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Phase 2.5 Subsurface Investigation

US 2/53 – 31st Ave East to 53rd Ave East
City of Superior, Douglas County, Wisconsin
WisDOT Project ID No. 1198-03-78

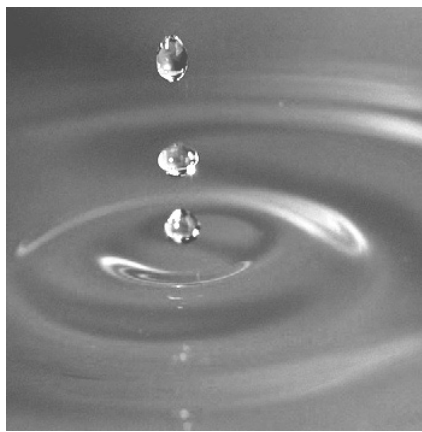
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Table of Contents

Executive Summary	i
1. Background	1
1.1 Scope and Application	1
1.2 WisDOT Project Description	1
1.3 Local Geology and Hydrogeology	1
2. Investigative Procedures	3
2.1 Soil Borings	3
2.2 Soil Sample Collection and Preservation	3
2.3 Groundwater Monitoring Wells	4
2.4 Groundwater Sample Collection and Preservation	4
2.5 Monitoring Well and Borehole Abandonment	5
2.6 Decontamination Procedures	5
3. Results	6
3.1 Field Screening Results	6
3.2 Laboratory Analytical Results	6
3.2.1 Regulatory Framework	6
3.2.2 Soil Sample Analytical Results	8
4. Conclusions and Recommendations	9
4.1 Conclusions	9
4.2 Recommendations	9
5. General Qualifications	11

Tables

1. Soil Analytical Summary

Figures

1. Regional Setting Diagram
2. Local Setting Diagram
3. Sample Location Diagram
4. Soil Management Zone Diagram

Appendices

- A. Site Background Information
- B. Photographic Log
- C. Soil Boring Logs and Abandonment Forms
- D. Laboratory Analytical Report
- E. Contract Special Provisions

Executive Summary

The Wisconsin Department of Transportation (WisDOT) is planning to improve United States Highway 2/53 (East 2nd Street) between 31st Avenue East and 53rd Avenue East in the City of Superior, Douglas County, Wisconsin. The improvement project is currently scheduled for 2020 and is anticipated to include spot locations of concrete pavement repair, roadway resurfacing consisting of a course grind and overlay, rehabilitation of a bridge, upgrading and/or installation of curb ramps at pedestrian crossings, updates or replacements of traffic signals and street lights, and repairs to existing utility manholes and inlets.

GEI Consultants, Inc. (GEI) was retained by WisDOT to complete a Phase 2.5 Subsurface Investigation (Phase 2.5 SI) within the existing right-of-way (ROW) adjacent to an unoccupied commercial property (203 39th Avenue East) located in the south quadrant of the intersection of East 2nd Street and 39th Avenue East (the “site”). The site was identified by WisDOT as a candidate for Phase 2.5 assessment based on a review of a historical WisDOT plan set dated 1948 which identified the site as being developed as a gasoline station at that time, a review of historical aerial photographs dated 1968 and 1983 which appeared to show pump islands near the ROW at those times, and the anticipated ground disturbances required near the site for updates and replacements of traffic signals and street lights, which may require spot excavations up to 15 feet deep for traffic signal pole foundations, 10 feet deep for street light pole foundations, and 7 feet deep for installation of electrical pull boxes. The objective of the Phase 2.5 SI was to assess the potential for impacted media (soil and/or groundwater) to be encountered during the planned project (WisDOT ID 1198-03-78).

The Phase 2.5 SI included completing subsurface exploration by advancing soil probes and installing a temporary groundwater monitoring well near the anticipated locations of spot excavations. GEI and a subcontract environmental probe firm completed subsurface exploration on June 5 and 6, 2019. Soil samples were collected for chemical analysis of contaminants of potential concern and additional landfill waste characterization analytes. Sufficient water for sampling was not encountered in the monitoring well installed during the Phase 2.5 SI.

Results of the Phase 2.5 SI indicate that concentrations of petroleum volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and lead above the Wisconsin Administrative Code, Chapter NR 720 Residual Contaminant Levels (RCLs) were detected in the ROW adjacent to the site. The detected concentrations of lead and several PAHs and petroleum VOCs, including benzene, ethylbenzene, naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and chrysene, exceed the NR 720 RCLs for the groundwater pathway, and the detected concentration of one PAH analyte, benzo(a)pyrene, exceeds the NR 720 RCL for the non-industrial direct contact pathway. The volatile and semi-volatile analytes detected in the ROW suggest that a release of gasoline from the historical operation of an underground storage tank (UST) system may have occurred at the site. Although the lead detections may also be associated with a former leaded gasoline UST system, subsurface conditions encountered during the Phase 2.5 SI and the distribution of lead detections suggest

that it is possible for elevated concentrations of lead to be associated with soil fill historically deposited within the ROW.

Based on Phase 2.5 SI results, we anticipate that lead-, PAH-, and petroleum VOC-impacted soil with concentrations above NR 720 RCLs will be encountered during construction adjacent to this site and therefore, we recommended that excavations adjacent to the site be field-screened by an environmental consultant. Laboratory analytical results and visual, olfactory, and photoionization detector (PID) field-screening conducted during the Phase 2.5 SI suggest that impacts may be encountered from the ground surface to a depth of approximately 10 feet below existing grades. Because concentrations exceed the NR 720 RCL for the groundwater pathway, we anticipate that impacted soil excavated during construction will be considered environmentally-unsuitable for reuse as backfill on the project and therefore, will require disposal at a licensed bioremediation/landfill facility. Existing pavement, sidewalk, and base course within the ROW adjacent to this site are not anticipated to be impacted; therefore, those materials should be able to be managed as common excavation. Existing traffic signal, lighting, and signage structures, including associated foundations (assuming soil adhered to those structures is brushed off or otherwise removed to the extent practicable) are also anticipated to be considered non-impacted.

Groundwater infiltration into the open boreholes and well casing installed at the site was not evident during the field exploration; therefore, sufficient groundwater for sampling was not encountered during the Phase 2.5 SI. Based on these observations, local topography, and information presented in Wisconsin Department of Natural Resources (WDNR) case files for nearby properties, we anticipate the depth to groundwater being deeper (at least 20 feet below existing ROW grade) than the maximum depths of excavation planned for the project near this site. Should water levels rise in the future, significant dewatering may not be necessary due to the low permeability of the natural silty clay deposits. Nevertheless, if dewatering is necessary to facilitate construction near this site (e.g., to remove storm water that may have accumulated in an open excavation), water generated during those activities should not be discharged to the surface, storm sewer, or sanitary sewer unless such discharge is approved and/or permitted by the WDNR and/or the City of Superior. Sampling and testing of water would likely be required prior to obtaining such approval.

Further subsurface investigation for the purposes of preparing for the improvement project near this site does not appear warranted at this time. However, we recommended that the WDNR and site owner be notified of these assessment results.

Contract special provisions for management of impacted soil that may be encountered during construction activities near this site were prepared and are appended to this report.

1. Background

1.1 Scope and Application

GEI Consultants, Inc. (GEI) was retained by the Wisconsin Department of Transportation (WisDOT) to complete a Phase 2.5 Subsurface Investigation (Phase 2.5 SI) within the existing right-of-way (ROW) adjacent to an unoccupied commercial property (203 39th Avenue East) located in the south quadrant of the intersection of East 2nd Street and 39th Avenue East (the “site”). The site was identified by WisDOT as a candidate for Phase 2.5 assessment based on a review of a historical WisDOT plan set dated 1948 which identified the site as being developed as a gasoline station at that time, a review of historical aerial photographs dated 1968 and 1983 which appeared to show pump islands near the ROW at those times, and the anticipated ground disturbances required near the site. The objective of the Phase 2.5 SI was to assess the potential for impacted media (soil and/or groundwater) to be encountered during the planned project (WisDOT ID 1198-03-78).

Background information associated with the site is included in Appendix A. The regional and local settings of the project are shown on the Regional Setting Diagram and Local Setting Diagram, presented as Figures 1 and 2, respectively.

1.2 WisDOT Project Description

WisDOT is planning to improve United States Highway 2/53 (East 2nd Street) between 31st Avenue East and 53rd Avenue East in the City of Superior. The improvement project is currently scheduled for 2020 and is anticipated to include spot locations of concrete pavement repair, roadway resurfacing consisting of a course grind and overlay, rehabilitation of a bridge, upgrading and/or installation of curb ramps at pedestrian crossings, updates or replacements of traffic signals and street lights, and repairs to existing utility manholes and inlets.

Based on information provided by WisDOT, construction activities that may disturb soil near the site in the south quadrant of the East 2nd Street and 39th Avenue East intersection are limited to updates and replacements of traffic signals, which may require spot excavations up to 15 feet deep for traffic signal pole foundations, 10 feet deep for street light pole foundations, and 7 feet deep for installation of electrical pull boxes.

1.3 Local Geology and Hydrogeology

The Department of the Interior United States Geological Survey publication *Water Resources of Wisconsin, Lake Superior Basin, Hydrologic Investigations Atlas HA-524, 1974*, indicates the site is in an area of glacial deposits (lake clay) overlying Precambrian-age bedrock consisting of sandstone, shale, and conglomerate. The thickness of glacial deposits over bedrock is anticipated to be 200 to 300 feet near the site.

The U.S. Department of Agriculture, Natural Resource Conservation Service (NRCS) Web Soil Survey indicates that Amnicon-Cuttre complex, 0% to 4% slopes, is the predominant soil series at the site. The Amnicon-Cuttre complex is described as moderately well drained soils located on the summit of till plains, having a depth to a restrictive feature of more than 80 inches, having a depth to water table as shallow as 12 inches, and generally consisting of silty clay loam to a depth of approximately 10 inches overlying clay to a depth of at least 67 inches.

Regional groundwater flow direction is toward Lake Superior (*Water Resources of Wisconsin, Lake Superior Basin, Hydrologic Investigations Atlas HA-524, 1974*), which is located north to northeast of the project. Local groundwater flow direction is also anticipated to be generally north to northeast toward Lake Superior; however, existing ditches, underground utilities, and other natural and manmade features may influence local groundwater flow. Based on local topography, observations completed during the field exploration, and information presented in WDNR files for nearby properties, we anticipate the depth to groundwater to be at least 20 feet below existing ROW grades near this site.

Refer to Section 3.1 for further description of site-specific conditions encountered during the Phase 2.5 SI field exploration.

2. Investigative Procedures

2.1 Soil Borings

GEI and a subcontract environmental probe firm (Probe Technologies, Inc. of West Bend, Wisconsin) accessed the project corridor on June 5 and 6, 2019, to complete the Phase 2.5 SI field exploration. Two soil probes (FGS-1 and FGS-2) were advanced using hydraulic direct-push (i.e., Geoprobe) technology within the existing ROW adjacent to the site, near areas of planned excavation for traffic signal foundations and electrical pull boxes. Soil probes were advanced to a depth of approximately 16 feet below ground surface (bgs).

The locations of soil probes advanced during the Phase 2.5 SI are illustrated on the Sample Location Diagram, presented as Figure 3. A photographic log of the soil probe locations is included in Appendix B.

2.2 Soil Sample Collection and Preservation

Soil samples were collected by advancing a 4-foot-long, 2-inch-diameter Macrocore sampler. As the sampler was retrieved, soils were preliminarily classified in the field and sub-samples were retained for field screening and laboratory analyses. Soil samples were field-screened by visual and olfactory observations, and using a photoionization detector (PID) equipped with a 10.6-electron volt lamp to qualitatively assess the presence of volatile organic compounds (VOCs). Information regarding soil types, drilling conditions, field-screening results, apparent depth to water (if evident) and approximate locations of stratigraphic changes were noted at the time of sampling and documented on the field logs. Soil classifications were based upon the texture and plasticity of the soil, in general accordance with the Unified Soil Classification System (USCS).

Soil samples selected for laboratory analysis were placed in appropriate containers provided by the laboratory and immediately placed into a cooler with ice for temporary field storage. Each soil sample container was labeled with the sample location, sample depth, sample preservative (if applicable), sample date and time, and project number. The samples were maintained in a cooler with ice during the fieldwork and until they could be delivered to the analytical laboratory.

Soil samples for laboratory analysis were submitted under chain-of-custody control to Pace Analytical Services, Inc. (Pace) in Green Bay, Wisconsin, for analysis of contaminants of potential concern specific to the site and additional landfill waste characterization analytes, as appropriate. Assessed parameters included diesel range organics (DRO), gasoline range organics (GRO), polycyclic aromatic hydrocarbons (PAHs), VOCs, and lead. A summary of parameters assessed in soil at each probe location is provided below.

Soil Parameters & Method	Probe Locations & Depths
DRO <i>WI Modified Method</i>	FGS-1 (2'-4') (4.5'-6.5') (12'-14') FGS-2 (0'-3') (6'-8') (12'-14')
GRO <i>WI Modified Method</i>	FGS-1 (2'-4') (4.5'-6.5') (12'-14') FGS-2 (0'-3') (6'-8') (12'-14')
VOCs <i>EPA Methods 8260 & 5035/5030B</i>	FGS-1 (2'-4') (4.5'-6.5') (12'-14') FGS-2 (0'-3') (6'-8') (12'-14')
PAHs <i>EPA Methods 8270 by SIM & 3546</i>	FGS-1 (2'-4') (4.5'-6.5') (12'-14') FGS-2 (0'-3') (6'-8') (12'-14')
Lead <i>EPA Methods 6010 & 3050</i>	FGS-1 (2'-4') (4.5'-6.5') (12'-14') FGS-2 (0'-3') (6'-8') (12'-14')

Soil samples for VOC and GRO analyses were preserved in the field at the time of collection by placing a 10-gram portion of soil into a pre-tared, laboratory-provided, 40-milliliter (ml) vial containing 10 ml of laboratory grade methanol. Soil samples for DRO analysis were unpreserved and prepared by placing an approximately 25-gram portion of soil into a pre-tared, laboratory-provided, 4-ounce glass container. Soil samples for PAH and lead analyses were unpreserved and prepared by packing laboratory-provided, 4-ounce glass and/or plastic containers full or nearly-full with soil.

Soil Boring Logs prepared based on soil types, field-screening results, and other notes recorded on field logs at the time of fieldwork, document the sampling and are included in Appendix C.

2.3 Groundwater Monitoring Well

Following the collection of soil samples, a small-diameter (“temporary”) groundwater monitoring well was installed at probe location FGS-2 to facilitate collection of a groundwater sample for evaluation of shallow groundwater quality. The temporary well was constructed of a 5-foot section of 3/4-inch inside diameter, polyvinyl chloride (PVC), slotted well screen attached to a solid PVC riser pipe. The temporary well included a sand filter pack and bentonite surface seal and was allowed to remain installed for approximately 24 hours prior to observation for sampling.

2.4 Groundwater Sample Collection and Preservation

Groundwater infiltration into the well casing installed at FGS-2 was not evident during the field exploration; therefore, sufficient groundwater for sampling was not encountered during the Phase 2.5 SI.

2.5 Monitoring Well and Borehole Abandonment

Following the collection of soil samples and observation of the temporary well for possible groundwater sampling, well materials were removed from FGS-2, and the boreholes and well were abandoned in accordance with the procedures outlined in Chapter NR 141, Wisconsin Administrative Code. The borehole located in an unpaved area (FGS-2) was backfilled with bentonite chips from the bottom of the boring to the ground surface. The borehole located in a paved area (FGS-1) was also backfilled with bentonite chips, but then finished with an asphalt patch to match the existing surface.

A GEI representative was present in the field during abandonment procedures and completed a WDNR Form 3300-5B, *Borehole Abandonment Form* for each sample location. Copies of the abandonment forms are included in Appendix C.

2.6 Decontamination Procedures

Down-hole soil sampling equipment was decontaminated before arriving to the site, prior to its initial use, and between probe locations to reduce the potential for cross-contamination between sample locations. Sample tools (Macrocore sampler, fittings, etc.) were decontaminated prior to arriving to the site and between sample intervals using an Alconox[®] or equivalent detergent wash, followed by a potable water rinse. Water generated during decontamination was contained by the probe contractor and transported off site for disposal. Equipment used for groundwater sampling was disposable and was replaced prior to the collection of each sample. The disposable equipment, including soil sampling acetate liners, tubing, and sampling gloves, were contained by GEI in a plastic bag after being used and transported off site for disposal.

3. Results

3.1 Field Screening Results

Subsurface conditions encountered during the Phase 2.5 SI were generally consistent at each probe location and described by the following: soil fill consisting of silty sand, clayey sand, and gravelly sand from the ground surface (FGS-2) or just beneath the asphalt-paved ground surface (FGS-1) to a depth of approximately 2 to 3 feet, underlain by reddish-brown silty clay with trace sand to the probe termination depth.

PID field screening results are presented on the boring logs (Appendix C). The PID was calibrated prior to initial operation using a calibration gas standard of 100 parts per million (ppm) isobutylene. The PID was used for qualitative assessment of a wide range of volatile analytes that may have been encountered during sampling, rather than a quantitative assessment of a specific analyte. Therefore, the PID was not programmed with an analyte-specific correction factor prior to initial operation. PID readings for soil samples collected from the probe locations ranged from less than 0.1 ppm, which is considered representative of background conditions, to 232 ppm. Readings less than 0.1 ppm were generally encountered shallower than 2 feet bgs and deeper than 7 feet bgs, and the most elevated PID readings were generally encountered at location FGS-1 at a depth between approximately 4 and 6 feet bgs. Apparent petroleum odors were also noted at FGS-1 between approximately 4 and 6 feet bgs and at FGS-2 between approximately 6 and 11 feet bgs.

Groundwater infiltration into the open boreholes and well casing was not evident during the field exploration; therefore, the current depth to groundwater at the site is uncertain. However, based on field observations, local topography, and information presented in WDNR files for nearby properties, we anticipate groundwater currently being deeper (at least 20 feet bgs) than the maximum depths of excavation planned for the project near this site. The depth to groundwater encountered during future construction activities could be shallower or deeper due to annual and/or seasonal variations in local precipitation.

3.2 Laboratory Analytical Results

3.2.1 Regulatory Framework

Wisconsin regulates soil conditions through several environmental rules and regulations. Chapter NR 720 of the Wisconsin Administrative Code presents the approved methodology to establish cleanup standards for soil impacts that will result in the restoration of the environment to the extent practicable. Under NR 720, methodologies are presented for establishing soil cleanup standards (i.e., Residual Contaminant Levels [RCLs]) for the protection of groundwater quality and protection of human health from direct contact (inhalation, ingestion, or dermal).

Three general soil cleanup standards can be calculated using this methodology and the exposure and toxicity assumptions recommended by the WDNR and/or Environmental Protection Agency (EPA):

- Non-Industrial Direct Contact Pathway – concentration of a particular chemical which, if present in the soil, represents a potential risk to human health as a result of inhalation or ingestion under exposure conditions characteristic of a non-industrial land use.
- Industrial Direct Contact Pathway – concentration of a particular chemical which, if present in the soil, represents a potential risk to human health as a result of inhalation or ingestion under exposure conditions characteristic of an industrial land use.
- Groundwater Pathway – concentration of a particular chemical which, if present in the soil, represents a potential risk to groundwater quality. Groundwater quality standards used to establish the Groundwater Pathway RCL generally correspond to federal drinking water standards or Wisconsin Enforcement Standards for groundwater.

Wisconsin has also established Background Threshold Values (BTVs) for particular substances by completing a statistical evaluation of soil samples collected from across the state in areas considered to be undisturbed and/or devoid of obvious anthropogenic influences. BTVs are summarized in the WDNR's R&R Program RCL Spreadsheet (RR-052e), which was last updated in December 2018. A BTV is considered to be the concentration of a substance that is categorically accepted as not exceeding naturally-occurring background levels. Per WDNR guidance and NR 720.07(3), Wisconsin Administrative Code, a substance detected in soil at a concentration above the RCL, but below the BTV, is not considered to be an exceedance of the RCL and does not need to be identified as such on summary tables or figures.

The general soil cleanup standards presented in NR 720 should not be interpreted as mandatory compliance standards. Rather, these limits are based on general toxicity values and exposure conditions and are intended to be used to evaluate the general environmental risk related to a property. Wisconsin regulations allow parties to meet soil cleanup standards by using protections (i.e. performance standards) that can be incorporated into development plans. A soil performance standard implemented to reduce the risk of direct contact typically consists of capping the surface where contaminants are present within four feet of the ground surface. Capping material may consist of a surface barrier such as soil, geomembrane, asphalt, or concrete and does not necessarily need to be impermeable if contaminants are not likely to leach. If contaminants exceeding direct contact RCLs are present at depths greater than 4 feet, a performance standard to limit direct contact exposure is imposed by listing the site on the WDNR database and requiring proper management of contaminated material if excavated in the future.

A soil performance standard can also be implemented where soil contamination threatens groundwater quality. If contaminants exceeding groundwater pathway RCLs are present, an impermeable barrier may be an effective performance standard remedy to reduce contaminant leaching through the soil and into groundwater. If soil contamination and groundwater contamination above ES levels are both present, natural attenuation of groundwater contaminants can also serve as a soil performance standard, provided naturally

occurring processes are containing and reducing the mass and concentration of groundwater contaminants, and groundwater contaminant concentrations will be reduced to below ES levels within a reasonable time period.

3.2.2 Soil Sample Analytical Results

Soil sample analytical results are presented on Table 1, with only parameters detected above laboratory minimum detection limits (MDLs) being summarized. Complete lists of assessed parameters and associated results are provided in the laboratory report included in Appendix D. A summary of the analytical results is presented below.

Laboratory analytical results indicate that DRO, GRO, lead, PAHs, and/or VOCs were detected above MDLs in each soil sample submitted for analysis. DRO was detected in five of six soil samples submitted for analysis, with reported concentrations ranging between 1.5 milligrams per kilogram (mg/kg) and 110 mg/kg. GRO was detected in four of six soil samples submitted for analysis, with reported concentrations ranging between 23.8 and 892 mg/kg. DRO and GRO are considered to be indicator parameters, and as such, RCLs have not been established for DRO or GRO. However, concentrations of DRO and GRO above 100 mg/kg generally represent soil conditions with a high probability of containing other contaminants of potential concern (e.g., VOCs or PAHs) at concentrations above a RCL. DRO at FGS-1 (2'-4') and GRO at FGS-1 (2'-4' and 4.5'-6.5') and FGS-2 (6'-8') were detected at concentrations above 100 mg/kg.

Lead was detected above the laboratory MDL in all six samples submitted for analysis; however, except at FGS-2 (0'-3'), the reported concentrations are below the BTV. Lead was detected at a concentration (142 mg/kg) above the BTV (52 mg/kg) at FGS-2 (0'-3'), which is also above the Groundwater Pathway RCL (27 mg/kg).

PAHs and VOCs were detected above the laboratory MDLs in four of six soil samples submitted for analysis; only the deepest samples at FGS-1 (12'-14') and FGS-2 (12'-14') did not contain PAHs or VOCs above the MDLs. Except for naphthalene at FGS-1 (4.5'-6.5') and benzo(a)pyrene and chrysene at FGS-2 (0'-3'), the reported concentrations of PAHs are below the most restrictive RCLs. The detected concentrations of naphthalene at FGS-1 (4.5'-6.5') and chrysene at FGS-2 (0'-3') are above the applicable Groundwater Pathway RCLs and the detected concentration of benzo(a)pyrene at FGS-2 (0'-3') is above the Non-Industrial Direct Contact Pathway RCL. VOCs detected above RCLs include benzene at FGS-2 (0'-3' and 6'-8'), ethylbenzene at FGS-1 (4.5'-6.5'), naphthalene at FGS-1 (2'-4' and 4.5'-6.5'), and total trimethylbenzenes (1,2,4- and/or 1,3,5-) at FGS-1 (2'-4' and 4.5'-6.5') and FGS-2 (0'-3' and 6'-8'); these petroleum VOCs (PVOCs) exceed the applicable Groundwater Pathway RCLs.

The volatile and semi-volatile analytes detected in the ROW suggest that a release of gasoline from the historical operation of an underground storage tank (UST) system may have occurred at the site. Although the lead detections may also be associated with a former leaded gasoline UST system, subsurface conditions encountered during the Phase 2.5 SI and the distribution of lead detections suggest that it is possible for elevated concentrations of lead to be associated with soil fill historically deposited within the ROW.

4. Conclusions and Recommendations

4.1 Conclusions

The results of this Phase 2.5 SI suggest that lead-, PAH-, and petroleum VOC-impacted soil is present within the ROW adjacent to this site and likely to be encountered during planned construction activities. Most notably, several PAH and petroleum VOC analytes were detected in surface, near-surface, and deeper soil at concentrations representing a potential risk to groundwater quality, and one PAH analyte (benzo[a]pyrene) was detected in surface soil at a concentration representing a potential risk to human health through direct contact. Considering results of visual, olfactory, and PID field-screening conducted during the Phase 2.5 SI, impacted soil may be encountered to a depth of at least 10 feet below existing grades.

The anticipated limits of impacted soil within the existing ROW near this site, based on soil samples analyzed as part of the Phase 2.5 SI, are illustrated on the Soil Management Zone Diagram, presented as Figure 4. Contract special provisions for management of impacted soil that may be encountered during construction activities near this site were prepared and are included in Appendix E.

4.2 Recommendations

Further subsurface investigation for the purposes of preparing for the improvement project near this site does not appear warranted at this time. However, we recommended that the WDNR and site owner be notified of these assessment results.

We recommended that excavations adjacent to this site be field-screened by an environmental consultant during construction. We anticipate that impacted soil excavated during construction will be considered environmentally-unsuitable for reuse as backfill on the project and therefore, will require disposal at a licensed bioremediation/landfill facility. Existing pavement, sidewalk, and base course within the ROW adjacent to this site are not anticipated to be impacted; therefore, those materials should be able to be managed as common excavation. Existing traffic signal, lighting, and signage structures, including associated foundations (assuming soil adhered to those structures is brushed off or otherwise removed to the extent practicable) are also anticipated to be considered non-impacted.

Based on observations during field exploration, local topography, and information presented in WDNR files for nearby properties, we anticipate the depth to groundwater being deeper (at least 20 feet below existing ROW grade) than the maximum depths of excavation planned for the project near this site. Should water levels rise in the future, significant dewatering may not be necessary due to the low permeability of the natural silty clay deposits. Nevertheless, if dewatering is necessary to facilitate construction near this site (e.g., to remove storm water that may have accumulated in an open excavation), water generated during those activities should not be discharged to the surface, storm sewer, or sanitary sewer unless such discharge

is approved and/or permitted by the WDNR and/or the City of Superior. Sampling and testing of water would likely be required prior to obtaining such approval.

If evidence of potential environmental impairment is encountered during construction beyond the limits of this Phase 2.5 SI, we recommended that excavations be terminated in the area and the engineer be notified for field screening or sampling.

5. General Qualifications

Conclusions presented herein are based on our professional interpretation of information collected during the Phase 2.5 SI. Our conclusions are limited by the accuracy and completeness of information provided by others. Therefore, if additional information is disclosed or an alteration of the information occurs, the conclusions presented in this report may need to be revised.

Conclusions presented herein are also based on subsurface conditions as revealed in the probes completed during the Phase 2.5 SI. Stratification lines shown on the boring logs represent the approximate boundaries between soil/material types. Variations in subsurface conditions may exist both in the horizontal and vertical directions away from the probes locations.

This report was prepared on behalf of WisDOT to evaluate the potential for subsurface impacts to be encountered during the planned construction project. We recommend that this report be used only for the purposes intended by GEI and WisDOT at the time of issuance. This report may be unsuitable for other uses, and reliance on this report by anyone other than WisDOT, is done at the sole risk of the user.

Tables

Table 1 Soil Analytical Summary

Table 1.
Soil Analytical Summary
WisDOT - Project 1198-03-08/78
1902429 US2-US53 31st to 53rd Superior

CAS #	Wisconsin Regulatory Standards ^{1,2}				Location	FGS-1	FGS-1	FGS-1	FGS-2	FGS-2	FGS-2	
	BTV	Non-Industrial DC	Industrial DC	GW	Date	6/5/19	6/5/19	6/5/19	6/5/19	6/5/19	6/5/19	
					Depth (ft)	2.0-4.0	4.5-6.5	12.0-14.0	0.0-3.0	6.0-8.0	12.0-14.0	
					% Moisture	18.7	24.0	27.7	17.6	25.6	27.8	
Indicator Parameters (mg/kg)³												
Photoionization Detector (PID)	NE	NE	NE	NE		3.5	232.0	< 0.1	< 0.1	7.1	< 0.1	
GRO (Gasoline Range Organics)	NE	NE	NE	NE		892	660	< 3.5	23.8	460	< 3.5	
DRO (Diesel Range Organics)	NE	NE	NE	NE		110	66.2	1.5 J	61.2	27.6	< 1.4	
METALS (detected analytes)^{3,4} (mg/kg)												
Lead	7439-92-1	52	400	800	27		10.3	10.3	9.4	<u>142</u> *	9.5	10.2
PAHs (detected analytes)³ (µg/kg)												
Acenaphthene	83-32-9	NE	3,590,000	45,200,000	NE		< 4.8	< 10.2	< 5.4	14.8 J	< 5.2	< 5.4
Acenaphthylene	208-96-8	NE	NE	NE	NE		< 4.1	< 8.7	< 4.6	19.6 J	< 4.4	< 4.6
Anthracene	120-12-7	NE	17,900,000	100,000,000	196,949		< 7.0	< 15	< 7.9	68.2	< 7.7	< 7.9
Benzo(a)anthracene	56-55-3	NE	1,140	20,800	NE		< 3.9	< 8.3	< 4.4	143	< 4.3	< 4.4
Benzo(a)pyrene	50-32-8	NE	115	2,110	470		< 3.1	< 6.6	< 3.5	<u>125</u>	< 3.4	< 3.5
Benzo(b)fluoranthene	205-99-2	NE	1,150	21,100	478.1		< 3.5	< 7.4	< 3.9	135	< 3.8	< 3.9
Benzo(g,h,i)perylene	191-24-2	NE	NE	NE	NE		< 2.5	< 5.3	< 2.8	93.0	< 2.7	< 2.8
Benzo(k)fluoranthene	207-08-9	NE	11,500	211,000	NE		< 3.1	< 6.6	< 3.5	135	< 3.4	< 3.5
Chrysene	218-01-9	NE	115,000	21,110,000	144.2		< 4.1	< 8.9	< 4.7	<u>199</u>	< 4.5	< 4.7
Dibenzo(a,h)anthracene	53-70-3	NE	115	2,110	NE		< 2.7	< 5.9	< 3.1	34.1	< 3.0	< 3.1
Fluoranthene	206-44-0	NE	2,390,000	30,100,000	88,877.8		< 6.4	< 13.7	< 7.2	261	< 7.0	< 7.2
Fluorene	86-73-7	NE	2,390,000	30,100,000	14,829.9		< 5.1	< 10.9	< 5.7	28.4 J	< 5.6	< 5.7
Indeno(1,2,3-cd)pyrene	193-39-5	NE	1,150	21,100	NE		< 2.7	< 5.8	< 3.0	65.5	< 3.0	< 3.0
1-Methylnaphthalene	90-12-0	NE	17,600	72,700	NE		160	184	< 5.6	794	48.9	< 5.6
2-Methylnaphthalene	91-57-6	NE	239,000	3,010,000	NE		462	453	< 6.9	1030	118	< 6.9
Naphthalene	91-20-3	NE	5,520	24,100	658.2		617	<u>1160</u>	< 11.6	607	253	< 11.7
Phenanthrene	85-01-8	NE	NE	NE	NE		< 14.3	< 30.6	< 16.1	549	< 15.6	< 16.1
Pyrene	129-00-0	NE	1,790,000	22,600,000	54,545.5		< 5.5	< 11.9	< 6.2	195	< 6.1	< 6.2
VOCs (detected analytes)³ (µg/kg)												
Benzene	71-43-2	NE	1,600	7,070	5.1		< 100	< 50.0	< 25.0	<u>254</u>	<u>38.3</u> J	< 25.0
n-Butylbenzene	104-51-8	NE	108,000	108,000	NE		2360	2110	< 25.0	< 25.0	690	< 25.0
sec-Butylbenzene	135-98-8	NE	145,000	145,000	NE		956	780	< 25.0	< 25.0	253	< 25.0
Ethylbenzene	100-41-4	NE	8,020	35,400	1,570.0		1570	<u>3150</u>	< 25.0	< 25.0	389	< 25.0
Isopropylbenzene (Cumene)	98-82-8	NE	268,000	268,000	NE		1140	1330	< 25.0	< 25.0	421	< 25.0
p-Isopropyltoluene	99-87-6	NE	162,000	162,000	NE		1650	1340	< 25.0	< 25.0	449	< 25.0
Naphthalene	91-20-3	NE	5,520	24,100	658.2		<u>1170</u> J	<u>2010</u>	< 40.0	54.4 J	540	< 40.0
n-Propylbenzene	103-65-1	NE	264,000	264,000	NE		2070	2280	< 25.0	< 25.0	738	< 25.0
Toluene	108-88-3	NE	818,000	818,000	1,107.2		< 100	< 50.0	< 25.0	48.8 J	< 25.0	< 25.0
1,2,4-Trimethylbenzene	95-63-6	NE	219,000	219,000			<u>1690</u>	1200	< 25.0	51.2 J	<u>2890</u>	< 25.0
1,3,5-Trimethylbenzene	108-67-8	NE	182,000	182,000	1,322.0		<u>3300</u>	<u>3190</u>	< 25.0	< 25.0	997	< 25.0
m&p-Xylene	1330-20-7	NE	260,000	260,000	3,960.0		1350	2120	< 50.0	64.7 J	1120	< 50.0
o-Xylene						< 100	66.4 J	< 25.0	60.5 J	< 25.0	< 25.0	

Notes
(mg/kg) = milligrams per kilogram; (µg/kg) = micrograms per kilogram; -- = not analyzed; DC = Direct Contact; GW = Groundwater; WT = Sample below observable water table; NE = Not Established
< = not detected above method detection limit; J = concentration between detection limit and reporting limit; PAHs = Polycyclic Aromatic Hydrocarbons; VOCs = Volatile Organic Compounds; BTV = Background Threshold Value

¹ NR 720 RCL = Chapter NR 720, Wisconsin Administrative Code, Residual Contaminant Level
² RCLs & BTVs, PAHs, and VOCs are based on USEPA methodology; presented in WDNR Guidance, Soil RCL Determinations using USEPA Regional Screening Level Web Calculator (RR-890) and summarized in the WDNR's R&R Program RCE Spreadsheet (June 2018).
³ Only detected analytes are listed; refer to the laboratory analytical report for a full list of assessed analytes
⁴ Metal concentrations above an RCL, but not noted as such on this table, are considered to be representative of background conditions in Wisconsin soils.

Exceeds the NR 720 Non-Industrial Direct Contact RCL: **100** Exceeds the NR 720 Industrial Direct Contact RCL: **100** Exceeds the NR 720 Groundwater Pathway RCL: **100** Exceeds the BTV: **100***

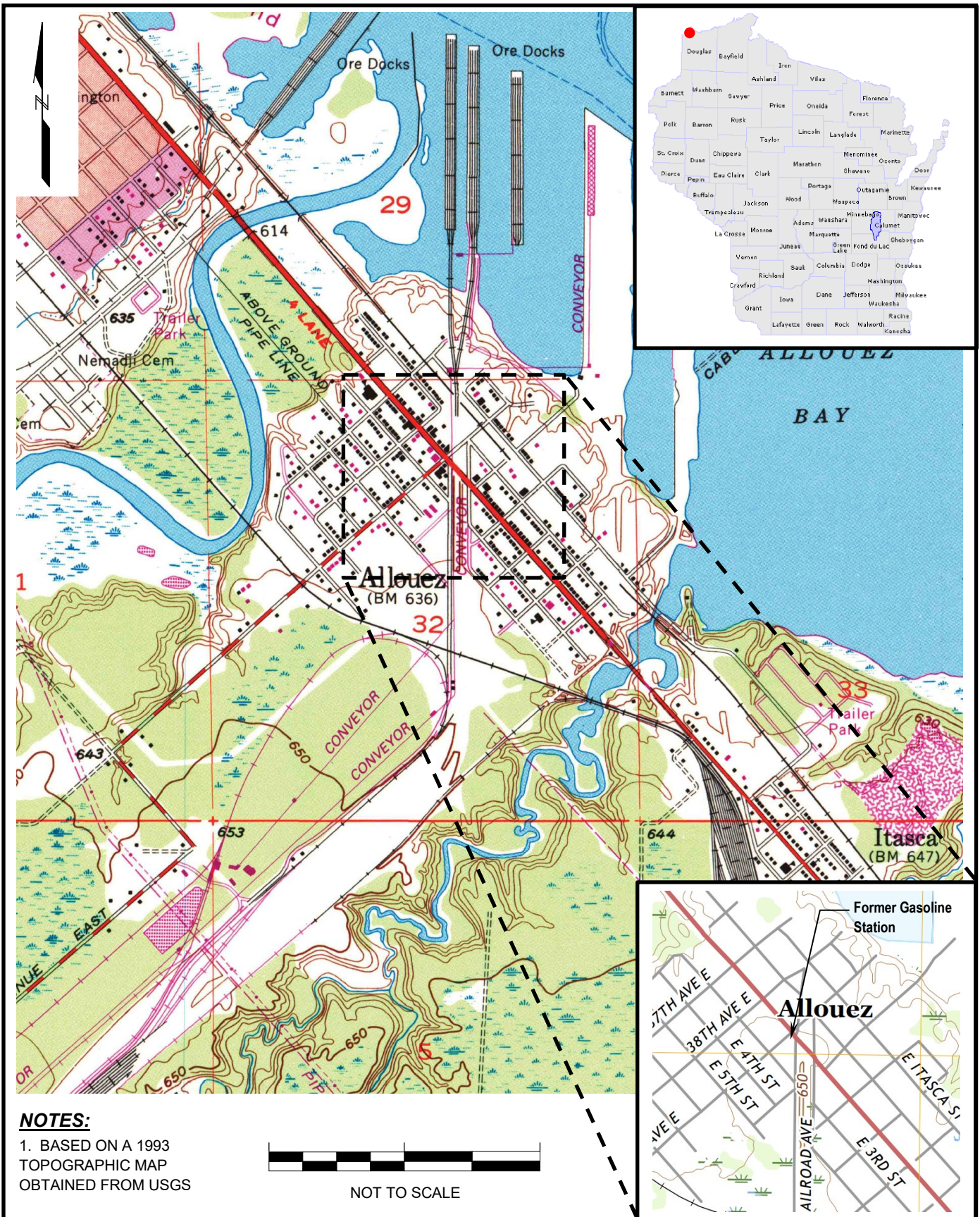
Figures

Figure 1 Regional Setting Diagram

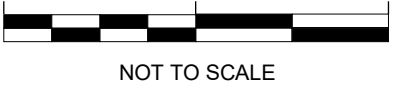
Figure 2 Local Setting Diagram


Figure 3 Sample Location Diagram

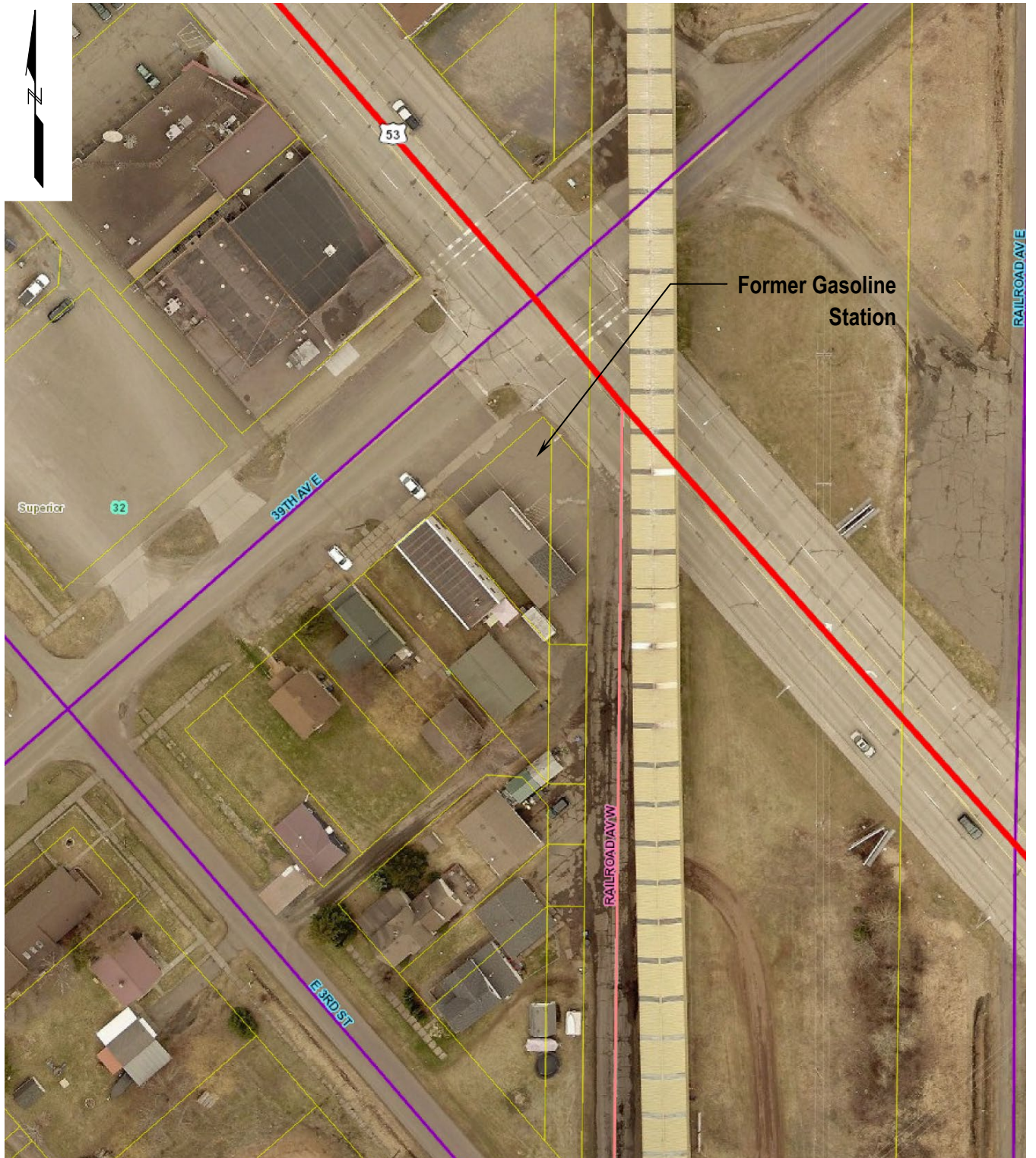
Figure 4 Soil & Groundwater Management Zone Diagram



NOTES:
 1. BASED ON A 1993 TOPOGRAPHIC MAP OBTAINED FROM USGS

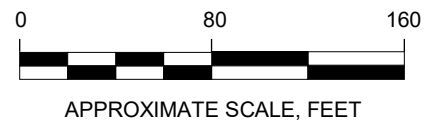


<p>WisDOT ID No. 1198-03-78 US 2/53 – 31st Ave East to 53rd Ave East Superior, Douglas County, Wisconsin</p>		<p>REGIONAL SETTING DIAGRAM</p>
<p>Wisconsin Department of Transportation Madison, Wisconsin</p>	<p>Project 1902429</p>	<p>August 2019 Fig. 1</p>



NOTES:

1. BASED ON A 2016 AERIAL PHOTOGRAPH OBTAINED FROM SUPERIOR/DOUGLAS COUNTY, WI WG XTREME



WisDOT ID No. 1198-03-78
 US 2/53 – 31st Ave East to 53rd Ave East
 Superior, Douglas County, Wisconsin

Wisconsin Department of Transportation
 Madison, Wisconsin

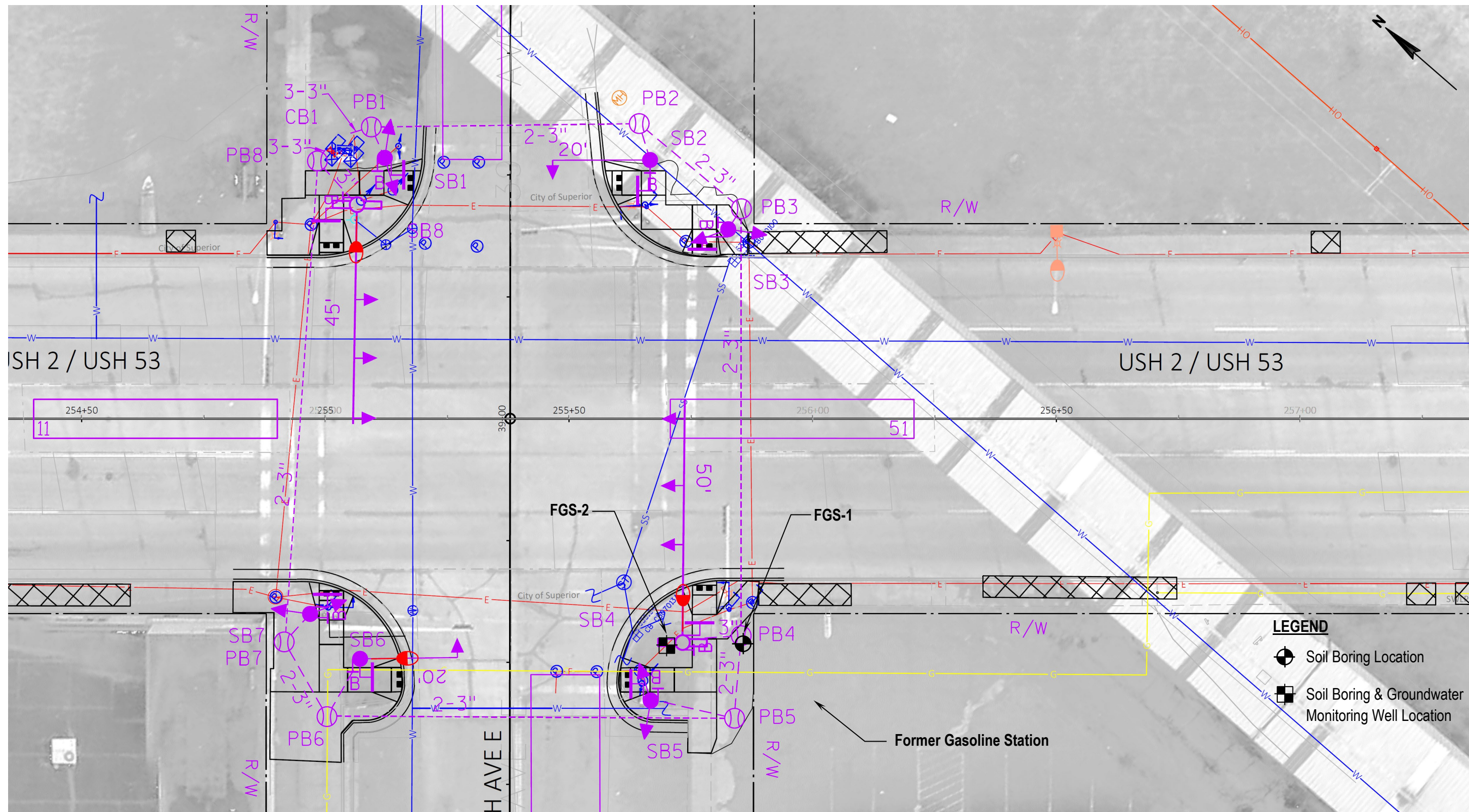


Project 1902429

LOCAL SETTING
 DIAGRAM

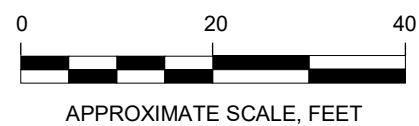
August 2019

Fig. 2



NOTES:

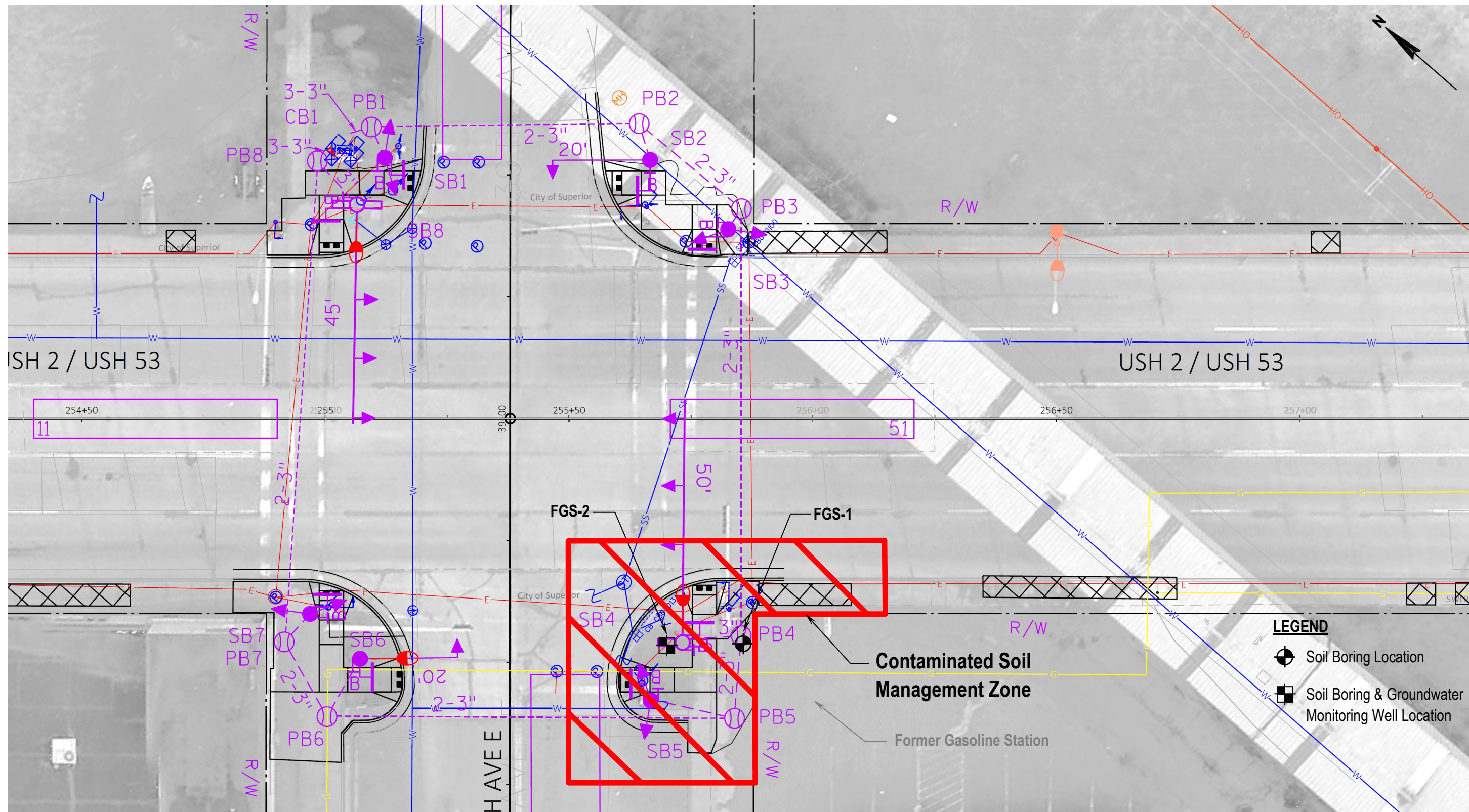
1. BASED ON A WISDOT PLAN DATED APRIL 17, 2019



WisDOT ID No. 1198-03-78
 US 2/53 – 31st Ave East to 53rd Ave East
 Superior, Douglas County, Wisconsin
 Wisconsin Department of Transportation
 Madison, Wisconsin

GEI Consultants
 Project 1902429

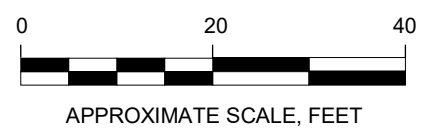
SAMPLE LOCATION DIAGRAM
 August 2019
 Fig. 3



LEGEND

- Soil Boring Location
- Soil Boring & Groundwater Monitoring Well Location

NOTES:
 1. BASED ON A WISDOT PLAN DATED APRIL 17, 2019



WisDOT ID No. 1198-03-78
 US 2/53 – 31st Ave East to 53rd Ave East
 Superior, Douglas County, Wisconsin
 Wisconsin Department of Transportation
 Madison, Wisconsin

Project 1902429

SOIL MANAGEMENT ZONE DIAGRAM
 August 2019
 Fig. 4

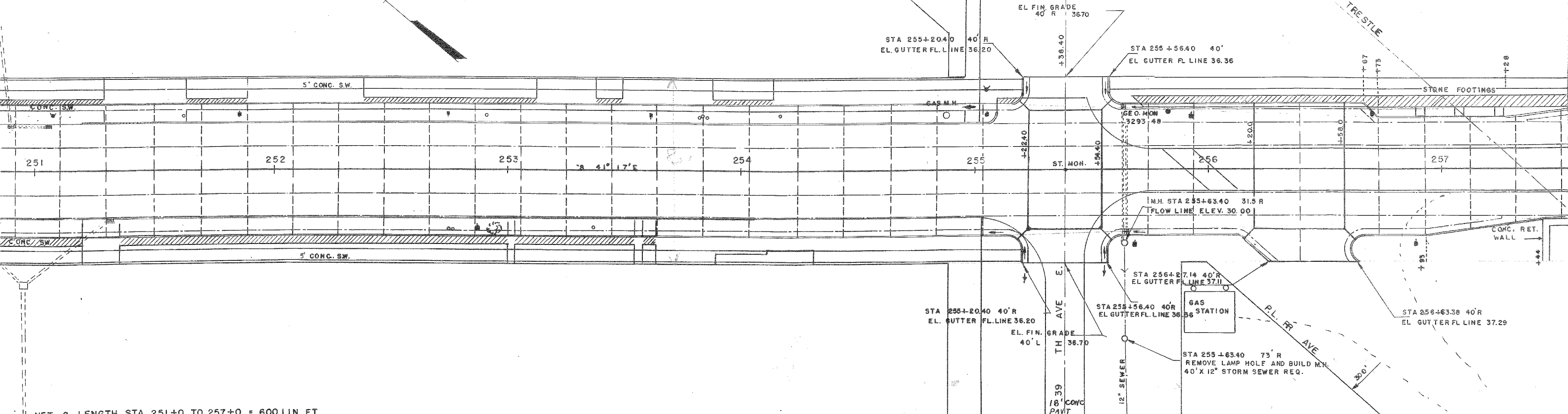
Phase 2.5 Subsurface Investigation
US 2/53 – 31st Ave East to 53rd Ave East
City of Superior, Douglas County, Wisconsin
WisDOT Project ID No. 1198-03-78
August 12, 2019

Appendix A

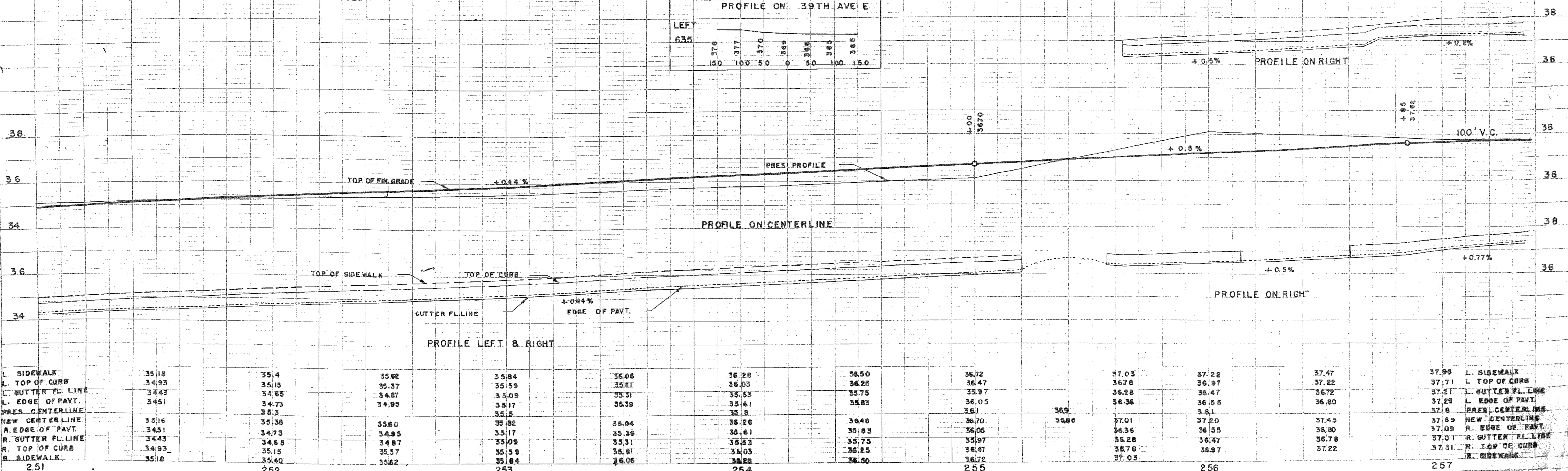
Site Background Information

BENCH MARKS				
NO.	STA.	DESCRIPTION	ELEV.	
12	251+08	ARROWHEAD ON HYD. 24' LT.	636.30	
13	255+83	GEO. MON 3293-48 25' LT.	637.068	

COUNTY AND HIGHWAY	ROUTE AND SECTION	CLASS AND AGREEMENT		FEDERAL DIVISION OFFICE	SHEET NO.	TOTAL SHEETS
		STATE	FEDERAL			
					17	55

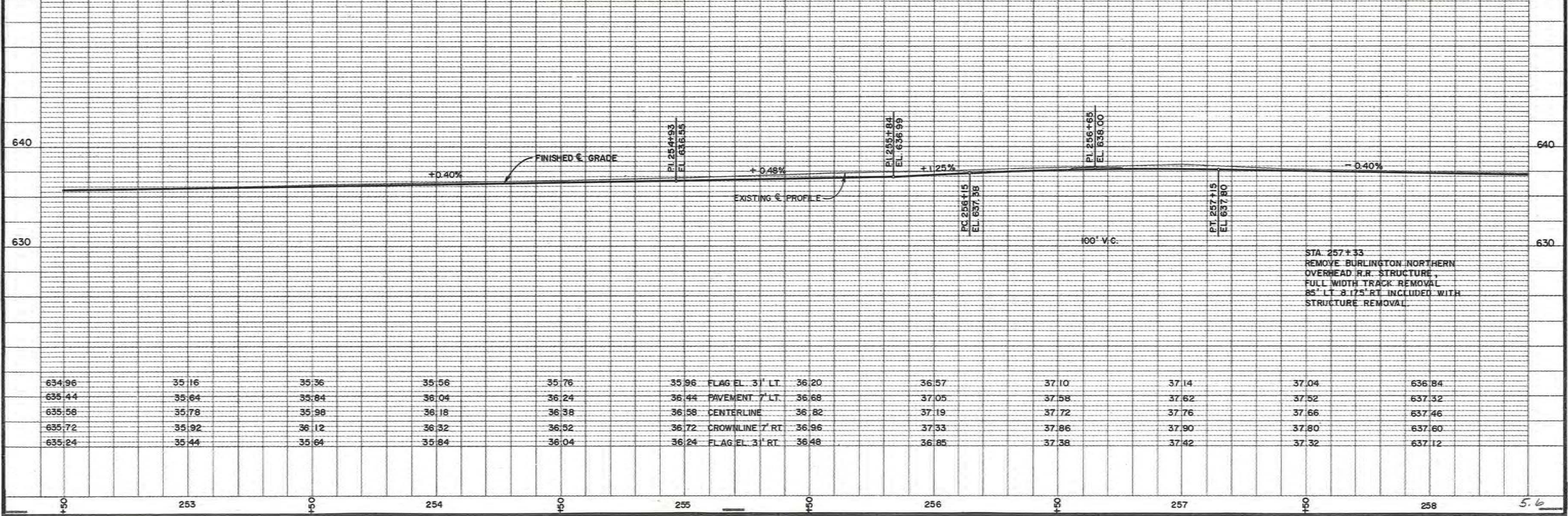
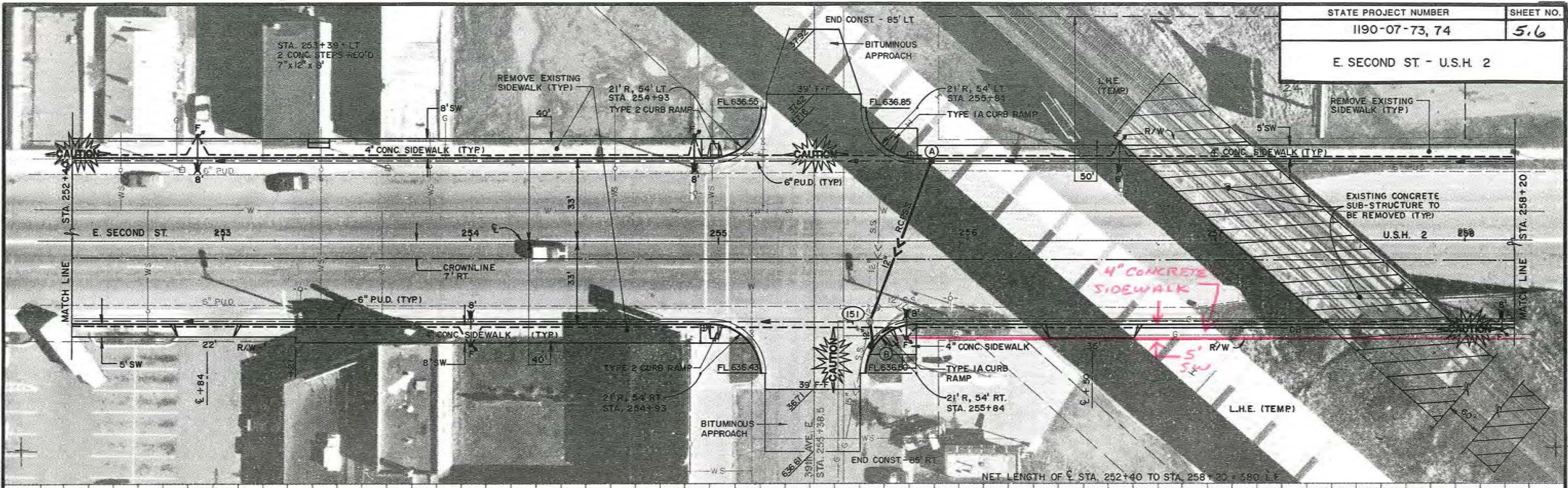


NET Q LENGTH STA. 251+0 TO 257+0 = 600 LIN. FT.

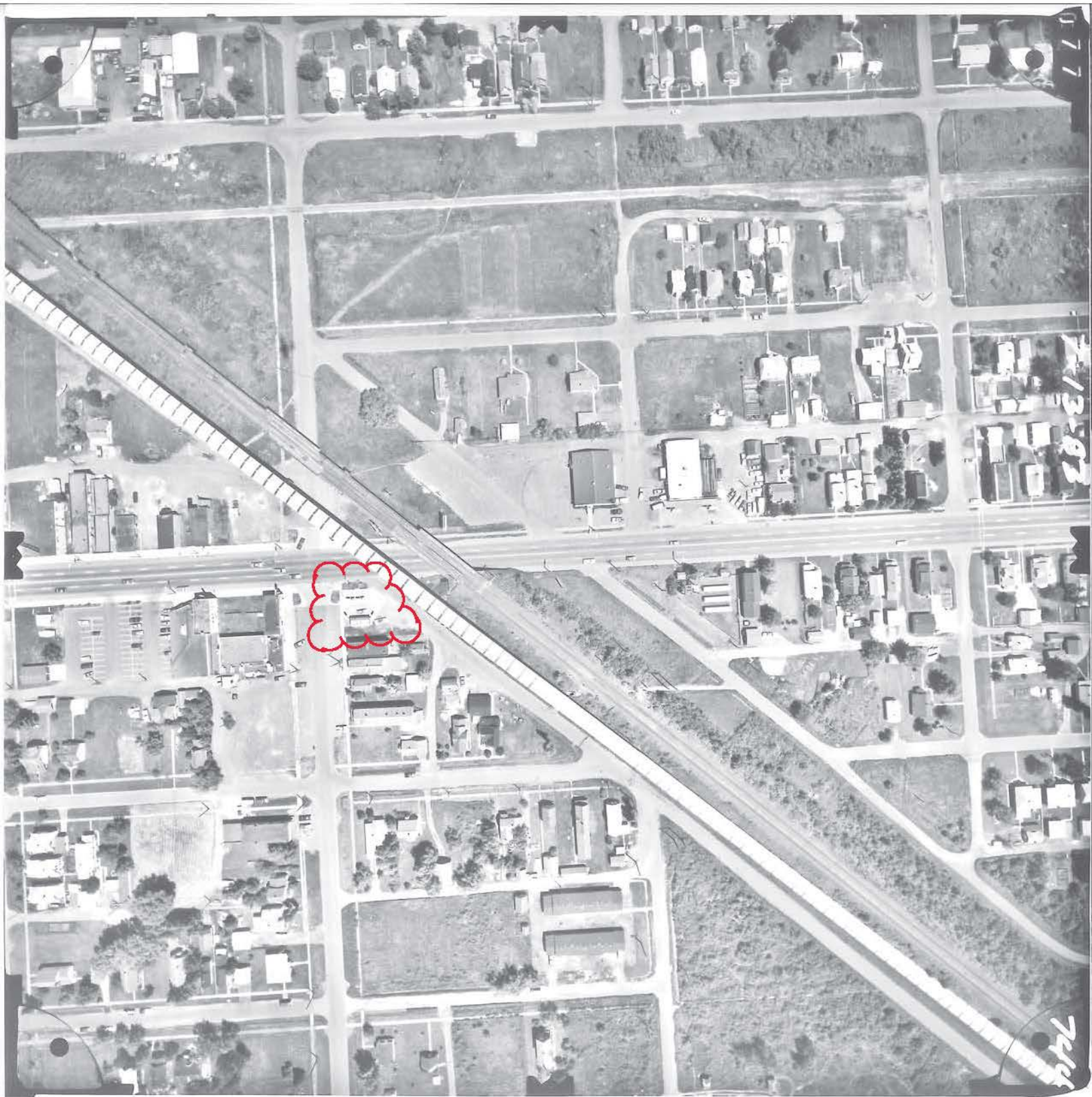


	251	252	253	254	255	256	257
L. SIDEWALK	35.18	35.4	35.62	35.84	36.06	36.28	36.50
L. TOP OF CURB	34.93	35.15	35.37	35.59	35.81	36.03	36.25
L. GUTTER FL. LINE	34.43	34.65	34.87	35.09	35.31	35.53	35.75
L. EDGE OF PAVT.	34.51	34.73	34.95	35.17	35.39	35.61	35.83
PRES. CENTERLINE		35.3	35.5	35.7	35.9	36.1	36.3
NEW CENTERLINE	35.16	35.38	35.60	35.82	36.04	36.26	36.48
R. EDGE OF PAVT.	34.51	34.73	34.95	35.17	35.39	35.61	35.83
R. GUTTER FL. LINE	34.43	34.65	34.87	35.09	35.31	35.53	35.75
R. TOP OF CURB	34.93	35.15	35.37	35.59	35.81	36.03	36.25
R. SIDEWALK	35.18	35.40	35.62	35.84	36.06	36.28	36.50

STATE PROJECT NUMBER	SHEET NO.
1190-07-73, 74	5.6
E. SECOND ST - U.S.H. 2	



STA 257+33
 REMOVE BURLINGTON NORTHERN
 OVERHEAD R.R. STRUCTURE
 FULL WIDTH TRACK REMOVAL
 85' LT & 175' RT INCLUDED WITH
 STRUCTURE REMOVAL.



1983 Aerial Photograph


Phase 2.5 Subsurface Investigation
US 2/53 – 31st Ave East to 53rd Ave East
City of Superior, Douglas County, Wisconsin
WisDOT Project ID No. 1198-03-78
August 12, 2019

Appendix B

Photographic Log

PHOTOGRAPHIC LOG

PHOTOGRAPH NO: 1	DATE: June 5, 2019	PROJECT NO: 1902429	CLIENT: WisDOT
DIRECTION: SE		SITE LOCATION: South Quadrant of East 2 nd Street/39 th Avenue East Intersection, City of Superior, Douglas County, WI (WisDOT Project ID #1198-03-78)	
<p>DESCRIPTION:</p> <p>Probe locations FGS-1 (cone at right) and FGS-2 (cone at left).</p>			

PHOTOGRAPH NO: 2	DATE: June 5, 2019	PROJECT NO: 1902429	CLIENT: WisDOT
DIRECTION: NW		SITE LOCATION: South Quadrant of East 2 nd Street/39 th Avenue East Intersection, City of Superior, Douglas County, WI (WisDOT Project ID #1198-03-78)	
<p>DESCRIPTION:</p> <p>Probe location FGS-1 (cone in foreground) and FGS-2 (cone in background).</p>			

Phase 2.5 Subsurface Investigation
US 2/53 – 31st Ave East to 53rd Ave East
City of Superior, Douglas County, Wisconsin
WisDOT Project ID No. 1198-03-78
August 12, 2019

Appendix C

Soil Boring Logs and Abandonment Forms



WI Dept. of Transportation
4802 Sheboygan Ave., Rm 451
Madison, WI 53705

WISDOT PROJECT ID:

1198-03-08

BORING ID:

FGS-1

WISDOT STRUCTURE ID:

PAGE NO:

1 of 1

WISDOT PROJECT NAME: Former Gas Station		CONSULTANT: GEI Consultants, Inc.	CONSULTANT PROJECT NO: 1902429	LATITUDE:	LONGITUDE:
ROADWAY NAME:		DRILLING CONTRACTOR: Probe Technologies, Inc	DRILLING CONTRACTOR PROJECT NO:	NORTHING: 166798.9	EASTING: 293811.4
DATE STARTED: 6/05/19		CREW CHIEF: Dan Bendorf	DRILL RIG: Geoprobe	COORDINATE SYSTEM: Douglas Co. Coordinates	
DATE COMPLETED: 6/05/19		LOGGED BY: Faith Zangl-Wiese	HOLE SIZE: 2 in	HORIZONTAL DATUM:	VERTICAL DATUM:
COUNTY: Douglas		LOG QC BY: Kyle Sandmire	HAMMER TYPE: 2" Macrocore - 4' long	STREAMBED ELEVATION: NA	
STATION	OFFSET	TOWNSHIP: 49	RANGE: 13	SECTION: 32	1/4 SECTION: NE 1/4 SECTION: NW
SURFACE ELEVATION:					

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Strength Qp (tsf)	P I D	Boulders	Drilling Method	Notes
CS 1	48			0.3		0.3 Asphalt						
				1		Fill: Dark brown silty sand with trace organics	SM	<0.1				
CS 2	48			2.0		Reddish brown silty clay						Environmental Sample 2-4 feet
				3		Dark streak with more sand from 2.5-3 feet	CL-ML	3.5				
				4		Odor from 3-4 feet						
CS 3	48			4.0		Reddish brown silty clay with trace sand						Environmental Sample 4.5-6.5 feet
				5		Odor from 4-6 feet	CL-ML	232.0				
				6				10.0				
				7				<0.1				
CS 4	48			8.0		Reddish brown silty clay						Environmental Sample 12-14 feet
				9			CL-ML	<0.1				
				10				<0.1				
				11				<0.1				
				12.0		Reddish brown silty clay - moist						
				13								
				14								
				15								
				16.0								

End of boring at 16 feet
Boring advanced from 0.0 to 16.0 feet with hydraulic push sampler
Borehole backfilled with 3/8-inch bentonite chips

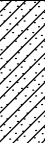















WATER LEVEL & CAVE-IN OBSERVATION DATA

<input type="checkbox"/>	WATER ENCOUNTERED DURING DRILLING:	<input checked="" type="checkbox"/>	CAVE - IN DEPTH AT COMPLETION: NMR	WET <input type="checkbox"/>
<input checked="" type="checkbox"/>	WATER LEVEL AT COMPLETION:	<input checked="" type="checkbox"/>	CAVE - IN DEPTH AFTER 0 HOURS: NMR	DRY <input type="checkbox"/>
				WET <input type="checkbox"/>
				DRY <input type="checkbox"/>

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
2) NE = Not Encountered; NMR = No Measurement Recorded





K:\GINT\PROJECTS\2019 GINT PROJECTS\1902429 FORMER GAS STATION - WISDOT.GPJ - Former Gas Station 7/30/19

 WI Dept. of Transportation 4802 Sheboygan Ave., Rm 451 Madison, WI 53705	WISDOT PROJECT ID: 1198-03-08		BORING ID: FGS-2	
	WISDOT STRUCTURE ID:		PAGE NO: 1 of 1	
WISDOT PROJECT NAME: Former Gas Station	CONSULTANT: GEI Consultants, Inc.	CONSULTANT PROJECT NO: 1902429	LATITUDE:	LONGITUDE:
ROADWAY NAME:	DRILLING CONTRACTOR: Probe Technologies, Inc	DRILLING CONTRACTOR PROJECT NO:	NORTHING: 166789.6	EASTING: 293817.8
DATE STARTED: 6/05/19	CREW CHIEF: Dan Bendorf	DRILL RIG: Geoprobe	COORDINATE SYSTEM: Douglas Co. Coordinates	
DATE COMPLETED: 6/05/19	LOGGED BY: Faith Zangl-Wiese	HOLE SIZE: 2 in	HORIZONTAL DATUM:	VERTICAL DATUM:
COUNTY: Douglas	LOG QC BY: Kyle Sandmire	HAMMER TYPE: 2" Macrocore - 4' long	STREAMBED ELEVATION: NA	
STATION	OFFSET	TOWNSHIP: 49	RANGE: 13	SECTION: 32
			1/4 SECTION: NE	1/4 SECTION: NW
		SURFACE ELEVATION:		

SAMPLE TYPE NUMBER	RECOVERY (in) (RQD)	Moisture	BLOW COUNTS (N VALUE)	Depth (ft)	Graphic	Soil / Rock Description and Geological Origin for Each Major Unit / Comments	USCS / AASHTO	Strength Qp (tsf)	P I D	Boulders	Drilling Method	Notes
CS 1	24			1		Fill: Dark brown clayey sand / topsoil with trace roots	SC					Environmental Sample 0-3 feet
				2		Fill: Dark brown to black sand with trace gravel	SP	<0.1				
				3		Reddish brown to brown silty clay with trace sand - moist	CL-ML					
CS 2	24			4		Reddish brown silty clay with trace sand - moist						Environmental Sample 6-8 feet
				5								
				6		Slight odor from 6-7 feet	CL-ML	7.1				
CS 3	48			7								Environmental Sample 12-14 feet
				8		Reddish brown silty clay - moist						
				9								
CS 4	48			10		Slight odor from 10-11 feet	CL-ML	<0.1	<0.1			Environmental Sample 12-14 feet
				11								
				12		Reddish brown silty clay - moist						
				13								
				14								
				15								
				16								

End of boring at 16 feet
 Boring advanced from 0.0 to 16.0 feet with hydraulic push sampler
 Installed temporary well to 16.0 feet
 Removed temporary well on 6/6/2019
 Borehole abandoned with 3/8-inch bentonite chips

WATER LEVEL & CAVE-IN OBSERVATION DATA

	WATER ENCOUNTERED DURING DRILLING:		CAVE - IN DEPTH AT COMPLETION: NMR	WET <input type="checkbox"/> DRY <input type="checkbox"/>
	WATER LEVEL AT COMPLETION:		CAVE - IN DEPTH AFTER 0 HOURS: NMR	WET <input type="checkbox"/> DRY <input type="checkbox"/>

NOTES: 1) Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.
 2) NE = Not Encountered; NMR = No Measurement Recorded

K:\GINT\PROJECTS\2019 GINT PROJECTS\1902429 FORMER GAS STATION - WISDOT.GPJ - Former Gas Station 7/30/19

WELL/DRILLHOLE/BOREHOLE ABANDONMENT

WISDOT PROJECT INFORMATION

WisDOT Project ID: 1198-03-08/78 WisDOT Project Name: Former Gas Station

(1) GENERAL INFORMATION

Unique Well No. _____ Well ID No. _____ County
Douglas

Common Well Name FGS-1 _____ Gov't Lot (if applicable)

SW 1/4 of SE 1/4 of Sec. 13 ; T. 49 N; R. 13 E
Grid Location W

_____ ft. N. S., _____ ft. E. W.

Local Grid Origin (estimated:) or Well Location

Lat _____ ° _____ ' _____ " Long _____ ° _____ ' _____ " or

State Plane 166798.93 ft. N. 293811.41 ft. E. S C N Zone

Reason for Abandonment _____ Unique Well No. _____
Boring only _____ of Replacement Well _____

(2) FACILITY /OWNER INFORMATION

Facility Name
Former Gas Station

Facility ID _____ License/Permit/Monitoring No. _____

Street Address of Well
203 39th Ave E

City, Village, or Town
Superior

Present Well Owner _____ Original Owner _____
WisDOT

Street Address or Route of Owner
4802 Sheboygan Ave.

City, State, Zip Code
Madison, WI 53705

(3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date 06/05/2019

Monitoring Well
 Water Well
 Drillhole / Borehole

If a Well Construction Report is available, please attach.

Construction Type:
 Drilled Driven (Sandpoint) Dug
 Other (Specify) Hydraulic push

Formation Type:
 Unconsolidated Formation Bedrock

Total Well Depth (ft) 16 Casing Diameter (in.) NA
(From ground surface) Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) 2.0

Was Well Annular Space Grouted? Yes No Unknown
If Yes, To What Depth? _____ Feet

Depth to Water (Feet) _____

(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL

Pump & Piping Removed? Yes No Not Applicable

Liner(s) Removed? Yes No Not Applicable

Screen Removed? Yes No Not Applicable

Casing Left in Place? Yes No

Was Casing Cut Off Below Surface? Yes No

Did Sealing Material Rise to Surface? Yes No

Did Material Settle After 24 Hours? Yes No
If Yes, Was Hole Retopped? Yes No

Required Method of Placing Sealing Material
 Conductor Pipe - Gravity Conductor Pipe - Pumped
 Screened & Poured Other (Explain)

(Bentonite Chips)

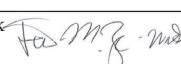
Sealing Materials For monitoring wells and monitoring well boreholes only

Neat Cement Grout Bentonite Chips
 Sand-Cement (Concrete) Grout Granular Bentonite
 Concrete Bentonite-Cement Grout
 Clay-Sand Slurry Bentonite - Sand Slurry
 Bentonite-Sand Slurry
 Chipped Bentonite

(5)	Sealing Material Used	From (Ft.)	To (Ft.)	Sacks Sealant	Mix Ratio or Mud Weight
	3/8" bentonite chips	Surface	16	1/2 bag	

(6) Comments _____

(7) Name of Person or Firm Doing Sealing Work _____ Date of Abandonment 6/5/2019
Probe Technologies

Signature of Person Doing Work  Date Signed 6/13/2019

Street or Route _____ Telephone Number 262-470-4768
7781 Pathfinder Lane

City, State, Zip Code
West Bend, WI 53090

WELL/DRILLHOLE/BOREHOLE ABANDONMENT

WISDOT PROJECT INFORMATION

WisDOT Project ID: 1198-03-08/78 WisDOT Project Name: Former Gas Station

(1) GENERAL INFORMATION

Unique Well No. _____ Well ID No. _____ County
Douglas

Common Well Name FGS-2 _____ Gov't Lot (if applicable)

SW 1/4 of SE 1/4 of Sec. 13 ; T. 49 N; R. 13 E
Grid Location W

_____ ft. N. S., _____ ft. E. W.

Local Grid Origin (estimated:) or Well Location

Lat _____ ° _____ ' _____ " Long _____ ° _____ ' _____ " or

State Plane 166789.61 ft. N. 293817.76 ft. E. S C N Zone

Reason for Abandonment _____ Unique Well No. _____
Boring only _____ of Replacement Well _____

(2) FACILITY /OWNER INFORMATION

Facility Name
Former Gas Station

Facility ID _____ License/Permit/Monitoring No. _____

Street Address of Well
203 39th Ave E

City, Village, or Town
Superior

Present Well Owner _____ Original Owner _____
WisDOT

Street Address or Route of Owner
4802 Sheboygan Ave.

City, State, Zip Code
Madison, WI 53705

(3) WELL/DRILLHOLE/BOREHOLE INFORMATION

Original Construction Date 06/05/2019

Monitoring Well
 Water Well
 Drillhole / Borehole

If a Well Construction Report is available, please attach.

Construction Type:
 Drilled Driven (Sandpoint) Dug
 Other (Specify) Hydraulic push

Formation Type:
 Unconsolidated Formation Bedrock

Total Well Depth (ft) 16 Casing Diameter (in.) NA
(From ground surface) Casing Depth (ft.) _____

Lower Drillhole Diameter (in.) 2.0

Was Well Annular Space Grouted? Yes No Unknown
If Yes, To What Depth? _____ Feet

Depth to Water (Feet) _____

(4) PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL

Pump & Piping Removed? Yes No Not Applicable
Liner(s) Removed? Yes No Not Applicable
Screen Removed? Yes No Not Applicable
Casing Left in Place? Yes No

Was Casing Cut Off Below Surface? Yes No
Did Sealing Material Rise to Surface? Yes No
Did Material Settle After 24 Hours? Yes No
If Yes, Was Hole Retopped? Yes No

Required Method of Placing Sealing Material
 Conductor Pipe - Gravity Conductor Pipe - Pumped
 Screened & Poured Other (Explain)
(Bentonite Chips)

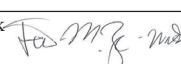
Sealing Materials For monitoring wells and monitoring well boreholes only

<input type="checkbox"/> Neat Cement Grout	<input type="checkbox"/> Bentonite Chips
<input type="checkbox"/> Sand-Cement (Concrete) Grout	<input type="checkbox"/> Granular Bentonite
<input type="checkbox"/> Concrete	<input type="checkbox"/> Bentonite-Cement Grout
<input type="checkbox"/> Clay-Sand Slurry	<input type="checkbox"/> Bentonite - Sand Slurry
<input type="checkbox"/> Bentonite-Sand Slurry	
<input checked="" type="checkbox"/> Chipped Bentonite	

(5)	Sealing Material Used	From (Ft.)	To (Ft.)	Sacks Sealant	Mix Ratio or Mud Weight
	3/8" bentonite chips	Surface	16	1/2 bag	

(6) Comments _____

(7) Name of Person or Firm Doing Sealing Work _____ Date of Abandonment 6/6/2019
Probe Technologies

Signature of Person Doing Work  Date Signed 6/13/2019

Street or Route _____ Telephone Number 262-470-4768
7781 Pathfinder Lane

City, State, Zip Code
West Bend, WI 53090

Phase 2.5 Subsurface Investigation
US 2/53 – 31st Ave East to 53rd Ave East
City of Superior, Douglas County, Wisconsin
WisDOT Project ID No. 1198-03-78
August 12, 2019

Appendix D

Laboratory Analytical Report

June 17, 2019

Roger Miller
GEI Consultants, Inc.
3159 Voyager Drive
Green Bay, WI 54311

RE: Project: 1902429 FMR GAS STATION-ADLER
Pace Project No.: 40188973

Dear Roger Miller:

Enclosed are the analytical results for sample(s) received by the laboratory on June 06, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Christopher Hyska
christopher.hyska@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Kyle Sandmire, GEI Consultants, Inc



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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SAMPLE SUMMARY

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40188973001	FGS-1 2'-4'	Solid	06/05/19 16:55	06/06/19 13:24
40188973002	FGS-1 4.5'-6.5'	Solid	06/05/19 17:00	06/06/19 13:24
40188973003	FGS-1 12'-14'	Solid	06/05/19 17:10	06/06/19 13:24
40188973004	FGS-2 0'-3'	Solid	06/05/19 16:15	06/06/19 13:24
40188973005	FGS-2 6'-8'	Solid	06/05/19 16:20	06/06/19 13:24
40188973006	FGS-2 12'-14'	Solid	06/05/19 16:40	06/06/19 13:24

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 1902429 FMR GAS STATION-ADLER
Pace Project No.: 40188973

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40188973001	FGS-1 2'-4'	WI MOD DRO	MRN	1	PASI-G
		WI MOD GRO	ALD	1	PASI-G
		EPA 6010	TXW	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	MDS	64	PASI-G
		ASTM D2974-87	PCG	1	PASI-G
40188973002	FGS-1 4.5'-6.5'	WI MOD DRO	MRN	1	PASI-G
		WI MOD GRO	ALD	1	PASI-G
		EPA 6010	TXW	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	MDS	64	PASI-G
		ASTM D2974-87	PCG	1	PASI-G
40188973003	FGS-1 12'-14'	WI MOD DRO	MRN	1	PASI-G
		WI MOD GRO	ALD	1	PASI-G
		EPA 6010	TXW	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	MDS	64	PASI-G
		ASTM D2974-87	PCG	1	PASI-G
40188973004	FGS-2 0'-3'	WI MOD DRO	MRN	1	PASI-G
		WI MOD GRO	ALD	1	PASI-G
		EPA 6010	TXW	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	MDS	64	PASI-G
		ASTM D2974-87	PCG	1	PASI-G
40188973005	FGS-2 6'-8'	WI MOD DRO	MRN	1	PASI-G
		WI MOD GRO	ALD	1	PASI-G
		EPA 6010	TXW	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	MDS	64	PASI-G
		ASTM D2974-87	PCG	1	PASI-G
40188973006	FGS-2 12'-14'	WI MOD DRO	MRN	1	PASI-G
		WI MOD GRO	ALD	1	PASI-G
		EPA 6010	TXW	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	MDS	64	PASI-G
		ASTM D2974-87	PCG	1	PASI-G

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
40188973001	FGS-1 2'-4'					
WI MOD DRO	Diesel Range Organics	110	mg/kg	8.7	06/13/19 12:29	DC
WI MOD GRO	Gasoline Range Organics	892	mg/kg	24.6	06/10/19 17:49	G+
EPA 6010	Lead	10.3	mg/kg	4.9	06/13/19 16:47	
EPA 8270 by SIM	1-Methylnaphthalene	160	ug/kg	16.5	06/12/19 15:57	
EPA 8270 by SIM	2-Methylnaphthalene	462	ug/kg	20.5	06/12/19 15:57	
EPA 8270 by SIM	Naphthalene	617	ug/kg	34.5	06/12/19 15:57	
EPA 8260	n-Butylbenzene	2360	ug/kg	295	06/07/19 17:43	
EPA 8260	sec-Butylbenzene	956	ug/kg	295	06/07/19 17:43	
EPA 8260	Ethylbenzene	1570	ug/kg	295	06/07/19 17:43	
EPA 8260	Isopropylbenzene (Cumene)	1140	ug/kg	295	06/07/19 17:43	
EPA 8260	p-Isopropyltoluene	1650	ug/kg	295	06/07/19 17:43	
EPA 8260	Naphthalene	1170J	ug/kg	1230	06/07/19 17:43	
EPA 8260	n-Propylbenzene	2070	ug/kg	295	06/07/19 17:43	
EPA 8260	1,2,4-Trimethylbenzene	1690	ug/kg	295	06/07/19 17:43	
EPA 8260	1,3,5-Trimethylbenzene	3300	ug/kg	295	06/07/19 17:43	
EPA 8260	m&p-Xylene	1350	ug/kg	590	06/07/19 17:43	
ASTM D2974-87	Percent Moisture	18.7	%	0.10	06/11/19 14:00	
40188973002	FGS-1 4.5'-6.5'					
WI MOD DRO	Diesel Range Organics	66.2	mg/kg	4.8	06/13/19 10:49	DC
WI MOD GRO	Gasoline Range Organics	660	mg/kg	26.3	06/10/19 16:06	G+
EPA 6010	Lead	10.3	mg/kg	5.0	06/13/19 17:00	
EPA 8270 by SIM	1-Methylnaphthalene	184	ug/kg	35.2	06/13/19 12:29	R1
EPA 8270 by SIM	2-Methylnaphthalene	453	ug/kg	43.9	06/13/19 12:29	M1, R1
EPA 8270 by SIM	Naphthalene	1160	ug/kg	73.9	06/13/19 12:29	M1, R1
EPA 8260	n-Butylbenzene	2110	ug/kg	158	06/07/19 18:06	
EPA 8260	sec-Butylbenzene	780	ug/kg	158	06/07/19 18:06	
EPA 8260	Ethylbenzene	3150	ug/kg	158	06/07/19 18:06	
EPA 8260	Isopropylbenzene (Cumene)	1330	ug/kg	158	06/07/19 18:06	
EPA 8260	p-Isopropyltoluene	1340	ug/kg	158	06/07/19 18:06	
EPA 8260	Naphthalene	2010	ug/kg	657	06/07/19 18:06	
EPA 8260	n-Propylbenzene	2280	ug/kg	158	06/07/19 18:06	
EPA 8260	1,2,4-Trimethylbenzene	1200	ug/kg	158	06/07/19 18:06	
EPA 8260	1,3,5-Trimethylbenzene	3190	ug/kg	158	06/07/19 18:06	
EPA 8260	m&p-Xylene	2120	ug/kg	316	06/07/19 18:06	
EPA 8260	o-Xylene	66.4J	ug/kg	158	06/07/19 18:06	
ASTM D2974-87	Percent Moisture	24.0	%	0.10	06/11/19 10:49	
40188973003	FGS-1 12'-14'					
WI MOD DRO	Diesel Range Organics	1.5J	mg/kg	4.5	06/13/19 10:58	DC
EPA 6010	Lead	9.4	mg/kg	2.6	06/12/19 15:54	
ASTM D2974-87	Percent Moisture	27.7	%	0.10	06/11/19 14:55	
40188973004	FGS-2 0'-3'					
WI MOD DRO	Diesel Range Organics	61.2	mg/kg	4.2	06/17/19 08:45	DC
WI MOD GRO	Gasoline Range Organics	23.8	mg/kg	6.1	06/10/19 14:23	GO
EPA 6010	Lead	142	mg/kg	2.4	06/12/19 15:56	
EPA 8270 by SIM	Acenaphthene	14.8J	ug/kg	31.2	06/12/19 17:23	
EPA 8270 by SIM	Acenaphthylene	19.6J	ug/kg	26.6	06/12/19 17:23	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40188973004	FGS-2 0'-3'					
EPA 8270 by SIM	Anthracene	68.2	ug/kg	46.0	06/12/19 17:23	
EPA 8270 by SIM	Benzo(a)anthracene	143	ug/kg	25.7	06/12/19 17:23	
EPA 8270 by SIM	Benzo(a)pyrene	125	ug/kg	20.3	06/12/19 17:23	
EPA 8270 by SIM	Benzo(b)fluoranthene	135	ug/kg	22.8	06/12/19 17:23	
EPA 8270 by SIM	Benzo(g,h,i)perylene	93.0	ug/kg	16.4	06/12/19 17:23	
EPA 8270 by SIM	Benzo(k)fluoranthene	135	ug/kg	20.2	06/12/19 17:23	
EPA 8270 by SIM	Chrysene	199	ug/kg	27.1	06/12/19 17:23	
EPA 8270 by SIM	Dibenz(a,h)anthracene	34.1	ug/kg	18.0	06/12/19 17:23	
EPA 8270 by SIM	Fluoranthene	261	ug/kg	42.1	06/12/19 17:23	
EPA 8270 by SIM	Fluorene	28.4J	ug/kg	33.4	06/12/19 17:23	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	65.5	ug/kg	17.8	06/12/19 17:23	
EPA 8270 by SIM	1-Methylnaphthalene	794	ug/kg	32.5	06/12/19 17:23	
EPA 8270 by SIM	2-Methylnaphthalene	1030	ug/kg	40.4	06/12/19 17:23	
EPA 8270 by SIM	Naphthalene	607	ug/kg	68.1	06/12/19 17:23	
EPA 8270 by SIM	Phenanthrene	549	ug/kg	94.0	06/12/19 17:23	
EPA 8270 by SIM	Pyrene	195	ug/kg	36.3	06/12/19 17:23	
EPA 8260	Benzene	254	ug/kg	72.8	06/07/19 15:24	
EPA 8260	Naphthalene	54.4J	ug/kg	303	06/07/19 15:24	
EPA 8260	Toluene	48.8J	ug/kg	72.8	06/07/19 15:24	
EPA 8260	1,2,4-Trimethylbenzene	51.2J	ug/kg	72.8	06/07/19 15:24	
EPA 8260	m&p-Xylene	64.7J	ug/kg	146	06/07/19 15:24	
EPA 8260	o-Xylene	60.5J	ug/kg	72.8	06/07/19 15:24	
ASTM D2974-87	Percent Moisture	17.6	%	0.10	06/11/19 10:49	
40188973005	FGS-2 6'-8'					
WI MOD DRO	Diesel Range Organics	27.6	mg/kg	4.9	06/17/19 08:54	DC
WI MOD GRO	Gasoline Range Organics	460	mg/kg	53.7	06/11/19 09:03	GO
EPA 6010	Lead	9.5	mg/kg	2.6	06/12/19 15:58	
EPA 8270 by SIM	1-Methylnaphthalene	48.9	ug/kg	18.0	06/13/19 19:27	
EPA 8270 by SIM	2-Methylnaphthalene	118	ug/kg	22.4	06/13/19 19:27	
EPA 8270 by SIM	Naphthalene	253	ug/kg	37.7	06/13/19 19:27	
EPA 8260	Benzene	38.3J	ug/kg	80.6	06/07/19 17:20	
EPA 8260	n-Butylbenzene	690	ug/kg	80.6	06/07/19 17:20	
EPA 8260	sec-Butylbenzene	253	ug/kg	80.6	06/07/19 17:20	
EPA 8260	Ethylbenzene	389	ug/kg	80.6	06/07/19 17:20	
EPA 8260	Isopropylbenzene (Cumene)	421	ug/kg	80.6	06/07/19 17:20	
EPA 8260	p-Isopropyltoluene	449	ug/kg	80.6	06/07/19 17:20	
EPA 8260	Naphthalene	540	ug/kg	336	06/07/19 17:20	
EPA 8260	n-Propylbenzene	738	ug/kg	80.6	06/07/19 17:20	
EPA 8260	1,2,4-Trimethylbenzene	2890	ug/kg	80.6	06/07/19 17:20	
EPA 8260	1,3,5-Trimethylbenzene	997	ug/kg	80.6	06/07/19 17:20	
EPA 8260	m&p-Xylene	1120	ug/kg	161	06/07/19 17:20	
ASTM D2974-87	Percent Moisture	25.6	%	0.10	06/11/19 10:49	
40188973006	FGS-2 12'-14'					
EPA 6010	Lead	10.2	mg/kg	2.8	06/12/19 16:01	
ASTM D2974-87	Percent Moisture	27.8	%	0.10	06/11/19 10:49	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Sample: FGS-1 2'-4' Lab ID: 40188973001 Collected: 06/05/19 16:55 Received: 06/06/19 13:24 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
Diesel Range Organics	110	mg/kg	8.7	2.6	2	06/12/19 08:48	06/13/19 12:29		DC
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Gasoline Range Organics	892	mg/kg	24.6	12.3	4	06/10/19 09:00	06/10/19 17:49		G+
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Lead	10.3	mg/kg	4.9	1.5	2	06/12/19 09:00	06/13/19 16:47	7439-92-1	
8270 MSSV PAH by SIM Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<4.8	ug/kg	15.9	4.8	1	06/12/19 08:21	06/12/19 15:57	83-32-9	
Acenaphthylene	<4.1	ug/kg	13.5	4.1	1	06/12/19 08:21	06/12/19 15:57	208-96-8	
Anthracene	<7.0	ug/kg	23.4	7.0	1	06/12/19 08:21	06/12/19 15:57	120-12-7	
Benzo(a)anthracene	<3.9	ug/kg	13.0	3.9	1	06/12/19 08:21	06/12/19 15:57	56-55-3	
Benzo(a)pyrene	<3.1	ug/kg	10.3	3.1	1	06/12/19 08:21	06/12/19 15:57	50-32-8	
Benzo(b)fluoranthene	<3.5	ug/kg	11.6	3.5	1	06/12/19 08:21	06/12/19 15:57	205-99-2	
Benzo(g,h,i)perylene	<2.5	ug/kg	8.3	2.5	1	06/12/19 08:21	06/12/19 15:57	191-24-2	
Benzo(k)fluoranthene	<3.1	ug/kg	10.3	3.1	1	06/12/19 08:21	06/12/19 15:57	207-08-9	
Chrysene	<4.1	ug/kg	13.8	4.1	1	06/12/19 08:21	06/12/19 15:57	218-01-9	
Dibenz(a,h)anthracene	<2.7	ug/kg	9.2	2.7	1	06/12/19 08:21	06/12/19 15:57	53-70-3	
Fluoranthene	<6.4	ug/kg	21.4	6.4	1	06/12/19 08:21	06/12/19 15:57	206-44-0	
Fluorene	<5.1	ug/kg	17.0	5.1	1	06/12/19 08:21	06/12/19 15:57	86-73-7	
Indeno(1,2,3-cd)pyrene	<2.7	ug/kg	9.0	2.7	1	06/12/19 08:21	06/12/19 15:57	193-39-5	
1-Methylnaphthalene	160	ug/kg	16.5	4.9	1	06/12/19 08:21	06/12/19 15:57	90-12-0	
2-Methylnaphthalene	462	ug/kg	20.5	6.1	1	06/12/19 08:21	06/12/19 15:57	91-57-6	
Naphthalene	617	ug/kg	34.5	10.4	1	06/12/19 08:21	06/12/19 15:57	91-20-3	
Phenanthrene	<14.3	ug/kg	47.7	14.3	1	06/12/19 08:21	06/12/19 15:57	85-01-8	
Pyrene	<5.5	ug/kg	18.4	5.5	1	06/12/19 08:21	06/12/19 15:57	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	66	%	28-99		1	06/12/19 08:21	06/12/19 15:57	321-60-8	
Terphenyl-d14 (S)	61	%	10-107		1	06/12/19 08:21	06/12/19 15:57	1718-51-0	
8260 MSV Med Level Normal List Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Benzene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	71-43-2	W
Bromobenzene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	108-86-1	W
Bromochloromethane	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	74-97-5	W
Bromodichloromethane	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	75-27-4	W
Bromoform	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	75-25-2	L1,W
Bromomethane	<280	ug/kg	1000	280	4	06/07/19 07:45	06/07/19 17:43	74-83-9	W
n-Butylbenzene	2360	ug/kg	295	123	4	06/07/19 07:45	06/07/19 17:43	104-51-8	
sec-Butylbenzene	956	ug/kg	295	123	4	06/07/19 07:45	06/07/19 17:43	135-98-8	
tert-Butylbenzene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	98-06-6	W
Carbon tetrachloride	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	56-23-5	W
Chlorobenzene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	108-90-7	W
Chloroethane	<268	ug/kg	1000	268	4	06/07/19 07:45	06/07/19 17:43	75-00-3	W
Chloroform	<186	ug/kg	1000	186	4	06/07/19 07:45	06/07/19 17:43	67-66-3	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Sample: FGS-1 2'-4' **Lab ID: 40188973001** Collected: 06/05/19 16:55 Received: 06/06/19 13:24 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Chloromethane	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	74-87-3	W
2-Chlorotoluene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	95-49-8	W
4-Chlorotoluene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	106-43-4	W
1,2-Dibromo-3-chloropropane	<365	ug/kg	1000	365	4	06/07/19 07:45	06/07/19 17:43	96-12-8	W
Dibromochloromethane	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	124-48-1	W
1,2-Dibromoethane (EDB)	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	106-93-4	W
Dibromomethane	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	74-95-3	W
1,2-Dichlorobenzene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	95-50-1	W
1,3-Dichlorobenzene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	541-73-1	W
1,4-Dichlorobenzene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	106-46-7	W
Dichlorodifluoromethane	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	75-71-8	W
1,1-Dichloroethane	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	75-34-3	W
1,2-Dichloroethane	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	107-06-2	W
1,1-Dichloroethene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	75-35-4	W
cis-1,2-Dichloroethene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	156-59-2	W
trans-1,2-Dichloroethene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	156-60-5	W
1,2-Dichloropropane	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	78-87-5	W
1,3-Dichloropropane	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	142-28-9	W
2,2-Dichloropropane	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	594-20-7	W
1,1-Dichloropropene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	563-58-6	W
cis-1,3-Dichloropropene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	10061-01-5	W
trans-1,3-Dichloropropene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	10061-02-6	W
Diisopropyl ether	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	108-20-3	W
Ethylbenzene	1570	ug/kg	295	123	4	06/07/19 07:45	06/07/19 17:43	100-41-4	
Hexachloro-1,3-butadiene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	87-68-3	W
Isopropylbenzene (Cumene)	1140	ug/kg	295	123	4	06/07/19 07:45	06/07/19 17:43	98-82-8	
p-Isopropyltoluene	1650	ug/kg	295	123	4	06/07/19 07:45	06/07/19 17:43	99-87-6	
Methylene Chloride	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	75-09-2	W
Methyl-tert-butyl ether	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	1634-04-4	W
Naphthalene	1170J	ug/kg	1230	197	4	06/07/19 07:45	06/07/19 17:43	91-20-3	
n-Propylbenzene	2070	ug/kg	295	123	4	06/07/19 07:45	06/07/19 17:43	103-65-1	
Styrene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	100-42-5	W
1,1,1,2-Tetrachloroethane	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	630-20-6	W
1,1,2,2-Tetrachloroethane	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	79-34-5	W
Tetrachloroethene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	127-18-4	W
Toluene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	108-88-3	W
1,2,3-Trichlorobenzene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	87-61-6	W
1,2,4-Trichlorobenzene	<190	ug/kg	1000	190	4	06/07/19 07:45	06/07/19 17:43	120-82-1	W
1,1,1-Trichloroethane	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	71-55-6	W
1,1,2-Trichloroethane	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	79-00-5	W
Trichloroethene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	79-01-6	W
Trichlorofluoromethane	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	75-69-4	W
1,2,3-Trichloropropane	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	96-18-4	W
1,2,4-Trimethylbenzene	1690	ug/kg	295	123	4	06/07/19 07:45	06/07/19 17:43	95-63-6	
1,3,5-Trimethylbenzene	3300	ug/kg	295	123	4	06/07/19 07:45	06/07/19 17:43	108-67-8	

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ANALYTICAL RESULTS

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Sample: FGS-1 2'-4' **Lab ID: 40188973001** Collected: 06/05/19 16:55 Received: 06/06/19 13:24 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Vinyl chloride	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	75-01-4	W
m&p-Xylene	1350	ug/kg	590	246	4	06/07/19 07:45	06/07/19 17:43	179601-23-1	
o-Xylene	<100	ug/kg	240	100	4	06/07/19 07:45	06/07/19 17:43	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	100	%	57-146		4	06/07/19 07:45	06/07/19 17:43	1868-53-7	D3
Toluene-d8 (S)	82	%	64-134		4	06/07/19 07:45	06/07/19 17:43	2037-26-5	
4-Bromofluorobenzene (S)	111	%	54-126		4	06/07/19 07:45	06/07/19 17:43	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	18.7	%	0.10	0.10	1		06/11/19 14:00		

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ANALYTICAL RESULTS

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Sample: FGS-1 4.5'-6.5' **Lab ID:** 40188973002 Collected: 06/05/19 17:00 Received: 06/06/19 13:24 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
Diesel Range Organics	66.2	mg/kg	4.8	1.4	1	06/12/19 08:48	06/13/19 10:49		DC
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Gasoline Range Organics	660	mg/kg	26.3	13.1	4	06/10/19 09:00	06/10/19 16:06		G+
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Lead	10.3	mg/kg	5.0	1.5	2	06/12/19 09:00	06/13/19 17:00	7439-92-1	
8270 MSSV PAH by SIM Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<10.2	ug/kg	33.9	10.2	2	06/12/19 08:21	06/13/19 12:29	83-32-9	
Acenaphthylene	<8.7	ug/kg	28.9	8.7	2	06/12/19 08:21	06/13/19 12:29	208-96-8	
Anthracene	<15.0	ug/kg	50.0	15.0	2	06/12/19 08:21	06/13/19 12:29	120-12-7	
Benzo(a)anthracene	<8.3	ug/kg	27.9	8.3	2	06/12/19 08:21	06/13/19 12:29	56-55-3	
Benzo(a)pyrene	<6.6	ug/kg	22.0	6.6	2	06/12/19 08:21	06/13/19 12:29	50-32-8	
Benzo(b)fluoranthene	<7.4	ug/kg	24.7	7.4	2	06/12/19 08:21	06/13/19 12:29	205-99-2	
Benzo(g,h,i)perylene	<5.3	ug/kg	17.8	5.3	2	06/12/19 08:21	06/13/19 12:29	191-24-2	
Benzo(k)fluoranthene	<6.6	ug/kg	22.0	6.6	2	06/12/19 08:21	06/13/19 12:29	207-08-9	
Chrysene	<8.9	ug/kg	29.4	8.9	2	06/12/19 08:21	06/13/19 12:29	218-01-9	
Dibenz(a,h)anthracene	<5.9	ug/kg	19.6	5.9	2	06/12/19 08:21	06/13/19 12:29	53-70-3	
Fluoranthene	<13.7	ug/kg	45.7	13.7	2	06/12/19 08:21	06/13/19 12:29	206-44-0	
Fluorene	<10.9	ug/kg	36.3	10.9	2	06/12/19 08:21	06/13/19 12:29	86-73-7	
Indeno(1,2,3-cd)pyrene	<5.8	ug/kg	19.3	5.8	2	06/12/19 08:21	06/13/19 12:29	193-39-5	
1-Methylnaphthalene	184	ug/kg	35.2	10.6	2	06/12/19 08:21	06/13/19 12:29	90-12-0	R1
2-Methylnaphthalene	453	ug/kg	43.9	13.2	2	06/12/19 08:21	06/13/19 12:29	91-57-6	M1,R1
Naphthalene	1160	ug/kg	73.9	22.1	2	06/12/19 08:21	06/13/19 12:29	91-20-3	M1,R1
Phenanthrene	<30.6	ug/kg	102	30.6	2	06/12/19 08:21	06/13/19 12:29	85-01-8	
Pyrene	<11.9	ug/kg	39.4	11.9	2	06/12/19 08:21	06/13/19 12:29	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	45	%	28-99		2	06/12/19 08:21	06/13/19 12:29	321-60-8	
Terphenyl-d14 (S)	44	%	10-107		2	06/12/19 08:21	06/13/19 12:29	1718-51-0	
8260 MSV Med Level Normal List Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Benzene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	71-43-2	W
Bromobenzene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	108-86-1	W
Bromochloromethane	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	74-97-5	W
Bromodichloromethane	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	75-27-4	W
Bromoform	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	75-25-2	L1,W
Bromomethane	<140	ug/kg	500	140	2	06/07/19 07:45	06/07/19 18:06	74-83-9	W
n-Butylbenzene	2110	ug/kg	158	65.7	2	06/07/19 07:45	06/07/19 18:06	104-51-8	
sec-Butylbenzene	780	ug/kg	158	65.7	2	06/07/19 07:45	06/07/19 18:06	135-98-8	
tert-Butylbenzene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	98-06-6	W
Carbon tetrachloride	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	56-23-5	W
Chlorobenzene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	108-90-7	W
Chloroethane	<134	ug/kg	500	134	2	06/07/19 07:45	06/07/19 18:06	75-00-3	W
Chloroform	<92.9	ug/kg	500	92.9	2	06/07/19 07:45	06/07/19 18:06	67-66-3	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Sample: FGS-1 4.5'-6.5' **Lab ID:** 40188973002 Collected: 06/05/19 17:00 Received: 06/06/19 13:24 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Chloromethane	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	74-87-3	W
2-Chlorotoluene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	95-49-8	W
4-Chlorotoluene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	106-43-4	W
1,2-Dibromo-3-chloropropane	<182	ug/kg	500	182	2	06/07/19 07:45	06/07/19 18:06	96-12-8	W
Dibromochloromethane	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	124-48-1	W
1,2-Dibromoethane (EDB)	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	106-93-4	W
Dibromomethane	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	74-95-3	W
1,2-Dichlorobenzene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	95-50-1	W
1,3-Dichlorobenzene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	541-73-1	W
1,4-Dichlorobenzene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	106-46-7	W
Dichlorodifluoromethane	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	75-71-8	W
1,1-Dichloroethane	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	75-34-3	W
1,2-Dichloroethane	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	107-06-2	W
1,1-Dichloroethene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	75-35-4	W
cis-1,2-Dichloroethene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	156-59-2	W
trans-1,2-Dichloroethene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	156-60-5	W
1,2-Dichloropropane	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	78-87-5	W
1,3-Dichloropropane	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	142-28-9	W
2,2-Dichloropropane	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	594-20-7	W
1,1-Dichloropropene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	563-58-6	W
cis-1,3-Dichloropropene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	10061-01-5	W
trans-1,3-Dichloropropene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	10061-02-6	W
Diisopropyl ether	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	108-20-3	W
Ethylbenzene	3150	ug/kg	158	65.7	2	06/07/19 07:45	06/07/19 18:06	100-41-4	
Hexachloro-1,3-butadiene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	87-68-3	W
Isopropylbenzene (Cumene)	1330	ug/kg	158	65.7	2	06/07/19 07:45	06/07/19 18:06	98-82-8	
p-Isopropyltoluene	1340	ug/kg	158	65.7	2	06/07/19 07:45	06/07/19 18:06	99-87-6	
Methylene Chloride	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	75-09-2	W
Methyl-tert-butyl ether	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	1634-04-4	W
Naphthalene	2010	ug/kg	657	105	2	06/07/19 07:45	06/07/19 18:06	91-20-3	
n-Propylbenzene	2280	ug/kg	158	65.7	2	06/07/19 07:45	06/07/19 18:06	103-65-1	
Styrene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	100-42-5	W
1,1,1,2-Tetrachloroethane	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	630-20-6	W
1,1,2,2-Tetrachloroethane	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	79-34-5	W
Tetrachloroethene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	127-18-4	W
Toluene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	108-88-3	W
1,2,3-Trichlorobenzene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	87-61-6	W
1,2,4-Trichlorobenzene	<95.1	ug/kg	500	95.1	2	06/07/19 07:45	06/07/19 18:06	120-82-1	W
1,1,1-Trichloroethane	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	71-55-6	W
1,1,2-Trichloroethane	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	79-00-5	W
Trichloroethene	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	79-01-6	W
Trichlorofluoromethane	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	75-69-4	W
1,2,3-Trichloropropane	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	96-18-4	W
1,2,4-Trimethylbenzene	1200	ug/kg	158	65.7	2	06/07/19 07:45	06/07/19 18:06	95-63-6	
1,3,5-Trimethylbenzene	3190	ug/kg	158	65.7	2	06/07/19 07:45	06/07/19 18:06	108-67-8	

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ANALYTICAL RESULTS

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Sample: FGS-1 4.5'-6.5' **Lab ID: 40188973002** Collected: 06/05/19 17:00 Received: 06/06/19 13:24 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Vinyl chloride	<50.0	ug/kg	120	50.0	2	06/07/19 07:45	06/07/19 18:06	75-01-4	W
m&p-Xylene	2120	ug/kg	316	131	2	06/07/19 07:45	06/07/19 18:06	179601-23-1	
o-Xylene	66.4J	ug/kg	158	65.7	2	06/07/19 07:45	06/07/19 18:06	95-47-6	
Surrogates									
Dibromofluoromethane (S)	102	%	57-146		2	06/07/19 07:45	06/07/19 18:06	1868-53-7	D3
Toluene-d8 (S)	94	%	64-134		2	06/07/19 07:45	06/07/19 18:06	2037-26-5	
4-Bromofluorobenzene (S)	119	%	54-126		2	06/07/19 07:45	06/07/19 18:06	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	24.0	%	0.10	0.10	1		06/11/19 10:49		

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ANALYTICAL RESULTS

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Sample: FGS-1 12'-14' **Lab ID: 40188973003** Collected: 06/05/19 17:10 Received: 06/06/19 13:24 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
Diesel Range Organics	1.5J	mg/kg	4.5	1.4	1	06/12/19 08:48	06/13/19 10:58		DC
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Gasoline Range Organics	<3.5	mg/kg	6.9	3.5	1	06/10/19 09:00	06/10/19 13:57		
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Lead	9.4	mg/kg	2.6	0.79	1	06/12/19 09:00	06/12/19 15:54	7439-92-1	
8270 MSSV PAH by SIM Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<5.4	ug/kg	17.8	5.4	1	06/12/19 08:21	06/12/19 16:14	83-32-9	
Acenaphthylene	<4.6	ug/kg	15.2	4.6	1	06/12/19 08:21	06/12/19 16:14	208-96-8	
Anthracene	<7.9	ug/kg	26.2	7.9	1	06/12/19 08:21	06/12/19 16:14	120-12-7	
Benzo(a)anthracene	<4.4	ug/kg	14.6	4.4	1	06/12/19 08:21	06/12/19 16:14	56-55-3	
Benzo(a)pyrene	<3.5	ug/kg	11.6	3.5	1	06/12/19 08:21	06/12/19 16:14	50-32-8	
Benzo(b)fluoranthene	<3.9	ug/kg	13.0	3.9	1	06/12/19 08:21	06/12/19 16:14	205-99-2	
Benzo(g,h,i)perylene	<2.8	ug/kg	9.3	2.8	1	06/12/19 08:21	06/12/19 16:14	191-24-2	
Benzo(k)fluoranthene	<3.5	ug/kg	11.5	3.5	1	06/12/19 08:21	06/12/19 16:14	207-08-9	
Chrysene	<4.7	ug/kg	15.5	4.7	1	06/12/19 08:21	06/12/19 16:14	218-01-9	
Dibenz(a,h)anthracene	<3.1	ug/kg	10.3	3.1	1	06/12/19 08:21	06/12/19 16:14	53-70-3	
Fluoranthene	<7.2	ug/kg	24.0	7.2	1	06/12/19 08:21	06/12/19 16:14	206-44-0	
Fluorene	<5.7	ug/kg	19.1	5.7	1	06/12/19 08:21	06/12/19 16:14	86-73-7	
Indeno(1,2,3-cd)pyrene	<3.0	ug/kg	10.1	3.0	1	06/12/19 08:21	06/12/19 16:14	193-39-5	
1-Methylnaphthalene	<5.6	ug/kg	18.5	5.6	1	06/12/19 08:21	06/12/19 16:14	90-12-0	
2-Methylnaphthalene	<6.9	ug/kg	23.1	6.9	1	06/12/19 08:21	06/12/19 16:14	91-57-6	
Naphthalene	<11.6	ug/kg	38.8	11.6	1	06/12/19 08:21	06/12/19 16:14	91-20-3	
Phenanthrene	<16.1	ug/kg	53.6	16.1	1	06/12/19 08:21	06/12/19 16:14	85-01-8	
Pyrene	<6.2	ug/kg	20.7	6.2	1	06/12/19 08:21	06/12/19 16:14	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	56	%	28-99		1	06/12/19 08:21	06/12/19 16:14	321-60-8	
Terphenyl-d14 (S)	55	%	10-107		1	06/12/19 08:21	06/12/19 16:14	1718-51-0	
8260 MSV Med Level Normal List Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Benzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	75-25-2	L1,W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/07/19 07:45	06/07/19 15:01	74-83-9	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	104-51-8	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	98-06-6	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/07/19 07:45	06/07/19 15:01	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/07/19 07:45	06/07/19 15:01	67-66-3	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Sample: FGS-1 12'-14' **Lab ID:** 40188973003 Collected: 06/05/19 17:10 Received: 06/06/19 13:24 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	74-87-3	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	106-43-4	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	06/07/19 07:45	06/07/19 15:01	96-12-8	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	124-48-1	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	106-93-4	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	74-95-3	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	95-50-1	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	541-73-1	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	106-46-7	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	75-71-8	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	75-34-3	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	107-06-2	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	75-35-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	156-59-2	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	156-60-5	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	78-87-5	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	142-28-9	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	594-20-7	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	563-58-6	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	10061-01-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	10061-02-6	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	98-82-8	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	99-87-6	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	75-09-2	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	1634-04-4	W
Naphthalene	<40.0	ug/kg	250	40.0	1	06/07/19 07:45	06/07/19 15:01	91-20-3	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	103-65-1	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	100-42-5	W
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	630-20-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	79-34-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	108-88-3	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	87-61-6	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	06/07/19 07:45	06/07/19 15:01	120-82-1	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	71-55-6	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	79-00-5	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	75-69-4	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	96-18-4	W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	95-63-6	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	108-67-8	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1902429 FMR GAS STATION-ADLER
Pace Project No.: 40188973

Sample: FGS-1 12'-14' **Lab ID: 40188973003** Collected: 06/05/19 17:10 Received: 06/06/19 13:24 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	75-01-4	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/07/19 07:45	06/07/19 15:01	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:01	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	108	%	57-146		1	06/07/19 07:45	06/07/19 15:01	1868-53-7	
Toluene-d8 (S)	94	%	64-134		1	06/07/19 07:45	06/07/19 15:01	2037-26-5	
4-Bromofluorobenzene (S)	92	%	54-126		1	06/07/19 07:45	06/07/19 15:01	460-00-4	
Percent Moisture		Analytical Method: ASTM D2974-87							
Percent Moisture	27.7	%	0.10	0.10	1		06/11/19 14:55		

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ANALYTICAL RESULTS

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Sample: FGS-2 0'-3' **Lab ID:** 40188973004 Collected: 06/05/19 16:15 Received: 06/06/19 13:24 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
Diesel Range Organics	61.2	mg/kg	4.2	1.2	1	06/14/19 08:42	06/17/19 08:45		DC
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Gasoline Range Organics	23.8	mg/kg	6.1	3.0	1	06/10/19 09:00	06/10/19 14:23		GO
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Lead	142	mg/kg	2.4	0.71	1	06/12/19 09:00	06/12/19 15:56	7439-92-1	
8270 MSSV PAH by SIM Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	14.8J	ug/kg	31.2	9.4	2	06/12/19 08:21	06/12/19 17:23	83-32-9	
Acenaphthylene	19.6J	ug/kg	26.6	8.0	2	06/12/19 08:21	06/12/19 17:23	208-96-8	
Anthracene	68.2	ug/kg	46.0	13.8	2	06/12/19 08:21	06/12/19 17:23	120-12-7	
Benzo(a)anthracene	143	ug/kg	25.7	7.7	2	06/12/19 08:21	06/12/19 17:23	56-55-3	
Benzo(a)pyrene	125	ug/kg	20.3	6.1	2	06/12/19 08:21	06/12/19 17:23	50-32-8	
Benzo(b)fluoranthene	135	ug/kg	22.8	6.8	2	06/12/19 08:21	06/12/19 17:23	205-99-2	
Benzo(g,h,i)perylene	93.0	ug/kg	16.4	4.9	2	06/12/19 08:21	06/12/19 17:23	191-24-2	
Benzo(k)fluoranthene	135	ug/kg	20.2	6.1	2	06/12/19 08:21	06/12/19 17:23	207-08-9	
Chrysene	199	ug/kg	27.1	8.2	2	06/12/19 08:21	06/12/19 17:23	218-01-9	
Dibenz(a,h)anthracene	34.1	ug/kg	18.0	5.4	2	06/12/19 08:21	06/12/19 17:23	53-70-3	
Fluoranthene	261	ug/kg	42.1	12.6	2	06/12/19 08:21	06/12/19 17:23	206-44-0	
Fluorene	28.4J	ug/kg	33.4	10.0	2	06/12/19 08:21	06/12/19 17:23	86-73-7	
Indeno(1,2,3-cd)pyrene	65.5	ug/kg	17.8	5.3	2	06/12/19 08:21	06/12/19 17:23	193-39-5	
1-Methylnaphthalene	794	ug/kg	32.5	9.7	2	06/12/19 08:21	06/12/19 17:23	90-12-0	
2-Methylnaphthalene	1030	ug/kg	40.4	12.1	2	06/12/19 08:21	06/12/19 17:23	91-57-6	
Naphthalene	607	ug/kg	68.1	20.4	2	06/12/19 08:21	06/12/19 17:23	91-20-3	
Phenanthrene	549	ug/kg	94.0	28.2	2	06/12/19 08:21	06/12/19 17:23	85-01-8	
Pyrene	195	ug/kg	36.3	10.9	2	06/12/19 08:21	06/12/19 17:23	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	61	%	28-99		2	06/12/19 08:21	06/12/19 17:23	321-60-8	
Terphenyl-d14 (S)	55	%	10-107		2	06/12/19 08:21	06/12/19 17:23	1718-51-0	
8260 MSV Med Level Normal List Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Benzene	254	ug/kg	72.8	30.3	1	06/07/19 07:45	06/07/19 15:24	71-43-2	
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	75-25-2	L1,W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/07/19 07:45	06/07/19 15:24	74-83-9	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	104-51-8	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	98-06-6	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/07/19 07:45	06/07/19 15:24	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/07/19 07:45	06/07/19 15:24	67-66-3	W

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ANALYTICAL RESULTS

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Sample: FGS-2 0'-3' Lab ID: 40188973004 Collected: 06/05/19 16:15 Received: 06/06/19 13:24 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	74-87-3	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	106-43-4	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	06/07/19 07:45	06/07/19 15:24	96-12-8	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	124-48-1	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	106-93-4	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	74-95-3	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	95-50-1	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	541-73-1	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	106-46-7	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	75-71-8	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	75-34-3	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	107-06-2	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	75-35-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	156-59-2	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	156-60-5	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	78-87-5	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	142-28-9	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	594-20-7	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	563-58-6	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	10061-01-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	10061-02-6	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	98-82-8	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	99-87-6	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	75-09-2	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	1634-04-4	W
Naphthalene	54.4J	ug/kg	303	48.6	1	06/07/19 07:45	06/07/19 15:24	91-20-3	
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	103-65-1	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	100-42-5	W
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	630-20-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	79-34-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	127-18-4	W
Toluene	48.8J	ug/kg	72.8	30.3	1	06/07/19 07:45	06/07/19 15:24	108-88-3	
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	87-61-6	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	06/07/19 07:45	06/07/19 15:24	120-82-1	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	71-55-6	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	79-00-5	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	75-69-4	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	96-18-4	W
1,2,4-Trimethylbenzene	51.2J	ug/kg	72.8	30.3	1	06/07/19 07:45	06/07/19 15:24	95-63-6	
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	108-67-8	W

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ANALYTICAL RESULTS

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Sample: FGS-2 0'-3' **Lab ID: 40188973004** Collected: 06/05/19 16:15 Received: 06/06/19 13:24 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:24	75-01-4	W
m&p-Xylene	64.7J	ug/kg	146	60.6	1	06/07/19 07:45	06/07/19 15:24	179601-23-1	
o-Xylene	60.5J	ug/kg	72.8	30.3	1	06/07/19 07:45	06/07/19 15:24	95-47-6	
Surrogates									
Dibromofluoromethane (S)	99	%	57-146		1	06/07/19 07:45	06/07/19 15:24	1868-53-7	
Toluene-d8 (S)	88	%	64-134		1	06/07/19 07:45	06/07/19 15:24	2037-26-5	
4-Bromofluorobenzene (S)	86	%	54-126		1	06/07/19 07:45	06/07/19 15:24	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	17.6	%	0.10	0.10	1		06/11/19 10:49		

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ANALYTICAL RESULTS

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Sample: FGS-2 6'-8' **Lab ID:** 40188973005 Collected: 06/05/19 16:20 Received: 06/06/19 13:24 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
Diesel Range Organics	27.6	mg/kg	4.9	1.5	1	06/14/19 08:42	06/17/19 08:54		DC
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Gasoline Range Organics	460	mg/kg	53.7	26.9	8	06/10/19 09:00	06/11/19 09:03		GO
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Lead	9.5	mg/kg	2.6	0.78	1	06/12/19 09:00	06/12/19 15:58	7439-92-1	
8270 MSSV PAH by SIM Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<5.2	ug/kg	17.3	5.2	1	06/13/19 09:43	06/13/19 19:27	83-32-9	
Acenaphthylene	<4.4	ug/kg	14.8	4.4	1	06/13/19 09:43	06/13/19 19:27	208-96-8	
Anthracene	<7.7	ug/kg	25.5	7.7	1	06/13/19 09:43	06/13/19 19:27	120-12-7	
Benzo(a)anthracene	<4.3	ug/kg	14.2	4.3	1	06/13/19 09:43	06/13/19 19:27	56-55-3	
Benzo(a)pyrene	<3.4	ug/kg	11.2	3.4	1	06/13/19 09:43	06/13/19 19:27	50-32-8	
Benzo(b)fluoranthene	<3.8	ug/kg	12.6	3.8	1	06/13/19 09:43	06/13/19 19:27	205-99-2	
Benzo(g,h,i)perylene	<2.7	ug/kg	9.1	2.7	1	06/13/19 09:43	06/13/19 19:27	191-24-2	
Benzo(k)fluoranthene	<3.4	ug/kg	11.2	3.4	1	06/13/19 09:43	06/13/19 19:27	207-08-9	
Chrysene	<4.5	ug/kg	15.0	4.5	1	06/13/19 09:43	06/13/19 19:27	218-01-9	
Dibenz(a,h)anthracene	<3.0	ug/kg	10	3.0	1	06/13/19 09:43	06/13/19 19:27	53-70-3	
Fluoranthene	<7.0	ug/kg	23.3	7.0	1	06/13/19 09:43	06/13/19 19:27	206-44-0	
Fluorene	<5.6	ug/kg	18.5	5.6	1	06/13/19 09:43	06/13/19 19:27	86-73-7	
Indeno(1,2,3-cd)pyrene	<3.0	ug/kg	9.8	3.0	1	06/13/19 09:43	06/13/19 19:27	193-39-5	
1-Methylnaphthalene	48.9	ug/kg	18.0	5.4	1	06/13/19 09:43	06/13/19 19:27	90-12-0	
2-Methylnaphthalene	118	ug/kg	22.4	6.7	1	06/13/19 09:43	06/13/19 19:27	91-57-6	
Naphthalene	253	ug/kg	37.7	11.3	1	06/13/19 09:43	06/13/19 19:27	91-20-3	
Phenanthrene	<15.6	ug/kg	52.1	15.6	1	06/13/19 09:43	06/13/19 19:27	85-01-8	
Pyrene	<6.1	ug/kg	20.1	6.1	1	06/13/19 09:43	06/13/19 19:27	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	53	%	28-99		1	06/13/19 09:43	06/13/19 19:27	321-60-8	
Terphenyl-d14 (S)	50	%	10-107		1	06/13/19 09:43	06/13/19 19:27	1718-51-0	
8260 MSV Med Level Normal List Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Benzene	38.3J	ug/kg	80.6	33.6	1	06/07/19 07:45	06/07/19 17:20	71-43-2	
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	75-25-2	L1,W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/07/19 07:45	06/07/19 17:20	74-83-9	W
n-Butylbenzene	690	ug/kg	80.6	33.6	1	06/07/19 07:45	06/07/19 17:20	104-51-8	
sec-Butylbenzene	253	ug/kg	80.6	33.6	1	06/07/19 07:45	06/07/19 17:20	135-98-8	
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	98-06-6	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/07/19 07:45	06/07/19 17:20	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/07/19 07:45	06/07/19 17:20	67-66-3	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Sample: FGS-2 6'-8' Lab ID: 40188973005 Collected: 06/05/19 16:20 Received: 06/06/19 13:24 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	74-87-3	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	106-43-4	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	06/07/19 07:45	06/07/19 17:20	96-12-8	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	124-48-1	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	106-93-4	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	74-95-3	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	95-50-1	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	541-73-1	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	106-46-7	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	75-71-8	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	75-34-3	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	107-06-2	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	75-35-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	156-59-2	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	156-60-5	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	78-87-5	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	142-28-9	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	594-20-7	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	563-58-6	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	10061-01-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	10061-02-6	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	108-20-3	W
Ethylbenzene	389	ug/kg	80.6	33.6	1	06/07/19 07:45	06/07/19 17:20	100-41-4	
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	87-68-3	W
Isopropylbenzene (Cumene)	421	ug/kg	80.6	33.6	1	06/07/19 07:45	06/07/19 17:20	98-82-8	
p-Isopropyltoluene	449	ug/kg	80.6	33.6	1	06/07/19 07:45	06/07/19 17:20	99-87-6	
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	75-09-2	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	1634-04-4	W
Naphthalene	540	ug/kg	336	53.8	1	06/07/19 07:45	06/07/19 17:20	91-20-3	
n-Propylbenzene	738	ug/kg	80.6	33.6	1	06/07/19 07:45	06/07/19 17:20	103-65-1	
Styrene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	100-42-5	W
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	630-20-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	79-34-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	108-88-3	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	87-61-6	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	06/07/19 07:45	06/07/19 17:20	120-82-1	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	71-55-6	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	79-00-5	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	75-69-4	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	96-18-4	W
1,2,4-Trimethylbenzene	2890	ug/kg	80.6	33.6	1	06/07/19 07:45	06/07/19 17:20	95-63-6	
1,3,5-Trimethylbenzene	997	ug/kg	80.6	33.6	1	06/07/19 07:45	06/07/19 17:20	108-67-8	

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ANALYTICAL RESULTS

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Sample: FGS-2 6'-8' **Lab ID: 40188973005** Collected: 06/05/19 16:20 Received: 06/06/19 13:24 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	75-01-4	W
m&p-Xylene	1120	ug/kg	161	67.2	1	06/07/19 07:45	06/07/19 17:20	179601-23-1	
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 17:20	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	104	%	57-146		1	06/07/19 07:45	06/07/19 17:20	1868-53-7	
Toluene-d8 (S)	92	%	64-134		1	06/07/19 07:45	06/07/19 17:20	2037-26-5	
4-Bromofluorobenzene (S)	107	%	54-126		1	06/07/19 07:45	06/07/19 17:20	460-00-4	
Percent Moisture		Analytical Method: ASTM D2974-87							
Percent Moisture	25.6	%	0.10	0.10	1		06/11/19 10:49		

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ANALYTICAL RESULTS

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Sample: FGS-2 12'-14' **Lab ID:** 40188973006 Collected: 06/05/19 16:40 Received: 06/06/19 13:24 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
Diesel Range Organics	<1.4	mg/kg	4.7	1.4	1	06/14/19 08:42	06/17/19 09:03		
WIGRO GCV Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.									
Gasoline Range Organics	<3.5	mg/kg	6.9	3.5	1	06/10/19 09:00	06/10/19 14:49		
6010 MET ICP Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Lead	10.2	mg/kg	2.8	0.83	1	06/12/19 09:00	06/12/19 16:01	7439-92-1	
8270 MSSV PAH by SIM Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<5.4	ug/kg	17.9	5.4	1	06/13/19 09:43	06/13/19 19:44	83-32-9	
Acenaphthylene	<4.6	ug/kg	15.2	4.6	1	06/13/19 09:43	06/13/19 19:44	208-96-8	
Anthracene	<7.9	ug/kg	26.3	7.9	1	06/13/19 09:43	06/13/19 19:44	120-12-7	
Benzo(a)anthracene	<4.4	ug/kg	14.7	4.4	1	06/13/19 09:43	06/13/19 19:44	56-55-3	
Benzo(a)pyrene	<3.5	ug/kg	11.6	3.5	1	06/13/19 09:43	06/13/19 19:44	50-32-8	
Benzo(b)fluoranthene	<3.9	ug/kg	13.0	3.9	1	06/13/19 09:43	06/13/19 19:44	205-99-2	
Benzo(g,h,i)perylene	<2.8	ug/kg	9.4	2.8	1	06/13/19 09:43	06/13/19 19:44	191-24-2	
Benzo(k)fluoranthene	<3.5	ug/kg	11.6	3.5	1	06/13/19 09:43	06/13/19 19:44	207-08-9	
Chrysene	<4.7	ug/kg	15.5	4.7	1	06/13/19 09:43	06/13/19 19:44	218-01-9	
Dibenz(a,h)anthracene	<3.1	ug/kg	10.3	3.1	1	06/13/19 09:43	06/13/19 19:44	53-70-3	
Fluoranthene	<7.2	ug/kg	24.1	7.2	1	06/13/19 09:43	06/13/19 19:44	206-44-0	
Fluorene	<5.7	ug/kg	19.1	5.7	1	06/13/19 09:43	06/13/19 19:44	86-73-7	
Indeno(1,2,3-cd)pyrene	<3.0	ug/kg	10.1	3.0	1	06/13/19 09:43	06/13/19 19:44	193-39-5	
1-Methylnaphthalene	<5.6	ug/kg	18.6	5.6	1	06/13/19 09:43	06/13/19 19:44	90-12-0	
2-Methylnaphthalene	<6.9	ug/kg	23.1	6.9	1	06/13/19 09:43	06/13/19 19:44	91-57-6	
Naphthalene	<11.7	ug/kg	38.9	11.7	1	06/13/19 09:43	06/13/19 19:44	91-20-3	
Phenanthrene	<16.1	ug/kg	53.7	16.1	1	06/13/19 09:43	06/13/19 19:44	85-01-8	
Pyrene	<6.2	ug/kg	20.8	6.2	1	06/13/19 09:43	06/13/19 19:44	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	51	%	28-99		1	06/13/19 09:43	06/13/19 19:44	321-60-8	
Terphenyl-d14 (S)	48	%	10-107		1	06/13/19 09:43	06/13/19 19:44	1718-51-0	
8260 MSV Med Level Normal List Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Benzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	75-25-2	L1,W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/07/19 07:45	06/07/19 15:47	74-83-9	W
n-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	104-51-8	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	98-06-6	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/07/19 07:45	06/07/19 15:47	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/07/19 07:45	06/07/19 15:47	67-66-3	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Sample: FGS-2 12'-14' Lab ID: 40188973006 Collected: 06/05/19 16:40 Received: 06/06/19 13:24 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	74-87-3	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	106-43-4	W
1,2-Dibromo-3-chloropropane	<91.2	ug/kg	250	91.2	1	06/07/19 07:45	06/07/19 15:47	96-12-8	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	124-48-1	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	106-93-4	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	74-95-3	W
1,2-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	95-50-1	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	541-73-1	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	106-46-7	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	75-71-8	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	75-34-3	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	107-06-2	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	75-35-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	156-59-2	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	156-60-5	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	78-87-5	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	142-28-9	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	594-20-7	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	563-58-6	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	10061-01-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	10061-02-6	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	100-41-4	W
Hexachloro-1,3-butadiene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	98-82-8	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	99-87-6	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	75-09-2	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	1634-04-4	W
Naphthalene	<40.0	ug/kg	250	40.0	1	06/07/19 07:45	06/07/19 15:47	91-20-3	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	103-65-1	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	100-42-5	W
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	630-20-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	79-34-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	108-88-3	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	87-61-6	W
1,2,4-Trichlorobenzene	<47.6	ug/kg	250	47.6	1	06/07/19 07:45	06/07/19 15:47	120-82-1	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	71-55-6	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	79-00-5	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	75-69-4	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	96-18-4	W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	95-63-6	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	108-67-8	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Sample: FGS-2 12'-14' **Lab ID: 40188973006** Collected: 06/05/19 16:40 Received: 06/06/19 13:24 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	75-01-4	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/07/19 07:45	06/07/19 15:47	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/07/19 07:45	06/07/19 15:47	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	110	%	57-146		1	06/07/19 07:45	06/07/19 15:47	1868-53-7	
Toluene-d8 (S)	95	%	64-134		1	06/07/19 07:45	06/07/19 15:47	2037-26-5	
4-Bromofluorobenzene (S)	92	%	54-126		1	06/07/19 07:45	06/07/19 15:47	460-00-4	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	27.8	%	0.10	0.10	1		06/11/19 10:49		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1902429 FMR GAS STATION-ADLER
Pace Project No.: 40188973

QC Batch:	323819	Analysis Method:	WI MOD GRO
QC Batch Method:	TPH GRO/PVOC WI ext.	Analysis Description:	WIGRO Solid GCV
Associated Lab Samples:	40188973001, 40188973002, 40188973003, 40188973004, 40188973005, 40188973006		

METHOD BLANK:	1880651	Matrix:	Solid
Associated Lab Samples:	40188973001, 40188973002, 40188973003, 40188973004, 40188973005, 40188973006		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	<1.6	5.0	06/10/19 10:06	

Parameter	Units	1880652		1880653		% Rec Limits	RPD	Max RPD	Qualifiers
		Spike Conc.	LCS Result	LCSD Result	LCS % Rec				
Gasoline Range Organics	mg/kg	10	9.0	8.5	90	85	80-120	6	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

QC Batch: 323958

Analysis Method: EPA 6010

QC Batch Method: EPA 3050

Analysis Description: 6010 MET

Associated Lab Samples: 40188973001, 40188973002, 40188973003, 40188973004, 40188973005, 40188973006

METHOD BLANK: 1881095

Matrix: Solid

Associated Lab Samples: 40188973001, 40188973002, 40188973003, 40188973004, 40188973005, 40188973006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	<0.60	2.0	06/12/19 15:31	

LABORATORY CONTROL SAMPLE & LCSD: 1881096

1881097

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Lead	mg/kg	50	48.1	47.1	96	94	80-120	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1881098

1881099

Parameter	Units	40188973001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	mg/kg	10.3	61.4	61.2	64.2	65.3	88	90	75-125	2	20	

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QUALITY CONTROL DATA

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

QC Batch: 323737 Analysis Method: EPA 8260
 QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
 Associated Lab Samples: 40188973001, 40188973002, 40188973003, 40188973004, 40188973005, 40188973006

METHOD BLANK: 1879662 Matrix: Solid
 Associated Lab Samples: 40188973001, 40188973002, 40188973003, 40188973004, 40188973005, 40188973006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	06/07/19 09:35	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	06/07/19 09:35	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	06/07/19 09:35	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	06/07/19 09:35	
1,1-Dichloroethane	ug/kg	<17.6	50.0	06/07/19 09:35	
1,1-Dichloroethene	ug/kg	<17.6	50.0	06/07/19 09:35	
1,1-Dichloropropene	ug/kg	<14.0	50.0	06/07/19 09:35	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	06/07/19 09:35	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	06/07/19 09:35	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	06/07/19 09:35	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	06/07/19 09:35	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	06/07/19 09:35	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	06/07/19 09:35	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	06/07/19 09:35	
1,2-Dichloroethane	ug/kg	<15.0	50.0	06/07/19 09:35	
1,2-Dichloropropane	ug/kg	<16.8	50.0	06/07/19 09:35	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	06/07/19 09:35	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	06/07/19 09:35	
1,3-Dichloropropane	ug/kg	<12.0	50.0	06/07/19 09:35	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	06/07/19 09:35	
2,2-Dichloropropane	ug/kg	<12.6	50.0	06/07/19 09:35	
2-Chlorotoluene	ug/kg	<15.8	50.0	06/07/19 09:35	
4-Chlorotoluene	ug/kg	<13.0	50.0	06/07/19 09:35	
Benzene	ug/kg	<9.2	20.0	06/07/19 09:35	
Bromobenzene	ug/kg	<20.6	50.0	06/07/19 09:35	
Bromochloromethane	ug/kg	<21.4	50.0	06/07/19 09:35	
Bromodichloromethane	ug/kg	<9.8	50.0	06/07/19 09:35	
Bromoform	ug/kg	<19.8	50.0	06/07/19 09:35	
Bromomethane	ug/kg	<69.9	250	06/07/19 09:35	
Carbon tetrachloride	ug/kg	<12.1	50.0	06/07/19 09:35	
Chlorobenzene	ug/kg	<14.8	50.0	06/07/19 09:35	
Chloroethane	ug/kg	<67.0	250	06/07/19 09:35	
Chloroform	ug/kg	<46.4	250	06/07/19 09:35	
Chloromethane	ug/kg	<20.4	50.0	06/07/19 09:35	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	06/07/19 09:35	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	06/07/19 09:35	
Dibromochloromethane	ug/kg	<17.9	50.0	06/07/19 09:35	
Dibromomethane	ug/kg	<19.3	50.0	06/07/19 09:35	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	06/07/19 09:35	
Diisopropyl ether	ug/kg	<17.7	50.0	06/07/19 09:35	
Ethylbenzene	ug/kg	<12.4	50.0	06/07/19 09:35	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

METHOD BLANK: 1879662

Matrix: Solid

Associated Lab Samples: 40188973001, 40188973002, 40188973003, 40188973004, 40188973005, 40188973006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	06/07/19 09:35	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	06/07/19 09:35	
m&p-Xylene	ug/kg	<34.4	100	06/07/19 09:35	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	06/07/19 09:35	
Methylene Chloride	ug/kg	<16.2	50.0	06/07/19 09:35	
n-Butylbenzene	ug/kg	<10.5	50.0	06/07/19 09:35	
n-Propylbenzene	ug/kg	<11.6	50.0	06/07/19 09:35	
Naphthalene	ug/kg	<40.0	250	06/07/19 09:35	
o-Xylene	ug/kg	<14.0	50.0	06/07/19 09:35	
p-Isopropyltoluene	ug/kg	<12.0	50.0	06/07/19 09:35	
sec-Butylbenzene	ug/kg	<11.9	50.0	06/07/19 09:35	
Styrene	ug/kg	<9.0	50.0	06/07/19 09:35	
tert-Butylbenzene	ug/kg	<9.5	50.0	06/07/19 09:35	
Tetrachloroethene	ug/kg	<12.9	50.0	06/07/19 09:35	
Toluene	ug/kg	<11.2	50.0	06/07/19 09:35	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	06/07/19 09:35	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	06/07/19 09:35	
Trichloroethene	ug/kg	<23.6	50.0	06/07/19 09:35	
Trichlorofluoromethane	ug/kg	<24.7	50.0	06/07/19 09:35	
Vinyl chloride	ug/kg	<21.1	50.0	06/07/19 09:35	
4-Bromofluorobenzene (S)	%	96	54-126	06/07/19 09:35	
Dibromofluoromethane (S)	%	106	57-146	06/07/19 09:35	
Toluene-d8 (S)	%	90	64-134	06/07/19 09:35	

LABORATORY CONTROL SAMPLE: 1879663

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2310	92	70-132	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2960	119	70-130	
1,1,2-Trichloroethane	ug/kg	2500	2640	106	70-130	
1,1-Dichloroethane	ug/kg	2500	2420	97	70-130	
1,1-Dichloroethene	ug/kg	2500	2460	98	77-126	
1,2,4-Trichlorobenzene	ug/kg	2500	1870	75	66-130	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2330	93	54-129	
1,2-Dibromoethane (EDB)	ug/kg	2500	2630	105	70-130	
1,2-Dichlorobenzene	ug/kg	2500	2430	97	70-130	
1,2-Dichloroethane	ug/kg	2500	2810	113	70-134	
1,2-Dichloropropane	ug/kg	2500	2550	102	74-124	
1,3-Dichlorobenzene	ug/kg	2500	2490	100	70-130	
1,4-Dichlorobenzene	ug/kg	2500	2600	104	70-130	
Benzene	ug/kg	2500	2500	100	70-130	
Bromodichloromethane	ug/kg	2500	2660	106	70-130	
Bromoform	ug/kg	2500	3050	122	47-115 L1	
Bromomethane	ug/kg	2500	2980	119	64-165	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

LABORATORY CONTROL SAMPLE: 1879663

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/kg	2500	2260	91	70-131	
Chlorobenzene	ug/kg	2500	2570	103	70-130	
Chloroethane	ug/kg	2500	2500	100	28-197	
Chloroform	ug/kg	2500	2460	99	80-131	
Chloromethane	ug/kg	2500	1660	66	45-118	
cis-1,2-Dichloroethene	ug/kg	2500	2350	94	70-130	
cis-1,3-Dichloropropene	ug/kg	2500	2480	99	70-130	
Dibromochloromethane	ug/kg	2500	2720	109	70-130	
Dichlorodifluoromethane	ug/kg	2500	1430	57	38-108	
Ethylbenzene	ug/kg	2500	2430	97	82-122	
Isopropylbenzene (Cumene)	ug/kg	2500	2490	100	70-130	
m&p-Xylene	ug/kg	5000	5110	102	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2800	112	70-130	
Methylene Chloride	ug/kg	2500	2840	113	70-130	
o-Xylene	ug/kg	2500	2490	99	70-130	
Styrene	ug/kg	2500	2750	110	70-130	
Tetrachloroethene	ug/kg	2500	2150	86	70-130	
Toluene	ug/kg	2500	2350	94	80-121	
trans-1,2-Dichloroethene	ug/kg	2500	2430	97	70-130	
trans-1,3-Dichloropropene	ug/kg	2500	2440	98	70-130	
Trichloroethene	ug/kg	2500	2510	100	70-130	
Trichlorofluoromethane	ug/kg	2500	2560	102	81-141	
Vinyl chloride	ug/kg	2500	1990	80	68-121	
4-Bromofluorobenzene (S)	%			112	54-126	
Dibromofluoromethane (S)	%			107	57-146	
Toluene-d8 (S)	%			97	64-134	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1879664 1879665

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40188975005 Result	Spike Conc.	Spike Conc.	Conc.								
1,1,1-Trichloroethane	ug/kg	<25.0	1780	1780	1530	1500	86	84	64-132	2	20		
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	1780	1780	2100	2040	118	115	70-132	3	20		
1,1,2-Trichloroethane	ug/kg	<25.0	1780	1780	1810	1830	102	103	70-130	1	20		
1,1-Dichloroethane	ug/kg	<25.0	1780	1780	1650	1700	93	95	70-130	3	20		
1,1-Dichloroethene	ug/kg	<25.0	1780	1780	1590	1600	90	90	65-126	1	21		
1,2,4-Trichlorobenzene	ug/kg	<47.6	1780	1780	1400	1380	79	78	66-139	2	20		
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	1780	1780	1430	1450	80	82	47-146	2	23		
1,2-Dibromoethane (EDB)	ug/kg	<25.0	1780	1780	1780	1840	100	104	70-130	3	20		
1,2-Dichlorobenzene	ug/kg	<25.0	1780	1780	1820	1870	102	105	70-130	3	20		
1,2-Dichloroethane	ug/kg	<25.0	1780	1780	1970	1940	111	109	70-136	2	20		
1,2-Dichloropropane	ug/kg	<25.0	1780	1780	1780	1830	100	103	74-124	3	20		
1,3-Dichlorobenzene	ug/kg	<25.0	1780	1780	1710	1730	97	97	70-130	1	20		
1,4-Dichlorobenzene	ug/kg	<25.0	1780	1780	1850	1880	104	106	70-130	2	20		

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QUALITY CONTROL DATA

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1879664 1879665												
Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		40188975005	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Benzene	ug/kg	<25.0	1780	1780	1710	1740	96	98	70-130	2	20	
Bromodichloromethane	ug/kg	<25.0	1780	1780	1830	1810	103	102	70-130	1	20	
Bromoform	ug/kg	<25.0	1780	1780	1980	1930	112	109	47-129	3	20	
Bromomethane	ug/kg	<69.9	1780	1780	2030	1780	114	100	41-180	13	20	
Carbon tetrachloride	ug/kg	<25.0	1780	1780	1470	1390	83	78	58-133	6	20	
Chlorobenzene	ug/kg	<25.0	1780	1780	1780	1790	100	101	70-130	0	20	
Chloroethane	ug/kg	<67.0	1780	1780	1820	1710	102	96	28-197	6	20	
Chloroform	ug/kg	<46.4	1780	1780	1760	1770	99	100	80-131	1	20	
Chloromethane	ug/kg	<25.0	1780	1780	1540	1510	87	85	26-118	2	20	
cis-1,2-Dichloroethene	ug/kg	<25.0	1780	1780	1630	1650	92	93	70-130	1	20	
cis-1,3-Dichloropropene	ug/kg	<25.0	1780	1780	1600	1620	90	91	70-130	2	20	
Dibromochloromethane	ug/kg	<25.0	1780	1780	1810	1830	102	103	67-130	1	20	
Dichlorodifluoromethane	ug/kg	<25.0	1780	1780	1340	1270	75	71	12-108	5	29	
Ethylbenzene	ug/kg	<25.0	1780	1780	1540	1550	87	87	80-122	0	20	
Isopropylbenzene (Cumene)	ug/kg	<25.0	1780	1780	1540	1560	87	88	70-130	1	20	
m&p-Xylene	ug/kg	<50.0	3550	3550	3290	3340	92	94	70-130	2	20	
Methyl-tert-butyl ether	ug/kg	<25.0	1780	1780	1860	1890	105	106	70-130	2	20	
Methylene Chloride	ug/kg	<25.0	1780	1780	1970	2000	111	113	70-130	2	20	
o-Xylene	ug/kg	<25.0	1780	1780	1600	1620	90	91	70-130	1	20	
Styrene	ug/kg	<25.0	1780	1780	1780	1870	100	105	70-130	5	20	
Tetrachloroethene	ug/kg	<25.0	1780	1780	1440	1430	81	80	70-130	1	20	
Toluene	ug/kg	<25.0	1780	1780	1570	1580	89	89	80-121	1	20	
trans-1,2-Dichloroethene	ug/kg	<25.0	1780	1780	1670	1690	94	95	70-130	1	20	
trans-1,3-Dichloropropene	ug/kg	<25.0	1780	1780	1580	1540	89	86	70-130	3	20	
Trichloroethene	ug/kg	<25.0	1780	1780	1680	1680	95	95	70-130	0	20	
Trichlorofluoromethane	ug/kg	<25.0	1780	1780	1740	1700	98	96	60-141	2	26	
Vinyl chloride	ug/kg	<25.0	1780	1780	1480	1410	83	79	46-121	5	20	
4-Bromofluorobenzene (S)	%						105	105	54-126			
Dibromofluoromethane (S)	%						104	102	57-146			
Toluene-d8 (S)	%						91	91	64-134			

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QUALITY CONTROL DATA

Project: 1902429 FMR GAS STATION-ADLER
Pace Project No.: 40188973

QC Batch: 324127 Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3546 Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 40188973001, 40188973002, 40188973003, 40188973004

METHOD BLANK: 1882001 Matrix: Solid
Associated Lab Samples: 40188973001, 40188973002, 40188973003, 40188973004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<4.0	13.4	06/12/19 11:02	
2-Methylnaphthalene	ug/kg	<5.0	16.7	06/12/19 11:02	
Acenaphthene	ug/kg	<3.9	12.9	06/12/19 11:02	
Acenaphthylene	ug/kg	<3.3	11.0	06/12/19 11:02	
Anthracene	ug/kg	<5.7	19.0	06/12/19 11:02	
Benzo(a)anthracene	ug/kg	<3.2	10.6	06/12/19 11:02	
Benzo(a)pyrene	ug/kg	<2.5	8.4	06/12/19 11:02	
Benzo(b)fluoranthene	ug/kg	<2.8	9.4	06/12/19 11:02	
Benzo(g,h,i)perylene	ug/kg	<2.0	6.8	06/12/19 11:02	
Benzo(k)fluoranthene	ug/kg	<2.5	8.4	06/12/19 11:02	
Chrysene	ug/kg	<3.4	11.2	06/12/19 11:02	
Dibenz(a,h)anthracene	ug/kg	<2.2	7.4	06/12/19 11:02	
Fluoranthene	ug/kg	<5.2	17.4	06/12/19 11:02	
Fluorene	ug/kg	<4.1	13.8	06/12/19 11:02	
Indeno(1,2,3-cd)pyrene	ug/kg	<2.2	7.3	06/12/19 11:02	
Naphthalene	ug/kg	<8.4	28.1	06/12/19 11:02	
Phenanthrene	ug/kg	<11.6	38.8	06/12/19 11:02	
Pyrene	ug/kg	<4.5	15.0	06/12/19 11:02	
2-Fluorobiphenyl (S)	%	64	28-99	06/12/19 11:02	
Terphenyl-d14 (S)	%	68	10-107	06/12/19 11:02	

LABORATORY CONTROL SAMPLE: 1882002

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	240	72	47-104	
2-Methylnaphthalene	ug/kg	333	227	68	50-100	
Acenaphthene	ug/kg	333	267	80	56-113	
Acenaphthylene	ug/kg	333	257	77	55-113	
Anthracene	ug/kg	333	299	90	59-103	
Benzo(a)anthracene	ug/kg	333	251	75	55-102	
Benzo(a)pyrene	ug/kg	333	291	87	59-114	
Benzo(b)fluoranthene	ug/kg	333	309	93	53-124	
Benzo(g,h,i)perylene	ug/kg	333	276	83	48-114	
Benzo(k)fluoranthene	ug/kg	333	265	79	61-118	
Chrysene	ug/kg	333	289	87	62-108	
Dibenz(a,h)anthracene	ug/kg	333	269	81	51-114	
Fluoranthene	ug/kg	333	287	86	59-113	
Fluorene	ug/kg	333	274	82	56-117	
Indeno(1,2,3-cd)pyrene	ug/kg	333	267	80	52-115	
Naphthalene	ug/kg	333	233	70	54-95	

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QUALITY CONTROL DATA

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

LABORATORY CONTROL SAMPLE: 1882002

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/kg	333	273	82	58-101	
Pyrene	ug/kg	333	249	75	56-105	
2-Fluorobiphenyl (S)	%			67	28-99	
Terphenyl-d14 (S)	%			70	10-107	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1882003 1882004

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40188973002 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
1-Methylnaphthalene	ug/kg	184	439	438	638	427	103	55	39-104	40	29	R1
2-Methylnaphthalene	ug/kg	453	439	438	970	636	118	42	40-100	42	32	M1,R1
Acenaphthene	ug/kg	<10.2	439	438	286	318	65	73	50-113	11	21	
Acenaphthylene	ug/kg	<8.7	439	438	300	304	68	69	42-114	1	27	
Anthracene	ug/kg	<15.0	439	438	322	344	73	79	33-105	7	21	
Benzo(a)anthracene	ug/kg	<8.3	439	438	266	262	61	60	43-102	2	21	
Benzo(a)pyrene	ug/kg	<6.6	439	438	278	289	63	66	34-117	4	22	
Benzo(b)fluoranthene	ug/kg	<7.4	439	438	265	259	60	59	35-124	2	35	
Benzo(g,h,i)perylene	ug/kg	<5.3	439	438	309	285	70	65	10-120	8	30	
Benzo(k)fluoranthene	ug/kg	<6.6	439	438	332	315	76	72	31-128	5	27	
Chrysene	ug/kg	<8.9	439	438	353	327	80	75	39-108	7	20	
Dibenz(a,h)anthracene	ug/kg	<5.9	439	438	280	284	64	65	19-114	1	28	
Fluoranthene	ug/kg	<13.7	439	438	307	310	70	71	45-113	1	22	
Fluorene	ug/kg	<10.9	439	438	304	301	69	69	48-117	1	21	
Indeno(1,2,3-cd)pyrene	ug/kg	<5.8	439	438	280	284	64	65	10-123	2	28	
Naphthalene	ug/kg	1160	439	438	1990	1100	190	-13	32-101	58	27	M1,R1
Phenanthrene	ug/kg	<30.6	439	438	294	297	67	68	40-101	1	20	
Pyrene	ug/kg	<11.9	439	438	274	266	62	61	35-105	3	26	
2-Fluorobiphenyl (S)	%						56	60	28-99			
Terphenyl-d14 (S)	%						53	54	10-107			

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QUALITY CONTROL DATA

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

QC Batch: 324322

Analysis Method: EPA 8270 by SIM

QC Batch Method: EPA 3546

Analysis Description: 8270/3546 MSSV PAH by SIM

Associated Lab Samples: 40188973005, 40188973006

METHOD BLANK: 1883096

Matrix: Solid

Associated Lab Samples: 40188973005, 40188973006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<4.0	13.4	06/13/19 13:38	
2-Methylnaphthalene	ug/kg	<5.0	16.7	06/13/19 13:38	
Acenaphthene	ug/kg	<3.9	12.9	06/13/19 13:38	
Acenaphthylene	ug/kg	<3.3	11.0	06/13/19 13:38	
Anthracene	ug/kg	<5.7	19.0	06/13/19 13:38	
Benzo(a)anthracene	ug/kg	<3.2	10.6	06/13/19 13:38	
Benzo(a)pyrene	ug/kg	<2.5	8.4	06/13/19 13:38	
Benzo(b)fluoranthene	ug/kg	<2.8	9.4	06/13/19 13:38	
Benzo(g,h,i)perylene	ug/kg	<2.0	6.8	06/13/19 13:38	
Benzo(k)fluoranthene	ug/kg	<2.5	8.4	06/13/19 13:38	
Chrysene	ug/kg	<3.4	11.2	06/13/19 13:38	
Dibenz(a,h)anthracene	ug/kg	<2.2	7.4	06/13/19 13:38	
Fluoranthene	ug/kg	<5.2	17.4	06/13/19 13:38	
Fluorene	ug/kg	<4.1	13.8	06/13/19 13:38	
Indeno(1,2,3-cd)pyrene	ug/kg	<2.2	7.3	06/13/19 13:38	
Naphthalene	ug/kg	<8.4	28.1	06/13/19 13:38	
Phenanthrene	ug/kg	<11.6	38.8	06/13/19 13:38	
Pyrene	ug/kg	<4.5	15.0	06/13/19 13:38	
2-Fluorobiphenyl (S)	%	60	28-99	06/13/19 13:38	
Terphenyl-d14 (S)	%	61	10-107	06/13/19 13:38	

LABORATORY CONTROL SAMPLE: 1883097

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	259	78	47-104	
2-Methylnaphthalene	ug/kg	333	263	79	50-100	
Acenaphthene	ug/kg	333	260	78	56-113	
Acenaphthylene	ug/kg	333	252	76	55-113	
Anthracene	ug/kg	333	287	86	59-103	
Benzo(a)anthracene	ug/kg	333	233	70	55-102	
Benzo(a)pyrene	ug/kg	333	258	77	59-114	
Benzo(b)fluoranthene	ug/kg	333	279	84	53-124	
Benzo(g,h,i)perylene	ug/kg	333	269	81	48-114	
Benzo(k)fluoranthene	ug/kg	333	262	79	61-118	
Chrysene	ug/kg	333	285	86	62-108	
Dibenz(a,h)anthracene	ug/kg	333	255	76	51-114	
Fluoranthene	ug/kg	333	265	80	59-113	
Fluorene	ug/kg	333	251	76	56-117	
Indeno(1,2,3-cd)pyrene	ug/kg	333	255	77	52-115	
Naphthalene	ug/kg	333	233	70	54-95	

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QUALITY CONTROL DATA

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

LABORATORY CONTROL SAMPLE: 1883097

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/kg	333	236	71	58-101	
Pyrene	ug/kg	333	240	72	56-105	
2-Fluorobiphenyl (S)	%			68	28-99	
Terphenyl-d14 (S)	%			64	10-107	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1883098 1883099

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40188975001 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
1-Methylnaphthalene	ug/kg	7.5J	453	453	285	328	61	71	39-104	14	29	
2-Methylnaphthalene	ug/kg	8.6J	453	453	294	333	63	72	40-100	13	32	
Acenaphthene	ug/kg	<5.3	453	453	301	317	66	69	50-113	5	21	
Acenaphthylene	ug/kg	<4.5	453	453	290	340	63	75	42-114	16	27	
Anthracene	ug/kg	<7.8	453	453	336	348	72	75	33-105	3	21	
Benzo(a)anthracene	ug/kg	20.1	453	453	309	335	64	70	43-102	8	21	
Benzo(a)pyrene	ug/kg	18.5	453	453	350	377	73	79	34-117	8	22	
Benzo(b)fluoranthene	ug/kg	17.7	453	453	342	360	72	76	35-124	5	35	
Benzo(g,h,i)perylene	ug/kg	11.4	453	453	314	326	67	70	10-120	4	30	
Benzo(k)fluoranthene	ug/kg	18.3	453	453	329	352	69	74	31-128	6	27	
Chrysene	ug/kg	24.0	453	453	340	362	70	75	39-108	6	20	
Dibenz(a,h)anthracene	ug/kg	3.5J	453	453	295	311	64	68	19-114	5	28	
Fluoranthene	ug/kg	42.5	453	453	383	423	75	84	45-113	10	22	
Fluorene	ug/kg	<5.6	453	453	297	336	65	74	48-117	12	21	
Indeno(1,2,3-cd)pyrene	ug/kg	10.2	453	453	309	319	66	68	10-123	3	28	
Naphthalene	ug/kg	<11.5	453	453	253	309	54	66	32-101	20	27	
Phenanthrene	ug/kg	28.5J	453	453	326	348	66	71	40-101	7	20	
Pyrene	ug/kg	31.7	453	453	327	378	65	77	35-105	15	26	
2-Fluorobiphenyl (S)	%						54	65	28-99			
Terphenyl-d14 (S)	%						52	55	10-107			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

QC Batch: 323974 Analysis Method: WI MOD DRO

QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS

Associated Lab Samples: 40188973001, 40188973002, 40188973003

METHOD BLANK: 1881154 Matrix: Solid

Associated Lab Samples: 40188973001, 40188973002, 40188973003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<1.3	4.4	06/13/19 08:34	

LABORATORY CONTROL SAMPLE & LCSD: 1881155 1881156

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	40	29.5	34.1	74	85	70-120	14	20	

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QUALITY CONTROL DATA

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

QC Batch: 324469 Analysis Method: WI MOD DRO

QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS

Associated Lab Samples: 40188973004, 40188973005, 40188973006

METHOD BLANK: 1883765 Matrix: Solid

Associated Lab Samples: 40188973004, 40188973005, 40188973006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	<1.3	4.4	06/17/19 08:36	

LABORATORY CONTROL SAMPLE & LCSD: 1883766 1883767

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	40	32.5	37.8	81	95	70-120	15	20	

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QUALITY CONTROL DATA

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

QC Batch: 324006 Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 40188973002, 40188973004, 40188973005, 40188973006

SAMPLE DUPLICATE: 1881314

Parameter	Units	40188973006 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	27.8	27.8	0	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

QC Batch: 324034

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 40188973001

SAMPLE DUPLICATE: 1881516

Parameter	Units	40188973001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	18.7	18.4	2	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

QC Batch: 324068

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 40188973003

SAMPLE DUPLICATE: 1881647

Parameter	Units	40188973003 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	27.7	27.0	2	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 1902429 FMR GAS STATION-ADLER
Pace Project No.: 40188973

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

DC Chromatographic pattern inconsistent with typical Diesel Fuel.

G+ Late peaks present outside the GRO window.

GO Early and late peaks present outside the GRO window.

L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

W Non-detect results are reported on a wet weight basis.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1902429 FMR GAS STATION-ADLER

Pace Project No.: 40188973

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40188973001	FGS-1 2'-4'	WI MOD DRO	323974	WI MOD DRO	324247
40188973002	FGS-1 4.5'-6.5'	WI MOD DRO	323974	WI MOD DRO	324247
40188973003	FGS-1 12'-14'	WI MOD DRO	323974	WI MOD DRO	324247
40188973004	FGS-2 0'-3'	WI MOD DRO	324469	WI MOD DRO	324543
40188973005	FGS-2 6'-8'	WI MOD DRO	324469	WI MOD DRO	324543
40188973006	FGS-2 12'-14'	WI MOD DRO	324469	WI MOD DRO	324543
40188973001	FGS-1 2'-4'	TPH GRO/PVOC WI ext.	323819	WI MOD GRO	323914
40188973002	FGS-1 4.5'-6.5'	TPH GRO/PVOC WI ext.	323819	WI MOD GRO	323914
40188973003	FGS-1 12'-14'	TPH GRO/PVOC WI ext.	323819	WI MOD GRO	323914
40188973004	FGS-2 0'-3'	TPH GRO/PVOC WI ext.	323819	WI MOD GRO	323914
40188973005	FGS-2 6'-8'	TPH GRO/PVOC WI ext.	323819	WI MOD GRO	323914
40188973006	FGS-2 12'-14'	TPH GRO/PVOC WI ext.	323819	WI MOD GRO	323914
40188973001	FGS-1 2'-4'	EPA 3050	323958	EPA 6010	324250
40188973002	FGS-1 4.5'-6.5'	EPA 3050	323958	EPA 6010	324250
40188973003	FGS-1 12'-14'	EPA 3050	323958	EPA 6010	324250
40188973004	FGS-2 0'-3'	EPA 3050	323958	EPA 6010	324250
40188973005	FGS-2 6'-8'	EPA 3050	323958	EPA 6010	324250
40188973006	FGS-2 12'-14'	EPA 3050	323958	EPA 6010	324250
40188973001	FGS-1 2'-4'	EPA 3546	324127	EPA 8270 by SIM	324155
40188973002	FGS-1 4.5'-6.5'	EPA 3546	324127	EPA 8270 by SIM	324155
40188973003	FGS-1 12'-14'	EPA 3546	324127	EPA 8270 by SIM	324155
40188973004	FGS-2 0'-3'	EPA 3546	324127	EPA 8270 by SIM	324155
40188973005	FGS-2 6'-8'	EPA 3546	324322	EPA 8270 by SIM	324390
40188973006	FGS-2 12'-14'	EPA 3546	324322	EPA 8270 by SIM	324390
40188973001	FGS-1 2'-4'	EPA 5035/5030B	323737	EPA 8260	323738
40188973002	FGS-1 4.5'-6.5'	EPA 5035/5030B	323737	EPA 8260	323738
40188973003	FGS-1 12'-14'	EPA 5035/5030B	323737	EPA 8260	323738
40188973004	FGS-2 0'-3'	EPA 5035/5030B	323737	EPA 8260	323738
40188973005	FGS-2 6'-8'	EPA 5035/5030B	323737	EPA 8260	323738
40188973006	FGS-2 12'-14'	EPA 5035/5030B	323737	EPA 8260	323738
40188973001	FGS-1 2'-4'	ASTM D2974-87	324034		
40188973002	FGS-1 4.5'-6.5'	ASTM D2974-87	324006		
40188973003	FGS-1 12'-14'	ASTM D2974-87	324068		
40188973004	FGS-2 0'-3'	ASTM D2974-87	324006		
40188973005	FGS-2 6'-8'	ASTM D2974-87	324006		
40188973006	FGS-2 12'-14'	ASTM D2974-87	324006		

REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name: GEI Consultants
 Branch/Location: Green Bay, WI
 Project Contact: Roger Miller
 Phone: 920-455-8657
 Project Number: 1902429
 Project Name: Former Gas Station - Adler
 Project State: WI
 Sampled By (Print): Kyle Sandmire
 Sampled By (Sign): [Signature]
 PO #: _____ Regulatory Program: _____



UPPER MIDWEST REGION

MN: 612-607-1700 WI: 920-469-2436

Page 1 of 1

40188973

Page 42 of 44

CHAIN OF CUSTODY

***Preservation Codes**
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED? (YES/NO)
 PRESERVATION (CODE)*

Y/N	N	N	N	N	N	N	Y
Pick Letter	A	A	F	F	A	B	D
Analyses Requested	PATHS	DRD	BRD	VOLs	Pb only	VOLs	Pb only

Quote #: _____
 Mail To Contact: _____
 Mail To Company: _____
 Mail To Address: _____
 Invoice To Contact: _____
 Invoice To Company: _____
 Invoice To Address: _____
 Invoice To Phone: _____

SAME

Data Package Options (billable)
 EPA Level III
 EPA Level IV

MS/MSD
 On your sample (billable)
 NOT needed on your sample

Matrix Codes
 A = Air W = Water
 B = Biota DW = Drinking Water
 C = Charcoal GW = Ground Water
 O = Oil SW = Surface Water
 S = Soil WW = Waste Water
 SI = Sludge WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX
		DATE	TIME	
001	FGS-1 2'-4'	6/5/19	16:55	S
002	FGS-1 4.5-6.5'	6/5/19	17:00	S
003	FGS-1 12-14'	6/5/19	17:10	S
004	FGS-2 0'-3'	6/5/19	16:15	S
005	FGS-2 6-8'	6/5/19	16:20	S
006	FGS-2 12-14'	6/5/19	16:40	S
	FGS-1			GW
	FGS-2			GW
	Trip blank water			W
	Trip - VOLs			

CLIENT COMMENTS

LAB COMMENTS (Lab Use Only)
PG

Profile #

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge)
 Date Needed: _____

Transmit Prelim Rush Results by (complete what you want):
 Email #1: _____
 Email #2: _____
 Telephone: _____
 Fax: _____

Samples on HOLD are subject to special pricing and release of liability

Relinquished By: [Signature] Date/Time: 6/6/2019 13:24

Relinquished By: _____ Date/Time: _____

Relinquished By: _____ Date/Time: _____

Relinquished By: _____ Date/Time: _____

Received By: Susana Ulyshe Pad Date/Time: 6/6/19 1324

Received By: _____ Date/Time: _____

Received By: _____ Date/Time: _____

Received By: _____ Date/Time: _____

PACE Project No. 40188973

Receipt Temp = ROT °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / NOT Present
Intact / NOT Intact

Sample Preservation Receipt Form

Client Name: GEI

Project # 10188973

All containers needing preservation have been checked and noted below: Yes No N/A

Initial when completed:

Date/Time:

Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Pace Lab #	Glass							Plastic							Vials				Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)				
	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3B	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SPST								ZPLC	GN		
001																																			2.5 / 5 / 10
002																																			2.5 / 5 / 10
003																																			2.5 / 5 / 10
004																																			2.5 / 5 / 10
005																																			2.5 / 5 / 10
006																																			2.5 / 5 / 10
007																																			2.5 / 5 / 10
008																																			2.5 / 5 / 10
009																																			2.5 / 5 / 10
010																																			2.5 / 5 / 10
011																																			2.5 / 5 / 10
012																																			2.5 / 5 / 10
013																																			2.5 / 5 / 10
014																																			2.5 / 5 / 10
015																																			2.5 / 5 / 10
016																																			2.5 / 5 / 10
017																																			2.5 / 5 / 10
018																																			2.5 / 5 / 10
019																																			2.5 / 5 / 10
020																																			2.5 / 5 / 10

MBC 06/06/19


Exceptions to preservation check: VOA Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____

Headspace in VOA Vials (>6mm): Yes No N/A *If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL		
AG5U	100 mL amber glass unpres	BP3B	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH	SPST	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4			GN:	

Sample Condition Upon Receipt Form (SCUR)

Client Name: GEI
Courier: CS Logistics Fed Ex Speedee UPS Walto
 Client Pace Other: _____

Project #: _____
WO#: 40188973

 40188973

Tracking #: _____
Custody Seal on Cooler/Box Present: yes no **Seals intact:** yes no
Custody Seal on Samples Present: yes no **Seals intact:** yes no
Packing Material: Bubble Wrap Bubble Bags None Other
Thermometer Used SR - N/A **Type of Ice:** Wet Blue Dry None Samples on ice, cooling process has begun
Cooler Temperature Uncorr: ROI /Corr: _____

Temp Blank Present: yes no **Biological Tissue is Frozen:** yes no
 Temp should be above freezing to 6°C.
 Biota Samples may be received at ≤ 0°C.

Person examining contents:
 Date: 06/06/19
 Initials: MSC

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>S</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>Trip Blank on COC, No bottles Received</u>
Pace Trip Blank Lot # (if purchased):		<u>MSC 06/06/19</u>

Client Notification/ Resolution: _____ If checked, see attached form for additional comments
 Person Contacted: Kyle Sanderson Date/Time: 6/7/19
 Comments/ Resolution: _____

Proceed without trip blank per Kyle - 6/7/19 CHH

Project Manager Review: CHH **Date:** 6/7/19

Phase 2.5 Subsurface Investigation
US 2/53 – 31st Ave East to 53rd Ave East
City of Superior, Douglas County, Wisconsin
WisDOT Project ID No. 1198-03-78
August 12, 2019

Appendix E

Contract Special Provisions

**Special Provisions for the
Excavation, Hauling, and
Disposal of Petroleum-Contaminated Soil**

**Project Design I.D. #1198-03-78
US 2/53 (31st Avenue East to 53rd Avenue East)
City of Superior, Douglas County, WI**

**Prepared by
GEI Consultants, Inc.,
Green Bay, WI**

August 2019

1. Excavation, Hauling, and Disposal of Petroleum-Contaminated Soil, Item 205.0501.S

A Description

A.1 General

This special provision describes excavating, loading, hauling, and disposing of petroleum-contaminated soil at a licensed bioremediation/disposal facility. The closest licensed facilities are:

Waste Management Timberline Trail RDF
N4581 Hutchinson Road
Weyerhaeuser, WI 54895
(715) 868-7000

Vonco V Waste Campus
1100 West Gary Street
Duluth, Minnesota 55808
(218) 336-5100

Waste Management Voyager Landfill
6830 US-53
Canyon, Minnesota 55717
(218) 345-6302

Perform this work in accordance to standard spec 205 and with pertinent parts of Chapters NR 700-754 of the Wisconsin Administrative Code, as supplemented herein. Per NR 718.07, a solid waste collection and transportation service-operating license is required under NR 502.06 for each vehicle used to transport contaminated soil. If a Minnesota bioremediation/disposal facility is utilized, perform hauling and disposal in accordance with equivalent State of Minnesota requirements.

A.2 Notice to the Contractor – Contaminated Soil Locations

The department completed testing for soil contamination within this project where excavation is required. Testing indicated that petroleum-contaminated soil is present or likely to be present at the following location as shown on the plans:

1. Station 255+50 to 260+15, from 25 feet RT of reference line to construction limits RT, from the ground surface to a depth of approximately 10 feet below existing grades.

If contaminated soil is encountered at other locations, terminate excavations in that area and notify the engineer. The excavation management plan for this project has been designed to minimize the off-site disposal of contaminated material. These special provisions, which outline the excavation management plan, have been developed in cooperation with the WDNR. The WDNR's concurrence is on file at the department.

For further information regarding previous investigation and remediation activities at these locations, contact:

Contact: Mr. Aaron Gustafson, WisDOT Northwest Region
Address: 1701 North 4th Street, Superior, WI 54880
Phone: (715) 919-3051
Fax: (715) 392-7863
Email: aaron.gustafson@dot.wi.gov

A.3 Coordination

Coordinate work under this contract with the environmental consultant:

Name: GEI Consultants, Inc., Mr. Roger Miller or Mr. Michael DeBraske
Address: 3159 Voyager Drive, Green Bay, WI 54311
Phone: (920) 455-8657 / (920) 455-8655
Fax: (920) 455-8225
E-mail: rmiller@geiconsultants.com, mdebraske@geiconsultants.com

The role of the environmental consultant will be limited to:

1. Determining the locations and limits of contaminated material to be excavated based on analytical results from previous investigations, visual observations, and field-screening of material that is excavated;
2. Identifying contaminated material to be hauled to the bioremediation/disposal facility;
3. Documenting that activities associated with management of contaminated material are in conformance with state regulations;
4. Obtaining the necessary approvals for treatment and disposal of contaminated material.

Provide at least a 14-calendar day notice of the preconstruction conference date to the environmental consultant. At the preconstruction conference, provide a schedule for all excavation activities in the contaminated areas specified above to the environmental consultant. Also notify the environmental consultant at least three calendar days prior to commencement of excavation activities in each of the contaminated areas.

Coordinate with the environmental consultant to ensure that the environmental consultant is present during excavation in contaminated areas. Perform excavation work in these areas on a continuous basis until excavation work is completed.

Identify the licensed bioremediation/disposal facility that will be used for disposal of contaminated material, and provide this information to the environmental consultant no later than 30 calendar days prior to commencement of excavation activities in the contaminated areas or at the preconstruction conference, whichever comes first. The environmental consultant will be responsible for obtaining the necessary approvals for disposal of contaminated soils from the bioremediation/disposal facility. Do not transport contaminated

soil offsite without prior approval from the environmental consultant.

A.4 Health and Safety Requirements

Supplement subsection 107.1 of the standard specifications with the following:

During excavation activities, expect to encounter soil contaminated with gasoline, diesel fuel, or other petroleum related products. Site workers taking part in activities that will result in the reasonable probability of exposure to safety and health hazards associated with hazardous materials shall have completed health and safety training that meets the Occupational Safety and Health Administration (OSHA) requirements for Hazardous Waste Operations and Emergency Response (HAZWOPER), as provided in 29 CFR 1910.120.

Prepare a site-specific Health and Safety Plan, and develop, delineate and enforce the health and safety exclusion zones for each contaminated site location as required by 29 CFR 1910.120. Submit the site-specific health and safety plan and written documentation of up-to-date OSHA training to the engineer prior to the start of work.

B (Vacant)

C Construction

Supplement subsection 205.3 of the standard specification with the following:

Control operations in the contaminated areas to minimize the quantity of contaminated material excavated.

The environmental consultant will periodically evaluate material excavated from the contaminated areas. The environmental consultant will evaluate excavated material based on field-screening results, visual observations, and analytical results from previous environmental investigations. Assist the environmental consultant in collecting samples for evaluation using excavation equipment. The sampling frequency shall be a maximum of one sample for every 15 cubic yards excavated.

On the basis of the results of such field-screening, the material will be designated as follows:

- Excavation Common consisting of clean soil and/or clean construction and demolition fill (such as boulders, concrete, reinforced concrete, bituminous pavement, bricks, building stone, and unpainted or untreated wood), which under NR 500.08 are exempt materials, or
- Petroleum-contaminated soil for bioremediation/disposal at the selected licensed bioremediation/disposal facility.

Directly load and haul material designated by the environmental consultant for offsite treatment and disposal at the licensed facility. Use loading and hauling practices that are appropriate to prevent any spills or releases of contaminated material or residues. Prior to transport, sufficiently dewater material designated for off-site treatment and disposal so

as not to contain free liquids.

Excavations may extend near or slightly beyond the depths to groundwater; however, due to the low permeability of subsurface materials, significant dewatering is not anticipated. Control activities in the contaminated area to minimize the amount of dewatering required. Allow contaminated water encountered, but not requiring removal as a standard course of construction, to remain in-place. If dewatering is necessary, notify the engineer and obtain any permits necessary prior to discharge or offsite transport of water.

D Measurement

The Department will measure Excavation, Hauling, and Disposal of Petroleum-Contaminated Soil in tons of contaminated soil accepted by the bioremediation/disposal facility as documented by weight tickets generated by the bioremediation/disposal facility. The management of contaminated groundwater shall be considered incidental to the project.

E Payment

The Department will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
205.0501.S	Excavation, Hauling, and Disposal of Petroleum-Contaminated Soil	Ton

Payment is full compensation for excavating, segregating, loading, hauling, and treatment via bioremediation or direct landfilling of contaminated soil; obtaining solid waste collection and transportation service operating licenses; assisting in the collection of soil samples for field evaluation; management of contaminated groundwater, if necessary; dewatering of soils prior to transport, if necessary; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.