2.00	µg/L	05/05/17 06:47	05/05/17 06:47	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/05/17 06:47	05/05/17 06:47	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	05/05/17 06:47	05/05/17 06:47	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	05/05/17 06:47	05/05/17 06:47	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	05/05/17 06:47	05/05/17 06:47	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/05/17 06:47	05/05/17 06:47	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*80-120*	*05/05/17 06:47*	*05/05/17 06:47*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*93.2 %*	*80-120*	*05/05/17 06:47*	*05/05/17 06:47*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*108 %*	*80-120*	*05/05/17 06:47*	*05/05/17 06:47*	*EPA 8260 B*				
Surrogate: Toluene-d8		*101 %*	*80-120*	*05/05/17 06:47*	*05/05/17 06:47*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1705028
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 05/09/17 16:16
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-6

1705028-06 (Aqueous) Sampled: 05/01/17 10:47

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/05/17 13:26	05/05/17 13:26	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/05/17 13:26	05/05/17 13:26	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	05/05/17 13:26	05/05/17 13:26	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/05/17 13:26	05/05/17 13:26	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/05/17 13:26	05/05/17 13:26	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/05/17 13:26	05/05/17 13:26	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/05/17 13:26	05/05/17 13:26	EPA 5030B	EPA 8260 B	A	JMG	N
Toluene	<2.00	2.00	µg/L	05/05/17 13:26	05/05/17 13:26	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	05/05/17 13:26	05/05/17 13:26	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	05/05/17 13:26	05/05/17 13:26	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/05/17 13:26	05/05/17 13:26	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*108 %*	*80-120*	*05/05/17 13:26*	*05/05/17 13:26*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*98.7 %*	*80-120*	*05/05/17 13:26*	*05/05/17 13:26*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*103 %*	*80-120*	*05/05/17 13:26*	*05/05/17 13:26*	*EPA 8260 B*				
Surrogate: Toluene-d8		*98.3 %*	*80-120*	*05/05/17 13:26*	*05/05/17 13:26*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1705028
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 05/09/17 16:16
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-7

1705028-07 (Aqueous) Sampled: 05/01/17 13:35

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**22.2**	2.00	µg/L	05/05/17 09:26	05/05/17 09:26	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	**4.93**	2.00	µg/L	05/05/17 09:26	05/05/17 09:26	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**120**	20.0	µg/L	05/05/17 09:26	05/05/17 16:56	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**33.0**	2.00	µg/L	05/05/17 09:26	05/05/17 09:26	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	**3.79**	2.00	µg/L	05/05/17 09:26	05/05/17 09:26	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/05/17 09:26	05/05/17 09:26	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**5.64**	2.00	µg/L	05/05/17 09:26	05/05/17 09:26	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**2.10**	2.00	µg/L	05/05/17 09:26	05/05/17 09:26	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	05/05/17 09:26	05/05/17 09:26	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	**23.6**	4.00	µg/L	05/05/17 09:26	05/05/17 09:26	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**23.6**	6.00	µg/L	05/05/17 09:26	05/05/17 09:26	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*99.8 %*	*80-120*	*05/05/17 09:26*	*05/05/17 09:26*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*	*05/05/17 09:26*	*05/05/17 09:26*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*98.1 %*	*80-120*	*05/05/17 09:26*	*05/05/17 09:26*	*EPA 8260 B*				
Surrogate: Toluene-d8		*96.8 %*	*80-120*	*05/05/17 09:26*	*05/05/17 09:26*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1705028
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	05/09/17 16:16

MW-8

1705028-08 (Aqueous) Sampled: 05/01/17 13:46

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**788**	50.0	µg/L	05/05/17 08:06	05/05/17 08:33	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**194**	50.0	µg/L	05/05/17 08:06	05/05/17 08:33	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**4150**	200	µg/L	05/05/17 08:06	05/05/17 08:06	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**870**	50.0	µg/L	05/05/17 08:06	05/05/17 08:33	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**50.4**	50.0	µg/L	05/05/17 08:06	05/05/17 08:33	EPA 5030B	EPA 8260 B	A	JMG	D1
MTBE	<50.0	50.0	µg/L	05/05/17 08:06	05/05/17 08:33	EPA 5030B	EPA 8260 B	A	JMG	D1
Naphthalene	**216**	50.0	µg/L	05/05/17 08:06	05/05/17 08:33	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**3890**	200	µg/L	05/05/17 08:06	05/05/17 08:06	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene o	**1260**	50.0	µg/L	05/05/17 08:06	05/05/17 08:33	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene p/m	**3160**	100	µg/L	05/05/17 08:06	05/05/17 08:33	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**4410**	150	µg/L	05/05/17 08:06	05/05/17 08:33	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*97.9 %*	*80-120*	*05/05/17 08:06*	*05/05/17 08:33*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*100 %*	*80-120*	*05/05/17 08:06*	*05/05/17 08:33*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*99.2 %*	*80-120*	*05/05/17 08:06*	*05/05/17 08:33*	*EPA 8260 B*				
Surrogate: Toluene-d8		*95.8 %*	*80-120*	*05/05/17 08:06*	*05/05/17 08:33*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1705028
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	05/09/17 16:16

MW-9

1705028-09 (Aqueous) Sampled: 05/01/17 13:05

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**26.0**	2.00	µg/L	05/05/17 09:52	05/05/17 09:52	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	**9.19**	2.00	µg/L	05/05/17 09:52	05/05/17 09:52	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**29.5**	2.00	µg/L	05/05/17 09:52	05/05/17 09:52	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	**5.65**	2.00	µg/L	05/05/17 09:52	05/05/17 09:52	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/05/17 09:52	05/05/17 09:52	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/05/17 09:52	05/05/17 09:52	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**3.38**	2.00	µg/L	05/05/17 09:52	05/05/17 09:52	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**31.9**	2.00	µg/L	05/05/17 09:52	05/05/17 09:52	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	**42.3**	2.00	µg/L	05/05/17 09:52	05/05/17 09:52	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	**73.1**	4.00	µg/L	05/05/17 09:52	05/05/17 09:52	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**115**	6.00	µg/L	05/05/17 09:52	05/05/17 09:52	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*80-120*	*05/05/17 09:52*	*05/05/17 09:52*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*101 %*	*80-120*	*05/05/17 09:52*	*05/05/17 09:52*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*94.0 %*	*80-120*	*05/05/17 09:52*	*05/05/17 09:52*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.2 %*	*80-120*	*05/05/17 09:52*	*05/05/17 09:52*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1705028
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	05/09/17 16:16

MW-1BR

1705028-10 (Aqueous) Sampled: 05/01/17 13:42

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**6.21**	2.00	µg/L	05/05/17 15:11	05/05/17 15:11	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/05/17 15:11	05/05/17 15:11	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**84.4**	2.00	µg/L	05/05/17 15:11	05/05/17 15:11	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	**3.48**	2.00	µg/L	05/05/17 15:11	05/05/17 15:11	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/05/17 15:11	05/05/17 15:11	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/05/17 15:11	05/05/17 15:11	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**2.28**	2.00	µg/L	05/05/17 15:11	05/05/17 15:11	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**4.47**	2.00	µg/L	05/05/17 15:11	05/05/17 15:11	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	**4.88**	2.00	µg/L	05/05/17 15:11	05/05/17 15:11	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	**9.65**	4.00	µg/L	05/05/17 15:11	05/05/17 15:11	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**14.5**	6.00	µg/L	05/05/17 15:11	05/05/17 15:11	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*105 %*	*80-120*	*05/05/17 15:11*	*05/05/17 15:11*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*97.8 %*	*80-120*	*05/05/17 15:11*	*05/05/17 15:11*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*105 %*	*80-120*	*05/05/17 15:11*	*05/05/17 15:11*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.1 %*	*80-120*	*05/05/17 15:11*	*05/05/17 15:11*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1705028
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 05/09/17 16:16
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-2BR

1705028-11 (Aqueous) Sampled: 05/01/17 11:50

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/05/17 13:52	05/05/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/05/17 13:52	05/05/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	05/05/17 13:52	05/05/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/05/17 13:52	05/05/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/05/17 13:52	05/05/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/05/17 13:52	05/05/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/05/17 13:52	05/05/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	05/05/17 13:52	05/05/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	05/05/17 13:52	05/05/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	05/05/17 13:52	05/05/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/05/17 13:52	05/05/17 13:52	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*80-120*	*05/05/17 13:52*	*05/05/17 13:52*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*98.6 %*	*80-120*	*05/05/17 13:52*	*05/05/17 13:52*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*97.9 %*	*80-120*	*05/05/17 13:52*	*05/05/17 13:52*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.8 %*	*80-120*	*05/05/17 13:52*	*05/05/17 13:52*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1705028
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	05/09/17 16:16

MW-3BR

1705028-12 (Aqueous) Sampled: 05/01/17 13:21

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/05/17 14:19	05/05/17 14:19	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/05/17 14:19	05/05/17 14:19	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	05/05/17 14:19	05/05/17 14:19	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/05/17 14:19	05/05/17 14:19	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/05/17 14:19	05/05/17 14:19	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**5.67**	2.00	µg/L	05/05/17 14:19	05/05/17 14:19	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/05/17 14:19	05/05/17 14:19	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	05/05/17 14:19	05/05/17 14:19	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	05/05/17 14:19	05/05/17 14:19	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	05/05/17 14:19	05/05/17 14:19	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/05/17 14:19	05/05/17 14:19	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*80-120*	*05/05/17 14:19*	*05/05/17 14:19*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*100 %*	*80-120*	*05/05/17 14:19*	*05/05/17 14:19*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*102 %*	*80-120*	*05/05/17 14:19*	*05/05/17 14:19*	*EPA 8260 B*				
Surrogate: Toluene-d8		*98.6 %*	*80-120*	*05/05/17 14:19*	*05/05/17 14:19*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1705028
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	05/09/17 16:16

MW-4BR

1705028-13 (Aqueous) Sampled: 05/01/17 08:56

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**20.4**	2.00	µg/L	05/05/17 14:45	05/05/17 14:45	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	**6.81**	2.00	µg/L	05/05/17 14:45	05/05/17 14:45	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**22.6**	2.00	µg/L	05/05/17 14:45	05/05/17 14:45	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	**10.5**	2.00	µg/L	05/05/17 14:45	05/05/17 14:45	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/05/17 14:45	05/05/17 14:45	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/05/17 14:45	05/05/17 14:45	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**2.45**	2.00	µg/L	05/05/17 14:45	05/05/17 14:45	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**41.7**	2.00	µg/L	05/05/17 14:45	05/05/17 14:45	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	**31.1**	2.00	µg/L	05/05/17 14:45	05/05/17 14:45	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	**65.0**	4.00	µg/L	05/05/17 14:45	05/05/17 14:45	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**96.2**	6.00	µg/L	05/05/17 14:45	05/05/17 14:45	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*80-120*	*05/05/17 14:45*	*05/05/17 14:45*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*99.8 %*	*80-120*	*05/05/17 14:45*	*05/05/17 14:45*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*102 %*	*80-120*	*05/05/17 14:45*	*05/05/17 14:45*	*EPA 8260 B*				
Surrogate: Toluene-d8		*100 %*	*80-120*	*05/05/17 14:45*	*05/05/17 14:45*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1705028
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	05/09/17 16:16

EW-1

1705028-14 (Aqueous) Sampled: 05/01/17 13:53

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**1060**	200	µg/L	05/05/17 16:04	05/05/17 16:30	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**247**	10.0	µg/L	05/05/17 16:04	05/05/17 16:04	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**2470**	200	µg/L	05/05/17 16:04	05/05/17 16:30	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**828**	200	µg/L	05/05/17 16:04	05/05/17 16:30	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**55.6**	10.0	µg/L	05/05/17 16:04	05/05/17 16:04	EPA 5030B	EPA 8260 B	A	JMG	D1
MTBE	**10.2**	10.0	µg/L	05/05/17 16:04	05/05/17 16:04	EPA 5030B	EPA 8260 B	A	JMG	D1
Naphthalene	**229**	10.0	µg/L	05/05/17 16:04	05/05/17 16:04	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**4800**	200	µg/L	05/05/17 16:04	05/05/17 16:30	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene o	**1610**	200	µg/L	05/05/17 16:04	05/05/17 16:30	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene p/m	**3920**	400	µg/L	05/05/17 16:04	05/05/17 16:30	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**5530**	600	µg/L	05/05/17 16:04	05/05/17 16:30	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*97.5 %*	*80-120*	*05/05/17 16:04*	*05/05/17 16:04*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*	*05/05/17 16:04*	*05/05/17 16:04*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*102 %*	*80-120*	*05/05/17 16:04*	*05/05/17 16:04*	*EPA 8260 B*				
Surrogate: Toluene-d8		*98.8 %*	*80-120*	*05/05/17 16:04*	*05/05/17 16:04*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1705028
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	05/09/17 16:16

EW-1BR

1705028-15 (Aqueous) Sampled: 05/01/17 13:49

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**199**	20.0	µg/L	05/05/17 15:37	05/09/17 02:01	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**53.1**	2.00	µg/L	05/05/17 15:37	05/05/17 15:37	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**679**	20.0	µg/L	05/05/17 15:37	05/09/17 02:01	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**174**	20.0	µg/L	05/05/17 15:37	05/09/17 02:01	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**18.3**	2.00	µg/L	05/05/17 15:37	05/05/17 15:37	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**4.87**	2.00	µg/L	05/05/17 15:37	05/05/17 15:37	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**42.2**	2.00	µg/L	05/05/17 15:37	05/05/17 15:37	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**469**	20.0	µg/L	05/05/17 15:37	05/09/17 02:01	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene o	**173**	20.0	µg/L	05/05/17 15:37	05/09/17 02:01	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene p/m	**551**	40.0	µg/L	05/05/17 15:37	05/09/17 02:01	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**724**	60.0	µg/L	05/05/17 15:37	05/09/17 02:01	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*95.9 %*	*80-120*	*05/05/17 15:37*	*05/05/17 15:37*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*101 %*	*80-120*	*05/05/17 15:37*	*05/05/17 15:37*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*98.5 %*	*80-120*	*05/05/17 15:37*	*05/05/17 15:37*	*EPA 8260 B*				
Surrogate: Toluene-d8		*98.2 %*	*80-120*	*05/05/17 15:37*	*05/05/17 15:37*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1705028
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	05/09/17 16:16

Stream

1705028-16 (Aqueous) Sampled: 05/01/17 14:03

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/04/17 17:11	05/04/17 17:11	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/04/17 17:11	05/04/17 17:11	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	05/04/17 17:11	05/04/17 17:11	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/04/17 17:11	05/04/17 17:11	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/04/17 17:11	05/04/17 17:11	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/04/17 17:11	05/04/17 17:11	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/04/17 17:11	05/04/17 17:11	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	05/04/17 17:11	05/04/17 17:11	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	05/04/17 17:11	05/04/17 17:11	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	05/04/17 17:11	05/04/17 17:11	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/04/17 17:11	05/04/17 17:11	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*80-120*	*05/04/17 17:11*	*05/04/17 17:11*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*96.6 %*	*80-120*	*05/04/17 17:11*	*05/04/17 17:11*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*104 %*	*80-120*	*05/04/17 17:11*	*05/04/17 17:11*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.0 %*	*80-120*	*05/04/17 17:11*	*05/04/17 17:11*	*EPA 8260 B*				

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 1705028
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	05/09/17 16:16

Certifications

Code	Description	Number	Expires
MDDOE	Maryland Department of the Environment	257	06/30/2017
PADEP-Altoona	Pennsylvania Department of Environmental Protection	009	03/31/2018
WVDEP-Altoona	West Virginia Department of Environmental Protection	225	10/31/2017
PADEP-DuBois	Pennsylvania Department of Environmental Protection	008	09/30/2017
WVDEP-HydroChem	West Virginia Department of Environmental Protection	038	11/01/2017

Notes and Definitions

Na	Matrix spike spike recovery was outside of the laboratory acceptance criteria.
N	Matrix spike recovery was outside of the laboratory acceptance criteria.
D1	The sample was analyzed at a dilution.
CC	Calculated analytes are reported based on unrounded results of the individual analytes used in the calculation. Therefore, using the rounded values of the analytes as reported may lead to a result that varies slightly from the reported result.
RL	Reporting Limit - either the practical quantitation limit or the method detection limit
dry	Sample results reported on a dry weight basis
A	Analysis Performed by Mountain Research Altoona Laboratory - PADEP #07-00418, WVDEP #225
D	Analysis Performed by Mountain Research DuBois Laboratory - PADEP # 33-00258
W	Analysis Performed by Mountain Research - HydroChem Laboratory - WVDEP #038

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

Billing Group:	Phase:	PROJECT NAME
	SCR	Vennard's
MR Project #		SITE LOCATION
4644.15.01		Indiana, PA
CLIENT		SAMPLER(S)
Vennard's		BA

NOTES:
Received On Ice: (Y) / N
Sample Temp: 4.6 °C
Comp Set
Comments:
*

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110 McCracken Run Road, Dubois, PA 15801 (814) 371-6030 Fa

CHAIN OF CUSTODY RECORD

MR PROJ. MGR. MK

Shipping Carrier:

Turn Around Time:
10 Day X
3 Day
1 Day

Comments:

SAMPLE ID	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	8260B	Preserve	LAB NUMBER
TRIP BLANK	5/1/2017	0645	X		AQ	2 40mL VOA	2A	X	HCl	01
MW-1	5/1/2017	1325	X		AQ	2 40mL VOA	2A	X	HCl	02
MW-3	5/1/2017	1317	X		AQ	2 40mL VOA	2A	X	HCl	03
MW-4	5/1/2017	1311	X		AQ	2 40mL VOA	2A	X	HCl	04
MW-5	5/1/2017	1330	X		AQ	2 40mL VOA	2A	X	HCl	05
MW-6	5/1/2017	1047	X		AQ	2 40mL VOA	2A	X	HCl	06
MW-7	5/1/2017	1335	X		AQ	2 40mL VOA	2A	X	HCl	07
MW-8	5/1/2017	1346	X		AQ	2 40mL VOA	2A	X	HCl	08
MW-9	5/1/2017	1305	X		AQ	2 40mL VOA	2A	X	HCl	09
MW-1BR	5/1/2017	1342	X		AQ	2 40mL VOA	2A	X	HCl	10
MW-2BR	5/1/2017	1150	X		AQ	2 40mL VOA	2A	X	HCl	11
MW-3BR	5/1/2017	1321	X		AQ	2 40mL VOA	2A	X	HCl	12

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Lab Workorder #:
	5/1/17	1600	Stacy Eckenrod	05/01/17 1600	1705028
NQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Labeled By:

Log In Time: 1015
Staff: SMF
Date: 05/02/17

Pg 1 of 2

Billing Group:	Phase:	PROJECT NAME
	SCR	Vennard's
MR Project #		SITE LOCATION
4644.15.01		Indiana, PA
CLIENT		SAMPLER(S)
Vennard's		BA

NOTES:
Received On Ice: (Y) / N
Sample Temp: 4.6
Comp Set
Comments:

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CHAIN OF CUSTODY RECORD

MR PROJ. MGR. MK

Shipping Carrier:

Turn Around Time:
10 Day X
3 Day
1 Day

Comments:

SAMPLE ID	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	8260B	Preserve	LAB NUMBER
MW-43R	5/1/2017	0856	X		AQ	2 40mL VOA	2A	X	HCl	13
EW-1	5/1/2017	1353	X		AQ	2 40mL VOA	2A	X	HCl	14
EW-1BR	5/1/2017	1349	X		AQ	2 40mL VOA	2A	X	HCl	15
Stream	5/1/2017	1403	X		AQ	2 40mL VOA	2A	X	HCl	16

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Lab Workorder #:	Log In Time: 1015
	5/1/17	1600	Stacy Eckenrode	05/01/17 1600	1705028	Staff: SLG
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Labeled By:	Date: 05/02/17

Pg 2 of 2

MOUNTAIN RESEARCH SAMPLE RECEIPT PROTOCOL

WORK ORDER: 1705028

CLIENT: Vennard's

DATE SAMPLED: 05/01/17 DATE RECEIVED: 05/01/17 TIME RECEIVED: 1600

1. CHECK ALL THAT APPLY: PA ☑ WV ☐ MD ☐ P W S ☐ NPDES/COMPLIANCE ☐ DAIRY ☐ RUSH ☐
2. WERE ANY OF THE SAMPLE CONTAINERS DAMAGED/LEAKING? (ARE CUSTODY SEALS BROKEN?) YES ☐ NO ☑

IF YES, EXPLAIN: _____

3. NUMBER OF CONTAINERS RECEIVED: 32
4. WERE THE SAMPLES RECEIVED ON ICE/OTHER ACCEPTABLE REFRIGERANT? YES ☑ NO ☐

IF NO, EXPLAIN: _____

5. RECEIVING TEMP: 4.6 °C TEMP CONTROL(S) PRESENT YES ☐ NO ☐ BOTTLE(S) TEMPED: 1
6. WERE THE SAMPLES PROPERLY PRESERVED? YES ☑ NO ☐

IF NO, EXPLAIN: _____

7. WERE THE SAMPLES COLLECTED IN THE CORRECT CONTAINERS? YES ☑ NO ☐

IF NO, EXPLAIN: _____

8. IS THERE HEADSPACE PRESENT FOR VOLATILES/ODOR SAMPLES? YES ☐ NO ☑ N/A ☐
9. WAS THE COC FILLED OUT PROPERLY? YES ☑ NO ☐

IF NO, EXPLAIN: _____

10. DID THE SAMPLE LABEL(S) CONTAIN ADEQUATE INFO? (CLIENT/DATE/TIME/PRESERVATIVE) YES ☑ NO ☐

IF NO, EXPLAIN: _____

11. WERE ANY OF THE SAMPLES RECEIVED OUTSIDE OF HOLDING TIME? YES ☐ NO ☑

IF YES, EXPLAIN: _____

12. DO THE SAMPLES REQUIRE ANALYSES THAT HAVE A SHORT HOLDING TIME? YES ☐ NO ☑

IF YES, WHAT ANALYSES? _____ **PLEASE NOTIFY LABORATORY ANALYSTS!**

13. IS SUBCONTRACTING REQUIRED? YES ☐ NO ☑

IF YES, WHAT ANALYSES? _____

14. WAS THE CLIENT CONTACTED? YES ☐ NO ☑ IF YES, FILL OUT THE FOLLOWING:

MR EMPLOYEE INITIALS: CLIENT SPOKEN TO: DATE/TIME:

OUTCOME:

SIGNATURE: Stacy Eckhardt

MOUNTAIN RESEARCH, LLC

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28 August 2017

Lab ID #: 7080492

Richard Vennard
Vennard Crossroads Convenience, Inc
5190 White Oak Dr
Indiana, PA 15701

RE: Indiana, PA

Enclosed are the results of analyses for samples received by the laboratory on 08/15/17 15:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Stephen Gampe

Stephen Gampe
Assistant Laboratory Manager

Authorized Reviewer

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7080492
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/28/17 15:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Sample Type	Date Sampled	Date Received
Trip Blank	7080492-01	Aqueous	Grab	08/14/17 07:30	08/15/17 15:20
MW-1	7080492-02	Aqueous	Grab	08/14/17 09:39	08/15/17 15:20
MW-2	7080492-03	Aqueous	Grab	08/14/17 14:50	08/15/17 15:20
MW-3	7080492-04	Aqueous	Grab	08/14/17 14:00	08/15/17 15:20
MW-4	7080492-05	Aqueous	Grab	08/14/17 11:59	08/15/17 15:20
MW-5	7080492-06	Aqueous	Grab	08/14/17 14:08	08/15/17 15:20
MW-6	7080492-07	Aqueous	Grab	08/14/17 11:10	08/15/17 15:20
MW-7	7080492-08	Aqueous	Grab	08/14/17 11:44	08/15/17 15:20
MW-8	7080492-09	Aqueous	Grab	08/14/17 12:08	08/15/17 15:20
MW-9	7080492-10	Aqueous	Grab	08/14/17 13:07	08/15/17 15:20
MW-1BR	7080492-11	Aqueous	Grab	08/14/17 12:39	08/15/17 15:20
MW-2BR	7080492-12	Aqueous	Grab	08/14/17 11:29	08/15/17 15:20
MW-3BR	7080492-13	Aqueous	Grab	08/14/17 10:34	08/15/17 15:20
MW-4BR	7080492-14	Aqueous	Grab	08/14/17 13:26	08/15/17 15:20
EW-1	7080492-15	Aqueous	Grab	08/14/17 12:50	08/15/17 15:20
EW-1BR	7080492-16	Aqueous	Grab	08/14/17 14:18	08/15/17 15:20
Stream	7080492-17	Aqueous	Grab	08/14/17 13:33	08/15/17 15:20
Duplicate	7080492-18	Aqueous	Grab	08/14/17 00:00	08/15/17 15:20

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7080492
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/28/17 15:34

Trip Blank

7080492-01 (Aqueous) Sampled: 08/14/17 07:30

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	08/22/17 01:44	08/22/17 01:44	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	08/22/17 01:44	08/22/17 01:44	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	08/22/17 01:44	08/22/17 01:44	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	08/22/17 01:44	08/22/17 01:44	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	08/22/17 01:44	08/22/17 01:44	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	08/22/17 01:44	08/22/17 01:44	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	08/22/17 01:44	08/22/17 01:44	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	08/22/17 01:44	08/22/17 01:44	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	08/22/17 01:44	08/22/17 01:44	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*113 %*	*80-120*	*08/22/17 01:44*	*08/22/17 01:44*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*92.4 %*	*80-120*	*08/22/17 01:44*	*08/22/17 01:44*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*114 %*	*80-120*	*08/22/17 01:44*	*08/22/17 01:44*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.3 %*	*80-120*	*08/22/17 01:44*	*08/22/17 01:44*	*EPA 8260 B*				

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7080492
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/28/17 15:34

MW-1

7080492-02 (Aqueous) Sampled: 08/14/17 09:39

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	08/21/17 16:11	08/21/17 16:11	EPA 5030B	EPA 8260 B	A	JMG	Na
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	08/21/17 16:11	08/21/17 16:11	EPA 5030B	EPA 8260 B	A	JMG	Na
Benzene	<2.00	2.00	µg/L	08/21/17 16:11	08/21/17 16:11	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	08/21/17 16:11	08/21/17 16:11	EPA 5030B	EPA 8260 B	A	JMG	N
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	08/21/17 16:11	08/21/17 16:11	EPA 5030B	EPA 8260 B	A	JMG	Na
MTBE	**2.23**	2.00	µg/L	08/21/17 16:11	08/21/17 16:11	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	08/21/17 16:11	08/21/17 16:11	EPA 5030B	EPA 8260 B	A	JMG	Na
Toluene	<2.00	2.00	µg/L	08/21/17 16:11	08/21/17 16:11	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	08/21/17 16:11	08/21/17 16:11	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*107 %*		*80-120*	*08/21/17 16:11*	*08/21/17 16:11*	*EPA 8260 B*			
Surrogate: 4-Bromofluorobenzene		*93.1 %*		*80-120*	*08/21/17 16:11*	*08/21/17 16:11*	*EPA 8260 B*			
Surrogate: Dibromofluoromethane		*115 %*		*80-120*	*08/21/17 16:11*	*08/21/17 16:11*	*EPA 8260 B*			
Surrogate: Toluene-d8		*98.5 %*		*80-120*	*08/21/17 16:11*	*08/21/17 16:11*	*EPA 8260 B*			

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7080492
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/28/17 15:34

MW-2

7080492-03 (Aqueous) Sampled: 08/14/17 14:50

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**858**	10.0	µg/L	08/27/17 21:13	08/27/17 21:13	EPA 5030B	EPA 8260 B	A	JMG	D1, X
1,3,5-Trimethylbenzene	**346**	10.0	µg/L	08/27/17 21:13	08/27/17 21:13	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**703**	10.0	µg/L	08/27/17 21:13	08/27/17 21:13	EPA 5030B	EPA 8260 B	A	JMG	D1, X
Ethylbenzene	**505**	10.0	µg/L	08/27/17 21:13	08/27/17 21:13	EPA 5030B	EPA 8260 B	A	JMG	D1, X
Isopropylbenzene (Cumene)	**83.3**	10.0	µg/L	08/27/17 21:13	08/27/17 21:13	EPA 5030B	EPA 8260 B	A	JMG	D1
MTBE	**10.4**	10.0	µg/L	08/27/17 21:13	08/27/17 21:13	EPA 5030B	EPA 8260 B	A	JMG	D1
Naphthalene	**274**	10.0	µg/L	08/27/17 21:13	08/27/17 21:13	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**927**	10.0	µg/L	08/27/17 21:13	08/27/17 21:13	EPA 5030B	EPA 8260 B	A	JMG	D1, X
Xylenes, Total	**2310**	30.0	µg/L	08/27/17 21:13	08/27/17 21:13	EPA 5030B	EPA 8260 B	A	JMG	CC, D1, X
Surrogate: 1,2-Dichloroethane-d4		*99.4 %*	*80-120*	*08/27/17 21:13*	*08/27/17 21:13*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*96.6 %*	*80-120*	*08/27/17 21:13*	*08/27/17 21:13*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*109 %*	*80-120*	*08/27/17 21:13*	*08/27/17 21:13*	*EPA 8260 B*				
Surrogate: Toluene-d8		*101 %*	*80-120*	*08/27/17 21:13*	*08/27/17 21:13*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7080492
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/28/17 15:34

MW-3

7080492-04 (Aqueous) Sampled: 08/14/17 14:00

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	08/22/17 00:53	08/22/17 00:53	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	08/22/17 00:53	08/22/17 00:53	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	08/22/17 00:53	08/22/17 00:53	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	08/22/17 00:53	08/22/17 00:53	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	08/22/17 00:53	08/22/17 00:53	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	08/22/17 00:53	08/22/17 00:53	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	08/22/17 00:53	08/22/17 00:53	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	08/22/17 00:53	08/22/17 00:53	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	08/22/17 00:53	08/22/17 00:53	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*80-120*	*08/22/17 00:53*	*08/22/17 00:53*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*94.0 %*	*80-120*	*08/22/17 00:53*	*08/22/17 00:53*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*113 %*	*80-120*	*08/22/17 00:53*	*08/22/17 00:53*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.3 %*	*80-120*	*08/22/17 00:53*	*08/22/17 00:53*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7080492
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/28/17 15:34

MW-4

7080492-05 (Aqueous) Sampled: 08/14/17 11:59

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**41.3**	2.00	µg/L	08/19/17 07:14	08/19/17 07:14	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	08/19/17 07:14	08/19/17 07:14	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**162**	10.0	µg/L	08/19/17 07:14	08/27/17 21:39	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**195**	10.0	µg/L	08/19/17 07:14	08/27/17 21:39	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**17.4**	2.00	µg/L	08/19/17 07:14	08/19/17 07:14	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**6.43**	2.00	µg/L	08/19/17 07:14	08/19/17 07:14	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**35.4**	10.0	µg/L	08/19/17 07:14	08/27/17 21:39	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	<2.00	2.00	µg/L	08/19/17 07:14	08/19/17 07:14	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	08/19/17 07:14	08/19/17 07:14	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*99.8 %*	*80-120*	*08/19/17 07:14*	*08/19/17 07:14*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*	*08/19/17 07:14*	*08/19/17 07:14*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*95.5 %*	*80-120*	*08/19/17 07:14*	*08/19/17 07:14*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.0 %*	*80-120*	*08/19/17 07:14*	*08/19/17 07:14*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7080492
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/28/17 15:34

MW-5

7080492-06 (Aqueous) Sampled: 08/14/17 14:08

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	08/22/17 02:10	08/22/17 02:10	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	08/22/17 02:10	08/22/17 02:10	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	08/22/17 02:10	08/22/17 02:10	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	08/22/17 02:10	08/22/17 02:10	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	08/22/17 02:10	08/22/17 02:10	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**2.65**	2.00	µg/L	08/22/17 02:10	08/22/17 02:10	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	08/22/17 02:10	08/22/17 02:10	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	08/22/17 02:10	08/22/17 02:10	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	08/22/17 02:10	08/22/17 02:10	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*109 %*		*80-120*	*08/22/17 02:10*	*08/22/17 02:10*	*EPA 8260 B*			
Surrogate: 4-Bromofluorobenzene		*91.5 %*		*80-120*	*08/22/17 02:10*	*08/22/17 02:10*	*EPA 8260 B*			
Surrogate: Dibromofluoromethane		*116 %*		*80-120*	*08/22/17 02:10*	*08/22/17 02:10*	*EPA 8260 B*			
Surrogate: Toluene-d8		*99.3 %*		*80-120*	*08/22/17 02:10*	*08/22/17 02:10*	*EPA 8260 B*			

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7080492
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/28/17 15:34

MW-6

7080492-07 (Aqueous) Sampled: 08/14/17 11:10

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	08/22/17 20:24	08/22/17 20:24	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	08/22/17 20:24	08/22/17 20:24	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	08/22/17 20:24	08/22/17 20:24	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	08/22/17 20:24	08/22/17 20:24	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	08/22/17 20:24	08/22/17 20:24	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	08/22/17 20:24	08/22/17 20:24	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	08/22/17 20:24	08/22/17 20:24	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	08/22/17 20:24	08/22/17 20:24	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	08/22/17 20:24	08/22/17 20:24	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*80-120*	*08/22/17 20:24*	*08/22/17 20:24*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*95.4 %*	*80-120*	*08/22/17 20:24*	*08/22/17 20:24*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*107 %*	*80-120*	*08/22/17 20:24*	*08/22/17 20:24*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.5 %*	*80-120*	*08/22/17 20:24*	*08/22/17 20:24*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7080492
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/28/17 15:34

MW-7

7080492-08 (Aqueous) Sampled: 08/14/17 11:44

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**4.43**	2.00	µg/L	08/22/17 02:36	08/22/17 02:36	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	08/22/17 02:36	08/22/17 02:36	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**52.4**	2.00	µg/L	08/22/17 02:36	08/22/17 02:36	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	**13.5**	2.00	µg/L	08/22/17 02:36	08/22/17 02:36	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	08/22/17 02:36	08/22/17 02:36	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	08/22/17 02:36	08/22/17 02:36	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	08/22/17 02:36	08/22/17 02:36	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**7.16**	2.00	µg/L	08/22/17 02:36	08/22/17 02:36	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**10.1**	6.00	µg/L	08/22/17 02:36	08/22/17 02:36	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*105 %*	*80-120*	*08/22/17 02:36*	*08/22/17 02:36*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*93.7 %*	*80-120*	*08/22/17 02:36*	*08/22/17 02:36*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*115 %*	*80-120*	*08/22/17 02:36*	*08/22/17 02:36*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.0 %*	*80-120*	*08/22/17 02:36*	*08/22/17 02:36*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7080492
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/28/17 15:34

MW-8

7080492-09 (Aqueous) Sampled: 08/14/17 12:08

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**714**	50.0	µg/L	08/27/17 22:05	08/27/17 22:05	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**125**	50.0	µg/L	08/27/17 22:05	08/27/17 22:05	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**2830**	50.0	µg/L	08/27/17 22:05	08/27/17 22:05	EPA 5030B	EPA 8260 B	A	JMG	D1, X
Ethylbenzene	**703**	50.0	µg/L	08/27/17 22:05	08/27/17 22:05	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**50.5**	50.0	µg/L	08/27/17 22:05	08/27/17 22:05	EPA 5030B	EPA 8260 B	A	JMG	D1
MTBE	<50.0	50.0	µg/L	08/27/17 22:05	08/27/17 22:05	EPA 5030B	EPA 8260 B	A	JMG	D1
Naphthalene	**222**	50.0	µg/L	08/27/17 22:05	08/27/17 22:05	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**1160**	50.0	µg/L	08/27/17 22:05	08/27/17 22:05	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**2770**	150	µg/L	08/27/17 22:05	08/27/17 22:05	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*107 %*	*80-120*	*08/27/17 22:05*	*08/27/17 22:05*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*94.0 %*	*80-120*	*08/27/17 22:05*	*08/27/17 22:05*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*110 %*	*80-120*	*08/27/17 22:05*	*08/27/17 22:05*	*EPA 8260 B*				
Surrogate: Toluene-d8		*101 %*	*80-120*	*08/27/17 22:05*	*08/27/17 22:05*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7080492
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/28/17 15:34

MW-9

7080492-10 (Aqueous) Sampled: 08/14/17 13:07

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**27.8**	2.00	µg/L	08/27/17 19:54	08/27/17 19:54	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	**8.87**	2.00	µg/L	08/27/17 19:54	08/27/17 19:54	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**55.4**	2.00	µg/L	08/27/17 19:54	08/27/17 19:54	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	**4.97**	2.00	µg/L	08/27/17 19:54	08/27/17 19:54	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	**2.89**	2.00	µg/L	08/27/17 19:54	08/27/17 19:54	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	08/27/17 19:54	08/27/17 19:54	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**3.51**	2.00	µg/L	08/27/17 19:54	08/27/17 19:54	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**15.7**	2.00	µg/L	08/27/17 19:54	08/27/17 19:54	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**51.2**	6.00	µg/L	08/27/17 19:54	08/27/17 19:54	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*96.0 %*	*80-120*	*08/27/17 19:54*	*08/27/17 19:54*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*94.2 %*	*80-120*	*08/27/17 19:54*	*08/27/17 19:54*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*113 %*	*80-120*	*08/27/17 19:54*	*08/27/17 19:54*	*EPA 8260 B*				
Surrogate: Toluene-d8		*100 %*	*80-120*	*08/27/17 19:54*	*08/27/17 19:54*	*EPA 8260 B*				

Mountain Research, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7080492
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/28/17 15:34

MW-1BR

7080492-11 (Aqueous) Sampled: 08/14/17 12:39

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**2.10**	2.00	µg/L	08/27/17 20:21	08/27/17 20:21	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	08/27/17 20:21	08/27/17 20:21	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**106**	2.00	µg/L	08/27/17 20:21	08/27/17 20:21	EPA 5030B	EPA 8260 B	A	JMG	X
Ethylbenzene	**7.55**	2.00	µg/L	08/27/17 20:21	08/27/17 20:21	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	08/27/17 20:21	08/27/17 20:21	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**2.62**	2.00	µg/L	08/27/17 20:21	08/27/17 20:21	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	08/27/17 20:21	08/27/17 20:21	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**3.27**	2.00	µg/L	08/27/17 20:21	08/27/17 20:21	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	08/27/17 20:21	08/27/17 20:21	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*80-120*	*08/27/17 20:21*	*08/27/17 20:21*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*95.2 %*	*80-120*	*08/27/17 20:21*	*08/27/17 20:21*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*112 %*	*80-120*	*08/27/17 20:21*	*08/27/17 20:21*	*EPA 8260 B*				
Surrogate: Toluene-d8		*101 %*	*80-120*	*08/27/17 20:21*	*08/27/17 20:21*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7080492
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/28/17 15:34

MW-2BR

7080492-12 (Aqueous) Sampled: 08/14/17 11:29

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	08/27/17 18:35	08/27/17 18:35	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	08/27/17 18:35	08/27/17 18:35	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	08/27/17 18:35	08/27/17 18:35	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	08/27/17 18:35	08/27/17 18:35	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	08/27/17 18:35	08/27/17 18:35	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	08/27/17 18:35	08/27/17 18:35	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	08/27/17 18:35	08/27/17 18:35	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	08/27/17 18:35	08/27/17 18:35	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	08/27/17 18:35	08/27/17 18:35	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*96.8 %*	*80-120*	*08/27/17 18:35*	*08/27/17 18:35*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*95.4 %*	*80-120*	*08/27/17 18:35*	*08/27/17 18:35*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*114 %*	*80-120*	*08/27/17 18:35*	*08/27/17 18:35*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.7 %*	*80-120*	*08/27/17 18:35*	*08/27/17 18:35*	*EPA 8260 B*				

Mountain Research, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7080492
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/28/17 15:34

MW-3BR

7080492-13 (Aqueous) Sampled: 08/14/17 10:34

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	08/27/17 19:02	08/27/17 19:02	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	08/27/17 19:02	08/27/17 19:02	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	08/27/17 19:02	08/27/17 19:02	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	08/27/17 19:02	08/27/17 19:02	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	08/27/17 19:02	08/27/17 19:02	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**9.46**	2.00	µg/L	08/27/17 19:02	08/27/17 19:02	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	08/27/17 19:02	08/27/17 19:02	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	08/27/17 19:02	08/27/17 19:02	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	08/27/17 19:02	08/27/17 19:02	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*80-120*	*08/27/17 19:02*	*08/27/17 19:02*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*95.6 %*	*80-120*	*08/27/17 19:02*	*08/27/17 19:02*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*109 %*	*80-120*	*08/27/17 19:02*	*08/27/17 19:02*	*EPA 8260 B*				
Surrogate: Toluene-d8		*101 %*	*80-120*	*08/27/17 19:02*	*08/27/17 19:02*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7080492
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/28/17 15:34

MW-4BR

7080492-14 (Aqueous) Sampled: 08/14/17 13:26

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	08/27/17 20:47	08/27/17 20:47	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	08/27/17 20:47	08/27/17 20:47	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	08/27/17 20:47	08/27/17 20:47	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	08/27/17 20:47	08/27/17 20:47	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	08/27/17 20:47	08/27/17 20:47	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	08/27/17 20:47	08/27/17 20:47	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	08/27/17 20:47	08/27/17 20:47	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	08/27/17 20:47	08/27/17 20:47	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	08/27/17 20:47	08/27/17 20:47	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*80-120*	*08/27/17 20:47*	*08/27/17 20:47*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*94.6 %*	*80-120*	*08/27/17 20:47*	*08/27/17 20:47*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*113 %*	*80-120*	*08/27/17 20:47*	*08/27/17 20:47*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.9 %*	*80-120*	*08/27/17 20:47*	*08/27/17 20:47*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7080492
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/28/17 15:34

EW-1

7080492-15 (Aqueous) Sampled: 08/14/17 12:50

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**275**	10.0	µg/L	08/27/17 22:32	08/27/17 22:32	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**84.2**	10.0	µg/L	08/27/17 22:32	08/27/17 22:32	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**171**	10.0	µg/L	08/27/17 22:32	08/27/17 22:32	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**93.3**	10.0	µg/L	08/27/17 22:32	08/27/17 22:32	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**14.7**	10.0	µg/L	08/27/17 22:32	08/27/17 22:32	EPA 5030B	EPA 8260 B	A	JMG	D1
MTBE	<10.0	10.0	µg/L	08/27/17 22:32	08/27/17 22:32	EPA 5030B	EPA 8260 B	A	JMG	D1
Naphthalene	**49.2**	10.0	µg/L	08/27/17 22:32	08/27/17 22:32	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**191**	10.0	µg/L	08/27/17 22:32	08/27/17 22:32	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**536**	30.0	µg/L	08/27/17 22:32	08/27/17 22:32	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*91.5 %*	*80-120*	*08/27/17 22:32*	*08/27/17 22:32*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*94.9 %*	*80-120*	*08/27/17 22:32*	*08/27/17 22:32*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*113 %*	*80-120*	*08/27/17 22:32*	*08/27/17 22:32*	*EPA 8260 B*				
Surrogate: Toluene-d8		*100 %*	*80-120*	*08/27/17 22:32*	*08/27/17 22:32*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7080492
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/28/17 15:34

EW-1BR

7080492-16 (Aqueous) Sampled: 08/14/17 14:18

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**343**	50.0	µg/L	08/19/17 08:06	08/27/17 22:58	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**99.9**	2.00	µg/L	08/19/17 08:06	08/19/17 08:06	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**2040**	50.0	µg/L	08/19/17 08:06	08/27/17 22:58	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**375**	50.0	µg/L	08/19/17 08:06	08/27/17 22:58	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**41.5**	2.00	µg/L	08/19/17 08:06	08/19/17 08:06	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**19.0**	2.00	µg/L	08/19/17 08:06	08/19/17 08:06	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**101**	50.0	µg/L	08/19/17 08:06	08/27/17 22:58	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**827**	50.0	µg/L	08/19/17 08:06	08/27/17 22:58	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**1490**	150	µg/L	08/19/17 08:06	08/27/17 22:58	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*96.7 %*	*80-120*	*08/19/17 08:06*	*08/19/17 08:06*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*	*08/19/17 08:06*	*08/19/17 08:06*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*87.0 %*	*80-120*	*08/19/17 08:06*	*08/19/17 08:06*	*EPA 8260 B*				
Surrogate: Toluene-d8		*95.6 %*	*80-120*	*08/19/17 08:06*	*08/19/17 08:06*	*EPA 8260 B*				

Mountain Research, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7080492
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/28/17 15:34

Stream

7080492-17 (Aqueous) Sampled: 08/14/17 13:33

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	08/27/17 19:28	08/27/17 19:28	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	08/27/17 19:28	08/27/17 19:28	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	08/27/17 19:28	08/27/17 19:28	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	08/27/17 19:28	08/27/17 19:28	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	08/27/17 19:28	08/27/17 19:28	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	08/27/17 19:28	08/27/17 19:28	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	08/27/17 19:28	08/27/17 19:28	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	08/27/17 19:28	08/27/17 19:28	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	08/27/17 19:28	08/27/17 19:28	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*80-120*	*08/27/17 19:28*	*08/27/17 19:28*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*96.4 %*	*80-120*	*08/27/17 19:28*	*08/27/17 19:28*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*114 %*	*80-120*	*08/27/17 19:28*	*08/27/17 19:28*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.8 %*	*80-120*	*08/27/17 19:28*	*08/27/17 19:28*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7080492
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/28/17 15:34

Duplicate

7080492-18 (Aqueous) Sampled: 08/14/17 00:00

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	08/23/17 00:43	08/23/17 00:43	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	08/23/17 00:43	08/23/17 00:43	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	08/23/17 00:43	08/23/17 00:43	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	08/23/17 00:43	08/23/17 00:43	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	08/23/17 00:43	08/23/17 00:43	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**9.23**	2.00	µg/L	08/23/17 00:43	08/23/17 00:43	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	08/23/17 00:43	08/23/17 00:43	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	08/23/17 00:43	08/23/17 00:43	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	08/23/17 00:43	08/23/17 00:43	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*111 %*	*80-120*	*08/23/17 00:43*	*08/23/17 00:43*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*88.9 %*	*80-120*	*08/23/17 00:43*	*08/23/17 00:43*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*114 %*	*80-120*	*08/23/17 00:43*	*08/23/17 00:43*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.7 %*	*80-120*	*08/23/17 00:43*	*08/23/17 00:43*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7080492
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	08/28/17 15:34

Certifications

Code	Description	Number	Expires
MDDOE	Maryland Department of the Environment	257	06/30/2017
PADEP-Altoona	Pennsylvania Department of Environmental Protection	009	03/31/2018
WVDEP-Altoona	West Virginia Department of Environmental Protection	225	10/31/2017
PADEP-DuBois	Pennsylvania Department of Environmental Protection	008	09/30/2017
WVDEP-HydroChem	West Virginia Department of Environmental Protection	038	11/01/2017

Notes and Definitions

X	The result is estimated because it was over the analysis calibration range.
Na	Matrix spike and matrix duplicate spike recovery was outside of the laboratory acceptance criteria.
N	Matrix duplicate spike recovery was outside of the laboratory acceptance criteria.
D1	The sample was analyzed at a dilution.
CC	Calculated analytes are reported based on unrounded results of the individual analytes used in the calculation. Therefore, using the rounded values of the analytes as reported may lead to a result that varies slightly from the reported result.
RL	Reporting Limit - either the practical quantitation limit or the method detection limit
dry	Sample results reported on a dry weight basis
A	Analysis Performed by Mountain Research Altoona Laboratory - PADEP #07-00418, WVDEP #225
D	Analysis Performed by Mountain Research DuBois Laboratory - PADEP # 33-00258
W	Analysis Performed by Mountain Research - HydroChem Laboratory - WVDEP #038

Billing Group:	Phase:	PROJECT NAME
	SCR	Vennard's
MR Project #		SITE LOCATION
4644.15.01		Indiana, PA
CLIENT		SAMPLER(S)
Vennard's		BA

NOTES:
Received On Ice: Y / N
Sample Temp: 1.2
Comp Set
Comments:

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110 McCracken Run Road, Dubois, PA 15801 (814) 371-

CHAIN OF CUSTODY RECORD

MR PROJ. MGR. MK

Shipping Carrier:

Turn Around Time:
10 Day X
3 Day
1 Day

Comments:
MW-2 HIGH ODOR, PRODUCT IN WELL

SAMPLE ID	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	8260B	Preserve	LAB NUMBER
TRIP BLANK	8/14/2017	0730	X		AQ	2 40mL VOA	2A,4A	X	HCl	01
MW-1	8/14/2017	0939	X		AQ	2 40mL VOA	2A,4A	X	HCl	02
MW-2	8/14/2017	1450	X		AQ	2 40mL VOA	2A,4A	X	HCl	03
MW-3	8/14/2017	1400	X		AQ	2 40mL VOA	2A,4A	X	HCl	04
MW-4	8/14/2017	1159	X		AQ	2 40mL VOA	2A,4A	X	HCl	05
MW-5	8/14/2017	1408	X		AQ	2 40mL VOA	2A,4A	X	HCl	06
MW-6	8/14/2017	1110	X		AQ	2 40mL VOA	2A,4A	X	HCl	07
MW-7	8/14/2017	1144	X		AQ	2 40mL VOA	2A,4A	X	HCl	08
MW-8	8/14/2017	1208	X		AQ	2 40mL VOA	2A,4A	X	HCl	09
MW-9	8/14/2017	1307	X		AQ	2 40mL VOA	2A,4A	X	HCl	10
MW-1BR	8/14/2017	1239	X		AQ	2 40mL VOA	2A,4A	X	HCl	11
MW-2BR	8/14/2017	1129	X		AQ	2 40mL VOA	2A,4A	X	HCl	12

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Lab Workorder #	Log In Time:
	8/15/17	1520		15:20 8-15-17	7080492	1443
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Labeled By:	Staff: KL
						Date: 8/16/17

Page 22 of 24

1/2

Billing Group:	Phase:	PROJECT NAME
	SCR	Vennard's
MR Project #		SITE LOCATION
4644.15.01		Indiana, PA
CLIENT		SAMPLER(S)
Vennard's		BA

NOTES:
Received On Ice: (Y) / N
Sample Temp: 1.2
Comp Set
Comments:

MOUNTAIN RESEARCH LLC

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CHAIN OF CUSTODY RECORD

MR PROJ. MGR. MK

Shipping Carrier:

Turn Around Time:
10 Day X
3 Day
1 Day

Comments:

SAMPLE ID	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	8260B	Preserve	LAB NUMBER
MW-3BR	8/14/2017	1034	X		AQ	2 40mL VOA	2A,4A	X	HCl	13
MW-4BR	8/14/2017	1326	X		AQ	2 40mL VOA	2A,4A	X	HCl	14
EW-1	8/14/2017	1250	X		AQ	2 40mL VOA	2A,4A	X	HCl	15
EW-1BR	8/14/2017	1418	X		AQ	2 40mL VOA	2A,4A	X	HCl	16
Stream	8/14/2017	1333	X		AQ	2 40mL VOA	2A,4A	X	HCl	17
Duplicate			X		AQ	3 40mL VOA	2A,4A	X	HCl	18

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Lab Workorder #:	Log In Time: 1443
	8/15/17	1520		15:20 8-15-17	7080492	Staff: KL
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Labeled By:	Date: 8/16/17

2/2

MOUNTAIN RESEARCH SAMPLE RECEIPT PROTOCOL

WORK ORDER: 7080492

CLIENT: Dennards

DATE SAMPLED: 8/14/17 DATE RECEIVED: 8/16/17 TIME RECEIVED: 15:20

1. CHECK ALL THAT APPLY: PA ☐ WV ☐ MD ☐ P W S ☐ NPDES/COMPLIANCE ☐ DAIRY ☐ RUSH ☐
2. WERE ANY OF THE SAMPLE CONTAINERS DAMAGED/LEAKING? (ARE CUSTODY SEALS BROKEN?) YES ☐ NO ☐

IF YES, EXPLAIN: _____

3. NUMBER OF CONTAINERS RECEIVED: 36
4. WERE THE SAMPLES RECEIVED ON ICE/OTHER ACCEPTABLE REFRIGERANT? YES ☐ NO ☐

IF NO, EXPLAIN: _____

5. RECEIVING TEMP: 1.2 °C TEMP CONTROL(S) PRESENT YES ☐ NO ☐ BOTTLE(S) TEMPED: _____
6. WERE THE SAMPLES PROPERLY PRESERVED? YES ☐ NO ☐

IF NO, EXPLAIN: _____

7. WERE THE SAMPLES COLLECTED IN THE CORRECT CONTAINERS? YES ☐ NO ☐

IF NO, EXPLAIN: _____

8. IS THERE HEADSPACE PRESENT FOR VOLATILES/ODOR SAMPLES? YES ☐ NO ☐ N/A ☐
9. WAS THE COC FILLED OUT PROPERLY? YES ☐ NO ☐

IF NO, EXPLAIN: _____

10. DID THE SAMPLE LABEL(S) CONTAIN ADEQUATE INFO? (CLIENT/DATE/TIME/PRESERVATIVE) YES ☐ NO ☐

IF NO, EXPLAIN: _____

11. WERE ANY OF THE SAMPLES RECEIVED OUTSIDE OF HOLDING TIME? YES ☐ NO ☐

IF YES, EXPLAIN: _____

12. DO THE SAMPLES REQUIRE ANALYSES THAT HAVE A SHORT HOLDING TIME? YES ☐ NO ☐

IF YES, WHAT ANALYSES? _____ **PLEASE NOTIFY LABORATORY ANALYSTS!**

13. IS SUBCONTRACTING REQUIRED? YES ☐ NO ☐

IF YES, WHAT ANALYSES? _____

14. WAS THE CLIENT CONTACTED? YES ☐ NO ☐ IF YES, FILL OUT THE FOLLOWING:

MR EMPLOYEE INITIALS: _____ CLIENT SPOKEN TO: _____ DATE/TIME: _____

OUTCOME: _____

SIGNATURE: _____

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06 October 2017

Lab ID #: 7090610

Richard Vennard
Vennard Crossroads Convenience, Inc
5190 White Oak Dr
Indiana, PA 15701

RE: Indiana, PA

Enclosed are the results of analyses for samples received by the laboratory on 09/22/17 08:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Stephen Gampe

Stephen Gampe
Assistant Laboratory Manager

Authorized Reviewer

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Sample Type	Date Sampled	Date Received
Trip Blank	7090610-01	Aqueous	Grab	09/20/17 17:00	09/22/17 08:15
MW-1	7090610-02	Aqueous	Grab	09/21/17 12:50	09/22/17 08:15
MW-2	7090610-03	Aqueous	Grab	09/21/17 13:35	09/22/17 08:15
MW-3	7090610-04	Aqueous	Grab	09/21/17 09:50	09/22/17 08:15
MW-4	7090610-05	Aqueous	Grab	09/21/17 11:27	09/22/17 08:15
MW-5	7090610-06	Aqueous	Grab	09/21/17 10:06	09/22/17 08:15
MW-6	7090610-07	Aqueous	Grab	09/21/17 10:24	09/22/17 08:15
MW-7	7090610-08	Aqueous	Grab	09/21/17 11:09	09/22/17 08:15
MW-8	7090610-09	Aqueous	Grab	09/21/17 11:36	09/22/17 08:15
MW-9	7090610-10	Aqueous	Grab	09/21/17 12:05	09/22/17 08:15
MW-11	7090610-11	Aqueous	Grab	09/21/17 14:55	09/22/17 08:15
MW-12	7090610-12	Aqueous	Grab	09/21/17 14:41	09/22/17 08:15
MW-1BR	7090610-13	Aqueous	Grab	09/21/17 11:59	09/22/17 08:15
MW-2BR	7090610-14	Aqueous	Grab	09/21/17 10:56	09/22/17 08:15
MW-3BR	7090610-15	Aqueous	Grab	09/21/17 09:43	09/22/17 08:15
MW-4BR	7090610-16	Aqueous	Grab	09/21/17 12:24	09/22/17 08:15
MW-5BR	7090610-17	Aqueous	Grab	09/21/17 14:15	09/22/17 08:15
Stream	7090610-18	Aqueous	Grab	09/21/17 12:44	09/22/17 08:15
Duplicate	7090610-19	Aqueous	Grab	09/21/17 00:00	09/22/17 08:15

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

Trip Blank

7090610-01 (Aqueous) Sampled: 09/20/17 17:00

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	09/27/17 18:40	09/27/17 18:40	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	09/27/17 18:40	09/27/17 18:40	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	09/27/17 18:40	09/27/17 18:40	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	09/27/17 18:40	09/27/17 18:40	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	09/27/17 18:40	09/27/17 18:40	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	09/27/17 18:40	09/27/17 18:40	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	09/27/17 18:40	09/27/17 18:40	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	09/27/17 18:40	09/27/17 18:40	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	09/27/17 18:40	09/27/17 18:40	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*95.5 %*	*80-120*	*09/27/17 18:40*	*09/27/17 18:40*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*93.8 %*	*80-120*	*09/27/17 18:40*	*09/27/17 18:40*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*98.1 %*	*80-120*	*09/27/17 18:40*	*09/27/17 18:40*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.7 %*	*80-120*	*09/27/17 18:40*	*09/27/17 18:40*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

MW-1

7090610-02 (Aqueous) Sampled: 09/21/17 12:50

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	09/27/17 19:06	09/27/17 19:06	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	09/27/17 19:06	09/27/17 19:06	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	09/27/17 19:06	09/27/17 19:06	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	09/27/17 19:06	09/27/17 19:06	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	09/27/17 19:06	09/27/17 19:06	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	09/27/17 19:06	09/27/17 19:06	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	09/27/17 19:06	09/27/17 19:06	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	09/27/17 19:06	09/27/17 19:06	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	09/27/17 19:06	09/27/17 19:06	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*93.8 %*	*80-120*	*09/27/17 19:06*	*09/27/17 19:06*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*95.8 %*	*80-120*	*09/27/17 19:06*	*09/27/17 19:06*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*98.0 %*	*80-120*	*09/27/17 19:06*	*09/27/17 19:06*	*EPA 8260 B*				
Surrogate: Toluene-d8		*98.3 %*	*80-120*	*09/27/17 19:06*	*09/27/17 19:06*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

MW-2

7090610-03 (Aqueous) Sampled: 09/21/17 13:35

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**1030**	50.0	µg/L	09/27/17 19:32	09/27/17 19:58	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**358**	10.0	µg/L	09/27/17 19:32	09/27/17 19:32	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**779**	50.0	µg/L	09/27/17 19:32	09/27/17 19:58	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**522**	50.0	µg/L	09/27/17 19:32	09/27/17 19:58	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**74.4**	10.0	µg/L	09/27/17 19:32	09/27/17 19:32	EPA 5030B	EPA 8260 B	A	JMG	D1
MTBE	<10.0	10.0	µg/L	09/27/17 19:32	09/27/17 19:32	EPA 5030B	EPA 8260 B	A	JMG	D1
Naphthalene	**297**	10.0	µg/L	09/27/17 19:32	09/27/17 19:32	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**1090**	50.0	µg/L	09/27/17 19:32	09/27/17 19:58	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**2510**	150	µg/L	09/27/17 19:32	09/27/17 19:58	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*96.9 %*	*80-120*	*09/27/17 19:32*	*09/27/17 19:32*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*	*09/27/17 19:32*	*09/27/17 19:32*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*96.0 %*	*80-120*	*09/27/17 19:32*	*09/27/17 19:32*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.3 %*	*80-120*	*09/27/17 19:32*	*09/27/17 19:32*	*EPA 8260 B*				

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Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

MW-3

7090610-04 (Aqueous) Sampled: 09/21/17 09:50

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 01:41	09/28/17 01:41	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 01:41	09/28/17 01:41	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	09/28/17 01:41	09/28/17 01:41	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	09/28/17 01:41	09/28/17 01:41	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	09/28/17 01:41	09/28/17 01:41	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	09/28/17 01:41	09/28/17 01:41	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	09/28/17 01:41	09/28/17 01:41	EPA 5030B	EPA 8260 B	A	JMG	L
Toluene	<2.00	2.00	µg/L	09/28/17 01:41	09/28/17 01:41	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	09/28/17 01:41	09/28/17 01:41	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*97.0 %*	*80-120*	*09/28/17 01:41*	*09/28/17 01:41*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*97.4 %*	*80-120*	*09/28/17 01:41*	*09/28/17 01:41*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*105 %*	*80-120*	*09/28/17 01:41*	*09/28/17 01:41*	*EPA 8260 B*				
Surrogate: Toluene-d8		*98.2 %*	*80-120*	*09/28/17 01:41*	*09/28/17 01:41*	*EPA 8260 B*				

Mountain Research, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

MW-4

7090610-05 (Aqueous) Sampled: 09/21/17 11:27

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 13:06	09/28/17 13:06	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 13:06	09/28/17 13:06	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**16.0**	2.00	µg/L	09/28/17 13:06	09/28/17 13:06	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	**10.8**	2.00	µg/L	09/28/17 13:06	09/28/17 13:06	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	09/28/17 13:06	09/28/17 13:06	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	09/28/17 13:06	09/28/17 13:06	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	09/28/17 13:06	09/28/17 13:06	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	09/28/17 13:06	09/28/17 13:06	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	09/28/17 13:06	09/28/17 13:06	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*97.7 %*	*80-120*	*09/28/17 13:06*	*09/28/17 13:06*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*97.8 %*	*80-120*	*09/28/17 13:06*	*09/28/17 13:06*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*99.9 %*	*80-120*	*09/28/17 13:06*	*09/28/17 13:06*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.6 %*	*80-120*	*09/28/17 13:06*	*09/28/17 13:06*	*EPA 8260 B*				

Mountain Research, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

MW-5

7090610-06 (Aqueous) Sampled: 09/21/17 10:06

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 02:07	09/28/17 02:07	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 02:07	09/28/17 02:07	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	09/28/17 02:07	09/28/17 02:07	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	09/28/17 02:07	09/28/17 02:07	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	09/28/17 02:07	09/28/17 02:07	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**2.30**	2.00	µg/L	09/28/17 02:07	09/28/17 02:07	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	09/28/17 02:07	09/28/17 02:07	EPA 5030B	EPA 8260 B	A	JMG	L
Toluene	<2.00	2.00	µg/L	09/28/17 02:07	09/28/17 02:07	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	09/28/17 02:07	09/28/17 02:07	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*96.5 %*	*80-120*	*09/28/17 02:07*	*09/28/17 02:07*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*96.7 %*	*80-120*	*09/28/17 02:07*	*09/28/17 02:07*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*103 %*	*80-120*	*09/28/17 02:07*	*09/28/17 02:07*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.8 %*	*80-120*	*09/28/17 02:07*	*09/28/17 02:07*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

MW-6

7090610-07 (Aqueous) Sampled: 09/21/17 10:24

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 02:33	09/28/17 02:33	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 02:33	09/28/17 02:33	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	09/28/17 02:33	09/28/17 02:33	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	09/28/17 02:33	09/28/17 02:33	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	09/28/17 02:33	09/28/17 02:33	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	09/28/17 02:33	09/28/17 02:33	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	09/28/17 02:33	09/28/17 02:33	EPA 5030B	EPA 8260 B	A	JMG	L
Toluene	<2.00	2.00	µg/L	09/28/17 02:33	09/28/17 02:33	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	09/28/17 02:33	09/28/17 02:33	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*80-120*	*09/28/17 02:33*	*09/28/17 02:33*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*98.1 %*	*80-120*	*09/28/17 02:33*	*09/28/17 02:33*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*103 %*	*80-120*	*09/28/17 02:33*	*09/28/17 02:33*	*EPA 8260 B*				
Surrogate: Toluene-d8		*98.1 %*	*80-120*	*09/28/17 02:33*	*09/28/17 02:33*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

MW-7

7090610-08 (Aqueous) Sampled: 09/21/17 11:09

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**4.99**	2.00	µg/L	09/28/17 03:00	09/28/17 03:00	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 03:00	09/28/17 03:00	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**95.3**	2.00	µg/L	09/28/17 03:00	09/28/17 03:00	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	**29.5**	2.00	µg/L	09/28/17 03:00	09/28/17 03:00	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	**2.62**	2.00	µg/L	09/28/17 03:00	09/28/17 03:00	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**2.59**	2.00	µg/L	09/28/17 03:00	09/28/17 03:00	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	09/28/17 03:00	09/28/17 03:00	EPA 5030B	EPA 8260 B	A	JMG	L
Toluene	**12.1**	2.00	µg/L	09/28/17 03:00	09/28/17 03:00	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**7.69**	6.00	µg/L	09/28/17 03:00	09/28/17 03:00	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*95.2 %*	*80-120*	*09/28/17 03:00*	*09/28/17 03:00*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*97.0 %*	*80-120*	*09/28/17 03:00*	*09/28/17 03:00*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*101 %*	*80-120*	*09/28/17 03:00*	*09/28/17 03:00*	*EPA 8260 B*				
Surrogate: Toluene-d8		*98.3 %*	*80-120*	*09/28/17 03:00*	*09/28/17 03:00*	*EPA 8260 B*				

Mountain Research, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

MW-8

7090610-09 (Aqueous) Sampled: 09/21/17 11:36

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**1050**	100	µg/L	09/28/17 03:26	09/28/17 03:52	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**208**	20.0	µg/L	09/28/17 03:26	09/28/17 03:26	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**4010**	100	µg/L	09/28/17 03:26	09/28/17 03:52	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**930**	20.0	µg/L	09/28/17 03:26	09/28/17 03:26	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**70.8**	20.0	µg/L	09/28/17 03:26	09/28/17 03:26	EPA 5030B	EPA 8260 B	A	JMG	D1
MTBE	**27.2**	20.0	µg/L	09/28/17 03:26	09/28/17 03:26	EPA 5030B	EPA 8260 B	A	JMG	D1
Naphthalene	**610**	100	µg/L	09/28/17 03:26	09/28/17 19:38	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**2210**	100	µg/L	09/28/17 03:26	09/28/17 03:52	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**4630**	300	µg/L	09/28/17 03:26	09/28/17 03:52	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*94.4 %*	*80-120*	*09/28/17 03:26*	*09/28/17 03:26*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*99.6 %*	*80-120*	*09/28/17 03:26*	*09/28/17 03:26*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*96.7 %*	*80-120*	*09/28/17 03:26*	*09/28/17 03:26*	*EPA 8260 B*				
Surrogate: Toluene-d8		*101 %*	*80-120*	*09/28/17 03:26*	*09/28/17 03:26*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

MW-9

7090610-10 (Aqueous) Sampled: 09/21/17 12:05

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**35.2**	2.00	µg/L	09/28/17 13:32	09/28/17 13:32	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	**4.54**	2.00	µg/L	09/28/17 13:32	09/28/17 13:32	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**75.3**	2.00	µg/L	09/28/17 13:32	09/28/17 13:32	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	**2.30**	2.00	µg/L	09/28/17 13:32	09/28/17 13:32	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	**6.37**	2.00	µg/L	09/28/17 13:32	09/28/17 13:32	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	09/28/17 13:32	09/28/17 13:32	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**6.62**	2.00	µg/L	09/28/17 13:32	09/28/17 13:32	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**7.75**	2.00	µg/L	09/28/17 13:32	09/28/17 13:32	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**77.1**	6.00	µg/L	09/28/17 13:32	09/28/17 13:32	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*99.0 %*	*80-120*	*09/28/17 13:32*	*09/28/17 13:32*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*98.8 %*	*80-120*	*09/28/17 13:32*	*09/28/17 13:32*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*92.7 %*	*80-120*	*09/28/17 13:32*	*09/28/17 13:32*	*EPA 8260 B*				
Surrogate: Toluene-d8		*98.3 %*	*80-120*	*09/28/17 13:32*	*09/28/17 13:32*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

MW-11

7090610-11 (Aqueous) Sampled: 09/21/17 14:55

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 04:18	09/28/17 04:18	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 04:18	09/28/17 04:18	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	09/28/17 04:18	09/28/17 04:18	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	09/28/17 04:18	09/28/17 04:18	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	09/28/17 04:18	09/28/17 04:18	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	09/28/17 04:18	09/28/17 04:18	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	09/28/17 04:18	09/28/17 04:18	EPA 5030B	EPA 8260 B	A	JMG	L
Toluene	<2.00	2.00	µg/L	09/28/17 04:18	09/28/17 04:18	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	09/28/17 04:18	09/28/17 04:18	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*98.0 %*	*80-120*	*09/28/17 04:18*	*09/28/17 04:18*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*96.2 %*	*80-120*	*09/28/17 04:18*	*09/28/17 04:18*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*101 %*	*80-120*	*09/28/17 04:18*	*09/28/17 04:18*	*EPA 8260 B*				
Surrogate: Toluene-d8		*98.4 %*	*80-120*	*09/28/17 04:18*	*09/28/17 04:18*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

MW-12

7090610-12 (Aqueous) Sampled: 09/21/17 14:41

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 04:45	09/28/17 04:45	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 04:45	09/28/17 04:45	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	09/28/17 04:45	09/28/17 04:45	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	09/28/17 04:45	09/28/17 04:45	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	09/28/17 04:45	09/28/17 04:45	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	09/28/17 04:45	09/28/17 04:45	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	09/28/17 04:45	09/28/17 04:45	EPA 5030B	EPA 8260 B	A	JMG	L
Toluene	<2.00	2.00	µg/L	09/28/17 04:45	09/28/17 04:45	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	09/28/17 04:45	09/28/17 04:45	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*80-120*	*09/28/17 04:45*	*09/28/17 04:45*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*96.6 %*	*80-120*	*09/28/17 04:45*	*09/28/17 04:45*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*102 %*	*80-120*	*09/28/17 04:45*	*09/28/17 04:45*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.7 %*	*80-120*	*09/28/17 04:45*	*09/28/17 04:45*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

MW-1BR

7090610-13 (Aqueous) Sampled: 09/21/17 11:59

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**2.72**	2.00	µg/L	09/28/17 13:58	09/28/17 13:58	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 13:58	09/28/17 13:58	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**73.8**	2.00	µg/L	09/28/17 13:58	09/28/17 13:58	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	**7.11**	2.00	µg/L	09/28/17 13:58	09/28/17 13:58	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	**2.04**	2.00	µg/L	09/28/17 13:58	09/28/17 13:58	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**2.56**	2.00	µg/L	09/28/17 13:58	09/28/17 13:58	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**2.45**	2.00	µg/L	09/28/17 13:58	09/28/17 13:58	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	09/28/17 13:58	09/28/17 13:58	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	09/28/17 13:58	09/28/17 13:58	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*95.8 %*	*80-120*	*09/28/17 13:58*	*09/28/17 13:58*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*97.9 %*	*80-120*	*09/28/17 13:58*	*09/28/17 13:58*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*98.0 %*	*80-120*	*09/28/17 13:58*	*09/28/17 13:58*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.8 %*	*80-120*	*09/28/17 13:58*	*09/28/17 13:58*	*EPA 8260 B*				

Mountain Research, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

MW-2BR

7090610-14 (Aqueous) Sampled: 09/21/17 10:56

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 05:11	09/28/17 05:11	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 05:11	09/28/17 05:11	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	09/28/17 05:11	09/28/17 05:11	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	09/28/17 05:11	09/28/17 05:11	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	09/28/17 05:11	09/28/17 05:11	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	09/28/17 05:11	09/28/17 05:11	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	09/28/17 05:11	09/28/17 05:11	EPA 5030B	EPA 8260 B	A	JMG	L
Toluene	<2.00	2.00	µg/L	09/28/17 05:11	09/28/17 05:11	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	09/28/17 05:11	09/28/17 05:11	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*80-120*	*09/28/17 05:11*	*09/28/17 05:11*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*97.0 %*	*80-120*	*09/28/17 05:11*	*09/28/17 05:11*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*102 %*	*80-120*	*09/28/17 05:11*	*09/28/17 05:11*	*EPA 8260 B*				
Surrogate: Toluene-d8		*98.5 %*	*80-120*	*09/28/17 05:11*	*09/28/17 05:11*	*EPA 8260 B*				

Mountain Research, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

MW-3BR

7090610-15 (Aqueous) Sampled: 09/21/17 09:43

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 05:37	09/28/17 05:37	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 05:37	09/28/17 05:37	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	09/28/17 05:37	09/28/17 05:37	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	09/28/17 05:37	09/28/17 05:37	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	09/28/17 05:37	09/28/17 05:37	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**8.08**	2.00	µg/L	09/28/17 05:37	09/28/17 05:37	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	09/28/17 05:37	09/28/17 05:37	EPA 5030B	EPA 8260 B	A	JMG	L
Toluene	<2.00	2.00	µg/L	09/28/17 05:37	09/28/17 05:37	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	09/28/17 05:37	09/28/17 05:37	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*104 %*	*80-120*	*09/28/17 05:37*	*09/28/17 05:37*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*97.4 %*	*80-120*	*09/28/17 05:37*	*09/28/17 05:37*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*102 %*	*80-120*	*09/28/17 05:37*	*09/28/17 05:37*	*EPA 8260 B*				
Surrogate: Toluene-d8		*100 %*	*80-120*	*09/28/17 05:37*	*09/28/17 05:37*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

MW-4BR

7090610-16 (Aqueous) Sampled: 09/21/17 12:24

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 06:03	09/28/17 06:03	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 06:03	09/28/17 06:03	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	09/28/17 06:03	09/28/17 06:03	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	09/28/17 06:03	09/28/17 06:03	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	09/28/17 06:03	09/28/17 06:03	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	09/28/17 06:03	09/28/17 06:03	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	09/28/17 06:03	09/28/17 06:03	EPA 5030B	EPA 8260 B	A	JMG	L
Toluene	<2.00	2.00	µg/L	09/28/17 06:03	09/28/17 06:03	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	09/28/17 06:03	09/28/17 06:03	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*80-120*	*09/28/17 06:03*	*09/28/17 06:03*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*96.7 %*	*80-120*	*09/28/17 06:03*	*09/28/17 06:03*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*99.6 %*	*80-120*	*09/28/17 06:03*	*09/28/17 06:03*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.9 %*	*80-120*	*09/28/17 06:03*	*09/28/17 06:03*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

MW-5BR

7090610-17 (Aqueous) Sampled: 09/21/17 14:15

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**529**	50.0	µg/L	09/28/17 08:41	09/28/17 14:51	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**72.8**	50.0	µg/L	09/28/17 08:41	09/28/17 14:51	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**1030**	50.0	µg/L	09/28/17 08:41	09/28/17 14:51	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**503**	50.0	µg/L	09/28/17 08:41	09/28/17 14:51	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**61.8**	2.00	µg/L	09/28/17 08:41	09/28/17 08:41	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**12.0**	2.00	µg/L	09/28/17 08:41	09/28/17 08:41	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**75.4**	50.0	µg/L	09/28/17 08:41	09/28/17 14:51	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**254**	50.0	µg/L	09/28/17 08:41	09/28/17 14:51	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**1150**	150	µg/L	09/28/17 08:41	09/28/17 14:51	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*93.4 %*	*80-120*	*09/28/17 08:41*	*09/28/17 08:41*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*	*09/28/17 08:41*	*09/28/17 08:41*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*92.0 %*	*80-120*	*09/28/17 08:41*	*09/28/17 08:41*	*EPA 8260 B*				
Surrogate: Toluene-d8		*100 %*	*80-120*	*09/28/17 08:41*	*09/28/17 08:41*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

Stream

7090610-18 (Aqueous) Sampled: 09/21/17 12:44

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 06:30	09/28/17 06:30	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	09/28/17 06:30	09/28/17 06:30	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	09/28/17 06:30	09/28/17 06:30	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	09/28/17 06:30	09/28/17 06:30	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	09/28/17 06:30	09/28/17 06:30	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	09/28/17 06:30	09/28/17 06:30	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	09/28/17 06:30	09/28/17 06:30	EPA 5030B	EPA 8260 B	A	JMG	L
Toluene	<2.00	2.00	µg/L	09/28/17 06:30	09/28/17 06:30	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	09/28/17 06:30	09/28/17 06:30	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*100 %*	*80-120*	*09/28/17 06:30*	*09/28/17 06:30*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*95.2 %*	*80-120*	*09/28/17 06:30*	*09/28/17 06:30*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*103 %*	*80-120*	*09/28/17 06:30*	*09/28/17 06:30*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.2 %*	*80-120*	*09/28/17 06:30*	*09/28/17 06:30*	*EPA 8260 B*				

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

Duplicate

7090610-19 (Aqueous) Sampled: 09/21/17 00:00

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**1300**	50.0	µg/L	09/28/17 06:56	09/28/17 15:17	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**374**	50.0	µg/L	09/28/17 06:56	09/28/17 15:17	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**753**	50.0	µg/L	09/28/17 06:56	09/28/17 15:17	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**553**	50.0	µg/L	09/28/17 06:56	09/28/17 15:17	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**75.0**	2.00	µg/L	09/28/17 06:56	09/28/17 06:56	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**10.2**	2.00	µg/L	09/28/17 06:56	09/28/17 06:56	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**313**	50.0	µg/L	09/28/17 06:56	09/28/17 15:17	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**1070**	50.0	µg/L	09/28/17 06:56	09/28/17 15:17	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**2620**	150	µg/L	09/28/17 06:56	09/28/17 15:17	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*95.8 %*	*80-120*	*09/28/17 06:56*	*09/28/17 06:56*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*	*09/28/17 06:56*	*09/28/17 06:56*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*92.8 %*	*80-120*	*09/28/17 06:56*	*09/28/17 06:56*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.7 %*	*80-120*	*09/28/17 06:56*	*09/28/17 06:56*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 7090610
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	10/06/17 15:27

Certifications

Code	Description	Number	Expires
MDDOE	Maryland Department of the Environment	257	06/30/2017
PADEP-Altoona	Pennsylvania Department of Environmental Protection	009	03/31/2018
WVDEP-Altoona	West Virginia Department of Environmental Protection	225	10/31/2017
PADEP-DuBois	Pennsylvania Department of Environmental Protection	008	09/30/2017
WVDEP-HydroChem	West Virginia Department of Environmental Protection	038	11/01/2017

Notes and Definitions

L	The laboratory control spike did not meet laboratory acceptance criteria. The associated analytical results may be biased high.
D1	The sample was analyzed at a dilution.
CC	Calculated analytes are reported based on unrounded results of the individual analytes used in the calculation. Therefore, using the rounded values of the analytes as reported may lead to a result that varies slightly from the reported result.
RL	Reporting Limit - either the practical quantitation limit or the method detection limit
dry	Sample results reported on a dry weight basis
A	Analysis Performed by Mountain Research Altoona Laboratory - PADEP #07-00418, WVDEP #225
D	Analysis Performed by Mountain Research DuBois Laboratory - PADEP # 33-00258
W	Analysis Performed by Mountain Research - HydroChem Laboratory - WVDEP #038

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

Billing Group:	Phase:	PROJECT NAME
	SCR	Vennard's
MR Project #		SITE LOCATION
4644.15.01		Indiana, PA
CLIENT		SAMPLER(S)
Vennard's		BA

NOTES:

Received On Ice: (Y) / N

Sample Temp: 2.4°C

Comp Set

Comments:

*

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CHAIN OF CUSTODY RECORD

MR PROJ. MGR. MK

Shipping Carrier:

Turn Around Time:
10 Day X
3 Day
1 Day

Comments:

SAMPLE ID	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	8260B	Preserve	LAB NUMBER
TRIP BLANK	9/20/17	1700	X		AQ	2 40mL VOA	2A,4A	X	HCl	01
MW-1	9/21/17	1250	X		AQ	2 40mL VOA	2A,4A	X	HCl	02
MW-2		1335	X		AQ	2 40mL VOA	2A,4A	X	HCl	03
MW-3		0950	X		AQ	2 40mL VOA	2A,4A	X	HCl	04
MW-4		1127	X		AQ	2 40mL VOA	2A,4A	X	HCl	05
MW-5		1006	X		AQ	2 40mL VOA	2A,4A	X	HCl	06
MW-6		1024	X		AQ	2 40mL VOA	2A,4A	X	HCl	07
MW-7		1109	X		AQ	2 40mL VOA	2A,4A	X	HCl	08
MW-8		1136	X		AQ	2 40mL VOA	2A,4A	X	HCl	09
MW-9		1205	X		AQ	2 40mL VOA	2A,4A	X	HCl	10
MW-11		1455	X		AQ	2 40mL VOA	2A,4A	X	HCl	11
MW-12		1441	X		AQ	2 40mL VOA	2A,4A	X	HCl	12

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Lab Workorder #:
	9/22/17	0815		08:15 9-22-17	709060
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Labeled By:

Log In Time: 1454

Staff:

Date: 9-25-17

Billing Group:	Phase:	PROJECT NAME
	SCR	Vennard's
MR Project #		SITE LOCATION
4644.15.01		Indiana, PA
CLIENT		SAMPLER(S)
Vennard's		BA

NOTES:
Received On Ice: (Y) / N
Sample Temp: 2.4
Comp Set
Comments:
*

MOUNTAIN RESEARCH LLC

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CHAIN OF CUSTODY RECORD

MR PROJ. MGR. MK

Shipping Carrier:

Turn Around Time:
10 Day X
3 Day
1 Day

Comments:

SAMPLE ID	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	8260B	Preserve	LAB NUMBER
MW-1BR	9/21/17	1159	X		AQ	2 40mL VOA	2A,4A	X	HCl	13
MW-2BR		1056	X		AQ	2 40mL VOA	2A,4A	X	HCl	14
MW-3BR		0943	X		AQ	2 40mL VOA	2A,4A	X	HCl	15
MW-4BR		1224	X		AQ	2 40mL VOA	2A,4A	X	HCl	16
MW-5BR		1415	X		AQ	2 40mL VOA	2A,4A	X	HCl	17
Stream		1244	X		AQ	2 40mL VOA	2A,4A	X	HCl	18
Duplicate			X		AQ	2 40mL VOA	2A,4A	X		

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Lab Workorder #:	Log In Time: 1454
[signature]	9/21/17	0815	[signature]	08:10 9-22-17	7090610	Staff: hd
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Labeled By:	Date: 9-25-17

MOUNTAIN RESEARCH SAMPLE RECEIPT PROTOCOL

WORK ORDER: 1090610

CLIENT: Ellwards

DATE SAMPLED: 9-21-17 DATE RECEIVED: 9-22-17 TIME RECEIVED: 08:15

1. CHECK ALL THAT APPLY: PA ☐ ~~WV~~ ☐ MD ☐ P W S ☐ NPDES/COMPLIANCE ☐ DAIRY ☐ RUSH ☐

2. WERE ANY OF THE SAMPLE CONTAINERS DAMAGED/LEAKING? (ARE CUSTODY SEALS BROKEN?) YES ☐ ~~NO ☐~~

IF YES, EXPLAIN: _____

3. NUMBER OF CONTAINERS RECEIVED: 38

4. WERE THE SAMPLES RECEIVED ON ICE/OTHER ACCEPTABLE REFRIGERANT? ~~YES ☐~~ NO ☐

IF NO, EXPLAIN: _____

5. RECEIVING TEMP: 2 °C TEMP CONTROL(S) PRESENT YES ☐ NO ☐ BOTTLE(S) TEMPED: _____

6. WERE THE SAMPLES PROPERLY PRESERVED? ~~YES ☐~~ NO ☐

IF NO, EXPLAIN: _____

7. WERE THE SAMPLES COLLECTED IN THE CORRECT CONTAINERS? ~~YES~~ NO ☐

IF NO, EXPLAIN: _____

8. IS THERE HEADSPACE PRESENT FOR VOLATILES/ODOR SAMPLES? YES ☐ ~~NO~~ N/A ☐

9. WAS THE COC FILLED OUT PROPERLY? ~~YES~~ NO ☐

IF NO, EXPLAIN: _____

10. DID THE SAMPLE LABEL(S) CONTAIN ADEQUATE INFO? (CLIENT/DATE/TIME/PRESERVATIVE) ~~YES ☐~~ NO ☐

IF NO, EXPLAIN: _____

11. WERE ANY OF THE SAMPLES RECEIVED OUTSIDE OF HOLDING TIME? YES ☐ ~~NO ☐~~

IF YES, EXPLAIN: _____

12. DO THE SAMPLES REQUIRE ANALYSES THAT HAVE A SHORT HOLDING TIME? YES ☐ ~~NO~~

IF YES, WHAT ANALYSES? _____ **PLEASE NOTIFY LABORATORY ANALYSTS!**

13. IS SUBCONTRACTING REQUIRED? YES ☐ ~~NO~~

IF YES, WHAT ANALYSES? _____

14. WAS THE CLIENT CONTACTED? YES ☐ NO ☐ IF YES, FILL OUT THE FOLLOWING:

MR EMPLOYEE INITIALS: CLIENT SPOKEN TO: DATE/TIME:

OUTCOME:

SIGNATURE:

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21 March 2018

Lab ID #: 8030120

Richard Vennard
Vennard Crossroads Convenience, Inc
5190 White Oak Dr
Indiana, PA 15701

RE: Indiana, PA

Enclosed are the results of analyses for samples received by the laboratory on 03/06/18 14:39. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Stephen Gampe

Stephen Gampe
Assistant Laboratory Manager

Authorized Reviewer

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030120
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	03/21/18 08:56

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Sample Type	Date Sampled	Date Received
Trip Blank	8030120-01	Aqueous	Grab	03/06/18 06:30	03/06/18 14:39
MW-10	8030120-02	Aqueous	Grab	03/06/18 09:52	03/06/18 14:39
MW-7BR	8030120-03	Aqueous	Grab	03/06/18 09:09	03/06/18 14:39
MW-8BR	8030120-04	Aqueous	Grab	03/06/18 09:35	03/06/18 14:39

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030120
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	03/21/18 08:56

Trip Blank

8030120-01 (Aqueous) Sampled: 03/06/18 06:30

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	03/08/18 20:01	03/08/18 20:01	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	03/08/18 20:01	03/08/18 20:01	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	03/08/18 20:01	03/08/18 20:01	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	03/08/18 20:01	03/08/18 20:01	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/08/18 20:01	03/08/18 20:01	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/08/18 20:01	03/08/18 20:01	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	03/08/18 20:01	03/08/18 20:01	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	03/08/18 20:01	03/08/18 20:01	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	03/08/18 20:01	03/08/18 20:01	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*80-120*	*03/08/18 20:01*	*03/08/18 20:01*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*92.7 %*	*80-120*	*03/08/18 20:01*	*03/08/18 20:01*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*106 %*	*80-120*	*03/08/18 20:01*	*03/08/18 20:01*	*EPA 8260 B*				
Surrogate: Toluene-d8		*96.6 %*	*80-120*	*03/08/18 20:01*	*03/08/18 20:01*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030120
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	03/21/18 08:56

MW-10

8030120-02 (Aqueous) Sampled: 03/06/18 09:52

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**137**	20.0	µg/L	03/07/18 18:12	03/07/18 18:12	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**41.2**	20.0	µg/L	03/07/18 18:12	03/07/18 18:12	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**357**	20.0	µg/L	03/07/18 18:12	03/07/18 18:12	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**209**	20.0	µg/L	03/07/18 18:12	03/07/18 18:12	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**20.2**	20.0	µg/L	03/07/18 18:12	03/07/18 18:12	EPA 5030B	EPA 8260 B	A	JMG	D1
MTBE	<20.0	20.0	µg/L	03/07/18 18:12	03/07/18 18:12	EPA 5030B	EPA 8260 B	A	JMG	D1
Naphthalene	**55.2**	20.0	µg/L	03/07/18 18:12	03/07/18 18:12	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**61.7**	20.0	µg/L	03/07/18 18:12	03/07/18 18:12	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**272**	60.0	µg/L	03/07/18 18:12	03/07/18 18:12	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*80-120*	*03/07/18 18:12*	*03/07/18 18:12*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*93.0 %*	*80-120*	*03/07/18 18:12*	*03/07/18 18:12*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*107 %*	*80-120*	*03/07/18 18:12*	*03/07/18 18:12*	*EPA 8260 B*				
Surrogate: Toluene-d8		*98.2 %*	*80-120*	*03/07/18 18:12*	*03/07/18 18:12*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030120
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	03/21/18 08:56

MW-7BR

8030120-03 (Aqueous) Sampled: 03/06/18 09:09

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	03/07/18 16:02	03/07/18 16:02	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	03/07/18 16:02	03/07/18 16:02	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	03/07/18 16:02	03/07/18 16:02	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	03/07/18 16:02	03/07/18 16:02	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/07/18 16:02	03/07/18 16:02	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/07/18 16:02	03/07/18 16:02	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	03/07/18 16:02	03/07/18 16:02	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	03/07/18 16:02	03/07/18 16:02	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	03/07/18 16:02	03/07/18 16:02	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*80-120*	*03/07/18 16:02*	*03/07/18 16:02*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*92.2 %*	*80-120*	*03/07/18 16:02*	*03/07/18 16:02*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*103 %*	*80-120*	*03/07/18 16:02*	*03/07/18 16:02*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.0 %*	*80-120*	*03/07/18 16:02*	*03/07/18 16:02*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030120
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 03/21/18 08:56
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-8BR

8030120-04 (Aqueous) Sampled: 03/06/18 09:35

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	03/07/18 16:28	03/07/18 16:28	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	03/07/18 16:28	03/07/18 16:28	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	03/07/18 16:28	03/07/18 16:28	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	03/07/18 16:28	03/07/18 16:28	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/07/18 16:28	03/07/18 16:28	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/07/18 16:28	03/07/18 16:28	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	03/07/18 16:28	03/07/18 16:28	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	03/07/18 16:28	03/07/18 16:28	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	03/07/18 16:28	03/07/18 16:28	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*115 %*	*80-120*	*03/07/18 16:28*	*03/07/18 16:28*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*92.0 %*	*80-120*	*03/07/18 16:28*	*03/07/18 16:28*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*108 %*	*80-120*	*03/07/18 16:28*	*03/07/18 16:28*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.2 %*	*80-120*	*03/07/18 16:28*	*03/07/18 16:28*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030120
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	03/21/18 08:56

Certifications

Code	Description	Number	Expires
MDDOE	Maryland Department of the Environment	257	06/30/2018
PADEP-Altoona	Pennsylvania Department of Environmental Protection	009	03/31/2018
WVDEP-Altoona	West Virginia Department of Environmental Protection	225	12/31/2018
PADEP-DuBois	Pennsylvania Department of Environmental Protection	008	09/30/2018
WVDEP-HydroChem	West Virginia Department of Environmental Protection	038	11/01/2018

Notes and Definitions

D1	The sample was analyzed at a dilution.
CC	Calculated analytes are reported based on unrounded results of the individual analytes used in the calculation. Therefore, using the rounded values of the analytes as reported may lead to a result that varies slightly from the reported result.
RL	Reporting Limit - either the practical quantitation limit or the method detection limit
dry	Sample results reported on a dry weight basis
A	Analysis Performed by Mountain Research Altoona Laboratory - PADEP #07-00418, WVDEP #225
D	Analysis Performed by Mountain Research DuBois Laboratory - PADEP # 33-00258
W	Analysis Performed by Mountain Research - HydroChem Laboratory - WVDEP #038

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

Billing Group:	Phase:	PROJECT NAME: GW Samp
MR Project #: 4644.15.01		SITE LOCATION: Indiana, PA
CLIENT: Vennards		SAMPLER(S): JC

MOUNTAIN RESEARCH L
825 25th Street, Altoona, PA 16601 (814)
110 McCracken Run Road, Dubois, PA 15801 (814)

NOTES:
Received On Ice: Y / N
Sample Temp: 5.5
PWSID #:
Comments:

CHAIN OF CUSTODY RECORD

SAMPLE ID	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	826013
Trip Blank	3-6-18	0630	X		AQ	2-40ml VOA	2A 4A	X
MW-10		0952					2A 4A	X
MW-7BR		0909					2A 4A	X
MW-8BR		0935					2A 4A	X

Analyses Requested

MR PROJ. MGR. MK
Shipping Carrier:
Turn Around Time:
10 Day
3 Day
1 Day
5 Day X
Comments:

Preserve	LAB NUMBER
HCL	01
	02
	03
	04

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME
	3-6-18	1439		1439 3-6-18
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME

Lab Workorder #: 8030120
Labeled By:

Log In Time: 15:19
Staff: KL
Date: 3/6/18

MOUNTAIN RESEARCH SAMPLE RECEIPT PROTOCOL

WORK ORDER: 803120

CLIENT: Walgreens

DATE SAMPLED: 3/6/18 DATE RECEIVED: 3/6/18 TIME RECEIVED: 1439

1. CHECK ALL THAT APPLY: PA ☑ WV ☐ MD ☐ P W S ☐ NPDES/COMPLIANCE ☐ DAIRY ☐ RUSH ☐
2. WERE ANY OF THE SAMPLE CONTAINERS DAMAGED/LEAKING? (ARE CUSTODY SEALS BROKEN?) YES ☐ NO ☑

IF YES, EXPLAIN: _____

3. NUMBER OF CONTAINERS RECEIVED: 8
4. WERE THE SAMPLES RECEIVED ON ICE/OTHER ACCEPTABLE REFRIGERANT? YES ☑ NO ☐

IF NO, EXPLAIN: _____

5. RECEIVING TEMP: 5.5 °C TEMP CONTROL(S) PRESENT YES ☐ NO ☐ BOTTLE(S) TEMPED: _____
6. WERE THE SAMPLES PROPERLY PRESERVED? YES ☑ NO ☐

IF NO, EXPLAIN: _____

7. WERE THE SAMPLES COLLECTED IN THE CORRECT CONTAINERS? YES ☑ NO ☐

IF NO, EXPLAIN: _____

8. IS THERE HEADSPACE PRESENT FOR VOLATILES/ODOR SAMPLES? YES ☐ NO ☐ N/A ☑
9. WAS THE COC FILLED OUT PROPERLY? YES ☑ NO ☐

IF NO, EXPLAIN: _____

10. DID THE SAMPLE LABEL(S) CONTAIN ADEQUATE INFO? (CLIENT/DATE/TIME/PRESERVATIVE) YES ☑ NO ☐

IF NO, EXPLAIN: _____

11. WERE ANY OF THE SAMPLES RECEIVED OUTSIDE OF HOLDING TIME? YES ☐ NO ☑

IF YES, EXPLAIN: _____

12. DO THE SAMPLES REQUIRE ANALYSES THAT HAVE A SHORT HOLDING TIME? YES ☐ NO ☑

IF YES, WHAT ANALYSES? _____ **PLEASE NOTIFY LABORATORY ANALYSTS!**

13. IS SUBCONTRACTING REQUIRED? YES ☐ NO ☑

IF YES, WHAT ANALYSES? _____

14. WAS THE CLIENT CONTACTED? YES ☐ NO ☐ IF YES, FILL OUT THE FOLLOWING:

MR EMPLOYEE INITIALS: _____ CLIENT SPOKEN TO: _____ DATE/TIME: _____

OUTCOME: _____

SIGNATURE: _____

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03 April 2018

Lab ID #: 8030679

Richard Vennard
Vennard Crossroads Convenience, Inc
5190 White Oak Dr
Indiana, PA 15701

RE: Indiana, PA

Enclosed are the results of analyses for samples received by the laboratory on 03/23/18 07:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Stephen Gampe

Stephen Gampe
Assistant Laboratory Manager

Authorized Reviewer

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/03/18 14:20

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Sample Type	Date Sampled	Date Received
Trip Blank	8030679-01	Aqueous	Grab	03/21/18 10:00	03/23/18 07:30
EW-1	8030679-02	Aqueous	Grab	03/22/18 13:10	03/23/18 07:30
MW-1	8030679-03	Aqueous	Grab	03/22/18 12:50	03/23/18 07:30
MW-3	8030679-04	Aqueous	Grab	03/22/18 08:45	03/23/18 07:30
MW-4	8030679-05	Aqueous	Grab	03/21/18 17:45	03/23/18 07:30
MW-5	8030679-06	Aqueous	Grab	03/21/18 18:46	03/23/18 07:30
MW-6	8030679-07	Aqueous	Grab	03/22/18 09:30	03/23/18 07:30
MW-7	8030679-08	Aqueous	Grab	03/22/18 11:25	03/23/18 07:30
MW-8	8030679-09	Aqueous	Grab	03/21/18 17:00	03/23/18 07:30
MW-9	8030679-10	Aqueous	Grab	03/21/18 17:25	03/23/18 07:30
MW-10	8030679-11	Aqueous	Grab	03/22/18 15:25	03/23/18 07:30
MW-11	8030679-12	Aqueous	Grab	03/22/18 10:20	03/23/18 07:30
MW-12	8030679-13	Aqueous	Grab	03/22/18 09:55	03/23/18 07:30
MW-13	8030679-14	Aqueous	Grab	03/22/18 11:45	03/23/18 07:30
MW-14	8030679-15	Aqueous	Grab	03/22/18 14:10	03/23/18 07:30
MW-1BR	8030679-16	Aqueous	Grab	03/21/18 16:55	03/23/18 07:30
MW-3BR	8030679-17	Aqueous	Grab	03/21/18 18:30	03/23/18 07:30
MW-4BR	8030679-18	Aqueous	Grab	03/21/18 17:20	03/23/18 07:30
MW-5BR	8030679-19	Aqueous	Grab	03/22/18 10:55	03/23/18 07:30
MW-6BR	8030679-20	Aqueous	Grab	03/22/18 15:50	03/23/18 07:30
MW-7BR	8030679-21	Aqueous	Grab	03/22/18 14:45	03/23/18 07:30
MW-8BR	8030679-22	Aqueous	Grab	03/22/18 15:00	03/23/18 07:30
MW-9BR	8030679-23	Aqueous	Grab	03/22/18 13:40	03/23/18 07:30

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/03/18 14:20

Trip Blank

8030679-01 (Aqueous) Sampled: 03/21/18 10:00

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	03/24/18 11:31	03/24/18 11:31	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	03/24/18 11:31	03/24/18 11:31	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	03/24/18 11:31	03/24/18 11:31	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	03/24/18 11:31	03/24/18 11:31	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/24/18 11:31	03/24/18 11:31	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/24/18 11:31	03/24/18 11:31	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	03/24/18 11:31	03/24/18 11:31	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	03/24/18 11:31	03/24/18 11:31	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	03/24/18 11:31	03/24/18 11:31	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*98.4 %*	*80-120*	*03/24/18 11:31*	*03/24/18 11:31*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*99.0 %*	*80-120*	*03/24/18 11:31*	*03/24/18 11:31*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*93.1 %*	*80-120*	*03/24/18 11:31*	*03/24/18 11:31*	*EPA 8260 B*				
Surrogate: Toluene-d8		*95.4 %*	*80-120*	*03/24/18 11:31*	*03/24/18 11:31*	*EPA 8260 B*				

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 04/03/18 14:20
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

EW-1

8030679-02 (Aqueous) Sampled: 03/22/18 13:10

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**67.1**	10.0	µg/L	03/27/18 21:58	03/27/18 21:58	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**12.6**	10.0	µg/L	03/27/18 21:58	03/27/18 21:58	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**113**	10.0	µg/L	03/27/18 21:58	03/27/18 21:58	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**24.9**	10.0	µg/L	03/27/18 21:58	03/27/18 21:58	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	<10.0	10.0	µg/L	03/27/18 21:58	03/27/18 21:58	EPA 5030B	EPA 8260 B	A	JMG	D1
MTBE	<10.0	10.0	µg/L	03/27/18 21:58	03/27/18 21:58	EPA 5030B	EPA 8260 B	A	JMG	D1
Naphthalene	**23.4**	10.0	µg/L	03/27/18 21:58	03/27/18 21:58	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**17.0**	10.0	µg/L	03/27/18 21:58	03/27/18 21:58	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**103**	30.0	µg/L	03/27/18 21:58	03/27/18 21:58	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*93.0 %*	*80-120*	*03/27/18 21:58*	*03/27/18 21:58*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*	*03/27/18 21:58*	*03/27/18 21:58*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*92.6 %*	*80-120*	*03/27/18 21:58*	*03/27/18 21:58*	*EPA 8260 B*				
Surrogate: Toluene-d8		*96.6 %*	*80-120*	*03/27/18 21:58*	*03/27/18 21:58*	*EPA 8260 B*				

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/03/18 14:20

MW-1

8030679-03 (Aqueous) Sampled: 03/22/18 12:50

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	03/24/18 11:57	03/24/18 11:57	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	03/24/18 11:57	03/24/18 11:57	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	03/24/18 11:57	03/24/18 11:57	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	03/24/18 11:57	03/24/18 11:57	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/24/18 11:57	03/24/18 11:57	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/24/18 11:57	03/24/18 11:57	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	03/24/18 11:57	03/24/18 11:57	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	03/24/18 11:57	03/24/18 11:57	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	03/24/18 11:57	03/24/18 11:57	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*80-120*	*03/24/18 11:57*	*03/24/18 11:57*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*99.4 %*	*80-120*	*03/24/18 11:57*	*03/24/18 11:57*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*94.2 %*	*80-120*	*03/24/18 11:57*	*03/24/18 11:57*	*EPA 8260 B*				
Surrogate: Toluene-d8		*96.0 %*	*80-120*	*03/24/18 11:57*	*03/24/18 11:57*	*EPA 8260 B*				

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/03/18 14:20

MW-3

8030679-04 (Aqueous) Sampled: 03/22/18 08:45

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	03/24/18 12:23	03/24/18 12:23	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	03/24/18 12:23	03/24/18 12:23	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	03/24/18 12:23	03/24/18 12:23	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	03/24/18 12:23	03/24/18 12:23	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/24/18 12:23	03/24/18 12:23	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/24/18 12:23	03/24/18 12:23	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	03/24/18 12:23	03/24/18 12:23	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	03/24/18 12:23	03/24/18 12:23	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	03/24/18 12:23	03/24/18 12:23	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*80-120*	*03/24/18 12:23*	*03/24/18 12:23*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*99.0 %*	*80-120*	*03/24/18 12:23*	*03/24/18 12:23*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*92.7 %*	*80-120*	*03/24/18 12:23*	*03/24/18 12:23*	*EPA 8260 B*				
Surrogate: Toluene-d8		*94.4 %*	*80-120*	*03/24/18 12:23*	*03/24/18 12:23*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 04/03/18 14:20
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-4

8030679-05 (Aqueous) Sampled: 03/21/18 17:45

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**90.2**	20.0	µg/L	03/27/18 07:49	03/27/18 23:16	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**15.4**	2.00	µg/L	03/27/18 07:49	03/27/18 07:49	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**131**	20.0	µg/L	03/27/18 07:49	03/27/18 23:16	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**106**	2.00	µg/L	03/27/18 07:49	03/27/18 07:49	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	**5.09**	2.00	µg/L	03/27/18 07:49	03/27/18 07:49	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/27/18 07:49	03/27/18 07:49	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**18.7**	2.00	µg/L	03/27/18 07:49	03/27/18 07:49	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**10.7**	2.00	µg/L	03/27/18 07:49	03/27/18 07:49	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**205**	60.0	µg/L	03/27/18 07:49	03/27/18 23:16	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*95.3 %*	*80-120*	*03/27/18 07:49*	*03/27/18 07:49*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*103 %*	*80-120*	*03/27/18 07:49*	*03/27/18 07:49*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*92.7 %*	*80-120*	*03/27/18 07:49*	*03/27/18 07:49*	*EPA 8260 B*				
Surrogate: Toluene-d8		*95.8 %*	*80-120*	*03/27/18 07:49*	*03/27/18 07:49*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/03/18 14:20

MW-5

8030679-06 (Aqueous) Sampled: 03/21/18 18:46

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	03/27/18 08:15	03/27/18 08:15	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	03/27/18 08:15	03/27/18 08:15	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	03/27/18 08:15	03/27/18 08:15	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	03/27/18 08:15	03/27/18 08:15	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/27/18 08:15	03/27/18 08:15	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/27/18 08:15	03/27/18 08:15	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	03/27/18 08:15	03/27/18 08:15	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	03/27/18 08:15	03/27/18 08:15	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	03/27/18 08:15	03/27/18 08:15	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*98.4 %*	*80-120*	*03/27/18 08:15*	*03/27/18 08:15*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*99.5 %*	*80-120*	*03/27/18 08:15*	*03/27/18 08:15*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*92.6 %*	*80-120*	*03/27/18 08:15*	*03/27/18 08:15*	*EPA 8260 B*				
Surrogate: Toluene-d8		*95.6 %*	*80-120*	*03/27/18 08:15*	*03/27/18 08:15*	*EPA 8260 B*				

Mountain Research, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/03/18 14:20

MW-6

8030679-07 (Aqueous) Sampled: 03/22/18 09:30

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	03/27/18 08:41	03/27/18 08:41	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	03/27/18 08:41	03/27/18 08:41	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**3.20**	2.00	µg/L	03/27/18 08:41	03/27/18 08:41	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	03/27/18 08:41	03/27/18 08:41	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/27/18 08:41	03/27/18 08:41	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/27/18 08:41	03/27/18 08:41	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	03/27/18 08:41	03/27/18 08:41	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	03/27/18 08:41	03/27/18 08:41	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	03/27/18 08:41	03/27/18 08:41	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*94.1 %*	*80-120*	*03/27/18 08:41*	*03/27/18 08:41*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*100 %*	*80-120*	*03/27/18 08:41*	*03/27/18 08:41*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*94.7 %*	*80-120*	*03/27/18 08:41*	*03/27/18 08:41*	*EPA 8260 B*				
Surrogate: Toluene-d8		*96.8 %*	*80-120*	*03/27/18 08:41*	*03/27/18 08:41*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/03/18 14:20

MW-7

8030679-08 (Aqueous) Sampled: 03/22/18 11:25

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	03/27/18 10:51	03/27/18 10:51	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	03/27/18 10:51	03/27/18 10:51	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	03/27/18 10:51	03/27/18 10:51	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	03/27/18 10:51	03/27/18 10:51	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/27/18 10:51	03/27/18 10:51	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/27/18 10:51	03/27/18 10:51	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	03/27/18 10:51	03/27/18 10:51	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	03/27/18 10:51	03/27/18 10:51	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	03/27/18 10:51	03/27/18 10:51	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*96.8 %*	*80-120*	*03/27/18 10:51*	*03/27/18 10:51*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*100 %*	*80-120*	*03/27/18 10:51*	*03/27/18 10:51*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*96.4 %*	*80-120*	*03/27/18 10:51*	*03/27/18 10:51*	*EPA 8260 B*				
Surrogate: Toluene-d8		*96.7 %*	*80-120*	*03/27/18 10:51*	*03/27/18 10:51*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/03/18 14:20

MW-8

8030679-09 (Aqueous) Sampled: 03/21/18 17:00

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**17.8**	2.00	µg/L	03/27/18 09:07	03/27/18 22:50	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	03/27/18 09:07	03/27/18 22:50	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**96.4**	20.0	µg/L	03/27/18 09:07	03/27/18 09:07	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**18.0**	2.00	µg/L	03/27/18 09:07	03/27/18 22:50	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/27/18 09:07	03/27/18 22:50	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/27/18 09:07	03/27/18 22:50	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**4.66**	2.00	µg/L	03/27/18 09:07	03/27/18 22:50	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	03/27/18 09:07	03/27/18 22:50	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**43.2**	6.00	µg/L	03/27/18 09:07	03/27/18 22:50	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*94.5 %*	*80-120*	*03/27/18 09:07*	*03/27/18 09:07*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*98.5 %*	*80-120*	*03/27/18 09:07*	*03/27/18 09:07*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*90.6 %*	*80-120*	*03/27/18 09:07*	*03/27/18 09:07*	*EPA 8260 B*				
Surrogate: Toluene-d8		*96.0 %*	*80-120*	*03/27/18 09:07*	*03/27/18 09:07*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/03/18 14:20

MW-9

8030679-10 (Aqueous) Sampled: 03/21/18 17:25

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	03/27/18 11:17	03/27/18 11:17	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	03/27/18 11:17	03/27/18 11:17	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	03/27/18 11:17	03/27/18 11:17	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	03/27/18 11:17	03/27/18 11:17	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/27/18 11:17	03/27/18 11:17	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/27/18 11:17	03/27/18 11:17	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	03/27/18 11:17	03/27/18 11:17	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	03/27/18 11:17	03/27/18 11:17	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	03/27/18 11:17	03/27/18 11:17	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*99.4 %*	*80-120*	*03/27/18 11:17*	*03/27/18 11:17*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*99.2 %*	*80-120*	*03/27/18 11:17*	*03/27/18 11:17*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*88.2 %*	*80-120*	*03/27/18 11:17*	*03/27/18 11:17*	*EPA 8260 B*				
Surrogate: Toluene-d8		*98.3 %*	*80-120*	*03/27/18 11:17*	*03/27/18 11:17*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/03/18 14:20

MW-10

8030679-11 (Aqueous) Sampled: 03/22/18 15:25

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**73.3**	20.0	µg/L	03/27/18 17:10	03/30/18 03:47	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**39.5**	2.00	µg/L	03/27/18 17:10	03/27/18 17:10	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**290**	20.0	µg/L	03/27/18 17:10	03/30/18 03:47	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**134**	20.0	µg/L	03/27/18 17:10	03/30/18 03:47	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**19.5**	2.00	µg/L	03/27/18 17:10	03/27/18 17:10	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**2.08**	2.00	µg/L	03/27/18 17:10	03/27/18 17:10	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**20.4**	2.00	µg/L	03/27/18 17:10	03/27/18 17:10	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**29.7**	2.00	µg/L	03/27/18 17:10	03/27/18 17:10	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**167**	6.00	µg/L	03/27/18 17:10	03/27/18 17:10	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*96.2 %*	*80-120*	*03/27/18 17:10*	*03/27/18 17:10*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*	*03/27/18 17:10*	*03/27/18 17:10*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*92.1 %*	*80-120*	*03/27/18 17:10*	*03/27/18 17:10*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.5 %*	*80-120*	*03/27/18 17:10*	*03/27/18 17:10*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/03/18 14:20

MW-11

8030679-12 (Aqueous) Sampled: 03/22/18 10:20

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	03/27/18 16:44	03/27/18 16:44	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	03/27/18 16:44	03/27/18 16:44	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	03/27/18 16:44	03/27/18 16:44	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	03/27/18 16:44	03/27/18 16:44	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/27/18 16:44	03/27/18 16:44	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/27/18 16:44	03/27/18 16:44	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	03/27/18 16:44	03/27/18 16:44	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	03/27/18 16:44	03/27/18 16:44	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	03/27/18 16:44	03/27/18 16:44	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*90.4 %*	*80-120*	*03/27/18 16:44*	*03/27/18 16:44*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*99.6 %*	*80-120*	*03/27/18 16:44*	*03/27/18 16:44*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*94.1 %*	*80-120*	*03/27/18 16:44*	*03/27/18 16:44*	*EPA 8260 B*				
Surrogate: Toluene-d8		*96.4 %*	*80-120*	*03/27/18 16:44*	*03/27/18 16:44*	*EPA 8260 B*				

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/03/18 14:20

MW-12

8030679-13 (Aqueous) Sampled: 03/22/18 09:55

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	03/30/18 02:29	03/30/18 02:29	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	03/30/18 02:29	03/30/18 02:29	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	03/30/18 02:29	03/30/18 02:29	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	03/30/18 02:29	03/30/18 02:29	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/30/18 02:29	03/30/18 02:29	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/30/18 02:29	03/30/18 02:29	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	03/30/18 02:29	03/30/18 02:29	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	03/30/18 02:29	03/30/18 02:29	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	03/30/18 02:29	03/30/18 02:29	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*80-120*	*03/30/18 02:29*	*03/30/18 02:29*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*92.9 %*	*80-120*	*03/30/18 02:29*	*03/30/18 02:29*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*104 %*	*80-120*	*03/30/18 02:29*	*03/30/18 02:29*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.1 %*	*80-120*	*03/30/18 02:29*	*03/30/18 02:29*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/03/18 14:20

MW-13

8030679-14 (Aqueous) Sampled: 03/22/18 11:45

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	03/27/18 18:02	03/27/18 18:02	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	03/27/18 18:02	03/27/18 18:02	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	03/27/18 18:02	03/27/18 18:02	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	03/27/18 18:02	03/27/18 18:02	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/27/18 18:02	03/27/18 18:02	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/27/18 18:02	03/27/18 18:02	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	03/27/18 18:02	03/27/18 18:02	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	03/27/18 18:02	03/27/18 18:02	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	03/27/18 18:02	03/27/18 18:02	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*99.0 %*	*80-120*	*03/27/18 18:02*	*03/27/18 18:02*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*99.6 %*	*80-120*	*03/27/18 18:02*	*03/27/18 18:02*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*94.8 %*	*80-120*	*03/27/18 18:02*	*03/27/18 18:02*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.6 %*	*80-120*	*03/27/18 18:02*	*03/27/18 18:02*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 04/03/18 14:20
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-14

8030679-15 (Aqueous) Sampled: 03/22/18 14:10

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**943**	100	µg/L	03/27/18 18:28	03/30/18 04:13	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**215**	100	µg/L	03/27/18 18:28	03/30/18 04:13	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**4700**	100	µg/L	03/27/18 18:28	03/30/18 04:13	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**927**	100	µg/L	03/27/18 18:28	03/30/18 04:13	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**87.3**	2.00	µg/L	03/27/18 18:28	03/27/18 18:28	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**58.0**	2.00	µg/L	03/27/18 18:28	03/27/18 18:28	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**164**	100	µg/L	03/27/18 18:28	03/30/18 04:13	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**2810**	100	µg/L	03/27/18 18:28	03/30/18 04:13	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**3560**	300	µg/L	03/27/18 18:28	03/30/18 04:13	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*91.6 %*	*80-120*	*03/27/18 18:28*	*03/27/18 18:28*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*112 %*	*80-120*	*03/27/18 18:28*	*03/27/18 18:28*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*98.6 %*	*80-120*	*03/27/18 18:28*	*03/27/18 18:28*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.9 %*	*80-120*	*03/27/18 18:28*	*03/27/18 18:28*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/03/18 14:20

MW-1BR

8030679-16 (Aqueous) Sampled: 03/21/18 16:55

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**2.13**	2.00	µg/L	03/30/18 02:55	03/30/18 02:55	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	03/30/18 02:55	03/30/18 02:55	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**102**	2.00	µg/L	03/30/18 02:55	03/30/18 02:55	EPA 5030B	EPA 8260 B	A	JMG	X
Ethylbenzene	**4.01**	2.00	µg/L	03/30/18 02:55	03/30/18 02:55	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/30/18 02:55	03/30/18 02:55	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/30/18 02:55	03/30/18 02:55	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	03/30/18 02:55	03/30/18 02:55	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	03/30/18 02:55	03/30/18 02:55	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	03/30/18 02:55	03/30/18 02:55	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*95.0 %*	*80-120*	*03/30/18 02:55*	*03/30/18 02:55*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*93.0 %*	*80-120*	*03/30/18 02:55*	*03/30/18 02:55*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*102 %*	*80-120*	*03/30/18 02:55*	*03/30/18 02:55*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.6 %*	*80-120*	*03/30/18 02:55*	*03/30/18 02:55*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/03/18 14:20

MW-3BR

8030679-17 (Aqueous) Sampled: 03/21/18 18:30

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	03/30/18 03:21	03/30/18 03:21	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	03/30/18 03:21	03/30/18 03:21	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	03/30/18 03:21	03/30/18 03:21	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	03/30/18 03:21	03/30/18 03:21	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/30/18 03:21	03/30/18 03:21	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**2.98**	2.00	µg/L	03/30/18 03:21	03/30/18 03:21	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	03/30/18 03:21	03/30/18 03:21	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	03/30/18 03:21	03/30/18 03:21	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	03/30/18 03:21	03/30/18 03:21	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*103 %*	*80-120*	*03/30/18 03:21*	*03/30/18 03:21*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*93.7 %*	*80-120*	*03/30/18 03:21*	*03/30/18 03:21*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*100 %*	*80-120*	*03/30/18 03:21*	*03/30/18 03:21*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.4 %*	*80-120*	*03/30/18 03:21*	*03/30/18 03:21*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 04/03/18 14:20
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-4BR

8030679-18 (Aqueous) Sampled: 03/21/18 17:20

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**6.85**	2.00	µg/L	03/27/18 19:46	03/27/18 19:46	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	**2.53**	2.00	µg/L	03/27/18 19:46	03/27/18 19:46	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**46.2**	2.00	µg/L	03/27/18 19:46	03/27/18 19:46	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	**8.48**	2.00	µg/L	03/27/18 19:46	03/27/18 19:46	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/27/18 19:46	03/27/18 19:46	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/27/18 19:46	03/27/18 19:46	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**3.32**	2.00	µg/L	03/27/18 19:46	03/27/18 19:46	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**52.9**	2.00	µg/L	03/27/18 19:46	03/27/18 19:46	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**51.1**	6.00	µg/L	03/27/18 19:46	03/27/18 19:46	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*90.4 %*	*80-120*	*03/27/18 19:46*	*03/27/18 19:46*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*104 %*	*80-120*	*03/27/18 19:46*	*03/27/18 19:46*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*90.4 %*	*80-120*	*03/27/18 19:46*	*03/27/18 19:46*	*EPA 8260 B*				
Surrogate: Toluene-d8		*94.8 %*	*80-120*	*03/27/18 19:46*	*03/27/18 19:46*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 04/03/18 14:20
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-5BR

8030679-19 (Aqueous) Sampled: 03/22/18 10:55

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**948**	50.0	µg/L	03/27/18 09:59	03/27/18 10:25	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**219**	10.0	µg/L	03/27/18 09:59	03/27/18 09:59	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**1300**	50.0	µg/L	03/27/18 09:59	03/27/18 10:25	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**809**	50.0	µg/L	03/27/18 09:59	03/27/18 10:25	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**86.8**	10.0	µg/L	03/27/18 09:59	03/27/18 09:59	EPA 5030B	EPA 8260 B	A	JMG	D1
MTBE	<10.0	10.0	µg/L	03/27/18 09:59	03/27/18 09:59	EPA 5030B	EPA 8260 B	A	JMG	D1
Naphthalene	**148**	10.0	µg/L	03/27/18 09:59	03/27/18 09:59	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**135**	10.0	µg/L	03/27/18 09:59	03/27/18 09:59	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**1720**	22.0	µg/L	03/27/18 09:59	03/27/18 10:25	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*90.1 %*	*80-120*	*03/27/18 09:59*	*03/27/18 09:59*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*103 %*	*80-120*	*03/27/18 09:59*	*03/27/18 09:59*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*90.1 %*	*80-120*	*03/27/18 09:59*	*03/27/18 09:59*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.1 %*	*80-120*	*03/27/18 09:59*	*03/27/18 09:59*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 04/03/18 14:20
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-6BR

8030679-20 (Aqueous) Sampled: 03/22/18 15:50

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	03/27/18 20:13	03/27/18 20:13	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	03/27/18 20:13	03/27/18 20:13	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	03/27/18 20:13	03/27/18 20:13	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	03/27/18 20:13	03/27/18 20:13	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/27/18 20:13	03/27/18 20:13	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/27/18 20:13	03/27/18 20:13	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	03/27/18 20:13	03/27/18 20:13	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	03/27/18 20:13	03/27/18 20:13	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	03/27/18 20:13	03/27/18 20:13	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*94.6 %*	*80-120*	*03/27/18 20:13*	*03/27/18 20:13*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*102 %*	*80-120*	*03/27/18 20:13*	*03/27/18 20:13*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*88.5 %*	*80-120*	*03/27/18 20:13*	*03/27/18 20:13*	*EPA 8260 B*				
Surrogate: Toluene-d8		*95.7 %*	*80-120*	*03/27/18 20:13*	*03/27/18 20:13*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/03/18 14:20

MW-7BR

8030679-21 (Aqueous) Sampled: 03/22/18 14:45

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	03/27/18 20:39	03/27/18 20:39	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	03/27/18 20:39	03/27/18 20:39	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	03/27/18 20:39	03/27/18 20:39	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	03/27/18 20:39	03/27/18 20:39	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/27/18 20:39	03/27/18 20:39	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/27/18 20:39	03/27/18 20:39	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	03/27/18 20:39	03/27/18 20:39	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	03/27/18 20:39	03/27/18 20:39	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	03/27/18 20:39	03/27/18 20:39	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*97.7 %*	*80-120*	*03/27/18 20:39*	*03/27/18 20:39*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*100 %*	*80-120*	*03/27/18 20:39*	*03/27/18 20:39*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*89.1 %*	*80-120*	*03/27/18 20:39*	*03/27/18 20:39*	*EPA 8260 B*				
Surrogate: Toluene-d8		*95.3 %*	*80-120*	*03/27/18 20:39*	*03/27/18 20:39*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 04/03/18 14:20
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-8BR

8030679-22 (Aqueous) Sampled: 03/22/18 15:00

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	03/27/18 21:05	03/27/18 21:05	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	03/27/18 21:05	03/27/18 21:05	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	03/27/18 21:05	03/27/18 21:05	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	03/27/18 21:05	03/27/18 21:05	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/27/18 21:05	03/27/18 21:05	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/27/18 21:05	03/27/18 21:05	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	03/27/18 21:05	03/27/18 21:05	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	03/27/18 21:05	03/27/18 21:05	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	03/27/18 21:05	03/27/18 21:05	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*91.8 %*	*80-120*	*03/27/18 21:05*	*03/27/18 21:05*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*101 %*	*80-120*	*03/27/18 21:05*	*03/27/18 21:05*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*92.6 %*	*80-120*	*03/27/18 21:05*	*03/27/18 21:05*	*EPA 8260 B*				
Surrogate: Toluene-d8		*95.5 %*	*80-120*	*03/27/18 21:05*	*03/27/18 21:05*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/03/18 14:20

MW-9BR

8030679-23 (Aqueous) Sampled: 03/22/18 13:40

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**5.37**	2.00	µg/L	03/27/18 21:31	03/27/18 21:31	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	03/27/18 21:31	03/27/18 21:31	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**6.74**	2.00	µg/L	03/27/18 21:31	03/27/18 21:31	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	03/27/18 21:31	03/27/18 21:31	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	03/27/18 21:31	03/27/18 21:31	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	03/27/18 21:31	03/27/18 21:31	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	03/27/18 21:31	03/27/18 21:31	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**2.73**	2.00	µg/L	03/27/18 21:31	03/27/18 21:31	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**12.1**	6.00	µg/L	03/27/18 21:31	03/27/18 21:31	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*90.9 %*	*80-120*	*03/27/18 21:31*	*03/27/18 21:31*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*103 %*	*80-120*	*03/27/18 21:31*	*03/27/18 21:31*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*92.0 %*	*80-120*	*03/27/18 21:31*	*03/27/18 21:31*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.8 %*	*80-120*	*03/27/18 21:31*	*03/27/18 21:31*	*EPA 8260 B*				

Mountain Research, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8030679
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	04/03/18 14:20

Certifications

Code	Description	Number	Expires
MDDOE	Maryland Department of the Environment	257	06/30/2018
PADEP-Altoona	Pennsylvania Department of Environmental Protection	009	03/31/2018
WVDEP-Altoona	West Virginia Department of Environmental Protection	225	12/31/2018
PADEP-DuBois	Pennsylvania Department of Environmental Protection	008	09/30/2018
WVDEP-HydroChem	West Virginia Department of Environmental Protection	038	11/01/2018

Notes and Definitions

X	The result is estimated because it was over the analysis calibration range.
D1	The sample was analyzed at a dilution.
CC	Calculated analytes are reported based on unrounded results of the individual analytes used in the calculation. Therefore, using the rounded values of the analytes as reported may lead to a result that varies slightly from the reported result.
RL	Reporting Limit - either the practical quantitation limit or the method detection limit
dry	Sample results reported on a dry weight basis
A	Analysis Performed by Mountain Research Altoona Laboratory - PADEP #07-00418, WVDEP #225
D	Analysis Performed by Mountain Research DuBois Laboratory - PADEP # 33-00258
W	Analysis Performed by Mountain Research - HydroChem Laboratory - WVDEP #038

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

BALL POINT PEN ONLY

Billing Group:	Phase:	PROJECT NAME: GW Sampling
MR Project #: 4644.15.01		SITE LOCATION: Indiana PA
CLIENT: Ventures		SAMPLER(S): JMB

NOTES:
Received On Ice: (Y) / N
Sample Temp: 5.4
PWSID #:
Seal In Tack: Y / N
Other:
Comments:

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825 25th Street, Altoona, PA 16601 (814) 949-2034 (800) 83'
110 McCracken Run Road, Dubois, PA 15801 (814) 371-6030 Fax (814

CHAIN OF CUSTODY RECORD

MR PROJ. MGR. MR

Shipping Carrier:

Turn Around Time:
10 Day X
3 Day
1 Day

Comments:

SAMPLE ID.NO.	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	Analyses Requested: 8260B	Preserve	LAB NUMBER
Trip Blank	3-21-18	10:00	X		AQ	2-40 ml VOA	2A,4A	X	HCL	01
EW-1	3-22-18	13:10								02
mw-1	3-22-18	12:50								03
mw-3	3-22-18	8:45								04
mw-4	3-21-18	17:45								05
mw-5	3-21-18	18:46								06
mw-6	3-22-18	9:30								07
mw-7	3-22-18	11:25								08
mw-8	3-21-18	17:00								09
mw-9	3-21-18	17:25								10
mw-10	3-22-18	15:25								11
mw-11	3-22-18	10:20	↓		↓	↓	↓	↓	↓	12

	DATE	TIME		DATE	TIME	
RELINQUISHED BY:	3-22-18	17:38	ACCEPTED BY:	3-23-18	07:30	Lab WO #: 8030679
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE	TIME	Labeled By:

Log In Time: 1102
Staff: AA
Date: 3/26/18

White - Lab; Blue - File; Yellow - Project Manager; Pink - Staff

H:\H\HYDRO\Field Forms\C-O-C\Blank COC_v1_04_08

BALL POINT PEN ONLY

00001

Billing Group:	Phase:	PROJECT NAME: GW Sampling
MR Project #: 4644.15.01		SITE LOCATION: Indiana PA
CLIENT: Venwards		SAMPLER(S): JmB

NOTES:
Received On Ice: (Y) / N
Sample Temp: 5.4
PWSID #:
Seal In Tack: Y / N
Other:
Comments:

MOUNTAIN RESEARCH LLC

825 25th Street, Altoona, PA 16601 (814) 949-2034 (800) 837-4674 FAX (814) 949-9591

110 McCracken Run Road, Dubois, PA 15801 (814) 371-6030 Fax (814) 375-0823

CHAIN OF CUSTODY RECORD

MR PROJ. MGR. mk

Shipping Carrier:

Turn Around Time:
10 Day X
3 Day
1 Day

Comments:

SAMPLE ID.NO.	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	Analyses Requested: 8260B	Preserve	LAB NUMBER
MW-12	3-22-18	9:55	X		AQ	2-40 mL VOA	2A.4A	X	HCl	13
MW-13	3-22-18	11:45								14
MW-14	3-22-18	14:10								15
MW-1BR	3-21-18	16:55								16
MW-3BR	3-21-18	18:30								17
MW-4BR	3-21-18	17:20								18
MW-5BR	3-22-18	10:55								19
MW-6BR	3-22-18	15:50								20
MW-7BR	3-22-18	14:45								21
MW-8BR	3-22-18	15:00								22
MW-9BR	3-22-18	13:40	↓		↓	↓	↓	↓	↓	23

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE	TIME	Lab WO #: 8030679	Log In Time:
	3-22-18	17:38		3-23-18	07:30		Staff: KC
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE	TIME	Labeled By:	Date: 3-26-18

White - Lab; Blue - File; Yellow - Project Manager; Pink - Staff

H:\H\HYDRO\Field Forms\C-O-C\Blank COC_v1_04_08

MOUNTAIN RESEARCH SAMPLE RECEIPT PROTOCOL

WORK ORDER: 8030679

CLIENT: Venngrds

DATE SAMPLED: 3/22/18 DATE RECEIVED: 3/23/18 TIME RECEIVED: 0730

1. CHECK ALL THAT APPLY: PA ☐ WV ☐ MD ☐ P W S ☐ NPDES/COMPLIANCE ☐ DAIRY ☐ RUSH ☐
2. WERE ANY OF THE SAMPLE CONTAINERS DAMAGED/LEAKING? (ARE CUSTODY SEALS BROKEN?) YES ☐ NO ☐

IF YES, EXPLAIN: _____

3. NUMBER OF CONTAINERS RECEIVED: 46
4. WERE THE SAMPLES RECEIVED ON ICE/OTHER ACCEPTABLE REFRIGERANT? YES ☐ NO ☐

IF NO, EXPLAIN: _____

5. RECEIVING TEMP: 5.4 °C TEMP CONTROL(S) PRESENT YES ☐ NO ☐ BOTTLE(S) TEMPED: _____
6. WERE THE SAMPLES PROPERLY PRESERVED? YES ☐ NO ☐

IF NO, EXPLAIN: _____

7. WERE THE SAMPLES COLLECTED IN THE CORRECT CONTAINERS? YES ☐ NO ☐

IF NO, EXPLAIN: _____

8. IS THERE HEADSPACE PRESENT FOR VOLATILES/ODOR SAMPLES? YES ☐ NO ☐ N/A ☐
9. WAS THE COC FILLED OUT PROPERLY? YES ☐ NO ☐

IF NO, EXPLAIN: _____

10. DID THE SAMPLE LABEL(S) CONTAIN ADEQUATE INFO? (CLIENT/DATE/TIME/PRESERVATIVE) YES ☐ NO ☐

IF NO, EXPLAIN: _____

11. WERE ANY OF THE SAMPLES RECEIVED OUTSIDE OF HOLDING TIME? YES ☐ NO ☐

IF YES, EXPLAIN: _____

12. DO THE SAMPLES REQUIRE ANALYSES THAT HAVE A SHORT HOLDING TIME? YES ☐ NO ☐

IF YES, WHAT ANALYSES? _____ **PLEASE NOTIFY LABORATORY ANALYSTS!**

13. IS SUBCONTRACTING REQUIRED? YES ☐ NO ☐

IF YES, WHAT ANALYSES? _____

14. WAS THE CLIENT CONTACTED? YES ☐ NO ☐ IF YES, FILL OUT THE FOLLOWING:

MR EMPLOYEE INITIALS: CLIENT SPOKEN TO: DATE/TIME:

OUTCOME:

SIGNATURE: KDeRose

MOUNTAIN RESEARCH, LLC

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Hydrochem Laboratories
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(304) 930-1972
Fax (304) 930-1975

22 May 2018

Lab ID #: 8050397

Richard Vennard
Vennard Crossroads Convenience, Inc
5190 White Oak Dr
Indiana, PA 15701

RE: Indiana, PA

Enclosed are the results of analyses for samples received by the laboratory on 05/09/18 14:16. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Stephen Gampe

Stephen Gampe
Assistant Laboratory Manager

Authorized Reviewer

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(304) 930-1972
Fax (304) 930-1975

Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050397
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	05/22/18 12:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Sample Type	Date Sampled	Date Received
Trip Blank	8050397-01	Aqueous	Grab	05/09/18 06:00	05/09/18 14:16
MW-15	8050397-02	Aqueous	Grab	05/09/18 08:55	05/09/18 14:16
MW-16	8050397-03	Aqueous	Grab	05/09/18 09:30	05/09/18 14:16

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050397
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	05/22/18 12:32

Trip Blank

8050397-01 (Aqueous) Sampled: 05/09/18 06:00

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/09/18 22:06	05/09/18 22:06	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/09/18 22:06	05/09/18 22:06	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	05/09/18 22:06	05/09/18 22:06	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/09/18 22:06	05/09/18 22:06	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/09/18 22:06	05/09/18 22:06	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/09/18 22:06	05/09/18 22:06	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/09/18 22:06	05/09/18 22:06	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	05/09/18 22:06	05/09/18 22:06	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/09/18 22:06	05/09/18 22:06	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*93.8 %*	*80-120*	*05/09/18 22:06*	*05/09/18 22:06*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*96.4 %*	*80-120*	*05/09/18 22:06*	*05/09/18 22:06*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*102 %*	*80-120*	*05/09/18 22:06*	*05/09/18 22:06*	*EPA 8260 B*				
Surrogate: Toluene-d8		*100 %*	*80-120*	*05/09/18 22:06*	*05/09/18 22:06*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050397
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	05/22/18 12:32

MW-15

8050397-02 (Aqueous) Sampled: 05/09/18 08:55

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/09/18 22:33	05/09/18 22:33	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/09/18 22:33	05/09/18 22:33	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	05/09/18 22:33	05/09/18 22:33	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/09/18 22:33	05/09/18 22:33	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/09/18 22:33	05/09/18 22:33	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/09/18 22:33	05/09/18 22:33	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/09/18 22:33	05/09/18 22:33	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	05/09/18 22:33	05/09/18 22:33	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/09/18 22:33	05/09/18 22:33	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*96.2 %*	*80-120*	*05/09/18 22:33*	*05/09/18 22:33*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*95.9 %*	*80-120*	*05/09/18 22:33*	*05/09/18 22:33*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*102 %*	*80-120*	*05/09/18 22:33*	*05/09/18 22:33*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.7 %*	*80-120*	*05/09/18 22:33*	*05/09/18 22:33*	*EPA 8260 B*				

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050397
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	05/22/18 12:32

MW-16

8050397-03 (Aqueous) Sampled: 05/09/18 09:30

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/09/18 22:59	05/09/18 22:59	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/09/18 22:59	05/09/18 22:59	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	05/09/18 22:59	05/09/18 22:59	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/09/18 22:59	05/09/18 22:59	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/09/18 22:59	05/09/18 22:59	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/09/18 22:59	05/09/18 22:59	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/09/18 22:59	05/09/18 22:59	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**3.85**	2.00	µg/L	05/09/18 22:59	05/09/18 22:59	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/09/18 22:59	05/09/18 22:59	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*80-120*	*05/09/18 22:59*	*05/09/18 22:59*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*96.7 %*	*80-120*	*05/09/18 22:59*	*05/09/18 22:59*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*105 %*	*80-120*	*05/09/18 22:59*	*05/09/18 22:59*	*EPA 8260 B*				
Surrogate: Toluene-d8		*102 %*	*80-120*	*05/09/18 22:59*	*05/09/18 22:59*	*EPA 8260 B*				

Mountain Research, LLC

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

MOUNTAIN RESEARCH, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050397
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	05/22/18 12:32

Certifications

Code	Description	Number	Expires
MDDOE	Maryland Department of the Environment	257	06/30/2018
PADEP-Altoona	Pennsylvania Department of Environmental Protection	009	03/31/2018
WVDEP-Altoona	West Virginia Department of Environmental Protection	225	12/31/2018
PADEP-DuBois	Pennsylvania Department of Environmental Protection	008	09/30/2018
WVDEP-HydroChem	West Virginia Department of Environmental Protection	038	11/01/2018

Notes and Definitions

CC	Calculated analytes are reported based on unrounded results of the individual analytes used in the calculation. Therefore, using the rounded values of the analytes as reported may lead to a result that varies slightly from the reported result.
RL	Reporting Limit - either the practical quantitation limit or the method detection limit
dry	Sample results reported on a dry weight basis
A	Analysis Performed by Mountain Research Altoona Laboratory - PADEP #07-00418, WVDEP #225
D	Analysis Performed by Mountain Research DuBois Laboratory - PADEP # 33-00258
W	Analysis Performed by Mountain Research - HydroChem Laboratory - WVDEP #038

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

BALL POINT PEN ONLY

Billing Group:	Phase:	PROJECT NAME
	GW Sampling	Vennards
MR Project #		SITE LOCATION
4644.15.01 ~~18.01~~		Indiana PA
CLIENT		SAMPLER(S)
Vennards		INS

MOUNTAIN RESEARCH LLC
825 25th Street, Altoona, PA 16601 (814) 949-2034 (800)
110 McCracken Run Road, Dubois, PA 15801 (814) 371-6030 Fax (8

NOTES: Ins 5/9/18 (Y)
Received On Ice: (Y) / N
Sample Temp: 5.1
PWSID #:
Seal In Tack: Y / N
Other:
Comments:

CHAIN OF CUSTODY RECORD

MR PROJ. MGR. MK

Shipping Carrier:

Turn Around Time:
10 Day
3 Day
1 Day
5day X
Comments:

SAMPLE ID.NO.	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	Analyses Requested: 8260B	Preserve	LAB NUMBER
Trip Blank	5/9/18	0600	X		Aq	2-40 ml vials	2A4A8260B	8260B	HCL	01
MW-15		0855								02
MW-16		0930								03

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE	TIME	Lab WO #:	Log In Time:
[illegible]	5/9/18	14:46	[illegible]	5/9/18	1446	8056397	1123
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE	TIME	Labeled By:	Staff: KL
							Date: 5/14/18

Page 7 of 8

White - Lab; Blue - File; Yellow - Project Manager; Pink - Staff

H:\H\HYDRO\Field Forms\C-O-C\Blank COC_v1_04_08

MOUNTAIN RESEARCH SAMPLE RECEIPT PROTOCOL

WORK ORDER: 8050397

CLIENT: Vennards

DATE SAMPLED: 5-9-18 DATE RECEIVED: 5-9-18 TIME RECEIVED: 1446

1. CHECK ALL THAT APPLY: PA ☑ WV ☐ MD ☐ P W S ☐ NPDES/COMPLIANCE ☐ DAIRY ☐ RUSH ☐
2. WERE ANY OF THE SAMPLE CONTAINERS DAMAGED/LEAKING? (ARE CUSTODY SEALS BROKEN?) YES ☐ NO ☑

IF YES, EXPLAIN: _____

3. NUMBER OF CONTAINERS RECEIVED: 6 + 2 Dups
4. WERE THE SAMPLES RECEIVED ON ICE/OTHER ACCEPTABLE REFRIGERANT? YES ☑ NO ☐

IF NO, EXPLAIN: _____

5. RECEIVING TEMP: 5.1 °C TEMP CONTROL(S) PRESENT YES ☐ NO ☐ BOTTLE(S) TEMPED: 1
6. WERE THE SAMPLES PROPERLY PRESERVED? YES ☑ NO ☐

IF NO, EXPLAIN: _____

7. WERE THE SAMPLES COLLECTED IN THE CORRECT CONTAINERS? YES ☑ NO ☐

IF NO, EXPLAIN: _____

8. IS THERE HEADSPACE PRESENT FOR VOLATILES/ODOR SAMPLES? YES ☐ NO ☑ N/A ☐
9. WAS THE COC FILLED OUT PROPERLY? YES ☑ NO ☐

IF NO, EXPLAIN: _____

10. DID THE SAMPLE LABEL(S) CONTAIN ADEQUATE INFO? (CLIENT/DATE/TIME/PRESERVATIVE) YES ☑ NO ☐

IF NO, EXPLAIN: _____

11. WERE ANY OF THE SAMPLES RECEIVED OUTSIDE OF HOLDING TIME? YES ☐ NO ☑

IF YES, EXPLAIN: _____

12. DO THE SAMPLES REQUIRE ANALYSES THAT HAVE A SHORT HOLDING TIME? YES ☐ NO ☑

IF YES, WHAT ANALYSES? _____ **PLEASE NOTIFY LABORATORY ANALYSTS!**

13. IS SUBCONTRACTING REQUIRED? YES ☐ NO ☑
14. WAS THE CLIENT CONTACTED? YES ☐ NO ☑ IF YES, FILL OUT THE FOLLOWING:

MR EMPLOYEE INITIALS: _____ CLIENT SPOKEN TO: _____ DATE/TIME: _____

OUTCOME: _____

2 Duplicates MW-15

SIGNATURE: _____

L60.30.A r2 Sample Receipt Form

For MR Use Only

MOUNTAIN RESEARCH, LLC

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15 June 2018

Lab ID #: 8050801

Richard Vennard
Vennard Crossroads Convenience, Inc
5190 White Oak Dr
Indiana, PA 15701

RE: Indiana, PA

Enclosed are the results of analyses for samples received by the laboratory on 05/25/18 14:07. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Stephen Gampe

Stephen Gampe
Assistant Laboratory Manager

Authorized Reviewer

MOUNTAIN RESEARCH, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Sample Type	Date Sampled	Date Received
MW-1	8050801-01	Aqueous	Grab	05/25/18 10:10	05/25/18 14:07
MW-2	8050801-02	Aqueous	Grab	05/25/18 11:53	05/25/18 14:07
MW-3	8050801-03	Aqueous	Grab	05/25/18 10:45	05/25/18 14:07
MW-4	8050801-04	Aqueous	Grab	05/25/18 09:07	05/25/18 14:07
MW-5	8050801-05	Aqueous	Grab	05/25/18 10:28	05/25/18 14:07
MW-6	8050801-06	Aqueous	Grab	05/25/18 07:57	05/25/18 14:07
MW-7	8050801-07	Aqueous	Grab	05/25/18 06:50	05/25/18 14:07
MW-8	8050801-08	Aqueous	Grab	05/25/18 09:32	05/25/18 14:07
MW-9	8050801-09	Aqueous	Grab	05/25/18 09:50	05/25/18 14:07
MW-10	8050801-10	Aqueous	Grab	05/25/18 08:10	05/25/18 14:07
MW-11	8050801-11	Aqueous	Grab	05/25/18 07:07	05/25/18 14:07
MW-12	8050801-12	Aqueous	Grab	05/25/18 07:50	05/25/18 14:07
MW-13	8050801-13	Aqueous	Grab	05/25/18 10:03	05/25/18 14:07
MW-14	8050801-14	Aqueous	Grab	05/25/18 11:30	05/25/18 14:07
MW-15	8050801-15	Aqueous	Grab	05/25/18 07:35	05/25/18 14:07
MW-16	8050801-16	Aqueous	Grab	05/25/18 08:40	05/25/18 14:07
MW-1BR	8050801-17	Aqueous	Grab	05/25/18 09:28	05/25/18 14:07
MW-2BR	8050801-18	Aqueous	Grab	05/25/18 06:55	05/25/18 14:07
MW-3BR	8050801-19	Aqueous	Grab	05/25/18 10:40	05/25/18 14:07
MW-4BR	8050801-20	Aqueous	Grab	05/25/18 09:45	05/25/18 14:07
MW-5BR	8050801-21	Aqueous	Grab	05/25/18 08:20	05/25/18 14:07
MW-6BR	8050801-22	Aqueous	Grab	05/25/18 08:30	05/25/18 14:07
MW-7BR	8050801-23	Aqueous	Grab	05/25/18 07:25	05/25/18 14:07
MW-8BR	8050801-24	Aqueous	Grab	05/25/18 07:20	05/25/18 14:07
MW-9BR	8050801-25	Aqueous	Grab	05/25/18 09:00	05/25/18 14:07
EW-1	8050801-26	Aqueous	Grab	05/25/18 09:36	05/25/18 14:07

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

MOUNTAIN RESEARCH, LLC

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(304) 930-1972
Fax (304) 930-1975

Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Sample Type	Date Sampled	Date Received
EW-1BR	8050801-27	Aqueous	Grab	05/25/18 09:41	05/25/18 14:07
Steam Gauge 1	8050801-28	Aqueous	Grab	05/24/18 08:41	05/25/18 14:07
BLD Sump	8050801-29	Aqueous	Grab	05/25/18 12:00	05/25/18 14:07
Tank Field Sump	8050801-30	Aqueous	Grab	05/25/18 11:05	05/25/18 14:07
Duplicate	8050801-31	Aqueous	Grab	05/25/18 10:30	05/25/18 14:07
Trip Blank	8050801-32	Aqueous	Grab	05/25/18 12:10	05/25/18 14:07
GAC	8050801-33	Aqueous	Grab	05/25/18 11:35	05/25/18 14:07

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-1

8050801-01 (Aqueous) Sampled: 05/25/18 10:10

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 01:32	05/31/18 01:32	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 01:32	05/31/18 01:32	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	05/31/18 01:32	05/31/18 01:32	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/31/18 01:32	05/31/18 01:32	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/31/18 01:32	05/31/18 01:32	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/31/18 01:32	05/31/18 01:32	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/31/18 01:32	05/31/18 01:32	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	05/31/18 01:32	05/31/18 01:32	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	05/31/18 01:32	05/31/18 01:32	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	05/31/18 01:32	05/31/18 01:32	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/31/18 01:32	05/31/18 01:32	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*92.4 %*	*80-120*	*05/31/18 01:32*	*05/31/18 01:32*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*95.7 %*	*80-120*	*05/31/18 01:32*	*05/31/18 01:32*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*100 %*	*80-120*	*05/31/18 01:32*	*05/31/18 01:32*	*EPA 8260 B*				
Surrogate: Toluene-d8		*98.4 %*	*80-120*	*05/31/18 01:32*	*05/31/18 01:32*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-2

8050801-02 (Aqueous) Sampled: 05/25/18 11:53

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**2740**	200	µg/L	05/30/18 20:19	05/30/18 20:19	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**754**	200	µg/L	05/30/18 20:19	05/30/18 20:19	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**2390**	200	µg/L	05/30/18 20:19	05/30/18 20:19	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**1900**	200	µg/L	05/30/18 20:19	05/30/18 20:19	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	<200	200	µg/L	05/30/18 20:19	05/30/18 20:19	EPA 5030B	EPA 8260 B	A	JMG	D1
MTBE	<200	200	µg/L	05/30/18 20:19	05/30/18 20:19	EPA 5030B	EPA 8260 B	A	JMG	D1
Naphthalene	**473**	200	µg/L	05/30/18 20:19	05/30/18 20:19	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**9540**	2000	µg/L	05/30/18 20:19	05/30/18 20:45	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene o	**4430**	200	µg/L	05/30/18 20:19	05/30/18 20:19	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene p/m	**9190**	400	µg/L	05/30/18 20:19	05/30/18 20:19	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**13600**	600	µg/L	05/30/18 20:19	05/30/18 20:19	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*103 %*	*80-120*	*05/30/18 20:19*	*05/30/18 20:19*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*96.9 %*	*80-120*	*05/30/18 20:19*	*05/30/18 20:19*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*96.2 %*	*80-120*	*05/30/18 20:19*	*05/30/18 20:19*	*EPA 8260 B*				
Surrogate: Toluene-d8		*105 %*	*80-120*	*05/30/18 20:19*	*05/30/18 20:19*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-3

8050801-03 (Aqueous) Sampled: 05/25/18 10:45

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 01:06	05/31/18 01:06	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 01:06	05/31/18 01:06	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	05/31/18 01:06	05/31/18 01:06	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/31/18 01:06	05/31/18 01:06	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/31/18 01:06	05/31/18 01:06	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/31/18 01:06	05/31/18 01:06	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/31/18 01:06	05/31/18 01:06	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	05/31/18 01:06	05/31/18 01:06	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	05/31/18 01:06	05/31/18 01:06	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	05/31/18 01:06	05/31/18 01:06	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/31/18 01:06	05/31/18 01:06	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*96.8 %*	*80-120*	*05/31/18 01:06*	*05/31/18 01:06*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*94.0 %*	*80-120*	*05/31/18 01:06*	*05/31/18 01:06*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*99.5 %*	*80-120*	*05/31/18 01:06*	*05/31/18 01:06*	*EPA 8260 B*				
Surrogate: Toluene-d8		*103 %*	*80-120*	*05/31/18 01:06*	*05/31/18 01:06*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-4

8050801-04 (Aqueous) Sampled: 05/25/18 09:07

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**4.55**	2.00	µg/L	05/31/18 06:46	05/31/18 06:46	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	**2.63**	2.00	µg/L	05/31/18 06:46	05/31/18 06:46	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**53.4**	2.00	µg/L	05/31/18 06:46	05/31/18 06:46	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	**2.91**	2.00	µg/L	05/31/18 06:46	05/31/18 06:46	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/31/18 06:46	05/31/18 06:46	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**9.67**	2.00	µg/L	05/31/18 06:46	05/31/18 06:46	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**2.43**	2.00	µg/L	05/31/18 06:46	05/31/18 06:46	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	05/31/18 06:46	05/31/18 06:46	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	05/31/18 06:46	05/31/18 06:46	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	**43.3**	4.00	µg/L	05/31/18 06:46	05/31/18 06:46	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**43.3**	6.00	µg/L	05/31/18 06:46	05/31/18 06:46	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*101 %*	*80-120*	*05/31/18 06:46*	*05/31/18 06:46*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*95.4 %*	*80-120*	*05/31/18 06:46*	*05/31/18 06:46*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*103 %*	*80-120*	*05/31/18 06:46*	*05/31/18 06:46*	*EPA 8260 B*				
Surrogate: Toluene-d8		*108 %*	*80-120*	*05/31/18 06:46*	*05/31/18 06:46*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 06/15/18 16:06
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-5

8050801-05 (Aqueous) Sampled: 05/25/18 10:28

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 01:58	05/31/18 01:58	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 01:58	05/31/18 01:58	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	05/31/18 01:58	05/31/18 01:58	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/31/18 01:58	05/31/18 01:58	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/31/18 01:58	05/31/18 01:58	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**4.81**	2.00	µg/L	05/31/18 01:58	05/31/18 01:58	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/31/18 01:58	05/31/18 01:58	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	05/31/18 01:58	05/31/18 01:58	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	05/31/18 01:58	05/31/18 01:58	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	05/31/18 01:58	05/31/18 01:58	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/31/18 01:58	05/31/18 01:58	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*93.6 %*	*80-120*	*05/31/18 01:58*	*05/31/18 01:58*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*94.8 %*	*80-120*	*05/31/18 01:58*	*05/31/18 01:58*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*101 %*	*80-120*	*05/31/18 01:58*	*05/31/18 01:58*	*EPA 8260 B*				
Surrogate: Toluene-d8		*100 %*	*80-120*	*05/31/18 01:58*	*05/31/18 01:58*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-6

8050801-06 (Aqueous) Sampled: 05/25/18 07:57

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 02:25	05/31/18 02:25	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 02:25	05/31/18 02:25	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**3.70**	2.00	µg/L	05/31/18 02:25	05/31/18 02:25	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/31/18 02:25	05/31/18 02:25	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/31/18 02:25	05/31/18 02:25	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/31/18 02:25	05/31/18 02:25	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/31/18 02:25	05/31/18 02:25	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	05/31/18 02:25	05/31/18 02:25	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	05/31/18 02:25	05/31/18 02:25	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	05/31/18 02:25	05/31/18 02:25	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/31/18 02:25	05/31/18 02:25	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*90.5 %*	*80-120*	*05/31/18 02:25*	*05/31/18 02:25*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*94.6 %*	*80-120*	*05/31/18 02:25*	*05/31/18 02:25*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*102 %*	*80-120*	*05/31/18 02:25*	*05/31/18 02:25*	*EPA 8260 B*				
Surrogate: Toluene-d8		*101 %*	*80-120*	*05/31/18 02:25*	*05/31/18 02:25*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 06/15/18 16:06
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-7

8050801-07 (Aqueous) Sampled: 05/25/18 06:50

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 02:51	05/31/18 02:51	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 02:51	05/31/18 02:51	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**92.8**	2.00	µg/L	05/31/18 02:51	05/31/18 02:51	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	**9.74**	2.00	µg/L	05/31/18 02:51	05/31/18 02:51	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/31/18 02:51	05/31/18 02:51	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**3.28**	2.00	µg/L	05/31/18 02:51	05/31/18 02:51	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/31/18 02:51	05/31/18 02:51	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**18.2**	2.00	µg/L	05/31/18 02:51	05/31/18 02:51	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	**8.20**	2.00	µg/L	05/31/18 02:51	05/31/18 02:51	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	**12.9**	4.00	µg/L	05/31/18 02:51	05/31/18 02:51	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**21.1**	6.00	µg/L	05/31/18 02:51	05/31/18 02:51	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*97.4 %*	*80-120*	*05/31/18 02:51*	*05/31/18 02:51*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*93.3 %*	*80-120*	*05/31/18 02:51*	*05/31/18 02:51*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*99.8 %*	*80-120*	*05/31/18 02:51*	*05/31/18 02:51*	*EPA 8260 B*				
Surrogate: Toluene-d8		*102 %*	*80-120*	*05/31/18 02:51*	*05/31/18 02:51*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 06/15/18 16:06
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-8

8050801-08 (Aqueous) Sampled: 05/25/18 09:32

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**310**	50.0	µg/L	05/31/18 07:12	06/01/18 12:38	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**97.9**	2.00	µg/L	05/31/18 07:12	05/31/18 07:12	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**1470**	50.0	µg/L	05/31/18 07:12	06/01/18 12:38	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**272**	50.0	µg/L	05/31/18 07:12	06/01/18 12:38	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**21.8**	2.00	µg/L	05/31/18 07:12	05/31/18 07:12	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**2.43**	2.00	µg/L	05/31/18 07:12	05/31/18 07:12	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**74.2**	2.00	µg/L	05/31/18 07:12	05/31/18 07:12	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**1230**	50.0	µg/L	05/31/18 07:12	06/01/18 12:38	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene o	**508**	50.0	µg/L	05/31/18 07:12	06/01/18 12:38	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene p/m	**1380**	100	µg/L	05/31/18 07:12	06/01/18 12:38	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**1890**	150	µg/L	05/31/18 07:12	06/01/18 12:38	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*93.7 %*	*80-120*	*05/31/18 07:12*	*05/31/18 07:12*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*98.7 %*	*80-120*	*05/31/18 07:12*	*05/31/18 07:12*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*101 %*	*80-120*	*05/31/18 07:12*	*05/31/18 07:12*	*EPA 8260 B*				
Surrogate: Toluene-d8		*100 %*	*80-120*	*05/31/18 07:12*	*05/31/18 07:12*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-9

8050801-09 (Aqueous) Sampled: 05/25/18 09:50

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**2.52**	2.00	µg/L	05/31/18 03:17	05/31/18 03:17	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 03:17	05/31/18 03:17	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**13.7**	2.00	µg/L	05/31/18 03:17	05/31/18 03:17	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/31/18 03:17	05/31/18 03:17	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/31/18 03:17	05/31/18 03:17	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/31/18 03:17	05/31/18 03:17	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/31/18 03:17	05/31/18 03:17	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	05/31/18 03:17	05/31/18 03:17	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	**5.03**	2.00	µg/L	05/31/18 03:17	05/31/18 03:17	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	05/31/18 03:17	05/31/18 03:17	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/31/18 03:17	05/31/18 03:17	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*99.4 %*	*80-120*	*05/31/18 03:17*	*05/31/18 03:17*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*95.5 %*	*80-120*	*05/31/18 03:17*	*05/31/18 03:17*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*93.2 %*	*80-120*	*05/31/18 03:17*	*05/31/18 03:17*	*EPA 8260 B*				
Surrogate: Toluene-d8		*109 %*	*80-120*	*05/31/18 03:17*	*05/31/18 03:17*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-10

8050801-10 (Aqueous) Sampled: 05/25/18 08:10

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**49.8**	2.00	µg/L	05/31/18 07:38	05/31/18 07:38	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	**19.0**	2.00	µg/L	05/31/18 07:38	05/31/18 07:38	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**296**	20.0	µg/L	05/31/18 07:38	06/01/18 13:30	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**93.6**	2.00	µg/L	05/31/18 07:38	05/31/18 07:38	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	**13.9**	2.00	µg/L	05/31/18 07:38	05/31/18 07:38	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**2.54**	2.00	µg/L	05/31/18 07:38	05/31/18 07:38	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**13.4**	2.00	µg/L	05/31/18 07:38	05/31/18 07:38	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**11.9**	2.00	µg/L	05/31/18 07:38	05/31/18 07:38	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	**6.05**	2.00	µg/L	05/31/18 07:38	05/31/18 07:38	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	**50.9**	4.00	µg/L	05/31/18 07:38	05/31/18 07:38	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**57.0**	6.00	µg/L	05/31/18 07:38	05/31/18 07:38	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*89.9 %*	*80-120*	*05/31/18 07:38*	*05/31/18 07:38*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*96.3 %*	*80-120*	*05/31/18 07:38*	*05/31/18 07:38*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*92.0 %*	*80-120*	*05/31/18 07:38*	*05/31/18 07:38*	*EPA 8260 B*				
Surrogate: Toluene-d8		*103 %*	*80-120*	*05/31/18 07:38*	*05/31/18 07:38*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-11

8050801-11 (Aqueous) Sampled: 05/25/18 07:07

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 03:43	05/31/18 03:43	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 03:43	05/31/18 03:43	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**3.11**	2.00	µg/L	05/31/18 03:43	05/31/18 03:43	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/31/18 03:43	05/31/18 03:43	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/31/18 03:43	05/31/18 03:43	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**2.34**	2.00	µg/L	05/31/18 03:43	05/31/18 03:43	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/31/18 03:43	05/31/18 03:43	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	05/31/18 03:43	05/31/18 03:43	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	05/31/18 03:43	05/31/18 03:43	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	05/31/18 03:43	05/31/18 03:43	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/31/18 03:43	05/31/18 03:43	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*91.4 %*	*80-120*	*05/31/18 03:43*	*05/31/18 03:43*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*95.6 %*	*80-120*	*05/31/18 03:43*	*05/31/18 03:43*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*111 %*	*80-120*	*05/31/18 03:43*	*05/31/18 03:43*	*EPA 8260 B*				
Surrogate: Toluene-d8		*101 %*	*80-120*	*05/31/18 03:43*	*05/31/18 03:43*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-12

8050801-12 (Aqueous) Sampled: 05/25/18 07:50

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 04:09	05/31/18 04:09	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 04:09	05/31/18 04:09	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	05/31/18 04:09	05/31/18 04:09	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/31/18 04:09	05/31/18 04:09	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/31/18 04:09	05/31/18 04:09	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/31/18 04:09	05/31/18 04:09	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/31/18 04:09	05/31/18 04:09	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	05/31/18 04:09	05/31/18 04:09	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	05/31/18 04:09	05/31/18 04:09	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	05/31/18 04:09	05/31/18 04:09	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/31/18 04:09	05/31/18 04:09	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*96.4 %*	*80-120*	*05/31/18 04:09*	*05/31/18 04:09*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*92.9 %*	*80-120*	*05/31/18 04:09*	*05/31/18 04:09*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*106 %*	*80-120*	*05/31/18 04:09*	*05/31/18 04:09*	*EPA 8260 B*				
Surrogate: Toluene-d8		*102 %*	*80-120*	*05/31/18 04:09*	*05/31/18 04:09*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-13

8050801-13 (Aqueous) Sampled: 05/25/18 10:03

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 04:35	05/31/18 04:35	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 04:35	05/31/18 04:35	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	05/31/18 04:35	05/31/18 04:35	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/31/18 04:35	05/31/18 04:35	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/31/18 04:35	05/31/18 04:35	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/31/18 04:35	05/31/18 04:35	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/31/18 04:35	05/31/18 04:35	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	05/31/18 04:35	05/31/18 04:35	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	05/31/18 04:35	05/31/18 04:35	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	05/31/18 04:35	05/31/18 04:35	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/31/18 04:35	05/31/18 04:35	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*87.3 %*	*80-120*	*05/31/18 04:35*	*05/31/18 04:35*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*92.1 %*	*80-120*	*05/31/18 04:35*	*05/31/18 04:35*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*106 %*	*80-120*	*05/31/18 04:35*	*05/31/18 04:35*	*EPA 8260 B*				
Surrogate: Toluene-d8		*102 %*	*80-120*	*05/31/18 04:35*	*05/31/18 04:35*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-14

8050801-14 (Aqueous) Sampled: 05/25/18 11:30

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**1040**	100	µg/L	05/31/18 05:01	05/31/18 05:27	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**349**	10.0	µg/L	05/31/18 05:01	05/31/18 05:01	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**1650**	100	µg/L	05/31/18 05:01	05/31/18 05:27	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**496**	100	µg/L	05/31/18 05:01	05/31/18 05:27	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**65.2**	10.0	µg/L	05/31/18 05:01	05/31/18 05:01	EPA 5030B	EPA 8260 B	A	JMG	D1
MTBE	**21.8**	10.0	µg/L	05/31/18 05:01	05/31/18 05:01	EPA 5030B	EPA 8260 B	A	JMG	D1
Naphthalene	**201**	10.0	µg/L	05/31/18 05:01	05/31/18 05:01	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**1650**	100	µg/L	05/31/18 05:01	05/31/18 05:27	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene o	**970**	100	µg/L	05/31/18 05:01	05/31/18 05:27	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene p/m	**2060**	200	µg/L	05/31/18 05:01	05/31/18 05:27	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**3030**	30.0	µg/L	05/31/18 05:01	05/31/18 05:27	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*86.2 %*	*80-120*	*05/31/18 05:01*	*05/31/18 05:01*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*97.8 %*	*80-120*	*05/31/18 05:01*	*05/31/18 05:01*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*96.5 %*	*80-120*	*05/31/18 05:01*	*05/31/18 05:01*	*EPA 8260 B*				
Surrogate: Toluene-d8		*98.6 %*	*80-120*	*05/31/18 05:01*	*05/31/18 05:01*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-15

8050801-15 (Aqueous) Sampled: 05/25/18 07:35

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 05:53	05/31/18 05:53	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 05:53	05/31/18 05:53	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	05/31/18 05:53	05/31/18 05:53	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/31/18 05:53	05/31/18 05:53	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/31/18 05:53	05/31/18 05:53	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/31/18 05:53	05/31/18 05:53	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/31/18 05:53	05/31/18 05:53	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	05/31/18 05:53	05/31/18 05:53	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	05/31/18 05:53	05/31/18 05:53	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	05/31/18 05:53	05/31/18 05:53	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/31/18 05:53	05/31/18 05:53	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*85.8 %*	*80-120*	*05/31/18 05:53*	*05/31/18 05:53*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*97.0 %*	*80-120*	*05/31/18 05:53*	*05/31/18 05:53*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*101 %*	*80-120*	*05/31/18 05:53*	*05/31/18 05:53*	*EPA 8260 B*				
Surrogate: Toluene-d8		*99.6 %*	*80-120*	*05/31/18 05:53*	*05/31/18 05:53*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-16

8050801-16 (Aqueous) Sampled: 05/25/18 08:40

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	06/01/18 12:11	06/01/18 12:11	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	06/01/18 12:11	06/01/18 12:11	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	06/01/18 12:11	06/01/18 12:11	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	06/01/18 12:11	06/01/18 12:11	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	06/01/18 12:11	06/01/18 12:11	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	06/01/18 12:11	06/01/18 12:11	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	06/01/18 12:11	06/01/18 12:11	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	06/01/18 12:11	06/01/18 12:11	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	06/01/18 12:11	06/01/18 12:11	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	06/01/18 12:11	06/01/18 12:11	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	06/01/18 12:11	06/01/18 12:11	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*97.5 %*	*80-120*	*06/01/18 12:11*	*06/01/18 12:11*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*92.4 %*	*80-120*	*06/01/18 12:11*	*06/01/18 12:11*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*109 %*	*80-120*	*06/01/18 12:11*	*06/01/18 12:11*	*EPA 8260 B*				
Surrogate: Toluene-d8		*103 %*	*80-120*	*06/01/18 12:11*	*06/01/18 12:11*	*EPA 8260 B*				

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5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-1BR

8050801-17 (Aqueous) Sampled: 05/25/18 09:28

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**24.8**	2.00	µg/L	05/31/18 08:04	05/31/18 08:04	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 08:04	05/31/18 08:04	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**226**	20.0	µg/L	05/31/18 08:04	06/01/18 13:57	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**47.7**	2.00	µg/L	05/31/18 08:04	05/31/18 08:04	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	**6.23**	2.00	µg/L	05/31/18 08:04	05/31/18 08:04	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/31/18 08:04	05/31/18 08:04	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**7.95**	2.00	µg/L	05/31/18 08:04	05/31/18 08:04	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**2.37**	2.00	µg/L	05/31/18 08:04	05/31/18 08:04	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	05/31/18 08:04	05/31/18 08:04	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	**10.2**	4.00	µg/L	05/31/18 08:04	05/31/18 08:04	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	**10.2**	6.00	µg/L	05/31/18 08:04	05/31/18 08:04	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*93.9 %*	*80-120*	*05/31/18 08:04*	*05/31/18 08:04*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*95.0 %*	*80-120*	*05/31/18 08:04*	*05/31/18 08:04*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*97.8 %*	*80-120*	*05/31/18 08:04*	*05/31/18 08:04*	*EPA 8260 B*				
Surrogate: Toluene-d8		*101 %*	*80-120*	*05/31/18 08:04*	*05/31/18 08:04*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-2BR

8050801-18 (Aqueous) Sampled: 05/25/18 06:55

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	06/01/18 17:54	06/01/18 17:54	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	06/01/18 17:54	06/01/18 17:54	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	06/01/18 17:54	06/01/18 17:54	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	06/01/18 17:54	06/01/18 17:54	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	06/01/18 17:54	06/01/18 17:54	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	06/01/18 17:54	06/01/18 17:54	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	06/01/18 17:54	06/01/18 17:54	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	06/01/18 17:54	06/01/18 17:54	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	06/01/18 17:54	06/01/18 17:54	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	06/01/18 17:54	06/01/18 17:54	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	06/01/18 17:54	06/01/18 17:54	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*90.8 %*	*80-120*	*06/01/18 17:54*	*06/01/18 17:54*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*93.0 %*	*80-120*	*06/01/18 17:54*	*06/01/18 17:54*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*101 %*	*80-120*	*06/01/18 17:54*	*06/01/18 17:54*	*EPA 8260 B*				
Surrogate: Toluene-d8		*103 %*	*80-120*	*06/01/18 17:54*	*06/01/18 17:54*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 06/15/18 16:06
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

MW-3BR

8050801-19 (Aqueous) Sampled: 05/25/18 10:40

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	06/01/18 18:20	06/01/18 18:20	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	06/01/18 18:20	06/01/18 18:20	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	06/01/18 18:20	06/01/18 18:20	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	06/01/18 18:20	06/01/18 18:20	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	06/01/18 18:20	06/01/18 18:20	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**3.11**	2.00	µg/L	06/01/18 18:20	06/01/18 18:20	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	06/01/18 18:20	06/01/18 18:20	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	06/01/18 18:20	06/01/18 18:20	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	06/01/18 18:20	06/01/18 18:20	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	06/01/18 18:20	06/01/18 18:20	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	06/01/18 18:20	06/01/18 18:20	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*95.7 %*	*80-120*	*06/01/18 18:20*	*06/01/18 18:20*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*89.0 %*	*80-120*	*06/01/18 18:20*	*06/01/18 18:20*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*108 %*	*80-120*	*06/01/18 18:20*	*06/01/18 18:20*	*EPA 8260 B*				
Surrogate: Toluene-d8		*102 %*	*80-120*	*06/01/18 18:20*	*06/01/18 18:20*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-4BR

8050801-20 (Aqueous) Sampled: 05/25/18 09:45

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 06:20	05/31/18 06:20	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	05/31/18 06:20	05/31/18 06:20	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	05/31/18 06:20	05/31/18 06:20	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	05/31/18 06:20	05/31/18 06:20	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	05/31/18 06:20	05/31/18 06:20	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/31/18 06:20	05/31/18 06:20	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	05/31/18 06:20	05/31/18 06:20	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	05/31/18 06:20	05/31/18 06:20	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	05/31/18 06:20	05/31/18 06:20	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	05/31/18 06:20	05/31/18 06:20	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	05/31/18 06:20	05/31/18 06:20	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*98.0 %*	*80-120*	*05/31/18 06:20*	*05/31/18 06:20*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*95.2 %*	*80-120*	*05/31/18 06:20*	*05/31/18 06:20*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*99.4 %*	*80-120*	*05/31/18 06:20*	*05/31/18 06:20*	*EPA 8260 B*				
Surrogate: Toluene-d8		*103 %*	*80-120*	*05/31/18 06:20*	*05/31/18 06:20*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-5BR

8050801-21 (Aqueous) Sampled: 05/25/18 08:20

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**758**	50.0	µg/L	06/01/18 18:47	06/01/18 19:13	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**213**	10.0	µg/L	06/01/18 18:47	06/01/18 18:47	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**1070**	50.0	µg/L	06/01/18 18:47	06/01/18 19:13	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**667**	50.0	µg/L	06/01/18 18:47	06/01/18 19:13	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**73.6**	10.0	µg/L	06/01/18 18:47	06/01/18 18:47	EPA 5030B	EPA 8260 B	A	JMG	D1
MTBE	<10.0	10.0	µg/L	06/01/18 18:47	06/01/18 18:47	EPA 5030B	EPA 8260 B	A	JMG	D1
Naphthalene	**172**	10.0	µg/L	06/01/18 18:47	06/01/18 18:47	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**128**	10.0	µg/L	06/01/18 18:47	06/01/18 18:47	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene o	**207**	10.0	µg/L	06/01/18 18:47	06/01/18 18:47	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene p/m	**1310**	100	µg/L	06/01/18 18:47	06/01/18 19:13	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**1520**	22.0	µg/L	06/01/18 18:47	06/01/18 19:13	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*96.2 %*	*80-120*	*06/01/18 18:47*	*06/01/18 18:47*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*91.8 %*	*80-120*	*06/01/18 18:47*	*06/01/18 18:47*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*103 %*	*80-120*	*06/01/18 18:47*	*06/01/18 18:47*	*EPA 8260 B*				
Surrogate: Toluene-d8		*103 %*	*80-120*	*06/01/18 18:47*	*06/01/18 18:47*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-6BR

8050801-22 (Aqueous) Sampled: 05/25/18 08:30

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	06/01/18 19:39	06/01/18 19:39	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	06/01/18 19:39	06/01/18 19:39	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	06/01/18 19:39	06/01/18 19:39	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	06/01/18 19:39	06/01/18 19:39	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	06/01/18 19:39	06/01/18 19:39	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	06/01/18 19:39	06/01/18 19:39	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	06/01/18 19:39	06/01/18 19:39	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	06/01/18 19:39	06/01/18 19:39	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	06/01/18 19:39	06/01/18 19:39	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	06/01/18 19:39	06/01/18 19:39	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	06/01/18 19:39	06/01/18 19:39	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*87.8 %*	*80-120*	*06/01/18 19:39*	*06/01/18 19:39*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*92.5 %*	*80-120*	*06/01/18 19:39*	*06/01/18 19:39*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*99.8 %*	*80-120*	*06/01/18 19:39*	*06/01/18 19:39*	*EPA 8260 B*				
Surrogate: Toluene-d8		*102 %*	*80-120*	*06/01/18 19:39*	*06/01/18 19:39*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-7BR

8050801-23 (Aqueous) Sampled: 05/25/18 07:25

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	06/01/18 20:05	06/01/18 20:05	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	06/01/18 20:05	06/01/18 20:05	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	06/01/18 20:05	06/01/18 20:05	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	06/01/18 20:05	06/01/18 20:05	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	06/01/18 20:05	06/01/18 20:05	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	06/01/18 20:05	06/01/18 20:05	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	06/01/18 20:05	06/01/18 20:05	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	06/01/18 20:05	06/01/18 20:05	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	06/01/18 20:05	06/01/18 20:05	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	06/01/18 20:05	06/01/18 20:05	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	06/01/18 20:05	06/01/18 20:05	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*90.8 %*	*80-120*	*06/01/18 20:05*	*06/01/18 20:05*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*92.8 %*	*80-120*	*06/01/18 20:05*	*06/01/18 20:05*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*101 %*	*80-120*	*06/01/18 20:05*	*06/01/18 20:05*	*EPA 8260 B*				
Surrogate: Toluene-d8		*102 %*	*80-120*	*06/01/18 20:05*	*06/01/18 20:05*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-8BR

8050801-24 (Aqueous) Sampled: 05/25/18 07:20

Mountain Research, LLC

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	06/02/18 00:28	06/02/18 00:28	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	06/02/18 00:28	06/02/18 00:28	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	06/02/18 00:28	06/02/18 00:28	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	06/02/18 00:28	06/02/18 00:28	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	06/02/18 00:28	06/02/18 00:28	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	06/02/18 00:28	06/02/18 00:28	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	06/02/18 00:28	06/02/18 00:28	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	06/02/18 00:28	06/02/18 00:28	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	06/02/18 00:28	06/02/18 00:28	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	06/02/18 00:28	06/02/18 00:28	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	06/02/18 00:28	06/02/18 00:28	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*92.6 %*	*80-120*	*06/02/18 00:28*	*06/02/18 00:28*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*91.0 %*	*80-120*	*06/02/18 00:28*	*06/02/18 00:28*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*110 %*	*80-120*	*06/02/18 00:28*	*06/02/18 00:28*	*EPA 8260 B*				
Surrogate: Toluene-d8		*103 %*	*80-120*	*06/02/18 00:28*	*06/02/18 00:28*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

MW-9BR

8050801-25 (Aqueous) Sampled: 05/25/18 09:00

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	06/02/18 00:54	06/02/18 00:54	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	06/02/18 00:54	06/02/18 00:54	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	06/02/18 00:54	06/02/18 00:54	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	06/02/18 00:54	06/02/18 00:54	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	06/02/18 00:54	06/02/18 00:54	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	06/02/18 00:54	06/02/18 00:54	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	06/02/18 00:54	06/02/18 00:54	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	06/02/18 00:54	06/02/18 00:54	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	06/02/18 00:54	06/02/18 00:54	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	06/02/18 00:54	06/02/18 00:54	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	06/02/18 00:54	06/02/18 00:54	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*95.9 %*	*80-120*	*06/02/18 00:54*	*06/02/18 00:54*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*91.8 %*	*80-120*	*06/02/18 00:54*	*06/02/18 00:54*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*98.4 %*	*80-120*	*06/02/18 00:54*	*06/02/18 00:54*	*EPA 8260 B*				
Surrogate: Toluene-d8		*107 %*	*80-120*	*06/02/18 00:54*	*06/02/18 00:54*	*EPA 8260 B*				

Mountain Research, LLC

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

EW-1

8050801-26 (Aqueous) Sampled: 05/25/18 09:36

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**435**	50.0	µg/L	05/31/18 08:31	06/01/18 13:04	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**102**	50.0	µg/L	05/31/18 08:31	06/01/18 13:04	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**924**	50.0	µg/L	05/31/18 08:31	06/01/18 13:04	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**375**	50.0	µg/L	05/31/18 08:31	06/01/18 13:04	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**43.5**	2.00	µg/L	05/31/18 08:31	05/31/18 08:31	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	05/31/18 08:31	05/31/18 08:31	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**71.4**	50.0	µg/L	05/31/18 08:31	06/01/18 13:04	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**1910**	50.0	µg/L	05/31/18 08:31	06/01/18 13:04	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene o	**602**	50.0	µg/L	05/31/18 08:31	06/01/18 13:04	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene p/m	**1570**	100	µg/L	05/31/18 08:31	06/01/18 13:04	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**2180**	150	µg/L	05/31/18 08:31	06/01/18 13:04	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*96.1 %*	*80-120*	*05/31/18 08:31*	*05/31/18 08:31*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*98.5 %*	*80-120*	*05/31/18 08:31*	*05/31/18 08:31*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*98.8 %*	*80-120*	*05/31/18 08:31*	*05/31/18 08:31*	*EPA 8260 B*				
Surrogate: Toluene-d8		*97.0 %*	*80-120*	*05/31/18 08:31*	*05/31/18 08:31*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

EW-1BR

8050801-27 (Aqueous) Sampled: 05/25/18 09:41

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**202**	20.0	µg/L	06/02/18 08:18	06/04/18 21:40	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**38.7**	2.00	µg/L	06/02/18 08:18	06/02/18 08:18	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	**734**	20.0	µg/L	06/02/18 08:18	06/04/18 21:40	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**177**	20.0	µg/L	06/02/18 08:18	06/04/18 21:40	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**18.9**	2.00	µg/L	06/02/18 08:18	06/02/18 08:18	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	06/02/18 08:18	06/02/18 08:18	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**46.5**	2.00	µg/L	06/02/18 08:18	06/02/18 08:18	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	**138**	20.0	µg/L	06/02/18 08:18	06/04/18 21:40	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene o	**197**	20.0	µg/L	06/02/18 08:18	06/04/18 21:40	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene p/m	**404**	40.0	µg/L	06/02/18 08:18	06/04/18 21:40	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**601**	60.0	µg/L	06/02/18 08:18	06/04/18 21:40	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*89.6 %*	*80-120*	*06/02/18 08:18*	*06/02/18 08:18*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*95.8 %*	*80-120*	*06/02/18 08:18*	*06/02/18 08:18*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*102 %*	*80-120*	*06/02/18 08:18*	*06/02/18 08:18*	*EPA 8260 B*				
Surrogate: Toluene-d8		*101 %*	*80-120*	*06/02/18 08:18*	*06/02/18 08:18*	*EPA 8260 B*				

Mountain Research, LLC

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Stephen Gampe

Stephen Gampe, Assistant Laboratory Manager

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

Steam Gauge 1

8050801-28 (Aqueous) Sampled: 05/24/18 08:41

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	06/02/18 01:20	06/02/18 01:20	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	06/02/18 01:20	06/02/18 01:20	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	06/02/18 01:20	06/02/18 01:20	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	06/02/18 01:20	06/02/18 01:20	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	06/02/18 01:20	06/02/18 01:20	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	06/02/18 01:20	06/02/18 01:20	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	06/02/18 01:20	06/02/18 01:20	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	06/02/18 01:20	06/02/18 01:20	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	06/02/18 01:20	06/02/18 01:20	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	06/02/18 01:20	06/02/18 01:20	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	06/02/18 01:20	06/02/18 01:20	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*96.7 %*	*80-120*	*06/02/18 01:20*	*06/02/18 01:20*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*89.3 %*	*80-120*	*06/02/18 01:20*	*06/02/18 01:20*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*103 %*	*80-120*	*06/02/18 01:20*	*06/02/18 01:20*	*EPA 8260 B*				
Surrogate: Toluene-d8		*102 %*	*80-120*	*06/02/18 01:20*	*06/02/18 01:20*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

BLD Sump

8050801-29 (Aqueous) Sampled: 05/25/18 12:00

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**4560**	2000	µg/L	06/02/18 03:31	06/02/18 03:57	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**3440**	200	µg/L	06/02/18 03:31	06/02/18 03:31	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**3030**	200	µg/L	06/02/18 03:31	06/02/18 03:31	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**1900**	200	µg/L	06/02/18 03:31	06/02/18 03:31	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**413**	200	µg/L	06/02/18 03:31	06/02/18 03:31	EPA 5030B	EPA 8260 B	A	JMG	D1
MTBE	<200	200	µg/L	06/02/18 03:31	06/02/18 03:31	EPA 5030B	EPA 8260 B	A	JMG	D1
Naphthalene	**2290**	200	µg/L	06/02/18 03:31	06/02/18 03:31	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**150000**	2000	µg/L	06/02/18 03:31	06/02/18 03:57	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene o	**8120**	200	µg/L	06/02/18 03:31	06/02/18 03:31	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene p/m	**16100**	400	µg/L	06/02/18 03:31	06/02/18 03:31	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**24200**	600	µg/L	06/02/18 03:31	06/02/18 03:31	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*88.8 %*	*80-120*	*06/02/18 03:31*	*06/02/18 03:31*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*97.6 %*	*80-120*	*06/02/18 03:31*	*06/02/18 03:31*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*99.8 %*	*80-120*	*06/02/18 03:31*	*06/02/18 03:31*	*EPA 8260 B*				
Surrogate: Toluene-d8		*101 %*	*80-120*	*06/02/18 03:31*	*06/02/18 03:31*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

Tank Field Sump

8050801-30 (Aqueous) Sampled: 05/25/18 11:05

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	**1950**	100	µg/L	06/02/18 01:46	06/04/18 21:14	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**499**	100	µg/L	06/02/18 01:46	06/04/18 21:14	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**2680**	100	µg/L	06/02/18 01:46	06/04/18 21:14	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**822**	100	µg/L	06/02/18 01:46	06/04/18 21:14	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**74.4**	2.00	µg/L	06/02/18 01:46	06/02/18 01:46	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	06/02/18 01:46	06/02/18 01:46	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**604**	100	µg/L	06/02/18 01:46	06/04/18 21:14	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**13200**	2000	µg/L	06/02/18 01:46	06/05/18 12:50	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene o	**3500**	100	µg/L	06/02/18 01:46	06/04/18 21:14	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene p/m	**6830**	200	µg/L	06/02/18 01:46	06/04/18 21:14	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**10300**	300	µg/L	06/02/18 01:46	06/04/18 21:14	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*84.6 %*	*80-120*	*06/02/18 01:46*	*06/02/18 01:46*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*94.8 %*	*80-120*	*06/02/18 01:46*	*06/02/18 01:46*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*107 %*	*80-120*	*06/02/18 01:46*	*06/02/18 01:46*	*EPA 8260 B*				
Surrogate: Toluene-d8		*77.1 %*	*80-120*	*06/02/18 01:46*	*06/02/18 01:46*	*EPA 8260 B*	*S*			

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:** 06/15/18 16:06
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	

Duplicate

8050801-31 (Aqueous) Sampled: 05/25/18 10:30

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	06/04/18 19:55	06/04/18 19:55	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	06/04/18 19:55	06/04/18 19:55	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	06/04/18 19:55	06/04/18 19:55	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	06/04/18 19:55	06/04/18 19:55	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	06/04/18 19:55	06/04/18 19:55	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**5.42**	2.00	µg/L	06/04/18 19:55	06/04/18 19:55	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	06/04/18 19:55	06/04/18 19:55	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	06/04/18 19:55	06/04/18 19:55	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	06/04/18 19:55	06/04/18 19:55	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	06/04/18 19:55	06/04/18 19:55	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	06/04/18 19:55	06/04/18 19:55	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*90.1 %*	*80-120*	*06/04/18 19:55*	*06/04/18 19:55*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*94.7 %*	*80-120*	*06/04/18 19:55*	*06/04/18 19:55*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*115 %*	*80-120*	*06/04/18 19:55*	*06/04/18 19:55*	*EPA 8260 B*				
Surrogate: Toluene-d8		*104 %*	*80-120*	*06/04/18 19:55*	*06/04/18 19:55*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

Trip Blank

8050801-32 (Aqueous) Sampled: 05/25/18 12:10

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
Mountain Research, LLC										
Volatile Organic Compounds by GC/MS										
1,2,4-Trimethylbenzene	<2.00	2.00	µg/L	06/04/18 20:21	06/04/18 20:21	EPA 5030B	EPA 8260 B	A	JMG	
1,3,5-Trimethylbenzene	<2.00	2.00	µg/L	06/04/18 20:21	06/04/18 20:21	EPA 5030B	EPA 8260 B	A	JMG	
Benzene	<2.00	2.00	µg/L	06/04/18 20:21	06/04/18 20:21	EPA 5030B	EPA 8260 B	A	JMG	
Ethylbenzene	<2.00	2.00	µg/L	06/04/18 20:21	06/04/18 20:21	EPA 5030B	EPA 8260 B	A	JMG	
Isopropylbenzene (Cumene)	<2.00	2.00	µg/L	06/04/18 20:21	06/04/18 20:21	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	<2.00	2.00	µg/L	06/04/18 20:21	06/04/18 20:21	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	<2.00	2.00	µg/L	06/04/18 20:21	06/04/18 20:21	EPA 5030B	EPA 8260 B	A	JMG	
Toluene	<2.00	2.00	µg/L	06/04/18 20:21	06/04/18 20:21	EPA 5030B	EPA 8260 B	A	JMG	
Xylene o	<2.00	2.00	µg/L	06/04/18 20:21	06/04/18 20:21	EPA 5030B	EPA 8260 B	A	JMG	
Xylene p/m	<4.00	4.00	µg/L	06/04/18 20:21	06/04/18 20:21	EPA 5030B	EPA 8260 B	A	JMG	
Xylenes, Total	<6.00	6.00	µg/L	06/04/18 20:21	06/04/18 20:21	EPA 5030B	EPA 8260 B	A	JMG	CC
Surrogate: 1,2-Dichloroethane-d4		*93.2 %*	*80-120*	*06/04/18 20:21*	*06/04/18 20:21*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*92.6 %*	*80-120*	*06/04/18 20:21*	*06/04/18 20:21*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*103 %*	*80-120*	*06/04/18 20:21*	*06/04/18 20:21*	*EPA 8260 B*				
Surrogate: Toluene-d8		*103 %*	*80-120*	*06/04/18 20:21*	*06/04/18 20:21*	*EPA 8260 B*				

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5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

GAC

8050801-33 (Aqueous) Sampled: 05/25/18 11:35

Mountain Research, LLC

Volatile Organic Compounds by GC/MS

Analyte	Result	RL	Units	Prepared	Analyzed	Prep Method	Method	Lab	Analyst	Notes
1,2,4-Trimethylbenzene	**1390**	50.0	µg/L	06/02/18 03:05	06/04/18 20:48	EPA 5030B	EPA 8260 B	A	JMG	D1
1,3,5-Trimethylbenzene	**414**	50.0	µg/L	06/02/18 03:05	06/04/18 20:48	EPA 5030B	EPA 8260 B	A	JMG	D1
Benzene	**1960**	50.0	µg/L	06/02/18 03:05	06/04/18 20:48	EPA 5030B	EPA 8260 B	A	JMG	D1
Ethylbenzene	**706**	50.0	µg/L	06/02/18 03:05	06/04/18 20:48	EPA 5030B	EPA 8260 B	A	JMG	D1
Isopropylbenzene (Cumene)	**55.8**	2.00	µg/L	06/02/18 03:05	06/02/18 03:05	EPA 5030B	EPA 8260 B	A	JMG	
MTBE	**17.5**	2.00	µg/L	06/02/18 03:05	06/02/18 03:05	EPA 5030B	EPA 8260 B	A	JMG	
Naphthalene	**193**	50.0	µg/L	06/02/18 03:05	06/04/18 20:48	EPA 5030B	EPA 8260 B	A	JMG	D1
Toluene	**2230**	50.0	µg/L	06/02/18 03:05	06/04/18 20:48	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene o	**1140**	50.0	µg/L	06/02/18 03:05	06/04/18 20:48	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylene p/m	**2610**	100	µg/L	06/02/18 03:05	06/04/18 20:48	EPA 5030B	EPA 8260 B	A	JMG	D1
Xylenes, Total	**3750**	150	µg/L	06/02/18 03:05	06/04/18 20:48	EPA 5030B	EPA 8260 B	A	JMG	CC, D1
Surrogate: 1,2-Dichloroethane-d4		*90.5 %*	*80-120*	*06/02/18 03:05*	*06/02/18 03:05*	*EPA 8260 B*				
Surrogate: 4-Bromofluorobenzene		*99.0 %*	*80-120*	*06/02/18 03:05*	*06/02/18 03:05*	*EPA 8260 B*				
Surrogate: Dibromofluoromethane		*93.4 %*	*80-120*	*06/02/18 03:05*	*06/02/18 03:05*	*EPA 8260 B*				
Surrogate: Toluene-d8		*101 %*	*80-120*	*06/02/18 03:05*	*06/02/18 03:05*	*EPA 8260 B*				

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Vennard Crossroads Convenience, Inc	Project Name: Indiana, PA	**Lab ID#:** 8050801
5190 White Oak Dr	Project Number: 4644.15.01	**Reported:**
Indiana PA, 15701	Lab Project Manager: Stephen Gampe	06/15/18 16:06

Certifications

Code	Description	Number	Expires
MDDOE	Maryland Department of the Environment	257	06/30/2018
PADEP-Altoona	Pennsylvania Department of Environmental Protection	009	03/31/2018
WVDEP-Altoona	West Virginia Department of Environmental Protection	225	12/31/2018
PADEP-DuBois	Pennsylvania Department of Environmental Protection	008	09/30/2018
WVDEP-HydroChem	West Virginia Department of Environmental Protection	038	11/01/2018

Notes and Definitions

S	Surrogate recovery outside of laboratory acceptance criteria.
D1	The sample was analyzed at a dilution.
CC	Calculated analytes are reported based on unrounded results of the individual analytes used in the calculation. Therefore, using the rounded values of the analytes as reported may lead to a result that varies slightly from the reported result.
RL	Reporting Limit - either the practical quantitation limit or the method detection limit
dry	Sample results reported on a dry weight basis
A	Analysis Performed by Mountain Research Altoona Laboratory - PADEP #07-00418, WVDEP #225
D	Analysis Performed by Mountain Research DuBois Laboratory - PADEP # 33-00258
W	Analysis Performed by Mountain Research - HydroChem Laboratory - WVDEP #038

BALL POINT PEN ONLY

Billing Group:	Phase:	PROJECT NAME: GW Sampling
MR Project #: 4644.15.01		SITE LOCATION: Indiana, PA
CLIENT: Vernards		SAMPLER(S): NS

NOTES:
Received On Ice: (Y) / N
Sample Temp: 2.2
PWSID #:
Seal In Tack: Y / N
Other:
Comments:

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CHAIN OF CUSTODY RECORD

MR PROJ. MGR. MK

Shipping Carrier:

Turn Around Time:
10 Day ✓
3 Day
1 Day

Comments:

SAMPLE ID.NO.	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	Analyses Requested: 8260B	Preserve	LAB NUMBER
MW-1	5/25/18	10:10	X		AQ	2-40mL VOAs	2A		HCL	01
MW-2	"	11:53	"		"	"	"		"	02
MW-3	"	10:45	"		"	"	"		"	03
MW-4	"	9:07	"		"	"	"		"	04
MW-5	"	10:28	"		"	"	"		"	05
MW-6	"	7:57	"		"	"	"		"	06
MW-7	"	6:50	"		"	"	"		"	07
MW-8	"	9:32	"		"	"	"		"	08
MW-9	"	9:50	"		"	"	"		"	09
MW-10	"	8:10	"		"	"	"		"	10
MW-11	"	7:07	"		"	"	"		"	11
MW-12	"	7:50	"		"	"	"		"	12

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE	TIME	Lab WO#
	5/25/18	2:07		5/25/18	2:07	8050801
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE	TIME	Labeled By:

Log In Time: 1423
Staff: KL
Date: 5/29/18

1 of 3

White - Lab; Blue - File; Yellow - Project Manager; Pink - Staff

H:\H\HYDRO\Field Forms\C-O-C\Blank COC_v1_04_08

Billing Group:	Phase:	PROJECT NAME GW Sampling
MR Project # 4644.15.01		SITE LOCATION Indiana, PA
CLIENT Vernards		SAMPLER(S) NS

NOTES:

Received On Ice: (Y) / N

Sample Temp: 2.2

Comp Set

Comments:

MOUNTAIN RESEARCH LLC

825 25th Street, Altoona, PA 16601
110 McCracken Run Road, Dubois, PA 15801
(814) 949-2034 (800) 837-4674 FAX (814) 949-9591
(814) 371-6030 Fax (814) 375-0823

CHAIN OF CUSTODY RECORD

MR PROJ. MGR. MK

Shipping Carrier:

Turn Around Time:
10 Day ✓
3 Day
1 Day

Comments:

SAMPLE ID	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	8260B	Preserve	LAB NUMBER
MW-13	5/25/18	10:03	X		AQ	2-40ml vial	2A	X	HCL	13
MW-14		11:30								14
MW-15		7:35								15
MW-16		8:40								16
MW-1BR		9:28								17
MW-2BR		6:55								18
MW-3BR		10:40								19
MW-4BR		9:45								20
MW-5BR		8:20								21
MW-6BR		8:30								22
MW-~~7~~8BR		7:25								23
MW-~~8~~8BR		7:20								24

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Lab Workorder #:
[signature]	5/25/18	2:07	[signature]	207 5/25/18	8050801
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Labeled By:

Log In Time: 1423
Staff: Kd
Date: 5/29/18

2 of 3

Billing Group:	Phase:	PROJECT NAME: GW Sampling
MR Project #: 4644.15.01		SITE LOCATION: Indiana, PA
CLIENT: Vennards		SAMPLER(S): NS

NOTES:

Received On Ice: (Y) / N

Sample Temp: 2.2

Comp Set

Comments:

MOUNTAIN RESEARCH LLC

825 25th Street, Altoona, PA 16601
110 McCracken Run Road, Dubois, PA 15801

(814) 949-2034 (800) 837-4674 FAX (814) 949-9591
(814) 371-6030 Fax (814) 375-0823

CHAIN OF CUSTODY RECORD

MR PROJ. MGR. MK

Shipping Carrier:

Turn Around Time:
10 Day ✓
3 Day
1 Day

Comments:

SAMPLE ID	DATE	TIME	GRAB	COMP	MATRIX	NUMBER OF CONTAINERS	PRODUCT CODE	8260B	Preserve	LAB NUMBER
MW-9BR	5/25/18	9:00	X		AQ	2 - 40 ml VOAs	2A	X	HCL	25
EW-1		9:36								26
EW-1BR		9:41								27
Stream Gauge 1	5/24/18	8:00								28
~~Stream Gauge 2~~										
BLD Sump	5/25/18	12:00								29
Tank field sump		11:05								30
Duplicate		10:30								31
Trip Blank		12:10								32
GAC		11:35								33

RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Lab Workorder #:
[signature]	5/25/18	2:07	[signature]	0207 5/25/18	8050 801
RELINQUISHED BY:	DATE	TIME	ACCEPTED BY:	DATE/TIME	Labeled By:

Log In Time: 1423
Staff: Kd
Date: 5/29/18

3 of 3

MOUNTAIN RESEARCH SAMPLE RECEIPT PROTOCOL

WORK ORDER: 8050801

CLIENT: Vennards

DATE SAMPLED: 5/24-25/18 DATE RECEIVED: 5-25-18 TIME RECEIVED: 1407

1. CHECK ALL THAT APPLY: PA ☑ WV ☐ MD ☐ P W S ☐ NPDES/COMPLIANCE ☐ DAIRY ☐ RUSH ☐
2. WERE ANY OF THE SAMPLE CONTAINERS DAMAGED/LEAKING? (ARE CUSTODY SEALS BROKEN?) YES ☐ NO ☒

IF YES, EXPLAIN: _____

3. NUMBER OF CONTAINERS RECEIVED: 66
4. WERE THE SAMPLES RECEIVED ON ICE/OTHER ACCEPTABLE REFRIGERANT? YES ☒ NO ☐

IF NO, EXPLAIN: _____

5. RECEIVING TEMP: 2.2°C TEMP CONTROL(S) PRESENT YES ☐ NO ☐ BOTTLE(S) TEMPED: _____
6. WERE THE SAMPLES PROPERLY PRESERVED? YES ☒ NO ☐

IF NO, EXPLAIN: _____

7. WERE THE SAMPLES COLLECTED IN THE CORRECT CONTAINERS? YES ☒ NO ☐

IF NO, EXPLAIN: _____

8. IS THERE HEADSPACE PRESENT FOR VOLATILES/ODOR SAMPLES? YES ☐ NO ☐ N/A ☒
9. WAS THE COC FILLED OUT PROPERLY? YES ☒ NO ☐

IF NO, EXPLAIN: _____

10. DID THE SAMPLE LABEL(S) CONTAIN ADEQUATE INFO? (CLIENT/DATE/TIME/PRESERVATIVE) YES ☒ NO ☐

IF NO, EXPLAIN: _____

11. WERE ANY OF THE SAMPLES RECEIVED OUTSIDE OF HOLDING TIME? YES ☐ NO ☑

IF YES, EXPLAIN: _____

12. DO THE SAMPLES REQUIRE ANALYSES THAT HAVE A SHORT HOLDING TIME? YES ☐ NO ☑

IF YES, WHAT ANALYSES? _____ **PLEASE NOTIFY LABORATORY ANALYSTS!**

13. IS SUBCONTRACTING REQUIRED? YES ☐ NO ☐

IF YES, WHAT ANALYSES? _____

14. WAS THE CLIENT CONTACTED? YES ☐ NO ☐ IF YES, FILL OUT THE FOLLOWING:

MR EMPLOYEE INITIALS: CLIENT SPOKEN TO: DATE/TIME:

OUTCOME:

SIGNATURE:

L60.30.A r2 Sample Receipt Form

For MR Use Only

APPENDIX E

FEASIBILITY TESTING REPORT

Groundwater Services International, Inc.

443 McCormick Road Mechanicsburg, Pennsylvania 17055 • phone (717) 691-9799 • fax (717) 691-9855

April 6, 2018

Mr. Jason Haney
Mountain Research, Inc.
825 25th Street
Altoona, Pennsylvania 16601

RE: **Pilot Study**
Vennards, Indiana PA

Dear Mr. Haney,

Groundwater Services International, Inc. is pleased to provide MRI with the pilot study data obtained from the Vennards, Indiana, Pennsylvania site. A summary of the testing is provided below and the testing sheets and transducer data is provided on the attached sheets.

Test #1 Date: March 27, 2018
Extraction well: MW-14
Transducer wells: MW-2, MW-4, MW-7 and MW-8.
Hand Gauge wells: MW-11, MW-12, EW-1, MW-9, MW-2BR

Start Time 9:00
Low Vac (5"Hg) Start Time: 11:10
Mid Vac (10"Hg) Start Time: 12:20
High Vac (Max) Start Time: 14:11
Pump and Vac off Recovery Start: 15:37

Notes: The water extracted from the well was very dirty and the flowmeter stopped working due to the silt from the well at approximately 14:40. We tried several times to unclog the internals and the flowmeter would spin several turns after coming back online but would eventually seize up. We started measuring the volume of water inside the batch tank to determine the flowrates of the pump into the trailer. Occasionally a siphon would occur when pumping out of the batch tank through the carbons to the discharge location. After the test and we checked the troll in MW-7 we moved it to well MW-9 at approx. 15:45 and it kept logging at a 1 minute interval to check infiltration due to precipitation. Due to a programming error or troll malfunction, water levels did not record in MW-8 for the three tests. The sky was overcast and it rained or drizzled during the testing.

Test #2 Date: March 28, 2018
Extraction well: EW-1
Transducer wells: MW-2, MW-4, MW-8 and MW-9.
Hand Gauge wells: EW-1BR, MW-13, Tank Pit Sump

Start Time 7:30
High Vac (Max) Start Time: 10:00
Mid Vac (10"Hg) Start Time: 11:46
Low Vac (5"Hg) Start Time: 13:33
Pump and Vac off Recovery Start: 16:02

Notes: Due to the silty water we measured the volume of water inside the batch tank to determine the flowrates. The vacuum pump did recover an additional 38.9 gallons of groundwater in the knockout tank during the High Vac test. Occasionally a siphon would occur when pumping out of the batch tank through the carbons to the discharge location. The sky was overcast and it rained or drizzled during the testing.

Test #3 Date: March 29, 2018
Extraction well: EW-1BR
Transducer wells: MW-1BR, MW-4BR, MW-8 and MW-5BR.
Hand Gauge wells: MW-9, MW-13, MW-9, EW-1, and Tank Pit Sump

Start Time 7:30
Low Vac (5"Hg) Start Time: 9:35
Mid Vac (10"Hg) Start Time: 10:40
High Vac (Max) Start Time: 11:33
Pump and Vac off Recovery Start: 12:30

Notes: Due to the silty water we measured the volume of water inside the batch tank to determine the flowrates. Occasionally a siphon would occur when pumping out of the batch tank through the carbons to the discharge location. The sky was overcast and it rained or drizzled during the testing.

GSI appreciates the opportunity to work for MR and if you have any questions or require any additional information, please feel free to give me a call at (717) 691-9799 or contact me by e-mail at kdeah@gwater.com.

Sincerely yours,
Groundwater Services International, Inc.

Keith Deah, EIT

Date: 3/27/2018 Site: Vennards Indiana PA Page: 1 of 1

Test Name: Vennards
Pump Type: Liquid Ring Pump
SVE Method: Liquid Ring Pump
Weather: Overcast, rain/drizzle

Personnel:
Jason Haney - MRI Mike McCreany - MRI
Keith Deah - GSI

Pumping Well: MW-14

Observation Wells:	MW-2	MW-4	MW-7	MW-8			
Distance to Pumping Well:							

Pump On: 9:00 Recharge Start: 15:37
Pump Off: 15:37 Recharge End: 3/28/2018 7:00

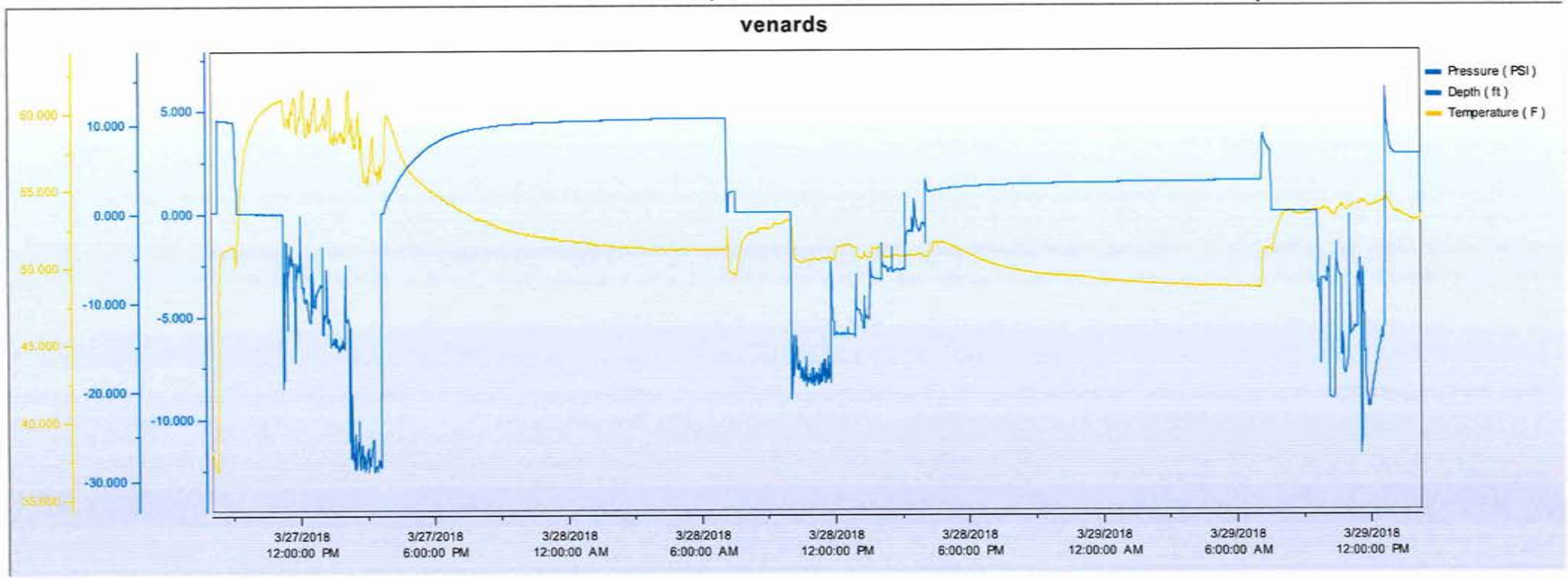
Misc Notes:
* All wells were 0.0 on the vacuum response except a slight vacuum in MW-2 during the high vac test (magnahelic are in inches of water)

Very Silty Pump Discharge
Flowmeter Jammed at Approx 14:40

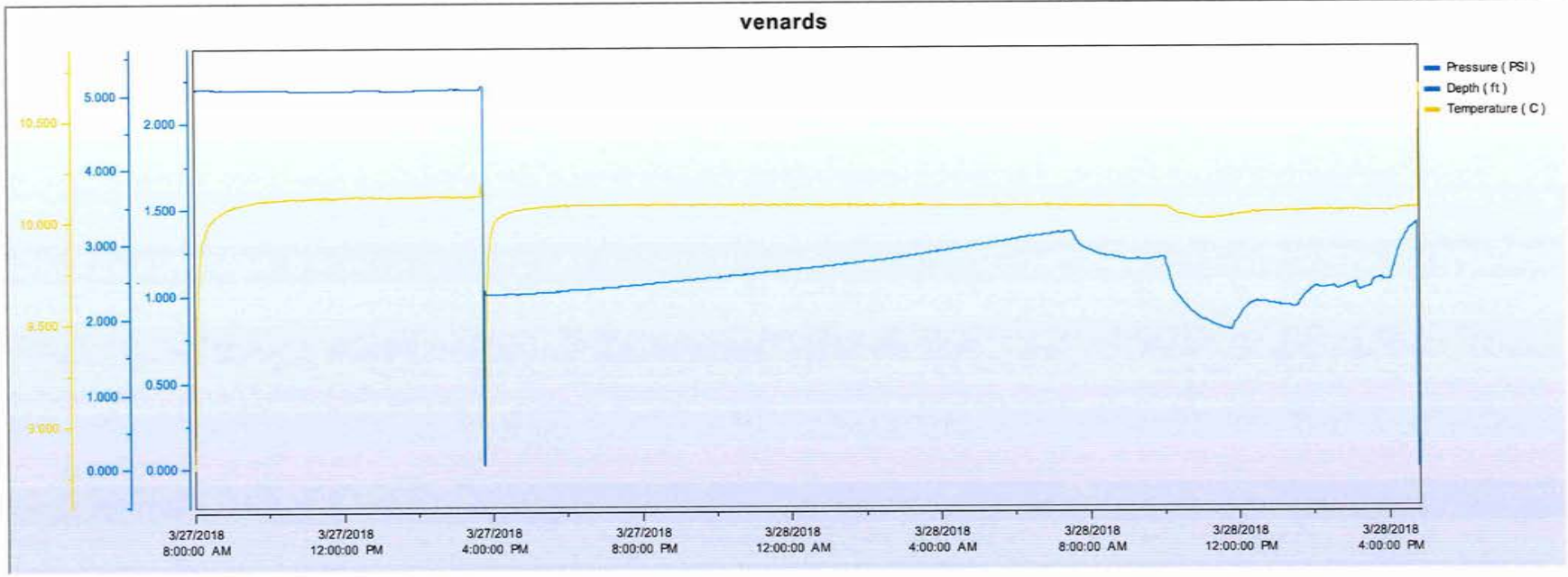
** GPM calcualted as Gallons pumped between previous recording event divided by the number of minutes between recordings

Units ⇨		mmHg	F	ft/min	PID	"hg		Vacuum *	Hand Gauging DTWs (ft)				
Time:	Flowmeter	Vacuum	temp	Anemometer		Well Head	GPM**	MW-2	MW-11	MW-12	EW-1	MW-9	MW-2BR
9:00	Start Pump								6.53	2.56	9.35	10.12	6.91
9:00	54513												
9:15	54530						1.13						
9:30	54535.2						0.35		6.53	2.53	9.35	10.12	6.93
10:00	54543.3						0.27		6.55	2.53	9.25	10.11	6.93
10:30	54548.3						0.17		6.55	2.53	9.24	10.10	6.96
11:00	54554.5						0.21		6.55	2.55	9.12	10.09	6.93
11:10	Started Low Vac Test ~5 "Hg												
11:30	54562.3	120	51.5	480	350		0.26		6.53	2.54	9.14	10.09	6.95
11:57	54568.4						0.23						
12:00		120	55	442	760				6.53		9.14	10.02	6.93
12:20	Started Mid Vac Test ~10 "Hg												
12:30	54586	308	54.9	682	960		0.53		6.51	2.42	9.15	10.05	6.91
13:00	54593.6	337	58.4	1300	845		0.25		6.54	2.32	9.16	10.02	6.91
13:30		372		1095	1095				6.50	2.30	9.18	10.02	6.91
14:00	54612.7	377	66.5	794	794		0.32		6.50	2.28	9.15	9.98	6.90
14:11	Started High Vac Test ~25 "Hg								6.48	2.30	9.12	9.98	
14:15	54618	720	66	1125	125		0.35						
14:40	54624.4 flowmeter stopped working (silty water) 0 gallons in batch tank						0.26						
15:00									6.46	2.29	9.10	9.96	
15:02	10.61	750	68	1668	977		0.48	0.03					
15:21	13.42						0.15						
15:26	14.08						0.13						
15:30	14.40	749	67.4	1700	990		0.08	0.03					
15:37													
15:37	Stopped Vac and Pump - Recovery begins												

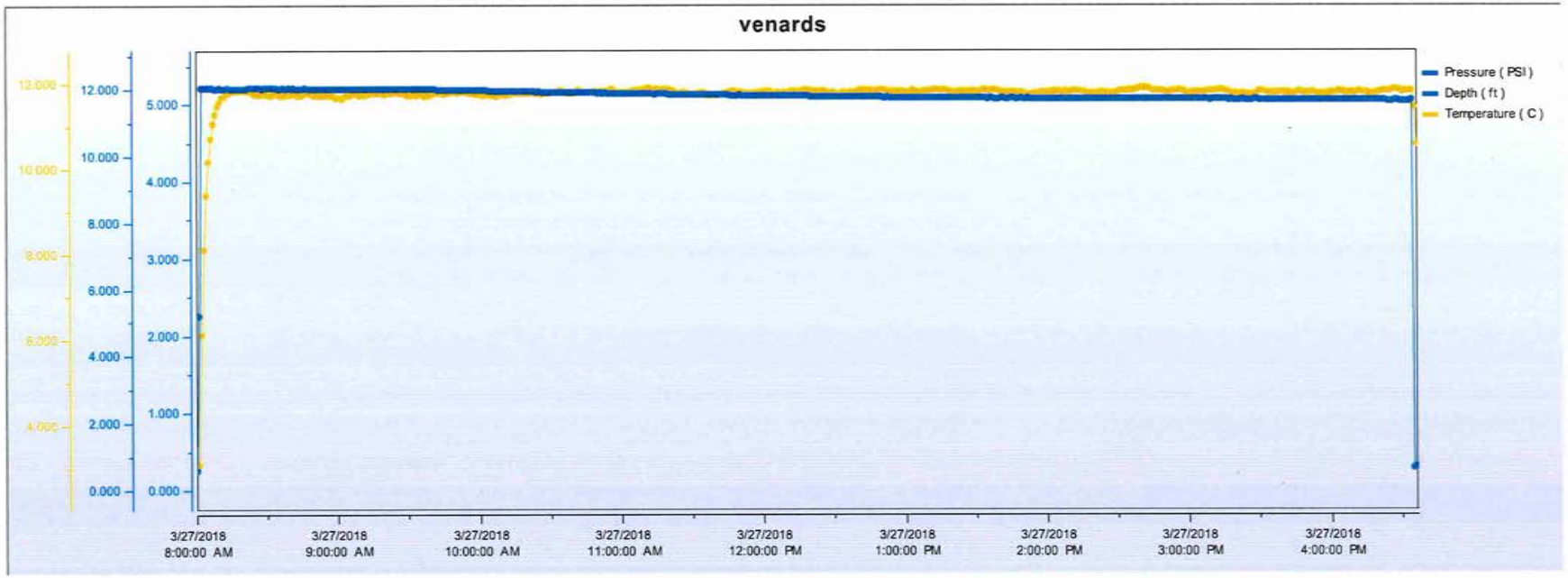
Test #1 MW-14 | Test #2 EW-1 | Test #3 EW-1BR



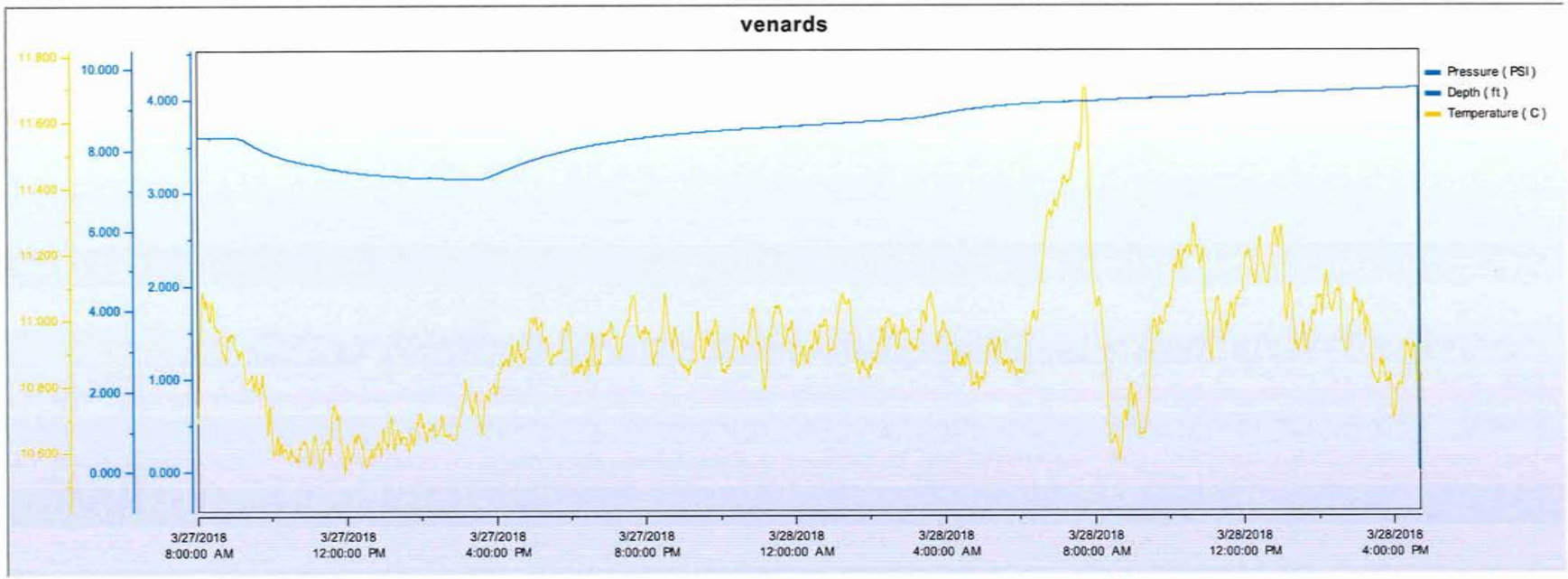
Test #1 MW-7	Transducer moved to MW-9	Test # 2 MW-9



Test #1 MW-4


venards
Pressure (PSI)
Depth (ft)
Temperature (C)
12.000
10.000
8.000
6.000
4.000
2.000
0.000
5.000
4.000
3.000
2.000
1.000
0.000
3/27/2018 8:00:00 AM
3/27/2018 9:00:00 AM
3/27/2018 10:00:00 AM
3/27/2018 11:00:00 AM
3/27/2018 12:00:00 PM
3/27/2018 1:00:00 PM
3/27/2018 2:00:00 PM
3/27/2018 3:00:00 PM
3/27/2018 4:00:00 PM

Test #1 and Test #2 MW-2



Date: 3/28/2018 Site: Vennards Indiana PA Page: 1 of 1

Test Name: Vennards
Pump Type: Liquid Ring Pump
SVE Method: Liquid Ring Pump
Weather: Overcast, rain/drizzle

Personnel:
Jason Haney - MRI Mike McCreany - MRI
Keith Deah - GSI

Misc Notes:
* All wells were 0.0 on the vacuum response

Very Silty Pump Discharge
Flowmeter Jammed due to silt
Recorded water in batch tank

GPM calculated as gallons pumped from previous reading / minutes between previous reading

Pumping Well: EW-1

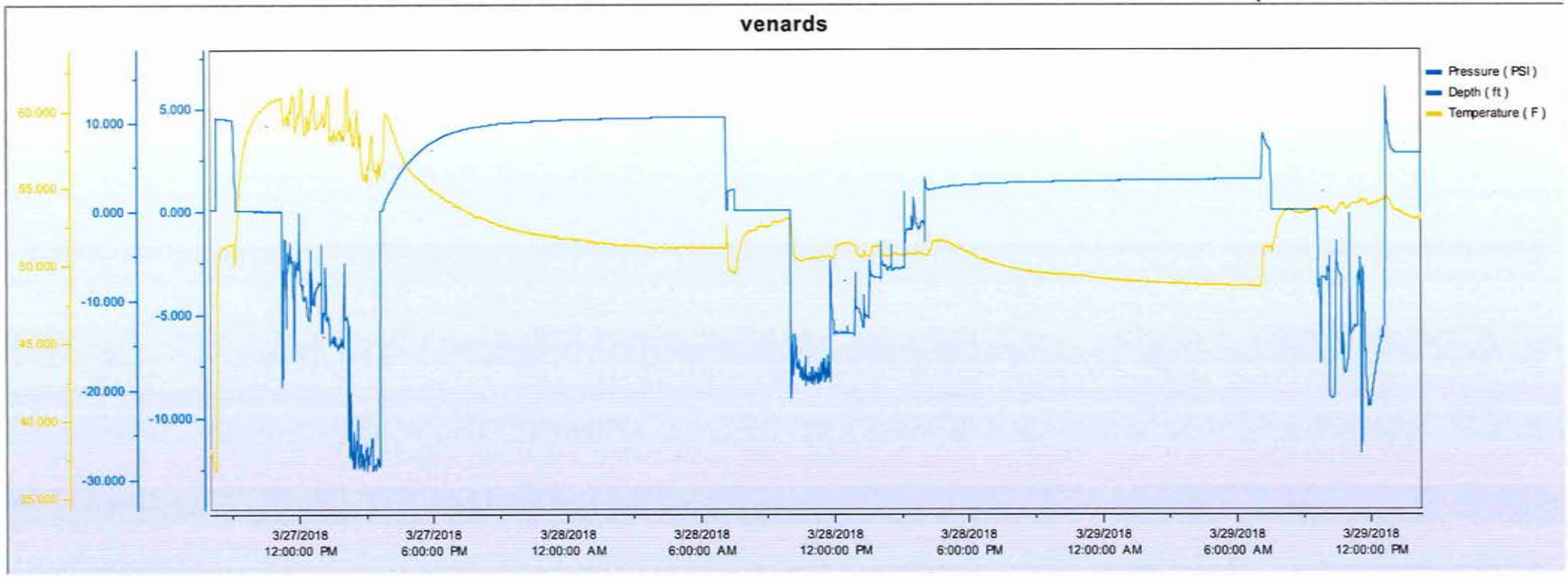
Observation Wells:	MW-2	MW-4	MW-9	MW-8			
Distance to Pumping Well:							

Pump On: 7:30 Recharge Start: 16:02
Pump Off: 16:02 Recharge End: 3/29/2018 7:00

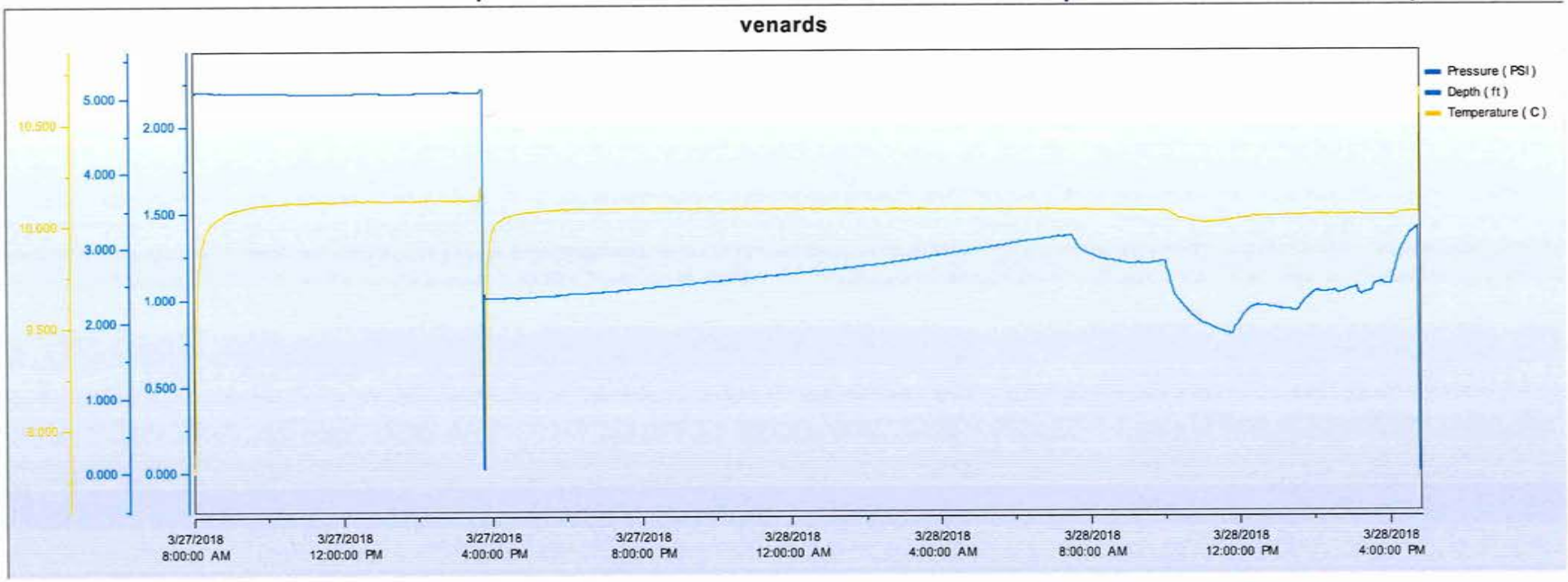
Units ⇨		mmHg	F	ft/min	PID	"hg		Vacuum	Hand Gauging DTWs (ft)					
Time:	Flowmeter	Vacuum	temp	Anemometer		Well Head	GPM	"H2O	EW-1BR	MW-13	Sump			
7:30	Pump On													
7:30	0.00						0							
7:37	4.93						0.70							
7:44	7.81						0.41							
7:58	14.19						0.46							
8:00									8.66	11.12	4.46			
8:03	18.50						0.86							
8:21	28.78						0.57							
8:30	34.54						0.64		8.79	11.12	4.46			
8:32	36.18													
8:45							0.11							
9:00	39.47						0.22		8.85	11.09	4.46			
9:06	41.53						0.34							
9:30	47.70						0.26		8.83	11.07	4.46			
9:57	52.22						0.17							
10:00	53.45						0.41		8.85	11.02	4.43			
10:00	High vac start													
10:07	58.52	605			238		0.72	0						
10:15	72.65						1.77							
10:23	87.60						1.87							
10:30	107.88	679	61	1607	618		2.90	0						
10:40														
11:00	134.77	668	64	1536	655		0.90	0	9.41	11.02	4.40			
11:12	145.68						0.91	0						
11:30	161.65	710	67	1400	395		0.89	0	9.32		4.40			
11:46	Mid Vac test Start													
11:48		349	68	1099	498			0						
12:00	170.07	343	68	1846	256		0.28	0	9.62	11.05	4.40			
12:30	172.95	340	69	1724	177		0.10	0	9.45	11.05	4.40			
12:44	177.88						0.35							
12:50	180.35						0.4111901							
13:00			69	1800				0	9.42	11.05	4.40			
13:15	178.70						-0.06579							
13:19	186.11		69.7	1107	35		1.8503553	0						
13:30									9.45	11.04	4.40			
13:33	Low Vac test Start													
13:33	190.22	148					0.3738092							
13:49	193.51						0.1731327							
14:00		144	68	681	120			0	9.28	11.04	4.40			
14:05	195.15						0.3289521							
14:30	223.11	149	67	741	164		1.118437	0	9.22	11.02	4.40			
14:32														
15:00	254.77	150	70	860	147		1.1307727	0	9.16	10.95	4.40			
15:08	256.83						0.2569938							
15:30		250	70	719	315			0	9.2	10.96	4.40			
15:34	283.56						1.0279752							
15:54	311.11						1.3774867							
16:00	318.10	185	70	1085	192		1.1650385	0	9.2	10.99	4.40			
16:02	Pump Off - Recharge Start													

Note: Batch tank would siphon after running water through carbons if valve after last carbon not opened.
Potential siphoning times when the water was pumped out of the batch tank include 7:44, 8:31, 10:07, 10:40, 11:33, 11:46, 13:15, 14:30, 15:08, and 15:54.

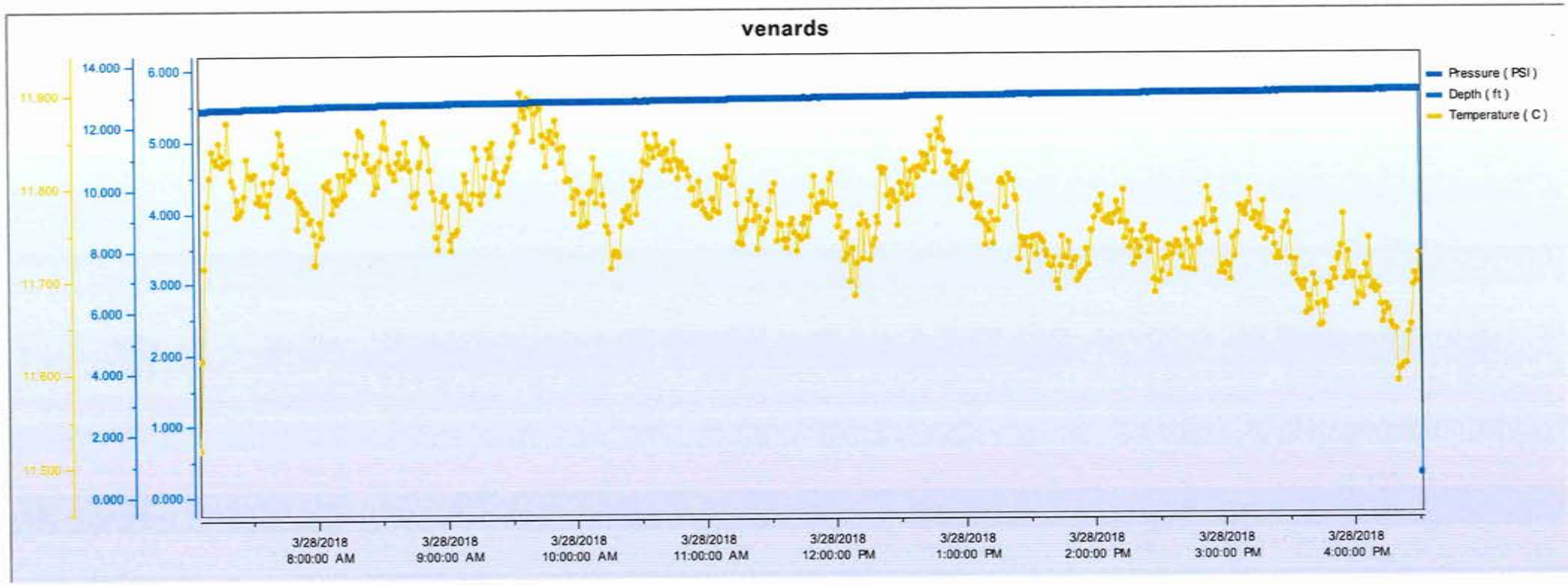
Test #1 MW-14 | Test #2 EW-1 | Test #3 EW-1BR



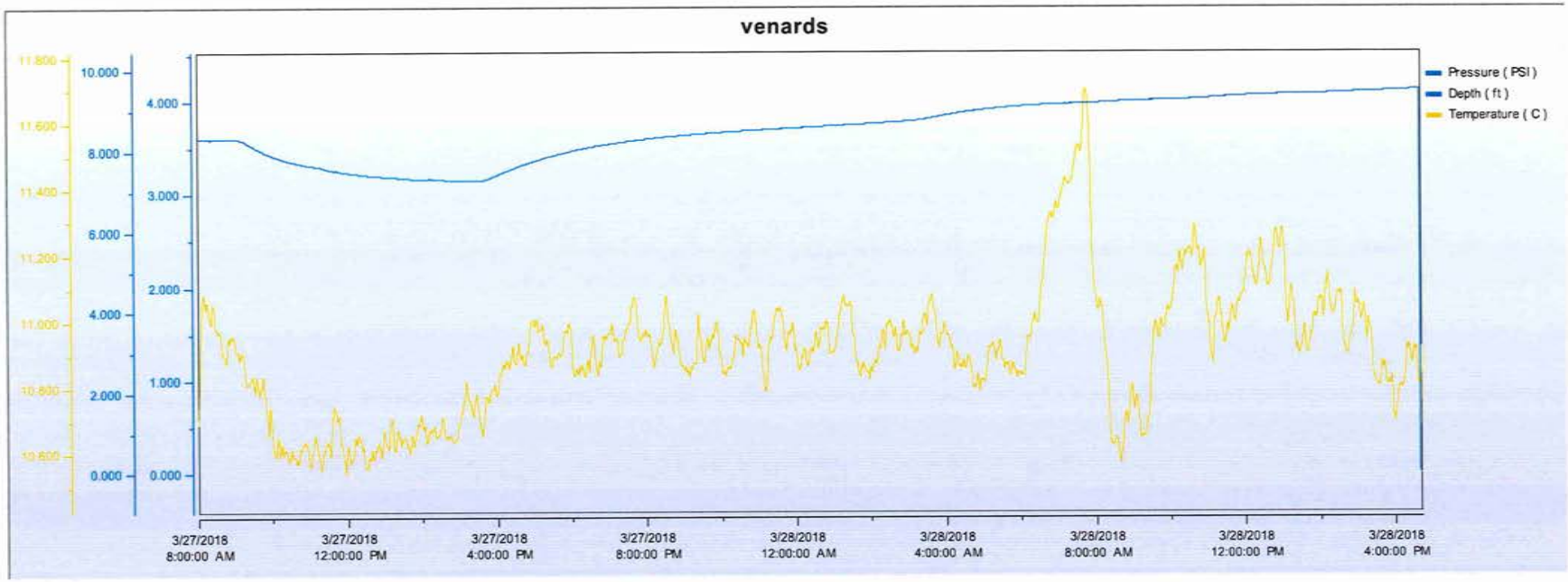
Test #1 MW-7	Transducer moved to MW-9	Test # 2 MW-9



Test #2 MW-4


venards
Pressure (PSI)
Depth (ft)
Temperature (C)
14.000
12.000
10.000
8.000
6.000
4.000
2.000
0.000
6.000
5.000
4.000
3.000
2.000
1.000
0.000
3/28/2018 8:00:00 AM
3/28/2018 9:00:00 AM
3/28/2018 10:00:00 AM
3/28/2018 11:00:00 AM
3/28/2018 12:00:00 PM
3/28/2018 1:00:00 PM
3/28/2018 2:00:00 PM
3/28/2018 3:00:00 PM
3/28/2018 4:00:00 PM

Test #1 and Test #2 MW-2



Date: 3/29/2018 Site: Vennards Indiana PA Page: 1 of 1

Test Name: Vennards
Pump Type: Liquid Ring Pump
SVE Method: Liquid Ring Pump
Weather: Overcast, rain/drizzle

Personnel:
Jason Haney - MRI Mike McCreany - MRI
Keith Deah - GSI

Pumping Well: EW-1BR

Observation Wells:	MW-5BR	MW-1BR	MW-4BR	MW-8			
Distance to Pumping Well:							

Pump On: 7:30 Recharge Start: 12:30
Pump Off: 12:30 Recharge End: 3/29/2018 13:30

Misc Notes:
* All wells were 0.0 on the vacuum response

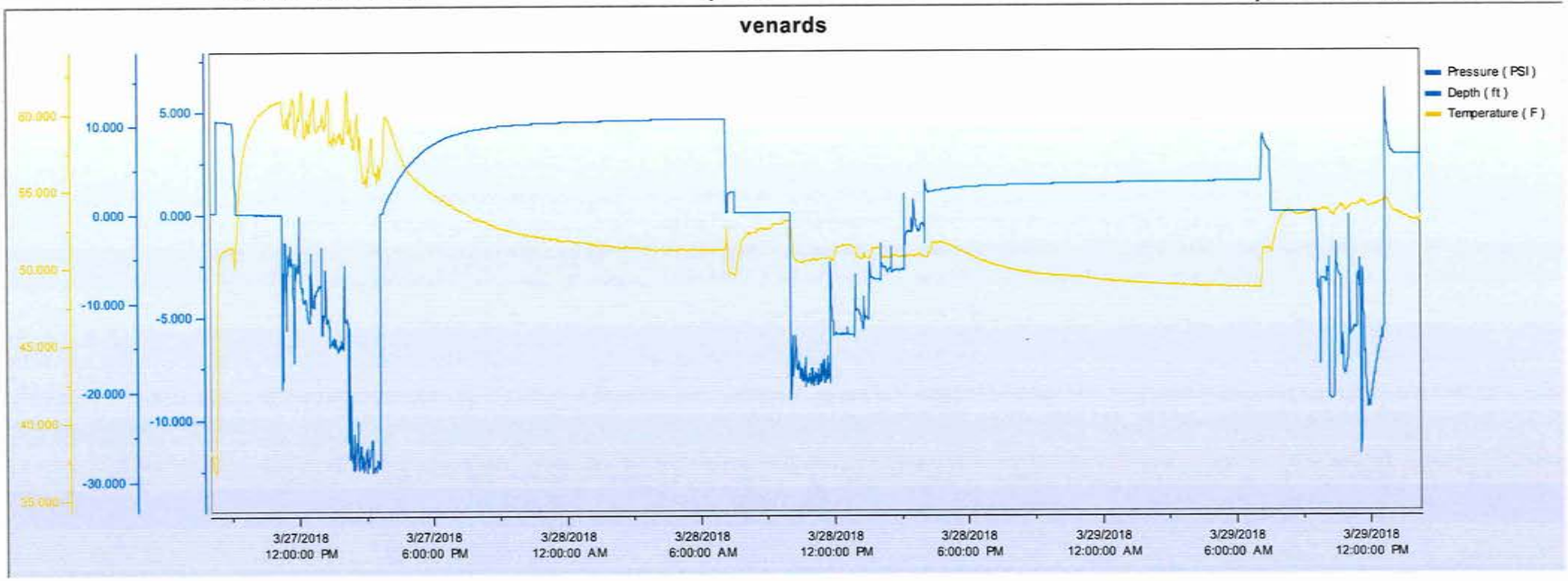
Very Silty Pump Discharge
Flowmeter Jammed due to silt
Recorded water in batch tank

GPM calculated as gallons pumped from previous reading / minutes between previous reading

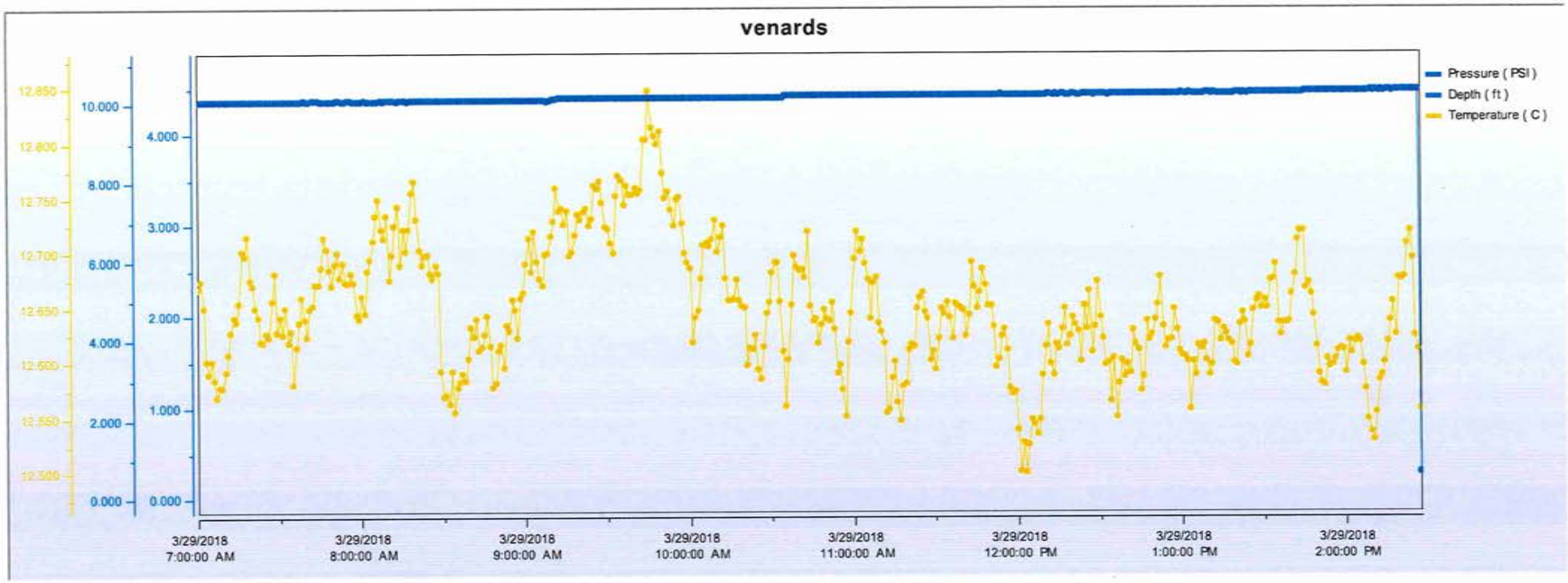
Units ⇨		mmHg	F	ft/min	PID	"hg		Vacuum	Hand Gauging DTWs (ft)				
Time:	Flowmeter	Vacuum	temp	Anemometer		Well Head	GPM	"H2O	MW-9BR	MW-13	MW-9	Sump	EW-1
7:30	Pump On												
7:30	0.00						0		6.60	9.77	8.08	4.30	
7:45	12.75						0.85						
8:00	18.91						0.41		6.68	9.79	8.16	4.30	
8:15	26.73						0.52						
8:30	30.43						0.25		6.67	9.78	8.15	4.30	
8:45	35.77						0.36						
9:00	40.30						0.30		7.69	9.79	8.20	4.30	
9:27	51.81						0.43						
9:30									6.66	9.75	8.18	4.30	7.32
9:35	Low Vac Test Start												
9:35	71.14	227	64.6	1332	54		2.42	0					
10:00	64.56						-0.26		6.70	9.78	8.17	4.30	
10:04	66.20	220	68	780	313		0.41	0					
10:25	78.54						0.59						
10:30	81.83	208	69.9	578	181		0.66	0	6.72	9.78	8.20	4.30	
10:35	83.47						0.33						
10:40	Mid Vac Test Start												
10:40	86.35	10	70	1300	60		0.58	0					
10:57	94.98						0.51						
11:00									6.75	9.78	8.25	4.30	7.34
11:07	100.33	10	71.7	1155	91		0.53	0					
11:23	108.55						0.51						
11:30	113.08	10	73	1378	58		0.65	0	6.74	9.74	8.20	4.30	
11:33	High Vac Test Start												
11:39	116.37	25	73.3	2240	64		0.66	0					
11:58	126.24						0.52						
12:00									6.71	9.74	8.20	4.27	
12:05	129.94	25	74.7	1784	63		0.53	0					
12:18	137.75						0.60						
12:30	144.33	25			60.5		0.55	0	6.74	9.74	8.18	4.23	7.35
12:30	Pump Off - Recharge Start												
13:30									6.54	9.72	7.98		7.16

Note: Batch tank would siphon after running water through carbons if valve after last carbon not opened.
Potential siphoning times when the water was pumped out of the batch tank include 8:30, 9:27, 10:00, 10:30, and 12:30.

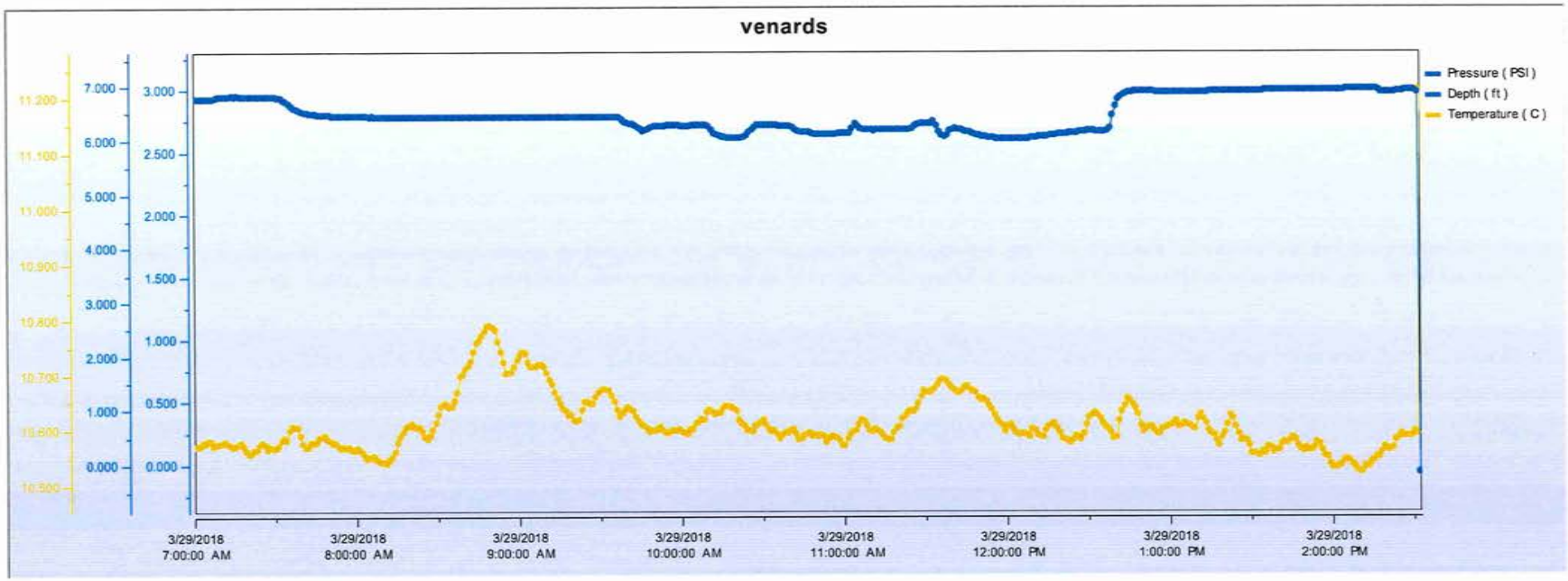
Test #1 MW-14 | Test #2 EW-1 | Test #3 EW-1BR



Test #3 MW-5BR


venards
Pressure (PSI)
Depth (ft)
Temperature (C)
12.850
12.800
12.750
12.700
12.650
12.600
12.550
12.500
10.000
8.000
6.000
4.000
2.000
0.000
4.000
3.000
2.000
1.000
0.000
3/29/2018 7:00:00 AM
3/29/2018 8:00:00 AM
3/29/2018 9:00:00 AM
3/29/2018 10:00:00 AM
3/29/2018 11:00:00 AM
3/29/2018 12:00:00 PM
3/29/2018 1:00:00 PM
3/29/2018 2:00:00 PM

Test #3 MW-4BR


venards
Pressure (PSI)
Depth (ft)
Temperature (C)
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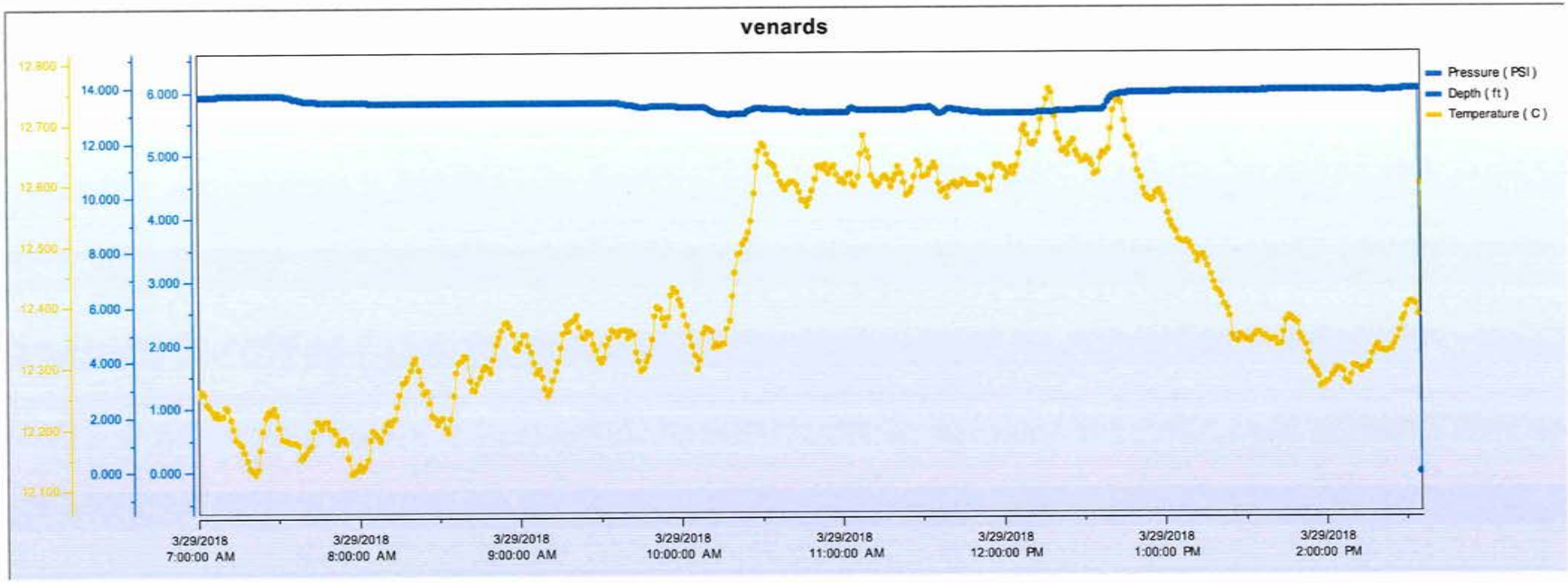
11.100
11.000
10.900
10.800
10.700
10.600
10.500
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0.000
3.000
2.500
2.000
1.500
1.000
0.500
0.000
3/29/2018 7:00:00 AM
3/29/2018 8:00:00 AM
3/29/2018 9:00:00 AM
3/29/2018 10:00:00 AM
3/29/2018 11:00:00 AM
3/29/2018 12:00:00 PM
3/29/2018 1:00:00 PM
3/29/2018 2:00:00 PM

Test #1 MW-1BR

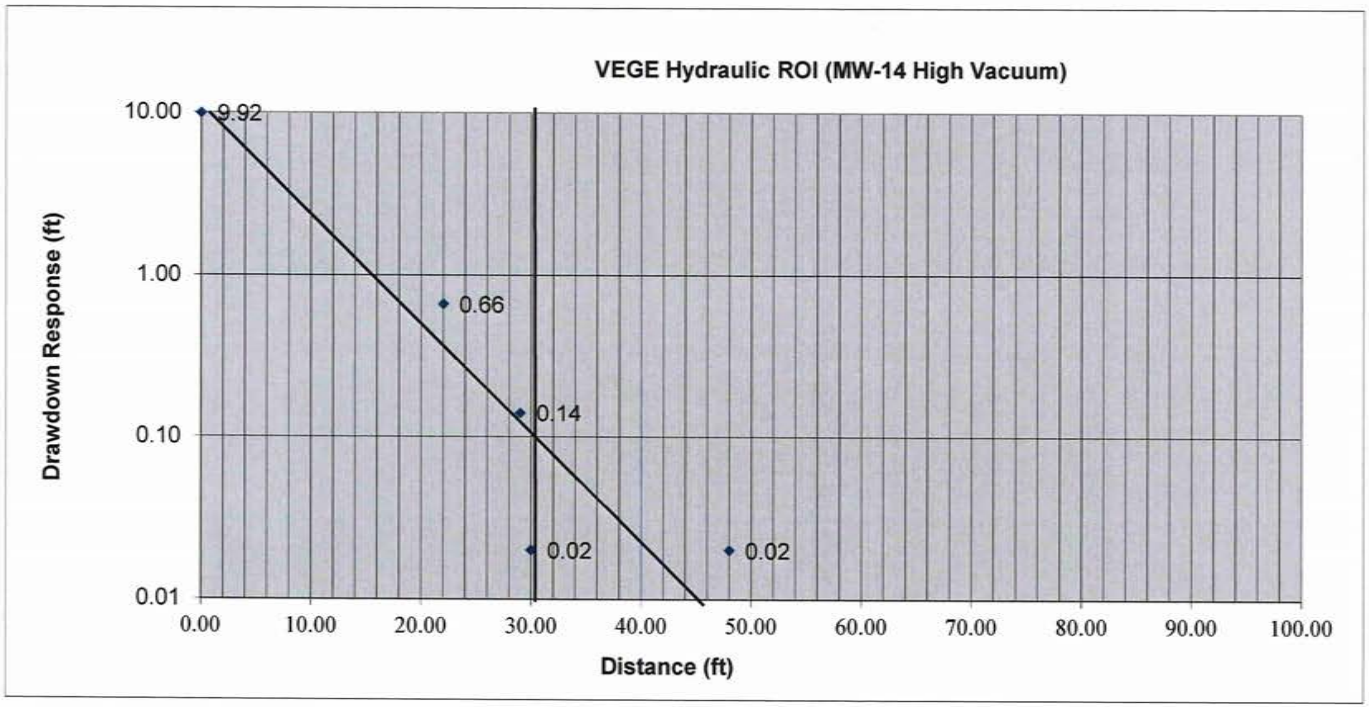

venards
Pressure (PSI)
Depth (ft)
Temperature (C)
12.800
12.700
12.600
12.500
12.400
12.300
12.200
12.100
14.000
12.000
10.000
8.000
6.000
4.000
2.000
0.000
6.000
5.000
4.000
3.000
2.000
1.000
0.000
3/29/2018 7:00:00 AM
3/29/2018 8:00:00 AM
3/29/2018 9:00:00 AM
3/29/2018 10:00:00 AM
3/29/2018 11:00:00 AM
3/29/2018 12:00:00 PM
3/29/2018 1:00:00 PM
3/29/2018 2:00:00 PM

Radius of Influence (ROI) Interpolation

Project No: 4644.15.01
Location: Indiana, PA
Client: Vennard's Crossroad Convenience Store
Extraction @ MW-14, Groundwater Extraction Only

Well	Distance (ft)	Initial WL (ft)	Final WL (ft)	Draw Down (ft)
MW-14	0.00	10.42	0.50	9.92
MW-2	22.00	8.31	7.65	0.66
MW-4	29	12.02	11.88	0.14
MW-7	30	5.08	5.06	0.02
MW-11	48	6.53	6.55	0.02
MW-12	115	2.56	2.55	-0.01
EW-1	66	9.35	9.12	-0.23
MW-9	78	10.12	10.09	-0.03

ROI = 30 ft

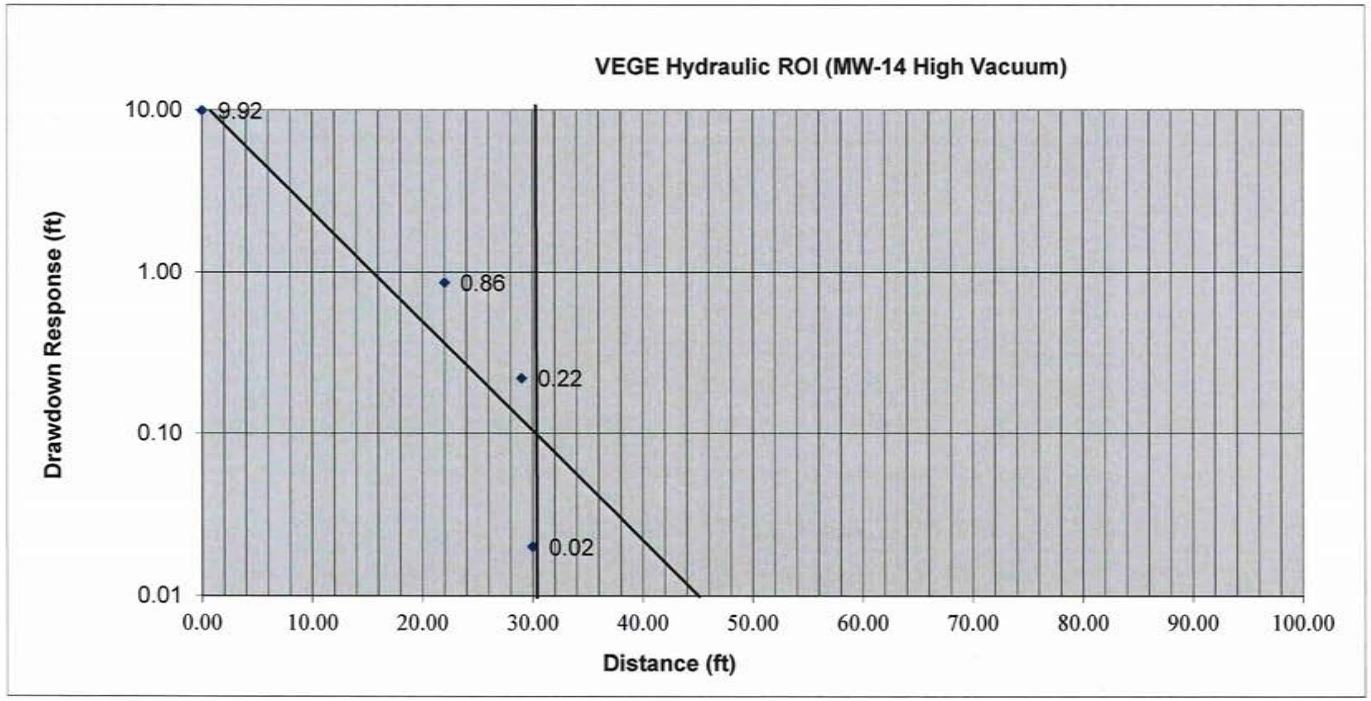


Radius of Influence (ROI) Interpolation

Project No: 4644.15.01
Location: Indiana, PA
Client: Vennard's Crossroad Convenience Store
Extraction @ MW-14, Low Vacuum, 5"Hg

Well	Distance (ft)	Initial WL (ft)	Final WL (ft)	Draw Down (ft)
MW-14	0.00	10.42	0.50	9.92
MW-2	22.00	8.31	7.45	0.86
MW-4	29	12.02	11.80	0.22
MW-7	30	5.08	5.06	0.02
MW-11	48	6.53	6.53	0.00
MW-12	115	2.56		-2.56
EW-1	66	9.35	9.14	-0.21
MW-9	78	10.12	10.09	-0.03

ROI = 30 ft

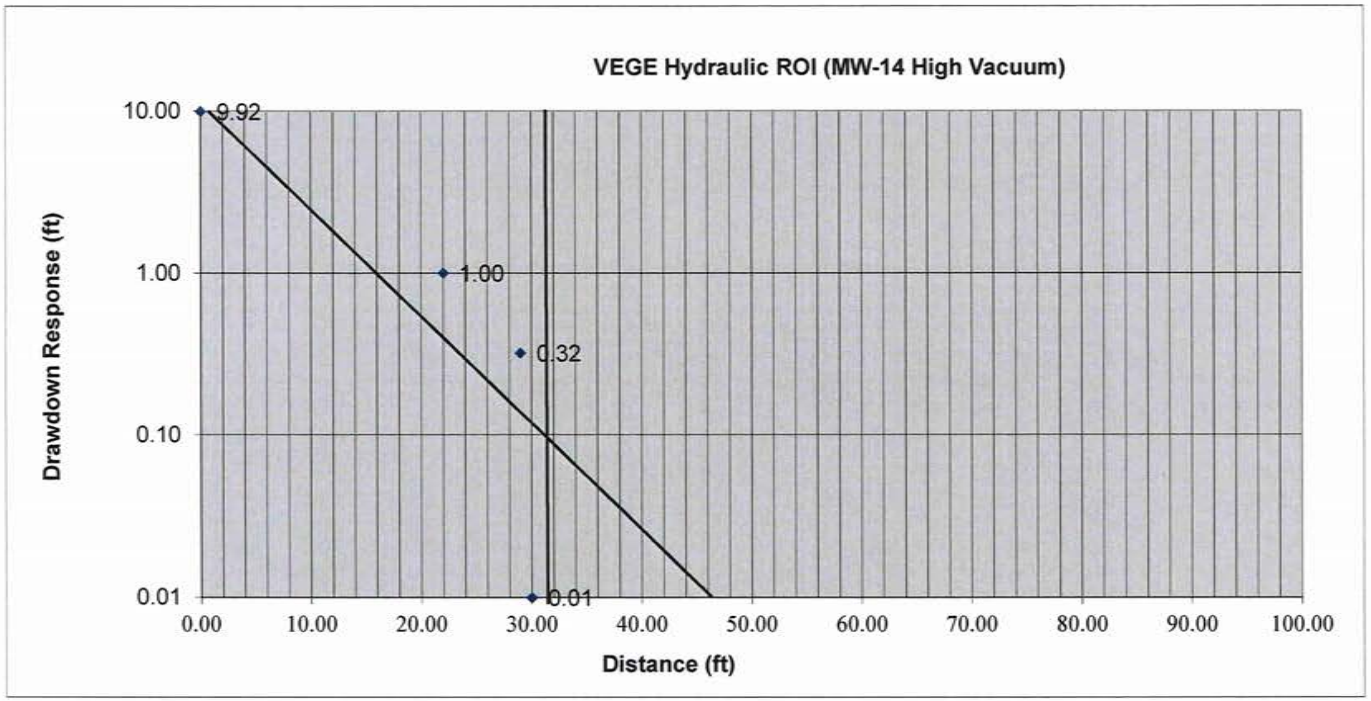


Radius of Influence (ROI) Interpolation

Project No: 4644.15.01
Location: Indiana, PA
Client: Vennard's Crossroad Convenience Store
Extraction @ MW-14, Mid Vacuum, 10"Hg

Well	Distance (ft)	Initial WL (ft)	Final WL (ft)	Draw Down (ft)
MW-14	0.00	10.42	0.50	9.92
MW-2	22.00	8.31	7.31	1.00
MW-4	29	12.02	11.70	0.32
MW-7	30	5.08	5.07	0.01
MW-11	48	6.53	6.50	-0.03
MW-12	115	2.56	2.28	-0.28
EW-1	66	9.35	9.15	-0.20
MW-9	78	10.12	9.98	-0.14

ROI = 31 ft

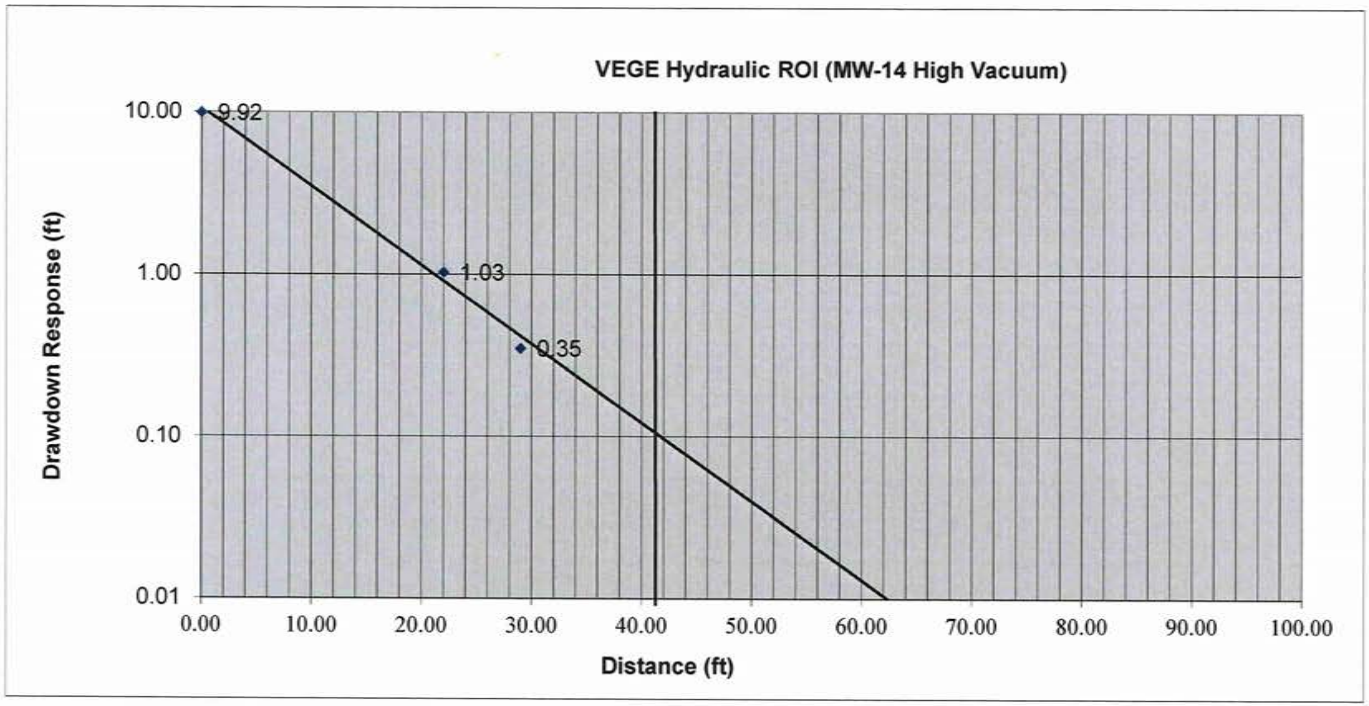


Radius of Influence (ROI) Interpolation

Project No: 4644.15.01
Location: Indiana, PA
Client: Vennard's Crossroad Convenience Store
Extraction @ MW-14, High Vacuum, 25"Hg

Well	Distance (ft)	Initial WL (ft)	Final WL (ft)	Draw Down (ft)
MW-14	0.00	10.42	0.50	9.92
MW-2	22.00	8.31	7.28	1.03
MW-4	29	12.02	11.67	0.35
MW-7	30	5.08	5.08	0.00
MW-11	48	6.53	6.46	-0.07
MW-12	115	2.56	2.29	-0.27
EW-1	66	9.35	9.10	-0.25
MW-9	78	10.12	9.96	-0.16

ROI = 41 ft

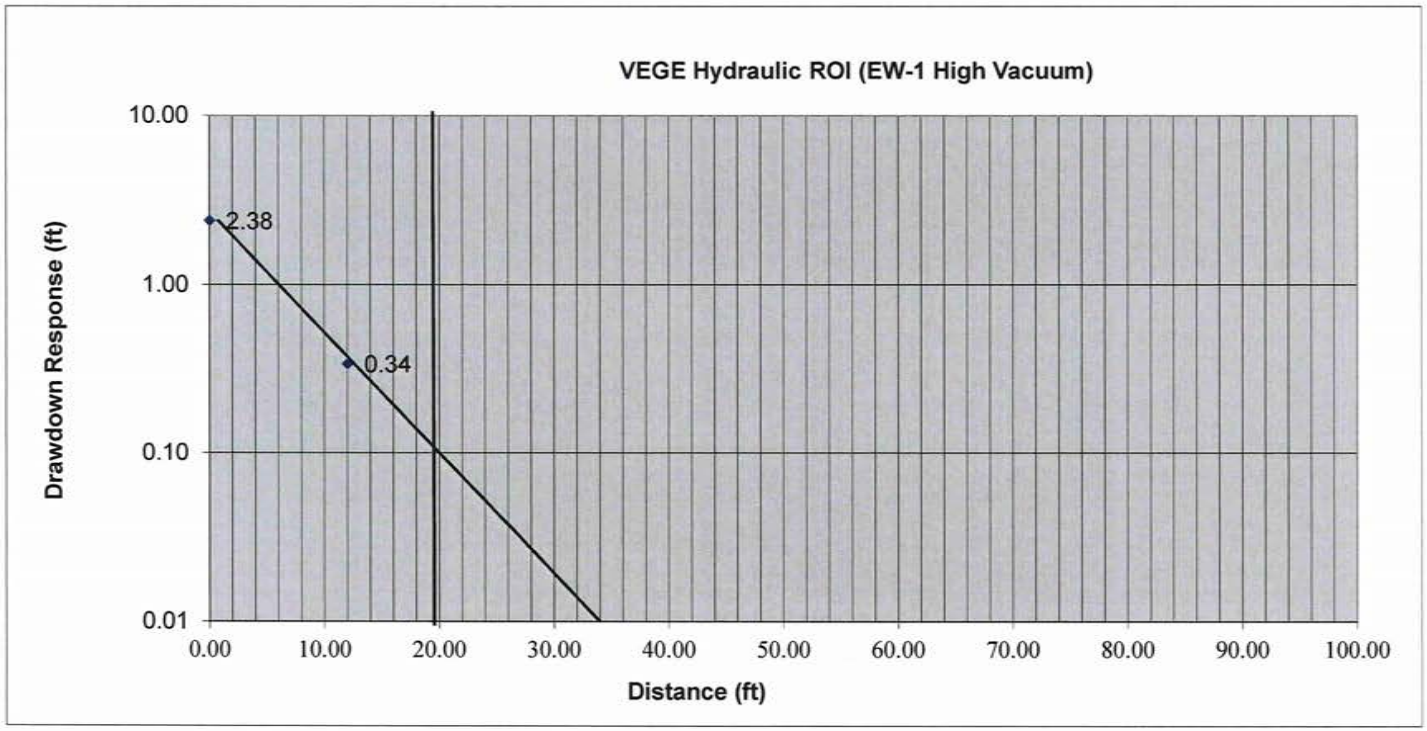


Radius of Influence (ROI) Interpolation

Project No: 4644.15.01
Location: Indiana, PA
Client: Vennard's Crossroad Convenience Store
Extraction @ EW-1, Groundwater Extraction Only

Well	Distance (ft)	Initial WL (ft)	Final WL (ft)	Draw Down (ft)
EW-1	0.00	2.48	0.10	2.38
MW-2	55	9.17	9.26	-0.09
MW-4	50	12.60	12.79	-0.19
MW-9	12	3.15	2.81	0.34
MW-13	36	11.12	11.02	-0.10
Sump	18	4.74	4.40	-0.34

ROI = 19 ft

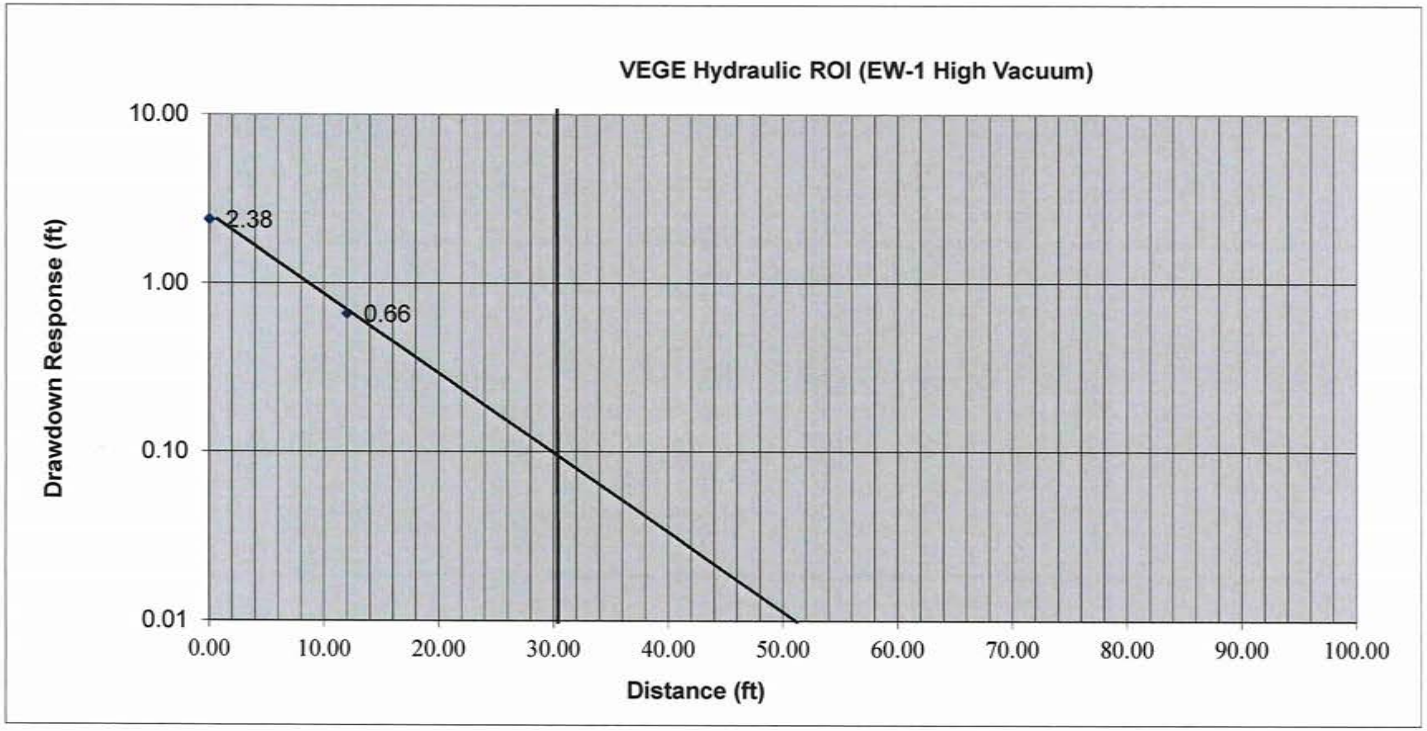


Radius of Influence (ROI) Interpolation

Project No: 4644.15.01
Location: Indiana, PA
Client: Vennard's Crossroad Convenience Store
Extraction @ EW-1, Low Vacuum, 5"Hg

Well	Distance (ft)	Initial WL (ft)	Final WL (ft)	Draw Down (ft)
EW-1	0.00	2.48	0.10	2.38
MW-2	55	9.17	9.48	-0.31
MW-4	50	12.60	13.08	-0.48
MW-9	12	3.15	2.49	0.66
MW-13	36	11.12	10.99	-0.13
Sump	18	4.74	4.40	-0.34

ROI = 30 ft

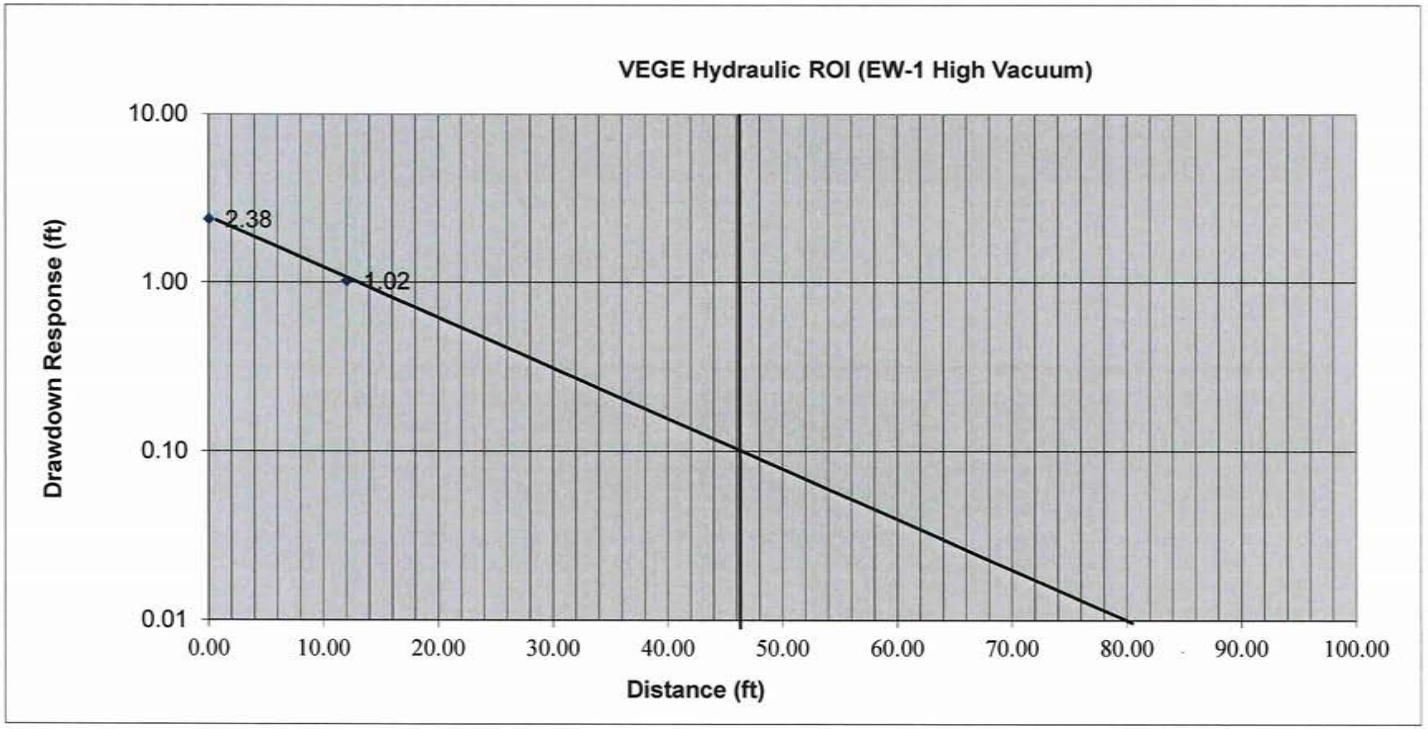


Radius of Influence (ROI) Interpolation

Project No: 4644.15.01
Location: Indiana, PA
Client: Vennard's Crossroad Convenience Store
Extraction @ EW-1, Mid Vacuum, 10"Hg

Well	Distance (ft)	Initial WL (ft)	Final WL (ft)	Draw Down (ft)
EW-1	0.00	2.48	0.10	2.38
MW-2	55	9.17	9.40	-0.23
MW-4	50	12.60	12.98	-0.38
MW-9	12	3.15	2.13	1.02
MW-13	36	11.12	11.04	-0.08
Sump	18	4.74	4.40	-0.34

ROI = 46 ft

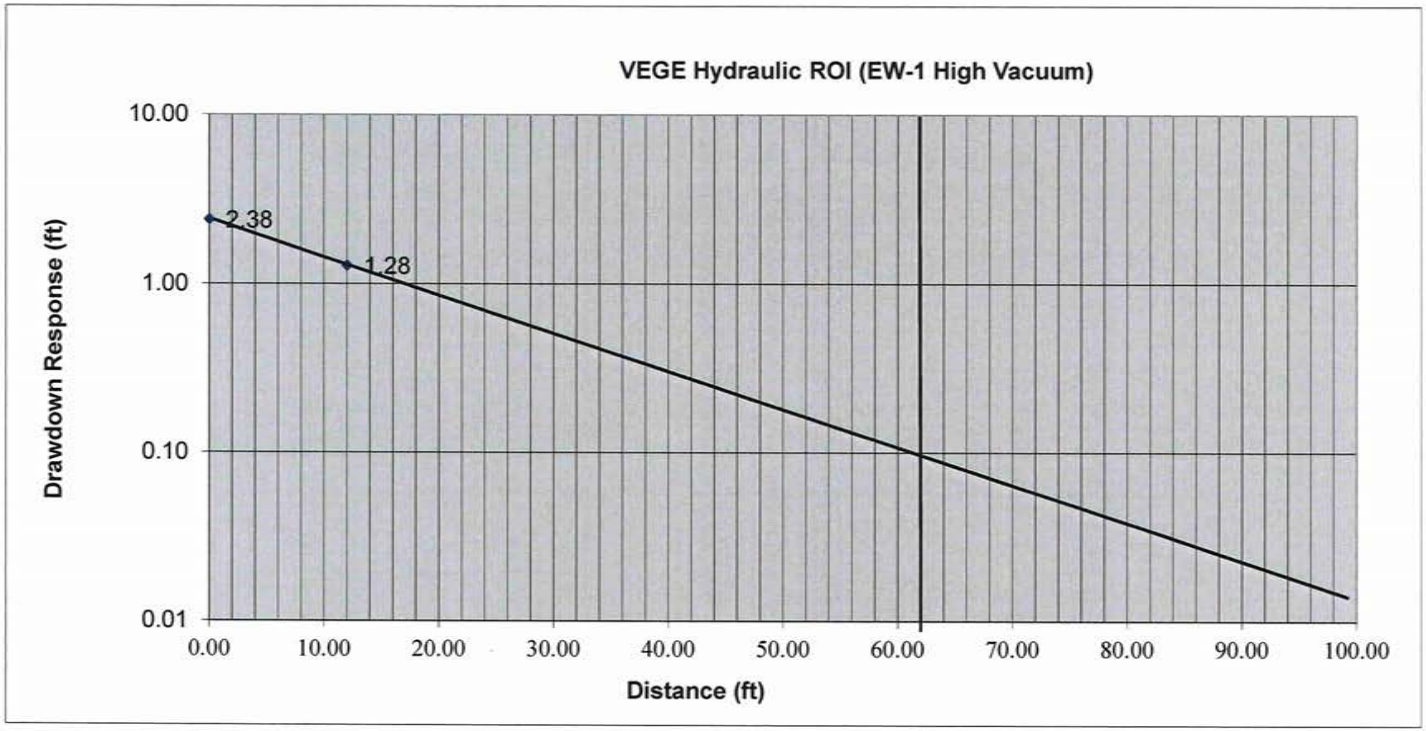


Radius of Influence (ROI) Interpolation

Project No: 4644.15.01
Location: Indiana, PA
Client: Vennard's Crossroad Convenience Store
Extraction @ EW-1, High Vacuum, 25"Hg

Well	Distance (ft)	Initial WL (ft)	Final WL (ft)	Draw Down (ft)
EW-1	0.00	2.48	0.10	2.38
MW-2	55	9.17	9.33	-0.16
MW-4	50	12.60	12.88	-0.28
MW-9	12	3.15	1.87	1.28
MW-13	36	11.12	11.02	-0.10
Sump	18	4.74	4.40	-0.34

ROI = 62 ft

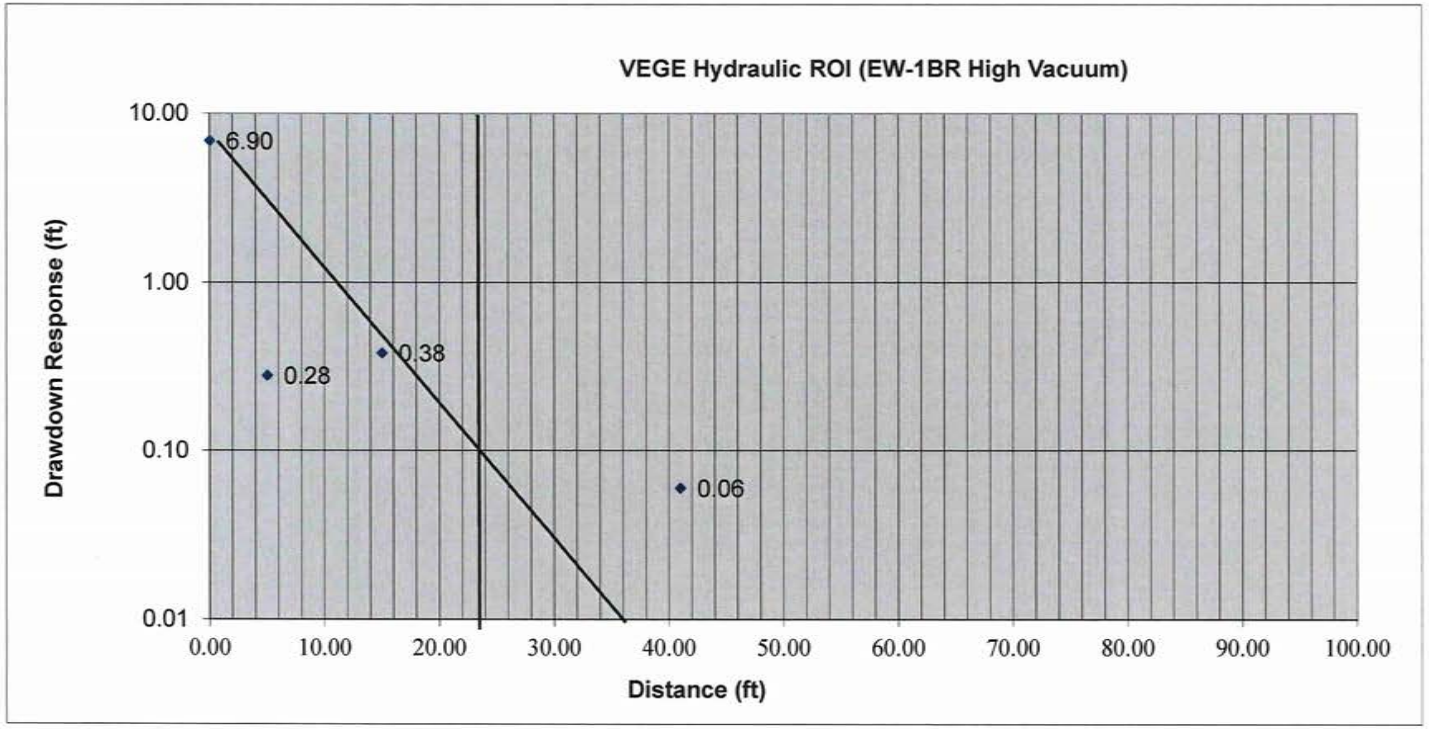


Radius of Influence (ROI) Interpolation

Project No: 4644.15.01
Location: Indiana, PA
Client: Vennard's Crossroad Convenience Store
Extraction @ EW-1BR, Groundwater Extraction Only

Well	Distance (ft)	Initial WL (ft)	Final WL (ft)	Draw Down (ft)
EW-1BR	0.00	6.97	0.07	6.90
MW-5BR	47	10.07	10.14	-0.07
MW-1BR	5	13.71	13.43	0.28
MW-4BR	15	6.80	6.42	0.38
MW-9BR	41	6.60	6.66	0.06

ROI = 23 ft

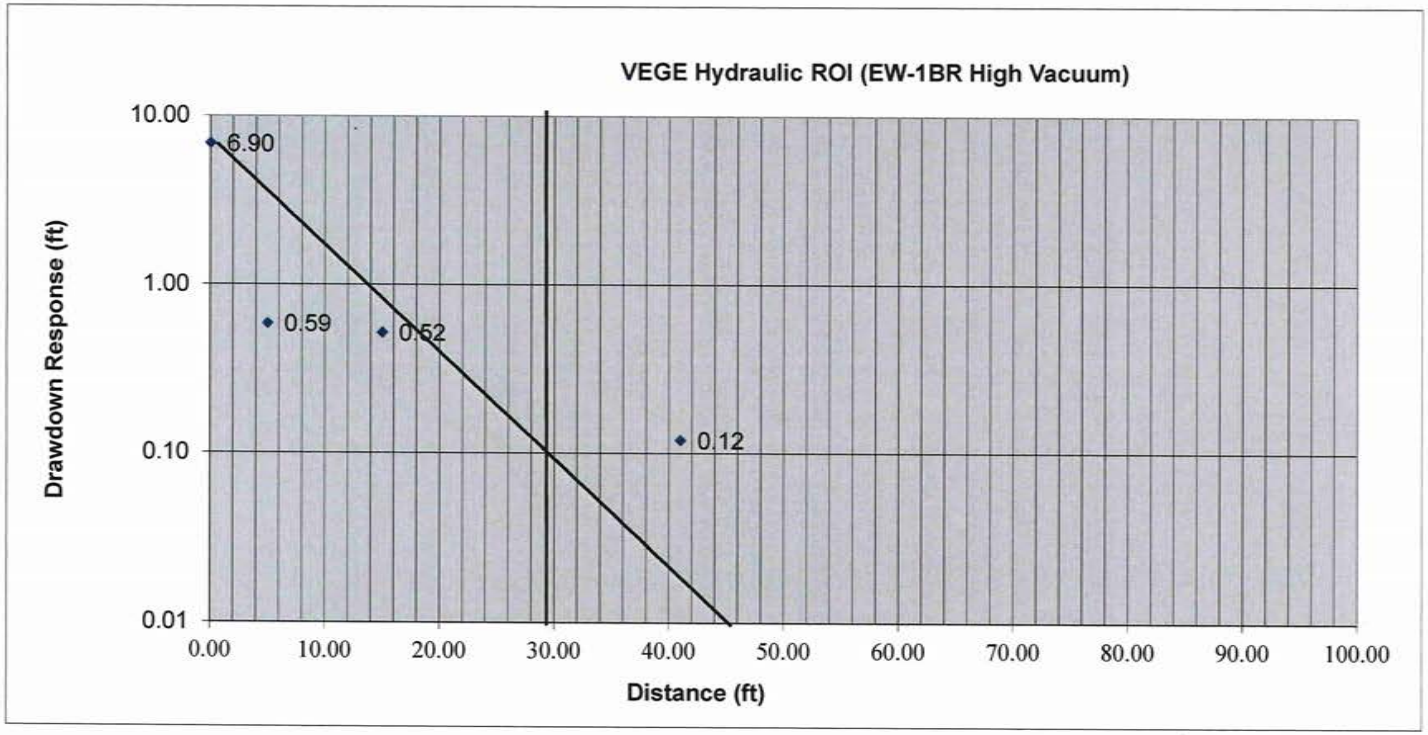


Radius of Influence (ROI) Interpolation

Project No: 4644.15.01
Location: Indiana, PA
Client: Vennard's Crossroad Convenience Store
Extraction @ EW-1BR, Low Vacuum, 5"Hg

Well	Distance (ft)	Initial WL (ft)	Final WL (ft)	Draw Down (ft)
EW-1BR	0.00	6.97	0.07	6.90
MW-5BR	47	10.07	10.15	-0.08
MW-1BR	5	13.71	13.12	0.59
MW-4BR	15	6.80	6.28	0.52
MW-9BR	41	6.60	6.72	0.12

ROI = 29 ft

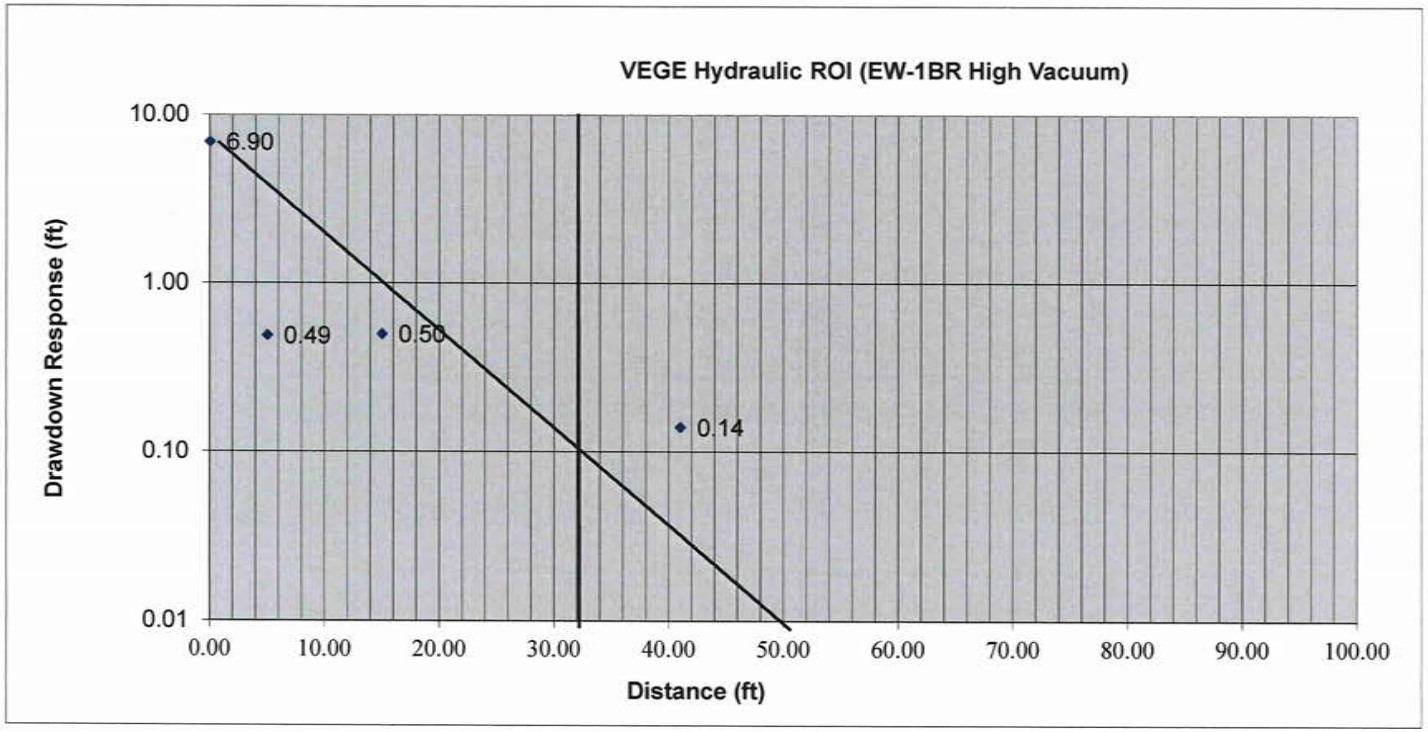


Radius of Influence (ROI) Interpolation

Project No: 4644.15.01
Location: Indiana, PA
Client: Vennard's Crossroad Convenience Store
Extraction @ EW-1BR, Mid Vacuum, 10"Hg

Well	Distance (ft)	Initial WL (ft)	Final WL (ft)	Draw Down (ft)
EW-1BR	0.00	6.97	0.07	6.90
MW-5BR	47	10.07	10.20	-0.13
MW-1BR	5	13.71	13.22	0.49
MW-4BR	15	6.80	6.30	0.50
MW-9BR	41	6.60	6.74	0.14

ROI = 32 ft

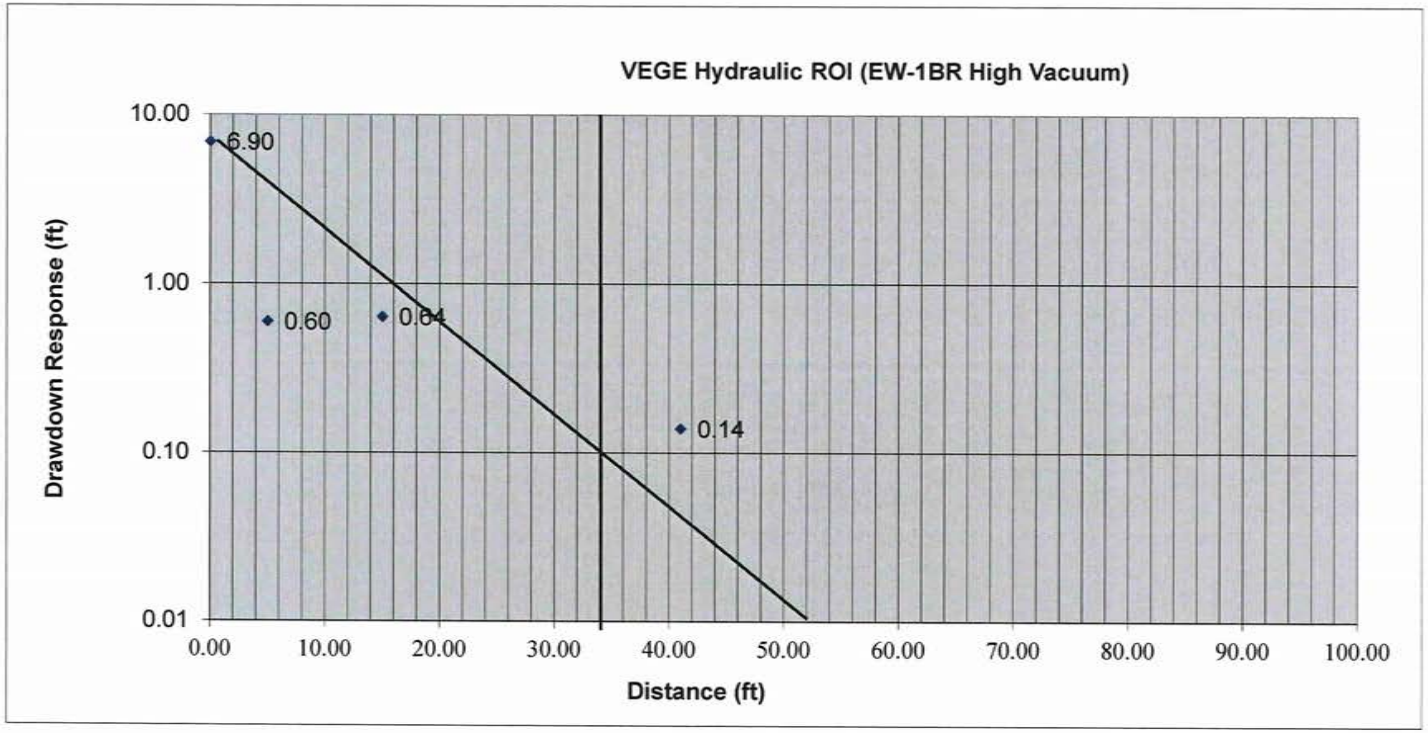


Radius of Influence (ROI) Interpolation

Project No: 4644.15.01
Location: Indiana, PA
Client: Vennard's Crossroad Convenience Store
Extraction @ EW-1BR, High Vacuum, 25"Hg

Well	Distance (ft)	Initial WL (ft)	Final WL (ft)	Draw Down (ft)
EW-1BR	0.00	6.97	0.07	6.90
MW-5BR	47	10.07	10.22	-0.15
MW-1BR	5	13.71	13.11	0.60
MW-4BR	15	6.80	6.16	0.64
MW-9BR	41	6.60	6.74	0.14

ROI = 34 ft



APPENDIX F

REMEDIAL EQUIPMENT SIZING CALCULATIONS

CALCULATION 1

EW-1 Reynolds No. Calculations - Single Well, Shallow Overburden Aquifer

Project No:	4644.15.01	Prepared by:	Jason Haney
Client:	Vennard's Crossroads Convenience, Inc.		
Location:	Indiana, PA		

Reynolds Number (Re)

Re = VDh / v

Dh = Hydraulic Diameter (ft)
V = Velocity (ft/s)
v = Kinematic viscosity (ft^2/sec)

*Dh = 4 * (π * d^2 / 4) / (2 * π * (d/2))*

Temp during test **50** °F (use table to find v)

Input	D (in)	Q (cfm)	v (ft^2/sec)
	2	**33**	0.000164

Convert	D (ft)	V (ft/sec)
	0.16666667	25.22293

Dh **0.16666667**

Re = **25633.0589**

laminar	Re <	2300	
transient	2300	< Re <	4000
turbulent	Re >	4000	

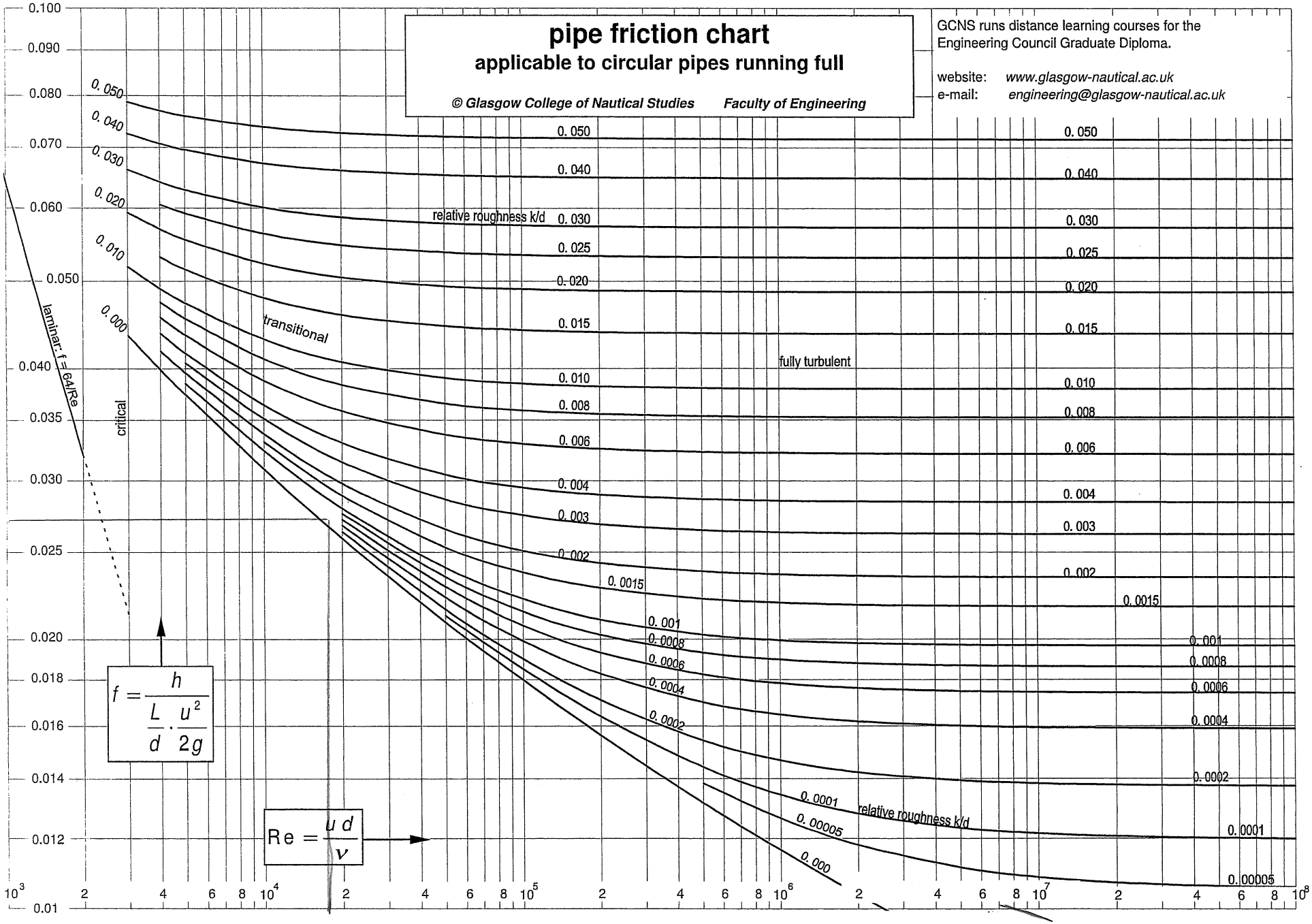
Type of Flow: **turbulent**
Solution: **Use Colebrook Equation**

note: viscosity changes with density of air, which is a function of temperature and pressure
viscosity used is based on temperatures at standard pressure
this error is minor in calculation of Reynolds No.

Viscocity Table

Temperature - *t* - (°F)	Dynamic - *μ* - (lb.s/ft²) x 10^{-7}	Kinematic - *v* - (ft²/s) x 10^{-7}
-40	3.29	1.12
-20	3.34	1.19
0	3.38	1.26
10	3.44	1.31
20	3.5	1.36
30	3.58	1.42
40	3.6	1.46
50	3.68	1.52
60	3.75	1.58
70	3.82	1.64
80	3.86	1.69
90	3.9	1.74
100	3.94	1.79
120	4.02	1.89
140	4.13	2.01
160	4.22	2.12
180	4.34	2.25
200	4.49	2.4
300	4.97	3.06
400	5.24	3.65
500	5.8	4.51
750	6.81	6.68
1,000	7.85	9.3
1,500	9.5	15.1

EW-1, Shallow Overburden Aquifer - Mid Vac 10" Hg



f = 0.027

Re = 1.7×10^4

K/d = 8.49×10^{-5}

CALCULATION 2

EW-1, Friction Factor Calculation Using Colebrook Equation

Project No:	4644.15.01	Prepared by:	Jason Haney
Client:	Vennard's Crossroads Convenience, Inc.		
Location:	Indiana, PA		

Colebrook Equation

$$1 / \lambda^{1/2} = -2 \log \left((2.51 / (Re\, \lambda^{1/2})) + ((k / d_h) / 3.72) \right) \quad (1)$$

λ = Darcy-Weisbach friction coefficient
Re = Reynolds Number
k = roughness of duct, pipe or tube surface (m, ft), from chart
dh = hydraulic diameter (m, ft)
dh = 4 * (π * d^2 / 4) / (2 * π * (d/2))

Solve for Darcy-Weisbach friction coefficient
Use Moody Diagram

Re	**25633**	from Reynolds No. Calculations
k	**1.42E-05**	from k value chart for PVC Pipe
d	**0.166666667**	diameter of pipe
dh	**0.167**	
k/dh	**8.49E-05**	

From Moody Diagram
Friction Coefficient:
0.027

4*(3.14*B21^2/4)/(2*3.14*B21/2)

Surface	Roughness Coefficients- *k*	
	millimeters	feet
Copper, Lead, Brass, Aluminum (new)	0.001 - 0.002	$3.33 - 6.7\ 10^{-6}$
PVC and Plastic Pipes	0.0015 - 0.007	$0.5 - 2.33\ 10^{-5}$
Stainless steel	0.015	$5\ 10^{-5}$
Steel commercial pipe	0.045 - 0.09	$1.5 - 3\ 10^{-4}$
Stretched steel	0.015	$5\ 10^{-5}$
Weld steel	0.045	$1.5\ 10^{-4}$
Galvanized steel	0.15	$5\ 10^{-4}$
Rusted steel (corrosion)	0.15 - 4	$5 - 133\ 10^{-4}$
New cast iron	0.25 - 0.8	$8 - 27\ 10^{-4}$
Worn cast iron	0.8 - 1.5	$2.7 - 5\ 10^{-3}$
Rusty cast iron	1.5 - 2.5	$5 - 8.3\ 10^{-3}$
Sheet or asphalted cast iron	0.01 - 0.015	$3.33 - 5\ 10^{-5}$
Smoothed cement	0.3	$1\ 10^{-3}$
Ordinary concrete	0.3 - 1	$1 - 3.33\ 10^{-3}$
Coarse concrete	0.3 - 5	$1 - 16.7\ 10^{-3}$
Well planed wood	0.18 - 0,9	$6 - 30\ 10^{-4}$
Ordinary wood	5	$16.7\ 10^{-3}$

CALCULATION 3

MW-14 Reynolds No. Calculations - Single Well, Deep Overburden Aquifer

Project No:	4644.15.01	Prepared by:	Jason Haney
Client:	Vennard's Crossroads Convenience, Inc.		
Location:	Indiana, PA		

Reynolds Number (Re)

Re = VDh / v

Dh = Hydraulic Diameter (ft)
V = Velocity (ft/s)
v = Kinematic viscosity (ft^2/sec)

*Dh = 4 * (π * d^2 / 4) / (2 * π * (d/2))*

Temp during test **50** °F (use table to find v)

Input	D (in)	Q (cfm)	v (ft^2/sec)
	2	**21**	0.000158

Convert	D (ft)	V (ft/sec)
	0.16666667	16.127389

Dh **0.16666667**

Re = **17012.0132**

laminar	Re <	2300	
transient	2300	< Re <	4000
turbulent	Re >	4000	

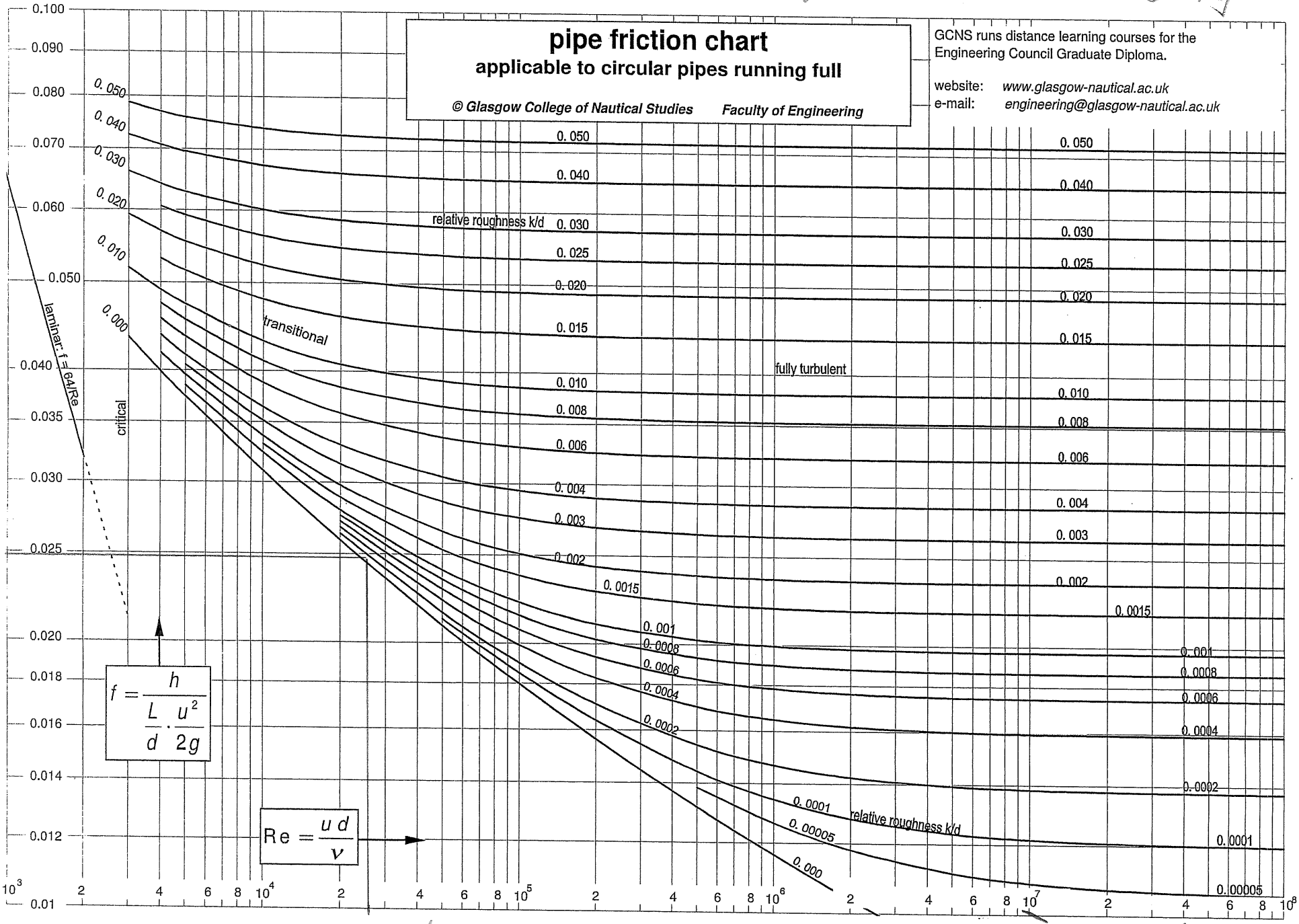
Type of Flow: **turbulent**
Solution: **Use Colebrook Equation**

note: viscosity changes with density of air, which is a function of temperature and pressure
viscosity used is based on temperatures at standard pressure
this error is minor in calculation of Reynolds No.

Viscocity Table

Temperature - *t* - (°F)	Dynamic - *μ* - (lb.s/ft²) x 10^{-7}	Kinematic - *v* - (ft²/s) x 10^{-7}
-40	3.29	1.12
-20	3.34	1.19
0	3.38	1.26
10	3.44	1.31
20	3.5	1.36
30	3.58	1.42
40	3.6	1.46
50	3.68	1.52
60	3.75	1.58
70	3.82	1.64
80	3.86	1.69
90	3.9	1.74
100	3.94	1.79
120	4.02	1.89
140	4.13	2.01
160	4.22	2.12
180	4.34	2.25
200	4.49	2.4
300	4.97	3.06
400	5.24	3.65
500	5.8	4.51
750	6.81	6.68
1,000	7.85	9.3
1,500	9.5	15.1

MW-14, Deep Overburden Aquifer – Mid Vac 10" Hg



f = 0.025

Re = 2.5x10^4

K/dh = 8.49x10^-5

CALCULATION 4

MW-14, Friction Factor Calculation Using Colebrook Equation

Project No:	4644.15.01	Prepared by:	Jason Haney
Client:	Vennard's Crossroads Convenience, Inc.		
Location:	Indiana, PA		

Colebrook Equation

$$1 / \lambda^{1/2} = -2 \log \left((2.51 / (Re\ \lambda^{1/2})) + ((k / d_h) / 3.72) \right) \quad (1)$$

λ = Darcy-Weisbach friction coefficient
Re = Reynolds Number
k = roughness of duct, pipe or tube surface (m, ft), from chart
dh = hydraulic diameter (m, ft)
dh = 4 * (π * d^2 / 4) / (2 * π * (d/2))

Solve for Darcy-Weisbach friction coefficient
Use Moody Diagram

Re	**17012**	from Reynolds No. Calculations
k	**1.42E-05**	from k value chart for PVC Pipe
d	**0.166666667**	diameter of pipe
dh	**0.167**	
k/dh	**8.49E-05**	

From Moody Diagram
Friction Coefficient:
0.025

4*(3.14*B21^2/4)/(2*3.14*B21/2)

Surface	Roughness Coefficients- *k*	
	millimeters	feet
Copper, Lead, Brass, Aluminum (new)	0.001 - 0.002	$3.33 - 6.7\ 10^{-6}$
PVC and Plastic Pipes	0.0015 - 0.007	$0.5 - 2.33\ 10^{-5}$
Stainless steel	0.015	$5\ 10^{-5}$
Steel commercial pipe	0.045 - 0.09	$1.5 - 3\ 10^{-4}$
Stretched steel	0.015	$5\ 10^{-5}$
Weld steel	0.045	$1.5\ 10^{-4}$
Galvanized steel	0.15	$5\ 10^{-4}$
Rusted steel (corrosion)	0.15 - 4	$5 - 133\ 10^{-4}$
New cast iron	0.25 - 0.8	$8 - 27\ 10^{-4}$
Worn cast iron	0.8 - 1.5	$2.7 - 5\ 10^{-3}$
Rusty cast iron	1.5 - 2.5	$5 - 8.3\ 10^{-3}$
Sheet or asphalted cast iron	0.01 - 0.015	$3.33 - 5\ 10^{-5}$
Smoothed cement	0.3	$1\ 10^{-3}$
Ordinary concrete	0.3 - 1	$1 - 3.33\ 10^{-3}$
Coarse concrete	0.3 - 5	$1 - 16.7\ 10^{-3}$
Well planed wood	0.18 - 0,9	$6 - 30\ 10^{-4}$
Ordinary wood	5	$16.7\ 10^{-3}$

CALCULATION 5

EW-1BR Reynolds No. Calculations - Single Well, Bedrock Aquifer

Project No:	4644.15.01	Prepared by:	Jason Haney
Client:	Vennard's Crossroads Convenience, Inc.		
Location:	Indiana, PA		

Reynolds Number (Re)

Re = VDh / v

Dh = Hydraulic Diameter (ft)
V = Velocity (ft/s)
v = Kinematic viscosity (ft^2/sec)

*Dh = 4 * (π * d^2 / 4) / (2 * π * (d/2))*

Temp during test **50** °F (use table to find v)

Input	D (in)	Q (cfm)	v (ft^2/sec)
	2	**28**	0.000164

Convert	D (ft)	V (ft/sec)
	0.16666667	21.324841

Dh **0.16666667**

Re = **21671.5861**

laminar	Re <	2300	
transient	2300	< Re <	4000
turbulent	Re >	4000	

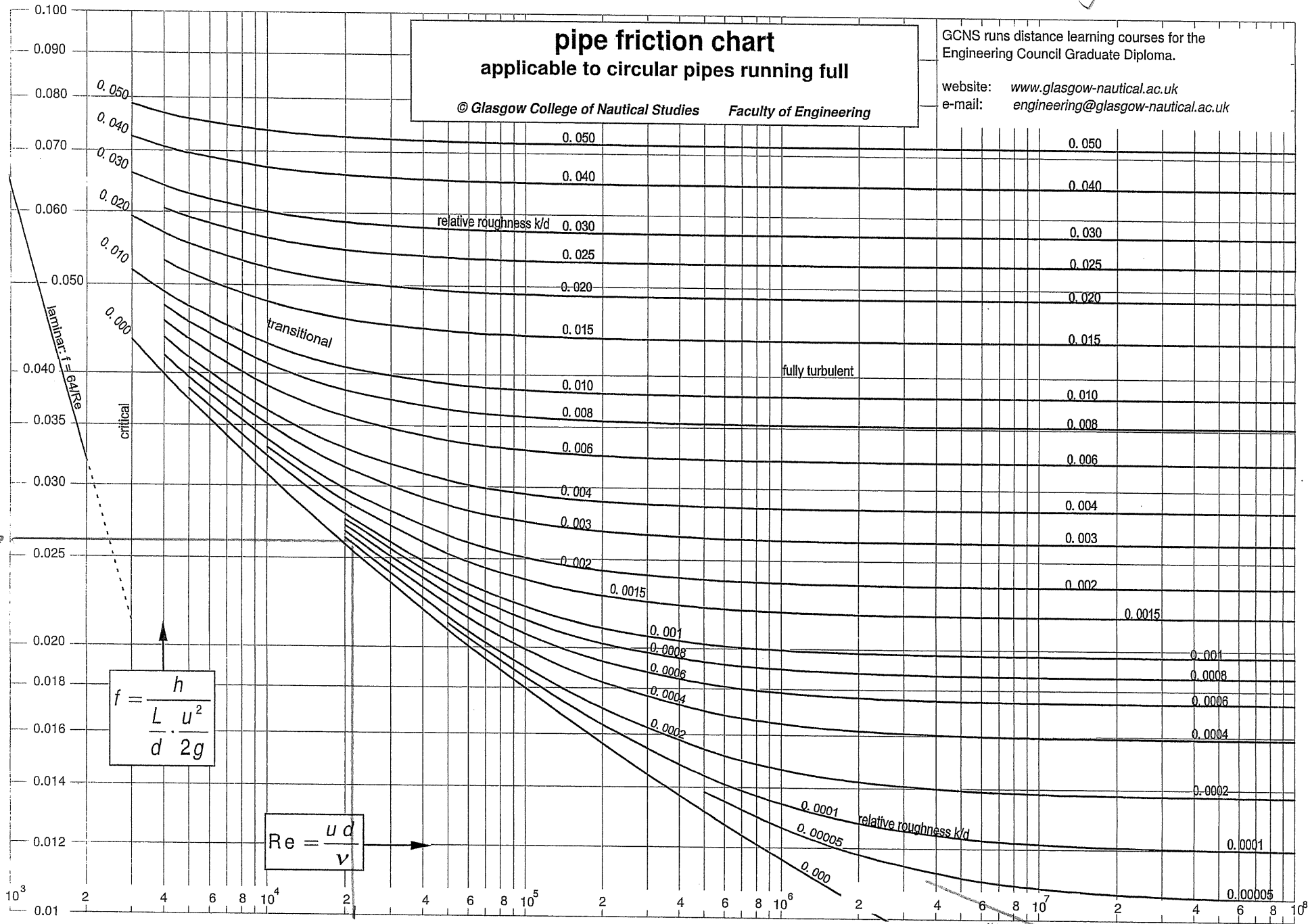
Type of Flow: **turbulent**
Solution: **Use Colebrook Equation**

note: viscosity changes with density of air, which is a function of temperature and pressure
viscosity used is based on temperatures at standard pressure
this error is minor in calculation of Reynolds No.

Viscocity Table

Temperature - *t* - (°F)	Dynamic - *μ* - (lb.s/ft²) x 10⁻⁵	Kinematic - *v* - (ft²/s) x 10⁻⁵
-40	3.29	1.12
-20	3.34	1.19
0	3.38	1.26
10	3.44	1.31
20	3.5	1.36
30	3.58	1.42
40	3.6	1.46
50	3.68	1.52
60	3.75	1.58
70	3.82	1.64
80	3.86	1.69
90	3.9	1.74
100	3.94	1.79
120	4.02	1.89
140	4.13	2.01
160	4.22	2.12
180	4.34	2.25
200	4.49	2.4
300	4.97	3.06
400	5.24	3.65
500	5.8	4.51
750	6.81	6.68
1,000	7.85	9.3
1,500	9.5	15.1

EW-1BR, Bedrock Aquifer - Mid Vac 10" Hg



f = 0.026

Re = 2.1×10^4

K/d = 8.44×10^{-5}

CALCULATION 6

EW-1BR, Friction Factor Calculation Using Colebrook Equation

Project No:	4644.15.01	Prepared by:	Jason Haney
Client:	Vennard's Crossroads Convenience, Inc.		
Location:	Indiana, PA		

Colebrook Equation

$$1 / \lambda^{1/2} = -2 \log \left((2.51 / (Re\, \lambda^{1/2})) + ((k / d_h) / 3.72) \right) \quad (1)$$

λ = Darcy-Weisbach friction coefficient
Re = Reynolds Number
k = roughness of duct, pipe or tube surface (m, ft), from chart
dh = hydraulic diameter (m, ft)
dh = 4 * (π * d^2 / 4) / (2 * π * (d/2))

Solve for Darcy-Weisbach friction coefficient
Use Moody Diagram

Re	**21672**	from Reynolds No. Calculations
k	**1.42E-05**	from k value chart for PVC Pipe
d	**0.166666667**	diameter of pipe
dh	**0.167**	
k/dh	**8.49E-05**	

From Moody Diagram
Friction Coefficient:
0.026

4*(3.14*B21^2/4)/(2*3.14*B21/2)

Surface	Roughness Coefficients- *k*	
	millimeters	feet
Copper, Lead, Brass, Aluminum (new)	0.001 - 0.002	$3.33 - 6.7\ 10^{-6}$
PVC and Plastic Pipes	0.0015 - 0.007	$0.5 - 2.33\ 10^{-5}$
Stainless steel	0.015	$5\ 10^{-5}$
Steel commercial pipe	0.045 - 0.09	$1.5 - 3\ 10^{-4}$
Stretched steel	0.015	$5\ 10^{-5}$
Weld steel	0.045	$1.5\ 10^{-4}$
Galvanized steel	0.15	$5\ 10^{-4}$
Rusted steel (corrosion)	0.15 - 4	$5 - 133\ 10^{-4}$
New cast iron	0.25 - 0.8	$8 - 27\ 10^{-4}$
Worn cast iron	0.8 - 1.5	$2.7 - 5\ 10^{-3}$
Rusty cast iron	1.5 - 2.5	$5 - 8.3\ 10^{-3}$
Sheet or asphalted cast iron	0.01 - 0.015	$3.33 - 5\ 10^{-5}$
Smoothed cement	0.3	$1\ 10^{-3}$
Ordinary concrete	0.3 - 1	$1 - 3.33\ 10^{-3}$
Coarse concrete	0.3 - 5	$1 - 16.7\ 10^{-3}$
Well planed wood	0.18 - 0,9	$6 - 30\ 10^{-4}$
Ordinary wood	5	$16.7\ 10^{-3}$

CALCULATION 7

Treatment Train Reynolds No. Calculations

Project No:	4644.15.01	Prepared by:	Jason Haney
Client:	ennard's Crossroads Convenience, In		
Location:	Indiana, PA		

Reynolds Number (Re)

Re = VDh / v

Dh = Hydraulic Diameter (ft)
V = Velocity (ft/s)
v = Kinematic viscosity (ft^2/sec)

*Dh = 4 * (π * d^2 / 4) / (2 * π * (d/2))*

Temp during test **50** °F (use table to find v)

Input	D (in)	Q *(cfm)*	v (ft^2/sec)
	3	**218**	0.000158

Convert	D (ft)	V (ft/sec)
	0.25	74.055202

Dh **0.25**

Re = **117175.952**

laminar	Re <	2300	
transient	2300	< Re <	4000
turbulent	Re >	4000	

Type of Flow: **turbulent**
Solution: **Use Colebrook Equation**

note: viscosity changes with density of air, which is a function of temperature and pressure
viscosity used is based on temperatures at standard pressure
this error is minor in calculation of Reynolds No.

Viscocity Table

Temperature - *t* - (°F)	Dynamic - *μ* - (lb.s/ft²) x 10^{-7}	Kinematic - *v* - (ft²/s) x 10^{-7}
-40	3.29	1.12
-20	3.34	1.19
0	3.38	1.26
10	3.44	1.31
20	3.5	1.36
30	3.58	1.42
40	3.6	1.46
50	3.68	1.52
60	3.75	1.58
70	3.82	1.64
80	3.86	1.69
90	3.9	1.74
100	3.94	1.79
120	4.02	1.89
140	4.13	2.01
160	4.22	2.12
180	4.34	2.25
200	4.49	2.4
300	4.97	3.06
400	5.24	3.65
500	5.8	4.51
750	6.81	6.68
1,000	7.85	9.3
1,500	9.5	15.1

Treatment Train – Mid Vac 10" Hg

pipe friction chart

applicable to circular pipes running full

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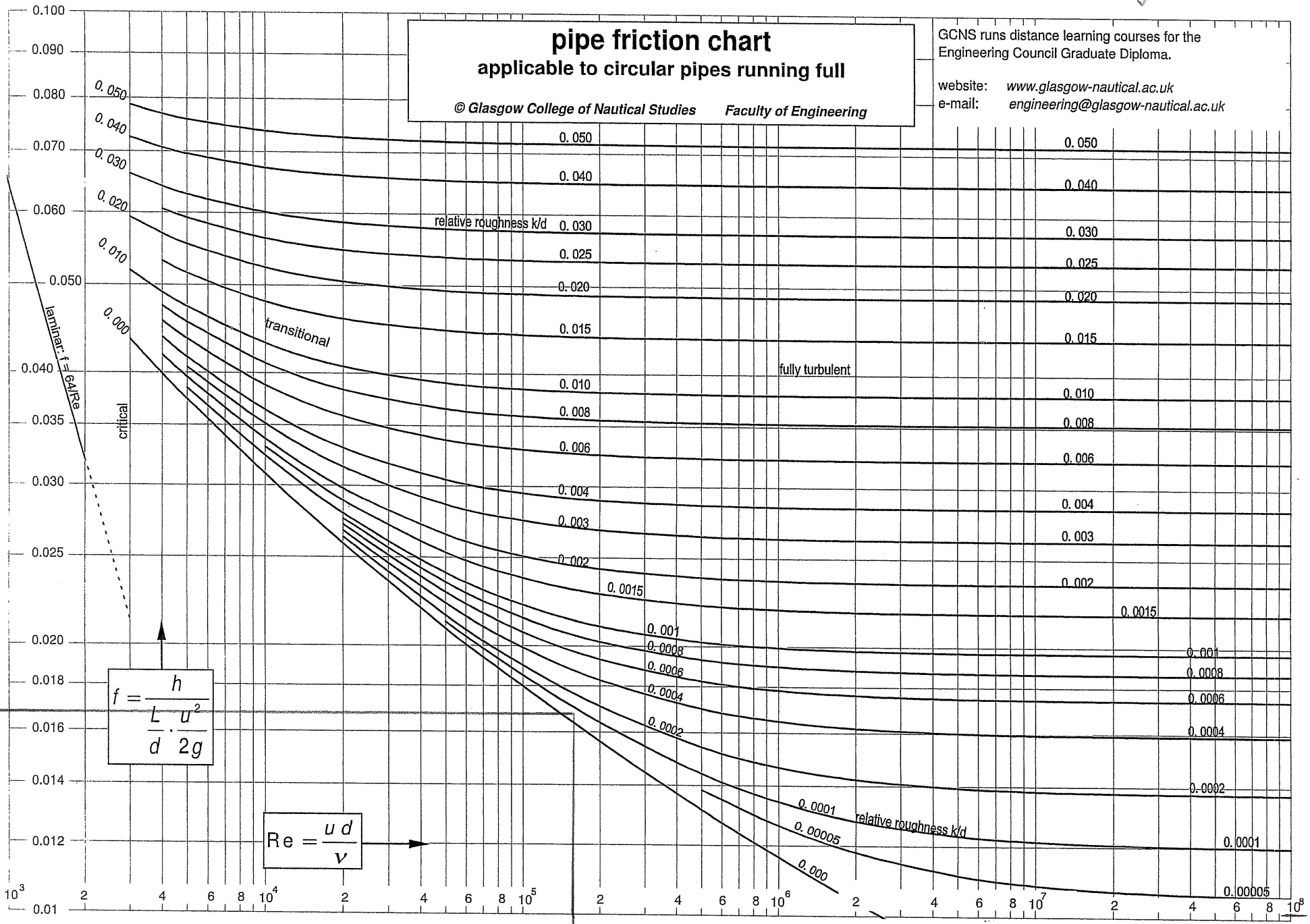
website: www.glasgow-nautical.ac.uk
e-mail: engineering@glasgow-nautical.ac.uk



f = 0.017

Re = 1.1 x 10^5

k/dh = 5.7×10^{-5}

CALCULATION 8

Treatment Train Friction Factor Calculation Using Colebrook Equation

Project No:	4644.15.01	Prepared by:	Jason Haney
Client:	Vennard's Crossroads Convenience, Inc.		
Location:	Indiana, PA		

Colebrook Equation

$$1 / \lambda^{1/2} = -2 \log \left((2.51 / (Re\, \lambda^{1/2})) + ((k / d_h) / 3.72) \right) \quad (1)$$

λ = Darcy-Weisbach friction coefficient
Re = Reynolds Number
k = roughness of duct, pipe or tube surface (m, ft), from chart
dh = hydraulic diameter (m, ft)
dh = 4 * (π * d^2 / 4) / (2 * π * (d/2))

Solve for Darcy-Weisback friction coefficient
Use Moddy Diagram

Re	**117176**	from Reynolds No. Calculations
k	**1.42E-05**	from k value chart for PVC Pipe
d	**0.25**	diameter of pipe
dh	**0.250**	
k/dh	**5.66E-05**	

From Moody Diagram
Friction Coefficient:

0.017

4*(3.14*B21^2/4)/(2*3.14*B21/2)

Surface	Roughness Coefficients- *k*	
	millimeters	feet
Copper, Lead, Brass, Aluminum (new)	0.001 - 0.002	$3.33 - 6.7\ 10^{-6}$
PVC and Plastic Pipes	0.0015 - 0.007	$0.5 - 2.33\ 10^{-5}$
Stainless steel	0.015	$5\ 10^{-5}$
Steel commercial pipe	0.045 - 0.09	$1.5 - 3\ 10^{-4}$
Stretched steel	0.015	$5\ 10^{-5}$
Weld steel	0.045	$1.5\ 10^{-4}$
Galvanized steel	0.15	$5\ 10^{-4}$
Rusted steel (corrosion)	0.15 - 4	$5 - 133\ 10^{-4}$
New cast iron	0.25 - 0.8	$8 - 27\ 10^{-4}$
Worn cast iron	0.8 - 1.5	$2.7 - 5\ 10^{-3}$
Rusty cast iron	1.5 - 2.5	$5 - 8.3\ 10^{-3}$
Sheet or asphalted cast iron	0.01 - 0.015	$3.33 - 5\ 10^{-5}$
Smoothed cement	0.3	$1\ 10^{-3}$
Ordinary concrete	0.3 - 1	$1 - 3.33\ 10^{-3}$
Coarse concrete	0.3 - 5	$1 - 16.7\ 10^{-3}$
Well planed wood	0.18 - 0,9	$6 - 30\ 10^{-4}$
Ordinary wood	5	$16.7\ 10^{-3}$

CALCULATION 6

Overburden Vacuum Pump Design Calculations

Project Number:	4644.15.01
Owner:	Vennard's Crossroads Convenience, Inc.
Site:	Indiana, PA
Prepared by:	Jason Haney

CONSTANTS

Density ρ:	0.002311	lbs/ft^3
Dynamic Viscocity, μ:	3.75E-07	lbs*sec/ft^2
Gravity, g:	32.2	ft/sec^2
Roughness Coef., k:	1.42E-05	ft

WELL EXTRACTION LINES **Overburden Wells**

Well	Flow (SCFM)	Pipe Diameter (in)	Vacuum Loss (in of Hg)
EW-1	33	2	0.33
EW-2	33	2	0.33
EW-3	33	2	0.31
EW-4	21	2	0.09
EW-5	21	2	0.07
EW-6	21	2	0.05
EW-1BR	28	2	0.23
EW-2BR	28	2	0.22

TREATMENT TRAIN LINE

	Flow (SCFM)	Pipe Diameter (in)	Vacuum Loss (in of Hg)
Train Line	218	3	2.15

TOTAL VACUUM

Vacuum Req at Well:	10	in of Hg
Extraction Line Loss:	0.33	in of Hg
Treatment Train Loss:	2.15	in of Hg
Safety Allocation (10%):	0.25	in of Hg
Vacuum at Pump Inlet:	**12.73**	**in of Hg**

PUMP REQUIREMENTS

Design Notes:			
Test Well:	218	SCFM @	12.73 in of Hg
Notes:			
Pump should be capable of	**220**	**SCFM @**	**13 in of Hg**

CALCULATION 7

VEGE Vacuum Pump Design Calculations, EW-1

Project Number: 4644.15.01
Owner: Vennard's Crossroads Convenience, Inc.
Site: Indiana, PA
Prepared by: Jason Haney

PIPE FRICTION LOSS CALCULATIONS

INDIVIDUAL LINE FROM MANIFOLD TO EW-1

Well No: EW-1

DATA INPUT

Pipe Diameter:	2	inch	
Flow:	33	SCFM	Q
Pipe Diameter:	0.16667	ft	d
Pipe Area:	0.0218	ft^2	A
Hydraulic Diamter:	0.1667	ft	dh
Velocity:	25.22	ft/sec	V, Flow / Pipe Area
viscosity:	0.000152	ft^2/sec	v, Kinematic viscosity based on standard temp and pressure
Reynolds No.:	27657		Re, dh*V / v
Roughness Coefficient:	1.42E-05	ft	k, Roughness Coefficient for PVC Pipe
Roughness Ratio:	8.52E-05		Roughness Ration = k / dh
Friction Factor:	**0.0270**		f, From Moody Diagram using Re and Roughness Ratio
Pipe Length:	120	ft	

MINOR LOSSES

Fittings for 2" dia. PVC pipe	Equiv. Pipe Dia.	Equiv. Length (ft)	Quantity	Total Equiv. Length (ft)
90° Bend	25	13.10	2	26.20
45° Bend	20	5.10	0	0.00
Ball Valve	11	3.00	1	3.00
Entrance	45	22.00	2	44.00
Total				73.20

TOTAL EQUIV LENGTH (ft) **193.20** ft L

TOTAL HEAD LOSS: Use Darcy Weisbach Equation, HL = f * (L / d) * (V^2 / 2g)

Head Loss, HL =	**309.19**	**ft of air**
Head Loss, HL in psi =	**0.16**	**psi**
Head Loss, in of Water =	**4.55**	**in of H2O**
Head Loss, in of Hg =	**0.33**	**in of Hg**

CALCULATION 8

VEGE Vacuum Pump Design Calculations, EW-2

Project Number: 4644.15.01
Owner: Vennard's Crossroads Convenience, Inc.
Site: Indiana, PA
Prepared by: Jason Haney

PIPE FRICTION LOSS CALCULATIONS

INDIVIDUAL LINE FROM MANIFOLD TO EW-2

Well No: EW-2

DATA INPUT

Pipe Diameter:	2	inch	
Flow:	33	SCFM	Q
Pipe Diameter:	0.16667	ft	d
Pipe Area:	0.0218	ft^2	A
Hydraulic Diamter:	0.1667	ft	dh
Velocity:	25.22	ft/sec	V, Flow / Pipe Area
viscosity:	0.000152	ft^2/sec	v, Kinematic viscosity based on standard temp and pressure
Reynolds No.:	27657		Re, dh*V / v
Roughness Coefficient:	1.42E-05	ft	k, Roughness Coefficient for PVC Pipe
Roughness Ratio:	8.52E-05		Roughness Ration = k / dh
Friction Factor:	**0.0270**		f, From Moody Diagram using Re and Roughness Ratio
Pipe Length:	120	ft	

MINOR LOSSES

Fittings for 2" dia. PVC pipe	Equiv. Pipe Dia.	Equiv. Length (ft)	Quantity	Total Equiv. Length (ft)
90° Bend	25	13.10	2	26.20
45° Bend	20	5.10	0	0.00
Ball Valve	11	3.00	1	3.00
Entrance	45	22.00	2	44.00
Total				73.20

TOTAL EQUIV LENGTH (ft) **193.20** ft L

TOTAL HEAD LOSS: Use Darcy Weisbach Equation, HL = f * (L / d) * (V^2 / 2g)

Head Loss, HL =	**309.19**	**ft of air**
Head Loss, HL in psi =	**0.16**	**psi**
Head Loss, in of Water =	**4.55**	**in of H2O**
Head Loss, in of Hg =	**0.33**	**in of Hg**

CALCULATION 9

VEGE Vacuum Pump Design Calculations, EW-3

Project Number: 4644.15.01
Owner: Vennard's Crossroads Convenience, Inc.
Site: Indiana, PA
Prepared by: Jason Haney

PIPE FRICTION LOSS CALCULATIONS

INDIVIDUAL LINE FROM MANIFOLD TO EW-3

Well No: EW-3

DATA INPUT

Pipe Diameter:	2	inch	
Flow:	33	SCFM	Q
Pipe Diameter:	0.16667	ft	d
Pipe Area:	0.0218	ft^2	A
Hydraulic Diamter:	0.1667	ft	dh
Velocity:	25.22	ft/sec	V, Flow / Pipe Area
viscosity:	0.000152	ft^2/sec	v, Kinematic viscosity based on standard temp and pressure
Reynolds No.:	27657		Re, dh*V / v
Roughness Coefficient:	1.42E-05	ft	k, Roughness Coefficient for PVC Pipe
Roughness Ratio:	8.52E-05		Roughness Ration = k / dh
Friction Factor:	**0.0270**		f, From Moody Diagram using Re and Roughness Ratio
Pipe Length:	95	ft	

MINOR LOSSES

Fittings for 2" dia. PVC pipe	Equiv. Pipe Dia.	Equiv. Length (ft)	Quantity	Total Equiv. Length (ft)
90° Bend	25	13.10	3	39.30
45° Bend	20	5.10	0	0.00
Ball Valve	11	3.00	1	3.00
Entrance	45	22.00	2	44.00
Total				86.30

TOTAL EQUIV LENGTH (ft) **181.30** ft L

TOTAL HEAD LOSS: Use Darcy Weisbach Equation, HL = f * (L / d) * (V^2 / 2g)

Head Loss, HL =	**290.15**	**ft of air**
Head Loss, HL in psi =	**0.15**	**psi**
Head Loss, in of Water =	**4.27**	**in of H2O**
Head Loss, in of Hg =	**0.31**	**in of Hg**

CALCULATION 10

VEGE Vacuum Pump Design Calculations, EW-4

Project Number: 4644.15.01
Owner: Vennard's Crossroads Convenience, Inc.
Site: Indiana, PA
Prepared by: Jason Haney

PIPE FRICTION LOSS CALCULATIONS

INDIVIDUAL LINE FROM MANIFOLD TO EW-4

Well No: EW-4

DATA INPUT

Pipe Diameter:	2	inch	
Flow:	21	SCFM	Q
Pipe Diameter:	0.16667	ft	d
Pipe Area:	0.0218	ft^2	A
Hydraulic Diamter:	0.1667	ft	dh
Velocity:	16.05	ft/sec	V, Flow / Pipe Area
viscosity:	0.000152	ft^2/sec	v, Kinematic viscosity based on standard temp and pressure
Reynolds No.:	17600		Re, dh*V / v
Roughness Coefficient:	1.42E-05	ft	k, Roughness Coefficient for PVC Pipe
Roughness Ratio:	8.52E-05		Roughness Ration = k / dh
Friction Factor:	**0.0250**		f, From Moody Diagram using Re and Roughness Ratio
Pipe Length:	65	ft	

MINOR LOSSES

Fittings for 2" dia. PVC pipe	Equiv. Pipe Dia.	Equiv. Length (ft)	Quantity	Total Equiv. Length (ft)
90° Bend	25	13.10	2	26.20
45° Bend	20	5.10	1	5.10
Ball Valve	11	3.00	1	3.00
Entrance	45	22.00	2	44.00
Total				78.30

TOTAL EQUIV LENGTH (ft) **143.30** ft L

TOTAL HEAD LOSS: Use Darcy Weisbach Equation, HL = f * (L / d) * (V^2 / 2g)

Head Loss, HL =	**85.99**	**ft of air**
Head Loss, HL in psi =	**0.05**	**psi**
Head Loss, in of Water =	**1.26**	**in of H2O**
Head Loss, in of Hg =	**0.09**	**in of Hg**

CALCULATION 11

VEGE Vacuum Pump Design Calculations, EW-5

Project Number: 4644.15.01
Owner: Vennard's Crossroads Convenience, Inc.
Site: Indiana, PA
Prepared by: Jason Haney

PIPE FRICTION LOSS CALCULATIONS

INDIVIDUAL LINE FROM MANIFOLD TO EW-5

Well No: EW-5

DATA INPUT

Pipe Diameter:	2	inch	
Flow:	21	SCFM	Q
Pipe Diameter:	0.16667	ft	d
Pipe Area:	0.0218	ft^2	A
Hydraulic Diamter:	0.1667	ft	dh
Velocity:	16.05	ft/sec	V, Flow / Pipe Area
viscosity:	0.000152	ft^2/sec	v, Kinematic viscosity based on standard temp and pressure
Reynolds No.:	17600		Re, dh*V / v
Roughness Coefficient:	1.42E-05	ft	k, Roughness Coefficient for PVC Pipe
Roughness Ratio:	8.52E-05		Roughness Ration = k / dh
Friction Factor:	**0.0250**		f, From Moody Diagram using Re and Roughness Ratio
Pipe Length:	40	ft	

MINOR LOSSES

Fittings for 2" dia. PVC pipe	Equiv. Pipe Dia.	Equiv. Length (ft)	Quantity	Total Equiv. Length (ft)
90° Bend	25	13.10	2	26.20
45° Bend	20	5.10	0	0.00
Ball Valve	11	3.00	1	3.00
Entrance	45	22.00	2	44.00
Total				73.20

TOTAL EQUIV LENGTH (ft) **113.20** ft L

TOTAL HEAD LOSS: Use Darcy Weisbach Equation, HL = f * (L / d) * (V^2 / 2g)

Head Loss, HL =	**67.93**	**ft of air**
Head Loss, HL in psi =	**0.04**	**psi**
Head Loss, in of Water =	**1.00**	**in of H2O**
Head Loss, in of Hg =	**0.07**	**in of Hg**

CALCULATION 12

VEGE Vacuum Pump Design Calculations, EW-6

Project Number: 4644.15.01
Owner: Vennard's Crossroads Convenience, Inc.
Site: Indiana, PA
Prepared by: Jason Haney

PIPE FRICTION LOSS CALCULATIONS

INDIVIDUAL LINE FROM MANIFOLD TO EW-6

Well No: EW-6

DATA INPUT

Pipe Diameter:	2	inch	
Flow:	21	SCFM	Q
Pipe Diameter:	0.16667	ft	d
Pipe Area:	0.0218	ft^2	A
Hydraulic Diamter:	0.1667	ft	dh
Velocity:	16.05	ft/sec	V, Flow / Pipe Area
viscosity:	0.000152	ft^2/sec	v, Kinematic viscosity based on standard temp and pressure
Reynolds No.:	17600		Re, dh*V / v
Roughness Coefficient:	1.42E-05	ft	k, Roughness Coefficient for PVC Pipe
Roughness Ratio:	8.52E-05		Roughness Ration = k / dh
Friction Factor:	**0.0250**		f, From Moody Diagram using Re and Roughness Ratio
Pipe Length:	10	ft	

MINOR LOSSES

Fittings for 2" dia. PVC pipe	Equiv. Pipe Dia.	Equiv. Length (ft)	Quantity	Total Equiv. Length (ft)
90° Bend	25	13.10	2	26.20
45° Bend	20	5.10	0	0.00
Ball Valve	11	3.00	1	3.00
Entrance	45	22.00	2	44.00
Total				73.20

TOTAL EQUIV LENGTH (ft) **83.20** ft L

TOTAL HEAD LOSS: Use Darcy Weisbach Equation, HL = f * (L / d) * (V^2 / 2g)

Head Loss, HL =	**49.93**	**ft of air**
Head Loss, HL in psi =	**0.03**	**psi**
Head Loss, in of Water =	**0.73**	**in of H2O**
Head Loss, in of Hg =	**0.05**	**in of Hg**

CALCULATION 13

VEGE Vacuum Pump Design Calculations, EW-1BR

Project Number: 4644.15.01
Owner: Vennard's Crossroads Convenience, Inc.
Site: Indiana, PA
Prepared by: Jason Haney

PIPE FRICTION LOSS CALCULATIONS

INDIVIDUAL LINE FROM MANIFOLD TO EW-1BR

Well No: EW-1BR

DATA INPUT

Pipe Diameter:	2	inch	
Flow:	28	SCFM	Q
Pipe Diameter:	0.16667	ft	d
Pipe Area:	0.0218	ft^2	A
Hydraulic Diamter:	0.1667	ft	dh
Velocity:	21.40	ft/sec	V, Flow / Pipe Area
viscosity:	0.000152	ft^2/sec	v, Kinematic viscosity based on standard temp and pressure
Reynolds No.:	23466		Re, dh*V / v
Roughness Coefficient:	1.42E-05	ft	k, Roughness Coefficient for PVC Pipe
Roughness Ratio:	8.52E-05		Roughness Ration = k / dh
Friction Factor:	**0.0260**		f, From Moody Diagram using Re and Roughness Ratio
Pipe Length:	120	ft	

MINOR LOSSES

Fittings for 2" dia. PVC pipe	Equiv. Pipe Dia.	Equiv. Length (ft)	Quantity	Total Equiv. Length (ft)
90° Bend	25	13.10	2	26.20
45° Bend	20	5.10	0	0.00
Ball Valve	11	3.00	1	3.00
Entrance	45	22.00	2	44.00
Total				73.20

TOTAL EQUIV LENGTH (ft) **193.20** ft L

TOTAL HEAD LOSS: Use Darcy Weisbach Equation, HL = f * (L / d) * (V^2 / 2g)

Head Loss, HL =	**214.35**	**ft of air**
Head Loss, HL in psi =	**0.11**	**psi**
Head Loss, in of Water =	**3.15**	**in of H2O**
Head Loss, in of Hg =	**0.23**	**in of Hg**

CALCULATION 14

VEGE Vacuum Pump Design Calculations, EW-2BR

Project Number: 4644.15.01
Owner: Vennard's Crossroads Convenience, Inc.
Site: Indiana, PA
Prepared by: Jason Haney

PIPE FRICTION LOSS CALCULATIONS

INDIVIDUAL LINE FROM MANIFOLD TO EW-2BR

Well No: EW-2BR

DATA INPUT

Pipe Diameter:	2	inch	
Flow:	28	SCFM	Q
Pipe Diameter:	0.16667	ft	d
Pipe Area:	0.0218	ft^2	A
Hydraulic Diamter:	0.1667	ft	dh
Velocity:	21.40	ft/sec	V, Flow / Pipe Area
viscosity:	0.000152	ft^2/sec	v, Kinematic viscosity based on standard temp and pressure
Reynolds No.:	23466		Re, dh*V / v
Roughness Coefficient:	1.42E-05	ft	k, Roughness Coefficient for PVC Pipe
Roughness Ratio:	8.52E-05		Roughness Ration = k / dh
Friction Factor:	**0.0260**		f, From Moody Diagram using Re and Roughness Ratio
Pipe Length:	95	ft	

MINOR LOSSES

Fittings for 2" dia. PVC pipe	Equiv. Pipe Dia.	Equiv. Length (ft)	Quantity	Total Equiv. Length (ft)
90° Bend	25	13.10	3	39.30
45° Bend	20	5.10	0	0.00
Ball Valve	11	3.00	1	3.00
Entrance	45	22.00	2	44.00
Total				86.30

TOTAL EQUIV LENGTH (ft) **181.30** ft L

TOTAL HEAD LOSS: Use Darcy Weisbach Equation, HL = f * (L / d) * (V^2 / 2g)

Head Loss, HL =	**201.15**	**ft of air**
Head Loss, HL in psi =	**0.11**	**psi**
Head Loss, in of Water =	**2.96**	**in of H2O**
Head Loss, in of Hg =	**0.22**	**in of Hg**

CALCULATION 15

VEGE Vacuum Pump Design Calculations, Treatment Train

Project Number: 4644.15.01
Owner: Vennard's Crossroads Convenience, Inc.
Site: Indiana, PA
Prepared by: Jason Haney

PIPE FRICTION LOSS CALCULATIONS

LINE FROM VAPOR INTAKE MANIFOLD THROUGH TREATMENT TRAIN

DATA INPUT

Pipe Diameter:	3	inch	
Flow:	218	ACFM	Q
Pipe Diameter:	0.25000	ft	d
Pipe Area:	0.0491	ft^2	A
Hydraulic Diamter:	0.2500	ft	dh
Velocity:	74.06	ft/sec	V, Flow / Pipe Area
viscosity:	0.000164	ft^2/sec	v, Kinematic viscosity based on standard temp and pressure
Reynolds No.:	112889		Re, dh*V / v
Roughness Coefficient:	1.42E-05	ft	k, Roughness Coefficient for PVC Pipe
Roughness Ratio:	5.68E-05		Roughness Ration = k / dh
Friction Factor:	**0.0170**		f, From Moody Diagram using Re and Roughness Ratio
Pipe Length:	20	ft	

MINOR LOSSES

Fittings for 4" dia. pipe	Equiv. Pipe Dia.	Equiv. Length (ft)	Quantity	Total Equiv. Length (ft)
90° Bend	25	6.25	16	100.00
45° Bend	20	5.00	0	0.00
Ball Valve	11	2.75	2	5.50
Entrance/Exit	45	11.25	2	22.50
Total				128.00

TOTAL EQUIV LENGTH (ft) **148.00** ft L

HEAD LOSS FROM PIPE Use Darcy Weisbach Equation, HL = f * (L / d) * (V^2 / 2g)

Head Loss, HL =	**857.03**	**ft of air**
Head Loss, HL in psi =	**0.46**	**psi**
Head Loss, in of Water =	**12.60**	**in of H2O**
Head Loss, in of Hg =	**0.93**	**in of Hg**

HEAD LOSS FROM TREATMENT UNITS

Unit	Number of Units	HL per Unit (psi)	20 (psi)	(in of Hg)
Vapor / Liquid Seperator	1	0.2	0.2	0.4072
Vapor Phase Carbon Vessels	2	0.2	0.4	0.8144
Total			**0.6000**	**1.2216**

TOTAL HEAD LOSS IN TREATMENT TRAIN

Head Loss, HL in psi = **1.0552**

Head Loss, in of Hg = **2.1485**