Enbridge Energy, Limited Partnership
1613 24th Ave E.
Superior, WI 54880

14 October 2022

Jeffrey Paddock, Regional Spill Coordinator
Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
107 Sutliff Avenue
Rhinelander, WI 54501

Re: Enbridge Energy, Limited Partnership – Line 5 Mile Post 1159.47 Valve Site
WDNR BRRTS Activity # 02-02-590370

Dear Mr. Paddock,

On August 3, 2022, Enbridge Energy (Enbridge) notified the Wisconsin Department of Natural Resources (WDNR) of crude oil impacts at a valve site on Line 5 near Gingles, Wisconsin. On August 16, 2022, WDNR issued a Responsible Party Letter to Enbridge. On behalf of Enbridge, WSP USA Inc. has prepared the enclosed documentation report which provides a site description and summary of the response and remedial activities.

During the response and remedial activities, the exposed pipeline was thoroughly inspected. No active leak was identified. Enbridge believes the source of these impacts to be from the installation of the valve at this location in 1974.

The remedial activities at this site were successful as the confirmation sampling results are below WDNR cleanup criteria concentrations. Enbridge requests closure of the incident. Please contact me at (218) 341-3863 or ross.peterson2@enbridge.com if you have any questions or require additional information.

Sincerely,

Ross Peterson
Environment Advisor

cc: Bart Johnson – Enbridge Operations Manager
Shane Yokom – Enbridge Environmental Supervisor
Karl Beaster – Enbridge Remediation
David Morrison – US EPA, Region 5

October 13, 2022

Jeff Paddock, Regional Spill Coordinator
Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
107 Sutliff Avenue
Rhinelander, Wisconsin 54501
715-828-8544

Responsible Party:
Enbridge Energy, Limited Partnership
Ross Peterson, Advisor Environment
1613 24th Avenue East
Superior, Wisconsin 54880
218-341-3863

Subject: **Enbridge Energy, Limited Partnership – Line 5 Mile Post 1159.47 Valve Site**
Historical Contamination - Immediate Actions Report
WDNR BRRTS Activity # 02-02-590370

Dear Mr. Paddock:

On behalf of Enbridge Energy, Limited Partnership (Enbridge), WSP USA Inc. (WSP) has prepared this Immediate Actions Report summarizing response and remediation activities associated with the discovery of historical crude oil impacts to soil at Enbridge's Line 5 Mile Post 1159.47 Valve Site (Site), located approximately 0.35 mile south of the intersection of Old Airport Road and Holmes Road, Town of Gingles, Ashland County, Wisconsin (E ½, SE ¼, NE ¼, SEC. 14 T47N, R4W). The Site location is shown on **Figure 1**. This submittal consists of a Site description; an overview of contamination discovery and an external notifications timeline; a summary of remedial actions completed; a soil screening and sampling procedure discussion; a remediation, soil sampling, and analytical results review; a discussion of waste management and disposal activities; a review of Site receptors; and a Site summary with conclusions and a request for no further response action.

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SITE DESCRIPTION AND CONTAMINATION DISCOVERY/NOTIFICATION TIMELINE

SITE DESCRIPTION

The Site currently exists as a Valve Site for Enbridge's Line 5 Pipeline and is located in an agricultural crop field in the Town of Gingles, Wisconsin at the approximate coordinates of 46°33'15.3"N 90°49'25.1"W; 46.554255, -90.823629. The Site exists within a privately-owned 20-acre land parcel (Ashland County Parcel No.: 008-00248-0100) which has the land classifications of agricultural, agricultural forest, and undeveloped land according to the Ashland County land assessment information website. The Valve Site, which consists of a rectangular fenced area of approximately 1,650 square feet, is complete with a gravel surface and various above ground pipeline infrastructure appurtenances and support structures. The portion of the Site which extends outside of the fenced area is located within Enbridge's Line 5 Pipeline Right-of-Way (ROW) and is an active agricultural crop field. The Site is located approximately 140 feet west of Holmes Road and is surrounded by agricultural crop land to the north, south, east, and west. The Site is accessible via a gravel access road that extends from the Valve Site's eastern fence line to Holmes Road. The immediate future use of the Site is expected to be a Valve Site/pipeline ROW for continued operation of the Enbridge pipeline system.

CONTAMINATION DISCOVERY AND NOTIFICATIONS

On August 3, 2022, Enbridge and contractor personnel observed crude oil contamination to soil while completing planned maintenance activities at the Site. Upon the discovery of contaminated soil, Enbridge shut down and isolated Line 5 in the vicinity of the Site to conduct additional assessment and evaluation activities. Immediately following the discovery of contaminated soil and the shutdown/isolation of Line 5, external notifications were completed by Enbridge. Following initial correspondence between Enbridge and the Wisconsin Department of Natural Resources (WDNR), the identification of crude oil contaminated soil was formally reported to the WDNR the same day and was assigned Spills Electronic Reporting and Tracking System (SERTS) ID: 20220803NO02-1 and a WDNR Bureau for Remediation and Redevelopment Tracking System (BRRTS) Activity No.: 04-02-590369. Due to the ongoing assessment and investigation activities at the time of the notification to the WDNR, the BRRTS Activity Type was reported as a Spill. However, subsequent investigation and evaluation activities completed by Enbridge and two Site visits by WDNR personnel indicated that the identified crude oil contaminated soil was not caused by an active release, but rather was the result of past historical activities at the Site.

On August 10, 2022, Enbridge determined that the scope of work at the Site had changed. In accordance with requirements of the Pipeline and Hazardous Materials Safety Administration, Enbridge provided notification to the National Response Center (NRC) and the notification was assigned NRC Report No.: 1344103. The WDNR was made aware of the NRC Report and following communication with Enbridge, assigned SERTS ID: 20220810NO02-1 and WDNR BRRTS Activity No.: 04-02-590377 the same day. In response to the NRC Report, a WDNR Conservation Warden mobilized to the Site during the evening of August 10, 2022 and reported no environmental media impacts. In addition, representatives from the WDNR and the United States Environmental Protection Agency (EPA) visited the Site on August 12, 2022 to observe Site conditions; the WDNR and EPA reported no indications of an active release.

As outlined above, initial crude oil impacts to soil and a modified scope of work at the Site were reported to the WDNR on August 3, 2022, (BRRTS Activity No.: 04-02-590369) and August 10, 2022, (BRRTS Activity No.: 04-02-590377). In both instances, Enbridge completed assessment and evaluation activities and representatives from the WDNR and EPA visited the Site to document conditions and communicate with Enbridge. The result of the assessment and evaluation activities completed by Enbridge and the observations documented by WDNR and EPA personnel indicated that there were no signs of any active releases and that the observed crude oil impacts to soil initially discovered by Enbridge on

August 3, 2022 was the result of past historical activities at the Site. Subsequently, on August 15, 2022, the August 3, 2022, and August 10, 2022 activities were closed by the WDNR and BRRTS Activity No.: 02-02-590370 was assigned to the Site through the WDNR Environmental Repair Program for historical soil contamination identified at the Site.

IMMEDIATE REMEDIAL ACTIONS

Upon the discovery of historical crude oil impacts to soil on August 3, 2022, Enbridge and contractor personnel immediately began remediation activities to remove impacted soil via hand tools and a tracked excavator. Excavated soils were initially placed into a polyethylene-lined containment area above wooden timber mats previously installed at the Site. During any period when impacted soils were not actively being stockpiled, the containment area was covered with polyethylene sheeting and was surrounded by erosion control wattles to reduce the risk of precipitation contact with excavated soils. On August 5, 2022, contractor personnel transferred all previously excavated impacted soil into roll-off containers for waste staging, pending laboratory characterization and approval for off-Site disposal. Initial remediation activities continued from August 3, 2022 through August 5, 2022. Additional excavation activities were conducted at the Site between August 23, 2022 and August 24, 2022, and final remedial excavation activities were completed between September 8, 2022 and September 13, 2022. All impacted soil that was removed during the remedial excavation activities was ultimately staged in roll-off containers for off-Site disposal or was directly loaded into dump trucks for immediate transport to the approved off-Site disposal facility.

SOIL SCREENING AND SAMPLING PROCEDURES

WSP performed soil screening and sampling activities for confirmatory chemical analysis during remediation activities.

SOIL SCREENING PROCEDURES

While excavation activities were taking place at the Site, WSP field screened soil for crude oil impacts via observation of visual impacts, odor, and headspace analysis for volatile organic compounds (VOCs) via a photoionization detector (PID) with a 10.6 electron-volt lamp. When visual and olfactory observations indicated that the impacts had been removed, WSP collected a soil sample for headspace analysis. Each sample was placed in a zip-closing bag and allowed to volatilize before taking a measurement. Soil was screened at approximate intervals of 10 linear feet on excavation sidewalls, and at the base of the excavation at a frequency of one sample per every 100 square feet. The locations of the soil samples for confirmatory field screening were recorded using a GPS Trimble unit capable of sub-meter accuracy.

Initially, PID readings above a 10 parts per million (ppm) screening threshold were used to field determine the extent of soil likely containing petroleum impacts at concentrations above applicable WDNR Remediation and Redevelopment Program Residual Contaminant Levels (RCLs). If headspace VOC concentrations exceeded 10 ppm, additional excavation was conducted until screening levels were below 10 ppm and the area was free of visual and olfactory indications of impacts. Following the receipt and review of laboratory analytical data from initial confirmation soil samples collected at the Site, the headspace measurement screening threshold was reduced to 5 ppm.

Excavation activities were successfully completed on September 13, 2022. The deepest part of the excavation extended to a depth of approximately 17 feet below grade (ft bg). Groundwater or free product was not encountered at any point during remedial excavation activities. **Figure 2** shows the final extent of the soil remediation area (excavation extent).

CONFIRMATION & DELINEATION SOIL SAMPLING PROCEDURES

When field screening results indicated that the historical crude oil impacts had been removed via mechanical or hand excavation, WSP collected confirmation soil samples for laboratory analysis. Confirmation soil samples were collected at

an approximate frequency of one soil sample per every 15 linear feet on excavation sidewalls, and at the base of the excavation at an approximate frequency of one sample per every 250 square feet. The selected confirmation soil sample locations were biased toward higher field-screening results. During Site remediation activities, several soil samples were collected via hand auger to assist in the vertical and horizontal delineation of historical crude oil impacts and guide the ongoing excavation.

Prior to the collection of soil samples for laboratory analysis, sample collection devices (e.g. metal hand trowel or metal hand auger) were decontaminated prior to each use. Soil samples for laboratory analysis were collected in laboratory provided bottleware, immediately placed in an ice filled cooler, and submitted under chain of custody protocol to Pace Analytical National Center for Testing & Innovation in Mt. Juliet, Tennessee for the laboratory analysis of chemicals of concern (COCs) that included petroleum volatile organic compounds (PVOCs) (benzene, ethylbenzene, toluene, total xylenes, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene) using SW-846 Method 8260 and polycyclic aromatic hydrocarbons (PAHs) using SW-846 Method 8270. Each soil sample collected for the analysis of PVOCs was field-preserved using SW-846 Method 5035A. The locations where soil samples were collected for laboratory analysis were recorded using a GPS Trimble unit capable of sub-meter accuracy. The soil sample locations are shown on **Figure 2**.

The laboratory analysis of the above COCs were selected based on the discovered petroleum impacts, communication between Enbridge and the WDNR, and in consideration of the land use history of the Site, which is limited to a remote petroleum pipeline valve site. Based on this information, chlorinated VOCs, and emergent contaminants such as perfluoroalkyl and polyfluoroalkyl substances and 1,4-dioxane are not COCs at the Site.

SOIL SAMPLING CRITERIA

Laboratory analytical data for soil samples collected during Site remediation activities are summarized in **Tables 1 and 2**. The laboratory analytical reports are included in **Attachment I**. Soil sample results were compared to the WDNR Remediation and Redevelopment Program RCLs for the following exposure pathways:

- Direct Contact – Non-Industrial;
- Direct Contact – Industrial; and,
- Soil to Groundwater.

SAMPLE ANALYTICAL QUALITY ASSURANCE

One duplicate sample was collected for approximately every ten confirmation/delineation soil samples collected. The duplicate samples were submitted to the laboratory "blind," without location I.D. or time collected information. Duplicate soil sample results are included in the soil sample results summary tables (**Tables 1 and 2**) and in the soil laboratory analytical reports (**Attachment I**).

REMEDIATION, SOIL SAMPLING, AND ANALYTICAL RESULTS

Between August 3, 2022, and September 13, 2022, iterative rounds of remedial soil excavation activities were completed at the Site and soil samples were collected for laboratory analysis. When soil sample analytical results indicated that COCs remained in soil above established WDNR Remediation and Redevelopment Program RCLs, additional targeted excavation activities were completed. To guide subsequent rounds of excavation, WSP also conducted soil sampling via hand auger to delineate the maximum horizontal and vertical extent of impacts in soil. Soil remediation continued until the excavation extended both vertically and horizontally to locations where soil sample analytical results were reported with no concentrations of COCs above established WDNR Remediation and Redevelopment Program RCLs.

In total, 26 confirmation and delineation soil samples were collected for laboratory analysis during remedial excavation activities. Of those, 13 soil samples were reported with at least one COC above established WDNR Remediation and Redevelopment Program RCLs. As indicated above, and in all locations where soil sample analytical results were reported with COC concentrations above applicable RCLs, additional remedial excavation activities were completed to remove the impacted soil. The results of the aforementioned 13 soil samples with COC concentrations above applicable RCLs are included in **Table 1**. Note that the laboratory results for those samples are struck through in the table, since the soil represented by those samples was excavated and disposed off-Site.

The remaining 13 confirmation soil samples were comprised of nine excavation sidewall samples and four excavation base samples that were collected once soils exhibiting visual or olfactory indications of impacts had been removed. The laboratory analytical results for these samples indicated no concentrations of COCs above applicable WDNR Remediation and Redevelopment Program RCLs. Laboratory analytical data for the soil samples are summarized in **Tables 1 and 2** and the soil sample locations are shown on **Figure 2**.

WASTE MANAGEMENT AND DISPOSAL ACTIVITIES

The following is a summary of waste management/disposal activities that were conducted during Site remediation.

STORMWATER CONTAINERIZATION AND DISPOSAL

While the on-Site excavation remained open, accumulated stormwater was periodically removed via a sump pump and containerized in a frac tank staged at the Site. No free product or groundwater was encountered during remedial activities. On September 14, 2022, containerized stormwater was transported to Valicor Environmental Services, LLC of Roseville, Minnesota for treatment and disposal. Approximately 700 gallons of stormwater were transported for disposal. Stormwater disposal documentation is included in **Attachment II.**

SOLID WASTE DISPOSAL

Solid waste generated during remediation activities included excavated soil/gravel and a small amount of miscellaneous impacted waste such as rags, plastic, and personal protective equipment. All solid waste that was generated during the remediation activities was containerized in roll-off containers (for subsequent transport) or was directly loaded into dump trucks for transport under manifest to the approved off-Site disposal facility. From August 24, 2022 through September 20, 2022, contractor personnel transported impacted solid waste to the Vonco V Waste Management Campus, located in Duluth, Minnesota (Waste Profile # 22-055-I). In total, 340.50 tons of impacted solid waste was transported for disposal. Solid waste disposal documentation is included in **Attachment II**.

SITE RECEPTOR SURVEY

According to the United States Geological Survey 7.5-Minute topographic map of the Ashland East, Wisconsin quadrangle (2022), the Site is approximately 700 feet above mean sea level. The surface topography of the Site and the surrounding area is generally flat. The land surrounding the Site is sparsely populated agricultural land with intermixed wooded and low-lying areas. Much of the wooded and low-lying areas in the vicinity of the Site have locations that are classified as palustrine wetland areas by the United States Fish and Wildlife Service National Wetlands Inventory (USFW NWI), typified by trees, shrubs, or other emergent vegetation and include areas traditionally referred to as marshes, swamps, bogs, fens, or prairies. The nearest mapped USFW NWI wetland is located approximately 530 feet southwest of the Site.

According to publicly available GIS data, the nearest mapped surface water body is an unnamed intermittent drainage swale located in an agricultural field approximately 1,000 feet east of the Site. The unnamed intermittent drainage swale is a tributary to Beartrap Creek, which is located approximately one mile east and northeast of the Site.

The WDNR Well Construction Information System database was queried to identify registered water supply wells in the Site vicinity. Twenty-one water supply wells were identified within a one-mile radius of the Site. Depths of these wells range from 105 to 220 ft bg, and static water level depths within the wells were reported to be between 40 and 134 ft bg. The static water level depths within four wells identified within 1/2-mile of the Site were reported to be between 59 and 134 ft bg. The well construction reports for the wells within 1/2-mile of the Site are included in **Attachment III**. Nearby water resources are shown on **Figure 3**.

While excavation activities were ongoing, the encountered subsurface soil conditions were documented by WSP's on-Site geologist and consisted of a red/brown clay with medium plasticity, trace gravel with depth, and slight moisture. While the Site excavation remained open, there was no indication of shallow groundwater infiltration into the excavation.

The historical crude oil contamination in soil that was identified at the Site consists of PVOC COCs and do not include chlorinated VOCs. Therefore, the potential for vapor intrusion is based on the RR-800 guidance for PVOCs. The nearest off-Site above grade structure is located approximately 900 feet to the south-southeast at an apparent rural residential property. As shown on **Figure 4,** above grade structures at the Site consist of one electrical meter box, one valve, and one valve control building. Photographs of the above grade structures at the Site are included in **Attachment IV**. The valve and the electrical meter box are not enclosed within a structure. The on-Site valve control building is not continuously occupied, and the foundation of the building consists of an elevated steel floor on concrete supports. The bottom of the steel floor is elevated above the ground surface and is resting on concrete; therefore, vapors from soil gas cannot enter the building through the floor or walls. Given that the valve control building is constructed on an elevated foundation, there is not a complete pathway for soil vapors to accumulate in the on-Site building. In addition, remedial excavation activities were successful in removing PVOC impacted soil. Therefore, based on the RR-800 guidance, and the site investigation requirements under Chapter NR 716.11(5)(g), sub-slab or soil gas vapor sampling is not required at the Site.

SUMMARY AND CONCLUSIONS

Upon the discovery of historical crude oil impacts in soil at the Line 5 Mile Post 1159.47 Valve Site, Enbridge reported the impacts to the WDNR and immediately began remediation activities. Laboratory analytical data for soil samples collected following completion of remediation activities indicate that all soil containing PVOC and PAH compounds were successfully removed and that the residual COC concentrations in soil do not exceed RCLs established under the WDNR Remediation and Redevelopment Program.

During the course of investigation and remediation activities, there was no indication of shallow groundwater infiltration into the excavation, which extended to a maximum depth of approximately 17 ft bg. The results of the nearby well records review indicate that the depth to groundwater in the vicinity of the Site is greater than approximately 60 ft bg. Because all crude oil impacted soil has been removed and because there is no groundwater in soil within the range of depths that previously contained impacts, there does not appear to be a risk of impact to groundwater as a result of the historical crude oil impacts in soil.

Based on the assessment and remediation activities completed, the Site does not constitute a threat to public safety, health, and welfare of the environment. Therefore, WSP recommends that no further response action be required at the Site and respectfully requests that the WDNR close the Site.

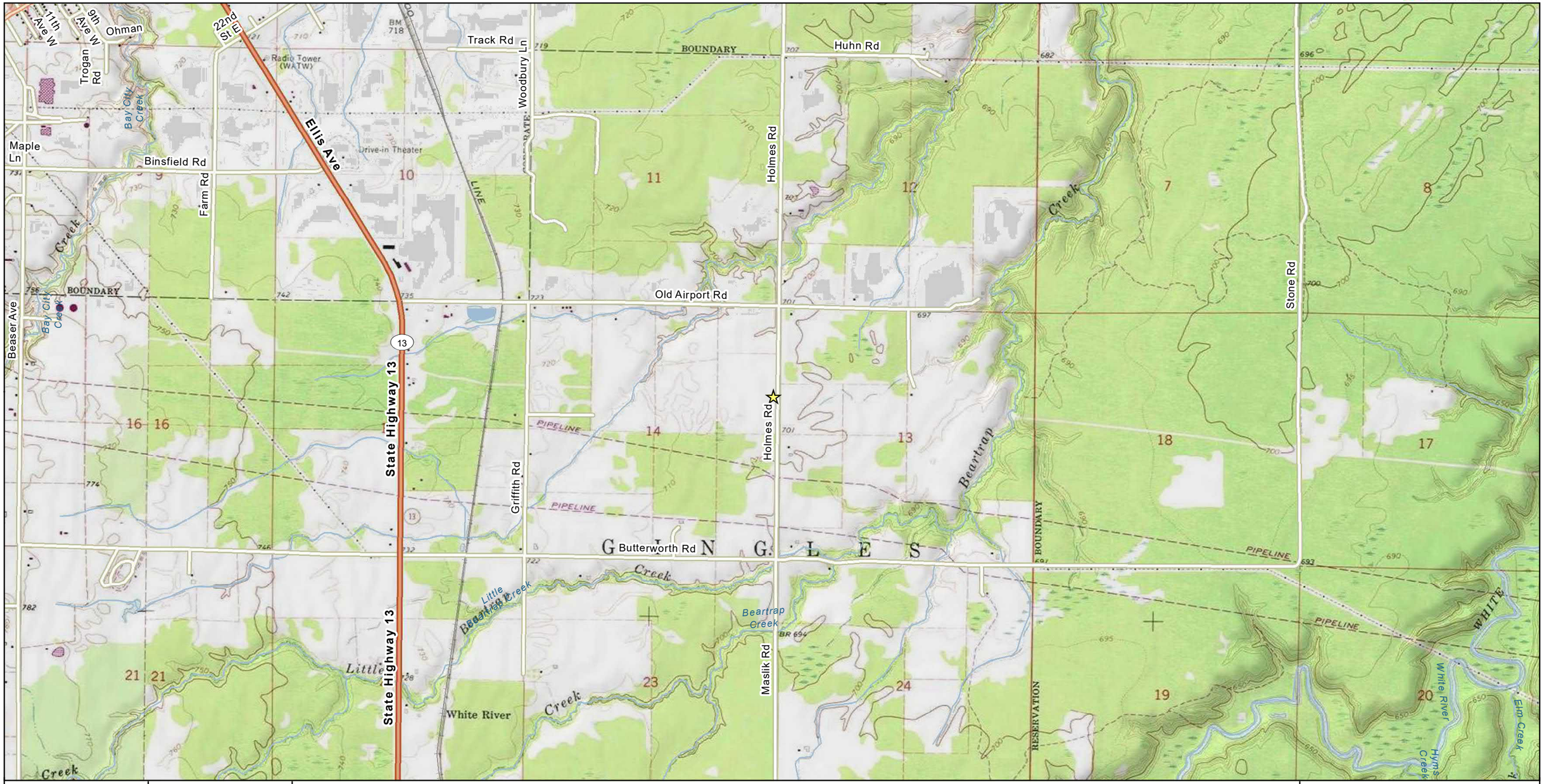
If you have any questions or concerns about this report, please do not hesitate to contact Ross Peterson (Enbridge) at 218-341-3863 or Ross.Peterson2@enbridge.com.

Kind regards,

Bradley DalSanto
Senior Consultant, Environmental Scientist

BJD/agm/bck
Attachments
cc: Ross Peterson, Enbridge; Shane Yokom, Enbridge

FIGURES



Drawn:	WSP 9/21/2022
Approved:	WSP 9/21/2022
Project #:	31401967.427

Map Location

N

0 2,000
Feet

Coordinate System: NAD 1983
StatePlane Wisconsin North FIPS
4801 Feet

Legend

☆ Site Location

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User

FIGURE 1
SITE LOCATION

LINE 5 MILE POST 1159.47
HISTORICAL CONTAMINATION SITE
ASHLAND COUNTY, WISCONSIN

ENBRIDGE ENERGY,
LIMITED PARTNERSHIP

C:\Users\molnarm\WSP O365\Kalamazoo GIS - GIS Files\Clients\Enbridge\L5 MP1159 Response\enbL5mp1159resp01x.mxd

Map Location

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Project #:	31401967.427

N

0 5 10 Feet

1 inch = 10 feet

Coordinate System: NAD 1983
StatePlane Wisconsin North FIPS
4801 Feet

Service Layer Credits: Aerial Imagery: Google Earth

Legend

Soil Samples (Sample ID Prefix LN5MP1159) Excavation Extent

Soil Sample Does Not Exceed Criteria

Soil Sample Removed via Excavation

FIGURE 2
EXCAVATION EXTENT AND
SOIL SAMPLE LOCATIONS

LINE 5 MILE POST 1159.47
HISTORICAL CONTAMINATION SITE
ASHLAND COUNTY, WISCONSIN

ENBRIDGE ENERGY,
LIMITED PARTNERSHIP

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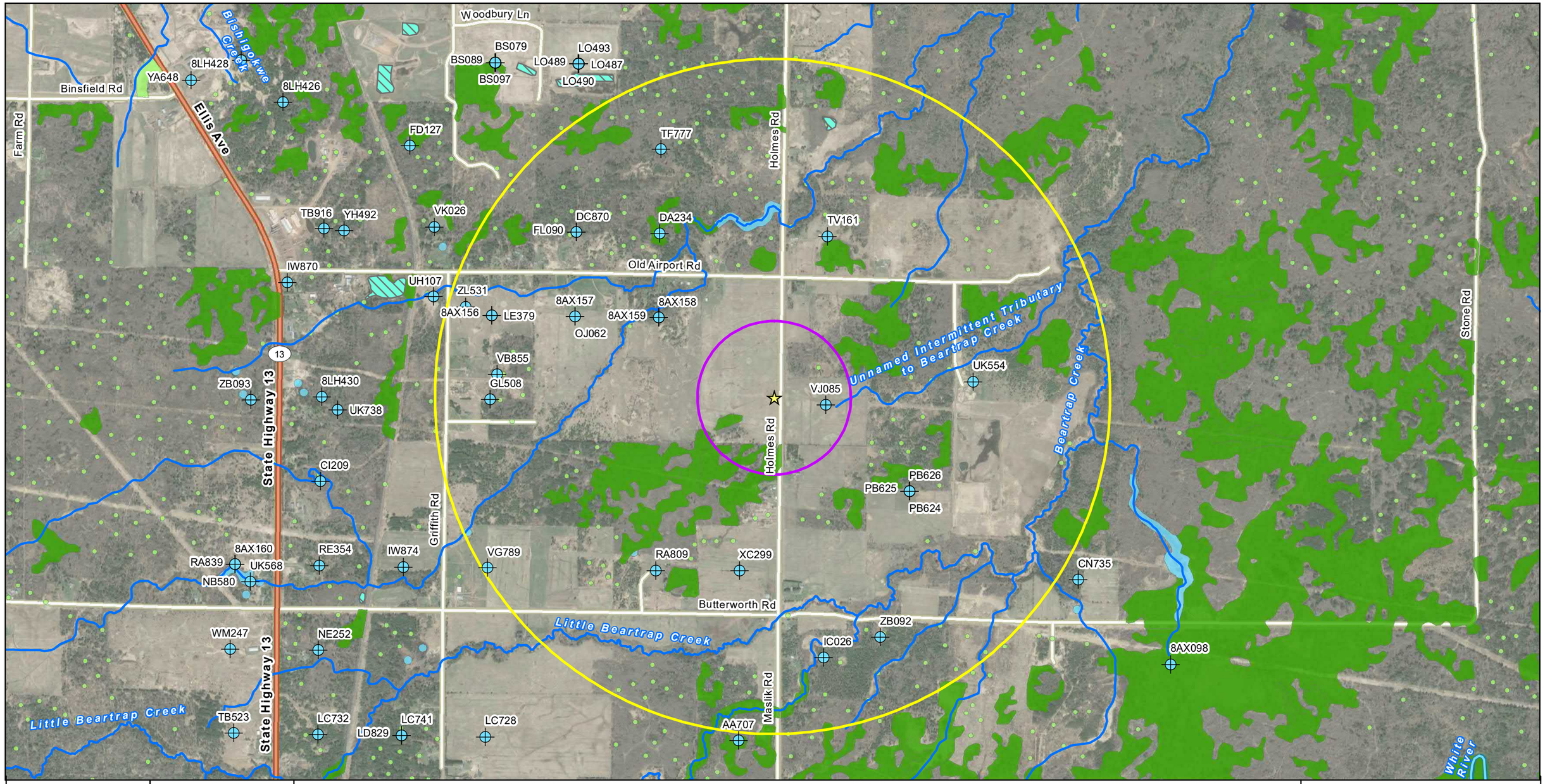
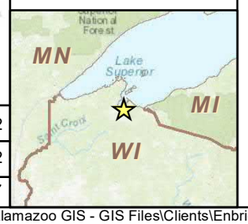
ENBRIDGE



Map Location



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Project #:	31401967.427

N

0 1,500

Feet

Coordinate System: NAD 1983 StatePlane Wisconsin North FIPS 4801 Feet

Legend

- Site Location
- Well Construction Record
- 1,200 Foot Radius
- 1 Mile Radius

NHD Flowline

- ArtificialPath
- StreamRiver

NHD Waterbody

- LakePond

NWI Wetland Type

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User

FIGURE 3
NEARBY WATER RESOURCES

LINE 5 MILE POST 1159.47
HISTORICAL CONTAMINATION SITE
ASHLAND COUNTY, WISCONSIN

ENBRIDGE ENERGY,
LIMITED PARTNERSHIP

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ENBRIDGE

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Project #:	31401967.427

Map Location

N

0 5 10 Feet

1 inch = 10 feet

Coordinate System: NAD 1983
StatePlane Wisconsin North FIPS
4801 Feet

Service Layer Credits: Aerial Imagery: Google Earth

Legend

Site Fence Line

Remedial Excavation Extent

FIGURE 4
ABOVE GROUND SITE
INFRASTRUCTURE

LINE 5 MILE POST 1159.47
HISTORICAL CONTAMINATION SITE
ASHLAND COUNTY, WISCONSIN

ENBRIDGE ENERGY,
LIMITED PARTNERSHIP

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TABLES

Table 1
Soil Quality - PVOCs

Line 5 Mile Post 1159.47

Ashland County, Wisconsin
Enbridge Energy, Limited Partnership

					PVOCs by EPA Method 5035/8260 (mg/Kg)						
					Benzene	Ethylbenzene	Toluene	Xylenes, Total	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Trimethylbenzenes [B]
CAS No.					**71-43-2**	**100-41-4**	**108-88-3**	**1330-20-7**	**95-63-6**	**108-67-8**	**--**
Generic RCLs[A]											
Direct Contact RCL - Non-Industrial					**1.6**	**8.02**	**818**	**260**	**219**	**182**	**NE**
Direct Contact RCL - Industrial					**7.07**	**35.4**	**818**	**260**	**219**	**182**	**NE**
Soil to Groundwater RCL					**0.0051**	**1.57**	**1.1072**	**3.96**	**NE**	**NE**	**1.3787**
Laboratory ID	**Sample ID**	**PID (ppm)**	**Depth (feet)**	**Date**	**Excavation Sidewalls**						
L1522068-02	LN5MP1159SC002	3.4	6.0	08/04/2022	<0.00156	<0.00246	<0.00433	<0.00293	<0.00527	<0.00667	< RCL
L1522569-03	LN5 MP1159 SC005	3.1	7.5	08/05/2022	<0.00156	<0.00246	<0.00433	0.0205	0.0144	0.00706	< RCL
L1522569-06	LN5 MP1159 SC008	1.7	8.0	08/05/2022	<0.00156	<0.00246	<0.00433	<0.00293	<0.00527	<0.00667	< RCL
L1522569-07	LN5 MP1159 SC009	1.8	8.0	08/05/2022	<0.00156	<0.00246	<0.00433	<0.00293	<0.00527	<0.00667	< RCL
L1522569-11	LN5 MP1159 SC011	1.3	7.5	08/05/2022	<0.00156	<0.00246	<0.00433	0.00586	0.00625	<0.00667 J3	< RCL
L1522569-12	LN5 MP1159 SD08052022B (LN5 MP1159 SC011)	1.3	7.5	08/05/2022	<0.00165	<0.00260	<0.00460	0.00392	<0.00557	<0.00707 J3	< RCL
L1530512-01	LN5MP1159SB006(9)	0.1	9.0	08/27/2022	<0.00224	<0.00353	<0.00621	<0.00420	<0.00755	<0.00956	< RCL
L1530517-01	LN5MP1159SB007(9)	0.1	9.0	08/27/2022	<0.00220	<0.00346	<0.00610	<0.00413	<0.00742	<0.00939	< RCL
L1530519-01	LN5MP1159SB008(9)	0.1	9.0	08/27/2022	<0.00243	<0.00384	<0.00679	<0.00459	<0.00825	<0.0104	< RCL
L1531884-01	LN5MP1159SB009 (8)	1.2	8.0	09/01/2022	<0.00277	<0.00438	<0.00771	0.0443	0.00962	<0.0119	< RCL
L1531884-02	LN5MP1159SD090122 (LN5MP1159SB009 (8))	1.2	8.0	09/01/2022	<0.00330	<0.00522	<0.00918	0.0493	0.0126	<0.0142	< RCL
Laboratory ID	**Sample ID**	**PID (ppm)**	**Depth (feet)**	**Date**	**Excavation Base**						
L1522068-01	LN5MP1159SC001	2.4	8.5	08/04/2022	<0.00156	<0.00246	<0.00433	0.00374	0.00648	<0.00667	< RCL
L1528939-03	LN5MP1159SC007R	0.8	13.0	08/24/2022	<0.00221	<0.00348	<0.00613	<0.00415	<0.00746	<0.00944	< RCL
L1530008-01	LN5MP1159SB004(17)	0.2	17.0	08/26/2022	<0.00243	<0.00383	<0.00675	<0.00457	<0.00822	<0.0104	< RCL
L1530523-01	LN5MP1159SB005(17)	0.1	17.0	08/26/2022	0.00487	<0.00372	<0.00655	<0.00443	<0.00797	<0.0101	< RCL
Laboratory ID	**Sample ID**	**PID (ppm)**	**Depth (feet)**	**Date**	**Removed Via Excavation**						
~~L1522569-01~~	~~LN5 MP1159 SC003~~	~~8.1~~	~~11.0~~	~~08/05/2022~~	~~**0.189**~~	~~0.132~~	~~<0.00433~~	~~1.80~~	~~0.494~~	~~0.239~~	~~< RCL~~
~~L1522569-08~~	~~LN5 MP1159 SD08052022A (LN5 MP1159 SC003)~~	~~8.1~~	~~11.0~~	~~08/05/2022~~	~~**0.199**~~	~~0.133~~	~~<0.00433~~	~~1.83~~	~~0.514~~	~~0.243~~	~~< RCL~~
~~L1528446-02~~	~~LN5MP1159 SC003R~~	~~2.4~~	~~16.0~~	~~08/23/2022~~	~~**0.0212**~~	~~0.0607~~	~~<0.00433~~	~~0.626~~	~~0.0156~~	~~0.00847~~	~~< RCL~~
~~L1522569-02~~	~~LN5 MP1159 SC004~~	~~4.8~~	~~8.0~~	~~08/05/2022~~	~~**0.117**~~	~~0.00753~~	~~<0.00433~~	~~1.51~~	~~0.279~~	~~0.150~~	~~< RCL~~
~~L1528446-03~~	~~LN5MP1159 SC004R~~	~~3.1~~	~~9.0~~	~~08/23/2022~~	~~**0.0385**~~	~~0.00344~~	~~<0.00433~~	~~0.325~~	~~0.122~~	~~0.0318~~	~~< RCL~~
~~L1522569-04~~	~~LN5 MP1159 SC006~~	~~7.4~~	~~7.5~~	~~08/05/2022~~	~~**0.157**~~	~~0.0574~~	~~<0.00433~~	~~1.78~~	~~0.315~~	~~0.173~~	~~< RCL~~
~~L1528446-01~~	~~LN5MP1159 SC006R~~	~~0.4~~	~~9.0~~	~~08/23/2022~~	~~**0.0302**~~	~~<0.00246~~	~~<0.00433~~	~~0.0599~~	~~<0.00527~~	~~<0.00667~~	~~< RCL~~
~~L1522569-05~~	~~LN5 MP1159 SC007~~	~~7.7~~	~~10.0~~	~~08/05/2022~~	~~**0.0233**~~	~~0.00518~~	~~<0.00433~~	~~0.326~~	~~0.296~~	~~0.157~~	~~< RCL~~
~~L1522569-10~~	~~LN5 MP1159 SC010~~	~~5.9~~	~~7.5~~	~~08/05/2022~~	~~**0.124**~~	~~0.0682~~	~~<0.00433~~	~~2.78~~	~~1.19~~	~~0.620~~	~~**1.81**~~
~~L1528939-02~~	~~LN5MP1159SC010R~~	~~0.8~~	~~8.5~~	~~08/23/2022~~	~~**0.0133**~~	~~0.00906~~	~~<0.00628~~	~~0.179~~	~~0.0572~~	~~0.0237~~	~~< RCL~~
~~L1528939-01~~	~~LN5MP1159SC012~~	~~1.7~~	~~15.5~~	~~08/23/2022~~	~~**0.0267**~~	~~0.0469~~	~~<0.00658~~	~~0.462~~	~~0.0387~~	~~0.0237~~	~~< RCL~~
~~L1524037-01~~	~~LN5MP1159 SB001 (14-15)~~	~~0.7~~	~~14.0-15.0~~	~~08/10/2022~~	~~**0.0137**~~	~~0.0162~~	~~<0.00433~~	~~0.123~~	~~<0.00527~~	~~<0.00667~~	~~< RCL~~
~~L1524037-02~~	~~LN5MP1159 SB002 (14-14.5)~~	~~2.5~~	~~14.0-14.5~~	~~08/10/2022~~	~~**0.0522**~~	~~0.0409~~	~~<0.00433~~	~~0.496~~	~~0.0161~~	~~0.00827~~	~~< RCL~~
~~L1530509-01~~	~~LN5MP1159SB005(16)~~	~~0.7~~	~~16.0~~	~~08/26/2022~~	~~**0.0858**~~	~~<0.00548~~	~~<0.00970~~	~~<0.00658~~	~~<0.0118~~	~~<0.0149~~	~~< RCL~~

Notes:

All values reported in milligrams/kilogram (mg/Kg).

PVOCs = Petroleum Volatile Organic Compounds.
CAS No. = Chemical Abstracts Service Number.
ppm = Parts Per Million.
A = Soil Residual Contaminant Levels (RCLs), Wisconsin Department of Natural Resources (WDNR) NR Chapter 720 Wisconsin Administrative Code updated December, 2018.
B = Trimethylbenzenes (1,2,4- and 1,3,5- combined).
< = The constituent was not detected above the laboratory Reported Detection Limit.
NE = No RCL established.
< RCL = Trimethylbenzenes (1,2,4- and 1,3,5- combined) reported below WDNR Soil to Groundwater RCL.
Date = Field Sample Collection Date.
Feet = Feet below grade.
( ) = Sample is duplicate from the location inside of the parentheses.
J3 = The associated batch QC was outside the established quality control range for precision.
Bold = Constituent was detected above WDNR Soil to Groundwater RCL.
~~Strike~~ = Sample location removed via additional excavation and is not representative of soil left in place.

Table 2
Soil Quality - PAHs

Line 5 Mile Post 1159.47

Ashland County, Wisconsin
Enbridge Energy, Limited Partnership

					PAHs by EPA Method 8270E by SIM (mg/Kg)															
					Anthracene	Acenaphthene	Acenaphthylene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	1-Methylnaphthalene	2-Methylnaphthalene
CAS No.					**120-12-7**	**83-32-9**	**208-96-8**	**56-55-3**	**50-32-8**	**205-99-2**	**191-24-2**	**207-08-9**	**218-01-9**	**53-70-3**	**206-44-0**	**86-73-7**	**193-39-5**	**91-20-3**	**85-01-8**	**129-00-0**	**90-12-0**	**91-57-6**
Generic RCLs[A]																					
Direct Contact RCL - Non-Industrial					**17,900**	**3,590**	**NE**	**1.14**	**0.115**	**1.15**	**NE**	**11.5**	**115**	**0.115**	**2,390**	**2,390**	**1.15**	**5.52**	**NE**	**1,790**	**17.6**	**239**
Direct Contact RCL - Industrial					**100,000**	**45,200**	**NE**	**20.8**	**2.11**	**21.1**	**NE**	**211**	**2,110**	**2.11**	**30,100**	**30,100**	**21.1**	**24.1**	**NE**	**22,600**	**72.7**	**3,010**
Soil to Groundwater RCL					**196.9492**	**NE**	**NE**	**NE**	**0.47**	**0.4781**	**NE**	**NE**	**0.1442**	**NE**	**88.8778**	**14.8299**	**NE**	**0.6582**	**NE**	**54.5455**	**NE**	**NE**
Laboratory ID	**Sample ID**	**PID (ppm)**	**Depth (feet)**	**Date**	**Excavation Sidewalls**																	
L1522068-02	LN5MP1159SC002	3.4	6.0	08/04/2022	<0.00767	<0.00697	<0.00720	0.0116	0.00837	0.0107	<0.00590	<0.00717	0.0318	<0.00573	0.027	<0.00683	<0.00603	<0.0136	0.0162	0.0232	<0.0150	<0.0142
L1522569-03	LN5 MP1159 SC005	3.1	7.5	08/05/2022	<0.00767	<0.00697	<0.00720	<0.00577	<0.00597	<0.00510	<0.00590	<0.00717	<0.00773	<0.00573	0.0105	<0.00683	<0.00603	0.0264	0.0162	0.00939	<0.0150	0.0338
L1522569-06	LN5 MP1159 SC008	1.7	8.0	08/05/2022	<0.00767	<0.00697	<0.00720	<0.00577	<0.00597	<0.00510	<0.00590	<0.00717	<0.00773	<0.00573	<0.00757	<0.00683	<0.00603	<0.0136	<0.00770	<0.00667	<0.0150	<0.0142
L1522569-07	LN5 MP1159 SC009	1.8	8.0	08/05/2022	<0.00767	<0.00697	<0.00720	<0.00577	<0.00597	<0.00510	<0.00590	<0.00717	<0.00773	<0.00573	<0.00757	<0.00683	<0.00603	<0.0136	<0.00770	<0.00667	<0.0150	<0.0142
L1522569-11	LN5 MP1159 SC011	1.3	7.5	08/05/2022	<0.00767	<0.00697	<0.00720	<0.00577	<0.00597	<0.00510	<0.00590	<0.00717	<0.00773	<0.00573	<0.00757	<0.00683	<0.00603	<0.0136	<0.00770	<0.00667	<0.0150	<0.0142
L1522569-12	LN5 MP1159 SD08052022B (LN5 MP1159 SC011)	1.3	7.5	08/05/2022	<0.00767	<0.00697	<0.00720	<0.00577	<0.00597	<0.00510	<0.00590	<0.00717	<0.00773	<0.00573	<0.00757	<0.00683	<0.00603	<0.0136	<0.00770	<0.00667	<0.0150	<0.0142
L1530512-01	LN5MP1159SB006(9)	0.1	9.0	08/27/2022	<0.00910	<0.00826	<0.00854	<0.00684	<0.00708	<0.00605	<0.00700	<0.00850	<0.00917	<0.00679	<0.00898	<0.00810	<0.00715	<0.0161	<0.00913	<0.00791	<0.0178	<0.0168
L1530517-01	LN5MP1159SB007(9)	0.1	9.0	08/27/2022	<0.00913	<0.00829	<0.00857	<0.00686	<0.00710	<0.00607	<0.00702	<0.00853	<0.00920	<0.00682	<0.00901	<0.00813	<0.00717	<0.0162	<0.00916	<0.00794	<0.0178	<0.0169
L1530519-01	LN5MP1159SB008(9)	0.1	9.0	08/27/2022	<0.00969	<0.00881	<0.00910	<0.00729	<0.00755	<0.00645	<0.00746	<0.00906	<0.00977	<0.00724	<0.00957	<0.00863	<0.00762	<0.0172	<0.00973	<0.00843	<0.0190	<0.0179
L1531884-01	LN5MP1159SB009 (8)	1.2	8.0	09/01/2022	<0.0106	<0.00965	<0.00997	<0.00799	<0.00827	<0.00706	<0.00817	<0.00993	<0.0107	<0.00793	<0.0105	<0.00946	<0.00835	<0.0188	<0.0107	<0.00924	<0.0208	<0.0197
L1531884-02	LN5MP1159SD090122 (LN5MP1159SB009 (8))	1.2	8.0	09/01/2022	<0.0111	<0.0101	<0.0105	<0.00838	<0.00867	<0.00741	<0.00857	<0.0104	<0.0112	<0.00832	<0.0110	<0.00992	<0.00876	<0.0198	<0.0112	<0.00969	<0.0218	<0.0206
Laboratory ID	**Sample ID**	**PID (ppm)**	**Depth (feet)**	**Date**	**Excavation Base**																	
L1522068-01	LN5MP1159SC001	2.4	8.5	08/04/2022	0.0213	<0.00697	<0.00720	0.012	0.00731	0.00902	<0.00590	<0.00717	0.0248	<0.00573	0.0384	<0.00683	<0.00603	<0.0136	0.0309	0.0323	<0.0150	<0.0142
L1528939-03	LN5MP1159SC007R	0.8	13.0	08/24/2022	<0.00909	<0.00826	<0.00853	<0.00684	<0.00707	<0.00604	<0.00699	<0.00850	<0.00916	<0.00679	<0.00897	<0.00809	<0.00714	<0.0161	<0.00912	<0.00790	<0.0178	<0.0168
L1530008-01	LN5MP1159SB004(17)	0.2	17.0	08/26/2022	<0.00947	<0.00861	<0.00889	<0.00713	<0.00737	<0.00630	<0.00729	<0.00886	<0.00955	<0.00708	<0.00935	<0.00844	<0.00745	<0.0168	<0.00951	<0.00824	<0.0185	<0.0175
L1530523-01	LN5MP1159SB005(17)	0.1	17.0	08/26/2022	<0.00958	<0.00870	<0.00899	<0.00720	<0.00745	<0.00637	<0.00737	<0.00895	<0.00965	<0.00715	<0.00945	<0.00853	<0.00753	<0.0170	<0.00961	<0.00833	<0.0187	<0.0177
Laboratory ID	**Sample ID**	**PID (ppm)**	**Depth (feet)**	**Date**	**Removed Via Excavation**																	
~~L1522569-01~~	~~LN5 MP1159 SC003~~	~~8.1~~	~~11.0~~	~~08/05/2022~~	~~<0.00767~~	~~<0.00697~~	~~<0.00720~~	~~<0.00577~~	~~<0.00597~~	~~<0.00510~~	~~<0.00590~~	~~<0.00717~~	~~<0.00773~~	~~<0.00573~~	~~<0.00757~~	~~<0.00683~~	~~<0.00603~~	~~0.025~~	~~<0.00770~~	~~<0.00667~~	~~<0.0150~~	~~<0.0142~~
~~L1522569-08~~	~~LN5 MP1159 SD08052022A (LN5 MP1159 SC003)~~	~~8.1~~	~~11.0~~	~~08/05/2022~~	~~<0.00767~~	~~<0.00697~~	~~<0.00720~~	~~<0.00577~~	~~<0.00597~~	~~<0.00510~~	~~<0.00590~~	~~<0.00717~~	~~<0.00773~~	~~<0.00573~~	~~<0.00757~~	~~<0.00683~~	~~<0.00603~~	~~0.0284~~	~~<0.00770~~	~~<0.00667~~	~~<0.0150~~	~~<0.0142~~
~~L1528446-02~~	~~LN5MP1159 SC003R~~	~~2.4~~	~~16.0~~	~~08/23/2022~~	~~<0.00767~~	~~<0.00697~~	~~<0.00720~~	~~<0.00577~~	~~<0.00597~~	~~<0.00510~~	~~<0.00590~~	~~<0.00717~~	~~<0.00773~~	~~<0.00573~~	~~<0.00757~~	~~<0.00683~~	~~<0.00603~~	~~<0.0136~~	~~<0.00770~~	~~<0.00667~~	~~<0.0150~~	~~<0.0142~~
~~L1522569-02~~	~~LN5 MP1159 SC004~~	~~4.8~~	~~8.0~~	~~08/05/2022~~	~~<0.00767~~	~~<0.00697~~	~~<0.00720~~	~~<0.00577~~	~~<0.00597~~	~~<0.00510~~	~~<0.00590~~	~~<0.00717~~	~~<0.00773~~	~~<0.00573~~	~~<0.00757~~	~~<0.00683~~	~~<0.00603~~	~~<0.0136~~	~~<0.00770~~	~~<0.00667~~	~~<0.0150~~	~~<0.0142~~
~~L1528446-03~~	~~LN5MP1159 SC004R~~	~~3.1~~	~~9.0~~	~~08/23/2022~~	~~<0.00767~~	~~<0.00697~~	~~<0.00720~~	~~<0.00577~~	~~<0.00597~~	~~<0.00510~~	~~<0.00590~~	~~<0.00717~~	~~<0.00773~~	~~<0.00573~~	~~<0.00757~~	~~<0.00683~~	~~<0.00603~~	~~<0.0136~~	~~<0.00770~~	~~<0.00667~~	~~<0.0150~~	~~<0.0142~~
~~L1522569-04~~	~~LN5 MP1159 SC006~~	~~7.4~~	~~7.5~~	~~08/05/2022~~	~~<0.00767~~	~~<0.00697~~	~~<0.00720~~	~~<0.00577~~	~~<0.00597~~	~~<0.00510~~	~~<0.00590~~	~~<0.00717~~	~~<0.00773~~	~~<0.00573~~	~~<0.00757~~	~~<0.00683~~	~~<0.00603~~	~~<0.0136~~	~~<0.00770~~	~~<0.00667~~	~~<0.0150~~	~~<0.0142~~
~~L1528446-01~~	~~LN5MP1159 SC006R~~	~~0.4~~	~~9.0~~	~~08/23/2022~~	~~<0.00767~~	~~<0.00697~~	~~<0.00720~~	~~<0.00577~~	~~<0.00597~~	~~<0.00510~~	~~<0.00590~~	~~<0.00717~~	~~<0.00773~~	~~<0.00573~~	~~<0.00757~~	~~<0.00683~~	~~<0.00603~~	~~<0.0136~~	~~<0.00770~~	~~<0.00667~~	~~<0.0150~~	~~<0.0142~~
~~L1522569-05~~	~~LN5 MP1159 SC007~~	~~7.7~~	~~10.0~~	~~08/05/2022~~	~~0.0192~~	~~0.0222~~	~~<0.00720~~	~~<0.00577~~	~~<0.00597~~	~~<0.00510~~	~~<0.00590~~	~~<0.00717~~	~~<0.00773~~	~~<0.00573~~	~~0.0335~~	~~0.017~~	~~<0.00603~~	~~0.0443~~	~~0.0766~~	~~0.0274~~	~~<0.0150~~	~~<0.0142~~
~~L1522569-10~~	~~LN5 MP1159 SC010~~	~~5.9~~	~~7.5~~	~~08/05/2022~~	~~<0.00767~~	~~<0.00697~~	~~<0.00720~~	~~<0.00577~~	~~<0.00597~~	~~<0.00510~~	~~<0.00590~~	~~<0.00717~~	~~<0.00773~~	~~<0.00573~~	~~<0.00757~~	~~<0.00683~~	~~<0.00603~~	~~<0.0136~~	~~<0.00770~~	~~<0.00667~~	~~<0.0150~~	~~<0.0142~~
~~L1528939-02~~	~~LN5MP1159SC010R~~	~~0.8~~	~~8.5~~	~~08/23/2022~~	~~<0.00913~~	~~<0.00829~~	~~<0.00857~~	~~<0.00687~~	~~<0.00710~~	~~<0.00607~~	~~<0.00702~~	~~<0.00853~~	~~<0.00920~~	~~<0.00682~~	~~<0.00901~~	~~<0.00813~~	~~<0.00717~~	~~<0.0162~~	~~<0.00916~~	~~<0.00794~~	~~<0.0178~~	~~<0.0169~~
~~L1528939-01~~	~~LN5MP1159SC012~~	~~1.7~~	~~15.5~~	~~08/23/2022~~	~~<0.00932~~	~~<0.00847~~	~~<0.00875~~	~~<0.00701~~	~~<0.00726~~	~~<0.00620~~	~~<0.00717~~	~~<0.00871~~	~~<0.00939~~	~~<0.00696~~	~~<0.00920~~	~~<0.00830~~	~~<0.00733~~	~~<0.0165~~	~~<0.00936~~	~~<0.00811~~	~~<0.0182~~	~~<0.0173~~
~~L1524037-01~~	~~LN5MP1159 SB001 (14-15)~~	~~0.7~~	~~14.0-15.0~~	~~08/10/2022~~	~~<0.00767~~	~~<0.00697~~	~~<0.00720~~	~~<0.00577~~	~~<0.00597~~	~~<0.00510~~	~~<0.00590~~	~~<0.00717~~	~~<0.00773~~	~~<0.00573~~	~~<0.00757~~	~~<0.00683~~	~~<0.00603~~	~~<0.0136~~	~~<0.00770~~	~~<0.00667~~	~~<0.0150~~	~~<0.0142~~
~~L1524037-02~~	~~LN5MP1159 SB002 (14-14.5)~~	~~2.5~~	~~14.0-14.5~~	~~08/10/2022~~	~~<0.00767~~	~~<0.00697~~	~~<0.00720~~	~~<0.00577~~	~~<0.00597~~	~~<0.00510~~	~~<0.00590~~	~~<0.00717~~	~~<0.00773~~	~~<0.00573~~	~~<0.00757~~	~~<0.00683~~	~~<0.00603~~	~~<0.0136~~	~~<0.00770~~	~~<0.00667~~	~~<0.0150~~	~~<0.0142~~
~~L1530509-01~~	~~LN5MP1159SB005(16)~~	~~0.7~~	~~16.0~~	~~08/26/2022~~	~~<0.00947~~	~~<0.00860~~	~~<0.00889~~	~~<0.00712~~	~~<0.00737~~	~~<0.00630~~	~~<0.00728~~	~~<0.00885~~	~~<0.00954~~	~~<0.00707~~	~~<0.00934~~	~~<0.00843~~	~~<0.00744~~	~~<0.0168~~	~~<0.00950~~	~~<0.00823~~	~~<0.0185~~	~~0.0433~~

Notes:
All values reported in milligrams/kilogram (mg/Kg).
A = Soil Residual Contaminant Levels (RCLs), Wisconsin Department of Natural Resources (WDNR) NR Chapter 720 Wisconsin Administrative Code updated December, 2018.
PAHs = Polycyclic Aromatic Hydrocarbons.
CAS No. = Chemical Abstracts Service Number.
ppm = Parts Per Million.
< = The constituent was not detected above the laboratory Reported Detection Limit.
NE = No RCL established.
Date = Field Sample Collection Date.
Feet = Feet below grade.
( ) = Sample is duplicate from the location inside of the parentheses.
~~Strike~~ = Sample location removed via additional excavation and is not representative of soil left in place.

ATTACHMENT I – LABORATORY ANALYTICAL REPORTS

ANALYTICAL REPORT

August 09, 2022

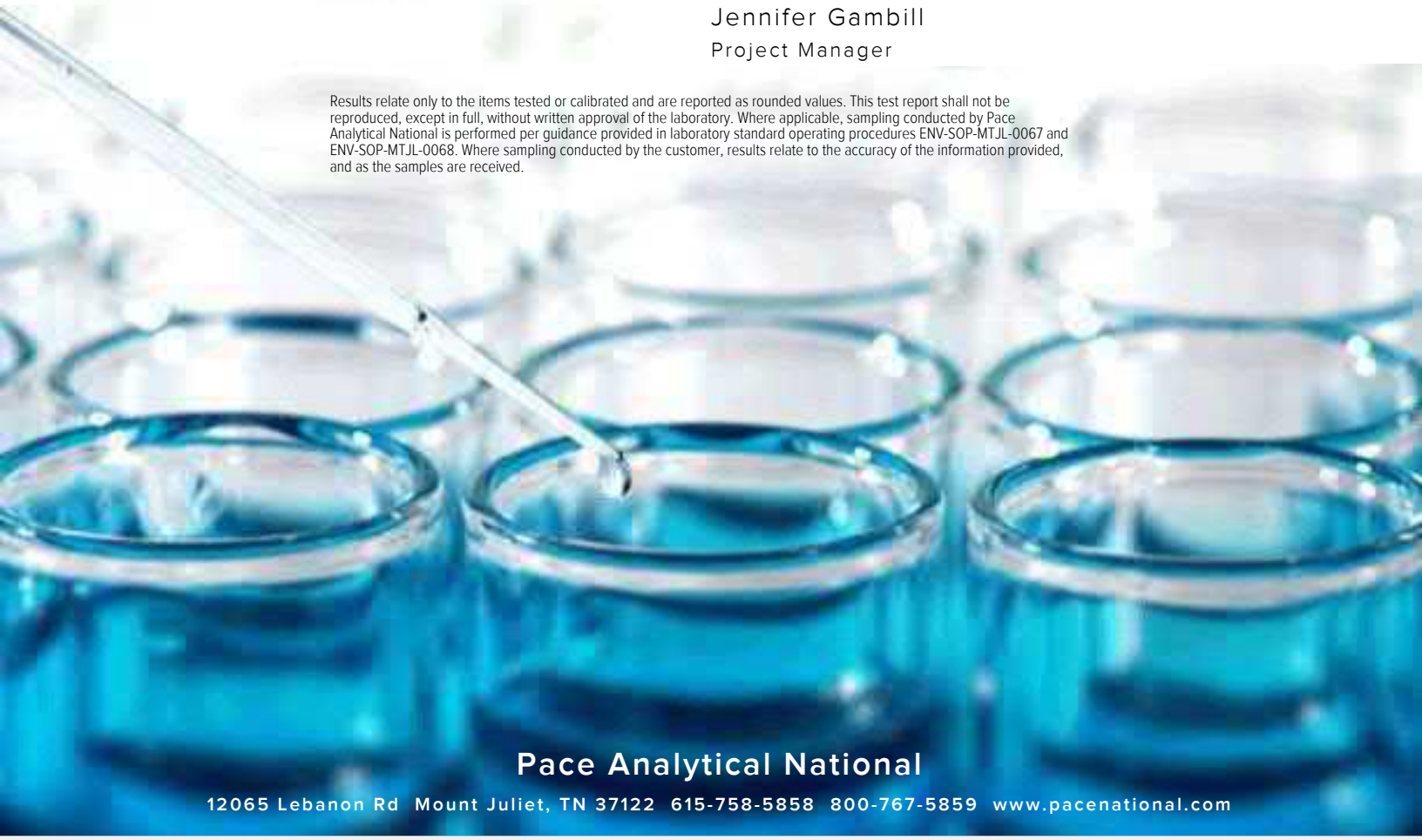
WSP USA - Duluth, MN

Sample Delivery Group:	L1522068
Samples Received:	08/05/2022
Project Number:	
Description:	LINE 5 MP 1159

Report To: Brad DalSanto
5957 McKee Road, Ste 7
Madison, WI 53719

Entire Report Reviewed By:

Jennifer Gambill
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

LN5MP1159SC001 L1522068-01 Solid

Collected by: Al Moreland
Collected date/time: 08/04/22 12:45
Received date/time: 08/05/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1906376	1	08/05/22 14:00	08/05/22 14:28	KDW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1906372	1	08/04/22 12:45	08/05/22 14:43	DWR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1906350	1	08/05/22 16:40	08/06/22 16:33	DSH	Mt. Juliet, TN

LN5MP1159SC002 L1522068-02 Solid

Collected by: Al Moreland
Collected date/time: 08/04/22 13:00
Received date/time: 08/05/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1906378	1	08/06/22 10:15	08/06/22 10:50	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1906372	1	08/04/22 13:00	08/05/22 15:03	DWR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1906350	1	08/05/22 16:40	08/06/22 16:53	DSH	Mt. Juliet, TN

LN5MP1159BT080422 L1522068-03 Solid

Collected by: Al Moreland
Collected date/time: 08/04/22 00:00
Received date/time: 08/05/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1907083	1	08/04/22 00:00	08/07/22 20:09	JHH	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jennifer Gambill
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	78.3		1	08/05/2022 14:28	WG1906376

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00156	1	08/05/2022 14:43	WG1906372
Ethylbenzene	ND		0.00246	1	08/05/2022 14:43	WG1906372
Toluene	ND		0.00433	1	08/05/2022 14:43	WG1906372
Xylenes, Total	0.00374		0.00293	1	08/05/2022 14:43	WG1906372
1,2,4-Trimethylbenzene	0.00648		0.00527	1	08/05/2022 14:43	WG1906372
1,3,5-Trimethylbenzene	ND		0.00667	1	08/05/2022 14:43	WG1906372
(S) Toluene-d8	*104*		*75.0-131*		*08/05/2022 14:43*	WG1906372
(S) 4-Bromofluorobenzene	*99.6*		*67.0-138*		*08/05/2022 14:43*	WG1906372
(S) 1,2-Dichloroethane-d4	*91.4*		*70.0-130*		*08/05/2022 14:43*	WG1906372

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	0.0213		0.00767	1	08/06/2022 16:33	WG1906350
Acenaphthene	ND		0.00697	1	08/06/2022 16:33	WG1906350
Acenaphthylene	ND		0.00720	1	08/06/2022 16:33	WG1906350
Benzo(a)anthracene	0.0120		0.00577	1	08/06/2022 16:33	WG1906350
Benzo(a)pyrene	0.00731		0.00597	1	08/06/2022 16:33	WG1906350
Benzo(b)fluoranthene	0.00902		0.00510	1	08/06/2022 16:33	WG1906350
Benzo(g,h,i)perylene	ND		0.00590	1	08/06/2022 16:33	WG1906350
Benzo(k)fluoranthene	ND		0.00717	1	08/06/2022 16:33	WG1906350
Chrysene	0.0248		0.00773	1	08/06/2022 16:33	WG1906350
Dibenz(a,h)anthracene	ND		0.00573	1	08/06/2022 16:33	WG1906350
Fluoranthene	0.0384		0.00757	1	08/06/2022 16:33	WG1906350
Fluorene	ND		0.00683	1	08/06/2022 16:33	WG1906350
Indeno(1,2,3-cd)pyrene	ND		0.00603	1	08/06/2022 16:33	WG1906350
Naphthalene	ND		0.0136	1	08/06/2022 16:33	WG1906350
Phenanthrene	0.0309		0.00770	1	08/06/2022 16:33	WG1906350
Pyrene	0.0323		0.00667	1	08/06/2022 16:33	WG1906350
1-Methylnaphthalene	ND		0.0150	1	08/06/2022 16:33	WG1906350
2-Methylnaphthalene	ND		0.0142	1	08/06/2022 16:33	WG1906350
2-Chloronaphthalene	ND		0.0155	1	08/06/2022 16:33	WG1906350
(S) p-Terphenyl-d14	*42.6*		*23.0-120*		*08/06/2022 16:33*	WG1906350
(S) Nitrobenzene-d5	*55.8*		*14.0-149*		*08/06/2022 16:33*	WG1906350
(S) 2-Fluorobiphenyl	*37.2*		*34.0-125*		*08/06/2022 16:33*	WG1906350

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.8		1	08/06/2022 10:50	WG1906378

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00156	1	08/05/2022 15:03	WG1906372
Ethylbenzene	ND		0.00246	1	08/05/2022 15:03	WG1906372
Toluene	ND		0.00433	1	08/05/2022 15:03	WG1906372
Xylenes, Total	ND		0.00293	1	08/05/2022 15:03	WG1906372
1,2,4-Trimethylbenzene	ND		0.00527	1	08/05/2022 15:03	WG1906372
1,3,5-Trimethylbenzene	ND		0.00667	1	08/05/2022 15:03	WG1906372
(S) Toluene-d8	*106*		*75.0-131*		*08/05/2022 15:03*	WG1906372
(S) 4-Bromofluorobenzene	*102*		*67.0-138*		*08/05/2022 15:03*	WG1906372
(S) 1,2-Dichloroethane-d4	*93.3*		*70.0-130*		*08/05/2022 15:03*	WG1906372

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00767	1	08/06/2022 16:53	WG1906350
Acenaphthene	ND		0.00697	1	08/06/2022 16:53	WG1906350
Acenaphthylene	ND		0.00720	1	08/06/2022 16:53	WG1906350
Benzo(a)anthracene	0.0116		0.00577	1	08/06/2022 16:53	WG1906350
Benzo(a)pyrene	0.00837		0.00597	1	08/06/2022 16:53	WG1906350
Benzo(b)fluoranthene	0.0107		0.00510	1	08/06/2022 16:53	WG1906350
Benzo(g,h,i)perylene	ND		0.00590	1	08/06/2022 16:53	WG1906350
Benzo(k)fluoranthene	ND		0.00717	1	08/06/2022 16:53	WG1906350
Chrysene	0.0318		0.00773	1	08/06/2022 16:53	WG1906350
Dibenz(a,h)anthracene	ND		0.00573	1	08/06/2022 16:53	WG1906350
Fluoranthene	0.0270		0.00757	1	08/06/2022 16:53	WG1906350
Fluorene	ND		0.00683	1	08/06/2022 16:53	WG1906350
Indeno(1,2,3-cd)pyrene	ND		0.00603	1	08/06/2022 16:53	WG1906350
Naphthalene	ND		0.0136	1	08/06/2022 16:53	WG1906350
Phenanthrene	0.0162		0.00770	1	08/06/2022 16:53	WG1906350
Pyrene	0.0232		0.00667	1	08/06/2022 16:53	WG1906350
1-Methylnaphthalene	ND		0.0150	1	08/06/2022 16:53	WG1906350
2-Methylnaphthalene	ND		0.0142	1	08/06/2022 16:53	WG1906350
2-Chloronaphthalene	ND		0.0155	1	08/06/2022 16:53	WG1906350
(S) p-Terphenyl-d14	*54.6*		*23.0-120*		*08/06/2022 16:53*	WG1906350
(S) Nitrobenzene-d5	*50.7*		*14.0-149*		*08/06/2022 16:53*	WG1906350
(S) 2-Fluorobiphenyl	*44.0*		*34.0-125*		*08/06/2022 16:53*	WG1906350

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00156	1	08/07/2022 20:09	WG1907083
Ethylbenzene	ND		0.00246	1	08/07/2022 20:09	WG1907083
Toluene	0.00605		0.00433	1	08/07/2022 20:09	WG1907083
Xylenes, Total	0.00510		0.00293	1	08/07/2022 20:09	WG1907083
1,2,4-Trimethylbenzene	ND		0.00527	1	08/07/2022 20:09	WG1907083
1,3,5-Trimethylbenzene	ND		0.00667	1	08/07/2022 20:09	WG1907083
(S) Toluene-d8	*105*		*75.0-131*		*08/07/2022 20:09*	WG1907083
(S) 4-Bromofluorobenzene	*103*		*67.0-138*		*08/07/2022 20:09*	WG1907083
(S) 1,2-Dichloroethane-d4	*91.6*		*70.0-130*		*08/07/2022 20:09*	WG1907083

Method Blank (MB)

(MB) R3823304-1 08/05/22 14:28

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00200			

L1522056-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1522056-01 08/05/22 14:28 • (DUP) R3823304-3 08/05/22 14:28

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	75.8	76.5	1	0.826		10

Laboratory Control Sample (LCS)

(LCS) R3823304-2 08/05/22 14:28

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3823719-1 08/06/22 10:50

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00400			

L1522071-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1522071-01 08/06/22 10:50 • (DUP) R3823719-3 08/06/22 10:50

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	81.1	79.4	1	2.12		10

Laboratory Control Sample (LCS)

(LCS) R3823719-2 08/06/22 10:50

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3823550-3 08/05/22 11:14

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00156
Ethylbenzene	U		0.000737	0.00246
Toluene	U		0.00130	0.00433
Xylenes, Total	U		0.000880	0.00293
1,2,4-Trimethylbenzene	U		0.00158	0.00527
1,3,5-Trimethylbenzene	U		0.00200	0.00667
(S) Toluene-d8	*101*			*75.0-131*
(S) 4-Bromofluorobenzene	*97.0*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*91.1*			*70.0-130*

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

(LCS) R3823550-1 08/05/22 09:56 • (LCSD) R3823550-2 08/05/22 10:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.132	0.134	106	107	70.0-123			1.50	20
Ethylbenzene	0.125	0.126	0.126	101	101	74.0-126			0.000	20
Toluene	0.125	0.130	0.135	104	108	75.0-121			3.77	20
Xylenes, Total	0.375	0.345	0.395	92.0	105	72.0-127			13.5	20
1,2,4-Trimethylbenzene	0.125	0.134	0.133	107	106	70.0-126			0.749	20
1,3,5-Trimethylbenzene	0.125	0.136	0.141	109	113	73.0-127			3.61	20
(S) Toluene-d8				*99.1*	*100*	*75.0-131*				
(S) 4-Bromofluorobenzene				*95.5*	*97.8*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*103*	*101*	*70.0-130*				

L1521792-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1521792-11 08/05/22 20:33 • (MS) R3823550-4 08/05/22 20:53 • (MSD) R3823550-5 08/05/22 21:12

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	6.95	0.239	7.11	3.54	102	50.9	55.6	10.0-149		J3	67.0	37
Ethylbenzene	6.95	52.8	53.4	51.6	8.63	0.000	55.6	10.0-160	V	V	3.43	38
Toluene	6.95	114	108	108	0.000	0.000	55.6	10.0-156	V	V	0.000	38
Xylenes, Total	20.9	738	669	667	0.000	0.000	55.6	10.0-160	V	V	0.299	38
1,2,4-Trimethylbenzene	6.95	458	475	488	245	432	55.6	10.0-160	E V	E V	2.70	36
1,3,5-Trimethylbenzene	6.95	146	141	160	0.000	201	55.6	10.0-160	E V	E V	12.6	38
(S) Toluene-d8					*95.4*	*98.4*		*75.0-131*				
(S) 4-Bromofluorobenzene					*87.8*	*89.3*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*102*	*105*		*70.0-130*				

Method Blank (MB)

(MB) R3823690-3 08/07/22 19:31

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00156
Ethylbenzene	U		0.000737	0.00246
Toluene	U		0.00130	0.00433
Xylenes, Total	U		0.000880	0.00293
1,2,4-Trimethylbenzene	U		0.00158	0.00527
1,3,5-Trimethylbenzene	U		0.00200	0.00667
(S) Toluene-d8	*106*			*75.0-131*
(S) 4-Bromofluorobenzene	*101*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*92.1*			*70.0-130*

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

(LCS) R3823690-1 08/07/22 18:11 • (LCSD) R3823690-2 08/07/22 18:30

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.126	0.131	101	105	70.0-123			3.89	20
Ethylbenzene	0.125	0.123	0.132	98.4	106	74.0-126			7.06	20
Toluene	0.125	0.126	0.130	101	104	75.0-121			3.12	20
Xylenes, Total	0.375	0.386	0.403	103	107	72.0-127			4.31	20
1,2,4-Trimethylbenzene	0.125	0.127	0.133	102	106	70.0-126			4.62	20
1,3,5-Trimethylbenzene	0.125	0.122	0.125	97.6	100	73.0-127			2.43	20
(S) Toluene-d8				*101*	*102*	*75.0-131*				
(S) 4-Bromofluorobenzene				*103*	*105*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*102*	*98.5*	*70.0-130*				

Method Blank (MB)

(MB) R3823489-2 08/06/22 10:14

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00767
Acenaphthene	U		0.00209	0.00697
Acenaphthylene	U		0.00216	0.00720
Benzo(a)anthracene	U		0.00173	0.00577
Benzo(a)pyrene	U		0.00179	0.00597
Benzo(b)fluoranthene	U		0.00153	0.00510
Benzo(g,h,i)perylene	U		0.00177	0.00590
Benzo(k)fluoranthene	U		0.00215	0.00717
Chrysene	U		0.00232	0.00773
Dibenz(a,h)anthracene	U		0.00172	0.00573
Fluoranthene	U		0.00227	0.00757
Fluorene	U		0.00205	0.00683
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00603
Naphthalene	U		0.00408	0.0136
Phenanthrene	U		0.00231	0.00770
Pyrene	U		0.00200	0.00667
1-Methylnaphthalene	U		0.00449	0.0150
2-Methylnaphthalene	U		0.00427	0.0142
2-Chloronaphthalene	U		0.00466	0.0155
(S) p-Terphenyl-d14	*70.6*			*23.0-120*
(S) Nitrobenzene-d5	*61.5*			*14.0-149*
(S) 2-Fluorobiphenyl	*66.1*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3823489-1 08/06/22 09:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0536	67.0	50.0-126	
Acenaphthene	0.0800	0.0551	68.9	50.0-120	
Acenaphthylene	0.0800	0.0560	70.0	50.0-120	
Benzo(a)anthracene	0.0800	0.0533	66.6	45.0-120	
Benzo(a)pyrene	0.0800	0.0506	63.3	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0518	64.8	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0505	63.1	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0506	63.3	49.0-125	
Chrysene	0.0800	0.0532	66.5	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0513	64.1	47.0-125	
Fluoranthene	0.0800	0.0550	68.8	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3823489-1 08/06/22 09:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0528	66.0	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0542	67.8	46.0-125	
Naphthalene	0.0800	0.0542	67.8	50.0-120	
Phenanthrene	0.0800	0.0517	64.6	47.0-120	
Pyrene	0.0800	0.0563	70.4	43.0-123	
1-Methylnaphthalene	0.0800	0.0554	69.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0573	71.6	50.0-120	
2-Chloronaphthalene	0.0800	0.0521	65.1	50.0-120	
(S) p-Terphenyl-d14			*66.9*	*23.0-120*	
(S) Nitrobenzene-d5			*64.6*	*14.0-149*	
(S) 2-Fluorobiphenyl			*65.8*	*34.0-125*	

L1521887-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1521887-04 08/06/22 12:14 • (MS) R3823489-3 08/06/22 12:34 • (MSD) R3823489-4 08/06/22 12:54

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	ND	0.0419	0.0399	52.4	49.9	1	10.0-145			4.89	30
Acenaphthene	0.0800	ND	0.0426	0.0446	53.3	55.8	1	14.0-127			4.59	27
Acenaphthylene	0.0800	ND	0.0419	0.0459	52.4	57.4	1	21.0-124			9.11	25
Benzo(a)anthracene	0.0800	ND	0.0398	0.0372	49.8	46.5	1	10.0-139			6.75	30
Benzo(a)pyrene	0.0800	ND	0.0392	0.0405	49.0	50.6	1	10.0-141			3.26	31
Benzo(b)fluoranthene	0.0800	ND	0.0356	0.0340	44.5	42.5	1	10.0-140			4.60	36
Benzo(g,h,i)perylene	0.0800	ND	0.0373	0.0388	46.6	48.5	1	10.0-140			3.94	33
Benzo(k)fluoranthene	0.0800	ND	0.0376	0.0390	47.0	48.8	1	10.0-137			3.66	31
Chrysene	0.0800	ND	0.0423	0.0415	52.9	51.9	1	10.0-145			1.91	30
Dibenz(a,h)anthracene	0.0800	ND	0.0341	0.0356	42.6	44.5	1	10.0-132			4.30	31
Fluoranthene	0.0800	ND	0.0464	0.0396	58.0	49.5	1	10.0-153			15.8	33
Fluorene	0.0800	ND	0.0390	0.0405	48.8	50.6	1	11.0-130			3.77	29
Indeno(1,2,3-cd)pyrene	0.0800	ND	0.0365	0.0378	45.6	47.3	1	10.0-137			3.50	32
Naphthalene	0.0800	ND	0.0460	0.0582	57.5	72.8	1	10.0-135			23.4	27
Phenanthrene	0.0800	ND	0.0504	0.0408	63.0	51.0	1	10.0-144			21.1	31
Pyrene	0.0800	ND	0.0488	0.0435	61.0	54.4	1	10.0-148			11.5	35
1-Methylnaphthalene	0.0800	ND	0.0436	0.0566	54.5	70.8	1	10.0-142			25.9	28
2-Methylnaphthalene	0.0800	ND	0.0442	0.0693	55.3	86.6	1	10.0-137		J3	44.2	28
2-Chloronaphthalene	0.0800	ND	0.0404	0.0444	50.5	55.5	1	29.0-120			9.43	24
(S) p-Terphenyl-d14					*46.9*	*45.1*		*23.0-120*				
(S) Nitrobenzene-d5					*55.2*	*63.8*		*14.0-149*				
(S) 2-Fluorobiphenyl					*49.6*	*51.1*		*34.0-125*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J3	The associated batch QC was outside the established quality control range for precision.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
WSP USA - Duluth, MN

5957 McKee Road, Ste 7
Madison, WI 53719

Billing Information:
Accounts Payable
5957 McKee Road, Ste 7
Madison, WI 53719

Pres Chk

Report to:
Brad DalSanto

Email To:
~~bradley.dalsanto@wsp.com~~;joseph_palo@golde

Project Description:
LINE 5 MP 1159

City/State Collected: WI

Please Circle:
PT MT (CT) ET

Phone: ~~608-669-9234~~

Client Project #

Lab Project #
~~WSPMWI-CUSHING~~
WSPMWI-LN5MP1159

Collected by (print):
Al Moreland

Site/Facility ID #

P.O. #

Collected by (signature):
Immediately
Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
X Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed
24-Hr TAT

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	~~IPHTX 40mlTW/SyringeNoPres~~	~~IS 4ozClr-NoPres~~	~~8260 Benzene only 40mlAmb/MeOH10ml/Syr~~	BTEX +TMB (5035/8260)	PAHs (8270)						Remarks	Sample # (lab only)
LN5MP1159 SC ØØ1	G	SS	8.5'	8-4-22	1245	4				X	X							-01
LN5MP1159SC ØØ2	G	SS	6'	8-4-22	1300	4				X	X							-02
TN5MP1159BT080422	--	SS	--	--	--	-				X								-03
		SS																
		SS																
		SS																
		SS																
		SS																
		SS																
		SS																

Chain of Custody Page ___ of ___

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1522068

J126

Acctnum: **WSPMWI**
Template: **T206187**
Prelogin: **P915492**
PM: **134 - Mark W. Beasley**
PB:
Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 4.0 °C Bottles Received: 8

If preservation required by Login: Date/Time

Date: 8/5/22 Time: 0845

Hold:

Condition: NCF / OK

ANALYTICAL REPORT

August 10, 2022

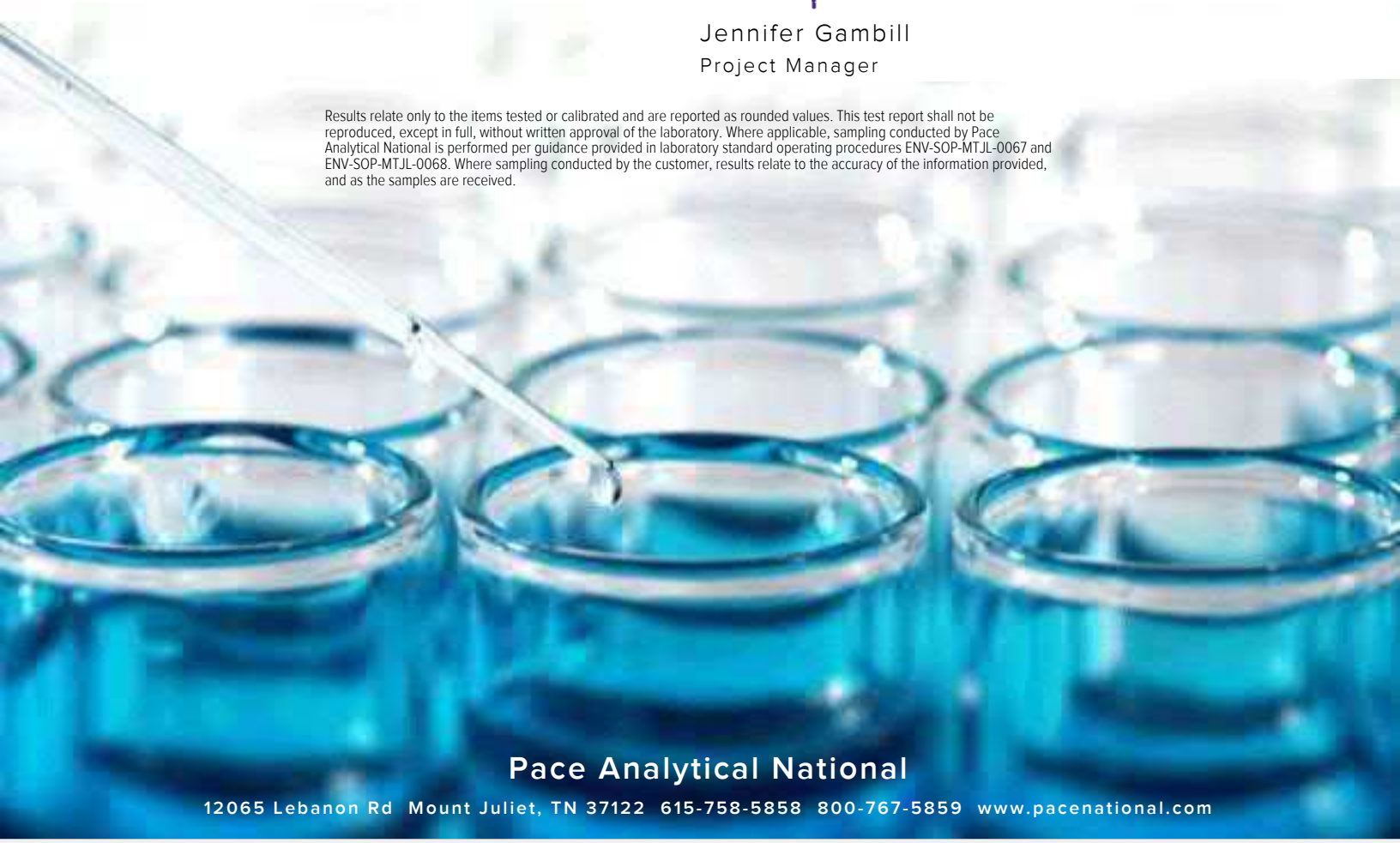
WSP USA - Duluth, MN

Sample Delivery Group:	L1522569
Samples Received:	08/06/2022
Project Number:	
Description:	LN5 MP1159-Enbridge

Report To: Brad DalSanto
5957 McKee Road, Ste 7
Madison, WI 53719

Entire Report Reviewed By:

Jennifer Gambill
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

LN5 MP1159 SC003 L1522569-01 Solid

Collected by: Al Moreland | Collected date/time: 08/05/22 11:30 | Received date/time: 08/06/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907204	1	08/08/22 08:02	08/08/22 08:10	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1906755	1	08/05/22 11:30	08/06/22 16:41	GLN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1906989	1	08/07/22 16:52	08/08/22 10:56	AMM	Mt. Juliet, TN

LN5 MP1159 SC004 L1522569-02 Solid

Collected by: Al Moreland | Collected date/time: 08/05/22 11:35 | Received date/time: 08/06/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907204	1	08/08/22 08:02	08/08/22 08:10	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1906755	1	08/05/22 11:35	08/06/22 17:01	GLN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1906989	1	08/07/22 16:52	08/08/22 11:13	AMM	Mt. Juliet, TN

LN5 MP1159 SC005 L1522569-03 Solid

Collected by: Al Moreland | Collected date/time: 08/05/22 11:40 | Received date/time: 08/06/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907204	1	08/08/22 08:02	08/08/22 08:10	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1906755	1	08/05/22 11:40	08/06/22 17:20	GLN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1906989	1	08/07/22 16:52	08/08/22 11:30	AMM	Mt. Juliet, TN

LN5 MP1159 SC006 L1522569-04 Solid

Collected by: Al Moreland | Collected date/time: 08/05/22 12:00 | Received date/time: 08/06/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907204	1	08/08/22 08:02	08/08/22 08:10	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1906755	1	08/05/22 12:00	08/06/22 17:39	GLN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1906989	1	08/07/22 16:52	08/08/22 11:48	AMM	Mt. Juliet, TN

LN5 MP1159 SC007 L1522569-05 Solid

Collected by: Al Moreland | Collected date/time: 08/05/22 13:10 | Received date/time: 08/06/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907204	1	08/08/22 08:02	08/08/22 08:10	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1906755	1	08/05/22 13:10	08/06/22 18:43	GLN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1906989	1	08/07/22 16:52	08/08/22 12:05	AMM	Mt. Juliet, TN

LN5 MP1159 SC008 L1522569-06 Solid

Collected by: Al Moreland | Collected date/time: 08/05/22 13:25 | Received date/time: 08/06/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907204	1	08/08/22 08:02	08/08/22 08:10	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1906755	1	08/05/22 13:25	08/06/22 19:02	GLN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1907799	1	08/05/22 13:25	08/09/22 12:02	GLN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1906989	1	08/07/22 16:52	08/08/22 12:23	AMM	Mt. Juliet, TN

LN5 MP1159 SC009 L1522569-07 Solid

Collected by: Al Moreland | Collected date/time: 08/05/22 13:30 | Received date/time: 08/06/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907204	1	08/08/22 08:02	08/08/22 08:10	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1906755	1	08/05/22 13:30	08/06/22 19:21	GLN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1906989	1	08/07/22 16:52	08/08/22 12:40	AMM	Mt. Juliet, TN

LN5 MP1159 SD08052022A L1522569-08 Solid

Collected by: Al Moreland | Collected date/time: 08/05/22 11:30 | Received date/time: 08/06/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907204	1	08/08/22 08:02	08/08/22 08:10	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1906755	1	08/05/22 11:30	08/06/22 19:40	GLN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1906989	1	08/07/22 16:52	08/08/22 12:57	AMM	Mt. Juliet, TN

LN5 MP1159 BT08052022 L1522569-09 Solid

Collected by: Al Moreland | Collected date/time: 08/05/22 00:00 | Received date/time: 08/06/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1906755	1	08/05/22 00:00	08/06/22 20:00	GLN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1907799	1	08/05/22 00:00	08/09/22 11:44	GLN	Mt. Juliet, TN

LN5 MP1159 SC010 L1522569-10 Solid

Collected by: Al Moreland | Collected date/time: 08/05/22 15:05 | Received date/time: 08/06/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907204	1	08/08/22 08:02	08/08/22 08:10	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1906755	1	08/05/22 15:05	08/06/22 20:19	GLN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1906989	1	08/07/22 16:52	08/08/22 13:15	AMM	Mt. Juliet, TN

LN5 MP1159 SC011 L1522569-11 Solid

Collected by: Al Moreland | Collected date/time: 08/05/22 15:10 | Received date/time: 08/06/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907204	1	08/08/22 08:02	08/08/22 08:10	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1906773	1	08/05/22 15:10	08/06/22 16:36	GLN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1906989	1	08/07/22 16:52	08/08/22 13:32	AMM	Mt. Juliet, TN

LN5 MP1159 SD08052022B L1522569-12 Solid

Collected by: Al Moreland | Collected date/time: 08/05/22 15:10 | Received date/time: 08/06/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1907205	1	08/08/22 07:50	08/08/22 07:57	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1906773	1.06	08/05/22 15:10	08/06/22 16:55	GLN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1906989	1	08/07/22 16:52	08/08/22 13:50	AMM	Mt. Juliet, TN

LN5 MP1159 BT08052022B L1522569-13 Solid

Collected by: Al Moreland | Collected date/time: 08/05/22 00:00 | Received date/time: 08/06/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1906773	1	08/05/22 00:00	08/06/22 17:14	GLN	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jennifer Gambill
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.3		1	08/08/2022 08:10	WG1907204

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.189		0.00156	1	08/06/2022 16:41	WG1906755
Toluene	ND		0.00433	1	08/06/2022 16:41	WG1906755
Ethylbenzene	0.132		0.00246	1	08/06/2022 16:41	WG1906755
Total Xylenes	1.80		0.00293	1	08/06/2022 16:41	WG1906755
1,2,4-Trimethylbenzene	0.494		0.00527	1	08/06/2022 16:41	WG1906755
1,3,5-Trimethylbenzene	0.239		0.00667	1	08/06/2022 16:41	WG1906755
(S) Toluene-d8	*105*		*75.0-131*		*08/06/2022 16:41*	WG1906755
(S) 4-Bromofluorobenzene	*85.7*		*67.0-138*		*08/06/2022 16:41*	WG1906755
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*08/06/2022 16:41*	WG1906755

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00767	1	08/08/2022 10:56	WG1906989
Acenaphthene	ND		0.00697	1	08/08/2022 10:56	WG1906989
Acenaphthylene	ND		0.00720	1	08/08/2022 10:56	WG1906989
Benzo(a)anthracene	ND		0.00577	1	08/08/2022 10:56	WG1906989
Benzo(a)pyrene	ND		0.00597	1	08/08/2022 10:56	WG1906989
Benzo(b)fluoranthene	ND		0.00510	1	08/08/2022 10:56	WG1906989
Benzo(g,h,i)perylene	ND		0.00590	1	08/08/2022 10:56	WG1906989
Benzo(k)fluoranthene	ND		0.00717	1	08/08/2022 10:56	WG1906989
Chrysene	ND		0.00773	1	08/08/2022 10:56	WG1906989
Dibenz(a,h)anthracene	ND		0.00573	1	08/08/2022 10:56	WG1906989
Fluoranthene	ND		0.00757	1	08/08/2022 10:56	WG1906989
Fluorene	ND		0.00683	1	08/08/2022 10:56	WG1906989
Indeno(1,2,3-cd)pyrene	ND		0.00603	1	08/08/2022 10:56	WG1906989
Naphthalene	0.0250		0.0136	1	08/08/2022 10:56	WG1906989
Phenanthrene	ND		0.00770	1	08/08/2022 10:56	WG1906989
Pyrene	ND		0.00667	1	08/08/2022 10:56	WG1906989
1-Methylnaphthalene	ND		0.0150	1	08/08/2022 10:56	WG1906989
2-Methylnaphthalene	ND		0.0142	1	08/08/2022 10:56	WG1906989
2-Chloronaphthalene	ND		0.0155	1	08/08/2022 10:56	WG1906989
(S) p-Terphenyl-d14	*76.5*		*23.0-120*		*08/08/2022 10:56*	WG1906989
(S) Nitrobenzene-d5	*51.2*		*14.0-149*		*08/08/2022 10:56*	WG1906989
(S) 2-Fluorobiphenyl	*51.8*		*34.0-125*		*08/08/2022 10:56*	WG1906989

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	72.6		1	08/08/2022 08:10	WG1907204

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.117		0.00156	1	08/06/2022 17:01	WG1906755
Toluene	ND		0.00433	1	08/06/2022 17:01	WG1906755
Ethylbenzene	0.00753		0.00246	1	08/06/2022 17:01	WG1906755
Total Xylenes	1.51		0.00293	1	08/06/2022 17:01	WG1906755
1,2,4-Trimethylbenzene	0.279		0.00527	1	08/06/2022 17:01	WG1906755
1,3,5-Trimethylbenzene	0.150		0.00667	1	08/06/2022 17:01	WG1906755
(S) Toluene-d8	*105*		*75.0-131*		*08/06/2022 17:01*	WG1906755
(S) 4-Bromofluorobenzene	*87.1*		*67.0-138*		*08/06/2022 17:01*	WG1906755
(S) 1,2-Dichloroethane-d4	*105*		*70.0-130*		*08/06/2022 17:01*	WG1906755

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00767	1	08/08/2022 11:13	WG1906989
Acenaphthene	ND		0.00697	1	08/08/2022 11:13	WG1906989
Acenaphthylene	ND		0.00720	1	08/08/2022 11:13	WG1906989
Benzo(a)anthracene	ND		0.00577	1	08/08/2022 11:13	WG1906989
Benzo(a)pyrene	ND		0.00597	1	08/08/2022 11:13	WG1906989
Benzo(b)fluoranthene	ND		0.00510	1	08/08/2022 11:13	WG1906989
Benzo(g,h,i)perylene	ND		0.00590	1	08/08/2022 11:13	WG1906989
Benzo(k)fluoranthene	ND		0.00717	1	08/08/2022 11:13	WG1906989
Chrysene	ND		0.00773	1	08/08/2022 11:13	WG1906989
Dibenz(a,h)anthracene	ND		0.00573	1	08/08/2022 11:13	WG1906989
Fluoranthene	ND		0.00757	1	08/08/2022 11:13	WG1906989
Fluorene	ND		0.00683	1	08/08/2022 11:13	WG1906989
Indeno(1,2,3-cd)pyrene	ND		0.00603	1	08/08/2022 11:13	WG1906989
Naphthalene	ND		0.0136	1	08/08/2022 11:13	WG1906989
Phenanthrene	ND		0.00770	1	08/08/2022 11:13	WG1906989
Pyrene	ND		0.00667	1	08/08/2022 11:13	WG1906989
1-Methylnaphthalene	ND		0.0150	1	08/08/2022 11:13	WG1906989
2-Methylnaphthalene	ND		0.0142	1	08/08/2022 11:13	WG1906989
2-Chloronaphthalene	ND		0.0155	1	08/08/2022 11:13	WG1906989
(S) p-Terphenyl-d14	*74.6*		*23.0-120*		*08/08/2022 11:13*	WG1906989
(S) Nitrobenzene-d5	*55.4*		*14.0-149*		*08/08/2022 11:13*	WG1906989
(S) 2-Fluorobiphenyl	*40.3*		*34.0-125*		*08/08/2022 11:13*	WG1906989

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	74.5		1	08/08/2022 08:10	WG1907204

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00156	1	08/06/2022 17:20	WG1906755
Toluene	ND		0.00433	1	08/06/2022 17:20	WG1906755
Ethylbenzene	ND		0.00246	1	08/06/2022 17:20	WG1906755
Total Xylenes	0.0205		0.00293	1	08/06/2022 17:20	WG1906755
1,2,4-Trimethylbenzene	0.0144		0.00527	1	08/06/2022 17:20	WG1906755
1,3,5-Trimethylbenzene	0.00706		0.00667	1	08/06/2022 17:20	WG1906755
(S) Toluene-d8	*110*		*75.0-131*		*08/06/2022 17:20*	WG1906755
(S) 4-Bromofluorobenzene	*83.1*		*67.0-138*		*08/06/2022 17:20*	WG1906755
(S) 1,2-Dichloroethane-d4	*104*		*70.0-130*		*08/06/2022 17:20*	WG1906755

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00767	1	08/08/2022 11:30	WG1906989
Acenaphthene	ND		0.00697	1	08/08/2022 11:30	WG1906989
Acenaphthylene	ND		0.00720	1	08/08/2022 11:30	WG1906989
Benzo(a)anthracene	ND		0.00577	1	08/08/2022 11:30	WG1906989
Benzo(a)pyrene	ND		0.00597	1	08/08/2022 11:30	WG1906989
Benzo(b)fluoranthene	ND		0.00510	1	08/08/2022 11:30	WG1906989
Benzo(g,h,i)perylene	ND		0.00590	1	08/08/2022 11:30	WG1906989
Benzo(k)fluoranthene	ND		0.00717	1	08/08/2022 11:30	WG1906989
Chrysene	ND		0.00773	1	08/08/2022 11:30	WG1906989
Dibenz(a,h)anthracene	ND		0.00573	1	08/08/2022 11:30	WG1906989
Fluoranthene	0.0105		0.00757	1	08/08/2022 11:30	WG1906989
Fluorene	ND		0.00683	1	08/08/2022 11:30	WG1906989
Indeno(1,2,3-cd)pyrene	ND		0.00603	1	08/08/2022 11:30	WG1906989
Naphthalene	0.0264		0.0136	1	08/08/2022 11:30	WG1906989
Phenanthrene	0.0162		0.00770	1	08/08/2022 11:30	WG1906989
Pyrene	0.00939		0.00667	1	08/08/2022 11:30	WG1906989
1-Methylnaphthalene	ND		0.0150	1	08/08/2022 11:30	WG1906989
2-Methylnaphthalene	0.0338		0.0142	1	08/08/2022 11:30	WG1906989
2-Chloronaphthalene	ND		0.0155	1	08/08/2022 11:30	WG1906989
(S) p-Terphenyl-d14	*87.0*		*23.0-120*		*08/08/2022 11:30*	WG1906989
(S) Nitrobenzene-d5	*48.3*		*14.0-149*		*08/08/2022 11:30*	WG1906989
(S) 2-Fluorobiphenyl	*50.1*		*34.0-125*		*08/08/2022 11:30*	WG1906989

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	77.1		1	08/08/2022 08:10	WG1907204

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.157		0.00156	1	08/06/2022 17:39	WG1906755
Toluene	ND		0.00433	1	08/06/2022 17:39	WG1906755
Ethylbenzene	0.0574		0.00246	1	08/06/2022 17:39	WG1906755
Total Xylenes	1.78		0.00293	1	08/06/2022 17:39	WG1906755
1,2,4-Trimethylbenzene	0.315		0.00527	1	08/06/2022 17:39	WG1906755
1,3,5-Trimethylbenzene	0.173		0.00667	1	08/06/2022 17:39	WG1906755
(S) Toluene-d8	*104*		*75.0-131*		*08/06/2022 17:39*	WG1906755
(S) 4-Bromofluorobenzene	*84.4*		*67.0-138*		*08/06/2022 17:39*	WG1906755
(S) 1,2-Dichloroethane-d4	*107*		*70.0-130*		*08/06/2022 17:39*	WG1906755

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00767	1	08/08/2022 11:48	WG1906989
Acenaphthene	ND		0.00697	1	08/08/2022 11:48	WG1906989
Acenaphthylene	ND		0.00720	1	08/08/2022 11:48	WG1906989
Benzo(a)anthracene	ND		0.00577	1	08/08/2022 11:48	WG1906989
Benzo(a)pyrene	ND		0.00597	1	08/08/2022 11:48	WG1906989
Benzo(b)fluoranthene	ND		0.00510	1	08/08/2022 11:48	WG1906989
Benzo(g,h,i)perylene	ND		0.00590	1	08/08/2022 11:48	WG1906989
Benzo(k)fluoranthene	ND		0.00717	1	08/08/2022 11:48	WG1906989
Chrysene	ND		0.00773	1	08/08/2022 11:48	WG1906989
Dibenz(a,h)anthracene	ND		0.00573	1	08/08/2022 11:48	WG1906989
Fluoranthene	ND		0.00757	1	08/08/2022 11:48	WG1906989
Fluorene	ND		0.00683	1	08/08/2022 11:48	WG1906989
Indeno(1,2,3-cd)pyrene	ND		0.00603	1	08/08/2022 11:48	WG1906989
Naphthalene	ND		0.0136	1	08/08/2022 11:48	WG1906989
Phenanthrene	ND		0.00770	1	08/08/2022 11:48	WG1906989
Pyrene	ND		0.00667	1	08/08/2022 11:48	WG1906989
1-Methylnaphthalene	ND		0.0150	1	08/08/2022 11:48	WG1906989
2-Methylnaphthalene	ND		0.0142	1	08/08/2022 11:48	WG1906989
2-Chloronaphthalene	ND		0.0155	1	08/08/2022 11:48	WG1906989
(S) p-Terphenyl-d14	*78.6*		*23.0-120*		*08/08/2022 11:48*	WG1906989
(S) Nitrobenzene-d5	*57.0*		*14.0-149*		*08/08/2022 11:48*	WG1906989
(S) 2-Fluorobiphenyl	*54.9*		*34.0-125*		*08/08/2022 11:48*	WG1906989

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	71.6		1	08/08/2022 08:10	WG1907204

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.0233		0.00156	1	08/06/2022 18:43	WG1906755
Toluene	ND		0.00433	1	08/06/2022 18:43	WG1906755
Ethylbenzene	0.00518		0.00246	1	08/06/2022 18:43	WG1906755
Total Xylenes	0.326		0.00293	1	08/06/2022 18:43	WG1906755
1,2,4-Trimethylbenzene	0.296		0.00527	1	08/06/2022 18:43	WG1906755
1,3,5-Trimethylbenzene	0.157		0.00667	1	08/06/2022 18:43	WG1906755
(S) Toluene-d8	*106*		*75.0-131*		*08/06/2022 18:43*	WG1906755
(S) 4-Bromofluorobenzene	*85.0*		*67.0-138*		*08/06/2022 18:43*	WG1906755
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*08/06/2022 18:43*	WG1906755

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	0.0192		0.00767	1	08/08/2022 12:05	WG1906989
Acenaphthene	0.0222		0.00697	1	08/08/2022 12:05	WG1906989
Acenaphthylene	ND		0.00720	1	08/08/2022 12:05	WG1906989
Benzo(a)anthracene	ND		0.00577	1	08/08/2022 12:05	WG1906989
Benzo(a)pyrene	ND		0.00597	1	08/08/2022 12:05	WG1906989
Benzo(b)fluoranthene	ND		0.00510	1	08/08/2022 12:05	WG1906989
Benzo(g,h,i)perylene	ND		0.00590	1	08/08/2022 12:05	WG1906989
Benzo(k)fluoranthene	ND		0.00717	1	08/08/2022 12:05	WG1906989
Chrysene	ND		0.00773	1	08/08/2022 12:05	WG1906989
Dibenz(a,h)anthracene	ND		0.00573	1	08/08/2022 12:05	WG1906989
Fluoranthene	0.0335		0.00757	1	08/08/2022 12:05	WG1906989
Fluorene	0.0170		0.00683	1	08/08/2022 12:05	WG1906989
Indeno(1,2,3-cd)pyrene	ND		0.00603	1	08/08/2022 12:05	WG1906989
Naphthalene	0.0443		0.0136	1	08/08/2022 12:05	WG1906989
Phenanthrene	0.0766		0.00770	1	08/08/2022 12:05	WG1906989
Pyrene	0.0274		0.00667	1	08/08/2022 12:05	WG1906989
1-Methylnaphthalene	ND		0.0150	1	08/08/2022 12:05	WG1906989
2-Methylnaphthalene	ND		0.0142	1	08/08/2022 12:05	WG1906989
2-Chloronaphthalene	ND		0.0155	1	08/08/2022 12:05	WG1906989
(S) p-Terphenyl-d14	*78.4*		*23.0-120*		*08/08/2022 12:05*	WG1906989
(S) Nitrobenzene-d5	*55.7*		*14.0-149*		*08/08/2022 12:05*	WG1906989
(S) 2-Fluorobiphenyl	*40.6*		*34.0-125*		*08/08/2022 12:05*	WG1906989

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.5		1	08/08/2022 08:10	WG1907204

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00156	1	08/06/2022 19:02	WG1906755
Toluene	ND		0.00433	1	08/06/2022 19:02	WG1906755
Ethylbenzene	ND		0.00246	1	08/06/2022 19:02	WG1906755
Total Xylenes	ND		0.00293	1	08/09/2022 12:02	WG1907799
1,2,4-Trimethylbenzene	ND		0.00527	1	08/09/2022 12:02	WG1907799
1,3,5-Trimethylbenzene	ND		0.00667	1	08/06/2022 19:02	WG1906755
(S) Toluene-d8	*103*		*75.0-131*		*08/06/2022 19:02*	WG1906755
(S) Toluene-d8	*96.0*		*75.0-131*		*08/09/2022 12:02*	WG1907799
(S) 4-Bromofluorobenzene	*82.7*		*67.0-138*		*08/06/2022 19:02*	WG1906755
(S) 4-Bromofluorobenzene	*110*		*67.0-138*		*08/09/2022 12:02*	WG1907799
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*08/06/2022 19:02*	WG1906755
(S) 1,2-Dichloroethane-d4	*107*		*70.0-130*		*08/09/2022 12:02*	WG1907799

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00767	1	08/08/2022 12:23	WG1906989
Acenaphthene	ND		0.00697	1	08/08/2022 12:23	WG1906989
Acenaphthylene	ND		0.00720	1	08/08/2022 12:23	WG1906989
Benzo(a)anthracene	ND		0.00577	1	08/08/2022 12:23	WG1906989
Benzo(a)pyrene	ND		0.00597	1	08/08/2022 12:23	WG1906989
Benzo(b)fluoranthene	ND		0.00510	1	08/08/2022 12:23	WG1906989
Benzo(g,h,i)perylene	ND		0.00590	1	08/08/2022 12:23	WG1906989
Benzo(k)fluoranthene	ND		0.00717	1	08/08/2022 12:23	WG1906989
Chrysene	ND		0.00773	1	08/08/2022 12:23	WG1906989
Dibenz(a,h)anthracene	ND		0.00573	1	08/08/2022 12:23	WG1906989
Fluoranthene	ND		0.00757	1	08/08/2022 12:23	WG1906989
Fluorene	ND		0.00683	1	08/08/2022 12:23	WG1906989
Indeno(1,2,3-cd)pyrene	ND		0.00603	1	08/08/2022 12:23	WG1906989
Naphthalene	ND		0.0136	1	08/08/2022 12:23	WG1906989
Phenanthrene	ND		0.00770	1	08/08/2022 12:23	WG1906989
Pyrene	ND		0.00667	1	08/08/2022 12:23	WG1906989
1-Methylnaphthalene	ND		0.0150	1	08/08/2022 12:23	WG1906989
2-Methylnaphthalene	ND		0.0142	1	08/08/2022 12:23	WG1906989
2-Chloronaphthalene	ND		0.0155	1	08/08/2022 12:23	WG1906989
(S) p-Terphenyl-d14	*58.6*		*23.0-120*		*08/08/2022 12:23*	WG1906989
(S) Nitrobenzene-d5	*67.7*		*14.0-149*		*08/08/2022 12:23*	WG1906989
(S) 2-Fluorobiphenyl	*45.9*		*34.0-125*		*08/08/2022 12:23*	WG1906989

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.1		1	08/08/2022 08:10	WG1907204

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00156	1	08/06/2022 19:21	WG1906755
Toluene	ND		0.00433	1	08/06/2022 19:21	WG1906755
Ethylbenzene	ND		0.00246	1	08/06/2022 19:21	WG1906755
Total Xylenes	ND		0.00293	1	08/06/2022 19:21	WG1906755
1,2,4-Trimethylbenzene	ND		0.00527	1	08/06/2022 19:21	WG1906755
1,3,5-Trimethylbenzene	ND		0.00667	1	08/06/2022 19:21	WG1906755
(S) Toluene-d8	*103*		*75.0-131*		*08/06/2022 19:21*	WG1906755
(S) 4-Bromofluorobenzene	*87.8*		*67.0-138*		*08/06/2022 19:21*	WG1906755
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*08/06/2022 19:21*	WG1906755

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00767	1	08/08/2022 12:40	WG1906989
Acenaphthene	ND		0.00697	1	08/08/2022 12:40	WG1906989
Acenaphthylene	ND		0.00720	1	08/08/2022 12:40	WG1906989
Benzo(a)anthracene	ND		0.00577	1	08/08/2022 12:40	WG1906989
Benzo(a)pyrene	ND		0.00597	1	08/08/2022 12:40	WG1906989
Benzo(b)fluoranthene	ND		0.00510	1	08/08/2022 12:40	WG1906989
Benzo(g,h,i)perylene	ND		0.00590	1	08/08/2022 12:40	WG1906989
Benzo(k)fluoranthene	ND		0.00717	1	08/08/2022 12:40	WG1906989
Chrysene	ND		0.00773	1	08/08/2022 12:40	WG1906989
Dibenz(a,h)anthracene	ND		0.00573	1	08/08/2022 12:40	WG1906989
Fluoranthene	ND		0.00757	1	08/08/2022 12:40	WG1906989
Fluorene	ND		0.00683	1	08/08/2022 12:40	WG1906989
Indeno(1,2,3-cd)pyrene	ND		0.00603	1	08/08/2022 12:40	WG1906989
Naphthalene	ND		0.0136	1	08/08/2022 12:40	WG1906989
Phenanthrene	ND		0.00770	1	08/08/2022 12:40	WG1906989
Pyrene	ND		0.00667	1	08/08/2022 12:40	WG1906989
1-Methylnaphthalene	ND		0.0150	1	08/08/2022 12:40	WG1906989
2-Methylnaphthalene	ND		0.0142	1	08/08/2022 12:40	WG1906989
2-Chloronaphthalene	ND		0.0155	1	08/08/2022 12:40	WG1906989
(S) p-Terphenyl-d14	*80.0*		*23.0-120*		*08/08/2022 12:40*	WG1906989
(S) Nitrobenzene-d5	*49.7*		*14.0-149*		*08/08/2022 12:40*	WG1906989
(S) 2-Fluorobiphenyl	*49.3*		*34.0-125*		*08/08/2022 12:40*	WG1906989

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.3		1	08/08/2022 08:10	WG1907204

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.199		0.00156	1	08/06/2022 19:40	WG1906755
Toluene	ND		0.00433	1	08/06/2022 19:40	WG1906755
Ethylbenzene	0.133		0.00246	1	08/06/2022 19:40	WG1906755
Total Xylenes	1.83		0.00293	1	08/06/2022 19:40	WG1906755
1,2,4-Trimethylbenzene	0.514		0.00527	1	08/06/2022 19:40	WG1906755
1,3,5-Trimethylbenzene	0.243		0.00667	1	08/06/2022 19:40	WG1906755
(S) Toluene-d8	*104*		*75.0-131*		*08/06/2022 19:40*	WG1906755
(S) 4-Bromofluorobenzene	*82.9*		*67.0-138*		*08/06/2022 19:40*	WG1906755
(S) 1,2-Dichloroethane-d4	*106*		*70.0-130*		*08/06/2022 19:40*	WG1906755

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00767	1	08/08/2022 12:57	WG1906989
Acenaphthene	ND		0.00697	1	08/08/2022 12:57	WG1906989
Acenaphthylene	ND		0.00720	1	08/08/2022 12:57	WG1906989
Benzo(a)anthracene	ND		0.00577	1	08/08/2022 12:57	WG1906989
Benzo(a)pyrene	ND		0.00597	1	08/08/2022 12:57	WG1906989
Benzo(b)fluoranthene	ND		0.00510	1	08/08/2022 12:57	WG1906989
Benzo(g,h,i)perylene	ND		0.00590	1	08/08/2022 12:57	WG1906989
Benzo(k)fluoranthene	ND		0.00717	1	08/08/2022 12:57	WG1906989
Chrysene	ND		0.00773	1	08/08/2022 12:57	WG1906989
Dibenz(a,h)anthracene	ND		0.00573	1	08/08/2022 12:57	WG1906989
Fluoranthene	ND		0.00757	1	08/08/2022 12:57	WG1906989
Fluorene	ND		0.00683	1	08/08/2022 12:57	WG1906989
Indeno(1,2,3-cd)pyrene	ND		0.00603	1	08/08/2022 12:57	WG1906989
Naphthalene	0.0284		0.0136	1	08/08/2022 12:57	WG1906989
Phenanthrene	ND		0.00770	1	08/08/2022 12:57	WG1906989
Pyrene	ND		0.00667	1	08/08/2022 12:57	WG1906989
1-Methylnaphthalene	ND		0.0150	1	08/08/2022 12:57	WG1906989
2-Methylnaphthalene	ND		0.0142	1	08/08/2022 12:57	WG1906989
2-Chloronaphthalene	ND		0.0155	1	08/08/2022 12:57	WG1906989
(S) p-Terphenyl-d14	*67.6*		*23.0-120*		*08/08/2022 12:57*	WG1906989
(S) Nitrobenzene-d5	*51.3*		*14.0-149*		*08/08/2022 12:57*	WG1906989
(S) 2-Fluorobiphenyl	*43.4*		*34.0-125*		*08/08/2022 12:57*	WG1906989

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00156	1	08/06/2022 20:00	WG1906755
Toluene	ND		0.00433	1	08/06/2022 20:00	WG1906755
Ethylbenzene	ND		0.00246	1	08/06/2022 20:00	WG1906755
Total Xylenes	ND		0.00293	1	08/09/2022 11:44	WG1907799
(S) Toluene-d8	*103*		*75.0-131*		*08/06/2022 20:00*	WG1906755
(S) Toluene-d8	*98.0*		*75.0-131*		*08/09/2022 11:44*	WG1907799
(S) 4-Bromofluorobenzene	*77.6*		*67.0-138*		*08/06/2022 20:00*	WG1906755
(S) 4-Bromofluorobenzene	*114*		*67.0-138*		*08/09/2022 11:44*	WG1907799
(S) 1,2-Dichloroethane-d4	*104*		*70.0-130*		*08/06/2022 20:00*	WG1906755
(S) 1,2-Dichloroethane-d4	*108*		*70.0-130*		*08/09/2022 11:44*	WG1907799

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	72.4		1	08/08/2022 08:10	WG1907204

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.124		0.00156	1	08/06/2022 20:19	WG1906755
Toluene	ND		0.00433	1	08/06/2022 20:19	WG1906755
Ethylbenzene	0.0682		0.00246	1	08/06/2022 20:19	WG1906755
Total Xylenes	2.78		0.00293	1	08/06/2022 20:19	WG1906755
1,2,4-Trimethylbenzene	1.19		0.00527	1	08/06/2022 20:19	WG1906755
1,3,5-Trimethylbenzene	0.620		0.00667	1	08/06/2022 20:19	WG1906755
(S) Toluene-d8	*108*		*75.0-131*		*08/06/2022 20:19*	WG1906755
(S) 4-Bromofluorobenzene	*85.0*		*67.0-138*		*08/06/2022 20:19*	WG1906755
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*08/06/2022 20:19*	WG1906755

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00767	1	08/08/2022 13:15	WG1906989
Acenaphthene	ND		0.00697	1	08/08/2022 13:15	WG1906989
Acenaphthylene	ND		0.00720	1	08/08/2022 13:15	WG1906989
Benzo(a)anthracene	ND		0.00577	1	08/08/2022 13:15	WG1906989
Benzo(a)pyrene	ND		0.00597	1	08/08/2022 13:15	WG1906989
Benzo(b)fluoranthene	ND		0.00510	1	08/08/2022 13:15	WG1906989
Benzo(g,h,i)perylene	ND		0.00590	1	08/08/2022 13:15	WG1906989
Benzo(k)fluoranthene	ND		0.00717	1	08/08/2022 13:15	WG1906989
Chrysene	ND		0.00773	1	08/08/2022 13:15	WG1906989
Dibenz(a,h)anthracene	ND		0.00573	1	08/08/2022 13:15	WG1906989
Fluoranthene	ND		0.00757	1	08/08/2022 13:15	WG1906989
Fluorene	ND		0.00683	1	08/08/2022 13:15	WG1906989
Indeno(1,2,3-cd)pyrene	ND		0.00603	1	08/08/2022 13:15	WG1906989
Naphthalene	ND		0.0136	1	08/08/2022 13:15	WG1906989
Phenanthrene	ND		0.00770	1	08/08/2022 13:15	WG1906989
Pyrene	ND		0.00667	1	08/08/2022 13:15	WG1906989
1-Methylnaphthalene	ND		0.0150	1	08/08/2022 13:15	WG1906989
2-Methylnaphthalene	ND		0.0142	1	08/08/2022 13:15	WG1906989
2-Chloronaphthalene	ND		0.0155	1	08/08/2022 13:15	WG1906989
(S) p-Terphenyl-d14	*89.8*		*23.0-120*		*08/08/2022 13:15*	WG1906989
(S) Nitrobenzene-d5	*47.5*		*14.0-149*		*08/08/2022 13:15*	WG1906989
(S) 2-Fluorobiphenyl	*40.9*		*34.0-125*		*08/08/2022 13:15*	WG1906989

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	76.5		1	08/08/2022 08:10	WG1907204

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00156	1	08/06/2022 16:36	WG1906773
Toluene	ND		0.00433	1	08/06/2022 16:36	WG1906773
Ethylbenzene	ND		0.00246	1	08/06/2022 16:36	WG1906773
Total Xylenes	0.00586		0.00293	1	08/06/2022 16:36	WG1906773
1,2,4-Trimethylbenzene	0.00625		0.00527	1	08/06/2022 16:36	WG1906773
1,3,5-Trimethylbenzene	ND	J3	0.00667	1	08/06/2022 16:36	WG1906773
(S) Toluene-d8	*102*		*75.0-131*		*08/06/2022 16:36*	WG1906773
(S) 4-Bromofluorobenzene	*103*		*67.0-138*		*08/06/2022 16:36*	WG1906773
(S) 1,2-Dichloroethane-d4	*87.6*		*70.0-130*		*08/06/2022 16:36*	WG1906773

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00767	1	08/08/2022 13:32	WG1906989
Acenaphthene	ND		0.00697	1	08/08/2022 13:32	WG1906989
Acenaphthylene	ND		0.00720	1	08/08/2022 13:32	WG1906989
Benzo(a)anthracene	ND		0.00577	1	08/08/2022 13:32	WG1906989
Benzo(a)pyrene	ND		0.00597	1	08/08/2022 13:32	WG1906989
Benzo(b)fluoranthene	ND		0.00510	1	08/08/2022 13:32	WG1906989
Benzo(g,h,i)perylene	ND		0.00590	1	08/08/2022 13:32	WG1906989
Benzo(k)fluoranthene	ND		0.00717	1	08/08/2022 13:32	WG1906989
Chrysene	ND		0.00773	1	08/08/2022 13:32	WG1906989
Dibenz(a,h)anthracene	ND		0.00573	1	08/08/2022 13:32	WG1906989
Fluoranthene	ND		0.00757	1	08/08/2022 13:32	WG1906989
Fluorene	ND		0.00683	1	08/08/2022 13:32	WG1906989
Indeno(1,2,3-cd)pyrene	ND		0.00603	1	08/08/2022 13:32	WG1906989
Naphthalene	ND		0.0136	1	08/08/2022 13:32	WG1906989
Phenanthrene	ND		0.00770	1	08/08/2022 13:32	WG1906989
Pyrene	ND		0.00667	1	08/08/2022 13:32	WG1906989
1-Methylnaphthalene	ND		0.0150	1	08/08/2022 13:32	WG1906989
2-Methylnaphthalene	ND		0.0142	1	08/08/2022 13:32	WG1906989
2-Chloronaphthalene	ND		0.0155	1	08/08/2022 13:32	WG1906989
(S) p-Terphenyl-d14	*92.8*		*23.0-120*		*08/08/2022 13:32*	WG1906989
(S) Nitrobenzene-d5	*51.9*		*14.0-149*		*08/08/2022 13:32*	WG1906989
(S) 2-Fluorobiphenyl	*54.0*		*34.0-125*		*08/08/2022 13:32*	WG1906989

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	78.2		1	08/08/2022 07:57	WG1907205

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00165	1.06	08/06/2022 16:55	WG1906773
Toluene	ND		0.00460	1.06	08/06/2022 16:55	WG1906773
Ethylbenzene	ND		0.00260	1.06	08/06/2022 16:55	WG1906773
Total Xylenes	0.00392		0.00311	1.06	08/06/2022 16:55	WG1906773
1,2,4-Trimethylbenzene	ND		0.00557	1.06	08/06/2022 16:55	WG1906773
1,3,5-Trimethylbenzene	ND	J3	0.00707	1.06	08/06/2022 16:55	WG1906773
(S) Toluene-d8	*101*		*75.0-131*		*08/06/2022 16:55*	WG1906773
(S) 4-Bromofluorobenzene	*107*		*67.0-138*		*08/06/2022 16:55*	WG1906773
(S) 1,2-Dichloroethane-d4	*95.6*		*70.0-130*		*08/06/2022 16:55*	WG1906773

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00767	1	08/08/2022 13:50	WG1906989
Acenaphthene	ND		0.00697	1	08/08/2022 13:50	WG1906989
Acenaphthylene	ND		0.00720	1	08/08/2022 13:50	WG1906989
Benzo(a)anthracene	ND		0.00577	1	08/08/2022 13:50	WG1906989
Benzo(a)pyrene	ND		0.00597	1	08/08/2022 13:50	WG1906989
Benzo(b)fluoranthene	ND		0.00510	1	08/08/2022 13:50	WG1906989
Benzo(g,h,i)perylene	ND		0.00590	1	08/08/2022 13:50	WG1906989
Benzo(k)fluoranthene	ND		0.00717	1	08/08/2022 13:50	WG1906989
Chrysene	ND		0.00773	1	08/08/2022 13:50	WG1906989
Dibenz(a,h)anthracene	ND		0.00573	1	08/08/2022 13:50	WG1906989
Fluoranthene	ND		0.00757	1	08/08/2022 13:50	WG1906989
Fluorene	ND		0.00683	1	08/08/2022 13:50	WG1906989
Indeno(1,2,3-cd)pyrene	ND		0.00603	1	08/08/2022 13:50	WG1906989
Naphthalene	ND		0.0136	1	08/08/2022 13:50	WG1906989
Phenanthrene	ND		0.00770	1	08/08/2022 13:50	WG1906989
Pyrene	ND		0.00667	1	08/08/2022 13:50	WG1906989
1-Methylnaphthalene	ND		0.0150	1	08/08/2022 13:50	WG1906989
2-Methylnaphthalene	ND		0.0142	1	08/08/2022 13:50	WG1906989
2-Chloronaphthalene	ND		0.0155	1	08/08/2022 13:50	WG1906989
(S) p-Terphenyl-d14	*97.9*		*23.0-120*		*08/08/2022 13:50*	WG1906989
(S) Nitrobenzene-d5	*45.6*		*14.0-149*		*08/08/2022 13:50*	WG1906989
(S) 2-Fluorobiphenyl	*56.8*		*34.0-125*		*08/08/2022 13:50*	WG1906989

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00156	1	08/06/2022 17:14	WG1906773
Toluene	ND		0.00433	1	08/06/2022 17:14	WG1906773
Ethylbenzene	ND		0.00246	1	08/06/2022 17:14	WG1906773
Total Xylenes	ND		0.00293	1	08/06/2022 17:14	WG1906773
(S) Toluene-d8	*98.4*		*75.0-131*		*08/06/2022 17:14*	WG1906773
(S) 4-Bromofluorobenzene	*110*		*67.0-138*		*08/06/2022 17:14*	WG1906773
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*08/06/2022 17:14*	WG1906773

Method Blank (MB)

(MB) R3823977-1 08/08/22 08:10

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00400			

L1522569-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1522569-01 08/08/22 08:10 • (DUP) R3823977-3 08/08/22 08:10

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	82.3	86.1	1	4.49		10

Laboratory Control Sample (LCS)

(LCS) R3823977-2 08/08/22 08:10

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3823973-1 08/08/22 07:57

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1522569-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1522569-12 08/08/22 07:57 • (DUP) R3823973-3 08/08/22 07:57

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	78.2	77.3	1	1.24		10

Laboratory Control Sample (LCS)

(LCS) R3823973-2 08/08/22 07:57

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3824017-3 08/06/22 12:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00156
Toluene	U		0.00130	0.00433
Ethylbenzene	U		0.000737	0.00246
Xylenes, Total	U		0.000880	0.00293
1,2,4-Trimethylbenzene	U		0.00158	0.00527
1,3,5-Trimethylbenzene	U		0.00200	0.00667
(S) Toluene-d8	*106*			*75.0-131*
(S) 4-Bromofluorobenzene	*78.5*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*

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

(LCS) R3824017-1 08/06/22 11:33 • (LCSD) R3824017-2 08/06/22 11:52

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.125	0.125	100	100	70.0-123			0.000	20
Toluene	0.125	0.127	0.123	102	98.4	75.0-121			3.20	20
Ethylbenzene	0.125	0.120	0.116	96.0	92.8	74.0-126			3.39	20
Xylenes, Total	0.375	0.340	0.340	90.7	90.7	72.0-127			0.000	20
1,2,4-Trimethylbenzene	0.125	0.121	0.130	96.8	104	70.0-126			7.17	20
1,3,5-Trimethylbenzene	0.125	0.138	0.145	110	116	73.0-127			4.95	20
(S) Toluene-d8				*99.9*	*99.5*	*75.0-131*				
(S) 4-Bromofluorobenzene				*80.8*	*80.8*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*114*	*109*	*70.0-130*				

Method Blank (MB)

(MB) R3823521-2 08/06/22 12:06

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00156
Toluene	U		0.00130	0.00433
Ethylbenzene	U		0.000737	0.00246
Xylenes, Total	U		0.000880	0.00293
1,2,4-Trimethylbenzene	U		0.00158	0.00527
1,3,5-Trimethylbenzene	U		0.00200	0.00667
(S) Toluene-d8	*101*			*75.0-131*
(S) 4-Bromofluorobenzene	*105*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*88.3*			*70.0-130*

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

(LCS) R3823521-1 08/06/22 10:51 • (LCSD) R3823521-3 08/06/22 13:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.126	0.117	101	93.6	70.0-123			7.41	20
Toluene	0.125	0.121	0.106	96.8	84.8	75.0-121			13.2	20
Ethylbenzene	0.125	0.123	0.109	98.4	87.2	74.0-126			12.1	20
Xylenes, Total	0.375	0.348	0.319	92.8	85.1	72.0-127			8.70	20
1,2,4-Trimethylbenzene	0.125	0.123	0.101	98.4	80.8	70.0-126			19.6	20
1,3,5-Trimethylbenzene	0.125	0.122	0.0950	97.6	76.0	73.0-127		J3	24.9	20
(S) Toluene-d8				*101*	*97.7*	*75.0-131*				
(S) 4-Bromofluorobenzene				*107*	*112*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*107*	*110*	*70.0-130*				

L1521957-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1521957-04 08/06/22 16:18 • (MS) R3823521-4 08/06/22 20:20 • (MSD) R3823521-5 08/06/22 20:39

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.158	ND	0.0599	0.154	37.9	97.5	1.26	10.0-149		J3	88.0	37
Toluene	0.158	ND	0.0625	0.162	39.6	103	1.26	10.0-156		J3	88.6	38
Ethylbenzene	0.158	ND	0.0657	0.171	41.6	108	1.26	10.0-160		J3	89.0	38
Xylenes, Total	0.473	ND	0.197	0.512	41.6	108	1.26	10.0-160		J3	88.9	38
1,2,4-Trimethylbenzene	0.158	0.00709	0.0796	0.176	50.4	111	1.26	10.0-160		J3	75.4	36
1,3,5-Trimethylbenzene	0.158	ND	0.0677	0.168	42.8	106	1.26	10.0-160		J3	85.1	38
(S) Toluene-d8					*100*	*102*		*75.0-131*				
(S) 4-Bromofluorobenzene					*106*	*108*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*94.2*	*88.2*		*70.0-130*				

Method Blank (MB)

(MB) R3824248-3 08/09/22 11:25

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Xylenes, Total	U		0.000880	0.00293
1,2,4-Trimethylbenzene	U		0.00158	0.00527
(S) Toluene-d8	*98.6*			*75.0-131*
(S) 4-Bromofluorobenzene	*112*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*109*			*70.0-130*

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

(LCS) R3824248-1 08/09/22 10:10 • (LCSD) R3824248-2 08/09/22 10:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Xylenes, Total	0.375	0.395	0.383	105	102	72.0-127			3.08	20
1,2,4-Trimethylbenzene	0.125	0.127	0.120	102	96.0	70.0-126			5.67	20
(S) Toluene-d8				*98.3*	*94.8*	*75.0-131*				
(S) 4-Bromofluorobenzene				*107*	*111*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*104*	*111*	*70.0-130*				

Method Blank (MB)

(MB) R3824073-2 08/08/22 07:45

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00767
Acenaphthene	U		0.00209	0.00697
Acenaphthylene	U		0.00216	0.00720
Benzo(a)anthracene	U		0.00173	0.00577
Benzo(a)pyrene	U		0.00179	0.00597
Benzo(b)fluoranthene	U		0.00153	0.00510
Benzo(g,h,i)perylene	U		0.00177	0.00590
Benzo(k)fluoranthene	U		0.00215	0.00717
Chrysene	U		0.00232	0.00773
Dibenz(a,h)anthracene	U		0.00172	0.00573
Fluoranthene	U		0.00227	0.00757
Fluorene	U		0.00205	0.00683
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00603
Naphthalene	U		0.00408	0.0136
Phenanthrene	U		0.00231	0.00770
Pyrene	U		0.00200	0.00667
1-Methylnaphthalene	U		0.00449	0.0150
2-Methylnaphthalene	U		0.00427	0.0142
2-Chloronaphthalene	U		0.00466	0.0155
(S) p-Terphenyl-d14	*88.4*			*23.0-120*
(S) Nitrobenzene-d5	*45.2*			*14.0-149*
(S) 2-Fluorobiphenyl	*58.9*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3824073-1 08/08/22 07:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0684	85.5	50.0-126	
Acenaphthene	0.0800	0.0652	81.5	50.0-120	
Acenaphthylene	0.0800	0.0695	86.9	50.0-120	
Benzo(a)anthracene	0.0800	0.0704	88.0	45.0-120	
Benzo(a)pyrene	0.0800	0.0647	80.9	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0685	85.6	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0646	80.7	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0704	88.0	49.0-125	
Chrysene	0.0800	0.0704	88.0	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0649	81.1	47.0-125	
Fluoranthene	0.0800	0.0675	84.4	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3824073-1 08/08/22 07:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0687	85.9	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0635	79.4	46.0-125	
Naphthalene	0.0800	0.0611	76.4	50.0-120	
Phenanthrene	0.0800	0.0663	82.9	47.0-120	
Pyrene	0.0800	0.0726	90.8	43.0-123	
1-Methylnaphthalene	0.0800	0.0639	79.9	51.0-121	
2-Methylnaphthalene	0.0800	0.0613	76.6	50.0-120	
2-Chloronaphthalene	0.0800	0.0659	82.4	50.0-120	
(S) p-Terphenyl-d14			*99.3*	*23.0-120*	
(S) Nitrobenzene-d5			*65.3*	*14.0-149*	
(S) 2-Fluorobiphenyl			*76.0*	*34.0-125*	

L1522434-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1522434-01 08/08/22 08:20 • (MS) R3824073-3 08/08/22 08:37 • (MSD) R3824073-4 08/08/22 08:54

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0780	ND	0.0593	0.0592	76.0	76.3	1	10.0-145			0.169	30
Acenaphthene	0.0780	ND	0.0519	0.0516	66.5	66.5	1	14.0-127			0.580	27
Acenaphthylene	0.0780	ND	0.0552	0.0543	70.8	70.0	1	21.0-124			1.64	25
Benzo(a)anthracene	0.0780	ND	0.0623	0.0606	79.9	78.1	1	10.0-139			2.77	30
Benzo(a)pyrene	0.0780	ND	0.0622	0.0616	79.7	79.4	1	10.0-141			0.969	31
Benzo(b)fluoranthene	0.0780	ND	0.0619	0.0606	79.4	78.1	1	10.0-140			2.12	36
Benzo(g,h,i)perylene	0.0780	ND	0.0588	0.0577	75.4	74.4	1	10.0-140			1.89	33
Benzo(k)fluoranthene	0.0780	ND	0.0633	0.0620	81.2	79.9	1	10.0-137			2.08	31
Chrysene	0.0780	ND	0.0648	0.0634	83.1	81.7	1	10.0-145			2.18	30
Dibenz(a,h)anthracene	0.0780	ND	0.0572	0.0570	73.3	73.5	1	10.0-132			0.350	31
Fluoranthene	0.0780	ND	0.0626	0.0606	80.3	78.1	1	10.0-153			3.25	33
Fluorene	0.0780	ND	0.0577	0.0583	74.0	75.1	1	11.0-130			1.03	29
Indeno(1,2,3-cd)pyrene	0.0780	ND	0.0574	0.0558	73.6	71.9	1	10.0-137			2.83	32
Naphthalene	0.0780	ND	0.0461	0.0427	59.1	55.0	1	10.0-135			7.66	27
Phenanthrene	0.0780	ND	0.0592	0.0587	75.9	75.6	1	10.0-144			0.848	31
Pyrene	0.0780	ND	0.0667	0.0655	85.5	84.4	1	10.0-148			1.82	35
1-Methylnaphthalene	0.0780	ND	0.0502	0.0467	64.4	60.2	1	10.0-142			7.22	28
2-Methylnaphthalene	0.0780	ND	0.0476	0.0452	61.0	58.2	1	10.0-137			5.17	28
2-Chloronaphthalene	0.0780	ND	0.0519	0.0511	66.5	65.9	1	29.0-120			1.55	24
(S) p-Terphenyl-d14					*88.8*	*86.8*		*23.0-120*				
(S) Nitrobenzene-d5					*63.3*	*59.0*		*14.0-149*				
(S) 2-Fluorobiphenyl					*69.7*	*67.4*		*34.0-125*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J3	The associated batch QC was outside the established quality control range for precision.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
WSP USA - Duluth, MN

5957 McKee Road, Ste 7
Madison, WI 53719

Billing Information:
Accounts Payable
5957 McKee Road, Ste 7
Madison, WI 53719

Pres Chk

Report to:
Brad DalSanto

Email To:
bradley.dalsanto@wsp.com;joseph_palo@golde

Project Description:
LNS MP1159 - ENBRIDGE

City/State Collected: ASHLAND, WI

Please Circle: PT MT CT ET

Phone: ~~608-669-9234~~

Client Project #

Lab Project #
WSPMWI ~~-CUSHING-~~ - LNS MP1159

Collected by (print):
AL MOREAND

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
X Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	~~8015 40mlTBW/SynrgeNoPres~~	~~TS 4oz Gl NoPres~~	~~VOA60 Benzene only 40mlAmb/MeOH 10ml/Syr~~	BTEX : TMB (8035/8260)	PAH (8270)						Remarks	Sample # (lab only)
LNS MP1159 SC003	G	SS	11	8-5-22	1130	4				X	X							-01
LNS MP1159 SC004	G	SS	8	8-5-22	1135	4				X	X							-02
LNS MP1159 SC005	G	SS	7.5	8-5-22	1140	4				X	X							-03
LNS MP1159 SC006	G	SS	7.5	8-5-22	1200	4				X	X							-04
LNS MP1159 SC007	G	SS	10	8-5-22	1310	4				X	X							-05
LNS MP1159 SC008	G	SS	8	8-5-22	1325	4				X	X							-06
LNS MP1159 SC009	G	SS	8	8-5-22	1330	4				X	X							-07
LNS MP1159 SD0805222A	G	SS	—	8-5-22	1130	4				X	X							-08
LNS MP1159 BE0805222	~~G~~	~~SS~~	—	8-5-22	—	1				X							BTEX ONLY	-09
~~LNS MP1159 SC012~~	~~G~~	~~SS~~		~~8-5-22~~		~~4~~												

Chain of Custody Page 1 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 152269

H026

Acctnum: **WSPMWI**
Template: **T206187**
Prelogin: **P915492**
PM: **134 - Mark W. Beasley**
PB:
Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

pH ____ Temp ____
Flow ____ Other ____

Samples returned via:
__ UPS __ FedEx __ Courier ____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	8/5/22	1425	T. Doup	(No)	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
	8/5/2022	1425	FED EX Duluth	46	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date:	Time:	Hold:	Condition: NCF / (OK)
			Zac Parris	8-6-22	09:00		

Company Name/Address:
WSP USA - Duluth, MN

5957 McKee Road, Ste 7
Madison, WI 53719

Billing Information:
Accounts Payable
5957 McKee Road, Ste 7
Madison, WI 53719

Pres Chk

Report to:
Brad DalSanto

Email To:
bradley.dalsanto@wsp.com;joseph_palo@golde

Project Description:
LNS MP1159 - ENBRIDGE

City/State Collected: ASHLAND / WI

Please Circle: PT MT (CT) ET

Phone: ~~608-669-9284~~

Client Project #

Lab Project #
WSPMWL~~CUSHING~~ - LNS MP1159

Collected by (print):
AL MONTEMURRO

Site/Facility ID #

P.O. #

Collected by (signature):
[signature] / WSP
Immediately
Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
X Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed

Quote #

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TPHTX 40mlTW/SyringeNoPres	~~TS 4oz Cl-NoPres~~	V8260 Benzene only 40mlAmb/MeOH 10ml/Syr	BTEX + TMB (5035 / 8260)	PAH (8270)	Remarks	Sample # (lab only)
LNS MP1159 SC#10	G	SS	2.5	8-5-22	1505	4				X	X		-10
LNS MP1159 SC#11	G	SS	2.5	8-5-22	1510	4				X	X		-11
~~LNS MP1159 SC#14~~	G	SS		8-5-22		4							
~~LNS MP1159 SD#3652412A~~	G	SS		8-5-22	1130	4				X	X		
LNS MP1159 SD#3652412B	G	SS	- -	8-5-22	1510	4				X	X		-12
LNS MP1159 BTEX 3652022B	- -	SS	\ -	- -	- -					X		BTEX only	-13
		SS											
		SS											
		SS											
		SS											

Chain of Custody Page 2 of 2

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 152569

Table #

Acctnum: **WSPMWI**
Template: **T206187**
Prelogin: **P915492**
PM: **134 - Mark W. Beasley**
PB:

Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ (FedEx) __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes (No) HCL / MeoH TBR	If preservation required by Login: Date/Time
[signature]	8-5-22	1800	FedEx Duluth	C	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C 0.5+0=0.5 Bottles Received: 46	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8-6-22 Time: 0910	Hold: Condition: NCF / (OK)

L1522569

Tracking Numbers	Temperature
5489 4031 9161	RR46 0,5+0=0,5
5489 4031 9172	RR46 0,3+0=0,3

ANALYTICAL REPORT

August 12, 2022

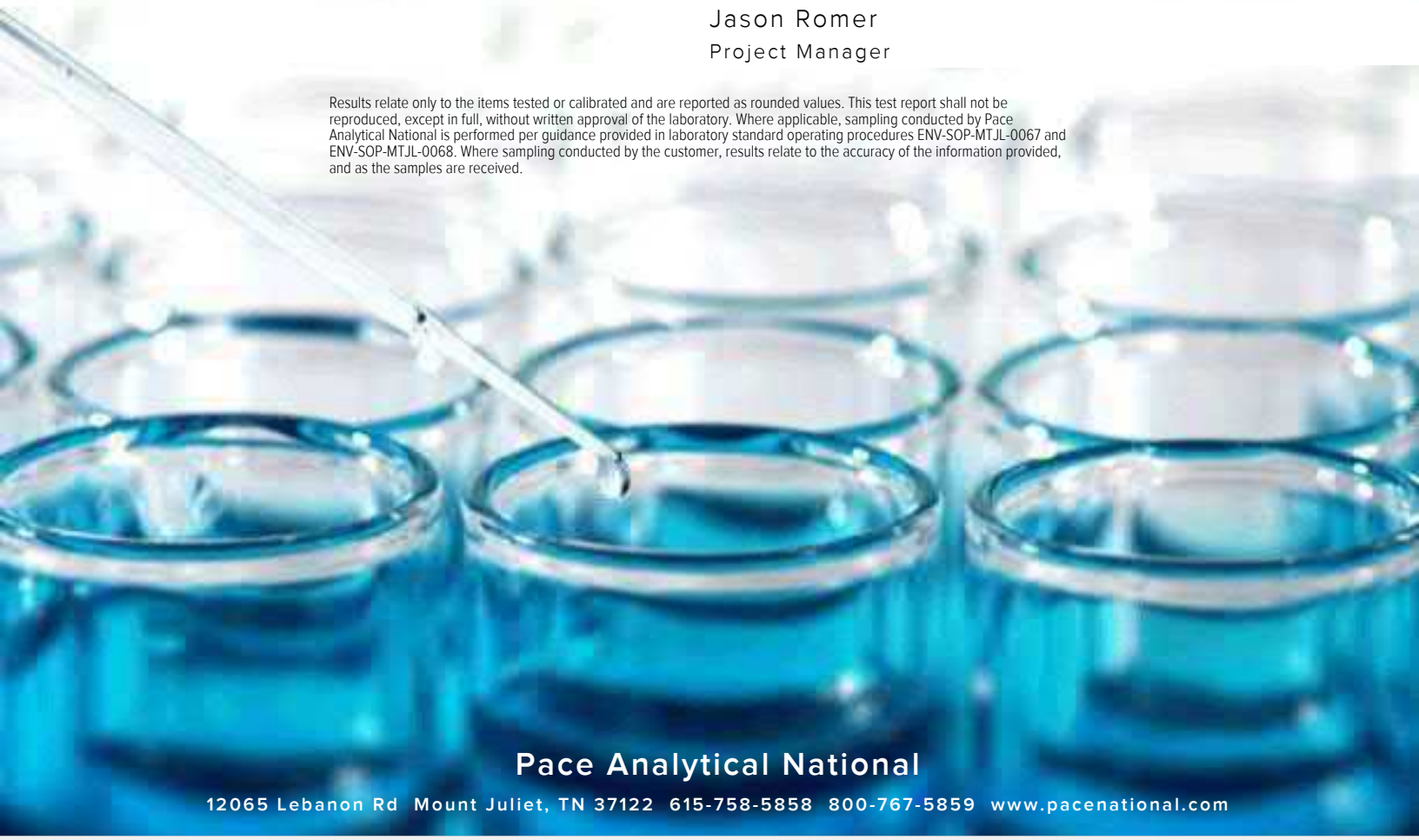
WSP USA - Duluth, MN

Sample Delivery Group:	L1524037
Samples Received:	08/11/2022
Project Number:	
Description:	Line 5 MP1159

Report To: Brad DalSanto
5957 McKee Road, Ste 7
Madison, WI 53719

Entire Report Reviewed By:

Jason Romer
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SAMPLE SUMMARY

LN5MP1159 SB001 (14-15) L1524037-01 Solid

Collected by: Al Moreland/WSP
Collected date/time: 08/10/22 13:20
Received date/time: 08/11/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1909322	1	08/11/22 17:26	08/11/22 17:41	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1909402	1	08/10/22 13:20	08/11/22 14:23	ACG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1909373	1	08/11/22 16:32	08/12/22 03:57	AGW	Mt. Juliet, TN

LN5MP1159 SB002 (14-14.5) L1524037-02 Solid

Collected by: Al Moreland/WSP
Collected date/time: 08/10/22 16:00
Received date/time: 08/11/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1909322	1	08/11/22 17:26	08/11/22 17:41	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1909402	1	08/10/22 16:00	08/11/22 14:43	ACG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1909373	1	08/11/22 16:32	08/12/22 04:16	AGW	Mt. Juliet, TN

LN5MP1159BT081022 L1524037-03 Solid

Collected by: Al Moreland/WSP
Collected date/time: 08/10/22 00:00
Received date/time: 08/11/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1909402	1	08/10/22 00:00	08/11/22 15:02	ACG	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jason Romer
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.1		1	08/11/2022 17:41	WG1909322

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.0137		0.00156	1	08/11/2022 14:23	WG1909402
Ethylbenzene	0.0162		0.00246	1	08/11/2022 14:23	WG1909402
Toluene	ND		0.00433	1	08/11/2022 14:23	WG1909402
Xylenes, Total	0.123		0.00293	1	08/11/2022 14:23	WG1909402
1,2,4-Trimethylbenzene	ND		0.00527	1	08/11/2022 14:23	WG1909402
1,3,5-Trimethylbenzene	ND		0.00667	1	08/11/2022 14:23	WG1909402
(S) Toluene-d8	*101*		*75.0-131*		*08/11/2022 14:23*	WG1909402
(S) 4-Bromofluorobenzene	*94.3*		*67.0-138*		*08/11/2022 14:23*	WG1909402
(S) 1,2-Dichloroethane-d4	*92.6*		*70.0-130*		*08/11/2022 14:23*	WG1909402

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00767	1	08/12/2022 03:57	WG1909373
Acenaphthene	ND		0.00697	1	08/12/2022 03:57	WG1909373
Acenaphthylene	ND		0.00720	1	08/12/2022 03:57	WG1909373
Benzo(a)anthracene	ND		0.00577	1	08/12/2022 03:57	WG1909373
Benzo(a)pyrene	ND		0.00597	1	08/12/2022 03:57	WG1909373
Benzo(b)fluoranthene	ND		0.00510	1	08/12/2022 03:57	WG1909373
Benzo(g,h,i)perylene	ND		0.00590	1	08/12/2022 03:57	WG1909373
Benzo(k)fluoranthene	ND		0.00717	1	08/12/2022 03:57	WG1909373
Chrysene	ND		0.00773	1	08/12/2022 03:57	WG1909373
Dibenz(a,h)anthracene	ND		0.00573	1	08/12/2022 03:57	WG1909373
Fluoranthene	ND		0.00757	1	08/12/2022 03:57	WG1909373
Fluorene	ND		0.00683	1	08/12/2022 03:57	WG1909373
Indeno(1,2,3-cd)pyrene	ND		0.00603	1	08/12/2022 03:57	WG1909373
Naphthalene	ND		0.0136	1	08/12/2022 03:57	WG1909373
Phenanthrene	ND		0.00770	1	08/12/2022 03:57	WG1909373
Pyrene	ND		0.00667	1	08/12/2022 03:57	WG1909373
1-Methylnaphthalene	ND		0.0150	1	08/12/2022 03:57	WG1909373
2-Methylnaphthalene	ND		0.0142	1	08/12/2022 03:57	WG1909373
2-Chloronaphthalene	ND		0.0155	1	08/12/2022 03:57	WG1909373
(S) p-Terphenyl-d14	*63.4*		*23.0-120*		*08/12/2022 03:57*	WG1909373
(S) Nitrobenzene-d5	*37.8*		*14.0-149*		*08/12/2022 03:57*	WG1909373
(S) 2-Fluorobiphenyl	*43.6*		*34.0-125*		*08/12/2022 03:57*	WG1909373

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.9		1	08/11/2022 17:41	WG1909322

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.0522		0.00156	1	08/11/2022 14:43	WG1909402
Ethylbenzene	0.0409		0.00246	1	08/11/2022 14:43	WG1909402
Toluene	ND		0.00433	1	08/11/2022 14:43	WG1909402
Xylenes, Total	0.496		0.00293	1	08/11/2022 14:43	WG1909402
1,2,4-Trimethylbenzene	0.0161		0.00527	1	08/11/2022 14:43	WG1909402
1,3,5-Trimethylbenzene	0.00827		0.00667	1	08/11/2022 14:43	WG1909402
(S) Toluene-d8	*99.4*		*75.0-131*		*08/11/2022 14:43*	WG1909402
(S) 4-Bromofluorobenzene	*103*		*67.0-138*		*08/11/2022 14:43*	WG1909402
(S) 1,2-Dichloroethane-d4	*94.8*		*70.0-130*		*08/11/2022 14:43*	WG1909402

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00767	1	08/12/2022 04:16	WG1909373
Acenaphthene	ND		0.00697	1	08/12/2022 04:16	WG1909373
Acenaphthylene	ND		0.00720	1	08/12/2022 04:16	WG1909373
Benzo(a)anthracene	ND		0.00577	1	08/12/2022 04:16	WG1909373
Benzo(a)pyrene	ND		0.00597	1	08/12/2022 04:16	WG1909373
Benzo(b)fluoranthene	ND		0.00510	1	08/12/2022 04:16	WG1909373
Benzo(g,h,i)perylene	ND		0.00590	1	08/12/2022 04:16	WG1909373
Benzo(k)fluoranthene	ND		0.00717	1	08/12/2022 04:16	WG1909373
Chrysene	ND		0.00773	1	08/12/2022 04:16	WG1909373
Dibenz(a,h)anthracene	ND		0.00573	1	08/12/2022 04:16	WG1909373
Fluoranthene	ND		0.00757	1	08/12/2022 04:16	WG1909373
Fluorene	ND		0.00683	1	08/12/2022 04:16	WG1909373
Indeno(1,2,3-cd)pyrene	ND		0.00603	1	08/12/2022 04:16	WG1909373
Naphthalene	ND		0.0136	1	08/12/2022 04:16	WG1909373
Phenanthrene	ND		0.00770	1	08/12/2022 04:16	WG1909373
Pyrene	ND		0.00667	1	08/12/2022 04:16	WG1909373
1-Methylnaphthalene	ND		0.0150	1	08/12/2022 04:16	WG1909373
2-Methylnaphthalene	ND		0.0142	1	08/12/2022 04:16	WG1909373
2-Chloronaphthalene	ND		0.0155	1	08/12/2022 04:16	WG1909373
(S) p-Terphenyl-d14	*57.6*		*23.0-120*		*08/12/2022 04:16*	WG1909373
(S) Nitrobenzene-d5	*44.3*		*14.0-149*		*08/12/2022 04:16*	WG1909373
(S) 2-Fluorobiphenyl	*40.8*		*34.0-125*		*08/12/2022 04:16*	WG1909373

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Benzene	ND		0.00156	1	08/11/2022 15:02	WG1909402
Ethylbenzene	ND		0.00246	1	08/11/2022 15:02	WG1909402
Toluene	ND		0.00433	1	08/11/2022 15:02	WG1909402
Xylenes, Total	ND		0.00293	1	08/11/2022 15:02	WG1909402
1,2,4-Trimethylbenzene	ND		0.00527	1	08/11/2022 15:02	WG1909402
1,3,5-Trimethylbenzene	ND		0.00667	1	08/11/2022 15:02	WG1909402
(S) Toluene-d8	*103*		*75.0-131*		*08/11/2022 15:02*	WG1909402
(S) 4-Bromofluorobenzene	*103*		*67.0-138*		*08/11/2022 15:02*	WG1909402
(S) 1,2-Dichloroethane-d4	*94.9*		*70.0-130*		*08/11/2022 15:02*	WG1909402

Method Blank (MB)

(MB) R3825662-1 08/11/22 17:41

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00300			

L1524037-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1524037-02 08/11/22 17:41 • (DUP) R3825662-3 08/11/22 17:41

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	81.9	82.1	1	0.302		10

Laboratory Control Sample (LCS)

(LCS) R3825662-2 08/11/22 17:41

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3825653-3 08/11/22 11:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00156
Ethylbenzene	U		0.000737	0.00246
Toluene	U		0.00130	0.00433
Xylenes, Total	U		0.000880	0.00293
1,2,4-Trimethylbenzene	U		0.00158	0.00527
1,3,5-Trimethylbenzene	U		0.00200	0.00667
(S) Toluene-d8	*101*			*75.0-131*
(S) 4-Bromofluorobenzene	*103*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*91.7*			*70.0-130*

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

(LCS) R3825653-1 08/11/22 10:01 • (LCSD) R3825653-2 08/11/22 10:20

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.111	0.107	88.8	85.6	70.0-123			3.67	20
Ethylbenzene	0.125	0.114	0.117	91.2	93.6	74.0-126			2.60	20
Toluene	0.125	0.111	0.112	88.8	89.6	75.0-121			0.897	20
Xylenes, Total	0.375	0.344	0.349	91.7	93.1	72.0-127			1.44	20
1,2,4-Trimethylbenzene	0.125	0.117	0.121	93.6	96.8	70.0-126			3.36	20
1,3,5-Trimethylbenzene	0.125	0.114	0.113	91.2	90.4	73.0-127			0.881	20
(S) Toluene-d8				*99.1*	*102*	*75.0-131*				
(S) 4-Bromofluorobenzene				*102*	*104*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*96.8*	*96.6*	*70.0-130*				

Method Blank (MB)

(MB) R3825485-2 08/12/22 01:39

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00767
Acenaphthene	U		0.00209	0.00697
Acenaphthylene	U		0.00216	0.00720
Benzo(a)anthracene	U		0.00173	0.00577
Benzo(a)pyrene	U		0.00179	0.00597
Benzo(b)fluoranthene	U		0.00153	0.00510
Benzo(g,h,i)perylene	U		0.00177	0.00590
Benzo(k)fluoranthene	U		0.00215	0.00717
Chrysene	U		0.00232	0.00773
Dibenz(a,h)anthracene	U		0.00172	0.00573
Fluoranthene	U		0.00227	0.00757
Fluorene	U		0.00205	0.00683
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00603
Naphthalene	U		0.00408	0.0136
Phenanthrene	U		0.00231	0.00770
Pyrene	U		0.00200	0.00667
1-Methylnaphthalene	U		0.00449	0.0150
2-Methylnaphthalene	U		0.00427	0.0142
2-Chloronaphthalene	U		0.00466	0.0155
(S) p-Terphenyl-d14	*63.9*			*23.0-120*
(S) Nitrobenzene-d5	*40.6*			*14.0-149*
(S) 2-Fluorobiphenyl	*51.7*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3825485-1 08/12/22 01:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0580	72.5	50.0-126	
Acenaphthene	0.0800	0.0548	68.5	50.0-120	
Acenaphthylene	0.0800	0.0551	68.9	50.0-120	
Benzo(a)anthracene	0.0800	0.0588	73.5	45.0-120	
Benzo(a)pyrene	0.0800	0.0560	70.0	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0570	71.3	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0528	66.0	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0560	70.0	49.0-125	
Chrysene	0.0800	0.0598	74.8	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0538	67.3	47.0-125	
Fluoranthene	0.0800	0.0614	76.8	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3825485-1 08/12/22 01:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0573	71.6	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0572	71.5	46.0-125	
Naphthalene	0.0800	0.0507	63.4	50.0-120	
Phenanthrene	0.0800	0.0568	71.0	47.0-120	
Pyrene	0.0800	0.0548	68.5	43.0-123	
1-Methylnaphthalene	0.0800	0.0514	64.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0549	68.6	50.0-120	
2-Chloronaphthalene	0.0800	0.0532	66.5	50.0-120	
(S) p-Terphenyl-d14			*63.5*	*23.0-120*	
(S) Nitrobenzene-d5			*66.3*	*14.0-149*	
(S) 2-Fluorobiphenyl			*67.7*	*34.0-125*	

L1524046-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1524046-01 08/12/22 04:36 • (MS) R3825485-3 08/12/22 04:56 • (MSD) R3825485-4 08/12/22 05:16

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	ND	0.0386	0.0425	48.3	53.1	1	10.0-145			9.62	30
Acenaphthene	0.0800	ND	0.0363	0.0374	45.4	46.8	1	14.0-127			2.99	27
Acenaphthylene	0.0800	ND	0.0350	0.0366	43.8	45.8	1	21.0-124			4.47	25
Benzo(a)anthracene	0.0800	ND	0.0385	0.0439	48.1	54.9	1	10.0-139			13.1	30
Benzo(a)pyrene	0.0800	ND	0.0409	0.0473	51.1	59.1	1	10.0-141			14.5	31
Benzo(b)fluoranthene	0.0800	ND	0.0367	0.0419	45.9	52.4	1	10.0-140			13.2	36
Benzo(g,h,i)perylene	0.0800	ND	0.0369	0.0418	46.1	52.3	1	10.0-140			12.5	33
Benzo(k)fluoranthene	0.0800	ND	0.0371	0.0423	46.4	52.9	1	10.0-137			13.1	31
Chrysene	0.0800	ND	0.0417	0.0483	52.1	60.4	1	10.0-145			14.7	30
Dibenz(a,h)anthracene	0.0800	ND	0.0351	0.0409	43.9	51.1	1	10.0-132			15.3	31
Fluoranthene	0.0800	ND	0.0416	0.0460	52.0	57.5	1	10.0-153			10.0	33
Fluorene	0.0800	ND	0.0377	0.0411	47.1	51.4	1	11.0-130			8.63	29
Indeno(1,2,3-cd)pyrene	0.0800	ND	0.0381	0.0428	47.6	53.5	1	10.0-137			11.6	32
Naphthalene	0.0800	ND	0.0288	0.0286	36.0	35.8	1	10.0-135			0.697	27
Phenanthrene	0.0800	ND	0.0388	0.0426	48.5	53.2	1	10.0-144			9.34	31
Pyrene	0.0800	ND	0.0376	0.0418	47.0	52.3	1	10.0-148			10.6	35
1-Methylnaphthalene	0.0800	ND	0.0321	0.0323	40.1	40.4	1	10.0-142			0.621	28
2-Methylnaphthalene	0.0800	ND	0.0324	0.0330	40.5	41.3	1	10.0-137			1.83	28
2-Chloronaphthalene	0.0800	ND	0.0323	0.0348	40.4	43.5	1	29.0-120			7.45	24
(S) p-Terphenyl-d14					*34.7*	*38.8*		*23.0-120*				
(S) Nitrobenzene-d5					*44.0*	*40.4*		*14.0-149*				
(S) 2-Fluorobiphenyl					*34.3*	*29.7*		*34.0-125*		J2		

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
WSP USA - Duluth, MN

5957 McKee Road, Ste 7
Madison, WI 53719

Billing Information:
Accounts Payable
5957 McKee Road, Ste 7
Madison, WI 53719

Pres Chk

Report to:
Brad DalSanto

Email To:
~~bradley.dalsanto@wsp.com~~;joseph_palo@golde

Project Description:
Line 5 MP1159

City/State Collected: Ashland, WI

Please Circle: PT MT CT ET

Phone: ~~608-669-9234~~

Client Project #

Lab Project #
WSPMWI-~~CUSTING~~
LN5MP1159

Collected by (print):
AL Moreland / WSP

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
X Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed
24-Hr

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	~~THTX 40mlTW/SyringeNoPres~~	~~TS 40zCl-NoPres~~	~~V8260 Benzene only 40mlAmb/MeOH10ml/Syr~~	BTEX + TMR (5035/8260)	PAHs (8270)							
LN5MP1159 SB01 (14-15)	G	SS	14-15	8-10-22	1320	4				X	X							-01
LN5MP1159 SB02 (14-14.5)	G	SS	14-14.5	8-10-22	1606	4 MS				X	X							-02
LN5MP1159BT081022	--	SS	--	--	--	1				X								-03

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1524037

Table #

Acctnum: **WSPMWI**
Template: **T206187**
Prelogin: **P915492**
PM: **134 - Mark W. Beasley**
PB:

Shipped Via:

Remarks | Sample # (lab only)

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 276664031 3123

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: RRAL °C 1.1+0=1.1	Bottles Received: 8
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8.11.22	Time: 0845

If preservation required by Login: Date/Time

Hold: | Condition: NCF / OK

ANALYTICAL REPORT

August 25, 2022

WSP USA - Duluth, MN

Sample Delivery Group:	L1528446
Samples Received:	08/24/2022
Project Number:	
Description:	Line 5 MP1159-Enbridge

Report To:

Brad DalSanto
5957 McKee Road, Ste 7
Madison, WI 53719

Entire Report Reviewed By:

Mark W. Beasley
Project Manager

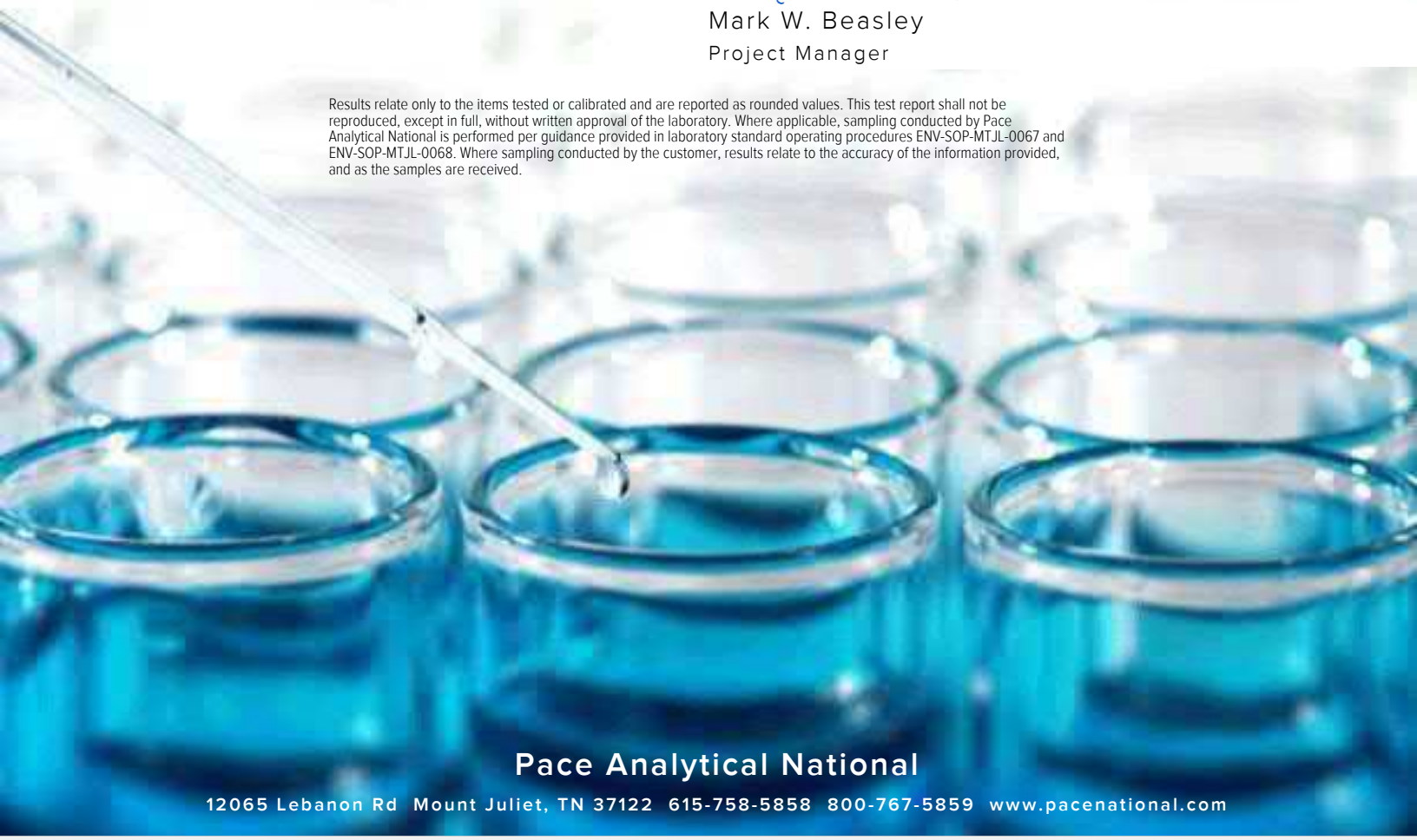


TABLE OF CONTENTS

SAMPLE SUMMARY

LN5MP1159 SC006R L1528446-01 Solid

Collected by: Al Moreland | Collected date/time: 08/23/22 13:20 | Received date/time: 08/24/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1915807	1	08/24/22 16:11	08/24/22 16:25	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1915866	1	08/23/22 13:20	08/24/22 14:19	GLN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1915882	1	08/24/22 18:05	08/25/22 03:02	AMG	Mt. Juliet, TN

LN5MP1159 SC003R L1528446-02 Solid

Collected by: Al Moreland | Collected date/time: 08/23/22 13:50 | Received date/time: 08/24/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1915807	1	08/24/22 16:11	08/24/22 16:25	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1915866	1	08/23/22 13:50	08/24/22 14:38	GLN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1915882	1	08/24/22 18:05	08/25/22 03:20	AMG	Mt. Juliet, TN

LN5MP1159 SC004R L1528446-03 Solid

Collected by: Al Moreland | Collected date/time: 08/23/22 14:05 | Received date/time: 08/24/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1915807	1	08/24/22 16:11	08/24/22 16:25	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1915866	1	08/23/22 14:05	08/24/22 14:57	GLN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1915882	1	08/24/22 18:05	08/25/22 03:37	AMG	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.5		1	08/24/2022 16:25	WG1915807

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.0302		0.00156	1	08/24/2022 14:19	WG1915866
Toluene	ND		0.00433	1	08/24/2022 14:19	WG1915866
Ethylbenzene	ND		0.00246	1	08/24/2022 14:19	WG1915866
Total Xylenes	0.0599		0.00293	1	08/24/2022 14:19	WG1915866
1,2,4-Trimethylbenzene	ND		0.00527	1	08/24/2022 14:19	WG1915866
1,3,5-Trimethylbenzene	ND		0.00667	1	08/24/2022 14:19	WG1915866
(S) Toluene-d8	*103*		*75.0-131*		*08/24/2022 14:19*	WG1915866
(S) 4-Bromofluorobenzene	*90.1*		*67.0-138*		*08/24/2022 14:19*	WG1915866
(S) 1,2-Dichloroethane-d4	*111*		*70.0-130*		*08/24/2022 14:19*	WG1915866

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00767	1	08/25/2022 03:02	WG1915882
Acenaphthene	ND		0.00697	1	08/25/2022 03:02	WG1915882
Acenaphthylene	ND		0.00720	1	08/25/2022 03:02	WG1915882
Benzo(a)anthracene	ND		0.00577	1	08/25/2022 03:02	WG1915882
Benzo(a)pyrene	ND		0.00597	1	08/25/2022 03:02	WG1915882
Benzo(b)fluoranthene	ND		0.00510	1	08/25/2022 03:02	WG1915882
Benzo(g,h,i)perylene	ND		0.00590	1	08/25/2022 03:02	WG1915882
Benzo(k)fluoranthene	ND		0.00717	1	08/25/2022 03:02	WG1915882
Chrysene	ND		0.00773	1	08/25/2022 03:02	WG1915882
Dibenz(a,h)anthracene	ND		0.00573	1	08/25/2022 03:02	WG1915882
Fluoranthene	ND		0.00757	1	08/25/2022 03:02	WG1915882
Fluorene	ND		0.00683	1	08/25/2022 03:02	WG1915882
Indeno(1,2,3-cd)pyrene	ND		0.00603	1	08/25/2022 03:02	WG1915882
Naphthalene	ND		0.0136	1	08/25/2022 03:02	WG1915882
Phenanthrene	ND		0.00770	1	08/25/2022 03:02	WG1915882
Pyrene	ND		0.00667	1	08/25/2022 03:02	WG1915882
1-Methylnaphthalene	ND		0.0150	1	08/25/2022 03:02	WG1915882
2-Methylnaphthalene	ND		0.0142	1	08/25/2022 03:02	WG1915882
2-Chloronaphthalene	ND		0.0155	1	08/25/2022 03:02	WG1915882
(S) p-Terphenyl-d14	*44.2*		*23.0-120*		*08/25/2022 03:02*	WG1915882
(S) Nitrobenzene-d5	*65.8*		*14.0-149*		*08/25/2022 03:02*	WG1915882
(S) 2-Fluorobiphenyl	*39.9*		*34.0-125*		*08/25/2022 03:02*	WG1915882

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.6		1	08/24/2022 16:25	WG1915807

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.0212		0.00156	1	08/24/2022 14:38	WG1915866
Toluene	ND		0.00433	1	08/24/2022 14:38	WG1915866
Ethylbenzene	0.0607		0.00246	1	08/24/2022 14:38	WG1915866
Total Xylenes	0.626		0.00293	1	08/24/2022 14:38	WG1915866
1,2,4-Trimethylbenzene	0.0156		0.00527	1	08/24/2022 14:38	WG1915866
1,3,5-Trimethylbenzene	0.00847		0.00667	1	08/24/2022 14:38	WG1915866
(S) Toluene-d8	*107*		*75.0-131*		*08/24/2022 14:38*	WG1915866
(S) 4-Bromofluorobenzene	*87.4*		*67.0-138*		*08/24/2022 14:38*	WG1915866
(S) 1,2-Dichloroethane-d4	*105*		*70.0-130*		*08/24/2022 14:38*	WG1915866

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00767	1	08/25/2022 03:20	WG1915882
Acenaphthene	ND		0.00697	1	08/25/2022 03:20	WG1915882
Acenaphthylene	ND		0.00720	1	08/25/2022 03:20	WG1915882
Benzo(a)anthracene	ND		0.00577	1	08/25/2022 03:20	WG1915882
Benzo(a)pyrene	ND		0.00597	1	08/25/2022 03:20	WG1915882
Benzo(b)fluoranthene	ND		0.00510	1	08/25/2022 03:20	WG1915882
Benzo(g,h,i)perylene	ND		0.00590	1	08/25/2022 03:20	WG1915882
Benzo(k)fluoranthene	ND		0.00717	1	08/25/2022 03:20	WG1915882
Chrysene	ND		0.00773	1	08/25/2022 03:20	WG1915882
Dibenz(a,h)anthracene	ND		0.00573	1	08/25/2022 03:20	WG1915882
Fluoranthene	ND		0.00757	1	08/25/2022 03:20	WG1915882
Fluorene	ND		0.00683	1	08/25/2022 03:20	WG1915882
Indeno(1,2,3-cd)pyrene	ND		0.00603	1	08/25/2022 03:20	WG1915882
Naphthalene	ND		0.0136	1	08/25/2022 03:20	WG1915882
Phenanthrene	ND		0.00770	1	08/25/2022 03:20	WG1915882
Pyrene	ND		0.00667	1	08/25/2022 03:20	WG1915882
1-Methylnaphthalene	ND		0.0150	1	08/25/2022 03:20	WG1915882
2-Methylnaphthalene	ND		0.0142	1	08/25/2022 03:20	WG1915882
2-Chloronaphthalene	ND		0.0155	1	08/25/2022 03:20	WG1915882
(S) p-Terphenyl-d14	*51.6*		*23.0-120*		*08/25/2022 03:20*	WG1915882
(S) Nitrobenzene-d5	*63.1*		*14.0-149*		*08/25/2022 03:20*	WG1915882
(S) 2-Fluorobiphenyl	*39.6*		*34.0-125*		*08/25/2022 03:20*	WG1915882

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.6		1	08/24/2022 16:25	WG1915807

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.0385		0.00156	1	08/24/2022 14:57	WG1915866
Toluene	ND		0.00433	1	08/24/2022 14:57	WG1915866
Ethylbenzene	0.00344		0.00246	1	08/24/2022 14:57	WG1915866
Total Xylenes	0.325		0.00293	1	08/24/2022 14:57	WG1915866
1,2,4-Trimethylbenzene	0.122		0.00527	1	08/24/2022 14:57	WG1915866
1,3,5-Trimethylbenzene	0.0318		0.00667	1	08/24/2022 14:57	WG1915866
(S) Toluene-d8	*108*		*75.0-131*		*08/24/2022 14:57*	WG1915866
(S) 4-Bromofluorobenzene	*89.0*		*67.0-138*		*08/24/2022 14:57*	WG1915866
(S) 1,2-Dichloroethane-d4	*108*		*70.0-130*		*08/24/2022 14:57*	WG1915866

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00767	1	08/25/2022 03:37	WG1915882
Acenaphthene	ND		0.00697	1	08/25/2022 03:37	WG1915882
Acenaphthylene	ND		0.00720	1	08/25/2022 03:37	WG1915882
Benzo(a)anthracene	ND		0.00577	1	08/25/2022 03:37	WG1915882
Benzo(a)pyrene	ND		0.00597	1	08/25/2022 03:37	WG1915882
Benzo(b)fluoranthene	ND		0.00510	1	08/25/2022 03:37	WG1915882
Benzo(g,h,i)perylene	ND		0.00590	1	08/25/2022 03:37	WG1915882
Benzo(k)fluoranthene	ND		0.00717	1	08/25/2022 03:37	WG1915882
Chrysene	ND		0.00773	1	08/25/2022 03:37	WG1915882
Dibenz(a,h)anthracene	ND		0.00573	1	08/25/2022 03:37	WG1915882
Fluoranthene	ND		0.00757	1	08/25/2022 03:37	WG1915882
Fluorene	ND		0.00683	1	08/25/2022 03:37	WG1915882
Indeno(1,2,3-cd)pyrene	ND		0.00603	1	08/25/2022 03:37	WG1915882
Naphthalene	ND		0.0136	1	08/25/2022 03:37	WG1915882
Phenanthrene	ND		0.00770	1	08/25/2022 03:37	WG1915882
Pyrene	ND		0.00667	1	08/25/2022 03:37	WG1915882
1-Methylnaphthalene	ND		0.0150	1	08/25/2022 03:37	WG1915882
2-Methylnaphthalene	ND		0.0142	1	08/25/2022 03:37	WG1915882
2-Chloronaphthalene	ND		0.0155	1	08/25/2022 03:37	WG1915882
(S) p-Terphenyl-d14	*53.5*		*23.0-120*		*08/25/2022 03:37*	WG1915882
(S) Nitrobenzene-d5	*63.7*		*14.0-149*		*08/25/2022 03:37*	WG1915882
(S) 2-Fluorobiphenyl	*48.0*		*34.0-125*		*08/25/2022 03:37*	WG1915882

Method Blank (MB)

(MB) R3830388-1 08/24/22 16:25

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00200			

L1528446-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1528446-01 08/24/22 16:25 • (DUP) R3830388-3 08/24/22 16:25

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	84.5	83.8	1	0.830		10

Laboratory Control Sample (LCS)

(LCS) R3830388-2 08/24/22 16:25

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3830164-2 08/24/22 10:53

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00156
Toluene	U		0.00130	0.00433
Ethylbenzene	U		0.000737	0.00246
Xylenes, Total	U		0.000880	0.00293
1,2,4-Trimethylbenzene	U		0.00158	0.00527
1,3,5-Trimethylbenzene	U		0.00200	0.00667
(S) Toluene-d8	*116*			*75.0-131*
(S) 4-Bromofluorobenzene	*78.4*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3830164-1 08/24/22 10:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.147	118	70.0-123	
Toluene	0.125	0.146	117	75.0-121	
Ethylbenzene	0.125	0.137	110	74.0-126	
Xylenes, Total	0.375	0.405	108	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.131	105	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.143	114	73.0-127	
(S) Toluene-d8			*104*	*75.0-131*	
(S) 4-Bromofluorobenzene			*82.5*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*111*	*70.0-130*	

L1528318-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1528318-05 08/24/22 18:48 • (MS) R3830164-3 08/24/22 21:01 • (MSD) R3830164-4 08/24/22 21:20

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	0.133	ND	0.154	0.139	116	105	1.06	10.0-149			10.2	37
Toluene	0.133	ND	0.159	0.137	120	103	1.06	10.0-156			14.9	38
Ethylbenzene	0.133	ND	0.148	0.129	111	97.0	1.06	10.0-160			13.7	38
Xylenes, Total	0.397	ND	0.417	0.362	105	91.2	1.06	10.0-160			14.1	38
1,2,4-Trimethylbenzene	0.133		0.167	0.128	117	87.4	1.06	10.0-160			26.4	36
1,3,5-Trimethylbenzene	0.133		0.153	0.128	115	96.2	1.06	10.0-160			17.8	38
(S) Toluene-d8					*105*	*101*		*75.0-131*				
(S) 4-Bromofluorobenzene					*82.0*	*85.2*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*99.9*	*102*		*70.0-130*				

Method Blank (MB)

(MB) R3830367-2 08/24/22 22:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00767
Acenaphthene	U		0.00209	0.00697
Acenaphthylene	U		0.00216	0.00720
Benzo(a)anthracene	U		0.00173	0.00577
Benzo(a)pyrene	U		0.00179	0.00597
Benzo(b)fluoranthene	U		0.00153	0.00510
Benzo(g,h,i)perylene	U		0.00177	0.00590
Benzo(k)fluoranthene	U		0.00215	0.00717
Chrysene	U		0.00232	0.00773
Dibenz(a,h)anthracene	U		0.00172	0.00573
Fluoranthene	U		0.00227	0.00757
Fluorene	U		0.00205	0.00683
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00603
Naphthalene	U		0.00408	0.0136
Phenanthrene	U		0.00231	0.00770
Pyrene	U		0.00200	0.00667
1-Methylnaphthalene	U		0.00449	0.0150
2-Methylnaphthalene	U		0.00427	0.0142
2-Chloronaphthalene	U		0.00466	0.0155
(S) p-Terphenyl-d14	*70.4*			*23.0-120*
(S) Nitrobenzene-d5	*45.1*			*14.0-149*
(S) 2-Fluorobiphenyl	*55.9*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3830367-1 08/24/22 22:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0581	72.6	50.0-126	
Acenaphthene	0.0800	0.0599	74.9	50.0-120	
Acenaphthylene	0.0800	0.0591	73.9	50.0-120	
Benzo(a)anthracene	0.0800	0.0609	76.1	45.0-120	
Benzo(a)pyrene	0.0800	0.0587	73.4	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0627	78.4	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0584	73.0	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0584	73.0	49.0-125	
Chrysene	0.0800	0.0633	79.1	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0580	72.5	47.0-125	
Fluoranthene	0.0800	0.0612	76.5	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3830367-1 08/24/22 22:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0586	73.3	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0621	77.6	46.0-125	
Naphthalene	0.0800	0.0559	69.9	50.0-120	
Phenanthrene	0.0800	0.0559	69.9	47.0-120	
Pyrene	0.0800	0.0678	84.8	43.0-123	
1-Methylnaphthalene	0.0800	0.0566	70.8	51.0-121	
2-Methylnaphthalene	0.0800	0.0588	73.5	50.0-120	
2-Chloronaphthalene	0.0800	0.0548	68.5	50.0-120	
(S) p-Terphenyl-d14			*70.3*	*23.0-120*	
(S) Nitrobenzene-d5			*65.5*	*14.0-149*	
(S) 2-Fluorobiphenyl			*67.7*	*34.0-125*	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
	The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
WSP USA - Duluth, MN

5957 McKee Road, Ste 7
Madison, WI 53719

Billing Information:
Accounts Payable
5957 McKee Road, Ste 7
Madison, WI 53719

Pres Chk

Report to:
Brad DalSanto

Email To:
bradley.dalsanto@wsp.com;alexander.morelan

Project Description:
Line 5 MP1159 - Enbridge

City/State Collected: Ashland, WI

Please Circle: PT MT CT ET

Phone: ~~608-669-9234~~

Client Project #

Lab Project #
WSPMWI-LINE5MP1159

Collected by (print):
A Moreland

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed
24-Hr - ASAP

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	SV8270PAHSIM 4ozClr-NoPres	~~TS 4ozClr-NoPres~~	V8260BTEX 40mlAmb/MeOH10ml/Syr 2 TMBs	~~V8260BTEX 4ozClr-NoPres~~	Remarks	Sample # (lab only)
LN5MP1159 SC0606R	G	SS	9	8-23-2022	1320	2	X		X			-01
LN5MP1159 SC0603R	G	SS	16	8-23-2022	1350	2	X		X			-02
LN5MP1159 SC0604R	G	SS	9	8-23-2022	1405	2	X		X			-03
		SS										
		SS										
		SS										
		SS										
		SS										
		SS										
		SS										

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1528446
B071

Acctnum: **WSPMWI**
Template: **T214472**
Prelogin: **P943527**
PM: **134 - Mark W. Beasley**
PB:
Shipped Via: **FedEX Standard**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 5882 7550 7909

Sample Receipt Checklist
COC Seal Present/Intact: __NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
WSP	8-23-2022	1800	FedEx Duluth
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) M. Weber

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 2.5+0-2.5 °C Bottles Received: 6

Date: 8/24/22 Time: 845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ANALYTICAL REPORT

August 26, 2022

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

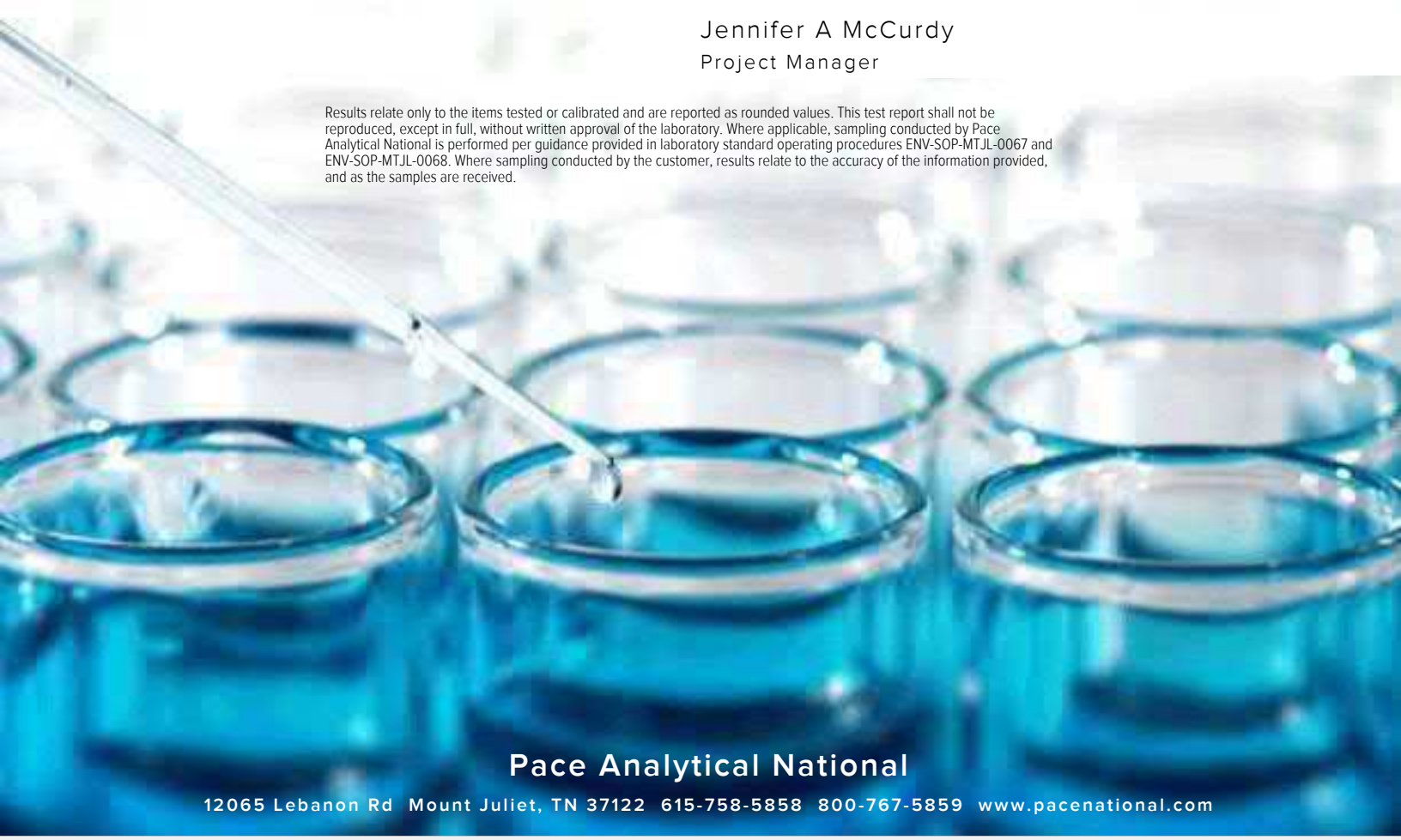
WSP USA - Duluth, MN

Sample Delivery Group:	L1528939
Samples Received:	08/25/2022
Project Number:	
Description:	

Report To: Brad DalSanto
5957 McKee Road, Ste 7
Madison, WI 53719

Entire Report Reviewed By:

Jennifer A McCurdy
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

LN5MP1159SC012 L1528939-01 Solid

Collected by: Al Moreland | Collected date/time: 08/23/22 15:20 | Received date/time: 08/25/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1916753	1	08/25/22 18:04	08/25/22 18:12	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1916609	1	08/23/22 15:20	08/25/22 15:43	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1916079	1	08/25/22 16:59	08/26/22 10:14	AMG	Mt. Juliet, TN

LN5MP1159SC010R L1528939-02 Solid

Collected by: Al Moreland | Collected date/time: 08/23/22 15:35 | Received date/time: 08/25/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1916753	1	08/25/22 18:04	08/25/22 18:12	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1916609	1	08/23/22 15:35	08/25/22 16:02	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1916079	1	08/25/22 16:59	08/26/22 10:33	AMG	Mt. Juliet, TN

LN5MP1159SC007R L1528939-03 Solid

Collected by: Al Moreland | Collected date/time: 08/24/22 07:50 | Received date/time: 08/25/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1916753	1	08/25/22 18:04	08/25/22 18:12	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1916609	1	08/24/22 07:50	08/25/22 16:21	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1916079	1	08/25/22 16:59	08/26/22 10:53	AMG	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jennifer A McCurdy
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.3		1	08/25/2022 18:12	WG1916753

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.0267		0.00237	1	08/25/2022 15:43	WG1916609
Ethylbenzene	0.0469		0.00374	1	08/25/2022 15:43	WG1916609
Toluene	ND		0.00658	1	08/25/2022 15:43	WG1916609
Xylenes, Total	0.462		0.00445	1	08/25/2022 15:43	WG1916609
1,2,4-Trimethylbenzene	0.0387		0.00800	1	08/25/2022 15:43	WG1916609
1,3,5-Trimethylbenzene	0.0237		0.0101	1	08/25/2022 15:43	WG1916609
(S) Toluene-d8	*110*		*75.0-131*		*08/25/2022 15:43*	WG1916609
(S) 4-Bromofluorobenzene	*82.8*		*67.0-138*		*08/25/2022 15:43*	WG1916609
(S) 1,2-Dichloroethane-d4	*99.2*		*70.0-130*		*08/25/2022 15:43*	WG1916609

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00932	1	08/26/2022 10:14	WG1916079
Acenaphthene	ND		0.00847	1	08/26/2022 10:14	WG1916079
Acenaphthylene	ND		0.00875	1	08/26/2022 10:14	WG1916079
Benzo(a)anthracene	ND		0.00701	1	08/26/2022 10:14	WG1916079
Benzo(a)pyrene	ND		0.00726	1	08/26/2022 10:14	WG1916079
Benzo(b)fluoranthene	ND		0.00620	1	08/26/2022 10:14	WG1916079
Benzo(g,h,i)perylene	ND		0.00717	1	08/26/2022 10:14	WG1916079
Benzo(k)fluoranthene	ND		0.00871	1	08/26/2022 10:14	WG1916079
Chrysene	ND		0.00939	1	08/26/2022 10:14	WG1916079
Dibenz(a,h)anthracene	ND		0.00696	1	08/26/2022 10:14	WG1916079
Fluoranthene	ND		0.00920	1	08/26/2022 10:14	WG1916079
Fluorene	ND		0.00830	1	08/26/2022 10:14	WG1916079
Indeno(1,2,3-cd)pyrene	ND		0.00733	1	08/26/2022 10:14	WG1916079
Naphthalene	ND		0.0165	1	08/26/2022 10:14	WG1916079
Phenanthrene	ND		0.00936	1	08/26/2022 10:14	WG1916079
Pyrene	ND		0.00811	1	08/26/2022 10:14	WG1916079
1-Methylnaphthalene	ND		0.0182	1	08/26/2022 10:14	WG1916079
2-Methylnaphthalene	ND		0.0173	1	08/26/2022 10:14	WG1916079
2-Chloronaphthalene	ND		0.0188	1	08/26/2022 10:14	WG1916079
(S) p-Terphenyl-d14	*72.7*		*23.0-120*		*08/26/2022 10:14*	WG1916079
(S) Nitrobenzene-d5	*40.3*		*14.0-149*		*08/26/2022 10:14*	WG1916079
(S) 2-Fluorobiphenyl	*51.2*		*34.0-125*		*08/26/2022 10:14*	WG1916079

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.0		1	08/25/2022 18:12	WG1916753

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.0133		0.00226	1	08/25/2022 16:02	WG1916609
Ethylbenzene	0.00906		0.00357	1	08/25/2022 16:02	WG1916609
Toluene	ND		0.00628	1	08/25/2022 16:02	WG1916609
Xylenes, Total	0.179		0.00425	1	08/25/2022 16:02	WG1916609
1,2,4-Trimethylbenzene	0.0572		0.00765	1	08/25/2022 16:02	WG1916609
1,3,5-Trimethylbenzene	0.0237		0.00968	1	08/25/2022 16:02	WG1916609
(S) Toluene-d8	*110*		*75.0-131*		*08/25/2022 16:02*	WG1916609
(S) 4-Bromofluorobenzene	*88.9*		*67.0-138*		*08/25/2022 16:02*	WG1916609
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*08/25/2022 16:02*	WG1916609

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00913	1	08/26/2022 10:33	WG1916079
Acenaphthene	ND		0.00829	1	08/26/2022 10:33	WG1916079
Acenaphthylene	ND		0.00857	1	08/26/2022 10:33	WG1916079
Benzo(a)anthracene	ND		0.00687	1	08/26/2022 10:33	WG1916079
Benzo(a)pyrene	ND		0.00710	1	08/26/2022 10:33	WG1916079
Benzo(b)fluoranthene	ND		0.00607	1	08/26/2022 10:33	WG1916079
Benzo(g,h,i)perylene	ND		0.00702	1	08/26/2022 10:33	WG1916079
Benzo(k)fluoranthene	ND		0.00853	1	08/26/2022 10:33	WG1916079
Chrysene	ND		0.00920	1	08/26/2022 10:33	WG1916079
Dibenz(a,h)anthracene	ND		0.00682	1	08/26/2022 10:33	WG1916079
Fluoranthene	ND		0.00901	1	08/26/2022 10:33	WG1916079
Fluorene	ND		0.00813	1	08/26/2022 10:33	WG1916079
Indeno(1,2,3-cd)pyrene	ND		0.00717	1	08/26/2022 10:33	WG1916079
Naphthalene	ND		0.0162	1	08/26/2022 10:33	WG1916079
Phenanthrene	ND		0.00916	1	08/26/2022 10:33	WG1916079
Pyrene	ND		0.00794	1	08/26/2022 10:33	WG1916079
1-Methylnaphthalene	ND		0.0178	1	08/26/2022 10:33	WG1916079
2-Methylnaphthalene	ND		0.0169	1	08/26/2022 10:33	WG1916079
2-Chloronaphthalene	ND		0.0184	1	08/26/2022 10:33	WG1916079
(S) p-Terphenyl-d14	*74.3*		*23.0-120*		*08/26/2022 10:33*	WG1916079
(S) Nitrobenzene-d5	*48.7*		*14.0-149*		*08/26/2022 10:33*	WG1916079
(S) 2-Fluorobiphenyl	*52.7*		*34.0-125*		*08/26/2022 10:33*	WG1916079

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.4		1	08/25/2022 18:12	WG1916753

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00221	1	08/25/2022 16:21	WG1916609
Ethylbenzene	ND		0.00348	1	08/25/2022 16:21	WG1916609
Toluene	ND		0.00613	1	08/25/2022 16:21	WG1916609
Xylenes, Total	ND		0.00415	1	08/25/2022 16:21	WG1916609
1,2,4-Trimethylbenzene	ND		0.00746	1	08/25/2022 16:21	WG1916609
1,3,5-Trimethylbenzene	ND		0.00944	1	08/25/2022 16:21	WG1916609
(S) Toluene-d8	*109*		*75.0-131*		*08/25/2022 16:21*	WG1916609
(S) 4-Bromofluorobenzene	*88.5*		*67.0-138*		*08/25/2022 16:21*	WG1916609
(S) 1,2-Dichloroethane-d4	*96.6*		*70.0-130*		*08/25/2022 16:21*	WG1916609

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00909	1	08/26/2022 10:53	WG1916079
Acenaphthene	ND		0.00826	1	08/26/2022 10:53	WG1916079
Acenaphthylene	ND		0.00853	1	08/26/2022 10:53	WG1916079
Benzo(a)anthracene	ND		0.00684	1	08/26/2022 10:53	WG1916079
Benzo(a)pyrene	ND		0.00707	1	08/26/2022 10:53	WG1916079
Benzo(b)fluoranthene	ND		0.00604	1	08/26/2022 10:53	WG1916079
Benzo(g,h,i)perylene	ND		0.00699	1	08/26/2022 10:53	WG1916079
Benzo(k)fluoranthene	ND		0.00850	1	08/26/2022 10:53	WG1916079
Chrysene	ND		0.00916	1	08/26/2022 10:53	WG1916079
Dibenz(a,h)anthracene	ND		0.00679	1	08/26/2022 10:53	WG1916079
Fluoranthene	ND		0.00897	1	08/26/2022 10:53	WG1916079
Fluorene	ND		0.00809	1	08/26/2022 10:53	WG1916079
Indeno(1,2,3-cd)pyrene	ND		0.00714	1	08/26/2022 10:53	WG1916079
Naphthalene	ND		0.0161	1	08/26/2022 10:53	WG1916079
Phenanthrene	ND		0.00912	1	08/26/2022 10:53	WG1916079
Pyrene	ND		0.00790	1	08/26/2022 10:53	WG1916079
1-Methylnaphthalene	ND		0.0178	1	08/26/2022 10:53	WG1916079
2-Methylnaphthalene	ND		0.0168	1	08/26/2022 10:53	WG1916079
2-Chloronaphthalene	ND		0.0184	1	08/26/2022 10:53	WG1916079
(S) p-Terphenyl-d14	*57.5*		*23.0-120*		*08/26/2022 10:53*	WG1916079
(S) Nitrobenzene-d5	*49.2*		*14.0-149*		*08/26/2022 10:53*	WG1916079
(S) 2-Fluorobiphenyl	*47.8*		*34.0-125*		*08/26/2022 10:53*	WG1916079

Method Blank (MB)

(MB) R3830876-1 08/25/22 18:12

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1528939-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1528939-02 08/25/22 18:12 • (DUP) R3830876-3 08/25/22 18:12

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	84.0	83.6	1	0.547		10

Laboratory Control Sample (LCS)

(LCS) R3830876-2 08/25/22 18:12

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3830749-1 08/25/22 11:43

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00156
Ethylbenzene	U		0.000737	0.00246
Toluene	U		0.00130	0.00433
Xylenes, Total	U		0.000880	0.00293
1,2,4-Trimethylbenzene	U		0.00158	0.00527
1,3,5-Trimethylbenzene	U		0.00200	0.00667
(S) Toluene-d8	*111*			*75.0-131*
(S) 4-Bromofluorobenzene	*81.9*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3830749-2 08/25/22 14:32

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.117	93.6	70.0-123	
Ethylbenzene	0.125	0.121	96.8	74.0-126	
Toluene	0.125	0.122	97.6	75.0-121	
Xylenes, Total	0.375	0.349	93.1	72.0-127	
1,2,4-Trimethylbenzene	0.125	0.103	82.4	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.110	88.0	73.0-127	
(S) Toluene-d8			*102*	*75.0-131*	
(S) 4-Bromofluorobenzene			*89.7*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*112*	*70.0-130*	

Method Blank (MB)

(MB) R3830903-2 08/26/22 09:34

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00767
Acenaphthene	U		0.00209	0.00697
Acenaphthylene	U		0.00216	0.00720
Benzo(a)anthracene	U		0.00173	0.00577
Benzo(a)pyrene	U		0.00179	0.00597
Benzo(b)fluoranthene	U		0.00153	0.00510
Benzo(g,h,i)perylene	U		0.00177	0.00590
Benzo(k)fluoranthene	U		0.00215	0.00717
Chrysene	U		0.00232	0.00773
Dibenz(a,h)anthracene	U		0.00172	0.00573
Fluoranthene	U		0.00227	0.00757
Fluorene	U		0.00205	0.00683
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00603
Naphthalene	U		0.00408	0.0136
Phenanthrene	U		0.00231	0.00770
Pyrene	U		0.00200	0.00667
1-Methylnaphthalene	U		0.00449	0.0150
2-Methylnaphthalene	U		0.00427	0.0142
2-Chloronaphthalene	U		0.00466	0.0155
(S) p-Terphenyl-d14	*67.3*			*23.0-120*
(S) Nitrobenzene-d5	*48.7*			*14.0-149*
(S) 2-Fluorobiphenyl	*58.2*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3830903-1 08/26/22 09:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0848	106	50.0-126	
Acenaphthene	0.0800	0.0754	94.3	50.0-120	
Acenaphthylene	0.0800	0.0790	98.8	50.0-120	
Benzo(a)anthracene	0.0800	0.0851	106	45.0-120	
Benzo(a)pyrene	0.0800	0.0812	102	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0752	94.0	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0760	95.0	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0725	90.6	49.0-125	
Chrysene	0.0800	0.0813	102	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0772	96.5	47.0-125	
Fluoranthene	0.0800	0.0829	104	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3830903-1 08/26/22 09:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0795	99.4	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0840	105	46.0-125	
Naphthalene	0.0800	0.0677	84.6	50.0-120	
Phenanthrene	0.0800	0.0772	96.5	47.0-120	
Pyrene	0.0800	0.0803	100	43.0-123	
1-Methylnaphthalene	0.0800	0.0682	85.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0704	88.0	50.0-120	
2-Chloronaphthalene	0.0800	0.0719	89.9	50.0-120	
(S) p-Terphenyl-d14			*87.1*	*23.0-120*	
(S) Nitrobenzene-d5			*85.6*	*14.0-149*	
(S) 2-Fluorobiphenyl			*89.6*	*34.0-125*	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
WSP USA - Duluth, MN

5957 McKee Road, Ste 7
Madison, WI 53719

Billing Information:
Accounts Payable
5957 McKee Road, Ste 7
Madison, WI 53719

Pres Chk

Report to:
Brad DalSanto

Email To:
bradley.dalsanto@wsp.com;alexander.morelan

Project Description:

City/State Collected: Ashland, WI

Please Circle: PT MT CT ET

Phone: ~~608-669-9234~~

Client Project #

Lab Project #
WSPMWI-LINE5MP1159

Collected by (print):
AL Moreland

Site/Facility ID #

P.O. #

Collected by (signature):

Quote #

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
X Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed: 24-HR – ASAP

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	SV8270PAHSIM 4ozClr-NoPres	TS 4ozClr-NoPres	V8260BTEX 40mlAmb/MeOH10ml/Syr ~~TMB~~	V8260BTEX 4ozClr-NoPres								
LN5MP1159 SC012	G	SS	15.5	8-23-2022	1520	2	X	X	X	X								-01
LN5MP1159 SC010R	G	SS	8.5	8-23-2022	1535	2	X	X	X	X								-02
LN5MP1159 SC007R	G	SS	13	8-24-2022	0750	2	X	X	X	X								-03
		SS																
		SS																
		SS																
		SS																
		SS																
		SS																
		SS																

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1528939
A007

Acctnum: **WSPMWI**
Template: **T214472**
Prelogin: **P943527**
PM: **134 - Mark W. Beasley**
PB:

Shipped Via: **FedEX Standard**

Remarks | Sample # (lab only)

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 5913 6271 8852

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Alexander Morelan / WSP	8-24-2022	1730	FedEx - Duluth.
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / (No) HCL / MeoH TBR

Temp: 1.8+.7 °C Bottles Received: 6
3.6-3.7

Date: 8/25/22 Time: 900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ANALYTICAL REPORT

August 30, 2022

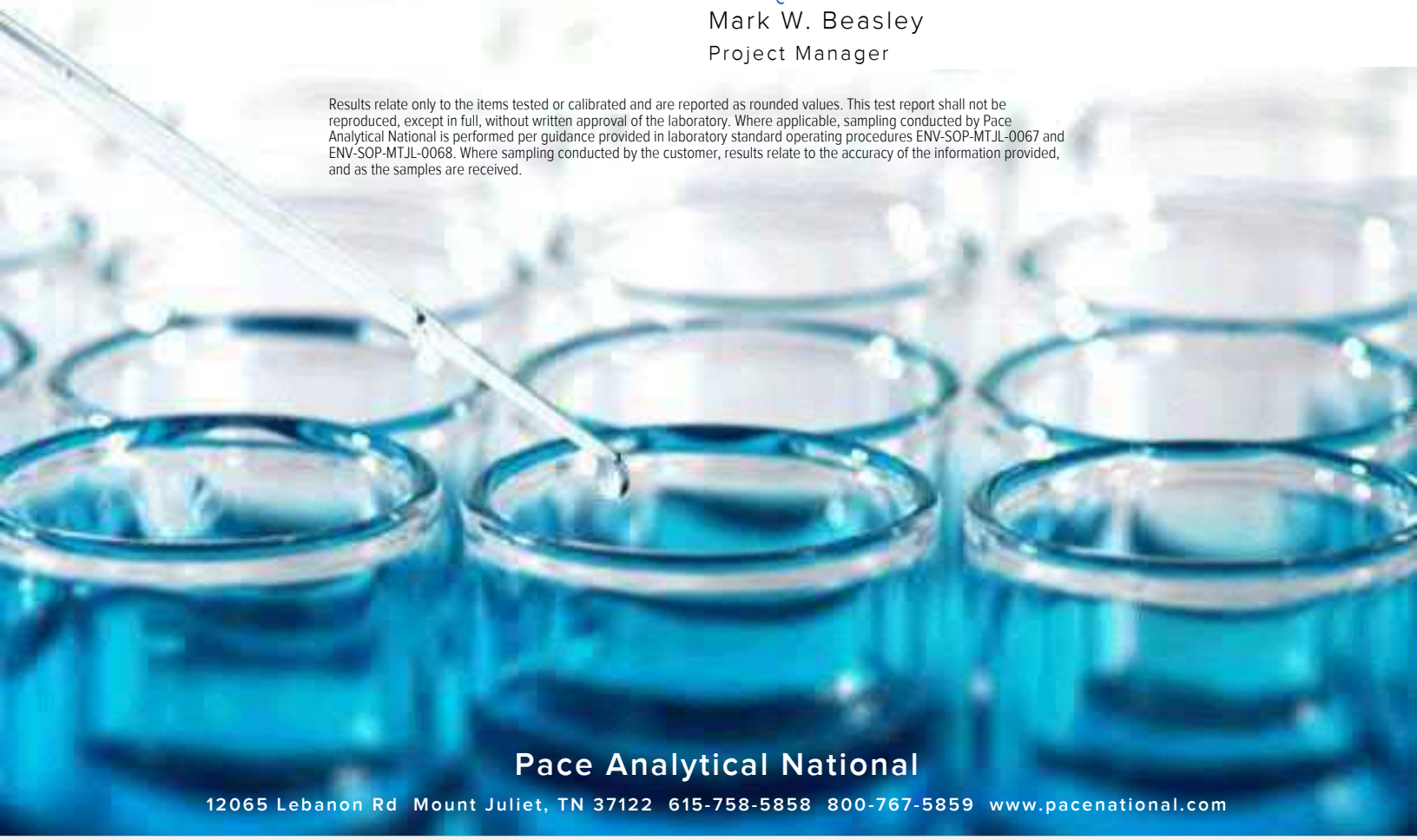
WSP USA - Duluth, MN

Sample Delivery Group:	L1530512
Samples Received:	08/30/2022
Project Number:	
Description:	Line 5 MP 1159

Report To: Brad DalSanto
5957 McKee Road, Ste 7
Madison, WI 53719

Entire Report Reviewed By:

Mark W. Beasley
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SAMPLE SUMMARY

LN5MP1159SB006(9) L1530512-01 Solid

Collected by: Al Moreland
Collected date/time: 08/27/22 10:30
Received date/time: 08/30/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1918691	1	08/30/22 12:49	08/30/22 12:53	MT	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1918679	1	08/27/22 10:30	08/30/22 13:22	DWR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1918638	1	08/30/22 14:48	08/30/22 16:32	CCW	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.3		1	08/30/2022 12:53	WG1918691

Volatile Organic Compounds (GC/MS) by Method 8260B/8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00224	1	08/30/2022 13:22	WG1918679
Toluene	ND		0.00621	1	08/30/2022 13:22	WG1918679
Ethylbenzene	ND		0.00353	1	08/30/2022 13:22	WG1918679
Total Xylenes	ND		0.00420	1	08/30/2022 13:22	WG1918679
1,2,4-Trimethylbenzene	ND		0.00755	1	08/30/2022 13:22	WG1918679
1,3,5-Trimethylbenzene	ND		0.00956	1	08/30/2022 13:22	WG1918679
(S) Toluene-d8	*119*		*75.0-131*		*08/30/2022 13:22*	WG1918679
(S) 4-Bromofluorobenzene	*97.8*		*67.0-138*		*08/30/2022 13:22*	WG1918679
(S) 1,2-Dichloroethane-d4	*93.0*		*70.0-130*		*08/30/2022 13:22*	WG1918679

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00910	1	08/30/2022 16:32	WG1918638
Acenaphthene	ND		0.00826	1	08/30/2022 16:32	WG1918638
Acenaphthylene	ND		0.00854	1	08/30/2022 16:32	WG1918638
Benzo(a)anthracene	ND		0.00684	1	08/30/2022 16:32	WG1918638
Benzo(a)pyrene	ND		0.00708	1	08/30/2022 16:32	WG1918638
Benzo(b)fluoranthene	ND		0.00605	1	08/30/2022 16:32	WG1918638
Benzo(g,h,i)perylene	ND		0.00700	1	08/30/2022 16:32	WG1918638
Benzo(k)fluoranthene	ND		0.00850	1	08/30/2022 16:32	WG1918638
Chrysene	ND		0.00917	1	08/30/2022 16:32	WG1918638
Dibenz(a,h)anthracene	ND		0.00679	1	08/30/2022 16:32	WG1918638
Fluoranthene	ND		0.00898	1	08/30/2022 16:32	WG1918638
Fluorene	ND		0.00810	1	08/30/2022 16:32	WG1918638
Indeno(1,2,3-cd)pyrene	ND		0.00715	1	08/30/2022 16:32	WG1918638
Naphthalene	ND		0.0161	1	08/30/2022 16:32	WG1918638
Phenanthrene	ND		0.00913	1	08/30/2022 16:32	WG1918638
Pyrene	ND		0.00791	1	08/30/2022 16:32	WG1918638
1-Methylnaphthalene	ND		0.0178	1	08/30/2022 16:32	WG1918638
2-Methylnaphthalene	ND		0.0168	1	08/30/2022 16:32	WG1918638
2-Chloronaphthalene	ND		0.0184	1	08/30/2022 16:32	WG1918638
(S) p-Terphenyl-d14	*58.5*		*23.0-120*		*08/30/2022 16:32*	WG1918638
(S) Nitrobenzene-d5	*86.5*		*14.0-149*		*08/30/2022 16:32*	WG1918638
(S) 2-Fluorobiphenyl	*74.3*		*34.0-125*		*08/30/2022 16:32*	WG1918638

Method Blank (MB)

(MB) R3832126-1 08/30/22 12:53

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1530517-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1530517-01 08/30/22 12:53 • (DUP) R3832126-3 08/30/22 12:53

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	84.1	84.2	1	0.224		10

Laboratory Control Sample (LCS)

(LCS) R3832126-2 08/30/22 12:53

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3831975-2 08/30/22 12:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00156
Ethylbenzene	U		0.000737	0.00246
Toluene	U		0.00130	0.00433
Xylenes, Total	U		0.000880	0.00293
1,3,5-Trimethylbenzene	U		0.00200	0.00667
1,2,4-Trimethylbenzene	U		0.00158	0.00527
(S) Toluene-d8	*120*			*75.0-131*
(S) 4-Bromofluorobenzene	*93.9*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*90.6*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3831975-1 08/30/22 11:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.136	109	70.0-123	
Ethylbenzene	0.125	0.132	106	74.0-126	
Toluene	0.125	0.140	112	75.0-121	
Xylenes, Total	0.375	0.407	109	72.0-127	
1,3,5-Trimethylbenzene	0.125	0.121	96.8	73.0-127	
1,2,4-Trimethylbenzene	0.125	0.128	102	70.0-126	
(S) Toluene-d8			*113*	*75.0-131*	
(S) 4-Bromofluorobenzene			*103*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*102*	*70.0-130*	

Method Blank (MB)

(MB) R3832073-2 08/30/22 15:22

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00767
Acenaphthene	U		0.00209	0.00697
Acenaphthylene	U		0.00216	0.00720
Benzo(a)anthracene	U		0.00173	0.00577
Benzo(a)pyrene	U		0.00179	0.00597
Benzo(b)fluoranthene	U		0.00153	0.00510
Benzo(g,h,i)perylene	U		0.00177	0.00590
Benzo(k)fluoranthene	U		0.00215	0.00717
Chrysene	U		0.00232	0.00773
Dibenz(a,h)anthracene	U		0.00172	0.00573
Fluoranthene	U		0.00227	0.00757
Fluorene	U		0.00205	0.00683
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00603
Naphthalene	U		0.00408	0.0136
Phenanthrene	U		0.00231	0.00770
Pyrene	U		0.00200	0.00667
1-Methylnaphthalene	U		0.00449	0.0150
2-Methylnaphthalene	U		0.00427	0.0142
2-Chloronaphthalene	U		0.00466	0.0155
(S) p-Terphenyl-d14	*82.4*			*23.0-120*
(S) Nitrobenzene-d5	*85.7*			*14.0-149*
(S) 2-Fluorobiphenyl	*79.1*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3832073-1 08/30/22 15:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0664	83.0	50.0-126	
Acenaphthene	0.0800	0.0664	83.0	50.0-120	
Acenaphthylene	0.0800	0.0672	84.0	50.0-120	
Benzo(a)anthracene	0.0800	0.0671	83.9	45.0-120	
Benzo(a)pyrene	0.0800	0.0607	75.9	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0638	79.8	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0616	77.0	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0630	78.8	49.0-125	
Chrysene	0.0800	0.0664	83.0	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0624	78.0	47.0-125	
Fluoranthene	0.0800	0.0688	86.0	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3832073-1 08/30/22 15:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0678	84.8	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0662	82.8	46.0-125	
Naphthalene	0.0800	0.0656	82.0	50.0-120	
Phenanthrene	0.0800	0.0646	80.7	47.0-120	
Pyrene	0.0800	0.0645	80.6	43.0-123	
1-Methylnaphthalene	0.0800	0.0673	84.1	51.0-121	
2-Methylnaphthalene	0.0800	0.0692	86.5	50.0-120	
2-Chloronaphthalene	0.0800	0.0638	79.8	50.0-120	
(S) p-Terphenyl-d14			*95.1*	*23.0-120*	
(S) Nitrobenzene-d5			*109*	*14.0-149*	
(S) 2-Fluorobiphenyl			*99.4*	*34.0-125*	

L1530509-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1530509-01 08/30/22 15:39 • (MS) R3832073-3 08/30/22 15:57 • (MSD) R3832073-4 08/30/22 16:14

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0953	ND	0.0683	0.0617	71.6	64.8	1	10.0-145			10.1	30
Acenaphthene	0.0953	ND	0.0665	0.0633	69.8	66.5	1	14.0-127			4.94	27
Acenaphthylene	0.0953	ND	0.0664	0.0648	69.7	68.0	1	21.0-124			2.45	25
Benzo(a)anthracene	0.0953	ND	0.0665	0.0588	69.8	61.7	1	10.0-139			12.4	30
Benzo(a)pyrene	0.0953	ND	0.0675	0.0585	70.9	61.4	1	10.0-141			14.3	31
Benzo(b)fluoranthene	0.0953	ND	0.0616	0.0515	64.6	54.0	1	10.0-140			17.9	36
Benzo(g,h,i)perylene	0.0953	ND	0.0602	0.0504	63.2	52.8	1	10.0-140			17.9	33
Benzo(k)fluoranthene	0.0953	ND	0.0623	0.0558	65.4	58.5	1	10.0-137			11.1	31
Chrysene	0.0953	ND	0.0681	0.0627	71.5	65.8	1	10.0-145			8.30	30
Dibenz(a,h)anthracene	0.0953	ND	0.0617	0.0553	64.8	58.0	1	10.0-132			11.0	31
Fluoranthene	0.0953	ND	0.0659	0.0589	69.2	61.8	1	10.0-153			11.3	33
Fluorene	0.0953	ND	0.0674	0.0630	70.7	66.1	1	11.0-130			6.82	29
Indeno(1,2,3-cd)pyrene	0.0953	ND	0.0612	0.0525	64.2	55.1	1	10.0-137			15.4	32
Naphthalene	0.0953	ND	0.0673	0.0667	58.1	57.4	1	10.0-135			0.922	27
Phenanthrene	0.0953	ND	0.0632	0.0581	66.3	61.0	1	10.0-144			8.34	31
Pyrene	0.0953	ND	0.0626	0.0551	65.7	57.8	1	10.0-148			12.8	35
1-Methylnaphthalene	0.0953	ND	0.0674	0.0684	56.5	57.5	1	10.0-142			1.45	28
2-Methylnaphthalene	0.0953	0.0433	0.0699	0.0746	27.8	32.8	1	10.0-137			6.50	28
2-Chloronaphthalene	0.0953	ND	0.0652	0.0632	68.4	66.3	1	29.0-120			3.08	24
(S) p-Terphenyl-d14					*83.4*	*62.0*		*23.0-120*				
(S) Nitrobenzene-d5					*98.5*	*88.6*		*14.0-149*				
(S) 2-Fluorobiphenyl					*87.5*	*71.1*		*34.0-125*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
	The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
WSP USA - Duluth, MN

5957 McKee Road, Ste 7
Madison, WI 53719

Billing Information:
Accounts Payable
5957 McKee Road, Ste 7
Madison, WI 53719

Pres Chk

Report to: **Brad DalSanto**

Email To: bradley.dalsanto@wsp.com;alexander.morelan

Project Description: Line 5 MP 1159

City/State Collected: Ashland WI

Please Circle: PT MT CT ET

Phone: ~~608-669-9234~~

Client Project #

Lab Project # **WSPMWI-LINE5MP1159**

Collected by (print): Al Moreland

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
X Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: 24-Hr - ASAP

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	SV8270PAHSIM 4ozClr-NoPres	TS 4ozClr-NoPres	V8260BTEX 40ml/Amb/MeOH10ml/Syr 1 TMB	V8260BTEX 4ozClr-NoPres								
LN5MP1159SB0006 (9)	G	SS	9	8-27-2022	1030	2	X	X	X	X								-01
		SS																
		SS																
		SS																
		SS																

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L530512
F078

Acctnum: **WSPMWI**
Template: **T214472**
Prelogin: **P943527**
PM: **134 - Mark W. Beasley**
PB:

Shipped Via: **FedEX Standard**

Remarks | Sample # (lab only)

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP X Y __N
COC Signed/Accurate: X Y __N
Bottles arrive intact: X Y __N
Correct bottles used: X Y __N
Sufficient volume sent: X Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: X Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / (No) HCL / MeoH TBR	
	8-29-2022	1700	FedEx - Duluth	0	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp REAL °C Bottles Received:	If preservation required by Login: Date/Time
				0240=02 2	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8/30/22 Time: 930	Hold: Condition: NCF / (OK)

ANALYTICAL REPORT

August 30, 2022

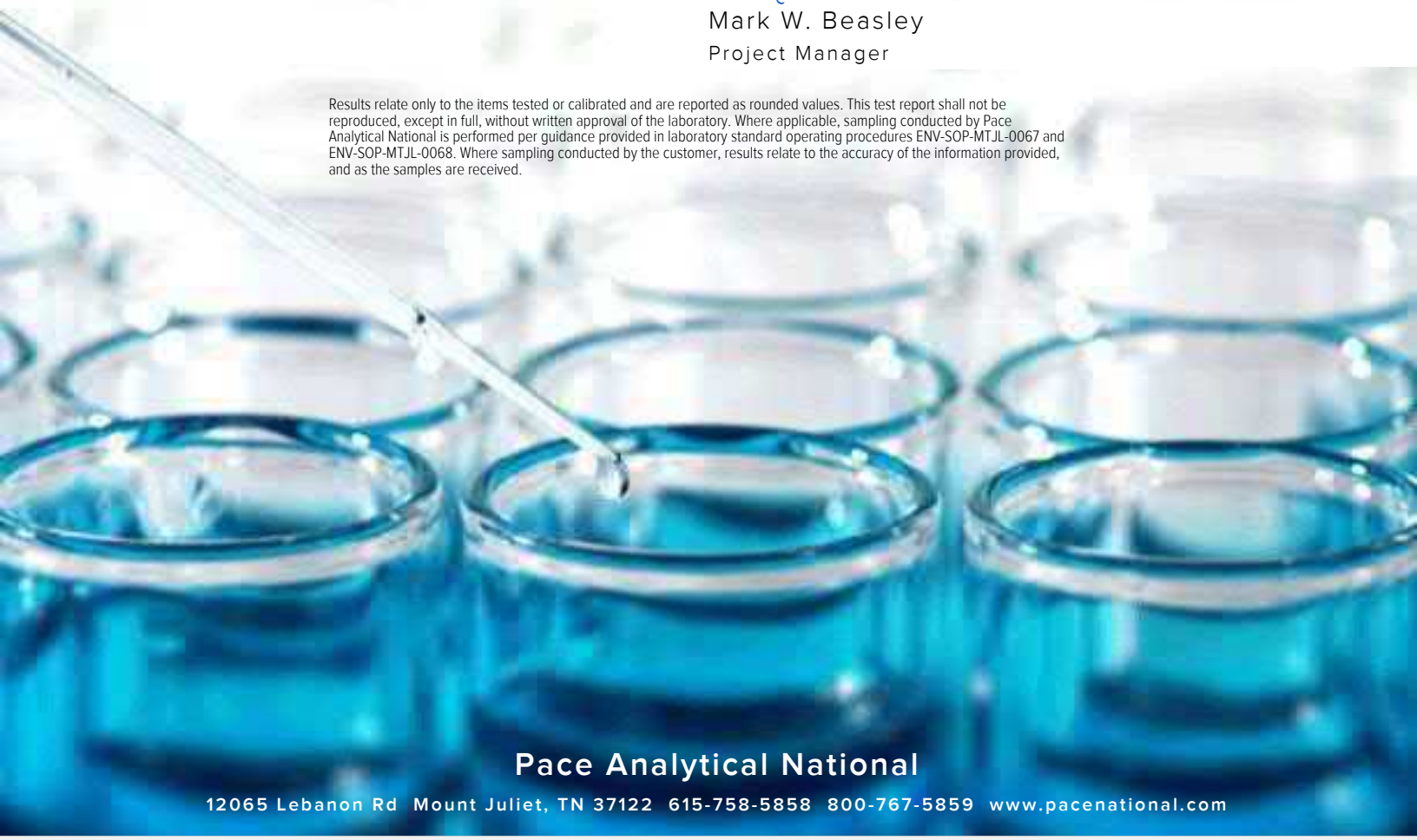
WSP USA - Duluth, MN

Sample Delivery Group:	L1530509
Samples Received:	08/30/2022
Project Number:	
Description:	Line 5 MP 1159

Report To: Brad DalSanto
5957 McKee Road, Ste 7
Madison, WI 53719

Entire Report Reviewed By:

Mark W. Beasley
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SAMPLE SUMMARY

LN5MP1159SB005(16) L1530509-01 Solid

Collected by: Al Moreland
Collected date/time: 08/26/22 15:45
Received date/time: 08/30/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1918691	1	08/30/22 12:49	08/30/22 12:53	MT	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1918679	1.62	08/26/22 15:45	08/30/22 13:00	DWR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1918638	1	08/30/22 14:48	08/30/22 15:39	AMG	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.0		1	08/30/2022 12:53	WG1918691

Volatile Organic Compounds (GC/MS) by Method 8260B/8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.0858		0.00348	1.62	08/30/2022 13:00	WG1918679
Toluene	ND		0.00970	1.62	08/30/2022 13:00	WG1918679
Ethylbenzene	ND		0.00548	1.62	08/30/2022 13:00	WG1918679
Total Xylenes	ND		0.00658	1.62	08/30/2022 13:00	WG1918679
1,2,4-Trimethylbenzene	ND		0.0118	1.62	08/30/2022 13:00	WG1918679
1,3,5-Trimethylbenzene	ND		0.0149	1.62	08/30/2022 13:00	WG1918679
(S) Toluene-d8	*116*		*75.0-131*		*08/30/2022 13:00*	WG1918679
(S) 4-Bromofluorobenzene	*99.0*		*67.0-138*		*08/30/2022 13:00*	WG1918679
(S) 1,2-Dichloroethane-d4	*90.5*		*70.0-130*		*08/30/2022 13:00*	WG1918679

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00947	1	08/30/2022 15:39	WG1918638
Acenaphthene	ND		0.00860	1	08/30/2022 15:39	WG1918638
Acenaphthylene	ND		0.00889	1	08/30/2022 15:39	WG1918638
Benzo(a)anthracene	ND		0.00712	1	08/30/2022 15:39	WG1918638
Benzo(a)pyrene	ND		0.00737	1	08/30/2022 15:39	WG1918638
Benzo(b)fluoranthene	ND		0.00630	1	08/30/2022 15:39	WG1918638
Benzo(g,h,i)perylene	ND		0.00728	1	08/30/2022 15:39	WG1918638
Benzo(k)fluoranthene	ND		0.00885	1	08/30/2022 15:39	WG1918638
Chrysene	ND		0.00954	1	08/30/2022 15:39	WG1918638
Dibenz(a,h)anthracene	ND		0.00707	1	08/30/2022 15:39	WG1918638
Fluoranthene	ND		0.00934	1	08/30/2022 15:39	WG1918638
Fluorene	ND		0.00843	1	08/30/2022 15:39	WG1918638
Indeno(1,2,3-cd)pyrene	ND		0.00744	1	08/30/2022 15:39	WG1918638
Naphthalene	ND		0.0168	1	08/30/2022 15:39	WG1918638
Phenanthrene	ND		0.00950	1	08/30/2022 15:39	WG1918638
Pyrene	ND		0.00823	1	08/30/2022 15:39	WG1918638
1-Methylnaphthalene	ND		0.0185	1	08/30/2022 15:39	WG1918638
2-Methylnaphthalene	0.0433		0.0175	1	08/30/2022 15:39	WG1918638
2-Chloronaphthalene	ND		0.0191	1	08/30/2022 15:39	WG1918638
(S) p-Terphenyl-d14	*52.8*		*23.0-120*		*08/30/2022 15:39*	WG1918638
(S) Nitrobenzene-d5	*86.9*		*14.0-149*		*08/30/2022 15:39*	WG1918638
(S) 2-Fluorobiphenyl	*66.4*		*34.0-125*		*08/30/2022 15:39*	WG1918638

Method Blank (MB)

(MB) R3832126-1 08/30/22 12:53

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1530517-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1530517-01 08/30/22 12:53 • (DUP) R3832126-3 08/30/22 12:53

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	84.1	84.2	1	0.224		10

Laboratory Control Sample (LCS)

(LCS) R3832126-2 08/30/22 12:53

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3831975-2 08/30/22 12:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00156
Ethylbenzene	U		0.000737	0.00246
Toluene	U		0.00130	0.00433
Xylenes, Total	U		0.000880	0.00293
1,3,5-Trimethylbenzene	U		0.00200	0.00667
1,2,4-Trimethylbenzene	U		0.00158	0.00527
(S) Toluene-d8	*120*			*75.0-131*
(S) 4-Bromofluorobenzene	*93.9*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*90.6*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3831975-1 08/30/22 11:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.136	109	70.0-123	
Ethylbenzene	0.125	0.132	106	74.0-126	
Toluene	0.125	0.140	112	75.0-121	
Xylenes, Total	0.375	0.407	109	72.0-127	
1,3,5-Trimethylbenzene	0.125	0.121	96.8	73.0-127	
1,2,4-Trimethylbenzene	0.125	0.128	102	70.0-126	
(S) Toluene-d8			*113*	*75.0-131*	
(S) 4-Bromofluorobenzene			*103*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*102*	*70.0-130*	

Method Blank (MB)

(MB) R3832073-2 08/30/22 15:22

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00767
Acenaphthene	U		0.00209	0.00697
Acenaphthylene	U		0.00216	0.00720
Benzo(a)anthracene	U		0.00173	0.00577
Benzo(a)pyrene	U		0.00179	0.00597
Benzo(b)fluoranthene	U		0.00153	0.00510
Benzo(g,h,i)perylene	U		0.00177	0.00590
Benzo(k)fluoranthene	U		0.00215	0.00717
Chrysene	U		0.00232	0.00773
Dibenz(a,h)anthracene	U		0.00172	0.00573
Fluoranthene	U		0.00227	0.00757
Fluorene	U		0.00205	0.00683
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00603
Naphthalene	U		0.00408	0.0136
Phenanthrene	U		0.00231	0.00770
Pyrene	U		0.00200	0.00667
1-Methylnaphthalene	U		0.00449	0.0150
2-Methylnaphthalene	U		0.00427	0.0142
2-Chloronaphthalene	U		0.00466	0.0155
(S) p-Terphenyl-d14	*82.4*			*23.0-120*
(S) Nitrobenzene-d5	*85.7*			*14.0-149*
(S) 2-Fluorobiphenyl	*79.1*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3832073-1 08/30/22 15:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0664	83.0	50.0-126	
Acenaphthene	0.0800	0.0664	83.0	50.0-120	
Acenaphthylene	0.0800	0.0672	84.0	50.0-120	
Benzo(a)anthracene	0.0800	0.0671	83.9	45.0-120	
Benzo(a)pyrene	0.0800	0.0607	75.9	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0638	79.8	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0616	77.0	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0630	78.8	49.0-125	
Chrysene	0.0800	0.0664	83.0	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0624	78.0	47.0-125	
Fluoranthene	0.0800	0.0688	86.0	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3832073-1 08/30/22 15:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0678	84.8	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0662	82.8	46.0-125	
Naphthalene	0.0800	0.0656	82.0	50.0-120	
Phenanthrene	0.0800	0.0646	80.7	47.0-120	
Pyrene	0.0800	0.0645	80.6	43.0-123	
1-Methylnaphthalene	0.0800	0.0673	84.1	51.0-121	
2-Methylnaphthalene	0.0800	0.0692	86.5	50.0-120	
2-Chloronaphthalene	0.0800	0.0638	79.8	50.0-120	
(S) p-Terphenyl-d14			*95.1*	*23.0-120*	
(S) Nitrobenzene-d5			*109*	*14.0-149*	
(S) 2-Fluorobiphenyl			*99.4*	*34.0-125*	

L1530509-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1530509-01 08/30/22 15:39 • (MS) R3832073-3 08/30/22 15:57 • (MSD) R3832073-4 08/30/22 16:14

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0953	ND	0.0683	0.0617	71.6	64.8	1	10.0-145			10.1	30
Acenaphthene	0.0953	ND	0.0665	0.0633	69.8	66.5	1	14.0-127			4.94	27
Acenaphthylene	0.0953	ND	0.0664	0.0648	69.7	68.0	1	21.0-124			2.45	25
Benzo(a)anthracene	0.0953	ND	0.0665	0.0588	69.8	61.7	1	10.0-139			12.4	30
Benzo(a)pyrene	0.0953	ND	0.0675	0.0585	70.9	61.4	1	10.0-141			14.3	31
Benzo(b)fluoranthene	0.0953	ND	0.0616	0.0515	64.6	54.0	1	10.0-140			17.9	36
Benzo(g,h,i)perylene	0.0953	ND	0.0602	0.0504	63.2	52.8	1	10.0-140			17.9	33
Benzo(k)fluoranthene	0.0953	ND	0.0623	0.0558	65.4	58.5	1	10.0-137			11.1	31
Chrysene	0.0953	ND	0.0681	0.0627	71.5	65.8	1	10.0-145			8.30	30
Dibenz(a,h)anthracene	0.0953	ND	0.0617	0.0553	64.8	58.0	1	10.0-132			11.0	31
Fluoranthene	0.0953	ND	0.0659	0.0589	69.2	61.8	1	10.0-153			11.3	33
Fluorene	0.0953	ND	0.0674	0.0630	70.7	66.1	1	11.0-130			6.82	29
Indeno(1,2,3-cd)pyrene	0.0953	ND	0.0612	0.0525	64.2	55.1	1	10.0-137			15.4	32
Naphthalene	0.0953	ND	0.0673	0.0667	58.1	57.4	1	10.0-135			0.922	27
Phenanthrene	0.0953	ND	0.0632	0.0581	66.3	61.0	1	10.0-144			8.34	31
Pyrene	0.0953	ND	0.0626	0.0551	65.7	57.8	1	10.0-148			12.8	35
1-Methylnaphthalene	0.0953	ND	0.0674	0.0684	56.5	57.5	1	10.0-142			1.45	28
2-Methylnaphthalene	0.0953	0.0433	0.0699	0.0746	27.8	32.8	1	10.0-137			6.50	28
2-Chloronaphthalene	0.0953	ND	0.0652	0.0632	68.4	66.3	1	29.0-120			3.08	24
(S) p-Terphenyl-d14					*83.4*	*62.0*		*23.0-120*				
(S) Nitrobenzene-d5					*98.5*	*88.6*		*14.0-149*				
(S) 2-Fluorobiphenyl					*87.5*	*71.1*		*34.0-125*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier | Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
WSP USA - Duluth, MN

5957 McKee Road, Ste 7
Madison, WI 53719

Billing Information:
Accounts Payable
5957 McKee Road, Ste 7
Madison, WI 53719

Pres Chk

Report to:
Brad DalSanto

Email To:
bradley.dalsanto@wsp.com;alexander.morelan

Project Description: Line 5 MP 1159

City/State Collected: Ashland WI

Please Circle: PT MT CT ET

Phone: ~~608-669-9234~~

Client Project #

Lab Project #
WSPMWI-LINE5MP1159

Collected by (print): AL Morelan

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
X Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed: 24-Hr – ASAP

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	SV8270PAHSIM 4ozClr-NoPres	TS 4ozClr-NoPres	V8260BTEX 40mlAmb/MeOH10ml/Syr 2 T/M Bs	V8260BTEX 4ozClr-NoPres
LN 5MP1159SB005(16)	G	SS	16	8-26-22	1545	2	X	X	X	X
		SS								
		SS								
		SS								
		SS								

AGM

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L530509

F077

Acctnum: **WSPMWI**
Template: **T214472**
Prelogin: **P943527**
PM: **134 - Mark W. Beasley**
PB:
Shipped Via: **FedEX Standard**

Remarks	Sample # (lab only)
	-01

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8-29-2022	1700	FedEx – Duluth
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / (No) HCL / MeoH TBR

Temp RRMC 0.2+0.2=0.4 Bottles Received: 2

Date: 8/30/22 Time: 930

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

ANALYTICAL REPORT

August 30, 2022

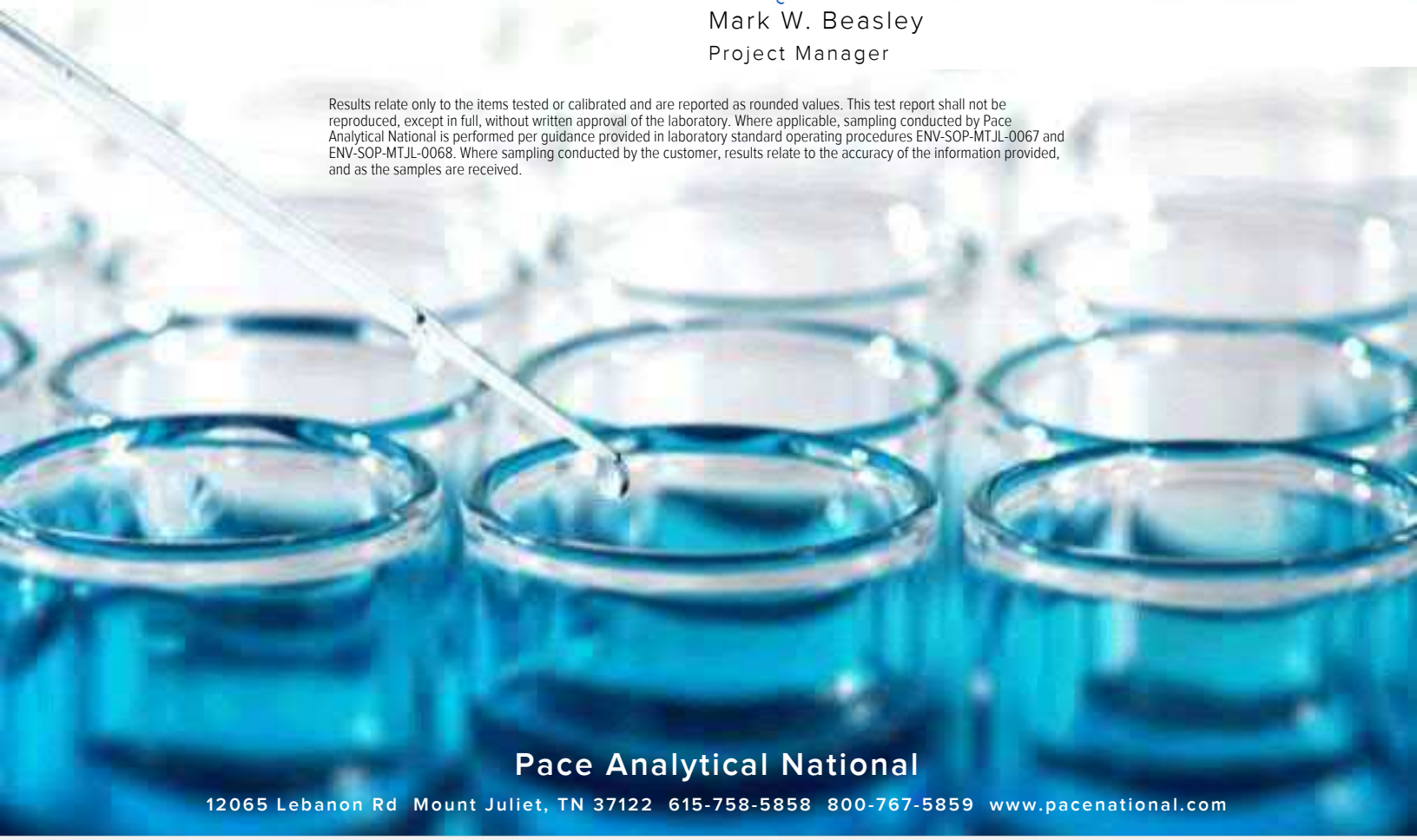
WSP USA - Duluth, MN

Sample Delivery Group:	L1530517
Samples Received:	08/30/2022
Project Number:	
Description:	Line 5 MP 1159

Report To: Brad DalSanto
5957 McKee Road, Ste 7
Madison, WI 53719

Entire Report Reviewed By:

Mark W. Beasley
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SAMPLE SUMMARY

LN5MP1159SB007(9) L1530517-01 Solid

Collected by: Al Moreland
Collected date/time: 08/27/22 12:00
Received date/time: 08/30/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1918691	1	08/30/22 12:49	08/30/22 12:53	MT	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1918679	1	08/27/22 12:00	08/30/22 13:43	DWR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1918638	1	08/30/22 14:48	08/30/22 16:49	CCW	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.1		1	08/30/2022 12:53	WG1918691

Volatile Organic Compounds (GC/MS) by Method 8260B/8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00220	1	08/30/2022 13:43	WG1918679
Toluene	ND		0.00610	1	08/30/2022 13:43	WG1918679
Ethylbenzene	ND		0.00346	1	08/30/2022 13:43	WG1918679
Total Xylenes	ND		0.00413	1	08/30/2022 13:43	WG1918679
1,2,4-Trimethylbenzene	ND		0.00742	1	08/30/2022 13:43	WG1918679
1,3,5-Trimethylbenzene	ND		0.00939	1	08/30/2022 13:43	WG1918679
(S) Toluene-d8	*116*		*75.0-131*		*08/30/2022 13:43*	WG1918679
(S) 4-Bromofluorobenzene	*97.3*		*67.0-138*		*08/30/2022 13:43*	WG1918679
(S) 1,2-Dichloroethane-d4	*94.5*		*70.0-130*		*08/30/2022 13:43*	WG1918679

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00913	1	08/30/2022 16:49	WG1918638
Acenaphthene	ND		0.00829	1	08/30/2022 16:49	WG1918638
Acenaphthylene	ND		0.00857	1	08/30/2022 16:49	WG1918638
Benzo(a)anthracene	ND		0.00686	1	08/30/2022 16:49	WG1918638
Benzo(a)pyrene	ND		0.00710	1	08/30/2022 16:49	WG1918638
Benzo(b)fluoranthene	ND		0.00607	1	08/30/2022 16:49	WG1918638
Benzo(g,h,i)perylene	ND		0.00702	1	08/30/2022 16:49	WG1918638
Benzo(k)fluoranthene	ND		0.00853	1	08/30/2022 16:49	WG1918638
Chrysene	ND		0.00920	1	08/30/2022 16:49	WG1918638
Dibenz(a,h)anthracene	ND		0.00682	1	08/30/2022 16:49	WG1918638
Fluoranthene	ND		0.00901	1	08/30/2022 16:49	WG1918638
Fluorene	ND		0.00813	1	08/30/2022 16:49	WG1918638
Indeno(1,2,3-cd)pyrene	ND		0.00717	1	08/30/2022 16:49	WG1918638
Naphthalene	ND		0.0162	1	08/30/2022 16:49	WG1918638
Phenanthrene	ND		0.00916	1	08/30/2022 16:49	WG1918638
Pyrene	ND		0.00794	1	08/30/2022 16:49	WG1918638
1-Methylnaphthalene	ND		0.0178	1	08/30/2022 16:49	WG1918638
2-Methylnaphthalene	ND		0.0169	1	08/30/2022 16:49	WG1918638
2-Chloronaphthalene	ND		0.0184	1	08/30/2022 16:49	WG1918638
(S) p-Terphenyl-d14	*57.5*		*23.0-120*		*08/30/2022 16:49*	WG1918638
(S) Nitrobenzene-d5	*98.5*		*14.0-149*		*08/30/2022 16:49*	WG1918638
(S) 2-Fluorobiphenyl	*66.9*		*34.0-125*		*08/30/2022 16:49*	WG1918638

Method Blank (MB)

(MB) R3832126-1 08/30/22 12:53

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1530517-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1530517-01 08/30/22 12:53 • (DUP) R3832126-3 08/30/22 12:53

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	84.1	84.2	1	0.224		10

Laboratory Control Sample (LCS)

(LCS) R3832126-2 08/30/22 12:53

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3831975-2 08/30/22 12:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00156
Ethylbenzene	U		0.000737	0.00246
Toluene	U		0.00130	0.00433
Xylenes, Total	U		0.000880	0.00293
1,3,5-Trimethylbenzene	U		0.00200	0.00667
1,2,4-Trimethylbenzene	U		0.00158	0.00527
(S) Toluene-d8	*120*			*75.0-131*
(S) 4-Bromofluorobenzene	*93.9*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*90.6*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3831975-1 08/30/22 11:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.136	109	70.0-123	
Ethylbenzene	0.125	0.132	106	74.0-126	
Toluene	0.125	0.140	112	75.0-121	
Xylenes, Total	0.375	0.407	109	72.0-127	
1,3,5-Trimethylbenzene	0.125	0.121	96.8	73.0-127	
1,2,4-Trimethylbenzene	0.125	0.128	102	70.0-126	
(S) Toluene-d8			*113*	*75.0-131*	
(S) 4-Bromofluorobenzene			*103*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*102*	*70.0-130*	

Method Blank (MB)

(MB) R3832073-2 08/30/22 15:22

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00767
Acenaphthene	U		0.00209	0.00697
Acenaphthylene	U		0.00216	0.00720
Benzo(a)anthracene	U		0.00173	0.00577
Benzo(a)pyrene	U		0.00179	0.00597
Benzo(b)fluoranthene	U		0.00153	0.00510
Benzo(g,h,i)perylene	U		0.00177	0.00590
Benzo(k)fluoranthene	U		0.00215	0.00717
Chrysene	U		0.00232	0.00773
Dibenz(a,h)anthracene	U		0.00172	0.00573
Fluoranthene	U		0.00227	0.00757
Fluorene	U		0.00205	0.00683
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00603
Naphthalene	U		0.00408	0.0136
Phenanthrene	U		0.00231	0.00770
Pyrene	U		0.00200	0.00667
1-Methylnaphthalene	U		0.00449	0.0150
2-Methylnaphthalene	U		0.00427	0.0142
2-Chloronaphthalene	U		0.00466	0.0155
(S) p-Terphenyl-d14	*82.4*			*23.0-120*
(S) Nitrobenzene-d5	*85.7*			*14.0-149*
(S) 2-Fluorobiphenyl	*79.1*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3832073-1 08/30/22 15:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0664	83.0	50.0-126	
Acenaphthene	0.0800	0.0664	83.0	50.0-120	
Acenaphthylene	0.0800	0.0672	84.0	50.0-120	
Benzo(a)anthracene	0.0800	0.0671	83.9	45.0-120	
Benzo(a)pyrene	0.0800	0.0607	75.9	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0638	79.8	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0616	77.0	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0630	78.8	49.0-125	
Chrysene	0.0800	0.0664	83.0	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0624	78.0	47.0-125	
Fluoranthene	0.0800	0.0688	86.0	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3832073-1 08/30/22 15:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0678	84.8	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0662	82.8	46.0-125	
Naphthalene	0.0800	0.0656	82.0	50.0-120	
Phenanthrene	0.0800	0.0646	80.7	47.0-120	
Pyrene	0.0800	0.0645	80.6	43.0-123	
1-Methylnaphthalene	0.0800	0.0673	84.1	51.0-121	
2-Methylnaphthalene	0.0800	0.0692	86.5	50.0-120	
2-Chloronaphthalene	0.0800	0.0638	79.8	50.0-120	
(S) p-Terphenyl-d14			*95.1*	*23.0-120*	
(S) Nitrobenzene-d5			*109*	*14.0-149*	
(S) 2-Fluorobiphenyl			*99.4*	*34.0-125*	

L1530509-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1530509-01 08/30/22 15:39 • (MS) R3832073-3 08/30/22 15:57 • (MSD) R3832073-4 08/30/22 16:14

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0953	ND	0.0683	0.0617	71.6	64.8	1	10.0-145			10.1	30
Acenaphthene	0.0953	ND	0.0665	0.0633	69.8	66.5	1	14.0-127			4.94	27
Acenaphthylene	0.0953	ND	0.0664	0.0648	69.7	68.0	1	21.0-124			2.45	25
Benzo(a)anthracene	0.0953	ND	0.0665	0.0588	69.8	61.7	1	10.0-139			12.4	30
Benzo(a)pyrene	0.0953	ND	0.0675	0.0585	70.9	61.4	1	10.0-141			14.3	31
Benzo(b)fluoranthene	0.0953	ND	0.0616	0.0515	64.6	54.0	1	10.0-140			17.9	36
Benzo(g,h,i)perylene	0.0953	ND	0.0602	0.0504	63.2	52.8	1	10.0-140			17.9	33
Benzo(k)fluoranthene	0.0953	ND	0.0623	0.0558	65.4	58.5	1	10.0-137			11.1	31
Chrysene	0.0953	ND	0.0681	0.0627	71.5	65.8	1	10.0-145			8.30	30
Dibenz(a,h)anthracene	0.0953	ND	0.0617	0.0553	64.8	58.0	1	10.0-132			11.0	31
Fluoranthene	0.0953	ND	0.0659	0.0589	69.2	61.8	1	10.0-153			11.3	33
Fluorene	0.0953	ND	0.0674	0.0630	70.7	66.1	1	11.0-130			6.82	29
Indeno(1,2,3-cd)pyrene	0.0953	ND	0.0612	0.0525	64.2	55.1	1	10.0-137			15.4	32
Naphthalene	0.0953	ND	0.0673	0.0667	58.1	57.4	1	10.0-135			0.922	27
Phenanthrene	0.0953	ND	0.0632	0.0581	66.3	61.0	1	10.0-144			8.34	31
Pyrene	0.0953	ND	0.0626	0.0551	65.7	57.8	1	10.0-148			12.8	35
1-Methylnaphthalene	0.0953	ND	0.0674	0.0684	56.5	57.5	1	10.0-142			1.45	28
2-Methylnaphthalene	0.0953	0.0433	0.0699	0.0746	27.8	32.8	1	10.0-137			6.50	28
2-Chloronaphthalene	0.0953	ND	0.0652	0.0632	68.4	66.3	1	29.0-120			3.08	24
(S) p-Terphenyl-d14					*83.4*	*62.0*		*23.0-120*				
(S) Nitrobenzene-d5					*98.5*	*88.6*		*14.0-149*				
(S) 2-Fluorobiphenyl					*87.5*	*71.1*		*34.0-125*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
	The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
WSP USA - Duluth, MN

5957 McKee Road, Ste 7
Madison, WI 53719

Billing Information:
Accounts Payable
5957 McKee Road, Ste 7
Madison, WI 53719

Pres Chk

Report to:
Brad DalSanto

Email To:
bradley.dalsanto@wsp.com;alexander.morelan

Project Description:
Line 5 MP 1159

City/State Collected: Ashland WI

Please Circle: PT MT CT ET

Phone: ~~608-669-9234~~

Client Project #

Lab Project #
WSPMWI-LINE5MP1159

Collected by (print):
AL Moreland

Site/Facility ID #

P.O. #

Collected by (signature):
Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
X Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed
24-Hr - ASAP

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	SV8270PAHSIM 4ozClr-NoPres	TS 4ozClr-NoPres	V8260BTEX 40mlAmb/MeOH10ml/Syr + TMB's	V8260BTEX 4ozClr-NoPres	Remarks	Sample # (lab only)
LN5MP1159SB0607(9)	G	SS	(9)	8-27-2022	1200	2	X	X	X	X		-01
		SS										
		SS										
		SS										
		SS										
		SS										
		SS										
		SS										
		SS										
		SS										
		SS										

AGM

Chain of Custody Page ___ of ___

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L530517
F079

Acctnum: **WSPMWI**
Template: **T214472**
Prelogin: **P943527**
PM: **134 - Mark W. Beasley**
PB:
Shipped Via: **FedEX Standard**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	8-29-2022	1700	FedEx-Duluth	0	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: RRR °C Bottles Received: 0.2+0=0.2 2	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8/30/22 Time: 930	Hold: / Condition: NCF / OK

ANALYTICAL REPORT

August 30, 2022

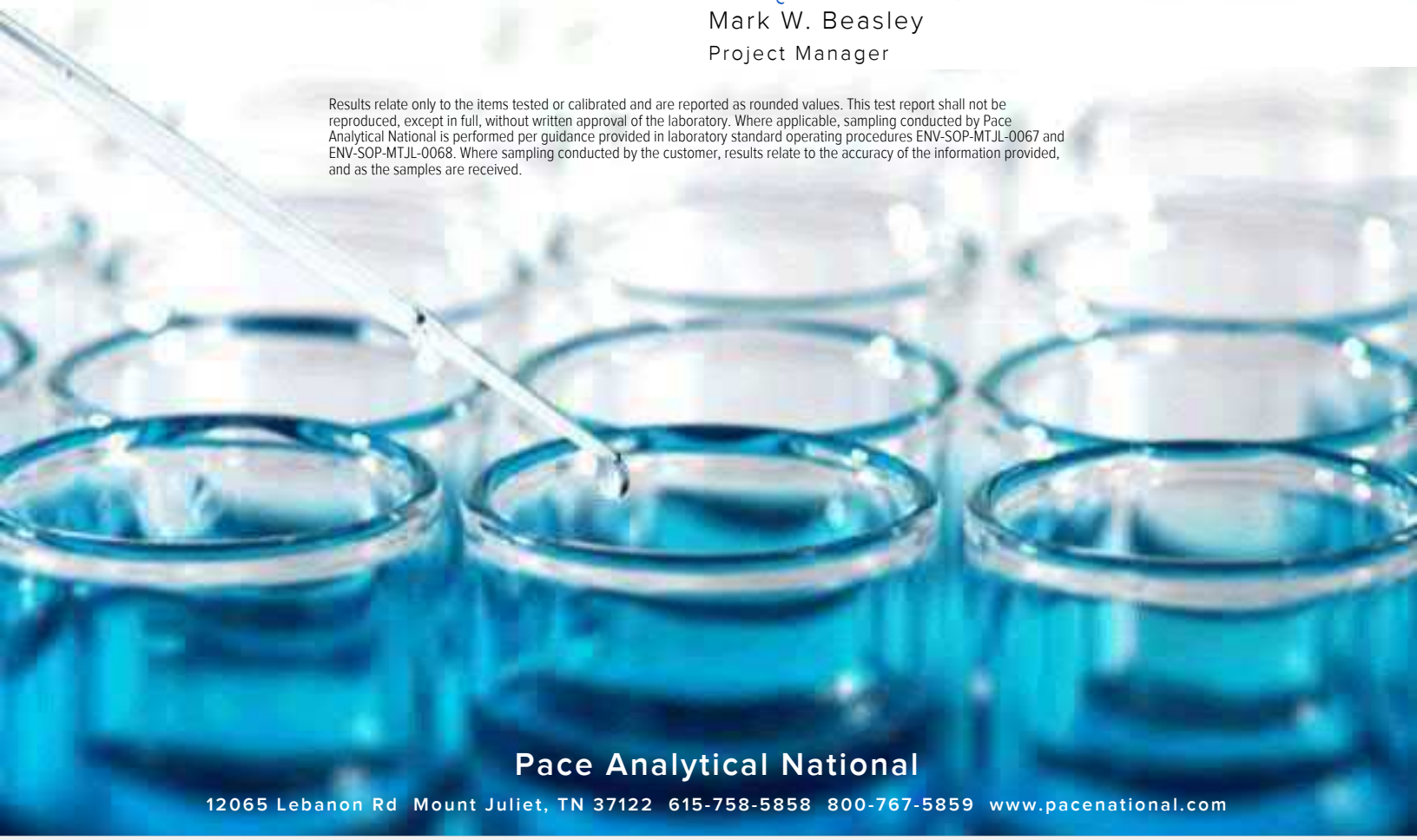
WSP USA - Duluth, MN

Sample Delivery Group:	L1530519
Samples Received:	08/30/2022
Project Number:	
Description:	Line 5 MP 1159

Report To: Brad DalSanto
5957 McKee Road, Ste 7
Madison, WI 53719

Entire Report Reviewed By:

Mark W. Beasley
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SAMPLE SUMMARY

LN5MP1159SB008(9) L1530519-01 Solid

Collected by: Al Moreland
Collected date/time: 08/27/22 13:00
Received date/time: 08/30/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1918691	1	08/30/22 12:49	08/30/22 12:53	MT	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1918679	1.03	08/27/22 13:00	08/30/22 14:05	DWR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1918638	1	08/30/22 14:48	08/30/22 17:07	CCW	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	79.1		1	08/30/2022 12:53	WG1918691

Volatile Organic Compounds (GC/MS) by Method 8260B/8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00243	1.03	08/30/2022 14:05	WG1918679
Toluene	ND		0.00679	1.03	08/30/2022 14:05	WG1918679
Ethylbenzene	ND		0.00384	1.03	08/30/2022 14:05	WG1918679
Total Xylenes	ND		0.00459	1.03	08/30/2022 14:05	WG1918679
1,2,4-Trimethylbenzene	ND		0.00825	1.03	08/30/2022 14:05	WG1918679
1,3,5-Trimethylbenzene	ND		0.0104	1.03	08/30/2022 14:05	WG1918679
(S) Toluene-d8	*119*		*75.0-131*		*08/30/2022 14:05*	WG1918679
(S) 4-Bromofluorobenzene	*91.8*		*67.0-138*		*08/30/2022 14:05*	WG1918679
(S) 1,2-Dichloroethane-d4	*89.3*		*70.0-130*		*08/30/2022 14:05*	WG1918679

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00969	1	08/30/2022 17:07	WG1918638
Acenaphthene	ND		0.00881	1	08/30/2022 17:07	WG1918638
Acenaphthylene	ND		0.00910	1	08/30/2022 17:07	WG1918638
Benzo(a)anthracene	ND		0.00729	1	08/30/2022 17:07	WG1918638
Benzo(a)pyrene	ND		0.00755	1	08/30/2022 17:07	WG1918638
Benzo(b)fluoranthene	ND		0.00645	1	08/30/2022 17:07	WG1918638
Benzo(g,h,i)perylene	ND		0.00746	1	08/30/2022 17:07	WG1918638
Benzo(k)fluoranthene	ND		0.00906	1	08/30/2022 17:07	WG1918638
Chrysene	ND		0.00977	1	08/30/2022 17:07	WG1918638
Dibenz(a,h)anthracene	ND		0.00724	1	08/30/2022 17:07	WG1918638
Fluoranthene	ND		0.00957	1	08/30/2022 17:07	WG1918638
Fluorene	ND		0.00863	1	08/30/2022 17:07	WG1918638
Indeno(1,2,3-cd)pyrene	ND		0.00762	1	08/30/2022 17:07	WG1918638
Naphthalene	ND		0.0172	1	08/30/2022 17:07	WG1918638
Phenanthrene	ND		0.00973	1	08/30/2022 17:07	WG1918638
Pyrene	ND		0.00843	1	08/30/2022 17:07	WG1918638
1-Methylnaphthalene	ND		0.0190	1	08/30/2022 17:07	WG1918638
2-Methylnaphthalene	ND		0.0179	1	08/30/2022 17:07	WG1918638
2-Chloronaphthalene	ND		0.0196	1	08/30/2022 17:07	WG1918638
(S) p-Terphenyl-d14	*56.5*		*23.0-120*		*08/30/2022 17:07*	WG1918638
(S) Nitrobenzene-d5	*85.8*		*14.0-149*		*08/30/2022 17:07*	WG1918638
(S) 2-Fluorobiphenyl	*65.1*		*34.0-125*		*08/30/2022 17:07*	WG1918638

Method Blank (MB)

(MB) R3832126-1 08/30/22 12:53

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1530517-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1530517-01 08/30/22 12:53 • (DUP) R3832126-3 08/30/22 12:53

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	84.1	84.2	1	0.224		10

Laboratory Control Sample (LCS)

(LCS) R3832126-2 08/30/22 12:53

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3831975-2 08/30/22 12:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00156
Ethylbenzene	U		0.000737	0.00246
Toluene	U		0.00130	0.00433
Xylenes, Total	U		0.000880	0.00293
1,3,5-Trimethylbenzene	U		0.00200	0.00667
1,2,4-Trimethylbenzene	U		0.00158	0.00527
(S) Toluene-d8	*120*			*75.0-131*
(S) 4-Bromofluorobenzene	*93.9*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*90.6*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3831975-1 08/30/22 11:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	0.125	0.136	109	70.0-123	
Ethylbenzene	0.125	0.132	106	74.0-126	
Toluene	0.125	0.140	112	75.0-121	
Xylenes, Total	0.375	0.407	109	72.0-127	
1,3,5-Trimethylbenzene	0.125	0.121	96.8	73.0-127	
1,2,4-Trimethylbenzene	0.125	0.128	102	70.0-126	
(S) Toluene-d8			*113*	*75.0-131*	
(S) 4-Bromofluorobenzene			*103*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*102*	*70.0-130*	

Method Blank (MB)

(MB) R3832073-2 08/30/22 15:22

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00767
Acenaphthene	U		0.00209	0.00697
Acenaphthylene	U		0.00216	0.00720
Benzo(a)anthracene	U		0.00173	0.00577
Benzo(a)pyrene	U		0.00179	0.00597
Benzo(b)fluoranthene	U		0.00153	0.00510
Benzo(g,h,i)perylene	U		0.00177	0.00590
Benzo(k)fluoranthene	U		0.00215	0.00717
Chrysene	U		0.00232	0.00773
Dibenz(a,h)anthracene	U		0.00172	0.00573
Fluoranthene	U		0.00227	0.00757
Fluorene	U		0.00205	0.00683
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00603
Naphthalene	U		0.00408	0.0136
Phenanthrene	U		0.00231	0.00770
Pyrene	U		0.00200	0.00667
1-Methylnaphthalene	U		0.00449	0.0150
2-Methylnaphthalene	U		0.00427	0.0142
2-Chloronaphthalene	U		0.00466	0.0155
(S) p-Terphenyl-d14	*82.4*			*23.0-120*
(S) Nitrobenzene-d5	*85.7*			*14.0-149*
(S) 2-Fluorobiphenyl	*79.1*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3832073-1 08/30/22 15:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0664	83.0	50.0-126	
Acenaphthene	0.0800	0.0664	83.0	50.0-120	
Acenaphthylene	0.0800	0.0672	84.0	50.0-120	
Benzo(a)anthracene	0.0800	0.0671	83.9	45.0-120	
Benzo(a)pyrene	0.0800	0.0607	75.9	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0638	79.8	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0616	77.0	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0630	78.8	49.0-125	
Chrysene	0.0800	0.0664	83.0	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0624	78.0	47.0-125	
Fluoranthene	0.0800	0.0688	86.0	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3832073-1 08/30/22 15:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0678	84.8	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0662	82.8	46.0-125	
Naphthalene	0.0800	0.0656	82.0	50.0-120	
Phenanthrene	0.0800	0.0646	80.7	47.0-120	
Pyrene	0.0800	0.0645	80.6	43.0-123	
1-Methylnaphthalene	0.0800	0.0673	84.1	51.0-121	
2-Methylnaphthalene	0.0800	0.0692	86.5	50.0-120	
2-Chloronaphthalene	0.0800	0.0638	79.8	50.0-120	
(S) p-Terphenyl-d14			*95.1*	*23.0-120*	
(S) Nitrobenzene-d5			*109*	*14.0-149*	
(S) 2-Fluorobiphenyl			*99.4*	*34.0-125*	

L1530509-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1530509-01 08/30/22 15:39 • (MS) R3832073-3 08/30/22 15:57 • (MSD) R3832073-4 08/30/22 16:14

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0953	ND	0.0683	0.0617	71.6	64.8	1	10.0-145			10.1	30
Acenaphthene	0.0953	ND	0.0665	0.0633	69.8	66.5	1	14.0-127			4.94	27
Acenaphthylene	0.0953	ND	0.0664	0.0648	69.7	68.0	1	21.0-124			2.45	25
Benzo(a)anthracene	0.0953	ND	0.0665	0.0588	69.8	61.7	1	10.0-139			12.4	30
Benzo(a)pyrene	0.0953	ND	0.0675	0.0585	70.9	61.4	1	10.0-141			14.3	31
Benzo(b)fluoranthene	0.0953	ND	0.0616	0.0515	64.6	54.0	1	10.0-140			17.9	36
Benzo(g,h,i)perylene	0.0953	ND	0.0602	0.0504	63.2	52.8	1	10.0-140			17.9	33
Benzo(k)fluoranthene	0.0953	ND	0.0623	0.0558	65.4	58.5	1	10.0-137			11.1	31
Chrysene	0.0953	ND	0.0681	0.0627	71.5	65.8	1	10.0-145			8.30	30
Dibenz(a,h)anthracene	0.0953	ND	0.0617	0.0553	64.8	58.0	1	10.0-132			11.0	31
Fluoranthene	0.0953	ND	0.0659	0.0589	69.2	61.8	1	10.0-153			11.3	33
Fluorene	0.0953	ND	0.0674	0.0630	70.7	66.1	1	11.0-130			6.82	29
Indeno(1,2,3-cd)pyrene	0.0953	ND	0.0612	0.0525	64.2	55.1	1	10.0-137			15.4	32
Naphthalene	0.0953	ND	0.0673	0.0667	58.1	57.4	1	10.0-135			0.922	27
Phenanthrene	0.0953	ND	0.0632	0.0581	66.3	61.0	1	10.0-144			8.34	31
Pyrene	0.0953	ND	0.0626	0.0551	65.7	57.8	1	10.0-148			12.8	35
1-Methylnaphthalene	0.0953	ND	0.0674	0.0684	56.5	57.5	1	10.0-142			1.45	28
2-Methylnaphthalene	0.0953	0.0433	0.0699	0.0746	27.8	32.8	1	10.0-137			6.50	28
2-Chloronaphthalene	0.0953	ND	0.0652	0.0632	68.4	66.3	1	29.0-120			3.08	24
(S) p-Terphenyl-d14					*83.4*	*62.0*		*23.0-120*				
(S) Nitrobenzene-d5					*98.5*	*88.6*		*14.0-149*				
(S) 2-Fluorobiphenyl					*87.5*	*71.1*		*34.0-125*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
	The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
WSP USA - Duluth, MN

5957 McKee Road, Ste 7
Madison, WI 53719

Billing Information:
Accounts Payable
5957 McKee Road, Ste 7
Madison, WI 53719

Pres Chk

Report to:
Brad DalSanto

Email To:
bradley.dalsanto@wsp.com;alexander.morelan

Project Description:
Line5MP 1159

City/State Collected: Ashland WI

Please Circle: PT MT CT ET

Phone: **608-669-9234**

Client Project #

Lab Project #
WSPMWI-LINE5MP1159

Collected by (print):
AL Moreland

Site/Facility ID #

P.O. #

Collected by (signature):

Quote #

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
X Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed
24 Hr - ASAP

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	SV8270PAHSIM 4ozClr-NoPres	TS 4ozClr-NoPres	V8260BTEX 40mlAmb/MeOH10ml/Syr ; TMB	V8260BTEX 4ozClr-NoPres	Remarks	Sample # (lab only)
LN5MP1159 SB0808(9)	G	SS	9	8-27-2022	1300	2	X	X	X	X		-01
		SS										
		SS										
		SS										
		SS										
		SS										
		SS										
		SS										
		SS										
		SS										

Chain of Custody Page ___ of ___

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L930519
F080

Acctnum: **WSPMWI**
Template: **T214472**
Prelogin: **P943527**
PM: **134 - Mark W. Beasley**
PB:
Shipped Via: **FedEX Standard**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
	8-29-2022	1700	FedEx - Duluth	0	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: R 0.2+0.2	Bottles Received: 2
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 8/30/22	Time: 930

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ANALYTICAL REPORT

September 01, 2022

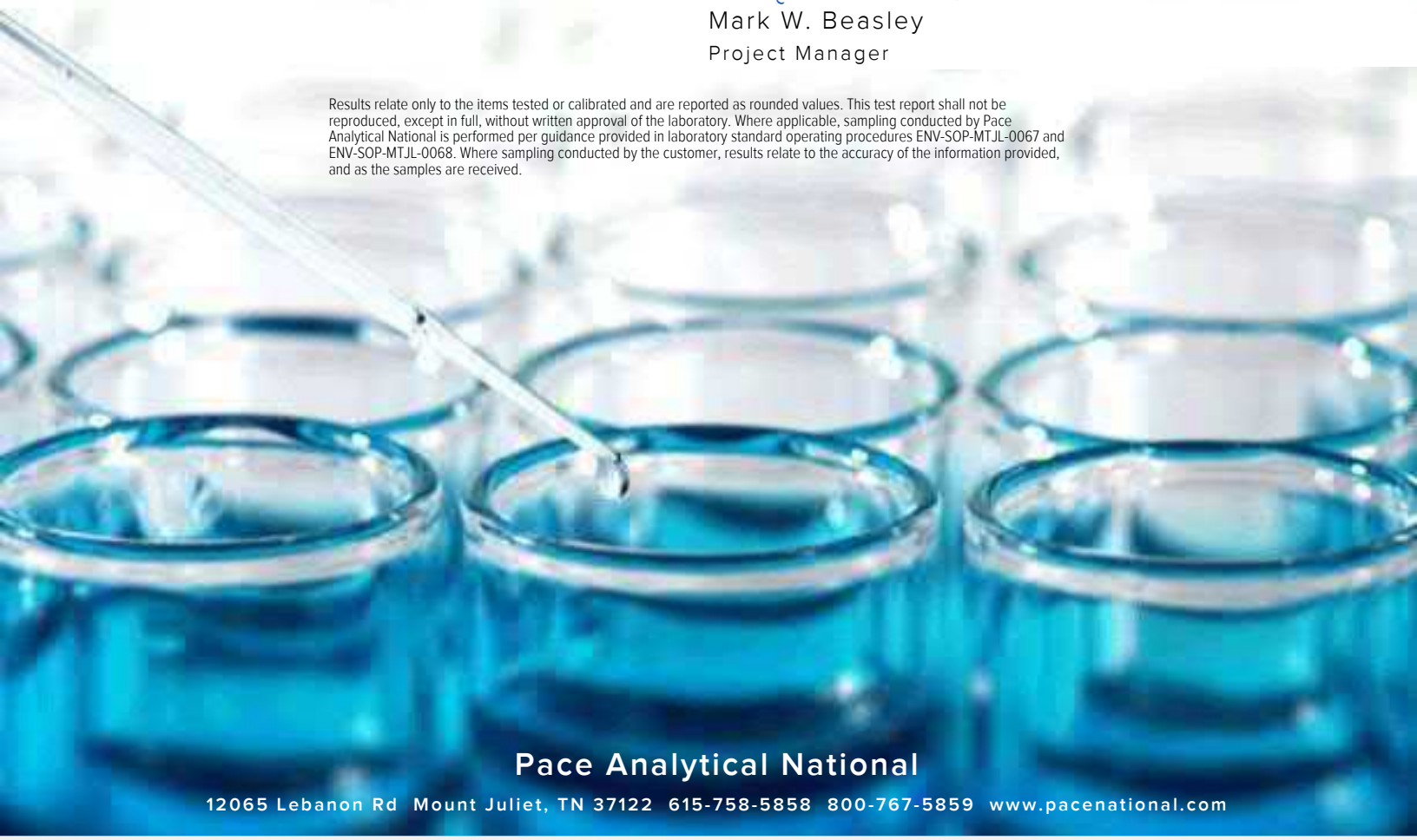
WSP USA - Duluth, MN

Sample Delivery Group:	L1530523
Samples Received:	08/30/2022
Project Number:	
Description:	Line 5 MP 1159

Report To: Brad DalSanto
5957 McKee Road, Ste 7
Madison, WI 53719

Entire Report Reviewed By:

Mark W. Beasley
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SAMPLE SUMMARY

LN5MP1159SB005(17) L1530523-01 Solid

Collected by: Al Moreland
Collected date/time: 08/26/22 15:55
Received date/time: 08/30/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1919202	1	08/31/22 09:34	08/31/22 09:42	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1919330	1	08/26/22 15:55	08/31/22 12:13	DWR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1919234	1	08/31/22 13:39	08/31/22 22:15	CCW	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	80.1		1	08/31/2022 09:42	WG1919202

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	0.00487		0.00236	1	08/31/2022 12:13	WG1919330
Ethylbenzene	ND		0.00372	1	08/31/2022 12:13	WG1919330
Toluene	ND		0.00655	1	08/31/2022 12:13	WG1919330
Xylenes, Total	ND		0.00443	1	08/31/2022 12:13	WG1919330
1,2,4-Trimethylbenzene	ND		0.00797	1	08/31/2022 12:13	WG1919330
1,3,5-Trimethylbenzene	ND		0.0101	1	08/31/2022 12:13	WG1919330
(S) Toluene-d8	*116*		*75.0-131*		*08/31/2022 12:13*	WG1919330
(S) 4-Bromofluorobenzene	*101*		*67.0-138*		*08/31/2022 12:13*	WG1919330
(S) 1,2-Dichloroethane-d4	*95.2*		*70.0-130*		*08/31/2022 12:13*	WG1919330

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00958	1	08/31/2022 22:15	WG1919234
Acenaphthene	ND		0.00870	1	08/31/2022 22:15	WG1919234
Acenaphthylene	ND		0.00899	1	08/31/2022 22:15	WG1919234
Benzo(a)anthracene	ND		0.00720	1	08/31/2022 22:15	WG1919234
Benzo(a)pyrene	ND		0.00745	1	08/31/2022 22:15	WG1919234
Benzo(b)fluoranthene	ND		0.00637	1	08/31/2022 22:15	WG1919234
Benzo(g,h,i)perylene	ND		0.00737	1	08/31/2022 22:15	WG1919234
Benzo(k)fluoranthene	ND		0.00895	1	08/31/2022 22:15	WG1919234
Chrysene	ND		0.00965	1	08/31/2022 22:15	WG1919234
Dibenz(a,h)anthracene	ND		0.00715	1	08/31/2022 22:15	WG1919234
Fluoranthene	ND		0.00945	1	08/31/2022 22:15	WG1919234
Fluorene	ND		0.00853	1	08/31/2022 22:15	WG1919234
Indeno(1,2,3-cd)pyrene	ND		0.00753	1	08/31/2022 22:15	WG1919234
Naphthalene	ND		0.0170	1	08/31/2022 22:15	WG1919234
Phenanthrene	ND		0.00961	1	08/31/2022 22:15	WG1919234
Pyrene	ND		0.00833	1	08/31/2022 22:15	WG1919234
1-Methylnaphthalene	ND		0.0187	1	08/31/2022 22:15	WG1919234
2-Methylnaphthalene	ND		0.0177	1	08/31/2022 22:15	WG1919234
2-Chloronaphthalene	ND		0.0193	1	08/31/2022 22:15	WG1919234
(S) p-Terphenyl-d14	*54.9*		*23.0-120*		*08/31/2022 22:15*	WG1919234
(S) Nitrobenzene-d5	*60.9*		*14.0-149*		*08/31/2022 22:15*	WG1919234
(S) 2-Fluorobiphenyl	*41.7*		*34.0-125*		*08/31/2022 22:15*	WG1919234

Method Blank (MB)

(MB) R3832541-1 08/31/22 09:42

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00400			

L1530191-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1530191-03 08/31/22 09:42 • (DUP) R3832541-3 08/31/22 09:42

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	76.8	77.2	1	0.526		10

Laboratory Control Sample (LCS)

(LCS) R3832541-2 08/31/22 09:42

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	99.9	85.0-115	

Method Blank (MB)

(MB) R3832413-2 08/31/22 07:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00156
Ethylbenzene	U		0.000737	0.00246
Toluene	U		0.00130	0.00433
Xylenes, Total	U		0.000880	0.00293
1,2,4-Trimethylbenzene	U		0.00158	0.00527
1,3,5-Trimethylbenzene	U		0.00200	0.00667
(S) Toluene-d8	*118*			*75.0-131*
(S) 4-Bromofluorobenzene	*96.0*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*90.9*			*70.0-130*

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

(LCS) R3832413-1 08/31/22 06:04 • (LCSD) R3832413-3 08/31/22 10:23

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.137	0.130	110	104	70.0-123			5.24	20
Ethylbenzene	0.125	0.138	0.122	110	97.6	74.0-126			12.3	20
Toluene	0.125	0.142	0.138	114	110	75.0-121			2.86	20
Xylenes, Total	0.375	0.424	0.387	113	103	72.0-127			9.12	20
1,2,4-Trimethylbenzene	0.125	0.142	0.127	114	102	70.0-126			11.2	20
1,3,5-Trimethylbenzene	0.125	0.132	0.120	106	96.0	73.0-127			9.52	20
(S) Toluene-d8				*110*	*109*	*75.0-131*				
(S) 4-Bromofluorobenzene				*106*	*104*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*102*	*103*	*70.0-130*				

Method Blank (MB)

(MB) R3832662-2 08/31/22 21:58

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00767
Acenaphthene	U		0.00209	0.00697
Acenaphthylene	U		0.00216	0.00720
Benzo(a)anthracene	U		0.00173	0.00577
Benzo(a)pyrene	U		0.00179	0.00597
Benzo(b)fluoranthene	U		0.00153	0.00510
Benzo(g,h,i)perylene	U		0.00177	0.00590
Benzo(k)fluoranthene	U		0.00215	0.00717
Chrysene	U		0.00232	0.00773
Dibenz(a,h)anthracene	U		0.00172	0.00573
Fluoranthene	U		0.00227	0.00757
Fluorene	U		0.00205	0.00683
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00603
Naphthalene	U		0.00408	0.0136
Phenanthrene	U		0.00231	0.00770
Pyrene	U		0.00200	0.00667
1-Methylnaphthalene	U		0.00449	0.0150
2-Methylnaphthalene	U		0.00427	0.0142
2-Chloronaphthalene	U		0.00466	0.0155
(S) p-Terphenyl-d14	*75.9*			*23.0-120*
(S) Nitrobenzene-d5	*71.8*			*14.0-149*
(S) 2-Fluorobiphenyl	*73.0*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3832662-1 08/31/22 21:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0427	53.4	50.0-126	
Acenaphthene	0.0800	0.0479	59.9	50.0-120	
Acenaphthylene	0.0800	0.0460	57.5	50.0-120	
Benzo(a)anthracene	0.0800	0.0427	53.4	45.0-120	
Benzo(a)pyrene	0.0800	0.0430	53.8	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0458	57.3	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0465	58.1	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0463	57.9	49.0-125	
Chrysene	0.0800	0.0459	57.4	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0476	59.5	47.0-125	
Fluoranthene	0.0800	0.0467	58.4	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3832662-1 08/31/22 21:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0473	59.1	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0454	56.8	46.0-125	
Naphthalene	0.0800	0.0491	61.4	50.0-120	
Phenanthrene	0.0800	0.0457	57.1	47.0-120	
Pyrene	0.0800	0.0489	61.1	43.0-123	
1-Methylnaphthalene	0.0800	0.0481	60.1	51.0-121	
2-Methylnaphthalene	0.0800	0.0480	60.0	50.0-120	
2-Chloronaphthalene	0.0800	0.0453	56.6	50.0-120	
(S) p-Terphenyl-d14			*79.5*	*23.0-120*	
(S) Nitrobenzene-d5			*80.5*	*14.0-149*	
(S) 2-Fluorobiphenyl			*79.0*	*34.0-125*	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
	The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
WSP USA - Duluth, MN

5957 McKee Road, Ste 7
Madison, WI 53719

Billing Information:
Accounts Payable
5957 McKee Road, Ste 7
Madison, WI 53719

Pres Chk

Report to:
Brad DalSanto

Email To:
bradley.dalsanto@wsp.com;alexander.morelan

Project Description:
Line 5 MP 1159

City/State Collected: Ashland WI

Please Circle: PT MT CT ET

Phone: ~~608-669-9234~~

Client Project #

Lab Project #
WSPMWI-LINE5MP1159

Collected by (print):
Alexander Morland

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed
Hold analysis

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	SV8270PAHSIM 4ozClr-NoPres	TS 4ozClr-NoPres	V8260BTEX 40mlAmb/MeOH10ml/Syr + TMBs	V8260BTEX 4ozClr-NoPres
LN5MP1159SB0005 (17)	G	SS	17	8.26.2022	1555	2	X	X	X	X
		SS								
		SS								
		SS								
		SS								
		SS								
		SS								
		SS								
		SS								
		SS								
		SS								

AGM

Chain of Custody Page ___ of ___

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # 153023

F081

Acctnum: **WSPMWI**
Template: **T214472**
Prelogin: **P943527**
PM: **134 - Mark W. Beasley**
PB:

Shipped Via: **FedEX Standard**

Remarks	Sample # (lab only)
	-01

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Prep samples/Extractions but hold analysis

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	8-29-2022	1700	FedEx - Duluth
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / (No) HCL / MeoH TBR

Temp: RAD C 0.2+0=0.2 Bottles Received: 2

Date: 8/30/22 Time: 930

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

ANALYTICAL REPORT

September 02, 2022

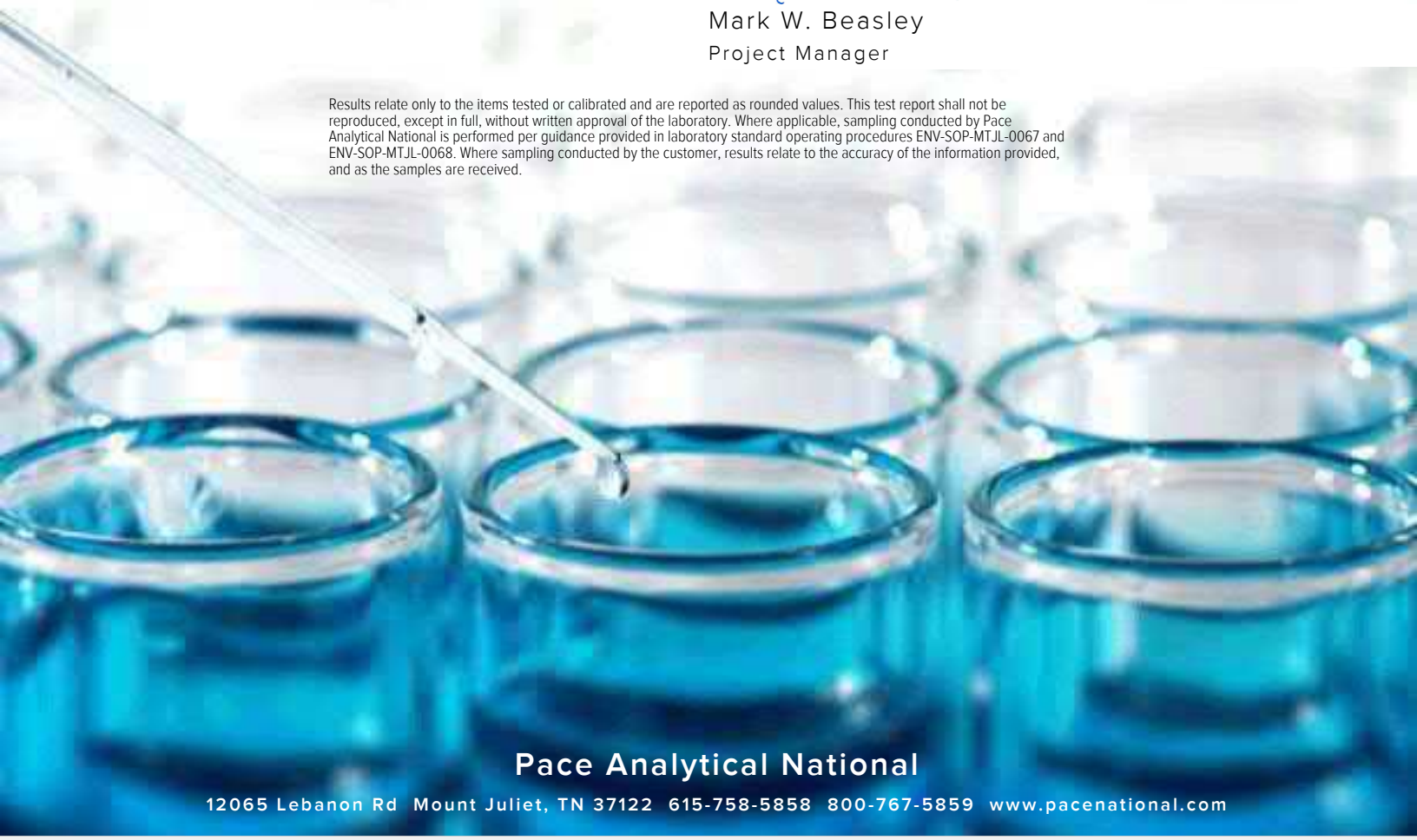
WSP USA - Duluth, MN

Sample Delivery Group:	L1531884
Samples Received:	09/02/2022
Project Number:	
Description:	Line 5 MP1159

Report To: Brad DalSanto
5957 McKee Road, Ste 7
Madison, WI 53719

Entire Report Reviewed By:

Mark W. Beasley
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SAMPLE SUMMARY

LN5MP1159SB009 (8) L1531884-01 Solid

Collected by: Al Moreland
Collected date/time: 09/01/22 09:15
Received date/time: 09/02/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1920729	1	09/02/22 12:49	09/02/22 12:54	MT	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1920746	1.01	09/01/22 09:15	09/02/22 14:31	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1920735	1	09/02/22 13:22	09/02/22 16:41	CCW	Mt. Juliet, TN

LN5MP1159SD090122 L1531884-02 Solid

Collected by: Al Moreland
Collected date/time: 09/01/22 09:15
Received date/time: 09/02/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1920729	1	09/02/22 12:49	09/02/22 12:54	MT	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1920746	1.15	09/01/22 09:15	09/02/22 14:50	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1920735	1	09/02/22 13:22	09/02/22 17:01	CCW	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	72.2		1	09/02/2022 12:54	WG1920729

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00277	1.01	09/02/2022 14:31	WG1920746
Ethylbenzene	ND		0.00438	1.01	09/02/2022 14:31	WG1920746
Toluene	ND		0.00771	1.01	09/02/2022 14:31	WG1920746
Xylenes, Total	0.0443		0.00523	1.01	09/02/2022 14:31	WG1920746
1,2,4-Trimethylbenzene	0.00962		0.00941	1.01	09/02/2022 14:31	WG1920746
1,3,5-Trimethylbenzene	ND		0.0119	1.01	09/02/2022 14:31	WG1920746
(S) Toluene-d8	*109*		*75.0-131*		*09/02/2022 14:31*	WG1920746
(S) 4-Bromofluorobenzene	*102*		*67.0-138*		*09/02/2022 14:31*	WG1920746
(S) 1,2-Dichloroethane-d4	*91.8*		*70.0-130*		*09/02/2022 14:31*	WG1920746

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.0106	1	09/02/2022 16:41	WG1920735
Acenaphthene	ND		0.00965	1	09/02/2022 16:41	WG1920735
Acenaphthylene	ND		0.00997	1	09/02/2022 16:41	WG1920735
Benzo(a)anthracene	ND		0.00799	1	09/02/2022 16:41	WG1920735
Benzo(a)pyrene	ND		0.00827	1	09/02/2022 16:41	WG1920735
Benzo(b)fluoranthene	ND		0.00706	1	09/02/2022 16:41	WG1920735
Benzo(g,h,i)perylene	ND		0.00817	1	09/02/2022 16:41	WG1920735
Benzo(k)fluoranthene	ND		0.00993	1	09/02/2022 16:41	WG1920735
Chrysene	ND		0.0107	1	09/02/2022 16:41	WG1920735
Dibenz(a,h)anthracene	ND		0.00793	1	09/02/2022 16:41	WG1920735
Fluoranthene	ND		0.0105	1	09/02/2022 16:41	WG1920735
Fluorene	ND		0.00946	1	09/02/2022 16:41	WG1920735
Indeno(1,2,3-cd)pyrene	ND		0.00835	1	09/02/2022 16:41	WG1920735
Naphthalene	ND		0.0188	1	09/02/2022 16:41	WG1920735
Phenanthrene	ND		0.0107	1	09/02/2022 16:41	WG1920735
Pyrene	ND		0.00924	1	09/02/2022 16:41	WG1920735
1-Methylnaphthalene	ND		0.0208	1	09/02/2022 16:41	WG1920735
2-Methylnaphthalene	ND		0.0197	1	09/02/2022 16:41	WG1920735
2-Chloronaphthalene	ND		0.0215	1	09/02/2022 16:41	WG1920735
(S) p-Terphenyl-d14	*73.7*		*23.0-120*		*09/02/2022 16:41*	WG1920735
(S) Nitrobenzene-d5	*68.2*		*14.0-149*		*09/02/2022 16:41*	WG1920735
(S) 2-Fluorobiphenyl	*59.7*		*34.0-125*		*09/02/2022 16:41*	WG1920735

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	68.8		1	09/02/2022 12:54	WG1920729

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00330	1.15	09/02/2022 14:50	WG1920746
Ethylbenzene	ND		0.00522	1.15	09/02/2022 14:50	WG1920746
Toluene	ND		0.00918	1.15	09/02/2022 14:50	WG1920746
Xylenes, Total	0.0493		0.00622	1.15	09/02/2022 14:50	WG1920746
1,2,4-Trimethylbenzene	0.0126		0.0112	1.15	09/02/2022 14:50	WG1920746
1,3,5-Trimethylbenzene	ND		0.0142	1.15	09/02/2022 14:50	WG1920746
(S) Toluene-d8	*109*		*75.0-131*		*09/02/2022 14:50*	WG1920746
(S) 4-Bromofluorobenzene	*102*		*67.0-138*		*09/02/2022 14:50*	WG1920746
(S) 1,2-Dichloroethane-d4	*89.8*		*70.0-130*		*09/02/2022 14:50*	WG1920746

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.0111	1	09/02/2022 17:01	WG1920735
Acenaphthene	ND		0.0101	1	09/02/2022 17:01	WG1920735
Acenaphthylene	ND		0.0105	1	09/02/2022 17:01	WG1920735
Benzo(a)anthracene	ND		0.00838	1	09/02/2022 17:01	WG1920735
Benzo(a)pyrene	ND		0.00867	1	09/02/2022 17:01	WG1920735
Benzo(b)fluoranthene	ND		0.00741	1	09/02/2022 17:01	WG1920735
Benzo(g,h,i)perylene	ND		0.00857	1	09/02/2022 17:01	WG1920735
Benzo(k)fluoranthene	ND		0.0104	1	09/02/2022 17:01	WG1920735
Chrysene	ND		0.0112	1	09/02/2022 17:01	WG1920735
Dibenz(a,h)anthracene	ND		0.00832	1	09/02/2022 17:01	WG1920735
Fluoranthene	ND		0.0110	1	09/02/2022 17:01	WG1920735
Fluorene	ND		0.00992	1	09/02/2022 17:01	WG1920735
Indeno(1,2,3-cd)pyrene	ND		0.00876	1	09/02/2022 17:01	WG1920735
Naphthalene	ND		0.0198	1	09/02/2022 17:01	WG1920735
Phenanthrene	ND		0.0112	1	09/02/2022 17:01	WG1920735
Pyrene	ND		0.00969	1	09/02/2022 17:01	WG1920735
1-Methylnaphthalene	ND		0.0218	1	09/02/2022 17:01	WG1920735
2-Methylnaphthalene	ND		0.0206	1	09/02/2022 17:01	WG1920735
2-Chloronaphthalene	ND		0.0225	1	09/02/2022 17:01	WG1920735
(S) p-Terphenyl-d14	*64.3*		*23.0-120*		*09/02/2022 17:01*	WG1920735
(S) Nitrobenzene-d5	*59.3*		*14.0-149*		*09/02/2022 17:01*	WG1920735
(S) 2-Fluorobiphenyl	*43.1*		*34.0-125*		*09/02/2022 17:01*	WG1920735

Method Blank (MB)

(MB) R3833523-1 09/02/22 12:54

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1531884-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1531884-02 09/02/22 12:54 • (DUP) R3833523-3 09/02/22 12:54

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	68.8	68.8	1	0.0557		10

Laboratory Control Sample (LCS)

(LCS) R3833523-2 09/02/22 12:54

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3833434-3 09/02/22 11:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00156
Ethylbenzene	U		0.000737	0.00246
Toluene	U		0.00130	0.00433
Xylenes, Total	U		0.000880	0.00293
1,2,4-Trimethylbenzene	U		0.00158	0.00527
1,3,5-Trimethylbenzene	U		0.00200	0.00667
(S) Toluene-d8	*107*			*75.0-131*
(S) 4-Bromofluorobenzene	*98.5*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*89.2*			*70.0-130*

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

(LCS) R3833434-1 09/02/22 10:33 • (LCSD) R3833434-2 09/02/22 10:52

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.113	0.124	90.4	99.2	70.0-123			9.28	20
Ethylbenzene	0.125	0.122	0.124	97.6	99.2	74.0-126			1.63	20
Toluene	0.125	0.127	0.129	102	103	75.0-121			1.56	20
Xylenes, Total	0.375	0.380	0.396	101	106	72.0-127			4.12	20
1,2,4-Trimethylbenzene	0.125	0.137	0.133	110	106	70.0-126			2.96	20
1,3,5-Trimethylbenzene	0.125	0.129	0.126	103	101	73.0-127			2.35	20
(S) Toluene-d8				*108*	*105*	*75.0-131*				
(S) 4-Bromofluorobenzene				*102*	*104*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*91.6*	*104*	*70.0-130*				

Method Blank (MB)

(MB) R3833503-2 09/02/22 16:21

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00767
Acenaphthene	U		0.00209	0.00697
Acenaphthylene	U		0.00216	0.00720
Benzo(a)anthracene	U		0.00173	0.00577
Benzo(a)pyrene	U		0.00179	0.00597
Benzo(b)fluoranthene	U		0.00153	0.00510
Benzo(g,h,i)perylene	U		0.00177	0.00590
Benzo(k)fluoranthene	U		0.00215	0.00717
Chrysene	U		0.00232	0.00773
Dibenz(a,h)anthracene	U		0.00172	0.00573
Fluoranthene	U		0.00227	0.00757
Fluorene	U		0.00205	0.00683
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00603
Naphthalene	U		0.00408	0.0136
Phenanthrene	U		0.00231	0.00770
Pyrene	U		0.00200	0.00667
1-Methylnaphthalene	U		0.00449	0.0150
2-Methylnaphthalene	U		0.00427	0.0142
2-Chloronaphthalene	U		0.00466	0.0155
(S) p-Terphenyl-d14	*79.9*			*23.0-120*
(S) Nitrobenzene-d5	*75.2*			*14.0-149*
(S) 2-Fluorobiphenyl	*80.0*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3833503-1 09/02/22 16:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0520	65.0	50.0-126	
Acenaphthene	0.0800	0.0514	64.3	50.0-120	
Acenaphthylene	0.0800	0.0554	69.3	50.0-120	
Benzo(a)anthracene	0.0800	0.0527	65.9	45.0-120	
Benzo(a)pyrene	0.0800	0.0455	56.9	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0507	63.4	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0475	59.4	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0491	61.4	49.0-125	
Chrysene	0.0800	0.0541	67.6	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0465	58.1	47.0-125	
Fluoranthene	0.0800	0.0558	69.8	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3833503-1 09/02/22 16:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0552	69.0	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0495	61.9	46.0-125	
Naphthalene	0.0800	0.0546	68.3	50.0-120	
Phenanthrene	0.0800	0.0513	64.1	47.0-120	
Pyrene	0.0800	0.0517	64.6	43.0-123	
1-Methylnaphthalene	0.0800	0.0537	67.1	51.0-121	
2-Methylnaphthalene	0.0800	0.0552	69.0	50.0-120	
2-Chloronaphthalene	0.0800	0.0528	66.0	50.0-120	
(S) p-Terphenyl-d14			*86.6*	*23.0-120*	
(S) Nitrobenzene-d5			*86.0*	*14.0-149*	
(S) 2-Fluorobiphenyl			*89.7*	*34.0-125*	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier | Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
WSP USA - Duluth, MN

5957 McKee Road, Ste 7
Madison, WI 53719

Billing Information:
Accounts Payable
5957 McKee Road, Ste 7
Madison, WI 53719

Pres Chk

Report to:
Brad DalSanto

Email To:
bradley.dalsanto@wsp.com;alexander.morelan

Project Description:
Line 5 MP1159

City/State Collected: Ashland WI

Please Circle: PT MT CT ET

Phone: ~~608-669-9234~~

Client Project #

Lab Project #
WSPMWI-LINE5MP1159

Collected by (print):
Al Moreland

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
X Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed
24-Hr - ASAP

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	SV8270PAHSIM 4ozClr-NoPres	TS 4ozClr-NoPres	V8260BTEX 40mlAmb/MeOH10ml/Syr ~~TMXs~~	V8260BTEX 4ozClr-NoPres													
LN5MP1159SB0909 (8)	G	SS	8	9-1-2022	0915	2	X	X	X	X												-9	
LN5MP1159SD090122	G	SS	8	9-1-2022	0915	2	X	X	X	X												-92	
		SS																					
		SS																					
		SS																					
		SS																					
		SS																					
		SS																					
		SS																					
		SS																					

AGM

Chain of Custody Page ___ of ___

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1531884
B013

Acctnum: **WSPMWI**
Template: **T214472**
Prelogin: **P943527**
PM: **134 - Mark W. Beasley**
PB:

Shipped Via: **FedEX Standard**

Remarks | Sample # (lab only)

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 2774 9649 1617

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
WSP	9-1-2022	1400	FedEx.
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: °C Bottles Received:
0.1+0=0.1 4

Date: 9/2/22 Time: 900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

ANALYTICAL REPORT

September 13, 2022

Revised Report

WSP USA - Duluth, MN

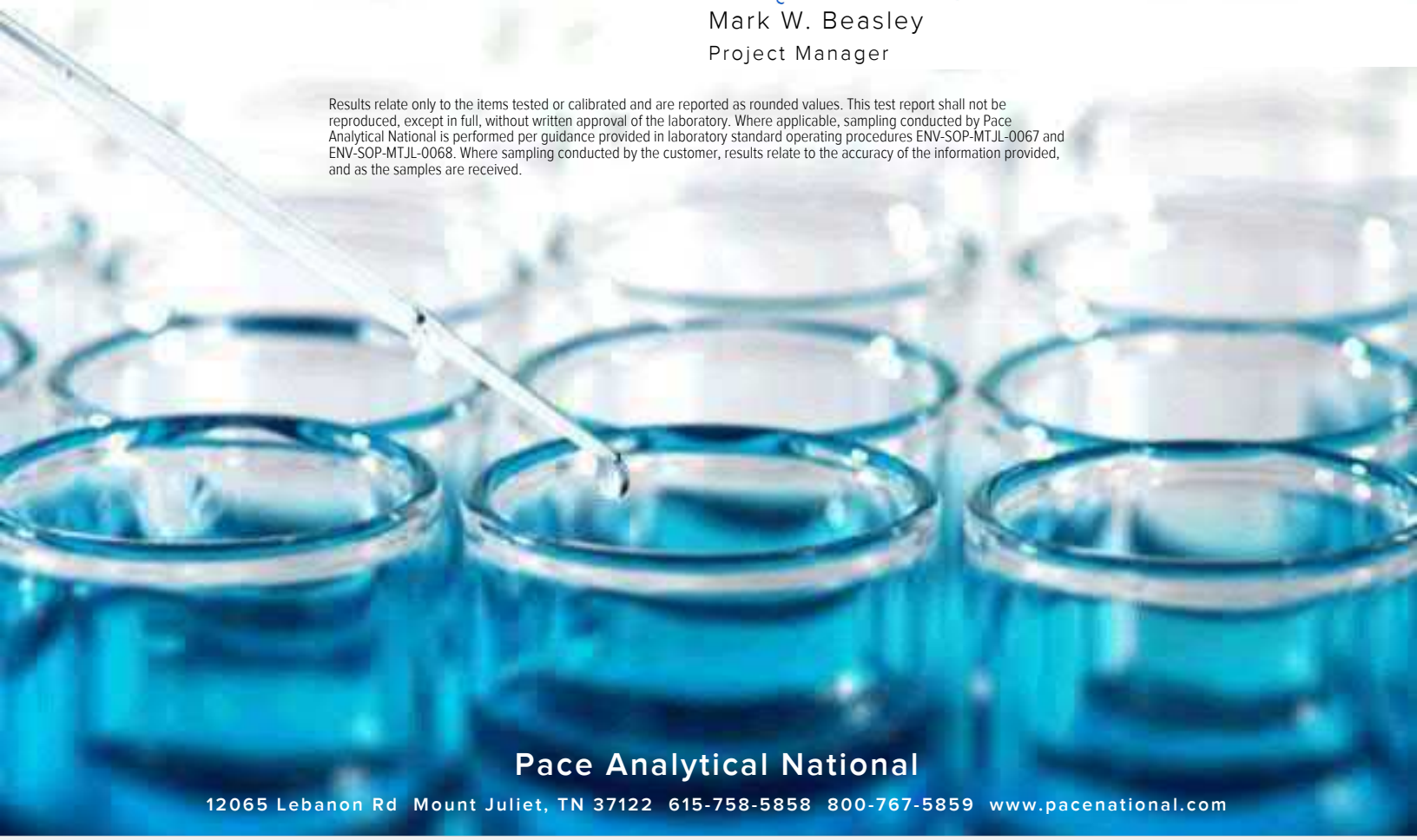
Sample Delivery Group:	L1530008
Samples Received:	08/27/2022
Project Number:	
Description:	WSPMWI-Live5MP1159

Report To:

Brad DalSanto
5957 McKee Road, Ste 7
Madison, WI 53719

Entire Report Reviewed By:

Mark W. Beasley
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SAMPLE SUMMARY

LN5MP1159SB004(17) L1530008-01 Solid

Collected by: Al Moreland
Collected date/time: 08/26/22 14:40
Received date/time: 08/27/22 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1917590	1	08/27/22 17:43	08/27/22 17:52	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1917589	1	08/26/22 14:40	08/27/22 19:04	DWR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1917684	1	08/29/22 09:38	08/29/22 13:10	AMG	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Mark W. Beasley
Project Manager

Report Revision History

Level II Report - Version 1: 08/29/22 16:35

Project Narrative

Corrected sample ID

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.0		1	08/27/2022 17:52	WG1917590

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Benzene	ND		0.00243	1	08/27/2022 19:04	WG1917589
Ethylbenzene	ND		0.00383	1	08/27/2022 19:04	WG1917589
Toluene	ND		0.00675	1	08/27/2022 19:04	WG1917589
Xylenes, Total	ND		0.00457	1	08/27/2022 19:04	WG1917589
1,2,4-Trimethylbenzene	ND		0.00822	1	08/27/2022 19:04	WG1917589
1,3,5-Trimethylbenzene	ND		0.0104	1	08/27/2022 19:04	WG1917589
(S) Toluene-d8	*107*		*75.0-131*		*08/27/2022 19:04*	WG1917589
(S) 4-Bromofluorobenzene	*98.9*		*67.0-138*		*08/27/2022 19:04*	WG1917589
(S) 1,2-Dichloroethane-d4	*96.3*		*70.0-130*		*08/27/2022 19:04*	WG1917589

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Anthracene	ND		0.00947	1	08/29/2022 13:10	WG1917684
Acenaphthene	ND		0.00861	1	08/29/2022 13:10	WG1917684
Acenaphthylene	ND		0.00889	1	08/29/2022 13:10	WG1917684
Benzo(a)anthracene	ND		0.00713	1	08/29/2022 13:10	WG1917684
Benzo(a)pyrene	ND		0.00737	1	08/29/2022 13:10	WG1917684
Benzo(b)fluoranthene	ND		0.00630	1	08/29/2022 13:10	WG1917684
Benzo(g,h,i)perylene	ND		0.00729	1	08/29/2022 13:10	WG1917684
Benzo(k)fluoranthene	ND		0.00886	1	08/29/2022 13:10	WG1917684
Chrysene	ND		0.00955	1	08/29/2022 13:10	WG1917684
Dibenz(a,h)anthracene	ND		0.00708	1	08/29/2022 13:10	WG1917684
Fluoranthene	ND		0.00935	1	08/29/2022 13:10	WG1917684
Fluorene	ND		0.00844	1	08/29/2022 13:10	WG1917684
Indeno(1,2,3-cd)pyrene	ND		0.00745	1	08/29/2022 13:10	WG1917684
Naphthalene	ND		0.0168	1	08/29/2022 13:10	WG1917684
Phenanthrene	ND		0.00951	1	08/29/2022 13:10	WG1917684
Pyrene	ND		0.00824	1	08/29/2022 13:10	WG1917684
1-Methylnaphthalene	ND		0.0185	1	08/29/2022 13:10	WG1917684
2-Methylnaphthalene	ND		0.0175	1	08/29/2022 13:10	WG1917684
2-Chloronaphthalene	ND		0.0191	1	08/29/2022 13:10	WG1917684
(S) p-Terphenyl-d14	*70.6*		*23.0-120*		*08/29/2022 13:10*	WG1917684
(S) Nitrobenzene-d5	*75.3*		*14.0-149*		*08/29/2022 13:10*	WG1917684
(S) 2-Fluorobiphenyl	*51.5*		*34.0-125*		*08/29/2022 13:10*	WG1917684

Method Blank (MB)

(MB) R3831434-1 08/27/22 17:52

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.000			

L1530008-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1530008-01 08/27/22 17:52 • (DUP) R3831434-3 08/27/22 17:52

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	81.0	81.0	1	0.0512		10

Laboratory Control Sample (LCS)

(LCS) R3831434-2 08/27/22 17:52

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3831319-3 08/27/22 06:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00156
Ethylbenzene	U		0.000737	0.00246
Toluene	U		0.00130	0.00433
Xylenes, Total	U		0.000880	0.00293
1,2,4-Trimethylbenzene	U		0.00158	0.00527
1,3,5-Trimethylbenzene	U		0.00200	0.00667
(S) Toluene-d8	*104*			*75.0-131*
(S) 4-Bromofluorobenzene	*96.7*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*95.5*			*70.0-130*

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

(LCS) R3831319-1 08/27/22 05:00 • (LCSD) R3831319-2 08/27/22 05:20

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.123	0.115	98.4	92.0	70.0-123			6.72	20
Ethylbenzene	0.125	0.119	0.123	95.2	98.4	74.0-126			3.31	20
Toluene	0.125	0.115	0.110	92.0	88.0	75.0-121			4.44	20
Xylenes, Total	0.375	0.362	0.348	96.5	92.8	72.0-127			3.94	20
1,2,4-Trimethylbenzene	0.125	0.120	0.117	96.0	93.6	70.0-126			2.53	20
1,3,5-Trimethylbenzene	0.125	0.112	0.116	89.6	92.8	73.0-127			3.51	20
(S) Toluene-d8				*101*	*102*	*75.0-131*				
(S) 4-Bromofluorobenzene				*100*	*102*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*109*	*108*	*70.0-130*				

Method Blank (MB)

(MB) R3831529-2 08/29/22 12:51

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00767
Acenaphthene	U		0.00209	0.00697
Acenaphthylene	U		0.00216	0.00720
Benzo(a)anthracene	U		0.00173	0.00577
Benzo(a)pyrene	U		0.00179	0.00597
Benzo(b)fluoranthene	U		0.00153	0.00510
Benzo(g,h,i)perylene	U		0.00177	0.00590
Benzo(k)fluoranthene	U		0.00215	0.00717
Chrysene	U		0.00232	0.00773
Dibenz(a,h)anthracene	U		0.00172	0.00573
Fluoranthene	U		0.00227	0.00757
Fluorene	U		0.00205	0.00683
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00603
Naphthalene	U		0.00408	0.0136
Phenanthrene	U		0.00231	0.00770
Pyrene	U		0.00200	0.00667
1-Methylnaphthalene	U		0.00449	0.0150
2-Methylnaphthalene	U		0.00427	0.0142
2-Chloronaphthalene	U		0.00466	0.0155
(S) p-Terphenyl-d14	*88.2*			*23.0-120*
(S) Nitrobenzene-d5	*74.1*			*14.0-149*
(S) 2-Fluorobiphenyl	*83.7*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R3831529-1 08/29/22 12:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0595	74.4	50.0-126	
Acenaphthene	0.0800	0.0614	76.8	50.0-120	
Acenaphthylene	0.0800	0.0613	76.6	50.0-120	
Benzo(a)anthracene	0.0800	0.0577	72.1	45.0-120	
Benzo(a)pyrene	0.0800	0.0546	68.3	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0565	70.6	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0564	70.5	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0588	73.5	49.0-125	
Chrysene	0.0800	0.0612	76.5	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0553	69.1	47.0-125	
Fluoranthene	0.0800	0.0622	77.8	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3831529-1 08/29/22 12:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0615	76.9	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0556	69.5	46.0-125	
Naphthalene	0.0800	0.0597	74.6	50.0-120	
Phenanthrene	0.0800	0.0578	72.3	47.0-120	
Pyrene	0.0800	0.0628	78.5	43.0-123	
1-Methylnaphthalene	0.0800	0.0578	72.3	51.0-121	
2-Methylnaphthalene	0.0800	0.0599	74.9	50.0-120	
2-Chloronaphthalene	0.0800	0.0606	75.8	50.0-120	
(S) p-Terphenyl-d14			*72.8*	*23.0-120*	
(S) Nitrobenzene-d5			*65.7*	*14.0-149*	
(S) 2-Fluorobiphenyl			*71.6*	*34.0-125*	

L1528194-22 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1528194-22 08/29/22 18:25 • (MS) R3831529-3 08/29/22 18:44 • (MSD) R3831529-4 08/29/22 19:04

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0966	0.0460	0.0512	0.0507	5.37	4.87	1	10.0-145	J6	J6	0.948	30
Acenaphthene	0.0966	0.0287	0.0456	0.0445	17.5	16.4	1	14.0-127			2.41	27
Acenaphthylene	0.0966	ND	0.0496	0.0480	51.4	49.8	1	21.0-124			3.21	25
Benzo(a)anthracene	0.0966	ND	0.0511	0.0505	50.5	49.9	1	10.0-139			1.19	30
Benzo(a)pyrene	0.0966	ND	0.0555	0.0548	57.5	56.8	1	10.0-141			1.31	31
Benzo(b)fluoranthene	0.0966	ND	0.0396	0.0428	41.0	44.4	1	10.0-140			7.91	36
Benzo(g,h,i)perylene	0.0966	ND	0.0465	0.0471	48.1	48.8	1	10.0-140			1.29	33
Benzo(k)fluoranthene	0.0966	ND	0.0548	0.0532	56.8	55.1	1	10.0-137			2.91	31
Chrysene	0.0966	ND	0.0631	0.0626	62.5	62.0	1	10.0-145			0.768	30
Dibenz(a,h)anthracene	0.0966	ND	0.0577	0.0538	59.8	55.8	1	10.0-132			6.93	31
Fluoranthene	0.0966	0.0225	0.0419	0.0459	20.1	24.2	1	10.0-153			9.08	33
Fluorene	0.0966	0.0293	0.0439	0.0449	15.1	16.1	1	11.0-130			2.17	29
Indeno(1,2,3-cd)pyrene	0.0966	ND	0.0456	0.0459	47.3	47.5	1	10.0-137			0.528	32
Naphthalene	0.0966	0.197	0.0601	0.0547	0.000	0.000	1	10.0-135	J6	J6	9.46	27
Phenanthrene	0.0966	0.0735	0.0389	0.0407	0.000	0.000	1	10.0-144	J6	J6	4.55	31
Pyrene	0.0966	0.0145	0.0396	0.0447	26.0	31.3	1	10.0-148			12.0	35
1-Methylnaphthalene	0.0966	0.0212	0.0501	0.0476	29.9	27.3	1	10.0-142			5.19	28
2-Methylnaphthalene	0.0966	0.0655	0.0520	0.0484	0.000	0.000	1	10.0-137	J6	J6	7.21	28
2-Chloronaphthalene	0.0966	ND	0.0486	0.0474	50.4	49.1	1	29.0-120			2.51	24
(S) p-Terphenyl-d14					*65.8*	*63.5*		*23.0-120*				
(S) Nitrobenzene-d5					*75.4*	*72.7*		*14.0-149*				
(S) 2-Fluorobiphenyl					*54.7*	*51.9*		*34.0-125*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

CHAIN-OF-CUSTODY RECORD

J061

Page ___ of ___

WSP USA Office Address: WSP USA - Duluth MN, 5257 McKee Rd, Ste 7, Madison WI 53716

Requested Analyses & Preservatives

No. 12041

WSP

Project Name: Line 5 MP 115a - Enbridge

WSP USA Contact Name: Brad Dalsanto

Laboratory Name & Location: MT Juliet, TN

Project Location: Ashland WI

WSP USA Contact E-mail: Bradley.Dalsanto@wsp.com

Laboratory Project Manager: Mark W. Beasley

Project Number & Task: WSPMW1-Line5MP115a

WSP USA Contact Phone: 608-444-4234

Requested Turn-Around-Time: ☐ Standard ☒ 24 HR ☐ 48 HR ☐ 72 HR ☐ ___ HR Same day Rush

Sampler(s) Name(s): Al Moreland

Sampler(s) Signature(s):

LIS20008

Sample Identification	Matrix	Collection Start* Date	Collection Start* Time	Collection Stop* Date	Collection Stop* Time	Number of Containers	SVOCs 8270 PAHs SIM Ho2	TS Hg2Cl2 - No Pres	VOCs 8260 BTEX Hcl + TMBs	VOCs 8260 BTEX Hg2Cl2 - No Pres
L5MP115SB004(17)	SS	8/24/22	14:40			2	X	X	X	X

Sample Comments: Same day Rush -01

Sample Receipt Checklist

COC Seal Present/Intact:	Y X N	If Applicable	
COC Signed/Accurate:	Y X N	VOA Zero Headspace:	Y N
Bottles arrive intact:	Y X N	Pres.Correct/Check:	Y N
Correct bottles used:	Y X N		
Sufficient volume sent:	Y X N		
RAD Screen <0.5 mR/hr:	Y X N		

Relinquished By (Signature)	Date	Time	Received By (Signature)	Date	Time	Shipment Method	Tracking Number(s)
	08/24/22	17:30	FedEx Duluth	08/26/22	17:30	Fed Ex	0221 5913 0271 8863
Relinquished By (Signature)	**Date**	**Time**	**Received By (Signature)**	**Date**	**Time**	**Number of Packages**	**Custody Seal Number(s)**
				08/27/22	0930	2	

*Use stop time/date for composite and/or air samples; use only start time/date for all other samples.

Matrix: AQ = Aqueous, S = Soil, SE = Sediment, A = Air, W = Wipe, B = Bulk, O = Other (detail in comments)

2.4 kn 32° TR-0

ATTACHMENT II – WASTE DISPOSAL DOCUMENTATION

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **345466**
Operator: DeAnna
In : 08/24/2022 8:23 am
Out: 08/24/2022 8:38 am
Vehicle: 0904PRA

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	49,220.00	LB	Scale In	
TARE	34,540.00	LB	Scale Out	
NET	14,680.00	LB	7.34	TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
7.34	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Vonco V Duluth, LLC

PHONE: 218-626-3830

Manifest No.:
Date:
Time Loaded:

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No. 218-341-3863 (Ross Peterson)

2. **Consultant/Contractor** _____
   Address _____
   City, St., Zip _____
   Owner's Phone No. _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** **Vonco V Duluth, LLC**
   Mailing Address City, State, Zip: **1100 West Gary Street, Duluth, MN 55808**

4. **Responsible Agency:** **MN Pollution Control Agency**
   Address: **520 Lafayette Road**
   City, State, Zip: **St. Paul, MN 55155-3898**

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1	

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) Dan Hinrichs Signature Dan Hinrichs Date 8/24/2022

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title Anthony Jankowski Signature _____ Date 8-24-22
    Address _____ City, St., Zip _____ Phone No. _____

11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** C12

Ticket # 345460 Tons 7.34 Yards _____
E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.

Name/Title (Printed or Typed) _____
Signature _____ Date 8/24/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **345472**
Operator: DeAnna
In : 08/24/2022 9:33 am
Out: 08/24/2022 9:33 am
Vehicle: 0904PRA

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	48,520.00	LB	Scale In
TARE	34,540.00	LB	Tare Out
NET	13,980.00	LB	6.99 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
6.99	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Vonco V Duluth, LLC

PHONE: 218-626-3830

Manifest No.:
Date: 8/24/22
Time Loaded: 915

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No. 218-341-3863 (Ross Peterson)

2. **Consultant/Contractor** _____
   Address _____
   City, St., Zip _____
   Owner's Phone No. _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** **Vonco V Duluth, LLC**
   Mailing Address City, State, Zip: **1100 West Gary Street, Duluth, MN 55808**

4. **Responsible Agency:** **MN Pollution Control Agency**
   Address: **520 Lafayette Road**
   City, State, Zip: **St. Paul, MN 55155-3898**

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil		

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) Dan Hinrichs Signature Dan Hinrichs Date 8/24/2022

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title Anthony Jankowski Signature _____ Date 8-24-22
    Address _____ City, St., Zip _____ Phone No. _____

11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** 012

Ticket # 34547 Tons 6.99 Yards _____
E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.

Name/Title (Printed or Typed) _____
Signature _____ Date 8/24/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **345477**
Operator: DeAnna
In : 08/24/2022 10:45 am
Out: 08/24/2022 10:45 am
Vehicle: 0904PRA

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	54,620.00	LB	Scale In
TARE	34,540.00	LB	Tare Out
NET	20,080.00	LB	10.04 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
10.04	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Vonco V Duluth, LLC

PHONE: 218-626-3830

Manifest No.: Load 3
Date: 8/24/22
Time Loaded: 10:17 AM

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No. 218-341-3863 (Ross Peterson)

2. **Consultant/Contractor** _____
   Address _____
   City, St., Zip _____
   Owner's Phone No. _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** **Vonco V Duluth, LLC**
   Mailing Address City, **1100 West Gary Street**
   State, Zip **Duluth, MN 55808**

4. **Responsible Agency:** **MN Pollution Control Agency**
   Address **520 Lafayette Road**
   City, State, Zip **St. Paul, MN 55155-3898**

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil		

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) Dan Hinrichs Signature Dan Hinrichs Date 8/24/2022

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title Anthony Jankowski Signature _____ Date 8-24-22
    Address _____ City, St., Zip _____ Phone No. _____

11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** CIP
    Ticket # 345477 Tons 10.04 Yards _____
    E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.
    Name/Title (Printed or Typed) _____
    Signature _____ Date 8/24/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **345489**
Operator: DeAnna
In : 08/24/2022 11:55 am
Out: 08/24/2022 11:55 am
Vehicle: 0904PRA

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	46,940.00	LB	Scale In	
TARE	34,540.00	LB	Tare Out	
NET	12,400.00	LB	6.20	TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
6.20	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Vonco V Duluth, LLC

PHONE: 218-626-3830

Manifest No.:
Date:
Time Loaded:

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No. 218-341-3863 (Ross Peterson)

2. **Consultant/Contractor** _____
   Address _____
   City, St., Zip _____
   Owner's Phone No. _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** **Vonco V Duluth, LLC**
   Mailing Address City, **1100 West Gary Street**
   State, Zip **Duluth, MN 55808**

4. **Responsible Agency:** **MN Pollution Control Agency**
   Address **520 Lafayette Road**
   City, State, Zip **St. Paul, MN 55155-3898**

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil		

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) Dan Hinrichs Signature Dan Hinrichs Date 8/24/2022

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title Anthony Jankowski Signature _____ Date 8-24-22
    Address _____ City, St., Zip _____ Phone No. _____

11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** QA

Ticket # 345489 Tons 6.20 Yards _____

E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.

Name/Title (Printed or Typed) _____

Signature _____ Date 8/24/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

' Duluth, LLC
. .00 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **345538**
Operator: DeAnna
In : 08/25/2022 9:00 am
Out: 08/25/2022 9:00 am
Vehicle: 0904PRA

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	61,540.00	LB	Manual In	
TARE	34,540.00	LB	Tare Out	
NET	27,000.00	LB	13.50	TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
13.50	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Vonco

Vonco V Duluth, LLC

PHONE: 218-626-3830

Manifest No.:
Date: 8-25-22
Time Loaded: 0645

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No. 218-341-3863 (Ross Peterson)

2. **Consultant/Contractor** _____
   Address _____
   City, St., Zip _____
   Owner's Phone No. _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** **Vonco V Duluth, LLC**
   Mailing Address City, State, Zip: **1100 West Gary Street, Duluth, MN 55808**

4. **Responsible Agency:** **MN Pollution Control Agency**
   Address: **520 Lafayette Road**
   City, State, Zip: **St. Paul, MN 55155-3898**

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1 ROLL OFF	10 YDS
	SHAMROCK GRAY	

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) WAYNE OLSON SITE INSPECTOR Signature [signature] Date 8-25-22

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title Anthony Jankowski Signature [signature] Date 8-25-22
    Address _____ City, St., Zip _____ Phone No. 218-343-5047

11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** C12

Ticket # 345538 Tons 13.50 Yards _____
E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.

Name/Title (Printed or Typed) _____
Signature [signature] Date 8/25/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **345542**
Operator: DeAnna
In : 08/25/2022 9:27 am
Out: 08/25/2022 9:27 am
Vehicle: 0904PRA

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	55,380.00	LB	Manual In
TARE	34,540.00	LB	Tare Out
NET	20,840.00	LB	10.42 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
10.42	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Vonco V Duluth, LLC

PHONE: 218-626-3830

Manifest No.:
Date: 8-25-22
Time Loaded: 6:45 AM

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No. 218-341-3863 (Ross Peterson)
2. **Consultant/Contractor** _____
   Address _____
   City, St., Zip _____
   Owner's Phone No. _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** **Vonco V Duluth, LLC**
   Mailing Address City, State, Zip: **1100 West Gary Street, Duluth, MN 55808**
4. **Responsible Agency:** **MN Pollution Control Agency**
   Address: **520 Lafayette Road**
   City, State, Zip: **St. Paul, MN 55155-3898**

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1 ROLL OFF	10 YDS
	20-028	

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.
   Name & Title (Printed or Typed) WAYNE OLSON SITE INSPECTOR Signature [signature] Date 8-25-22

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title Anthony Jankowski Signature [signature] Date 8-25-22
    Address _____ City, St., Zip _____ Phone No. 218-343-5047
11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** CLR
    Ticket# 345542 Tons 10.42 Yards _____
    E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.
    Name/Title (Printed or Typed) _____
    Signature [signature] Date 8/25/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **345641**
Operator: DeAnna
In : 08/26/2022 3:13 pm
Out: 08/26/2022 3:46 pm
Vehicle: PB9859

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	48,300.00	LB	Manual In
TARE	35,120.00	LB	Scale Out
NET	13,180.00	LB	6.59 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
6.59	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Vonco V Duluth, LLC
PHONE: 218-626-3830

Manifest No.:
Date:
Time Loaded:

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No. 218-341-3863 (Ross Peterson)

2. **Consultant/Contractor** _____
   Address _____
   City, St., Zip _____
   Owner's Phone No. _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** Vonco V Duluth, LLC
   Mailing Address City, State, Zip: 1100 West Gary Street, Duluth, MN 55808

4. **Responsible Agency:** MN Pollution Control Agency
   Address: 520 Lafayette Road
   City, State, Zip: St. Paul, MN 55155-3898

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil		

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) _____ Signature _____ Date _____

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title David Hennemann Driver Signature X Date 08-26-22
    Address PO Box 247 Bloomer WI City, St., Zip 54724 Phone No. 715-568-5181

11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** N/A
    Ticket # 345641 Tons 6.59 Yards _____
    E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.
    Name/Title (Printed or Typed) Randy Helland
    Signature _____ Date 8-26-22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **345750**
Operator: DeAnna
In : 08/30/2022 2:18 pm
Out: 08/30/2022 2:33 pm
Vehicle: M94524X

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	59,960.00	LB	Manual In
TARE	35,320.00	LB	Manual Out
NET	24,640.00	LB	12.32 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
12.32	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Vonco V Duluth, LLC

PHONE: 218-626-3830

Manifest No.:
Date: 8-30-22
Time Loaded: 1200 pm

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No. 218-341-3863 (Ross Peterson)
2. **Consultant/Contractor** _____
   Address _____
   City, St., Zip _____
   Owner's Phone No. _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** **Vonco V Duluth, LLC**
   Mailing Address City, State, Zip: **1100 West Gary Street, Duluth, MN 55808**
4. **Responsible Agency:** **MN Pollution Control Agency**
   Address: **520 Lafayette Road**
   City, State, Zip: **St. Paul, MN 55155-3898**

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1 roll off - RT3866	10 yards

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) Wayne Olson Jr Site Inspector Signature [signature] Date 8-30-22

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title CHAD ARENDT owner Signature [signature] Date 08/30/2022
    Address PO Box 247 Bovey MN City, St., Zip 55724 Phone No. 75-888-5181
11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** CD
    Ticket # 345750 Tons 12.32 Yards _____
    E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.
    Name/Title (Printed or Typed) _____
    Signature [signature] Date 8/30/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **345752**
Operator: DeAnna
In : 08/30/2022 2:37 pm
Out: 08/30/2022 2:37 pm
Vehicle: M94524X

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	52,220.00	LB	Manual In
TARE	35,320.00	LB	Tare Out
NET	16,900.00	LB	8.45 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
8.45	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Vonco V Duluth, LLC

PHONE: 218-626-3830

Manifest No.:
Date: 8/30/22
Time Loaded: 1200 pm

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No. 218-341-3863 (Ross Peterson)
2. **Consultant/Contractor** _____
   Address _____
   City, St., Zip _____
   Owner's Phone No. _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** **Vonco V Duluth, LLC**
   Mailing Address City, State, Zip: **1100 West Gary Street, Duluth, MN 55808**
4. **Responsible Agency:** **MN Pollution Control Agency**
   Address: **520 Lafayette Road**
   City, State, Zip: **St. Paul, MN 55155-3898**

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1 roll off - RT2889	10 yards

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) Wayne Olson Jr Site Inspector Signature [signature] Date 8-30-22

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title CHAD ARENDT Signature [signature] Date 8/30/2022
    Address PO Box 247 Bloomer WI City, St., Zip 54724 Phone No 715-568-5181
11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** C12

Ticket # 345752 Tons 8.45 Yards _____
E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.
    Name/Title (Printed or Typed) _____
    Signature [signature] Date 8/30/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **346045**
Operator: DeAnna
In : 09/08/2022 10:23 am
Out: 09/08/2022 10:23 am
Vehicle: T68615W

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	65,480.00	LB	Scale In	
TARE	31,520.00	LB	Tare Out	
NET	33,960.00	LB	16.98	TN

Signature: _____

Quantity		Description	Rate	Extension	Tax	Total
16.98	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

onco V Duluth, LLC

PHONE: 218-626-3830

Manifest No.: 001
Date: 9-8-2022
Time Loaded: 0800

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St, Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No. 218-341-3863 (Ross Peterson)

2. **Consultant/Contractor** _____
   Address _____
   City, St, Zip _____
   Owner's Phone No _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** Vonco V Duluth, LLC
   Mailing Address City, State, Zip: 1100 West Gary Street, Duluth, MN 55808

4. **Responsible Agency:** MN Pollution Control Agency
   Address: 520 Lafayette Road
   City, State, Zip: St. Paul, MN 55155-3898

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1 - Dump Truck	10 yards
	#007	

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) Wayne Olson Jr - Site Inspector Signature Wayne Olson Jr Date 9/8/22

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title Steven Quade Signature _____ Date 9/8/22
    Address _____ City, St, Zip _____ Phone No (715) 292-5306

11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St, Zip _____ Phone No _____

DISPOSAL SITE

12. **Discrepancy Indication Space** C/D

Ticket # 3460045 Tons 16.98 Yards _____

E _____ N _____ Elev _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.

Name/Title (Printed or Typed) _____

Signature _____ Date 9/8/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **346080**
Operator: DeAnna
In : 09/08/2022 2:59 pm
Out: 09/08/2022 2:59 pm
Vehicle: T68615W

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	67,120.00	LB	Scale In
TARE	31,520.00	LB	Tare Out
NET	35,600.00	LB	17.80 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
17.80	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Manifest No.: 002
Date: 9-8-2022
Time Loaded: 1240

Vonco V Duluth, LLC

PHONE: 218-626-3830

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No. 218-341-3863 (Ross Peterson)
2. **Consultant/Contractor** _____
   Address _____
   City, St., Zip _____
   Owner's Phone No. _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** **Vonco V Duluth, LLC**
   Mailing Address City, State, Zip: **1100 West Gary Street, Duluth, MN 55808**
4. **Responsible Agency:** **MN Pollution Control Agency**
   Address: **520 Lafayette Road**
   City, State, Zip: **St. Paul, MN 55155-3898**

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1 - Dump Truck	10 yds
	#007	

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) Wayne Olson OR Site Inspector Signature [signature] Date 9/8/22

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title Steve Quade Signature [signature] Date 9/8/22
    Address _____ City, St., Zip _____ Phone No (715) 292-5396
11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** C12
    Ticket # 346080 Tons 17.80 Yards _____
    E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.
    Name/Title (Printed or Typed) _____
    Signature [signature] Date 9/8/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **346089**
Operator: DeAnna
In : 09/09/2022 8:00 am
Out: 09/09/2022 8:00 am
Vehicle: RB24385

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	49,080.00	LB	Scale In
TARE	30,360.00	LB	Tare Out
NET	18,720.00	LB	9.36 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
9.36	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Vonco V Duluth, LLC

PHONE: 218-626-3830

Manifest No.: 003
Date: 9-8-2022
Time Loaded: 1350

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No. 218-341-3863 (Ross Peterson)
2. **Consultant/Contractor** _____
   Address _____
   City, St., Zip _____
   Owner's Phone No. _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** **Vonco V Duluth, LLC**
   Mailing Address City, State, Zip: **1100 West Gary Street, Duluth, MN 55808**
4. **Responsible Agency:** **MN Pollution Control Agency**
   Address: **520 Lafayette Road**
   City, State, Zip: **St. Paul, MN 55155-3898**

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1- Dump Truck	10 yds
	# 036	

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) Wayne Olson TO SITE INSPECTOR Signature [signature] Date 9-8-22

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title Jeremy Gordon Signature [signature] Date 9-8-22
    Address Sipsas Ironwood, MI St., Zip _____ Phone No. 7155170807
11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** CIP

Ticket # 3446089 Tons 9.36 Yards _____

E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.

Name/Title (Printed or Typed) [signature]

Signature _____ Date 9/9/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **346091**
Operator: DeAnna
In : 09/09/2022 8:04 am
Out: 09/09/2022 8:04 am
Vehicle: RB32913

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	58,740.00	LB	Scale In
TARE	27,460.00	LB	Tare Out
NET	31,280.00	LB	15.64 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
15.64	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Vonco V Duluth, LLC

PHONE: 218-626-3830

Manifest No.: 994
Date: 9-8-2022
Time Loaded: 1415

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No. 218-341-3863 (Ross Peterson)
2. **Consultant/Contractor** _____
   Address _____
   City, St., Zip _____
   Owner's Phone No. _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** **Vonco V Duluth, LLC**
   Mailing Address City, State, Zip: **1100 West Gary Street, Duluth, MN 55808**
4. **Responsible Agency:** **MN Pollution Control Agency**
   Address: **520 Lafayette Road**
   City, State, Zip: **St. Paul, MN 55155-3898**

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1- Dump Truck #992	10 yds

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) Wayne Olson Jr Site Inspector Signature Wayne Olson Jr Date 9-8-22

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title Dennis Hipshen Signature _____ Date 9-8-22
    Address _____ City, St., Zip _____ Phone No. 715-813-9108
11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** CIa
    Ticket# 3460091 Tons 15.04 Yards _____
    E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.
    Name/Title (Printed or Typed) _____
    Signature _____ Date 9/9/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **346090**
Operator: DeAnna
In : 09/09/2022 8:01 am
Out: 09/09/2022 8:01 am
Vehicle: RB27906

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	47,340.00	LB	Scale In
TARE	27,700.00	LB	Tare Out
NET	19,640.00	LB	9.82 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
9.82	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Manifest No.: 005
Date: 9-8-2022
Time Loaded: 1450

Vonco V Duluth, LLC

PHONE: 218-626-3830

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No. 218-341-3863 (Ross Peterson)
2. **Consultant/Contractor** _____
   Address _____
   City, St., Zip _____
   Owner's Phone No. _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** **Vonco V Duluth, LLC**
   Mailing Address City, State, Zip: **1100 West Gary Street, Duluth, MN 55808**
4. **Responsible Agency:** **MN Pollution Control Agency**
   Address: **520 Lafayette Road**
   City, State, Zip: **St. Paul, MN 55155-3898**

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1- Dump Truck # 037	10 yds

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) DAYNE OLSON ENV. SITE INSPECTOR Signature Dayne Olson Date 9-8-22

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title ALAN PERO TRUCK DRIVE Signature _____ Date 9-8-22
    Address SIPSAS EXC. City, St., Zip _____ Phone No. 715-292-5747
11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** CB

Ticket # 3460010 Tons 9.82 Yards _____
E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.
    Name/Title (Printed or Typed) _____
    Signature _____ Date 9/9/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **346092**
Operator: DeAnna
In : 09/09/2022 8:09 am
Out: 09/09/2022 8:12 am
Vehicle: QB13769

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	42,420.00	LB	Manual In
TARE	26,420.00	LB	Scale Out
NET	16,000.00	LB	8.00 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
8.00	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Manifest No.: #16
Date: 9-8-2022
Time Loaded: 1500

Vonco V Duluth, LLC

PHONE: 218-626-3830

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No. 218-341-3863 (Ross Peterson)
2. **Consultant/Contractor** _____
   Address _____
   City, St., Zip _____
   Owner's Phone No. _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** **Vonco V Duluth, LLC**
   Mailing Address City, State, Zip: **1100 West Gary Street, Duluth, MN 55808**
4. **Responsible Agency:** **MN Pollution Control Agency**
   Address: **520 Lafayette Road**
   City, State, Zip: **St. Paul, MN 55155-3898**

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1- Dump Truck # 619	5 yds.

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) Wayne Olson Jr Site Inspector Signature Wayne Olson Date 9-8-22

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title Kenny Nelson Signature _____ Date 9-8-22
    Address Siposs City, St., Zip _____ Phone No (715) 580-1081
11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** CD
    Ticket # 346092 Tons 8.00 Yards _____
    E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.
    Name/Title (Printed or Typed) _____
    Signature _____ Date 9/9/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **346201**
Operator: DeAnna
In : 09/12/2022 10:56 am
Out: 09/12/2022 10:56 am
Vehicle: T68615W

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	56,600.00	LB	Manual In
TARE	31,520.00	LB	Tare Out
NET	25,080.00	LB	12.54 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
12.54	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

V Duluth, LLC

218-626-3830

Manifest No: 001
Date: 9 12 - 2022
Time Loaded 0700

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. Work Site Name: Line 5 MP 1159 47 Valve Site
   Address: 46.554270, -90.823566 1.800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City St Zip: Gingles WI 54806
   Owner's Name: Enbridge Energy
   Owner's Phone No: 218-341-3863 (Ross Peterson)
2. Consultant/Contractor:
   Address:
   City St Zip:
   Owner's Phone No:

PROFILE #: 22-055-I

3. Waste Disposal Site: Vonco V Duluth, LLC
   Mailing Address City: 1100 West Gary Street
   State, Zip: Duluth, MN 55808
4. Responsible Agency: MN Pollution Control Agency
   Address: 520 Lafayette Road
   City, State, Zip: St. Paul, MN 55155-3898

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1- Dump Truck # 007	10 - Yds

8. Special Handling Instructions and Additional Information

9. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed): Wayne Olson TR SITE INSPECTOR Signature: [signature] Date: 9/12/22

TRANSPORTER

10. Transporter 1 (Acknowledgement of receipt of materials)
    Name/Title: Steve Gluck Signature: [signature] Date: 9/12/22
    Address: Sipsas City St Zip: Phone No: (715) 292-5506
11. Transporter 2 (Acknowledgement of receipt of materials)
    Name/Title: Signature: Date:
    Address: City St Zip: Phone No:

DISPOSAL SITE

12. Discrepancy Indication Space

Ticket # 34600 Tons 12.54 Yards
E N Elev

13. Waste Disposal Site Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.

Name/Title (Printed or Typed): Signature: Date: 9/12/22

CONTRACTOR: WHITE TRANSPORTER: CANARY WASTE DISPOSAL SITE: PINK GENERATOR/OPERATOR: GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **346226**
Operator: DeAnna
In : 09/12/2022 4:08 pm
Out: 09/12/2022 4:08 pm
Vehicle: T68615W

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	81,760.00	LB	Manual In
TARE	31,520.00	LB	Tare Out
NET	50,240.00	LB	25.12 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
25.12	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Manifest No.: 608
Date: 9-12-2022
Time Loaded: 1310

Vonco V Duluth, LLC

PHONE: 218-626-3830

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St , Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No 218-341-3863 (Ross Peterson)
2. **Consultant/Contractor** _____
   Address _____
   City, St , Zip _____
   Owner's Phone No _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** Vonco V Duluth, LLC
   Mailing Address City, State, Zip: 1100 West Gary Street, Duluth, MN 55808
4. **Responsible Agency:** MN Pollution Control Agency
   Address: 520 Lafayette Road
   City, State, Zip: St. Paul, MN 55155-3898

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1- Dump Truck #007	10 yds.

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) WAYNE OLSON JR SITE INSPECTOR Signature Wayne Olson Jr Date 9/12/22

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title Steve Quade Signature [signature] Date 9/12/22
    Address Sipsas City, St , Zip — Phone No 715 292-5305
11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St , Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space**

Ticket # 346776 Tons 25.12 Yards _____
E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.
    Name/Title (Printed or Typed) [signature]
    Signature _____ Date 9/10/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **346228**
Operator: DeAnna
In : 09/12/2022 4:20 pm
Out: 09/12/2022 4:20 pm
Vehicle: RB34261

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	60,160.00	LB	Manual In Manual Out
TARE	28,220.00	LB	
NET	31,940.00	LB	15.97 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
15.97	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Manifest No.: ~~008~~ 009
Date: 9-12-2022
Time Loaded: 1335

Vonco V Duluth, LLC
PHONE: 218-626-3830

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St, Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No 218-341-3863 (Ross Peterson)

2. **Consultant/Contractor** _____
   Address _____
   City, St, Zip _____
   Owner's Phone No _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** Vonco V Duluth, LLC
   Mailing Address City, **1100 West Gary Street**
   State, Zip **Duluth, MN 55808**

4. **Responsible Agency:** MN Pollution Control Agency
   Address **520 Lafayette Road**
   City, State, Zip **St. Paul, MN 55155-3898**

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1- Dump Truck # 010	10 yds

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.
   Name & Title (Printed or Typed) Wayne Olson Site Inspection Signature [signature] Date 9/12/22

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title Shane Sipsas Signature [signature] Date 9/12/22
    Address Sipsas City, St, Zip _____ Phone No 715-292-8333

11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space**

Ticket # 346888 Tons 15.97 Yards _____
E _____ N _____ Elev _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.
    Name/Title (Printed or Typed) _____
    Signature _____ Date 9/12/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **346227**
Operator: DeAnna
In : 09/12/2022 4:18 pm
Out: 09/12/2022 4:18 pm
Vehicle: TS46521

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	75,520.00	LB	Manual In
TARE	31,620.00	LB	Manual Out
NET	43,900.00	LB	21.95 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
21.95	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Manifest No.: 910
Date: 9-12-2022
Time Loaded: 1355

Vonco V Duluth, LLC

PHONE: 218-626-3830

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No 218-341-3863 (Ross Peterson)
2. **Consultant/Contractor** _____
   Address _____
   City, St Zip _____
   Owner's Phone No _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** Vonco V Duluth, LLC
   Mailing Address City, State, Zip: 1100 West Gary Street, Duluth, MN 55808
4. **Responsible Agency:** MN Pollution Control Agency
   Address: 520 Lafayette Road
   City, State, Zip: St. Paul, MN 55155-3898

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1 - Dump Truck	10 yds.
	# 902	

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) Wayne Olson Jr Site Inspector Signature [signature] Date 9/12/22

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title Desi Sipsas Signature [signature] Date 9-12-2022
    Address Sipsas City, St., Zip _____ Phone No 7152972822

11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space**

Ticket # 316727 Tons 21.95 Yards _____
E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.
    Name/Title (Printed or Typed) _____
    Signature [signature] Date 9/12/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **346239**
Operator: DeAnna
In : 09/13/2022 9:47 am
Out: 09/13/2022 9:47 am
Vehicle: TS46521

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	74,300.00	LB	Manual In
TARE	31,620.00	LB	Tare Out
NET	42,680.00	LB	21.34 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
21.34	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Vonco V Duluth, LLC

PHONE: 218-626-3830

Manifest No.: 011
Date: 9-13-2022
Time Loaded: 0715

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No 218-341-3863 (Ross Peterson)

2. **Consultant/Contractor** _____
   Address _____
   City, St Zip _____
   Owner's Phone No _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** Vonco V Duluth, LLC
   Mailing Address City, State, Zip: 1100 West Gary Street, Duluth, MN 55808

4. **Responsible Agency:** MN Pollution Control Agency
   Address: 520 Lafayette Road
   City, State, Zip: St. Paul, MN 55155-3898

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1- Dump Truck	10 yds
	#002	

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) Greg Nettles Inspector Signature [signature] Date 9/13/22

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title Steve Quade Signature [signature] Date 9/13/22
    Address Sipas Exc City, St., Zip - - Phone No 715 292 5306

11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** C12
    Ticket # 346239 Tons 21.34 Yards _____
    E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.
    Name/Title (Printed or Typed) _____
    Signature [signature] Date 9/13/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **346242**
Operator: DeAnna
In : 09/13/2022 10:07 am
Out: 09/13/2022 10:17 am
Vehicle: QB18483

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	54,000.00	LB	Manual In
TARE	28,620.00	LB	Manual Out
NET	25,380.00	LB	12.69 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
12.69	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Vonco V Duluth, LLC

PHONE: 218-626-3830

Manifest No.: 12
Date: 9-13-2022
Time Loaded: 0745

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159 47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St , Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No 218-341-3863 (Ross Peterson)

2. **Consultant/Contractor** _____
   Address _____
   City, St , Zip _____
   Owner's Phone No _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** Vonco V Duluth, LLC
   Mailing Address City, 1100 West Gary Street
   State, Zip Duluth, MN 55808

4. **Responsible Agency:** MN Pollution Control Agency
   Address 520 Lafayette Road
   City, State, Zip St. Paul, MN 55155-3898

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1 - Dump Truck # 004	10 yds

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) Greg Nettles Inspector Signature [signature] Date 9/13/22

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title Chris Lane Signature [signature] Date 9/13/22
    Address Sipsas Exc. - Lake Effect w/ Shr City, St , Zip _____ Phone No 218-390-4268

11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** CNR

Ticket # 346242 Tons 12.69 Yards _____

E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.

Name/Title (Printed or Typed) _____

Signature [signature] Date 9/13/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **346241**
Operator: DeAnna
In : 09/13/2022 10:07 am
Out: 09/13/2022 10:15 am
Vehicle: TS6754

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	56,000.00	LB	Manual In
TARE	26,740.00	LB	Manual Out
NET	29,260.00	LB	14.63 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
14.63	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Manifest No.: 013
Date: 9-13-2022
Time Loaded: 0800

Vonco V Duluth, LLC

PHONE: 218-626-3830

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No 218-341-3863 (Ross Peterson)

2. **Consultant/Contractor** _____
   Address _____
   City, St., Zip _____
   Owner's Phone No _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** Vonco V Duluth, LLC
   Mailing Address City, **1100 West Gary Street**
   State, Zip **Duluth, MN 55808**

4. **Responsible Agency:** MN Pollution Control Agency
   Address **520 Lafayette Road**
   City, State, Zip **St. Paul, MN 55155-3898**

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1-Dump Truck	10 yds
	# 005	

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) Greg Nettles Inspector Signature [signature] Date 9/13/22

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)

Name/Title Russel Olson Signature [signature] Date 9/13/22

Address Sipsas Exc. ~ Lake Effect w/Star City, St., Zip — — Phone No 218-600-9172

11. **Transporter 2** (Acknowledgement of receipt of materials)

Name/Title _____ Signature _____ Date _____

Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** C12

Ticket # 346241 Tons 14.03 Yards _____

E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.

Name/Title (Printed or Typed) _____

Signature [signature] Date 9/13/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **346262**
Operator: DeAnna
In : 09/13/2022 1:19 pm
Out: 09/13/2022 1:19 pm
Vehicle: RB34261

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	60,900.00	LB	Manual In
TARE	28,220.00	LB	Tare Out
NET	32,680.00	LB	16.34 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
16.34	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Manifest No.: 014
Date: 9-13-2022
Time Loaded: 0815

Vonco V Duluth, LLC
PHONE: 218-626-3830

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No 218-341-3863 (Ross Peterson)
2. **Consultant/Contractor** _____
   Address _____
   City, St., Zip _____
   Owner's Phone No _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** Vonco V Duluth, LLC
   Mailing Address City, State, Zip: 1100 West Gary Street, Duluth, MN 55808
4. **Responsible Agency:** MN Pollution Control Agency
   Address: 520 Lafayette Road
   City, State, Zip: St. Paul, MN 55155-3898

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1- Dump Truck	10 yds
	#010	

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) Greg Nettles Inspector Signature [signature] Date 9/13/22

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title Shane Sipsas Signature [signature] Date 9/13/22
    Address Sipsas Exc. City, St., Zip _____ Phone No 715-292-8373
11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** CD

Ticket No 346262 Tons 16.34 Yards _____
E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.
    Name/Title (Printed or Typed) _____
    Signature [signature] Date 9/13/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **346248**
Operator: DeAnna
In : 09/13/2022 11:00 am
Out: 09/13/2022 11:00 am
Vehicle: RB27906

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	50,840.00	LB	Manual In
TARE	27,700.00	LB	Tare Out
NET	23,140.00	LB	11.57 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
11.57	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Manifest No.: 615
Date: 9-13-2022
Time Loaded: 0905

Vonco V Duluth, LLC

PHONE: 218-626-3830

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No. 218-341-3863 (Ross Peterson)

2. **Consultant/Contractor** _____
   Address _____
   City, St., Zip _____
   Owner's Phone No _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** Vonco V Duluth, LLC
   Mailing Address City, **1100 West Gary Street**
   State, Zip **Duluth, MN 55808**

4. **Responsible Agency:** MN Pollution Control Agency
   Address **520 Lafayette Road**
   City, State, Zip **St. Paul, MN 55155-3898**

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1- Dump Truck	10 yds.
	#037	

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) Greg Nettles Inspector Signature GNettles Date 9/13/2022

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)

Name/Title TRUCK Driver Signature Date 9/13/2022

Address Sipsers Exc. City, St., Zip — — Phone No 715-292-5747

11. **Transporter 2** (Acknowledgement of receipt of materials)

Name/Title _____ Signature _____ Date _____

Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** C12

Ticket# 3440548 Tons 11.57 Yards _____

E _____ N _____ Elev _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.

Name/Title (Printed or Typed) _____

Signature _____ Date 9/13/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **346253**
Operator: DeAnna
In : 09/13/2022 11:42 am
Out: 09/13/2022 11:58 am
Vehicle: Q27994Z

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	52,140.00	LB	Manual In
TARE	35,300.00	LB	Manual Out
NET	16,840.00	LB	8.42 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
8.42	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Manifest No.: 016
Date: 9-13-2022
Time Loaded: NA

Vonco V Duluth, LLC
PHONE: 218-626-3830

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1.800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No 218-341-3863 (Ross Peterson)
2. **Consultant/Contractor** _____
   Address _____
   City, St., Zip _____
   Owner's Phone No _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** Vonco V Duluth, LLC
   Mailing Address City, 1100 West Gary Street
   State, Zip Duluth, MN 55808
4. **Responsible Agency:** MN Pollution Control Agency
   Address 520 Lafayette Road
   City, State, Zip St. Paul, MN 55155-3898

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1 - Roll off	10 yd
	RT-1348	

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) WAYNE OLSON JR SITE INSPECTOR Signature Wayne Olson Jr Date 9/13/22

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title BRIAN WILDENBERG Signature B W. Wildenberg Date 9/13/22
    Address RIGHTAWAY ROLLOFF City, St., Zip _____ Phone No 715 404 0088
11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** CD

Ticket # 346253 Tons 8.47 Yards _____
E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.
    Name/Title (Printed or Typed) _____
    Signature DW Date 9/13/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco V Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **346254**
Operator: DeAnna
In : 09/13/2022 12:07 pm
Out: 09/13/2022 12:07 pm
Vehicle: Q27994Z

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference:

Work Order#: 0
Cell: C12

GROSS	54,980.00	LB	Manual In
TARE	35,300.00	LB	Tare Out
NET	19,680.00	LB	9.84 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
9.84	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Manifest No.: 017
Date: 9/13/2022
Time Loaded: NA

Vonco V Duluth, LLC

PHONE: 218-626-3830

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

1. **Work Site Name** Line 5 MP 1159.47 Valve Site
   Address 46.554270, -90.823566; 1,800 ft south of the intersection of Holmes Rd & Old Airport Rd
   City, St., Zip Gingles, WI 54806
   Owner's Name Enbridge Energy
   Owner's Phone No. 218-341-3863 (Ross Peterson)

2. **Consultant/Contractor** _____
   Address _____
   City, St., Zip _____
   Owner's Phone No. _____

PROFILE #: 22-055-I

3. **Waste Disposal Site:** Vonco V Duluth, LLC
   Mailing Address City, State, Zip: 1100 West Gary Street, Duluth, MN 55808

4. **Responsible Agency:** MN Pollution Control Agency
   Address: 520 Lafayette Road
   City, State, Zip: St. Paul, MN 55155-3898

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Petroleum Impacted Soil	1 ~ Roll Off	10 yds
	RT-H251	

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) WAYNE OLSON JR SITE INSPECTOR Signature Wayne Olson Jr Date 9/13/2022

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title BRIAN WILDENBERG Signature B Wildenberg Date 9/13/2022
    Address RIGHTAWAY ROLLOFF City, St., Zip _____ Phone No. 715 404 0694

11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space** CL2

Ticket# 340254 Tons 9.84 Yards _____

E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.

Name/Title (Printed or Typed) _____

Signature _____ Date 9/13/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

Vonco y Duluth, LLC
1100 West Gary Street
Duluth, MN 55808
(218) 626-3830

001342
ENBRIDGE ENERGY
PO BOX 1411

TICKET #: **346506**
Operator: DeAnna
In : 09/20/2022 11:52 am
Out: 09/20/2022 11:52 am
Vehicle: 8888PRA

INBOUND
INVOICE

Contract: 22-055-I Gingles WI

Reference: 1894-6 Enbridge Energy

Work Order#: 0
Cell: C12

GROSS	56,700.00	LB	Manual In
TARE	35,420.00	LB	Tare Out
NET	21,280.00	LB	10.64 TN

Signature:_____

Quantity		Description	Rate	Extension	Tax	Total
10.64	TN	Contaminated Soil - Tons				
1.00		Environmental Fee - 10				

Vonco V Duluth, LLC

PHONE: 218-626-3830

INDUSTRIAL/NON-HAZARDOUS MATERIAL TRANSPORT AND DISPOSAL MANIFEST

GENERATOR

PROFILE #: ~~21-0653-1~~ 22-053-1

1. **Work Site Name** Enbridge Energy Superior Terminal
   Address 2800 East 21st Street
   City, St., Zip Superior, WI 54880
   Owner's Name Ross Peterson
   Owner's Phone No. 218-341-3863

2. **Consultant/Contractor** Terminal Coordinator (Craig Noble)
   Address 2800 East 21st Street
   City, St., Zip Superior, WI 54880
   Operator's Phone 715-398-8338

3. **Waste Disposal Site** VONCO V Duluth, LLC.
   Mailing Address 1100 West Gary Street
   City, St., Zip Duluth, MN 55808

4. **Responsible Agency** MN Pollution Control Agency
   Address 520 Lafayette Road
   City, St., Zip St. Paul, MN 55155-3898

5. Description of Materials	6. Containers (No.-Type)	7. Total Quantity (m^3 or yd^3)
Hydrocarbon contaminated soil & debris		
MP 1159		

8. **Special Handling Instructions and Additional Information**

9. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and governmental regulations. The above listed material(s) is (are) not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law.

Name & Title (Printed or Typed) CRAIG NOBLE Signature Craig Noble Date 9/20/22

TRANSPORTER

10. **Transporter 1** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

11. **Transporter 2** (Acknowledgement of receipt of materials)
    Name/Title _____ Signature _____ Date _____
    Address _____ City, St., Zip _____ Phone No. _____

DISPOSAL SITE

12. **Discrepancy Indication Space**

Ticket # 5509 Tons 10.61 Yards _____
E _____ N _____ Elev. _____

13. **Waste Disposal Site Owner or Operator:** Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 12.

Name/Title (Printed or Typed) _____
Signature _____ Date 9/20/22

CONTRACTOR - WHITE TRANSPORTER - CANARY WASTE DISPOSAL SITE - PINK GENERATOR/OPERATOR - GOLD

LUBE·TECH.
Accelerating Performance
WE WORK SAFELY.

EMERGENCY RESPONSE TELEPHONE NUMBER

CHEMTREC (800) 424-9300 (CCN #: 634778)

☐ BILL OF LADING ☒ NON-HAZARDOUS WASTE MANIFEST	1. Generator's EPA ID No.	2. Manifest Doc. No. RV725	3. Page 1 of 1	4. Truck Number R217

5. Name and Mailing Address
Enbridge Energy, Limited Partnership
1613 24th Ave E.
Superior, WI 544880
Phone Number 218-341-3863

6. Generator's Site Address (if different than mailing address)

7. Transporter 1 Company Name	8. US EPA ID Number	9. Phone Number
Lube-Tech Inc.	MNS000112870	763-545-0707
10. Transporter 2 Company Name	11. US EPA ID Number	12. Phone Number

13. Designated Facility Name and Site Address
Valicor Environmental Services, LLC
2420 County Road C, W #B
Roseville, MN 55113

14. US EPA ID Number
MNS000343816

612-366-6395

16. Shipping Name and Description	17. Containers No.	17. Containers Type	18. Total Quantity	19. Unit Wt/Vol
a. Non RCRA Non Hazardous Used Oily Water			700	gal
b.				
c.				
d.				

20. Additional Descriptions for Materials Listed Above
XXX

21. Special Handling Instructions and Additional Information

22. **Certification:** This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. I certify the materials described above on this manifest/bill of lading are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Print/Typed Name	Signature	Month	Day	Year
WAYNE OLSONITE	Wayne Olson	09	14	22

23. Transporter 1 Acknowledgement of Receipt of Materials

Print/Typed Name	Signature	Month	Day	Year
Paul Kraemer	Paul	09	14	22

24. Transporter 2 Acknowledgement of Receipt of Materials

Print/Typed Name	Signature	Month	Day	Year

25. Discrepancy Indication Space

26. Facility Owner or Operator: Certification of receipt or waste materials covered by this manifest/bill of lading except as noted in item 19.

Print/Typed Name	Signature	Month	Day	Year
Joe Dow		9	20	2022

ATTACHMENT III – NEARBY WELL CONSTRUCTION REPORTS

Well Construction Report
WISCONSIN UNIQUE WELL NUMBER VJ085

Drinking Water and Groundwater - DG/5
Department of Natural Resources, Box 7921
Madison WI 53707

Form 3300-077A

Property Owner: MONAHAN, BRIAN	Phone #: (715)682-5531
Mailing Address: 2800 FRONT ST	
City: ASHLAND	State: WI Zip Code: 54806
County: Ashland	Co. Permit #:
Notification #	Completed: 11-17-2010

1. Well Location

Town of GINGLES	Fire # (if avail.): NA
Street Address or Road Name and Number: BARROTT RD	
Subdivision Name	Lot # / Block #

Well Constructor (Business Name): NEHLS & WEBSTER WELL DRILLING	Lic. #: 6076	Facility ID # (Public Wells)	Latitude / Longitude in Decimal Degree (DD): °N °W — Method Code
		Well Plan Approval #	SW NW or Govt Lot # — Section: 13 — Township: 47 N — Range: 4 W
Address: 1901 APACHE LN RHINELANDER WI 54501		Approval Date (mm-dd-yyyy): 11-30-2010	**2. Well Type** New Well; of previous unique well # ; constructed in
Hicap Permanent Well #	Common Well #	Specific Capacity: 0.5	Reason for replaced or reconstructed well ?
3. Well serves 1 # of Private,potable; Heat Exchange____# of drillholes		Hicap Well ? No; Hicap Property ? No; Hicap Potable ?	Construction Type: Drilled

4. Potential Contamination Sources - ON REVERSE SIDE

5. Drillhole Dimensions and Construction Method

Dia. (in.)	From (ft.)	To (ft.)
6	Surface	181

Upper Enlarged Drillhole — Lower Open Bedrock

- Rotary - Mud Circulation .....
- Rotary - Air .....
- Rotary - Air & Foam .....
- Drill-Through Casing Hammer
- Reverse Rotary
- Cable-tool Bit ____in. dia...
- Dual Rotary .....
- Temp. Outer Casing ____in. dia
  - Removed? ____depth ft. (If NO explain on back side)

8. Geology

Geology Codes	8. Geology Type, Caving/Noncaving, Color, Hardness, etc...	From (ft.)	To (ft.)
R - C -	RED CLAY	Surface	175
- - S -	SAND	175	181

6. Casing, Liner, Screen

Dia. (in.)	Material, Weight, Specification Manufacturer & Method of Assembly	From (ft.)	To (ft.)
6	PE ISPCO 18.97 A53	Surface	178
Dia. (in.)	Screen type, material & slot size	From (ft.)	To (ft.)
3	SS NO 7	178	181

7. Grout or Other Sealing Material

Method

Kind of Sealing Material	From (ft.)	To (ft.)	# Sacks Cement
GRANULAR	Surface	40	3 S

9. Static Water Level

91 ft. below ground surface

10. Pump Test

Pumping level 110 ft. below surface

Pumping at 10 GP M for 1 Hrs.

Pumping Method ?

11. Well Is

16 in. above grade

Developed ? Yes

Disinfected ? Yes

Capped ? Yes

12. Notified Owner of need to fill & seal ?

Filled & Sealed Well(s) as needed?

13. Constructor / Supervisory Driller	Lic #	Date Signed
PW		12-31-2010
Drill Rig Operator	Lic or Reg #	Date Signed
DW		12-31-2010

4a. Potential Contamination Sources Is the well located in floodplain ? No

Type	Qualifier	Distance	Type	Qualifier	Distance
POWTS dispersal component (soil absorption unit or mound)		300	Septic or Holding, or POWTS Tank		100

Comment: IHS

Water Quality Text:

Water Quantity Text:

Difficulty Text:

Created On: 03-29-2011 Created by: WELL CONST LOAD Updated On: 04-05-2011 Updated by: LYONSD

MAY 21 1976

State of Wisconsin
Department of Natural Resources
Box 7921
Madison, Wisconsin 53707

ID 8AX158

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300–15 Rev. 12-76

1. COUNTY: ASHLAND
CHECK (✓) ONE: ☐ Town ☐ Village ☒ City Name: ASHLAND

2. LOCATION: ¼ Section: NW-NE; Section: 14; Township: 47N.; Range: 4W
OR – Grid or Street No.: Street Name:
AND – If available subdivision name, lot & block No.:

3. NAME ☒ OWNER ☐ AGENT AT TIME OF DRILLING CHECK (✓) ONE: DR. JAMES O. SHAW
ADDRESS: RR
POST OFFICE: ASHLAND, WIS. 54806

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain		Sanitary Bldg. Sewer		Floor Drain Connected To:		Storm Bldg. Drain		Storm Bldg. Sewer	
	C.I.	Other	C.I.	Other	C.I. Sewer	Other Sewer	C.I.	Other	C.I.	Other
15										

Street Sewer		Other Sewers		Foundation Drain Connected to:				Sewage Sump		Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit	
San.	Storm	C.I.	Other	Sewer		Sewage Sump		C.I.	Other		80		Seepage Pit	
				Clearwater Dr.		Clearwater Sump							Seepage Bed	
													Seepage Trench	100'

Privy	Pet Waste Pit	Pit: Nonconforming Existing		Subsurface Pumproom	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit
		Well		Nonconforming Existing							
		Pump									
		Tank									

Temporary Manure Stack	Watertight Liquid Manure Tank	Solid Manure Storage Structure	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Other (Give Description)

5. Well is intended to supply water for: RURAL RESIDENCE

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
8	Surface	210			
4	210'	220'			

7. CASING, LINER, CURBING AND SCREEN

Dia. (in.)	Material, Weight, Specification & Method of Assembly	From (ft.)	To (ft.)
4½	O.D. BLK - W.C.	Surface	
237	WALL - ASTM-A589		
11#	4" I.D. STEEL PIPE		220

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
PUDDLED CLAY	Surface	210

9. FORMATIONS

Kind	From (ft.)	To (ft.)
RED CLAY	Surface	10
DRY SAND	12	128
RED CLAY	128	210
SANDY CLAY	210	218
HEAVY GRAVEL	218	220

10. TYPE OF DRILLING MACHINE USED
☒ Cable Tool 210' ☐ Rotary-hammer w/drilling mud & air ☐ Jetting with
☐ Rotary-air w/drilling mud 220 ☐ Rotary-hammer & air ☐ Air ☐ Water
☒ Rotary-w/drilling mud 0-210' ☐ Reverse Rotary

Well construction completed on 6-2 19 76

11. MISCELLANEOUS DATA
Yield Test: 10 Hrs. at 8 GPM
Depth from surface to normal water level 124 Ft.
Depth of water level when pumping 160 Ft. Stabilized ☒ Yes ☐ No

Well is terminated 12 inches ☒ above ☐ below final grade
Well disinfected upon completion ☒ Yes ☐ No
Well sealed watertight upon completion ☒ Yes ☐ No

Water sample sent to MADISON laboratory on 8-2 19 77

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature: Richard W Squires Registered Well Driller

Complete Mail Address: RT MASON, WIS. 54856

927

AUG 7 1979

State of Wisconsin
Department of Natural Resources
Box 7921
Madison, Wisconsin 53707

ID 8AX159

NOTE:
White Copy – Division's Copy
Green Copy – Driller's Copy
Yellow Copy – Owner's Copy

WELL CONSTRUCTOR'S REPORT
Form 3300–15 Rev. 12-76

JUN 28 1979

AS-238-a

1. COUNTY: ASHLAND — CHECK (✓) ONE: ☑ Town ☐ Village ☐ City — Name: GINGLES

2. LOCATION: ¼ Section: NW-NE | Section: 14 | Township: 47N | Range: 4W
OR – Grid or Street No. | Street Name:
AND – If available subdivision name, lot & block No.

3. NAME ☐ OWNER ☐ AGENT AT TIME OF DRILLING CHECK (✓) ONE: FRANK SZUMAL, JR.
ADDRESS: R2
POST OFFICE: ASHLAND, WIS

4. Distance in feet from well to nearest: (Record answer in appropriate block)

Building	Sanitary Bldg. Drain		Sanitary Bldg. Sewer		Floor Drain Connected To:		Storm Bldg. Drain		Storm Bldg. Sewer	
15	C.I.	Other	C.I.	Other	C.I. Sewer	Other Sewer	C.I.	Other	C.I.	Other

Street Sewer		Other Sewers		Foundation Drain Connected to:		Sewage Sump		Clearwater Sump	Septic Tank	Holding Tank	Sewage Absorption Unit
San.	Storm	C.I.	Other	Sewer	Sewage Sump	C.I.	Other			60	Seepage Pit
				Clearwater Dr.	Clearwater Sump						Seepage Bed
											Seepage Trench

Privy	Pet Waste Pit	Pit: Nonconforming Existing	Subsurface Pumproom Nonconforming Existing	Barn Gutter	Animal Barn Pen	Animal Yard	Silo With Pit	Glass Lined Storage Facility	Silo w/o Pit	Earthen Silage Storage Trench Or Pit
		Well								
		Pump								
		Tank								

Temporary Manure Stack	Watertight Liquid Manure Tank	Solid Manure Storage Structure	Subsurface Gasoline or Oil Tank	Waste Pond or Land Disposal Unit (Specify Type)	Other (Give Description)

5. Well is intended to supply water for: RURAL RESIDENCE

6. DRILLHOLE

Dia. (in.)	From (ft.)	To (ft.)	Dia. (in.)	From (ft.)	To (ft.)
8	Surface	135			
4	135	153			

7. CASING, LINER, CURBING AND SCREEN

Dia. (in.)	Material, Weight, Specification & Method of Assembly	From (ft.)	To (ft.)
4½" OD	TAC, 237 WALL	Surface	
ASTM	A589 11# 4" I.D.		
BLK.	STEEL PIPE		149
#948	STAINLESS STEEL #10	149	
SLOT 2	SCREEN w/4½ K PACKER		153

8. GROUT OR OTHER SEALING MATERIAL

Kind	From (ft.)	To (ft.)
PUDDLED CLAY	Surface	135
		135

9. FORMATIONS

Kind	From (ft.)	To (ft.)
RED CLAY	Surface	135
SILTY SAND	135	145
CLEAN COARSE WATER SAND	145	153

10. TYPE OF DRILLING MACHINE USED: 135-153
☑ Cable Tool ☐ Rotary-air w/drilling mud ☐ Rotary-w/drilling mud A 0-135' ☐ Rotary-hammer w/drilling mud & air ☐ Rotary-hammer & air ☐ Reverse Rotary ☐ Jetting with ☐ Air ☐ Water

Well construction completed on 7-28 1976

11. MISCELLANEOUS DATA
Yield Test: 10 Hrs. at 8 GPM
Depth from surface to normal water level 72 Ft.
Depth of water level when pumping 105 Ft. Stabilized ☑ Yes ☐ No

Well is terminated 12 inches ☑ above ☐ below final grade
Well disinfected upon completion ☑ Yes ☐ No
Well sealed watertight upon completion ☑ Yes ☐ No

Water sample sent to MADISON laboratory on 7-28 1976

Your opinion concerning other pollution hazards, information concerning difficulties encountered, and data relating to nearby wells, screens, seals, method of finishing the well, amount of cement used in grouting, blasting, etc., should be given on reverse side.

Signature: Richard W. Squires Registered Well Driller

Complete Mail Address: R1 MASON, WIS 54856

928

Well Construction Report
WISCONSIN UNIQUE WELL NUMBER TV161

Drinking Water and Groundwater - DG/5
Department of Natural Resources, Box 7921
Madison WI 53707

Form 3300-077A

Property Owner: KUPCZYK, DAN & JENNIFER	Phone #: (715)682-4350
Mailing Address: 65086 OLD AIRPORT RD	
City: ASHLAND	State: WI Zip Code: 54806
County: Ashland	Co. Permit #:
Notification #: 20016662	Completed: 07-06-2005
Well Constructor (Business Name): THOMAS G BUTTERFIELD	Lic. #: 555
Facility ID # (Public Wells):	
Well Plan Approval #:	
Address: THOMAS BUTTERFIELD INC HAYWARD WI 54843-9790	
Approval Date (mm-dd-yyyy):	
Hicap Permanent Well #:	Common Well #:
Specific Capacity: 0.3	

1. Well Location

Town of GINGLES	Fire # (if avail.): 65086
Street Address or Road Name and Number: 65086 OLD AIRPORT RD	
Subdivision Name:	Lot #: Block #:
Latitude / Longitude in Decimal Degree (DD): °N °W	Method Code: GPS008

SW or Govt Lot #	SW	Section	Township	Range
		12	47 N	4 W

2. Well Type New Well
of previous unique well # constructed in
Reason for replaced or reconstructed well ?
Construction Type: Drilled

3. Well serves 1 # of
Private,potable
Heat Exchange____# of drillholes
Hicap Well ? No
Hicap Property ? No
Hicap Potable ?

4. Potential Contamination Sources - ON REVERSE SIDE

5. Drillhole Dimensions and Construction Method

Dia. (in.)	From (ft.)	To (ft.)
8.75	Surface	193

Upper Enlarged Drillhole		Lower Open Bedrock
Yes	Rotary - Mud Circulation	No
No	Rotary - Air	No
No	Rotary - Air & Foam	No
No	Drill-Through Casing Hammer	
No	Reverse Rotary	
No	Cable-tool Bit ____in. dia...	No
	Dual Rotary	
No	Temp. Outer Casing ____in. dia	
No	Removed? ____depth ft. (If NO explain on back side)	

8. Geology

Geology Codes				8. Geology Type, Caving/Noncaving, Color, Hardness, etc...	From (ft.)	To (ft.)
-	-	F	-	Fill	Surface	2
T	-	C	-	Tan/Brown, Clay	2	40
T	-	X	M	Tan/Brown, Sand & Clay, Silty	40	55
T	H	C	-	Tan/Brown, Hard/Firm, Clay	55	153
-	-	G	M	Gravel/Cobbles/Boulders/Stones , Silty	153	157
-	H	C	-	Hard/Firm, Clay	157	159
-	N	S	M	Fine, Sand, Silty	159	193

6. Casing, Liner, Screen

Dia. (in.)	Material, Weight, Specification Manufacturer & Method of Assembly	From (ft.)	To (ft.)
5	NORTHERN PVC 58DR21, 200 PSI	Surface	173
Dia. (in.)	Screen type, material & slot size	From (ft.)	To (ft.)
5	25 CONTINUOUS SLOT JOHNSON PVC	173	193

7. Grout or Other Sealing Material

Method Tremie Pipe - Pumped

Kind of Sealing Material	From (ft.)	To (ft.)	# Sacks Cement
High solid bentonite grout	Surface	170	

9. Static Water Level
59 ft. below ground surface

10. Pump Test
Pumping level 94 ft. below surface
Pumping at 10 GP M for 1 Hrs.
Pumping Method ?

11. Well Is
14 in. above grade
Developed ? Yes
Disinfected ? Yes
Capped ? Yes

12. Notified Owner of need to fill & seal ?
Filled & Sealed Well(s) as needed? No
NEW CONSTRUCTION

13. Constructor / Supervisory Driller	Lic #	Date Signed
TGB		07-08-2005
Drill Rig Operator	Lic or Reg #	Date Signed
JSM		07-08-2005

4a. Potential Contamination Sources Is the well located in floodplain ? No

Type	Qualifier	Distance	Type	Qualifier	Distance
Building Overhang		10	Septic or Holding, or POWTS Tank		50

Comment:

Water Quality Text:

Water Quantity Text:

Difficulty Text:

Created On: 08-04-2005 Created by: WELL CONST LOAD Updated On: 02-14-2006 Updated by: CASTLJ

ATTACHMENT IV – ABOVE GRADE SITE INFRASTRUCTURE PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG		
Enbridge Energy, Limited Partnership	Line 5 Mile Post 1159.47 Valve Site Above-Ground Infrastructure Ashland County, Wisconsin	Attachment IV

Photo No.	**Date**
1	September 8, 2022

Line 5 Valve Control Building.

Photo No.	**Date**
2	September 8, 2022

Line 5 Valve – Above-ground portion.

PHOTOGRAPHIC LOG		
Enbridge Energy, Limited Partnership	Line 5 Mile Post 1159.47 Valve Site Above-Ground Infrastructure Ashland County, Wisconsin	Attachment IV

Photo No.	**Date**
3	September 8, 2022

Electrical meter box.