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October 16, 2019

Ms. Eileen Maxwell
Wisconsin Department of Natural Resources
2300 N. Dr. Martin Luther King Jr. Dr.
Milwaukee, WI 53212

Subject: Phase 2.5 Investigation and Concurrence Letter Amendment
STH 100 Various Intersections
City of Greenfield and West Allis, Milwaukee County, Wisconsin
WisDOT Project ID #2030-13-00
TRC Project #356814.0000.0000

Dear Ms. Maxwell:

In August 2018, TRC submitted a Phase 2.5 Hazardous Materials Assessment report and Special Provisions for the management of contaminated soil during roadway construction along STH 100 in the City of Greenfield and City of West Allis, Milwaukee County, Wisconsin. The WDNR reviewed the report and Special Provisions and responded with a concurrence letter dated August 14, 2018. A copy of the concurrence letter is attached.

Recent changes in design added up to 40 inlet repairs along the project corridor, some of which require excavation beyond what typical inlet height adjustments would require. Three additional soil borings were necessary to determine if contamination was present where excavation for inlet repairs is required near known BRRTS sites.

Enclosed is a copy of the Phase 2.5 Hazardous Materials Assessment report and Special Provisions for the additional 3 soil boring locations. CVOC-contaminated soil is expected to be encountered at one location (near a dry cleaner site) within the proposed construction corridor.

TRC recommends that the WDNR review this report and the attached Special Provisions as the Excavation Management Plan (EMP) for the project. If acceptable, the WDNR should respond with an amendment to the attached concurrence letter. The WisDOT and TRC respectfully request a response from the WDNR for the EMP by October 25, 2019.

If you have questions or comments, please call me at 262-901-2126.

Sincerely,

TRC

Bryan Bergmann, P.G.
Project Manager

Attachment – WDNR Concurrence Letter

cc: Shar TeBeest – WisDOT (pdf via email)
Andy Malsom – WisDOT (pdf via email)
Dan Haak – TRC

\\brookfield-fp1\MLW-VOL1\-\WPMLW\PJT2\356814\0000\L3568140000-001.docx

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
2300 N. Dr. Martin Luther King, Jr. Drive
Milwaukee WI 53212-3128

Scott Walker, Governor
Daniel L. Meyer, Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

August 14, 2018

Mr. Bryan Bergmann, P. G.
TRC, Inc.
150 North Patrick Blvd., Suite 180
Brookfield, WI 53045

Subject: DNR Concurrence for Excavation Management Plan
STH 100 Intersections
West Allis and Greenfield, Milwaukee County, Wisconsin
Bioremediation and Notice to Contractor- Contamination Beyond Construction Limits
WisDOT Construction Project ID No. 2030-13-00

Dear Mr. Bergmann:

The Wisconsin Department of Natural Resources (DNR) reviewed the Excavation Management Plan for the Subject reconstruction project. The DNR understands that the work includes upgrading traffic signals at five intersections along STH 100 in Milwaukee County. This *Concurrence* letter provides approval for bioremediation and notification to the contractor of contamination beyond construction limits.

Bioremediation

Laboratory analytical testing of soil provided in the Phase 2.5 Investigation Report identifies petroleum and metal contaminated soil that may be encountered during construction within the project limits where concentrations exceeded the respective Wis. Admin. Code § NR 720 Residual Contaminant Levels (RCLs). Analytical testing of soil identified gasoline range organics (GRO) at a concentration of 36 milligrams per kilogram (mg/kg), diesel range organics (DRO) at 180 mg/kg, nickel ranging from 13 mg/kg to 33 mg/kg, and 1,2,4-trimethylbenzene ranging from 20 micrograms per kilogram (µg/kg) to 69 µg/kg. The DNR concurs that these soils be appropriately field screened, segregated and managed, and transported to a DNR-licensed solid waste landfill for bioremediation. The specific landfill bioremediation areas are:

Intersection of STH 100 & W. Layton Avenue

1. Station 77+60 to 78+15 from approximately 60 feet left of reference line to 30 feet right of reference line, approximately 1 feet to 8 feet below grade, estimated 4.8 cubic yards or 8.1 tons.

2. Station 77+60 to 78+70 from approximately 30 feet right of reference line to 100 feet right of reference line, approximately 4 feet to 10+ feet below grade, estimated 3.4 cubic yards or 5.8 tons.

3. Station 78+15 to 80+10 from approximately 110 feet left of reference line to 30 feet right of reference line, from 1 feet to 8+ feet below grade, estimated 10.4 cubic yards or 17.6 tons.

Intersection of STH 100 & W. Oklahoma Avenue

4. Station 183+25 to 184+15 from approximately 105 feet left of reference line to 25 feet left of reference line, approximately 4 feet to 8+ feet below grade, estimated 1.4 cubic yards or 2.3 tons.

5. Station 183+25 to 184+15 from approximately 25 feet left of reference line to 105 feet right of reference line, approximately 1 feet to 12+ feet below grade, estimated 8.2 cubic yards or 14.0 tons.

6. Station 184+15 to 184+65 from approximately 105 feet left of reference line to reference line, approximately 1 feet to 8 feet below grade, estimated 3.6 cubic yards or 6.2 tons.

7. Station 184+65 to 185+55 from approximately 25 feet left of reference line to 105 feet right of reference line, approximately 1 feet to 12+ feet below grade, estimated 7.1 cubic yards or 12.1 tons.

Intersection of STH 100 & West National Avenue

8. Station 203+95 to 204+70 from approximately 95 feet left of reference line to 30 feet left of reference line, approximately 4 feet to 10+ feet below grade, estimated 2.8 cubic yards or 4.8 tons.

9. Station 204+70 to 206+00 from approximately 95 feet left of reference line to 25 feet right of reference line, approximately 1 feet to 10+ feet below grade, estimated 10.5 cubic yards or 17.9 tons.

Intersection of STH 100 & West Cleveland Avenue

10. Station 209+70 to 210+00 from approximately 65 feet left of reference line to 30 feet left of reference line, approximately 1 feet to 8 feet below grade, estimated 3.6 cubic yards or 6.2 tons.

11. Station 209+70 to 211+65 from approximately reference line to 105 feet right of reference line, approximately 6 feet to 14+ feet below grade, estimated 3.4 cubic yards or 5.7 tons.

Contamination Beyond Construction Limits

Due to the proximity of known contaminants outside the project limits, a "Notice to Contractor – Contamination Beyond Construction Limits" will be included with the project proposal to make contractors aware that areas beyond the project may contain soil and groundwater contaminated with chlorinated solvents related to dry cleaning facilities. The contractor should control construction activities in these areas to ensure that excavation does not extend beyond the proposed limits. If work does advance into this area, the DNR concurs that work shall be temporarily stopped while the engineer is notified. The impacted soil areas are:

1. Station 235+90 to 237+25, beyond project limits left (Former Dry Cleaners, Southwest Corner STH 100 & West Lincoln Avenue, WDNR BRRTS No. 02-41-580667, Open ERP Site).

2. Station 237+25 to 239+00, beyond project limits left (Rainbow Cleaners, Northwest Corner STH 100 & West Lincoln Avenue, WDNR BRRTS No. 02-41-560615, Closed ERP Site).

3. Station 237+25 to 239+00, beyond project limits right (One Hour Martinizing, Northeast Corner STH 100 & West Lincoln Avenue, WDNR BRRTS No. 02-41-246246, Open ERP Site).

Other Conditions

The Phase 2.5 investigation suggests that contaminated groundwater may be present within the project limits. If groundwater handling or dewatering is necessary during the project, the work shall be temporarily stopped while the engineer is notified and provides a recommendation. All groundwater shall be evaluated for petroleum and metal compounds, and appropriately disposed to a sanitary sewer with prior approval from Milwaukee Metropolitan Sewerage District (MMSD.). No accumulated groundwater from dewatering may be returned to the project.

If contaminated soil or waste material is encountered here or elsewhere during the project, work shall be temporarily stopped while the engineer is notified. The DNR also recommends that all construction activities proceed using environmentally sound practices, including proper management and handling of drums and containers, dust suppression, recycling, proper waste disposal, storm water management, and erosion control.

If the project changes from what is currently proposed, or if other environmental issues arise, please contact me at 414-263-8586, or send e-mail to Eileen.Maxwell@Wisconsin.gov for additional review and concurrence. Thank you.

Sincerely,

Eileen Maxwell,
Hydrogeologist
Remediation & Redevelopment

cc: Andrew Malsom – WisDOT, Pamela Mylotta – DNR, Michele Norman – DNR, Mike Thompson – DNR, Kristina Betzold– DNR
SER File

Phase 2.5 Investigation

STH 100 Various Intersections West Allis and Greenfield, Milwaukee County, Wisconsin

October 2019

WisDOT Project #2030-13-00

Prepared For:

Wisconsin Department of Transportation

Prepared By:

TRC
150 N. Patrick Blvd., Suite 180
Brookfield, Wisconsin 53045

Aaron Sobbe
Staff Engineer

Bryan Bergmann, P.G.
Project Manager

Dan Haak, P.E.
TRC Quality Assurance

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TABLES

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APPENDICES

COMMONLY USED ABBREVIATIONS AND ACRONYMS

AST	aboveground storage tank
bgs	below ground surface
BRRTS	Bureau for Remediation and Redevelopment Tracking System
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CTH	County Trunk Highway
CY	cubic yards
DATCP	Department of Agriculture, Trade and Consumer Protection
DRO	diesel range organics
FDM	Facilities Development Manual
EMP	Excavation Management Plan
ERP	Environmental Repair Program
ES	Enforcement Standards
ESA	Environmental Site Assessment
FINDS	Facility Index System/Facility Identification Initiative Program Summary Report
GIS Registry	WDNR Geographic Information System (GIS) Registry of Closed Remediation Sites
GRO	gasoline range organics
HAZWOPER	Code of Federal Registry Chapter 29 (29 CFR) Part 1910.120 Hazardous Waste Operations and Emergency Response
HMA	Hazardous Materials Assessment
IH	Interstate Highway
LQG	large quantity generator
LUST	leaking underground storage tank
NPL	National Priorities List
NR ###	Wisconsin Administrative Code (WAC) Natural Resources (NR) Chapter ###
PAHs	polynuclear aromatic hydrocarbons
PAL	Preventive Action Limits
PCBs	polychlorinated biphenyls
PCE	perchloroethylene/tetrachloroethylene
PID	photoionization detector
PVOCs	petroleum volatile organic compounds
RCLs	Residual Contaminant Levels in NR 720
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
R/W or ROW	right-of-way
sf	square feet
STH	State Trunk Highway
TCE	trichloroethylene
TRIS	Toxic Chemical Release Inventory System
USGS	United States Geological Survey
USH	United States Highway
UST	underground storage tank
VOCs	volatile organic compounds
WDNR	Wisconsin Department of Natural Resources
WisDOT	Wisconsin Department of Transportation
WGNHS	Wisconsin Geological and Natural History Survey
WI ERP	Wisconsin Environmental Repair Program database

Executive Summary

The WisDOT is preparing to upgrade traffic signals at intersections along STH 100 (WisDOT ID 2030-13-00) in Milwaukee County. The intersections are located in the City of West Allis and City of Greenfield.

A Phase 1 was not completed for the project because the project was originally scoped as a simple mill and overlay and was therefore exempt from the WisDOT Phase 1 requirement. In the 60% plans, traffic signal upgrades had been added to five intersections along the project corridor. Each of the intersections had sites of concern from a HAZMAT program perspective.

TRC completed a Phase 2.5 Investigation for the five intersections in July 2018 (under WisDOT Project ID #2030-13-00, TRC project number 298947.0000.0000).

Recent changes in design added up to 40 inlet repairs, some of which require excavation beyond what typical inlet height adjustments would require. Three additional soil borings were necessary to determine if contamination was present where excavation for inlet repairs is required near sites with potential contamination.

On September 9, 2019, three Geoprobe borings (GP-31, GP-32, and GP-33) were each advanced to a depth of 8 feet bgs at the locations where inlet repairs will occur.

The results of the Phase 2.5 Investigation indicate the following:

- GP-33 (4'-6') has a concentration of tetrachloroethene of 570 µg/kg, which exceeds the NR 720 groundwater pathway RCL.

Special Provisions should be included in the construction documents advising the contractor of these findings, and the requirements to manage CVOC-contaminated soil at the following location:

- Station 240+00 to 240+60, from 30' right of the reference line to project limits right, from 1 to 8+ feet bgs. The estimated volume of contaminated soil to be excavated at this location is 37 CY (approximately 63 tons using a conversion factor of 1.7 tons per cubic yard).

An Excavation Management Plan should be prepared and submitted to the WDNR for their review and concurrence. The WisDOT's environmental consultant will be present during excavations in the areas of known contamination to field screen and document the excavation activities.

1.0 Background

The WisDOT is preparing to upgrade traffic signals at intersections along STH 100 (WisDOT ID 2030-13-00) in Milwaukee County. The intersections are located in the City of West Allis and City of Greenfield.

A Phase 1 was not completed for the project because the project was originally scoped as a simple mill and overlay and was therefore exempt from the WisDOT Phase 1 requirement. In the 60% plans, traffic signal upgrades had been added to five intersections along the project corridor. Each of the intersections had sites of concern from a HAZMAT program perspective.

TRC completed a Phase 2.5 Investigation for the five intersections in July 2018 (Phase 2.5 Investigation, STH 100 Intersections, West Allis & Greenfield, Milwaukee County, Wisconsin, WisDOT Project ID #2030-13-00, TRC No. 298947.0000.0000).

Recent changes in design added up to 40 inlet repairs, some of which require excavation beyond what typical inlet height adjustment would require. Three additional soil borings were necessary to determine if contamination was present where excavation for inlet repairs is required.

A summary of the three inlets requiring excavation with potential environmental concerns (south to north) are provided below.

1. Inlet N8, excavation depth to approximately 7.8 feet bgs. The Former Auto Shoppe site (Open LUST and Closed ERP, BRRTS: 03-41-546651, 02-41-560465) is located on the west side of STH 100 across from Inlet N8. Contaminants of concern at the Former Auto Shoppe are diesel, waste oil, VOCs, and CVOCs.
2. Inlet S67, excavation depth to approximately 8.2 feet bgs. The Hub Chrysler Plymouth site (Closed LUST, BRRTS: 03-41-002116) is adjacent to inlet S67 on the west side of STH 100. WDNR files indicated one 2,000-gallon gasoline UST was the source of contamination.
3. Inlet N67, excavation depth to approximately 8.0 feet bgs. The One Hour Martinizing site (Open ERP & closed LUST, BRRTS 02-41-246246 & 03-41-257880) was a former dry cleaner with soil and groundwater contamination and is located south of Inlet N67; however, the WDNR site closure file shows contaminated groundwater flowing north along a utility trench toward Inlet N67. The site closure file indicates groundwater near Inlet N67 is anticipated to be present at a depth of approximately 5.5’ to 8’ bgs. Contaminants of concern are CVOCs.

The WisDOT requested that TRC complete a Phase 2.5 investigation at the three inlet locations described above.

2.0 Sampling Activities

TRC performed the additional Phase 2.5 Investigation field activities on September 9, 2019. Three Geoprobe borings (GP-31, GP-32, and GP-33) were each advanced to a depth of 8 feet bgs. Soil probe locations are shown on Figures 2, 3, and 4.

During the soil probe activities, soil was continuously sampled, classified, and field-screened using a photoionization detector (PID). Soil samples from GP-33 were also field screened with a flame ionization detector (FID) due to the possible presence of CVOCs. PID results ranged from <1 Instrument Unit (IU) to 8.2 IU. FID results were <1 IU. Elevated readings are likely due to moisture/humidity. In general, the soil profile consisted of fill overlying stiff silty clay. Groundwater was encountered in GP-33 at a depth of approximately 5 feet bgs.

Upon completion, the soil probe holes were abandoned with bentonite. Soil boring logs and borehole abandonment forms are provided in Appendix B.

Soil sampled at GP-31, near Hub Chrysler Plymouth, was analyzed for PVOC plus naphthalene and GRO. Soil sampled at GP-32, near the Former Auto Shoppe, was analyzed for VOCs, metals, SVOCs, PCBs, GRO, and DRO. Soil sampled at GP-32, near the One-hour Martinizing, was analyzed for VOCs.

Photographs taken during fieldwork activities are included in Appendix C.

3.0 Soil Sampling Results and Evaluation

Soil sample laboratory results are summarized in Table 1. The laboratory analytical report is included in Appendix D.

Soil sample results for the Phase 2.5 were as follows:

- PVOCs and VOCs were not detected in GP-31 and GP-32, respectively. Tetrachloroethene was detected at a concentration of 570 µg/kg in GP-33, which exceeds the NR 720 groundwater pathway RCL.
- Metals concentrations were below the respective NR 720 background threshold values.
- SVOCs were detected in GP-32, but at concentrations below respective NR 720 RCLs.
- PCBs were not detected in GP-32.

TRC performed calculations using the soil sample lab data to determine if the concentrations of detected compounds exceeded the respective NR 720 non-industrial or industrial direct contact RCLs, calculated cumulative hazard indices, and/or the cumulative cancer risk (See Appendix E for calculations). All the samples were below their respective RCLs, calculated cumulative hazard indices, and/or the cumulative cancer risk.

4.0 Findings, Conclusions, and Recommendations

The results of the Phase 2.5 Investigation indicate the following:

- GP-33 (4'-6') has a concentration of tetrachloroethene of 570 µg/kg, which exceeds the NR 720 groundwater pathway RCL.

Special Provisions should be included in the construction documents advising the contractor of these findings, and the requirements to manage CVOC-contaminated soil at the following location:

- Station 240+00 to 240+60, from 30’ right of the reference line to project limits right, from 1 to 8+ feet bgs. The estimated volume of contaminated soil to be excavated at this location is 37 CY (approximately 63 tons using a conversion factor of 1.7 tons per cubic yard).

Draft Special Provisions are included in Appendix F.

An Excavation Management Plan should be prepared and submitted to the WDNR for their review and concurrence. The WisDOT’s environmental consultant shall be present during excavations in the areas of known contamination to field screen and document the excavation activities.

4.1 Request for WDNR Reviews

TRC has prepared draft Special Provisions for the management of contaminated soil during construction (Appendix F). TRC recommends that the WDNR review this report and the attached Special Provisions as the Excavation Management Plan (EMP) for the project. If acceptable, the WDNR should respond with a concurrence letter for the EMP.

Table 1: Soil Sampling Results Summary
STH 100 Various Intersections
Greenfield and West Allis, Milwaukee County, Wisconsin
WisDOT ID: 2030-13-00, TRC No.: 356814.0000.00000

Analytes[1]	Soil RCL NR 720[4]				Soil Sample ID, Depth (feet bgs), Soil Type, Sample Date			
					GP-31	GP-32	GP-33	
					4'-6'	6'-8'	4'-6'	
	Groundwater Pathway[2]	Non-Industrial Direct Contact[3]	Industrial Direct Contact[3]	Surficial Background Threshold[5]	SILTY CLAY	SILTY CLAY	FILL: SAND	Trip Blank
					SAMPLES COLLECTED ON SEPTEMBER 9, 2019			
PID/FID Readings	-	-	-	-	4.3/--	8.2/--	<1/<1	
GRO (mg/kg)	-	-	-	-	<1.2	<0.75	--	--
DRO (mg/kg)	-	-	-	-	--	<1.7	--	--
VOCs (µg/kg)								
Tetrachloroethene	4.5	33,000	145,000	-	--	--	*570*	<19
Remaining VOCs	-	-	-	-	ND	ND	ND	ND
Metals (mg/kg)								
Arsenic	0.584	0.677	3.00	8.0	--	5.3	--	--
Barium	164.8	15,300	100,000	364	--	88	--	--
Cadmium	0.752	71.1	985	1.0	--	0.31	--	--
Chromium	360,000	-	-	44	--	23	--	--
Copper	91.6	3,130	46,700	35	--	23	--	--
Lead	27	400	800	52	27 F1 F2	18		--
Nickel	13.0612	1,550	22,500	31	--	23	--	--
Silver	0.8491	391	5,840	-	--	4.3	--	--
Zinc	-	23,500	100,000	150	--	65 B	--	--
Mercury	0.208	3.13	3.13	-	--	0.14	--	--
SVOCs (µg/kg)								
Anthracene	196,949.2	17,900,000	100,000,000	-	--	22 J	--	--
Benzo(a)anthracene	-	1,140	20,800	-	--	50	--	--
Benzo(a)pyrene	470	115	2,110	-	--	82	--	--
Benzo(b)fluoranthene	478.1	1,150	21,100	-	--	85	--	--
Benzo(g,h,i)perylene	-	-	-	-	--	19 J	--	--
Benzo(k)fluoranthene	-	115,000	211,000	-	--	56	--	--
Chrysene	144.2	115,000	2,110,000	-	--	51	--	--
Fluoranthene	88,877.8	2,390,000	30,100,000	-	--	140	--	--
Phenanthrene	-	-	-	-	--	58	--	--
Pyrene	54,545.5	1,790,000	22,600,000	-	--	88	--	--
PCBs (µg/kg)								
PCBs, Totals	9.4	-	-	-	--	ND	--	--
HAZARD INDEX (CUMULATIVE)[6]								
NON-INDUSTRIAL		1.0	-	-	0.0000	0.2540	0.0052	0.0000
INDUSTRIAL		-	1.0	-	0.0000	0.0033	0.0010	0.0000
CANCER RISK (CUMULATIVE)[6]								
NON-INDUSTRIAL		1.00E-05	-	-	0.0E+00	8.4E-07	1.7E-08	0.0E+00
INDUSTRIAL		-	1.00E-05	-	0.0E+00	4.6E-06	3.9E-09	0.0E+00

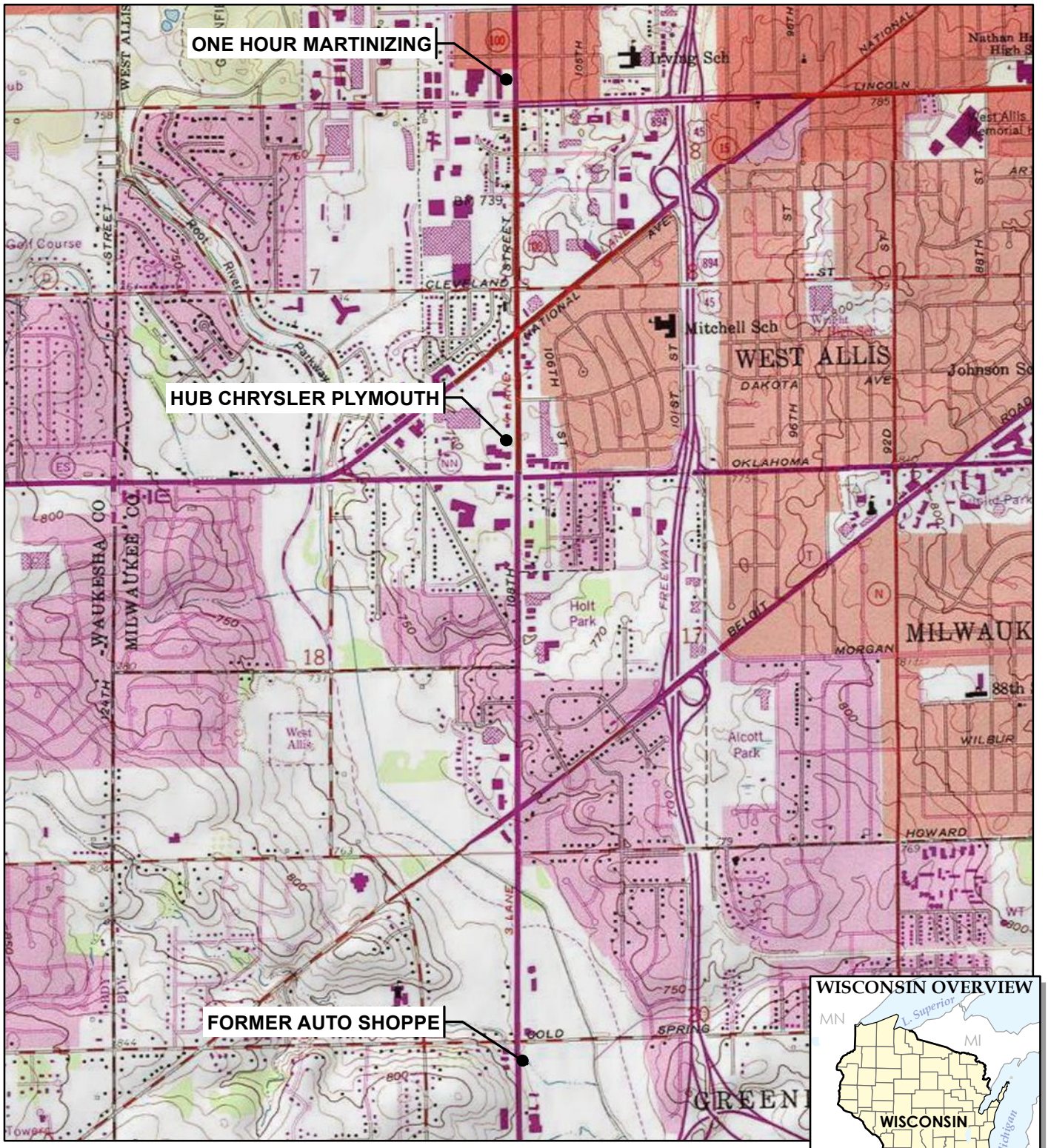
Created By: B. Bergmann 9/25/2019
Checked By: A. Sobbe 9/30/2019

Notes:

1 PID = Photoionization Detector
2 FID = Flame Ionization Detector
3 GRO = Gasoline Range Organics analyzed using the WDNR WI-GRO method.
4 DRO = Diesel Range Organics analyzed using the WDNR WI-DRO method.
5 VOCs = Volatile Organic Compounds analyzed using EPA Method 8260B.
6 SVOCs = Semi-Volatile Organic Compounds analyzed using EPA Method 8270.
7 PCBs = Polychlorinated Biphenyls analyzed using EPA Method 8082A.
8 mg/kg = milligrams per kilogram (ppm).
9 µg/kg = micrograms per kilogram (ppb).
10 - = Standard not established.
11 -- = Parameter not analyzed for.
14 ND = Not detected
12 J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
13 F1 = MS and/or MSD Recovery is outside acceptance limits.
14 F2 = MS/MSD RPD exceeds control limits.
15 B = Compound was found in the blank and sample.
16 Samples were collected by TRC and analyzed by Test America (Wisconsin Certification ID 999580010).
17 Results in **BOLD** indicate a detection (or potential detection if J-flagged) above the Non-Industrial or Industrial NR 720 RCL plus the background threshold value.
18 Results in *Italics* indicate a detection (or potential detection if J-flagged) above the Groundwater Pathway NR 720 RCL plus the background threshold value.

Footnotes:

(1) Only analytes that were detected in at least one sample are shown in the table.
(2) Value is the generic RCL for the groundwater pathway.
(3) Value is the generic RCL for exposure by direct contact.
(4) Calculated from http://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search using default exposure assumptions listed in NR 720.12(3).
(5) Background threshold value (BTV) from the Wisconsin DNR's NR 720 RCL spreadsheet.
(6) Calculated using WDNR RCL Spreadsheet Calculator (December 2018 Update).



BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES.

N

1 " = 2,000 '
1:24,000

0 2,000 4,000
FEET

TRC

150 North Patrick Blvd., Suite 180
Brookfield, WI 53045
Phone: 262.879.1212
www.trcsolutions.com

TRC - GIS

PROJECT:

WISDOT ID# 2030-13-00
STH 100 VARIOUS INTERSECTIONS
WEST ALLIS & GREENFIELD
MILWAUKEE COUNTY, WISCONSIN

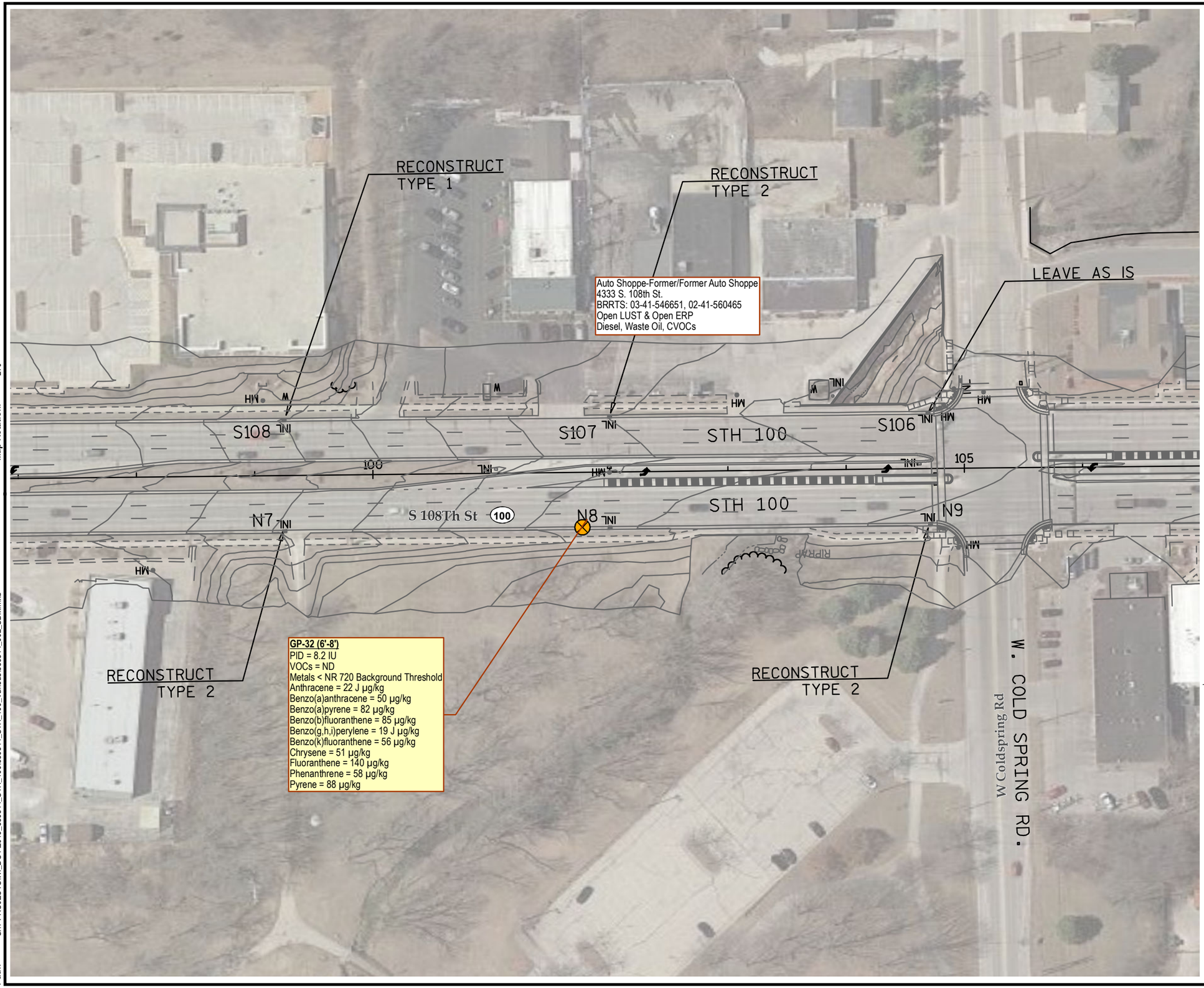
TITLE:

SITE LOCATION MAP

DRAWN BY:	A. ADAIR
CHECKED BY:	B. BERGMANN
APPROVED BY:	D. HAAK
DATE:	OCTOBER 2019
PROJ. NO.:	356814
FILE:	356814_001_SLM.mxd

FIGURE 1

S:\1-PROJECTS\WI_DOT\2019_356814_STH_100\356814_STH_100_Various\356814_001_SLM.mxd -- Saved By: AADAIR on 10/7/2019, 09:54:09 AM



LEGEND

⊗ SOIL BORING LOCATION SEPTEMBER 9, 2019

NOTES

1. BASE MAP IMAGERY FROM GOOGLE EARTH PRO., (3/16/2018).
2. MAP PROJECTION AND GRID COORDINATES ARE NAD 83 STATE PLANE WISCONSIN SOUTH (US-SURVEY FEET).
3. CONSTRUCTION PLANS PROVIDED BY WISDOT, LOCATIONS ARE APPROXIMATE.

0 80 160 Feet

1 " = 80 '

1:960

PROJECT:

WISDOT ID# 2030-13-00
STH 100 VARIOUS INTERSECTIONS
WEST ALLIS & GREENFIELD
MILWAUKEE COUNTY, WISCONSIN

TITLE:

SOIL BORING LOCATION FORMER AUTO SHOPPE

DRAWN BY:	A. ADAIR	PROJ. NO.:	356814
CHECKED BY:	B. BERGMANN		
APPROVED BY:	D. HAAK		**FIGURE 2**
DATE:	OCTOBER 2019		

TRC
150 North Patrick Blvd., Suite 180
Brookfield, WI 53045
Phone: 262.879.1212
www.trcsolutions.com

FILE NO.: 356814_002_SBM.mxd

TRC - GIS
Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet (Foot US)
Map Rotation: 270
Plot Date: 10/9/2019, 10:28:42 AM by AADAIR -- LAYOUT: ANSI B(11"x17")
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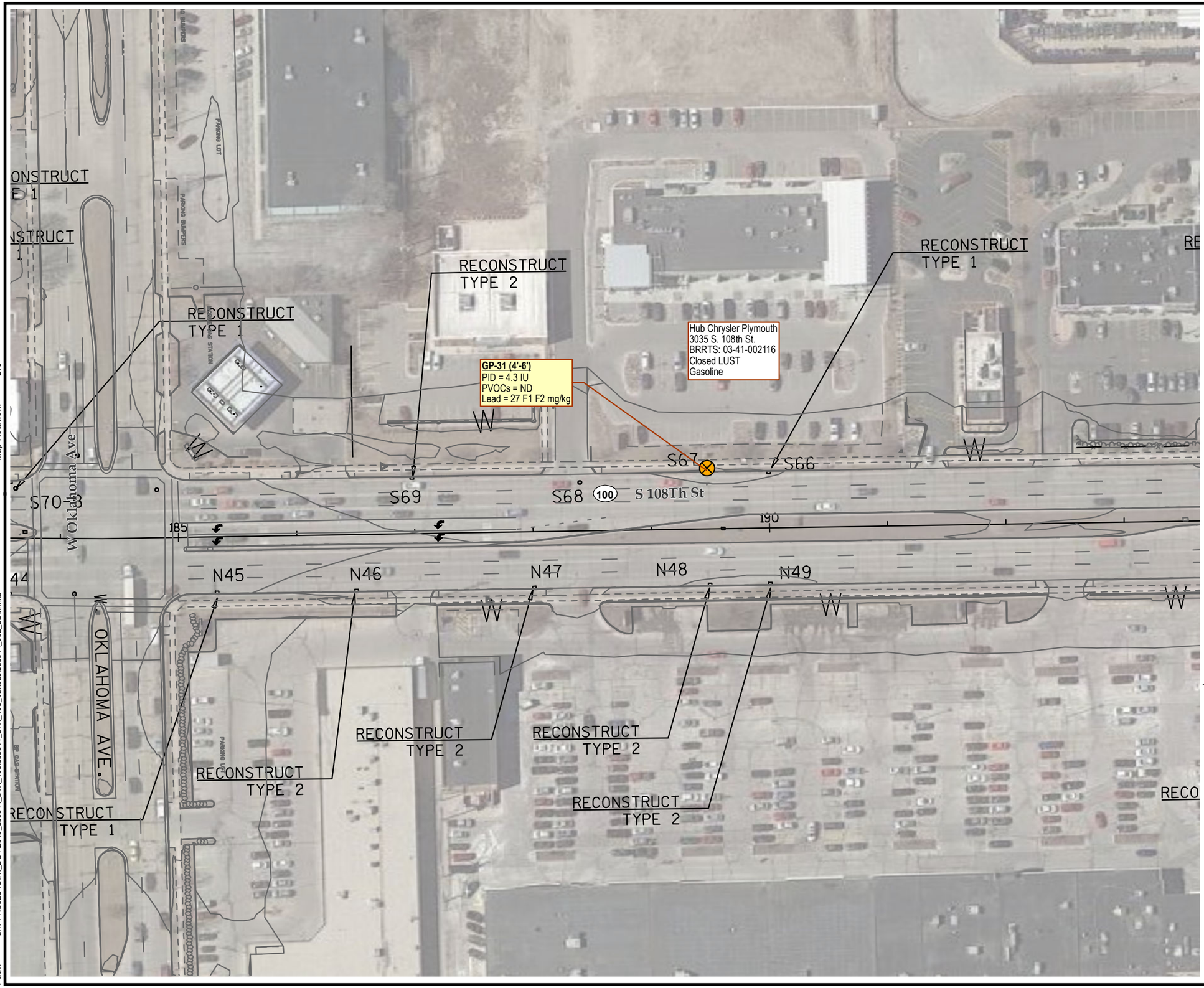


LEGEND

⊗ SOIL BORING LOCATION SEPTEMBER 9, 2019

NOTES

1. BASE MAP IMAGERY FROM GOOGLE EARTH PRO., (3/16/2018).
2. MAP PROJECTION AND GRID COORDINATES ARE NAD 83 STATE PLANE WISCONSIN SOUTH (US-SURVEY FEET).
3. CONSTRUCTION PLANS PROVIDED BY WISDOT, LOCATIONS ARE APPROXIMATE.

0 80 160 Feet

1 " = 80 '

1:960

PROJECT:
WISDOT ID# 2030-13-00
STH 100 VARIOUS INTERSECTIONS
WEST ALLIS & GREENFIELD
MILWAUKEE COUNTY, WISCONSIN

TITLE:
SOIL BORING LOCATION
HUB CHRYSLER PLYMOUTH

DRAWN BY:	A. ADAIR	PROJ. NO.:	356814
CHECKED BY:	B. BERGMANN		
APPROVED BY:	D. HAAK		**FIGURE 3**
DATE:	OCTOBER 2019		

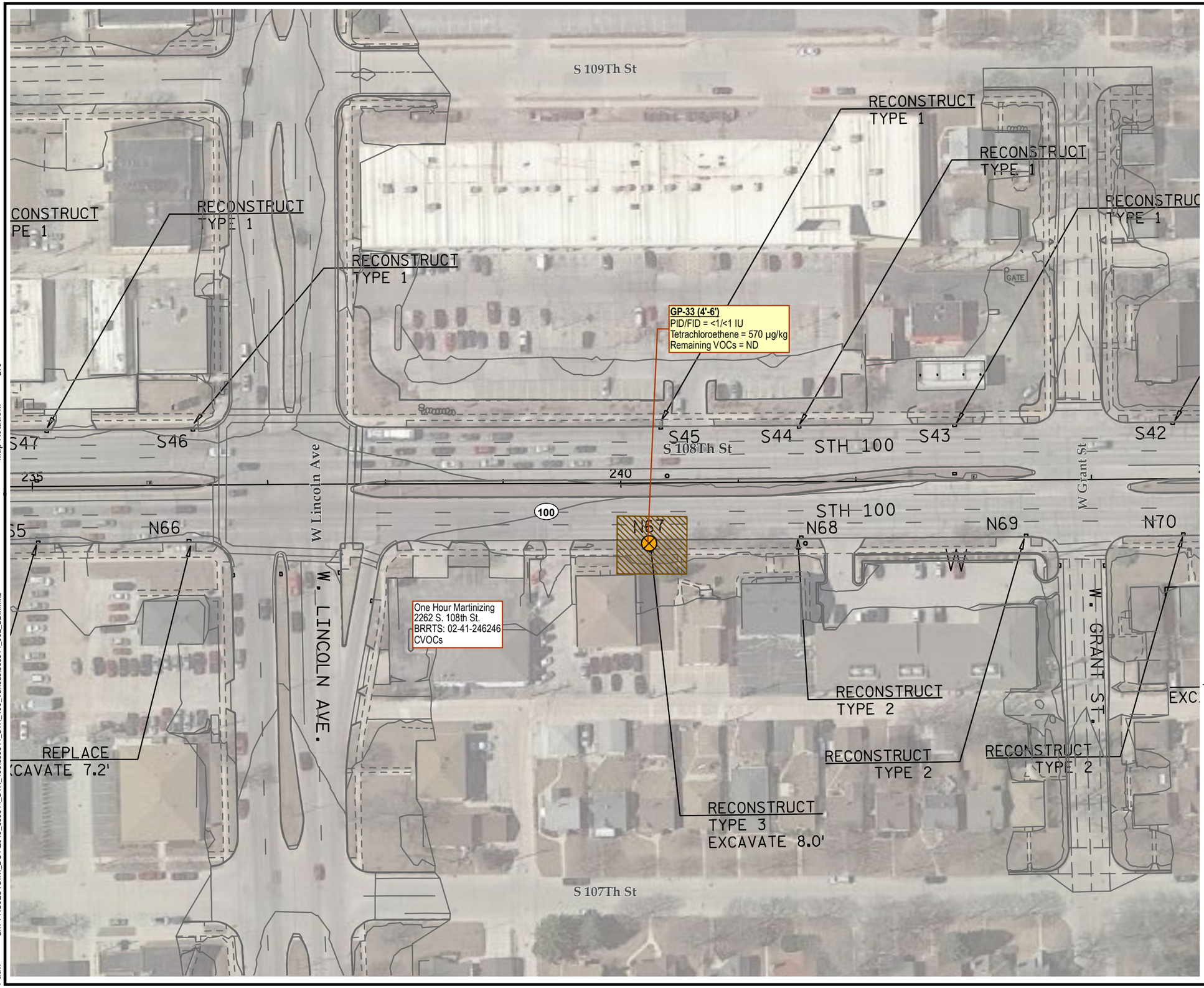
TRC
150 North Patrick Blvd., Suite 180
Brookfield, WI 53045
Phone: 262.879.1212
www.trcsolutions.com

FILE NO.: 356814_002_SBM.mxd

Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet (Foot US)
Map Rotation: 270

Plot Date: 10/9/2019, 10:28:42 AM by AADAIR -- LAYOUT: ANSI B(11"x17")
Path: S:\1-PROJECTS\WI_DOT\2019_356814_STH_100\356814_STH_100_Various\356814_002_SBM.mxd

TRC - GIS



LEGEND

- SOIL BORING LOCATION SEPTEMBER 9, 2019
- CVOC CONTAMINATED SOIL FROM 1' TO 8'+ BGS

NOTES

1. BASE MAP IMAGERY FROM GOOGLE EARTH PRO., (3/16/2018).
2. MAP PROJECTION AND GRID COORDINATES ARE NAD 83 STATE PLANE WISCONSIN SOUTH (US-SURVEY FEET).
3. CONSTRUCTION PLANS PROVIDED BY WISDOT, LOCATIONS ARE APPROXIMATE.

0 80 160 Feet

1 " = 80 '
1:960

PROJECT:
WISDOT ID# 2030-13-00
STH 100 VARIOUS INTERSECTIONS
WEST ALLIS & GREENFIELD
MILWAUKEE COUNTY, WISCONSIN

TITLE:
SOIL BORING LOCATION
ONE HOUR MARTINIZING

DRAWN BY:	A. ADAIR	PROJ. NO.:	356814
CHECKED BY:	B. BERGMANN		
APPROVED BY:	D. HAAK		
DATE:	OCTOBER 2019		

FIGURE 4

TRC
150 North Patrick Blvd., Suite 180
Brookfield, WI 53045
Phone: 262.879.1212
www.trcsolutions.com

FILE NO.: 356814_002_SBM.mxd

Coordinate System: NAD 1983 StatePlane Wisconsin South FIPS 4803 Feet (Foot US)
Map Rotation: 270
Plot Date: 10/9/2019, 10:28:42 AM by AADAIR -- LAYOUT: ANSI B(11"x17")
Path: S:\1-PROJECTS\WI_DOT\2019_356814_STH_100\356814_STH_100_Various\356814_002_SBM.mxd
TRC - GIS

Appendix A: WDNR BRRTS Information

Wisconsin Department of Natural Resources

Environmental Cleanup & Brownfields Redevelopment

BRRTS on the Web

Click the Location Name below to view the Location Details page for this Activity. Other Activities, if present, may be viewed from that page.

< Basic Search

03-41-546651 AUTO SHOPPE - FORMER

OPEN LUST

Location Name (Click Location Name to View Location Details)				County	WDNR Region
FORMER AUTO SHOPPE				MILWAUKEE	SOUTHEAST
Address				Municipality	
4333 S 108TH ST				GREENFIELD	
PLSS Description			Latitude	Google Maps	RR Sites Map
NE 1/4 of the SE 1/4 of Sec 19, T06N, R21E			42.965609	CLICK TO VIEW	CLICK TO VIEW
Additional Location Description			Longitude	Facility ID	Size (Acres)
			-88.048501	341127160	1
Jurisdiction	PECFA No.	EPA Cerclis ID	Start Date	End Date	Last Action
DNR RR	53228-2502-33		2006-04-04		2019-09-12

Characteristics

PECFA Tracked?	EPA NPL Site?	Eligible for PECFA Funds?	Above Ground Storage Tank?	Drycleaner?	Co-Contamination?	Continuing Obligations Apply?
Yes	No	Yes	No	No	Yes	No

Actions

Place Cursor Over Action Code to View Description

Date	Code	Name	Comment
2006-04-04	1	Notification of Hazardous Substance Discharge	
2006-04-19	2	Responsible Party (RP) letter sent	
2006-04-26	99	Miscellaneous	REC'D LTR RE CONSULTANT SELECTION
2007-03-02	182	Case Closure Review Request Received - Fee Required	
2007-03-02	79	Case Closure Review Request Received	REC'D CK# 3434 $750.00 REFUND 09/24/07
2007-03-02	37	Site Investigation Report (SIR) Received (non-fee)	

2007-05-23	97	Technical Assistance Request Received (fee)	REC'D CK# 3585 $500.00
2007-05-23	98	Technical Assistance Provided	REC'D CK# 3585 $500.00
2007-05-23	99	Miscellaneous	REQUESTED ADD'L INFO DURING TECHNICAL MEETING
2007-09-14	99	Miscellaneous	VICKY WILL UPDATE BRRTS TO REFLECT REFUND FOR "CODE 79"
2007-09-24	80	Closure Not Recommended	CLR REQUEST WITHDRAWN - REFUNDED CLR REQUEST FEE
2008-03-27	99	Miscellaneous	REC'D LTR RE OFF SI REQUEST
2008-04-09	97	Technical Assistance Request Received (fee)	REC'D CK#10528 $500.00 REPORT FORTH COMMING (HELD MEETING 04/09/08)
2008-04-09	98	Technical Assistance Provided	REC'D CK#10528 $500.00 REPORT FORTH COMMING (HELD MEETING 04/09/08)
2008-07-28	99	Miscellaneous	RECVD REQUEST FOR WDNR INVOLVEMENT - OFFSITE ACCESS TO INSATALL MONITOR WELLS
2011-09-07	130	DNR Regulatory Reminder Sent	Vapor Intrusion (VI) Assessment Notification Ltr Sent
Linked to Code 130:		0341546651_VI_Letter.pdf Click to Download or Open	
2012-06-19	99	Miscellaneous	SENT DOCUMENTS TO ATTORNEY FOR INPUT-OFFSITE ACRES EQUEST; INFORMED CONSULTANT BY PHONE
2012-12-11	99	Miscellaneous	HELD MEETING WITH RP & CONSULTANT. THE CONSULTANT WOULD PREPARE & SUBMIT SI WORKPLAN
2013-04-23	35	Site Investigation Workplan (SIWP) Received (non-fee)	REQUEST FOR VARIANCE FROM NR 141.07
2013-05-01	81	Site Investigation Workplan (SIWP) Not Approved	REQ'D ADD'L INFO
2013-06-03	99	Miscellaneous	REC'D ADD'L INF RE: REQUESTS FOR VARIANCE
2013-06-04	99	Miscellaneous	APPROVED NR 141 MONITORING WELL VARIANCE (CO-MINGLED PLUME WITH ACTIVITY 02-41-540465)
2013-07-16	99	Miscellaneous	PECFA TRANSFER NOTIFICATION LETTER SENT
2014-01-13	43	Site Activity Status Update Received	REC'D STATUS UPDATE
2014-09-22	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 1/1/2014 - 6/30/2014
Click 195 Action Name above to view NR700.11 report			
2015-03-17	99	Miscellaneous	REQUEST FOR SITE UPDATE
2015-04-15	99	Miscellaneous	REC'D VAPOR AND GW RESULTS LETTER
2015-08-10	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 1/1/2015 - 6/30/2015
Click 195 Action Name above to view NR700.11 report			
2015-08-24	130	DNR Regulatory Reminder Sent	PECFA SUNSET LETTER
Linked to Code 130:		0341546651_PECFA_LTR.pdf Click to Download or Open	
2016-02-05	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 7/1/2015 - 12/31/2015
Click 195 Action Name above to view NR700.11 report			

2016-07-25	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 1/1/2016 - 6/30/2016
Click 195 Action Name above to view NR700.11 report			
2018-01-16	130	DNR Regulatory Reminder Sent	PECFA REMINDER LETTER
2018-01-30	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 7/1/2017 - 12/31/2017
Click 195 Action Name above to view NR700.11 report			
2018-07-16	130	DNR Regulatory Reminder Sent	PECFA REMINDER LETTER
Linked to Code 130:		20180716_130_DNR_Reg_Remind_Ltr.pdf Click to Download or Open	
2018-07-18	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 1/1/2018 - 6/30/2018
Click 195 Action Name above to view NR700.11 report			
2019-01-23	130	DNR Regulatory Reminder Sent	PECFA REMINDER LETTER
Linked to Code 130:		20190123_130_DNR_Reg_Reminder_Ltr.pdf Click to Download or Open	
2019-01-27	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 7/1/2018 - 12/31/2018
Click 195 Action Name above to view NR700.11 report			
2019-07-08	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 1/1/2019 - 6/30/2019
Click 195 Action Name above to view NR700.11 report			
2019-07-25	130	DNR Regulatory Reminder Sent	PECFA REMINDER LETTER
Linked to Code 130:		20190725_130_DNR_Reg_Remind_Ltr.pdf Click to Download or Open	
2019-09-12	200	Push Action Taken	REQUESTING UPDATE - RECOMMENDING GW MONITORING AS PREVIOUSLY PROPOSED BY KEC
Linked to Code 200:		20190912_200_Push_Action.pdf Click to Download or Open	

PECFA Claims Paid or Pending Payment

Payments made from the Petroleum Environmental Cleanup Fund Award

PECFA Site Name:		Auto Shoppe-Former				
Maximum Reimbursement:			$190,000	**Total Amount Paid:**		
Occ No	**Claim No**	**Audit Date**	**Paid Date**	**Amt Submitted**	**Amt Ineligible**	**Amt Paid**
A	1			$.00		$.00

Substances

Substance	Type	Est Amt Released	Units
Chlorinated Solvents	VOC		
Volatile Organic Compounds	VOC		
Diesel Fuel	Petroleum		
Non-Chlorinated Solvents	VOC		

Who

Role	Name/Address
Responsible Party	GREENFIELD INVESTMENTS, LLC 8771 S 27TH ST FRANKLIN, WI

Project Manager	LINDA MICHALETS	2300 N MARTIN LUTHER KING DR	MILWAUKEE, WI 53212

BRRTS data comes from various sources, both internal and external to DNR. There may be omissions and errors in the data and delays in updating new information. Please see the disclaimers page for more information. We welcome your Feedback.

The Official Internet site for the Wisconsin Department of Natural Resources
101 S. Webster Street . PO Box 7921 . Madison, Wisconsin 53707-7921 . 608.266.2621

Release 2.8.4 | 08/05/2019 | Release Notes

Wisconsin Department of Natural Resources

Environmental Cleanup & Brownfields Redevelopment

BRRTS on the Web

Click the Location Name below to view the Location Details page for this Activity. Other Activities, if present, may be viewed from that page.

< Basic Search

02-41-560465 FORMER AUTO SHOPPE

OPEN ERP

Location Name (Click Location Name to View Location Details)				County	WDNR Region
FORMER AUTO SHOPPE				MILWAUKEE	SOUTHEAST
Address				Municipality	
4333 S 108TH ST				GREENFIELD	
PLSS Description			Latitude	Google Maps	RR Sites Map
NE 1/4 of the SE 1/4 of Sec 19, T06N, R21E			42.9656222	CLICK TO VIEW	CLICK TO VIEW
Additional Location Description			Longitude	Facility ID	Size (Acres)
			-88.0484809	341127160	UNKNOWN
Jurisdiction	PECFA No.	EPA Cerclis ID	Start Date	End Date	Last Action
DNR RR			2013-05-07		2019-09-12

Characteristics

PECFA Tracked?	EPA NPL Site?	Eligible for PECFA Funds?	Above Ground Storage Tank?	Drycleaner?	Co-Contamination?	Continuing Obligations Apply?
No	No	No	No	No	Yes	No

Actions

Place Cursor Over Action Code to View Description

Date	Code	Name	Comment
2012-12-11	99	Miscellaneous	HELD MEETING WITH RP & CONSULTANT. THE CONSULTANT WOULD PREPARE & SUBMIT SI WORKPLAN
2013-05-07	1	Notification of Hazardous Substance Discharge	
2013-05-17	35	Site Investigation Workplan (SIWP) Received (non-fee)	
2013-06-03	99	Miscellaneous	REC'D REQUEST FOR NR 141 MONITORING WELL VARIANCE (PLUME CO-MINGLED WITH ACTIVITY O3-41-546651)
2013-06-04	99	Miscellaneous	A[[RPVED MR 141 MONITORING WELL VARIANCE (CO-MINGLED PLUME WITH ACTIVITY 03-41-546651)

2014-09-05	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 1/1/2014 - 6/30/2014
Click 195 Action Name above to view NR700.11 report			
2015-01-19	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 7/1/2014 - 12/31/2014
Click 195 Action Name above to view NR700.11 report			
2015-07-14	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 1/1/2015 - 6/30/2015
Click 195 Action Name above to view NR700.11 report			
2015-10-01	99	Miscellaneous	REQUEST FOR SITE UPDATE LTR
2016-01-19	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 7/1/2015 - 12/31/2015
Click 195 Action Name above to view NR700.11 report			
2016-07-12	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 1/1/2016 - 6/30/2016
Click 195 Action Name above to view NR700.11 report			
2017-01-17	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 7/1/2016 - 12/31/2016
Click 195 Action Name above to view NR700.11 report			
2017-07-13	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 1/1/2017 - 6/30/2017
Click 195 Action Name above to view NR700.11 report			
2018-01-18	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 7/1/2017 - 12/31/2017
Click 195 Action Name above to view NR700.11 report			
2018-07-18	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 1/1/2018 - 6/30/2018
Click 195 Action Name above to view NR700.11 report			
2019-01-04	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 7/1/2018 - 12/31/2018
Click 195 Action Name above to view NR700.11 report			
2019-07-08	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 1/1/2019 - 6/30/2019
Click 195 Action Name above to view NR700.11 report			
2019-09-12	200	Push Action Taken	REQUESTING UPDATE - RECOMMENDING GW MONITORING AS PREVIOUSLY PROPOSED BY KEC

Linked to Code 200:	20190912_200_Push_Action.pdf Click to Download or Open

Substances

Substance	Type	Est Amt Released	Units
Volatile Organic Compounds	VOC		
Polynuclear Aromatic Hydrocarbons	Petroleum		
Chlorinated Solvents	VOC		
Petroleum - Unknown Type	Petroleum		

Who

Role	Name/Address
Responsible Party	GREENFIELD INVESTMENTS, LLC 8771 S 27TH ST FRANKLIN, WI
Project Manager	LINDA MICHALETS 2300 N MARTIN LUTHER KING DR MILWAUKEE, WI 53212

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Wisconsin Department of Natural Resources

Environmental Cleanup & Brownfields Redevelopment

BRRTS on the Web

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< Basic Search

03-41-002116 HUB CHRYSLER PLYMOUTH

CLOSED LUST

Location Name (Click Location Name to View Location Details)				County	WDNR Region
AUTO ZONE #3968				MILWAUKEE	SOUTHEAST
Address				Municipality	
3035 S 108TH ST				WEST ALLIS	
PLSS Description			Latitude	Google Maps	RR Sites Map
SE 1/4 of the SE 1/4 of Sec 07, T06N, R21E			42.9894179	CLICK TO VIEW	CLICK TO VIEW
Additional Location Description			Longitude	Facility ID	Size (Acres)
			-88.0477196	241354410	UNKNOWN
Jurisdiction	PECFA No.	EPA Cerclis ID	Start Date	End Date	Last Action
DNR RR	53227-0226-35		1989-12-26	1997-06-03	1997-06-03

Characteristics

PECFA Tracked?	EPA NPL Site?	Eligible for PECFA Funds?	Above Ground Storage Tank?	Drycleaner?	Co-Contamination?	Continuing Obligations Apply?
Yes	No	Yes	No	No	No	No

Actions

Place Cursor Over Action Code to View Description

Date	Code	Name	Comment
1989-12-26	1	Notification of Hazardous Substance Discharge	
1994-04-01	99	Miscellaneous	CHANGE PRIORITY TO LOW
1994-04-20	2	Responsible Party (RP) letter sent	RP LETTER
1994-08-31	41	Remedial Action Report Received	RA REPORT RECV'D
1994-10-31	41	Remedial Action Report Received	RA REPORT RECV'D
1997-04-02	179	Case Closure Review Request Received (non-fee)	
1997-04-04	39	Remedial Action Options Report (RAOR) Received (non-fee)	

1997-06-03	11	Activity Closed				

Other Documents and Images Not Linked to Actions Above

Click File Name to Download or Open

The file below contains permanent records related to the site available at the time the paper Site File was scanned and uploaded. Records withheld by the department due to confidentiality, attorney-client privilege, and other sensitive records, as well as lab data, may not be included. Additional records associated with the site may or may not be accessible through an open records request.

Site File	0341002116_Site_File.pdf

PECFA Claims Paid or Pending Payment

Payments made from the Petroleum Environmental Cleanup Fund Award

PECFA Site Name:			Hub Chrysler Plymouth Inc South			
Maximum Reimbursement:			$500,000	**Total Amount Paid:**		$78,826.10
Occ No	**Claim No**	**Audit Date**	**Paid Date**	**Amt Submitted**	**Amt Ineligible**	**Amt Paid**
A	1	1995-04-07	1995-11-29	$87,157.69	$4,182.85	$78,826.10

Substances

Substance	Type	Est Amt Released	Units
Petroleum - Unknown Type	Petroleum		

Who

Role	Name/Address
Responsible Party	HUB CHYSLER PLYMOUTH 3035 S 108TH ST WEST ALLIS, WI 53227

For Additional Information, Please Contact

JENNIFER DORMAN 414-263-8683 jennifer.dorman@wisconsin.gov

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Wisconsin Department of Natural Resources

Environmental Cleanup & Brownfields Redevelopment

BRRTS on the Web

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< Basic Search

02-41-246246 ONE HOUR MARTINIZING

OPEN ERP

Location Name (Click Location Name to View Location Details)			County	WDNR Region
ONE HOUR MARTINIZING			MILWAUKEE	SOUTHEAST
Address			Municipality	
2262 S 108TH ST			WEST ALLIS	
PLSS Description		Latitude	Google Maps	RR Sites Map
SW 1/4 of the SW 1/4 of Sec 05, T06N, R21E		43.0029499	CLICK TO VIEW	CLICK TO VIEW
Additional Location Description		Longitude	Facility ID	Size (Acres)
		-88.0464604	241287530	.3

Jurisdiction	PECFA No.	EPA Cerclis ID	Start Date	End Date	Last Action
DNR RR			1993-12-01		2019-08-15

Characteristics

PECFA Tracked?	EPA NPL Site?	Eligible for PECFA Funds?	Above Ground Storage Tank?	Drycleaner?	Co-Contamination?	Continuing Obligations Apply?
No	No	No	No	Yes	No	No

Actions

Place Cursor Over Action Code to View Description

Date	Code	Name	Comment
1993-12-01	1	Notification of Hazardous Substance Discharge	NOV issued
1994-11-01	14	Notice of Violation (NOV) Issued	
1995-08-10	43	Site Activity Status Update Received	
1996-02-01	43	Site Activity Status Update Received	
1996-10-30	37	Site Investigation Report (SIR) Received (non-fee)	
1999-03-05	110	DERF - Potential Claim Form	

		Approved	
2000-08-02	99	Miscellaneous	DERF APPLICATION #2
2000-10-25	99	Miscellaneous	REIMBURSEMENT SUMMARY
2000-10-25	218	DERF - Cost Reimbursement Application Approved	AUTO-POPULATED BY CAOS
2000-11-15	218	DERF - Cost Reimbursement Application Approved	AUTO-POPULATED BY CAOS
2002-11-18	218	DERF - Cost Reimbursement Application Approved	AUTO-POPULATED BY CAOS
2002-12-13	39	Remedial Action Options Report (RAOR) Received (non-fee)	
2003-07-16	218	DERF - Cost Reimbursement Application Approved	AUTO-POPULATED BY CAOS
2004-05-25	217	DERF - Cost Reimbursement Application Received	~RECEIPT OF COST REIMBURSEMENT APPL. GK.
2004-09-22	218	DERF - Cost Reimbursement Application Approved	AUTO-POPULATED BY CAOS
2005-08-22	43	Site Activity Status Update Received	
2005-08-22	217	DERF - Cost Reimbursement Application Received	PM - FOR RA$30,016.12 - FORWARDED TO MADISON
2006-01-11	218	DERF - Cost Reimbursement Application Approved	
2007-05-29	79	Case Closure Review Request Received	REC'D CK# 726943 $750.00, REC'D GIS & SOIL PKTS GIVEN TO BG 05/30/07 CHECKED 6/07/2007 BG
2007-05-29	700	Database Fee Paid for Groundwater Continuing Obligation(s)	REC'D CK# 726943 $250.00
2007-05-29	710	Database Fee Paid for Soil Continuing Obligation(s)	REC'D CK# 726943 $200.00
2007-05-29	50	GIS Registry Site	AUTOPOPULATED FROM 700/710 ACTION ENTRY ON 31-MAY-07
2007-08-14	80	Closure Not Recommended	MIM, ASR
2007-11-28	112	DERF - Change Order Received	
2007-11-28	217	DERF - Cost Reimbursement Application Received	REMEDIAL ACTION - PARTIAL
2008-04-17	99	Miscellaneous	FORWARDED CLAIM DOCUMENTS TO COMM. FINANCE
2008-04-28	218	DERF - Cost Reimbursement Application Approved	AUDIT OF 11/28/07 CLAIM COMPLETE. REIMB CHECK NOT YET SENT, NO FUNDS AVAILABLE. WILL BE ISSUED ASAP
2008-10-22	146	Remedial Action Plan Go Ahead (Notice to Proceed)	DERF CHANGE ORDER - COST APPROVED =$15,564
2009-03-10	99	Miscellaneous	REIMB CHECK FOR NOV 2007 CLAIM MAILED TODAY
2009-05-11	43	Site Activity Status Update Received	VA[PR AMD GW SAMPLE RESULTS
2010-10-18	99	Miscellaneous	DATA PACKET REVIEW SENT - REQUIRE FURTHER VAPOR ASSESSMENT
2011-01-04	112	DERF - Change Order Received	VAPOR ASSESSMENT

2011-05-11	99	Miscellaneous	EMAIL REQUEST FOR COST CLARIFICATION FOR LAST CHANGE ORDER REQUEST
2011-07-06	99	Miscellaneous	CHANGE ORDER CLARIFICATIONS REC'D
2011-09-07	130	DNR Regulatory Reminder Sent	Vapor Intrusion (VI) Assessment Notification Ltr Sent
Linked to Code 130:		0241246246_VI_Letter.pdf Click to Download or Open	
2011-10-04	99	Miscellaneous	DERP CHANGE ORDER CONDITIONALLY APPROVED - $16,470
Linked to Code 99:		20111025_99_DERP_Change_Order_Conditional_Appr.pdf Click to Download or Open	
2012-04-10	43	Site Activity Status Update Received	REC'D VI ASSESSMENT RESULTS
2013-03-21	112	DERF - Change Order Received	OFF-SITE VI INVESTIGATION SOW
2013-03-21	217	DERF - Cost Reimbursement Application Received	REMEDIAL CLAIM #8
2013-04-26	99	Miscellaneous	SOW APPROVAL FOR ADDITIONAL VAPOR ASSESSMENT LTR SENT
2013-07-19	218	DERF - Cost Reimbursement Application Approved	PAYMENT ISSUED $19,430.36
2013-12-19	43	Site Activity Status Update Received	INDOOR VAPOR ASSESSMENT RPT
2014-01-30	130	DNR Regulatory Reminder Sent	DERF FUNDING STATUS LTR
2014-03-07	99	Miscellaneous	SCOPE OF WORK PLAN FOR CLOSURE APPROVAL LTR
2014-05-20	779	Case Closure Review Fee Received	REC'D CK# 109922 $1,050.00
2014-05-30	198	Request for Additional Information (Fee-Based or Closure)	AR Pause
2014-05-30	79	Case Closure Review Request Received	
2014-07-08	199	Additional Information Received (Fee-Based or Closure)	AR RESTART - REC'D COPIES OF SENT OFFSITE LTRS & CD 30-DAY WAIT PERIOD DUE 7/28/14
2014-08-14	80	Closure Not Recommended	NEED VAPOR SYSTEMS INSTALLED, LETTERS WENT TO OFFSITE PROPERTY OWNERS
2014-09-17	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 1/1/2014 - 6/30/2014
Click 195 Action Name above to view NR700.11 report			
2015-01-12	213	DERF - Interim Action Workplan Received	SOW FOR SUPPLEMENTAL INVESTIGATION AND VAPOR MITIGATION
2015-01-20	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 7/1/2014 - 12/31/2014
Click 195 Action Name above to view NR700.11 report			
2015-01-26	112	DERF - Change Order Received	SCOPE OF WORK CHANGE ORDER APPROVAL
2015-07-15	99	Miscellaneous	COST ESTIMATE SUBSLAB + SAMPLING
2015-07-17	112	DERF - Change Order Received	SOW, COST, AND CONSULTANT APPROVAL
2015-07-20	195	Semi-Annual/PECFA Cost	Period: 1/1/2015 - 6/30/2015

		Reporting (NR700) Requirement Met	
Click 195 Action Name above to view NR700.11 report			
2015-10-05	99	Miscellaneous	RECVD COPY OF GW SAMPLE REPORT FOR OFFSITE PROPERTY OWNER
2015-12-10	99	Miscellaneous	RECEIVED SUPPLEMENTAL INVESTIGATION AND VAPOR MITIGATION REPORT
2016-01-05	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 7/1/2015 - 12/31/2015
Click 195 Action Name above to view NR700.11 report			
2016-05-13	35	Site Investigation Workplan (SIWP) Received (non-fee)	GW/VAPOR MIGRATION EVALUATION ALONG SEWERS, SUBSLAB SAMPLING, ROW SAMPLING
2016-05-16	99	Miscellaneous	VAPOR SAMPLING RESULTS ADJACENT PROPERTY (2248)
2016-05-17	112	DERF - Change Order Received	SOW APPROVAL FOR SEWERS AND SUBSLAB
2016-07-08	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 1/1/2016 - 6/30/2016
Click 195 Action Name above to view NR700.11 report			
2016-08-24	99	Miscellaneous	GW, SOIL GAS, SUBSLAB RESULTS FOR 4 PROPERTIES
2016-10-28	43	Site Activity Status Update Received	UTILITY, BASEMENT, SUBSLAB RESULTS
Linked to Code 43:		20161028_43_Status_Rpt_Oct_2016.pdf Click to Download or Open	
2016-12-29	217	DERF - Cost Reimbursement Application Received	
2017-01-11	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 7/1/2016 - 12/31/2016
Click 195 Action Name above to view NR700.11 report			
2017-02-28	99	Miscellaneous	REC'D SAMPLE DATA - VAPOR SAMPLES
Linked to Code 99:		20171028_99_Sample_Data.pdf Click to Download or Open	
2017-07-06	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 1/1/2017 - 6/30/2017
Click 195 Action Name above to view NR700.11 report			
2018-01-05	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 7/1/2017 - 12/31/2017
Click 195 Action Name above to view NR700.11 report			
2018-03-23	99	Miscellaneous	REC'D SUPPLEMENTAL CLOSURE DOCUMENTATION
Linked to Code 99:		20180323_99_Supplemental_Closure_Doc.pdf Click to Download or Open	
2018-07-02	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 1/1/2018 - 6/30/2018
Click 195 Action Name above to view NR700.11 report			
2018-09-14	99	Miscellaneous	REVIEWED ADD'L CLOSURE DOCS, SENT EMAIL TO CONFIRM SEALED SUMP, SEND REVISED CLOSURE PACKET,

			INQUIRY
2018-09-24	99	Miscellaneous	CHANGE ORDER 1 FOR CASE CLOSURE PREPARATION
2018-10-05	99	Miscellaneous	CHANGE ORDER 1 APPROVED
Linked to Code 99:		20181005_99_Change_Order_1_Appr.pdf Click to Download or Open	
2018-12-11	218	DERF - Cost Reimbursement Application Approved	
2018-12-11	288	DERF - Cost Reimbursement Paid	
2019-01-02	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 7/1/2018 - 12/31/2018
Click 195 Action Name above to view NR700.11 report			
2019-02-14	179	Case Closure Review Request Received (non-fee)	REC'D CLOSURE RESUBMITTAL
Linked to Code 179:		20190214_179_Closure_resubmit.zip Click to Download or Open	
2019-04-02	198	Request for Additional Information (Fee-Based or Closure)	NEED REVISIONS TO MAPS & TABLES. EMAIL SENT.
2019-04-22	99	Miscellaneous	REVISED CAP PLAN, MAPS, & TABLES
2019-05-02	99	Miscellaneous	REVISIONS TO CAP PLAN, SSDS INSPECTIONS
2019-06-24	99	Miscellaneous	CASE CLOSURE REVIEW/PAUSE LETTER SENT
Linked to Code 99:		20190624_99_Closure_Review_Letter.pdf Click to Download or Open	
2019-06-26	213	DERF - Interim Action Workplan Received	SOW INSPECTION, TRAINING
Linked to Code 213:		20190626_213_DERP_IAWP.pdf Click to Download or Open	
2019-07-01	195	Semi-Annual/PECFA Cost Reporting (NR700) Requirement Met	Period: 1/1/2019 - 6/30/2019
Click 195 Action Name above to view NR700.11 report			
2019-07-03	214	DERF - Interim Action Workplan Approved	APPROVED SOW
Linked to Code 214:		20190703_214_DERP_IAWP_Appr.pdf Click to Download or Open	
2019-07-11	43	Site Activity Status Update Received	REC'D NOTIFICATION FROM WE ENERGIES OF GAS METER REPLACEMENT
Linked to Code 43:		20190711_43_We_Energies_Project.pdf Click to Download or Open	
2019-08-15	99	Miscellaneous	APPROVAL OF WE ENERGIES GAS METER REPLACEMENT
Linked to Code 99:		20190815_99_We_Energies_Approval.pdf Click to Download or Open	

Other Documents and Images Not Linked to Actions Above

Click File Name to Download or Open

Category	File Name or URL Description
Dry Cleaner Response Fund	DC-648 OHM West Allis- Success, Inc. .pdf

Financial

Grants, Loans, DERF Expenditures, State-Funded and Spill Response

Category	Fiscal Year	Amount
DERF Reimbursements : Grant	2001	$37,145
DERF Reimbursements : Grant	2001	$95,711
DERF Reimbursements : Grant	2003	$32,290
DERF Reimbursements : Grant	2003	$42,758
DERF Reimbursements : Grant	2005	$28,170
DERF Reimbursements : Grant	2006	$27,461
DERF Reimbursements : Grant	2008	$24,443
DERF Reimbursements : Grant	2014	$19,430

Substances

Substance	Type	Est Amt Released	Units
Perchloroethylene	VOC		
Resource Conservation and Recovery Act Subtitle C Wastes	RCRA		
Volatile Organic Compounds	VOC		

Who

Role	Name/Address
Project Manager	JOHN HNAT 2300 N ML KING, JR DRIVE MILWAUKEE, WI 53212
Responsible Party	BRIAN CASS W229 N2494 CTH F WAUKESHA, WI 53186

BRRTS data comes from various sources, both internal and external to DNR. There may be omissions and errors in the data and delays in updating new information. Please see the disclaimers page for more information. We welcome your Feedback.

Appendix B: Soil Boring Logs and Borehole Abandonment Forms

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
STH 100 Various Intersections		GP-31

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dan Bendorf Probe Technologies	9/9/2019	9/9/2019	

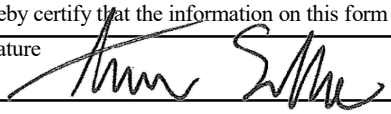
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		GP-31	Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane N, E S/C/N
NW 1/4 of SW 1/4 of Section 20, T 6 N, R 21 E
Lat 42° 59' 22.1" Long 88° 2' 50.2"
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Milwaukee	41	Greenfield and West Allis

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
GP	48 37		0	**TOPSOIL**, very dark brown (10YR 2/2), no odor, moist.										
			1	**SILTY CLAY**, medium plasticity, pale brown (10YR 6/3), no odor, moist, very stiff.				<1	1.75					
			2						2.25					
			3					2.4	3.5					
				Pale brown (10YR 6/3) to black (10YR 2/1), no odor to organic odor, very stiff to stiff.										
GP	48 24		4		CL-ML									
			5					4.3	1.5					Sample GP-31 (4'-6')
			6						1.25					
			7					3.7	1.25					
			8	End of boring at 8 feet bgs.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature  Firm TRC Tel: Fax:

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
STH 100 Various Intersections		GP-32

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dan Bendorf Probe Technologies	9/9/2019	9/9/2019	

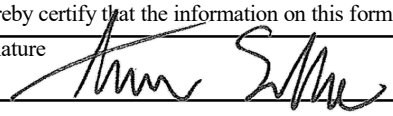
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		GP-32	Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane N, E S/C/N
SE 1/4 of SE 1/4 of Section 7, T 6 N, R 21 E
Lat 42° 57' 55.5"
Long 88° 2' 51.4"
Local Grid Location ☐ N ☐ E Feet ☐ S Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Milwaukee	41	Greenfield and West Allis

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
GP	48 31		1	**TOPSOIL**, black (10YR 2/1), no odor, moist.										
			2	**FILL**, clay, few coarse sand, trace fine gravel, low plasticity, dark brown (10YR 3/3), no odor, moist, very stiff.				8.3	3					
			3					8.9						
			4	**FILL**, well graded sand, yellowish brown (10YR 5/6), no odor, moist.										
GP	48 26		5	**FILL**, clay, sand, medium plasticity, dark yellowish brown (10YR 3/6), no odor, moist, soft.				4.5	0.25					
			6	**SILTY CLAY**, low plasticity, black (10YR 2/1), organic odor, moist, very stiff.	CL-ML			8.2	3.5					Sample GP-32 (6'-8')
			7											
			8	End of boring at 8 feet bgs.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature  Firm TRC Tel: Fax:

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
STH 100 Various Intersections		GP-33

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
Dan Bendorf Probe Technologies	9/9/2019	9/9/2019	

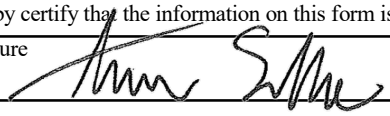
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		GP-33	Feet MSL	Feet MSL	2.0 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane N, E S/C/N
SW 1/4 of SW 1/4 of Section 5, T 6 N, R 21 E
Lat 43° 0' 12.2"
Long 88° 2' 48.2"
Local Grid Location ☐ N Feet ☐ S ☐ E Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	Milwaukee	41	Greenfield and West Allis

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
GP	48 44		0	**TOPSOIL**, black (10YR 2/1), no odor, moist.										
			1	**FILL**, silty clay, trace fine sand, black (10YR 2/1), organic odor, moist, stiff, wood shavings.				<1/<1						
			2						1.25					
			3	Black (10YR 2/1) to brown (10YR 5/3).				<1/<1	1.25					
GP	48 37		4	**FILL**, sand, poorly graded, fine, light yellowish brown (10YR 6/4), no odor, moist.										
			5	Moist to wet.				<1/<1						
			6											Sample GP-33 (4'-6')
			7					<1/<1						
			8	End of boring at 8 feet bgs. Temp well installed. Not enough water to sample.										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature  Firm TRC Tel: Fax:

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State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing

Form 3300-5 (R 4/08)

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between $10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return this form to the appropriate DNR office and bureau. See instructions on reverse for more information.

☐ Verification Only of Fill and Seal

Route to:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Milwaukee		GP-31

Lattitude / Longitude (Degrees and Minutes): 42 ° 59 ' 22.1"N / 88 ° 2 ' 50.2"W
Method Code (see instructions):

¼ / ¼	¼	Section	Township	Range
NW	SW	20	6	21 ☒ E ☐ W

or Gov't Lot #

Well Street Address

Well City, Village or Town	Well ZIP Code
Greenfield	53228

Subdivision Name	Lot #

Reason For Removal From Service	WI Unique Well # of Replacement Well

2. Facility / Owner Information

Facility Name: STH 100 Various Intersections
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner:
Present Well Owner: WisDOT
Mailing Address of Present Owner: P.O. Box 7965 5th Floor South S513.12

City of Present Owner	State	ZIP Code
Madison	WI	53707-7965

3. Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Drillhole / Borehole

Original Construction Date:
If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (Specify) Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft)	Casing Diameter (in.)

Lower Drillhole Diameter (in.)	Casing Depth (ft.)
2.0	

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☒ N/A
If bentonite chips were used, were they hydrated with water from a known safe source	☐ Yes	☐ No	☐ N/A

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

Sealing Materials
☐ Neat Cement Grout ☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " "
☐ Concrete ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite Chips	Surface	8.0	0.5	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing (mm/dd/yyyy)
Probe Technologies		9/9/2019

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

City	State	ZIP Code
West Bend	WI	53090

Signature of Person Doing Work:
Date Signed:

DNR Use Only

Date Received	Noted By

Comments:

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing

Form 3300-5 (R 4/08)

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☐ Verification Only of Fill and Seal

Route to:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Milwaukee		GP-32

Lattitude / Longitude (Degrees and Minutes): 42 ° 57 ' 55.5"N / 88 ° 2 ' 51.4"W
Method Code (see instructions):

¼ / ¼ SE	¼ SE	Section	Township	Range
or Gov't Lot #		7	6	21 ☒ E ☐ W

Well Street Address:

Well City, Village or Town	Well ZIP Code
West Allis	53227

Subdivision Name	Lot #

Reason For Removal From Service	WI Unique Well # of Replacement Well

2. Facility / Owner Information

Facility Name: STH 100 Various Intersections
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner:
Present Well Owner: WisDOT
Mailing Address of Present Owner: P.O. Box 7965 5th Floor South S513.12

City of Present Owner	State	ZIP Code
Madison	WI	53707-7965

3. Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Drillhole / Borehole

Original Construction Date:
If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (Specify) Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft)	Casing Diameter (in.)

Lower Drillhole Diameter (in.)	Casing Depth (ft.)
2.0	

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☒ N/A
If bentonite chips were used, were they hydrated with water from a known safe source	☐ Yes	☐ No	☐ N/A

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

Sealing Materials
☐ Neat Cement Grout ☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " "
☐ Concrete ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite Chips	Surface	8.0	0.5	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing (mm/dd/yyyy)
Probe Technologies		9/9/2019

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

City	State	ZIP Code	Signature of Person Doing Work	Date Signed
West Bend	WI	53090		

DNR Use Only

Date Received	Noted By

Comments:

State of Wis., Dept. of Natural Resources
dnr.wi.gov

Well / Drillhole / Borehole Filling & Sealing

Form 3300-5 (R 4/08)

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☐ Verification Only of Fill and Seal

Route to:
☐ Drinking Water ☐ Watershed/Wastewater ☐ Remediation/Redevelopment
☐ Waste Management ☐ Other

1. Well Location Information

County	WI Unique Well # of Removed Well	Hicap #
Milwaukee		GP-33

Lattitude / Longitude (Degrees and Minutes): 43 ° 0 ' 12.2"N / 88 ° 2 ' 48.2"W
Method Code (see instructions):

¼ / ¼ SW	¼ SW	Section	Township	Range
or Gov't Lot #		5	6	21 ☒ E ☐ W

Well Street Address:

Well City, Village or Town	Well ZIP Code
West Allis	53227

Subdivision Name	Lot #

Reason For Removal From Service	WI Unique Well # of Replacement Well

2. Facility / Owner Information

Facility Name: STH 100 Various Intersections
Facility ID (FID or PWS):
License/Permit/Monitoring #:
Original Well Owner:
Present Well Owner: WisDOT
Mailing Address of Present Owner: P.O. Box 7965 5th Floor South S513.12

City of Present Owner	State	ZIP Code
Madison	WI	53707-7965

3. Well / Drillhole / Borehole Information

☐ Monitoring Well
☐ Water Well
☒ Drillhole / Borehole

Original Construction Date:
If a Well Construction Report is available, please attach.

Construction Type:
☐ Drilled ☐ Driven (Sandpoint) ☐ Dug
☒ Other (Specify) Geoprobe

Formation Type:
☒ Unconsolidated Formation ☐ Bedrock

Total Well Depth From Ground Surface (ft)	Casing Diameter (in.)

Lower Drillhole Diameter (in.)	Casing Depth (ft.)
2.0	

Was well annular space grouted? ☐ Yes ☐ No ☐ Unknown

If yes, to what depth (feet)?	Depth to Water (feet)

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed?	☐ Yes	☐ No	☒ N/A
Liner(s) removed?	☐ Yes	☐ No	☒ N/A
Screen removed?	☐ Yes	☐ No	☒ N/A
Casing left in place?	☐ Yes	☐ No	☒ N/A
Was casing cut off below surface?	☐ Yes	☐ No	☒ N/A
Did sealing material rise to surface?	☒ Yes	☐ No	☐ N/A
Did material settle after 24 hours?	☐ Yes	☒ No	☐ N/A
If yes, was hole retopped?	☐ Yes	☐ No	☒ N/A
If bentonite chips were used, were they hydrated with water from a known safe source	☐ Yes	☐ No	☐ N/A

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

Sealing Materials
☐ Neat Cement Grout ☐ Clay-Sand Slurry (11 lb./gal. wt.)
☐ Sand-Cement (Concrete) Grout ☐ Bentonite-Sand Slurry " "
☐ Concrete ☒ Bentonite Chips

For Monitoring Wells and Monitoring Well Boreholes Only:
☐ Bentonite Chips ☐ Bentonite - Cement Grout
☐ Granular Bentonite ☐ Bentonite - Sand Slurry

5. Material Used to Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite Chips	Surface	8.0	0.5	

6. Comments

7. Supervision of Work

Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing (mm/dd/yyyy)
Probe Technologies		9/9/2019

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

City	State	ZIP Code
West Bend	WI	53090

Signature of Person Doing Work:
Date Signed:

DNR Use Only

Date Received	Noted By

Comments:

Appendix C: Photographic Log

Photographic Log

Client Name:	Site Location:	Project No.:
Wisconsin Department of Transportation	STH 100 Intersections Greenfield & West Allis, Milwaukee County, Wisconsin	WisDOT ID: 2030-13-00 TRC #: 356814

Photo No.	Date
1	9/9/2019

Description
Looking south at GP-31.

Photo No.	Date
2	9/9/2019

Description
Looking north at GP-32.

Photographic Log

Client Name:	Site Location:	Project No.:
Wisconsin Department of Transportation	STH 100 Intersections Greenfield & West Allis, Milwaukee County, Wisconsin	WisDOT ID: 2030-13-00 TRC #: 356814

Photo No.	Date
3	9/9/2019

Description
Looking north at GP-33.

Appendix D: Laboratory Analytical Reports

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Chicago
2417 Bond Street
University Park, IL 60484
Tel: (708)534-5200

Laboratory Job ID: 500-169724-1
Client Project/Site: WisDOT STH 100 Intersections - 356814

For:
TRC Environmental Corporation.
150 N. Patrick Blvd.
Suite 180
Brookfield, Wisconsin 53045

Attn: Mr. Bryan Bergmann

Sandie Fredrick

Authorized for release by:
9/24/2019 3:00:52 PM

Sandie Fredrick, Project Manager II
(920)261-1660
sandie.fredrick@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Case Narrative

Client: TRC Environmental Corporation. Job ID: 500-169724-1
Project/Site: WisDOT STH 100 Intersections - 356814

Job ID: 500-169724-1

Laboratory: Eurofins TestAmerica, Chicago

Narrative

Job Narrative
500-169724-1

Comments
No additional comments.

Receipt
The samples were received on 9/10/2019 8:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2º C.

Receipt Exceptions
Trip Blank is a soil Trip Blank, COC as it as a water. Client only sent in 1 Trip Blank for 2 jobs. The other job is 500-169722

GC/MS VOA
Method(s) 8260B: The method blank for analytical batch 504590 contained Naphthalene above the Method detection limit (MDL) but below reporting limit (RL). Naphthalene was non-detect in the sample: therefore, no re-analysis was done and the data has been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA
Method(s) 8082A: The following sample required a mercury clean-up, via EPA Method 3660A, to reduce matrix interferences caused by sulfur: GP-32 (6'-8') (500-169724-2). The reagent lot number used was: 190938.

Method(s) 8082A: The following sample was diluted due to the nature of the sample matrix: GP-32 (6'-8') (500-169724-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: TRC Environmental Corporation. Job ID: 500-169724-1
Project/Site: WisDOT STH 100 Intersections - 356814

Client Sample ID: GP-31 (4'-6') Lab Sample ID: 500-169724-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	27	F1 F2	0.75	0.35	mg/Kg	1	☼	6010B	Total/NA

Client Sample ID: GP-32 (6'-8') Lab Sample ID: 500-169724-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	22	J	41	6.9	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	50		41	5.5	ug/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	82		41	8.0	ug/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	85		41	8.9	ug/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	19	J	41	13	ug/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	56		41	12	ug/Kg	1	☼	8270D	Total/NA
Chrysene	51		41	11	ug/Kg	1	☼	8270D	Total/NA
Fluoranthene	140		41	7.6	ug/Kg	1	☼	8270D	Total/NA
Phenanthrene	58		41	5.7	ug/Kg	1	☼	8270D	Total/NA
Pyrene	88		41	8.2	ug/Kg	1	☼	8270D	Total/NA
Arsenic	5.3		1.1	0.37	mg/Kg	1	☼	6010B	Total/NA
Barium	88		1.1	0.12	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.31		0.22	0.039	mg/Kg	1	☼	6010B	Total/NA
Chromium	23		1.1	0.53	mg/Kg	1	☼	6010B	Total/NA
Copper	23		1.1	0.30	mg/Kg	1	☼	6010B	Total/NA
Lead	18		0.54	0.25	mg/Kg	1	☼	6010B	Total/NA
Nickel	23		1.1	0.31	mg/Kg	1	☼	6010B	Total/NA
Silver	4.3		0.54	0.14	mg/Kg	1	☼	6010B	Total/NA
Zinc	65	B	2.2	0.95	mg/Kg	1	☼	6010B	Total/NA
Mercury	0.14		0.020	0.0066	mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: GP-33 (4'-6') Lab Sample ID: 500-169724-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	570		62	23	ug/Kg	50	☼	8260B	Total/NA

Client Sample ID: Trip Blank Lab Sample ID: 500-169724-4

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: TRC Environmental Corporation. Job ID: 500-169724-1
Project/Site: WisDOT STH 100 Intersections - 356814

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CHI
WI-GRO	Wisconsin - Gasoline Range Organics (GC)	WI-GRO	TAL CHI
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CHI
WI-DRO	Wisconsin - Diesel Range Organics (GC)	WI-DRO	TAL CHI
6010B	Metals (ICP)	SW846	TAL CHI
7471B	Mercury (CVAA)	SW846	TAL CHI
Moisture	Percent Moisture	EPA	TAL CHI
3050B	Preparation, Metals	SW846	TAL CHI
3541	Automated Soxhlet Extraction	SW846	TAL CHI
5035	Closed System Purge and Trap	SW846	TAL CHI
7471B	Preparation, Mercury	SW846	TAL CHI
WI DRO PREP	Wisconsin Extraction (Diesel Range Organics)	WI-DRO	TAL CHI
WI GRO	Closed System Purge and Trap	WI-GRO	TAL CHI

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

WI-DRO = "Modified DRO: Method For Determining Diesel Range Organics", Wisconsin DNR, Publ-SW-141, September, 1995.

WI-GRO = "Modified GRO: Method For Determining Gasoline Range Organics", Wisconsin DNR, Publ-SW-140, September, 1995.

Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Sample Summary

Client: TRC Environmental Corporation.
Job ID: 500-169724-1
Project/Site: WisDOT STH 100 Intersections - 356814

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
500-169724-1	GP-31 (4'-6')	Solid	09/09/19 07:50	09/10/19 08:45	
500-169724-2	GP-32 (6'-8')	Solid	09/09/19 08:15	09/10/19 08:45	
500-169724-3	GP-33 (4'-6')	Solid	09/09/19 09:30	09/10/19 08:45	
500-169724-4	Trip Blank	Solid	09/09/19 00:00	09/10/19 08:45	

Client: TRC Environmental Corporation.
Project/Site: WisDOT STH 100 Intersections - 356814

Job ID: 500-169724-1

Client Sample ID: GP-31 (4'-6')

Date Collected: 09/09/19 07:50
Date Received: 09/10/19 08:45

Lab Sample ID: 500-169724-1

Matrix: Solid
Percent Solids: 59.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	<44		120	44	ug/Kg	☼	09/09/19 07:50	09/17/19 03:10	50
1,3,5-Trimethylbenzene	<46		120	46	ug/Kg	☼	09/09/19 07:50	09/17/19 03:10	50
Benzene	<18		31	18	ug/Kg	☼	09/09/19 07:50	09/17/19 03:10	50
Ethylbenzene	<22		31	22	ug/Kg	☼	09/09/19 07:50	09/17/19 03:10	50
Methyl tert-butyl ether	<48		120	48	ug/Kg	☼	09/09/19 07:50	09/17/19 03:10	50
Naphthalene	<41		120	41	ug/Kg	☼	09/09/19 07:50	09/17/19 03:10	50
Toluene	<18		31	18	ug/Kg	☼	09/09/19 07:50	09/17/19 03:10	50
Xylenes, Total	<27		61	27	ug/Kg	☼	09/09/19 07:50	09/17/19 03:10	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*75 - 126*	*09/09/19 07:50*	*09/17/19 03:10*	*50*
4-Bromofluorobenzene (Surr)	*107*		*72 - 124*	*09/09/19 07:50*	*09/17/19 03:10*	*50*
Dibromofluoromethane	*97*		*75 - 120*	*09/09/19 07:50*	*09/17/19 03:10*	*50*
Toluene-d8 (Surr)	*102*		*75 - 120*	*09/09/19 07:50*	*09/17/19 03:10*	*50*

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
WI Gasoline Range Organics (C5-C10)	<1200		3700	1200	ug/Kg	☼	09/09/19 07:50	09/12/19 22:41	50

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**27**	**F1 F2**	0.75	0.35	mg/Kg	☼	09/23/19 09:59	09/23/19 21:46	1

Client Sample ID: GP-32 (6'-8')

Date Collected: 09/09/19 08:15
Date Received: 09/10/19 08:45

Lab Sample ID: 500-169724-2

Matrix: Solid
Percent Solids: 79.7

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<35		75	35	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
1,1,1-Trichloroethane	<28		75	28	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
1,1,2,2-Tetrachloroethane	<30		75	30	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
1,1,2-Trichloroethane	<26		75	26	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
1,1-Dichloroethane	<31		75	31	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
1,1-Dichloroethene	<29		75	29	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
1,1-Dichloropropene	<22		75	22	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
1,2,3-Trichlorobenzene	<34		75	34	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
1,2,3-Trichloropropane	<31		150	31	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
1,2,4-Trichlorobenzene	<26		75	26	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
1,2,4-Trimethylbenzene	<27		75	27	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
1,2-Dibromo-3-Chloropropane	<150		370	150	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
1,2-Dibromoethane	<29		75	29	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
1,2-Dichlorobenzene	<25		75	25	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
1,2-Dichloroethane	<29		75	29	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
1,2-Dichloropropane	<32		75	32	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
1,3,5-Trimethylbenzene	<28		75	28	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
1,3-Dichlorobenzene	<30		75	30	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
1,3-Dichloropropane	<27		75	27	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
1,4-Dichlorobenzene	<27		75	27	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
2,2-Dichloropropane	<33		75	33	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50

Client Sample ID: GP-32 (6'-8') **Lab Sample ID: 500-169724-2**
Date Collected: 09/09/19 08:15 **Matrix: Solid**
Date Received: 09/10/19 08:45 **Percent Solids: 79.7**

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	<24		75	24	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
4-Chlorotoluene	<26		75	26	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Benzene	<11		19	11	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Bromobenzene	<27		75	27	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Bromochloromethane	<32		75	32	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Bromodichloromethane	<28		75	28	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Bromoform	<36		75	36	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Bromomethane	<60		220	60	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Carbon tetrachloride	<29		75	29	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Chlorobenzene	<29		75	29	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Chloroethane	<38		75	38	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Chloroform	<28		150	28	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Chloromethane	<24		75	24	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
cis-1,2-Dichloroethene	<31		75	31	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
cis-1,3-Dichloropropene	<31		75	31	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Dibromochloromethane	<37		75	37	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Dibromomethane	<20		75	20	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Dichlorodifluoromethane	<50		220	50	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Ethylbenzene	<14		19	14	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Hexachlorobutadiene	<33		75	33	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Isopropyl ether	<21		75	21	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Isopropylbenzene	<29		75	29	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Methyl tert-butyl ether	<29		75	29	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Methylene Chloride	<120		370	120	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Naphthalene	<25		75	25	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
n-Butylbenzene	<29		75	29	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
N-Propylbenzene	<31		75	31	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
p-Isopropyltoluene	<27		75	27	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
sec-Butylbenzene	<30		75	30	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Styrene	<29		75	29	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
tert-Butylbenzene	<30		75	30	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Tetrachloroethene	<28		75	28	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Toluene	<11		19	11	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
trans-1,2-Dichloroethene	<26		75	26	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
trans-1,3-Dichloropropene	<27		75	27	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Trichloroethene	<12		37	12	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Trichlorofluoromethane	<32		75	32	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Vinyl chloride	<20		75	20	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50
Xylenes, Total	<16		37	16	ug/Kg	☼	09/09/19 08:15	09/17/19 03:36	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*118*		*75 - 126*	*09/09/19 08:15*	*09/17/19 03:36*	*50*
4-Bromofluorobenzene (Surr)	*113*		*72 - 124*	*09/09/19 08:15*	*09/17/19 03:36*	*50*
Dibromofluoromethane	*99*		*75 - 120*	*09/09/19 08:15*	*09/17/19 03:36*	*50*
Toluene-d8 (Surr)	*100*		*75 - 120*	*09/09/19 08:15*	*09/17/19 03:36*	*50*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<44		210	44	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
1,2-Dichlorobenzene	<49		210	49	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1

Client: TRC Environmental Corporation.
Project/Site: WisDOT STH 100 Intersections - 356814

Job ID: 500-169724-1

Client Sample ID: GP-32 (6'-8')
Date Collected: 09/09/19 08:15
Date Received: 09/10/19 08:45

Lab Sample ID: 500-169724-2
Matrix: Solid
Percent Solids: 79.7

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	<46		210	46	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
1,4-Dichlorobenzene	<53		210	53	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
1-Methylnaphthalene	<10		83	10	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
2,2'-oxybis[1-chloropropane]	<48		210	48	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
2,4,5-Trichlorophenol	<94		410	94	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
2,4,6-Trichlorophenol	<140		410	140	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
2,4-Dichlorophenol	<98		410	98	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
2,4-Dimethylphenol	<160		410	160	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
2,4-Dinitrophenol	<720		830	720	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
2,4-Dinitrotoluene	<65		210	65	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
2,6-Dinitrotoluene	<81		210	81	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
2-Chloronaphthalene	<45		210	45	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
2-Chlorophenol	<70		210	70	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
2-Methylnaphthalene	<7.6		83	7.6	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
2-Methylphenol	<66		210	66	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
2-Nitroaniline	<55		210	55	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
2-Nitrophenol	<97		410	97	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
3 & 4 Methylphenol	<69		210	69	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
3,3'-Dichlorobenzidine	<58		210	58	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
3-Nitroaniline	<130		410	130	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
4,6-Dinitro-2-methylphenol	<330		830	330	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
4-Bromophenyl phenyl ether	<54		210	54	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
4-Chloro-3-methylphenol	<140		410	140	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
4-Chloroaniline	<190		830	190	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
4-Chlorophenyl phenyl ether	<48		210	48	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
4-Nitroaniline	<170		410	170	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
4-Nitrophenol	<390		830	390	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Acenaphthene	<7.4		41	7.4	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Acenaphthylene	<5.4		41	5.4	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Anthracene	**22**	**J**	41	6.9	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Benzo[a]anthracene	**50**		41	5.5	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Benzo[a]pyrene	**82**		41	8.0	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Benzo[b]fluoranthene	**85**		41	8.9	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Benzo[g,h,i]perylene	**19**	**J**	41	13	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Benzo[k]fluoranthene	**56**		41	12	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Benzoic acid	<410		2100	410	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Benzyl alcohol	<410		830	410	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Bis(2-chloroethoxy)methane	<42		210	42	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Bis(2-chloroethyl)ether	<62		210	62	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Bis(2-ethylhexyl) phthalate	<75		210	75	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Butyl benzyl phthalate	<78		210	78	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Carbazole	<100		210	100	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Chrysene	**51**		41	11	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Dibenz(a,h)anthracene	<7.9		41	7.9	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Dibenzofuran	<48		210	48	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Diethyl phthalate	<70		210	70	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Dimethyl phthalate	<54		210	54	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Di-n-butyl phthalate	<63		210	63	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Di-n-octyl phthalate	<67		210	67	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1

Client Sample ID: GP-32 (6'-8')
Date Collected: 09/09/19 08:15
Date Received: 09/10/19 08:45

Lab Sample ID: 500-169724-2
Matrix: Solid
Percent Solids: 79.7

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	**140**		41	7.6	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Fluorene	<5.8		41	5.8	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Hexachlorobenzene	<9.5		83	9.5	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Hexachlorobutadiene	<65		210	65	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Hexachlorocyclopentadiene	<240		830	240	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Hexachloroethane	<62		210	62	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Indeno[1,2,3-cd]pyrene	<11		41	11	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Isophorone	<46		210	46	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Naphthalene	<6.3		41	6.3	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Nitrobenzene	<10		41	10	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
N-Nitrosodi-n-propylamine	<50		83	50	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
N-Nitrosodiphenylamine	<48		210	48	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Pentachlorophenol	<660		830	660	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Phenanthrene	**58**		41	5.7	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Phenol	<91		210	91	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1
Pyrene	**88**		41	8.2	ug/Kg	☼	09/20/19 07:27	09/21/19 07:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*50*		*31 - 143*	*09/20/19 07:27*	*09/21/19 07:23*	*1*
2-Fluorobiphenyl (Surr)	*75*		*43 - 145*	*09/20/19 07:27*	*09/21/19 07:23*	*1*
2-Fluorophenol (Surr)	*95*		*31 - 166*	*09/20/19 07:27*	*09/21/19 07:23*	*1*
Nitrobenzene-d5 (Surr)	*74*		*37 - 147*	*09/20/19 07:27*	*09/21/19 07:23*	*1*
Phenol-d5 (Surr)	*80*		*30 - 153*	*09/20/19 07:27*	*09/21/19 07:23*	*1*
Terphenyl-d14 (Surr)	*89*		*42 - 157*	*09/20/19 07:27*	*09/21/19 07:23*	*1*

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
WI Gasoline Range Organics (C5-C10)	<750		2200	750	ug/Kg	☼	09/09/19 08:15	09/12/19 23:16	50

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<73		210	73	ug/Kg	☼	09/19/19 15:51	09/20/19 02:33	10
PCB-1221	<91		210	91	ug/Kg	☼	09/19/19 15:51	09/20/19 02:33	10
PCB-1232	<90		210	90	ug/Kg	☼	09/19/19 15:51	09/20/19 02:33	10
PCB-1242	<68		210	68	ug/Kg	☼	09/19/19 15:51	09/20/19 02:33	10
PCB-1248	<82		210	82	ug/Kg	☼	09/19/19 15:51	09/20/19 02:33	10
PCB-1254	<45		210	45	ug/Kg	☼	09/19/19 15:51	09/20/19 02:33	10
PCB-1260	<100		210	100	ug/Kg	☼	09/19/19 15:51	09/20/19 02:33	10
Polychlorinated biphenyls, Total	<40		210	40	ug/Kg	☼	09/19/19 15:51	09/20/19 02:33	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*83*		*49 - 129*	*09/19/19 15:51*	*09/20/19 02:33*	*10*
DCB Decachlorobiphenyl	*117*		*37 - 121*	*09/19/19 15:51*	*09/20/19 02:33*	*10*

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
WI Diesel Range Organics (C10-C28)	<1.7		4.2	1.7	mg/Kg	☼	09/13/19 14:05	09/16/19 13:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Nonane	*83*		*44 - 148*	*09/13/19 14:05*	*09/16/19 13:22*	*1*

Client Sample ID: GP-32 (6'-8')

Lab Sample ID: 500-169724-2
Date Collected: 09/09/19 08:15
Matrix: Solid
Date Received: 09/10/19 08:45
Percent Solids: 79.7

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.3		1.1	0.37	mg/Kg	☼	09/23/19 09:59	09/23/19 22:06	1
Barium	88		1.1	0.12	mg/Kg	☼	09/23/19 09:59	09/23/19 22:06	1
Cadmium	0.31		0.22	0.039	mg/Kg	☼	09/23/19 09:59	09/23/19 22:06	1
Chromium	23		1.1	0.53	mg/Kg	☼	09/23/19 09:59	09/23/19 22:06	1
Copper	23		1.1	0.30	mg/Kg	☼	09/23/19 09:59	09/23/19 22:06	1
Lead	18		0.54	0.25	mg/Kg	☼	09/23/19 09:59	09/23/19 22:06	1
Nickel	23		1.1	0.31	mg/Kg	☼	09/23/19 09:59	09/23/19 22:06	1
Selenium	<0.63		1.1	0.63	mg/Kg	☼	09/23/19 09:59	09/24/19 11:30	1
Silver	4.3		0.54	0.14	mg/Kg	☼	09/23/19 09:59	09/23/19 22:06	1
Zinc	65	B	2.2	0.95	mg/Kg	☼	09/23/19 09:59	09/24/19 11:30	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.14		0.020	0.0066	mg/Kg	☼	09/20/19 12:55	09/23/19 09:59	1

Client Sample ID: GP-33 (4'-6')

Lab Sample ID: 500-169724-3
Date Collected: 09/09/19 09:30
Matrix: Solid
Date Received: 09/10/19 08:45
Percent Solids: 89.1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<29		62	29	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
1,1,1-Trichloroethane	<24		62	24	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
1,1,2,2-Tetrachloroethane	<25		62	25	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
1,1,2-Trichloroethane	<22		62	22	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
1,1-Dichloroethane	<25		62	25	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
1,1-Dichloroethene	<24		62	24	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
1,1-Dichloropropene	<18		62	18	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
1,2,3-Trichlorobenzene	<28		62	28	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
1,2,3-Trichloropropane	<26		120	26	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
1,2,4-Trichlorobenzene	<21		62	21	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
1,2,4-Trimethylbenzene	<22		62	22	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
1,2-Dibromo-3-Chloropropane	<120		310	120	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
1,2-Dibromoethane	<24		62	24	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
1,2-Dichlorobenzene	<21		62	21	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
1,2-Dichloroethane	<24		62	24	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
1,2-Dichloropropane	<27		62	27	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
1,3,5-Trimethylbenzene	<24		62	24	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
1,3-Dichlorobenzene	<25		62	25	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
1,3-Dichloropropane	<22		62	22	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
1,4-Dichlorobenzene	<23		62	23	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
2,2-Dichloropropane	<28		62	28	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
2-Chlorotoluene	<19		62	19	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
4-Chlorotoluene	<22		62	22	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Benzene	<9.1		16	9.1	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Bromobenzene	<22		62	22	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Bromochloromethane	<27		62	27	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Bromodichloromethane	<23		62	23	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Bromoform	<30		62	30	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Bromomethane	<49		190	49	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50

Client Sample ID: GP-33 (4'-6')

Lab Sample ID: 500-169724-3
Date Collected: 09/09/19 09:30 **Matrix: Solid**
Date Received: 09/10/19 08:45 **Percent Solids: 89.1**

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	<24		62	24	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Chlorobenzene	<24		62	24	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Chloroethane	<31		62	31	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Chloroform	<23		120	23	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Chloromethane	<20		62	20	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
cis-1,2-Dichloroethene	<25		62	25	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
cis-1,3-Dichloropropene	<26		62	26	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Dibromochloromethane	<30		62	30	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Dibromomethane	<17		62	17	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Dichlorodifluoromethane	<42		190	42	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Ethylbenzene	<11		16	11	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Hexachlorobutadiene	<28		62	28	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Isopropyl ether	<17		62	17	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Isopropylbenzene	<24		62	24	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Methyl tert-butyl ether	<24		62	24	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Methylene Chloride	<100		310	100	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Naphthalene	<21		62	21	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
n-Butylbenzene	<24		62	24	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
N-Propylbenzene	<26		62	26	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
p-Isopropyltoluene	<22		62	22	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
sec-Butylbenzene	<25		62	25	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Styrene	<24		62	24	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
tert-Butylbenzene	<25		62	25	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Tetrachloroethene	**570**		62	23	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Toluene	<9.1		16	9.1	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
trans-1,2-Dichloroethene	<22		62	22	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
trans-1,3-Dichloropropene	<22		62	22	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Trichloroethene	<10		31	10	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Trichlorofluoromethane	<27		62	27	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Vinyl chloride	<16		62	16	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50
Xylenes, Total	<14		31	14	ug/Kg	☼	09/09/19 09:30	09/17/19 04:02	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*75 - 126*	*09/09/19 09:30*	*09/17/19 04:02*	*50*
4-Bromofluorobenzene (Surr)	*109*		*72 - 124*	*09/09/19 09:30*	*09/17/19 04:02*	*50*
Dibromofluoromethane	*98*		*75 - 120*	*09/09/19 09:30*	*09/17/19 04:02*	*50*
Toluene-d8 (Surr)	*102*		*75 - 120*	*09/09/19 09:30*	*09/17/19 04:02*	*50*

Client Sample ID: Trip Blank

Lab Sample ID: 500-169724-4
Date Collected: 09/09/19 00:00 **Matrix: Solid**
Date Received: 09/10/19 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<23		50	23	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
1,1,1-Trichloroethane	<19		50	19	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
1,1,2,2-Tetrachloroethane	<20		50	20	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
1,1,2-Trichloroethane	<18		50	18	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
1,1-Dichloroethane	<21		50	21	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
1,1-Dichloroethene	<20		50	20	ug/Kg		09/09/19 00:00	09/17/19 04:28	50

Client: TRC Environmental Corporation.
Job ID: 500-169724-1
Project/Site: WisDOT STH 100 Intersections - 356814

Client Sample ID: Trip Blank
Lab Sample ID: 500-169724-4
Date Collected: 09/09/19 00:00
Matrix: Solid
Date Received: 09/10/19 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloropropene	<15		50	15	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
1,2,3-Trichlorobenzene	<23		50	23	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
1,2,3-Trichloropropane	<21		100	21	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
1,2,4-Trichlorobenzene	<17		50	17	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
1,2,4-Trimethylbenzene	<18		50	18	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
1,2-Dibromo-3-Chloropropane	<100		250	100	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
1,2-Dibromoethane	<19		50	19	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
1,2-Dichlorobenzene	<17		50	17	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
1,2-Dichloroethane	<20		50	20	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
1,2-Dichloropropane	<21		50	21	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
1,3,5-Trimethylbenzene	<19		50	19	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
1,3-Dichlorobenzene	<20		50	20	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
1,3-Dichloropropane	<18		50	18	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
1,4-Dichlorobenzene	<18		50	18	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
2,2-Dichloropropane	<22		50	22	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
2-Chlorotoluene	<16		50	16	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
4-Chlorotoluene	<18		50	18	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Benzene	<7.3		13	7.3	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Bromobenzene	<18		50	18	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Bromochloromethane	<21		50	21	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Bromodichloromethane	<19		50	19	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Bromoform	<24		50	24	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Bromomethane	<40		150	40	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Carbon tetrachloride	<19		50	19	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Chlorobenzene	<19		50	19	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Chloroethane	<25		50	25	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Chloroform	<19		100	19	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Chloromethane	<16		50	16	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
cis-1,2-Dichloroethene	<20		50	20	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
cis-1,3-Dichloropropene	<21		50	21	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Dibromochloromethane	<24		50	24	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Dibromomethane	<14		50	14	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Dichlorodifluoromethane	<34		150	34	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Ethylbenzene	<9.2		13	9.2	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Hexachlorobutadiene	<22		50	22	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Isopropyl ether	<14		50	14	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Isopropylbenzene	<19		50	19	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Methyl tert-butyl ether	<20		50	20	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Methylene Chloride	<82		250	82	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Naphthalene	<17		50	17	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
n-Butylbenzene	<19		50	19	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
N-Propylbenzene	<21		50	21	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
p-Isopropyltoluene	<18		50	18	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
sec-Butylbenzene	<20		50	20	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Styrene	<19		50	19	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
tert-Butylbenzene	<20		50	20	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Tetrachloroethene	<19		50	19	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Toluene	<7.4		13	7.4	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
trans-1,2-Dichloroethene	<18		50	18	ug/Kg		09/09/19 00:00	09/17/19 04:28	50

Client: TRC Environmental Corporation.
Job ID: 500-169724-1
Project/Site: WisDOT STH 100 Intersections - 356814

Client Sample ID: Trip Blank
Lab Sample ID: 500-169724-4
Date Collected: 09/09/19 00:00
Matrix: Solid
Date Received: 09/10/19 08:45

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	<18		50	18	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Trichloroethene	<8.2		25	8.2	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Trichlorofluoromethane	<21		50	21	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Vinyl chloride	<13		50	13	ug/Kg		09/09/19 00:00	09/17/19 04:28	50
Xylenes, Total	<11		25	11	ug/Kg		09/09/19 00:00	09/17/19 04:28	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*119*		*75 - 126*	*09/09/19 00:00*	*09/17/19 04:28*	*50*
4-Bromofluorobenzene (Surr)	*109*		*72 - 124*	*09/09/19 00:00*	*09/17/19 04:28*	*50*
Dibromofluoromethane	*99*		*75 - 120*	*09/09/19 00:00*	*09/17/19 04:28*	*50*
Toluene-d8 (Surr)	*102*		*75 - 120*	*09/09/19 00:00*	*09/17/19 04:28*	*50*

Definitions/Glossary

Client: TRC Environmental Corporation. Job ID: 500-169724-1
Project/Site: WisDOT STH 100 Intersections - 356814

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
F3	Duplicate RPD exceeds the control limit
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

GC/MS VOA

Prep Batch: 504467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169724-1	GP-31 (4'-6')	Total/NA	Solid	WI GRO	
500-169724-2	GP-32 (6'-8')	Total/NA	Solid	WI GRO	
500-169724-3	GP-33 (4'-6')	Total/NA	Solid	5035	
500-169724-4	Trip Blank	Total/NA	Solid	5035	
LB3 500-504467/18-A	Method Blank	Total/NA	Solid	WI GRO	
LCS 500-504467/19-A	Lab Control Sample	Total/NA	Solid	WI GRO	

Analysis Batch: 504590

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB3 500-504467/18-A	Method Blank	Total/NA	Solid	8260B	504467
MB 500-504590/9	Method Blank	Total/NA	Solid	8260B	
LCS 500-504467/19-A	Lab Control Sample	Total/NA	Solid	8260B	504467
LCS 500-504590/8	Lab Control Sample	Total/NA	Solid	8260B	

Analysis Batch: 505112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169724-1	GP-31 (4'-6')	Total/NA	Solid	8260B	504467
500-169724-2	GP-32 (6'-8')	Total/NA	Solid	8260B	504467
500-169724-3	GP-33 (4'-6')	Total/NA	Solid	8260B	504467
500-169724-4	Trip Blank	Total/NA	Solid	8260B	504467
MB 500-505112/6	Method Blank	Total/NA	Solid	8260B	
LCS 500-505112/7	Lab Control Sample	Total/NA	Solid	8260B	

GC/MS Semi VOA

Prep Batch: 505862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169724-2	GP-32 (6'-8')	Total/NA	Solid	3541	
MB 500-505862/1-A	Method Blank	Total/NA	Solid	3541	
LCS 500-505862/2-A	Lab Control Sample	Total/NA	Solid	3541	

Analysis Batch: 506027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169724-2	GP-32 (6'-8')	Total/NA	Solid	8270D	505862
MB 500-505862/1-A	Method Blank	Total/NA	Solid	8270D	505862
LCS 500-505862/2-A	Lab Control Sample	Total/NA	Solid	8270D	505862

GC VOA

Prep Batch: 504467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169724-1	GP-31 (4'-6')	Total/NA	Solid	WI GRO	
500-169724-2	GP-32 (6'-8')	Total/NA	Solid	WI GRO	
LB3 500-504467/18-A	Method Blank	Total/NA	Solid	WI GRO	
LCS 500-504467/20-A	Lab Control Sample	Total/NA	Solid	WI GRO	
LCSD 500-504467/21-A	Lab Control Sample Dup	Total/NA	Solid	WI GRO	

Analysis Batch: 504518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169724-1	GP-31 (4'-6')	Total/NA	Solid	WI-GRO	504467
500-169724-2	GP-32 (6'-8')	Total/NA	Solid	WI-GRO	504467
LB3 500-504467/18-A	Method Blank	Total/NA	Solid	WI-GRO	504467

GC VOA (Continued)

Analysis Batch: 504518 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-504467/20-A	Lab Control Sample	Total/NA	Solid	WI-GRO	504467
LCSD 500-504467/21-A	Lab Control Sample Dup	Total/NA	Solid	WI-GRO	504467

GC Semi VOA

Prep Batch: 504764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169724-2	GP-32 (6'-8')	Total/NA	Solid	WI DRO PREP	
MB 500-504764/1-A	Method Blank	Total/NA	Solid	WI DRO PREP	
LCS 500-504764/2-A	Lab Control Sample	Total/NA	Solid	WI DRO PREP	
LCSD 500-504764/3-A	Lab Control Sample Dup	Total/NA	Solid	WI DRO PREP	

Analysis Batch: 504964

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169724-2	GP-32 (6'-8')	Total/NA	Solid	WI-DRO	504764
MB 500-504764/1-A	Method Blank	Total/NA	Solid	WI-DRO	504764
LCS 500-504764/2-A	Lab Control Sample	Total/NA	Solid	WI-DRO	504764
LCSD 500-504764/3-A	Lab Control Sample Dup	Total/NA	Solid	WI-DRO	504764

Analysis Batch: 505681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169724-2	GP-32 (6'-8')	Total/NA	Solid	8082A	505767
MB 500-505767/1-A	Method Blank	Total/NA	Solid	8082A	505767
LCS 500-505767/2-A	Lab Control Sample	Total/NA	Solid	8082A	505767

Prep Batch: 505767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169724-2	GP-32 (6'-8')	Total/NA	Solid	3541	
MB 500-505767/1-A	Method Blank	Total/NA	Solid	3541	
LCS 500-505767/2-A	Lab Control Sample	Total/NA	Solid	3541	

Metals

Prep Batch: 505905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169724-2	GP-32 (6'-8')	Total/NA	Solid	7471B	
MB 500-505905/12-A	Method Blank	Total/NA	Solid	7471B	
LCS 500-505905/13-A	Lab Control Sample	Total/NA	Solid	7471B	

Prep Batch: 506290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169724-1	GP-31 (4'-6')	Total/NA	Solid	3050B	
500-169724-2	GP-32 (6'-8')	Total/NA	Solid	3050B	
MB 500-506290/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 500-506290/2-A	Lab Control Sample	Total/NA	Solid	3050B	
500-169724-1 MS	GP-31 (4'-6')	Total/NA	Solid	3050B	
500-169724-1 MSD	GP-31 (4'-6')	Total/NA	Solid	3050B	
500-169724-1 DU	GP-31 (4'-6')	Total/NA	Solid	3050B	

Analysis Batch: 506307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169724-2	GP-32 (6'-8')	Total/NA	Solid	7471B	505905

Metals (Continued)

Analysis Batch: 506307 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-505905/12-A	Method Blank	Total/NA	Solid	7471B	505905
LCS 500-505905/13-A	Lab Control Sample	Total/NA	Solid	7471B	505905

Analysis Batch: 506449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169724-1	GP-31 (4'-6')	Total/NA	Solid	6010B	506290
500-169724-2	GP-32 (6'-8')	Total/NA	Solid	6010B	506290
MB 500-506290/1-A	Method Blank	Total/NA	Solid	6010B	506290
LCS 500-506290/2-A	Lab Control Sample	Total/NA	Solid	6010B	506290
500-169724-1 MS	GP-31 (4'-6')	Total/NA	Solid	6010B	506290
500-169724-1 MSD	GP-31 (4'-6')	Total/NA	Solid	6010B	506290
500-169724-1 DU	GP-31 (4'-6')	Total/NA	Solid	6010B	506290

Analysis Batch: 506529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169724-2	GP-32 (6'-8')	Total/NA	Solid	6010B	506290
MB 500-506290/1-A	Method Blank	Total/NA	Solid	6010B	506290
LCS 500-506290/2-A	Lab Control Sample	Total/NA	Solid	6010B	506290
500-169724-1 MS	GP-31 (4'-6')	Total/NA	Solid	6010B	506290
500-169724-1 MSD	GP-31 (4'-6')	Total/NA	Solid	6010B	506290
500-169724-1 DU	GP-31 (4'-6')	Total/NA	Solid	6010B	506290

General Chemistry

Analysis Batch: 505711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-169724-1	GP-31 (4'-6')	Total/NA	Solid	Moisture	
500-169724-2	GP-32 (6'-8')	Total/NA	Solid	Moisture	
500-169724-3	GP-33 (4'-6')	Total/NA	Solid	Moisture	

Surrogate Summary

Client: TRC Environmental Corporation.
Project/Site: WisDOT STH 100 Intersections - 356814

Job ID: 500-169724-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(75-126)	(72-124)	(75-120)	(75-120)
500-169724-1	GP-31 (4'-6')	112	107	97	102
500-169724-2	GP-32 (6'-8')	118	113	99	100
500-169724-3	GP-33 (4'-6')	117	109	98	102
500-169724-4	Trip Blank	119	109	99	102
LB3 500-504467/18-A	Method Blank	91	109	92	99
LCS 500-504467/19-A	Lab Control Sample	91	99	95	105
LCS 500-504590/8	Lab Control Sample	88	99	94	105
LCS 500-505112/7	Lab Control Sample	109	109	96	104
MB 500-504590/9	Method Blank	87	107	91	101
MB 500-505112/6	Method Blank	119	111	101	103

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHL
Lab Sample ID	Client Sample ID	(31-143)	(43-145)	(31-166)	(37-147)	(30-153)	(42-157)
500-169724-2	GP-32 (6'-8')	50	75	95	74	80	89
LCS 500-505862/2-A	Lab Control Sample	70	86	99	83	88	92
MB 500-505862/1-A	Method Blank	60	76	107	76	91	94

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCBP1
Lab Sample ID	Client Sample ID	(49-129)	(37-121)
500-169724-2	GP-32 (6'-8')	83	117
LCS 500-505767/2-A	Lab Control Sample	93	100
MB 500-505767/1-A	Method Blank	100	112

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCBP = DCB Decachlorobiphenyl

Surrogate Summary

Client: TRC Environmental Corporation. Job ID: 500-169724-1
Project/Site: WisDOT STH 100 Intersections - 356814

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	C9 (44-148)								
500-169724-2	GP-32 (6'-8')	83								
LCS 500-504764/2-A	Lab Control Sample	84								
LCSD 500-504764/3-A	Lab Control Sample Dup	83								
MB 500-504764/1-A	Method Blank	79								

Surrogate Legend

C9 = n-Nonane

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: LB3 500-504467/18-A
Matrix: Solid
Analysis Batch: 504590

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 504467

Analyte	LB3 Result	LB3 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<23		50	23	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
1,1,1-Trichloroethane	<19		50	19	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
1,1,2,2-Tetrachloroethane	<20		50	20	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
1,1,2-Trichloroethane	<18		50	18	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
1,1-Dichloroethane	<21		50	21	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
1,1-Dichloroethene	<20		50	20	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
1,1-Dichloropropene	<15		50	15	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
1,2,3-Trichlorobenzene	<23		50	23	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
1,2,3-Trichloropropane	<21		100	21	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
1,2,4-Trichlorobenzene	<17		50	17	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
1,2,4-Trimethylbenzene	<18		50	18	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
1,2-Dibromo-3-Chloropropane	<100		250	100	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
1,2-Dibromoethane	<19		50	19	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
1,2-Dichlorobenzene	<17		50	17	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
1,2-Dichloroethane	<20		50	20	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
1,2-Dichloropropane	<21		50	21	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
1,3,5-Trimethylbenzene	<19		50	19	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
1,3-Dichlorobenzene	<20		50	20	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
1,3-Dichloropropane	<18		50	18	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
1,4-Dichlorobenzene	<18		50	18	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
2,2-Dichloropropane	<22		50	22	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
2-Chlorotoluene	<16		50	16	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
4-Chlorotoluene	<18		50	18	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Benzene	<7.3		13	7.3	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Bromobenzene	<18		50	18	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Bromochloromethane	<21		50	21	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Bromodichloromethane	<19		50	19	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Bromoform	<24		50	24	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Bromomethane	<40		150	40	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Carbon tetrachloride	<19		50	19	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Chlorobenzene	<19		50	19	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Chloroethane	<25		50	25	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Chloroform	<19		100	19	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Chloromethane	<16		50	16	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
cis-1,2-Dichloroethene	<20		50	20	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
cis-1,3-Dichloropropene	<21		50	21	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Dibromochloromethane	<24		50	24	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Dibromomethane	<14		50	14	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Dichlorodifluoromethane	<34		150	34	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Ethylbenzene	<9.2		13	9.2	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Hexachlorobutadiene	<22		50	22	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Isopropyl ether	<14		50	14	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Isopropylbenzene	<19		50	19	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Methyl tert-butyl ether	<20		50	20	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Methylene Chloride	<82		250	82	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Naphthalene	<17		50	17	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
n-Butylbenzene	<19		50	19	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
N-Propylbenzene	<21		50	21	ug/Kg		09/12/19 08:00	09/13/19 06:51	50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LB3 500-504467/18-A **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 504590 **Prep Batch: 504467**

Analyte	LB3 Result	LB3 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	<18		50	18	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
sec-Butylbenzene	<20		50	20	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Styrene	<19		50	19	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
tert-Butylbenzene	<20		50	20	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Tetrachloroethene	<19		50	19	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Toluene	<7.4		13	7.4	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
trans-1,2-Dichloroethene	<18		50	18	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
trans-1,3-Dichloropropene	<18		50	18	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Trichloroethene	<8.2		25	8.2	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Trichlorofluoromethane	<21		50	21	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Vinyl chloride	<13		50	13	ug/Kg		09/12/19 08:00	09/13/19 06:51	50
Xylenes, Total	<11		25	11	ug/Kg		09/12/19 08:00	09/13/19 06:51	50

Surrogate	*LB3 %Recovery*	*LB3 Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*75 - 126*	*09/12/19 08:00*	*09/13/19 06:51*	*50*
4-Bromofluorobenzene (Surr)	*109*		*72 - 124*	*09/12/19 08:00*	*09/13/19 06:51*	*50*
Dibromofluoromethane	*92*		*75 - 120*	*09/12/19 08:00*	*09/13/19 06:51*	*50*
Toluene-d8 (Surr)	*99*		*75 - 120*	*09/12/19 08:00*	*09/13/19 06:51*	*50*

Lab Sample ID: LCS 500-504467/19-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 504590 **Prep Batch: 504467**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	2500	2780		ug/Kg		111	70 - 125
1,1,1-Trichloroethane	2500	2420		ug/Kg		97	70 - 125
1,1,2,2-Tetrachloroethane	2500	2820		ug/Kg		113	62 - 140
1,1,2-Trichloroethane	2500	2630		ug/Kg		105	71 - 130
1,1-Dichloroethane	2500	2980		ug/Kg		119	70 - 125
1,1-Dichloroethene	2500	2370		ug/Kg		95	67 - 122
1,1-Dichloropropene	2500	2720		ug/Kg		109	70 - 121
1,2,3-Trichlorobenzene	2500	2720		ug/Kg		109	51 - 145
1,2,3-Trichloropropane	2500	2560		ug/Kg		103	50 - 133
1,2,4-Trichlorobenzene	2500	2690		ug/Kg		107	57 - 137
1,2,4-Trimethylbenzene	2500	2690		ug/Kg		107	70 - 123
1,2-Dibromo-3-Chloropropane	2500	2140		ug/Kg		86	56 - 123
1,2-Dibromoethane	2500	2750		ug/Kg		110	70 - 125
1,2-Dichlorobenzene	2500	2830		ug/Kg		113	70 - 125
1,2-Dichloroethane	2500	2560		ug/Kg		102	68 - 127
1,2-Dichloropropane	2500	3170		ug/Kg		127	67 - 130
1,3,5-Trimethylbenzene	2500	2740		ug/Kg		110	70 - 123
1,3-Dichlorobenzene	2500	2780		ug/Kg		111	70 - 125
1,3-Dichloropropane	2500	2780		ug/Kg		111	62 - 136
1,4-Dichlorobenzene	2500	2670		ug/Kg		107	70 - 120
2,2-Dichloropropane	2500	2560		ug/Kg		102	58 - 139
2-Chlorotoluene	2500	2690		ug/Kg		108	70 - 125
4-Chlorotoluene	2500	2570		ug/Kg		103	68 - 124
Benzene	2500	2750		ug/Kg		110	70 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-504467/19-A
Matrix: Solid
Analysis Batch: 504590

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 504467

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	2500	2760		ug/Kg		111	70 - 122
Bromochloromethane	2500	2670		ug/Kg		107	65 - 122
Bromodichloromethane	2500	2430		ug/Kg		97	69 - 120
Bromoform	2500	2470		ug/Kg		99	56 - 132
Bromomethane	2500	1840		ug/Kg		74	40 - 152
Carbon tetrachloride	2500	2230		ug/Kg		89	59 - 133
Chlorobenzene	2500	2780		ug/Kg		111	70 - 120
Chloroethane	2500	2530		ug/Kg		101	48 - 136
Chloroform	2500	2500		ug/Kg		100	70 - 120
Chloromethane	2500	2450		ug/Kg		98	56 - 152
cis-1,2-Dichloroethene	2500	2670		ug/Kg		107	70 - 125
cis-1,3-Dichloropropene	2500	2820		ug/Kg		113	64 - 127
Dibromochloromethane	2500	2470		ug/Kg		99	68 - 125
Dibromomethane	2500	2520		ug/Kg		101	70 - 120
Dichlorodifluoromethane	2500	1270		ug/Kg		51	40 - 159
Ethylbenzene	2500	2890		ug/Kg		116	70 - 123
Hexachlorobutadiene	2500	2960		ug/Kg		118	51 - 150
Isopropylbenzene	2500	2790		ug/Kg		112	70 - 126
Methyl tert-butyl ether	2500	2420		ug/Kg		97	55 - 123
Methylene Chloride	2500	2600		ug/Kg		104	69 - 125
Naphthalene	2500	2520		ug/Kg		101	53 - 144
n-Butylbenzene	2500	2720		ug/Kg		109	68 - 125
N-Propylbenzene	2500	2700		ug/Kg		108	69 - 127
p-Isopropyltoluene	2500	2700		ug/Kg		108	70 - 125
sec-Butylbenzene	2500	2830		ug/Kg		113	70 - 123
Styrene	2500	2720		ug/Kg		109	70 - 120
tert-Butylbenzene	2500	2760		ug/Kg		111	70 - 121
Tetrachloroethene	2500	2880		ug/Kg		115	70 - 128
Toluene	2500	2760		ug/Kg		110	70 - 125
trans-1,2-Dichloroethene	2500	2590		ug/Kg		104	70 - 125
trans-1,3-Dichloropropene	2500	2520		ug/Kg		101	62 - 128
Trichloroethene	2500	2650		ug/Kg		106	70 - 125
Trichlorofluoromethane	2500	2120		ug/Kg		85	55 - 128
Vinyl chloride	2500	2700		ug/Kg		108	64 - 126
Xylenes, Total	5000	5350		ug/Kg		107	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*91*		*75 - 126*
4-Bromofluorobenzene (Surr)	*99*		*72 - 124*
Dibromofluoromethane	*95*		*75 - 120*
Toluene-d8 (Surr)	*105*		*75 - 120*

Lab Sample ID: MB 500-504590/9
Matrix: Solid
Analysis Batch: 504590

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/Kg			09/12/19 23:31	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-504590/9
Matrix: Solid
Analysis Batch: 504590

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/Kg			09/12/19 23:31	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/Kg			09/12/19 23:31	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/Kg			09/12/19 23:31	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/Kg			09/12/19 23:31	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/Kg			09/12/19 23:31	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/Kg			09/12/19 23:31	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/Kg			09/12/19 23:31	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/Kg			09/12/19 23:31	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/Kg			09/12/19 23:31	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/Kg			09/12/19 23:31	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/Kg			09/12/19 23:31	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/Kg			09/12/19 23:31	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/Kg			09/12/19 23:31	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/Kg			09/12/19 23:31	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/Kg			09/12/19 23:31	1
1,3,5-Trimethylbenzene	<0.38		1.0	0.38	ug/Kg			09/12/19 23:31	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/Kg			09/12/19 23:31	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/Kg			09/12/19 23:31	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/Kg			09/12/19 23:31	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/Kg			09/12/19 23:31	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/Kg			09/12/19 23:31	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/Kg			09/12/19 23:31	1
Benzene	<0.15		0.25	0.15	ug/Kg			09/12/19 23:31	1
Bromobenzene	<0.36		1.0	0.36	ug/Kg			09/12/19 23:31	1
Bromochloromethane	<0.43		1.0	0.43	ug/Kg			09/12/19 23:31	1
Bromodichloromethane	<0.37		1.0	0.37	ug/Kg			09/12/19 23:31	1
Bromoform	<0.48		1.0	0.48	ug/Kg			09/12/19 23:31	1
Bromomethane	<0.80		3.0	0.80	ug/Kg			09/12/19 23:31	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/Kg			09/12/19 23:31	1
Chlorobenzene	<0.39		1.0	0.39	ug/Kg			09/12/19 23:31	1
Chloroethane	<0.50		1.0	0.50	ug/Kg			09/12/19 23:31	1
Chloroform	<0.37		2.0	0.37	ug/Kg			09/12/19 23:31	1
Chloromethane	<0.32		1.0	0.32	ug/Kg			09/12/19 23:31	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/Kg			09/12/19 23:31	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/Kg			09/12/19 23:31	1
Dibromochloromethane	<0.49		1.0	0.49	ug/Kg			09/12/19 23:31	1
Dibromomethane	<0.27		1.0	0.27	ug/Kg			09/12/19 23:31	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/Kg			09/12/19 23:31	1
Ethylbenzene	<0.18		0.25	0.18	ug/Kg			09/12/19 23:31	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/Kg			09/12/19 23:31	1
Isopropyl ether	<0.28		1.0	0.28	ug/Kg			09/12/19 23:31	1
Isopropylbenzene	<0.38		1.0	0.38	ug/Kg			09/12/19 23:31	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/Kg			09/12/19 23:31	1
Methylene Chloride	<1.6		5.0	1.6	ug/Kg			09/12/19 23:31	1
Naphthalene	0.778	J	1.0	0.33	ug/Kg			09/12/19 23:31	1
n-Butylbenzene	<0.39		1.0	0.39	ug/Kg			09/12/19 23:31	1
N-Propylbenzene	<0.41		1.0	0.41	ug/Kg			09/12/19 23:31	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/Kg			09/12/19 23:31	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/Kg			09/12/19 23:31	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-504590/9 **Client Sample ID: Method Blank**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 504590

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	<0.39		1.0	0.39	ug/Kg			09/12/19 23:31	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/Kg			09/12/19 23:31	1
Tetrachloroethene	<0.37		1.0	0.37	ug/Kg			09/12/19 23:31	1
Toluene	<0.15		0.25	0.15	ug/Kg			09/12/19 23:31	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/Kg			09/12/19 23:31	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/Kg			09/12/19 23:31	1
Trichloroethene	<0.16		0.50	0.16	ug/Kg			09/12/19 23:31	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/Kg			09/12/19 23:31	1
Vinyl chloride	<0.26		1.0	0.26	ug/Kg			09/12/19 23:31	1
Xylenes, Total	<0.22		0.50	0.22	ug/Kg			09/12/19 23:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*87*		*75 - 126*		*09/12/19 23:31*	*1*
4-Bromofluorobenzene (Surr)	*107*		*72 - 124*		*09/12/19 23:31*	*1*
Dibromofluoromethane	*91*		*75 - 120*		*09/12/19 23:31*	*1*
Toluene-d8 (Surr)	*101*		*75 - 120*		*09/12/19 23:31*	*1*

Lab Sample ID: LCS 500-504590/8 **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 504590

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	50.0	44.3		ug/Kg		89	70 - 125
1,1,1-Trichloroethane	50.0	41.5		ug/Kg		83	70 - 125
1,1,2,2-Tetrachloroethane	50.0	45.5		ug/Kg		91	62 - 140
1,1,2-Trichloroethane	50.0	42.8		ug/Kg		86	71 - 130
1,1-Dichloroethane	50.0	48.5		ug/Kg		97	70 - 125
1,1-Dichloroethene	50.0	40.0		ug/Kg		80	67 - 122
1,1-Dichloropropene	50.0	44.8		ug/Kg		90	70 - 121
1,2,3-Trichlorobenzene	50.0	43.2		ug/Kg		86	51 - 145
1,2,3-Trichloropropane	50.0	41.5		ug/Kg		83	50 - 133
1,2,4-Trichlorobenzene	50.0	45.3		ug/Kg		91	57 - 137
1,2,4-Trimethylbenzene	50.0	44.0		ug/Kg		88	70 - 123
1,2-Dibromo-3-Chloropropane	50.0	34.2		ug/Kg		68	56 - 123
1,2-Dibromoethane	50.0	44.3		ug/Kg		89	70 - 125
1,2-Dichlorobenzene	50.0	44.7		ug/Kg		89	70 - 125
1,2-Dichloroethane	50.0	39.2		ug/Kg		78	68 - 127
1,2-Dichloropropane	50.0	49.0		ug/Kg		98	67 - 130
1,3,5-Trimethylbenzene	50.0	44.5		ug/Kg		89	70 - 123
1,3-Dichlorobenzene	50.0	45.8		ug/Kg		92	70 - 125
1,3-Dichloropropane	50.0	44.2		ug/Kg		88	62 - 136
1,4-Dichlorobenzene	50.0	44.5		ug/Kg		89	70 - 120
2,2-Dichloropropane	50.0	45.2		ug/Kg		90	58 - 139
2-Chlorotoluene	50.0	44.0		ug/Kg		88	70 - 125
4-Chlorotoluene	50.0	42.7		ug/Kg		85	68 - 124
Benzene	50.0	44.0		ug/Kg		88	70 - 120
Bromobenzene	50.0	44.1		ug/Kg		88	70 - 122
Bromochloromethane	50.0	42.4		ug/Kg		85	65 - 122

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-504590/8
Matrix: Solid
Analysis Batch: 504590

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromodichloromethane	50.0	37.9		ug/Kg		76	69 - 120
Bromoform	50.0	40.7		ug/Kg		81	56 - 132
Bromomethane	50.0	47.2		ug/Kg		94	40 - 152
Carbon tetrachloride	50.0	38.2		ug/Kg		76	59 - 133
Chlorobenzene	50.0	45.1		ug/Kg		90	70 - 120
Chloroethane	50.0	51.7		ug/Kg		103	48 - 136
Chloroform	50.0	40.5		ug/Kg		81	70 - 120
Chloromethane	50.0	50.7		ug/Kg		101	56 - 152
cis-1,2-Dichloroethene	50.0	43.2		ug/Kg		86	70 - 125
cis-1,3-Dichloropropene	50.0	45.2		ug/Kg		90	64 - 127
Dibromochloromethane	50.0	40.0		ug/Kg		80	68 - 125
Dibromomethane	50.0	40.3		ug/Kg		81	70 - 120
Dichlorodifluoromethane	50.0	35.7		ug/Kg		71	40 - 159
Ethylbenzene	50.0	47.1		ug/Kg		94	70 - 123
Hexachlorobutadiene	50.0	49.4		ug/Kg		99	51 - 150
Isopropylbenzene	50.0	45.5		ug/Kg		91	70 - 126
Methyl tert-butyl ether	50.0	38.6		ug/Kg		77	55 - 123
Methylene Chloride	50.0	44.3		ug/Kg		89	69 - 125
Naphthalene	50.0	39.6		ug/Kg		79	53 - 144
n-Butylbenzene	50.0	46.4		ug/Kg		93	68 - 125
N-Propylbenzene	50.0	44.8		ug/Kg		90	69 - 127
p-Isopropyltoluene	50.0	44.8		ug/Kg		90	70 - 125
sec-Butylbenzene	50.0	46.2		ug/Kg		92	70 - 123
Styrene	50.0	44.2		ug/Kg		88	70 - 120
tert-Butylbenzene	50.0	44.4		ug/Kg		89	70 - 121
Tetrachloroethene	50.0	49.2		ug/Kg		98	70 - 128
Toluene	50.0	44.4		ug/Kg		89	70 - 125
trans-1,2-Dichloroethene	50.0	43.8		ug/Kg		88	70 - 125
trans-1,3-Dichloropropene	50.0	41.5		ug/Kg		83	62 - 128
Trichloroethene	50.0	43.3		ug/Kg		87	70 - 125
Trichlorofluoromethane	50.0	38.8		ug/Kg		78	55 - 128
Vinyl chloride	50.0	52.3		ug/Kg		105	64 - 126
Xylenes, Total	100	88.2		ug/Kg		88	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*75 - 126*
4-Bromofluorobenzene (Surr)	*99*		*72 - 124*
Dibromofluoromethane	*94*		*75 - 120*
Toluene-d8 (Surr)	*105*		*75 - 120*

Lab Sample ID: MB 500-505112/6
Matrix: Solid
Analysis Batch: 505112

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/Kg			09/16/19 22:53	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/Kg			09/16/19 22:53	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/Kg			09/16/19 22:53	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-505112/6
Matrix: Solid
Analysis Batch: 505112

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/Kg			09/16/19 22:53	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/Kg			09/16/19 22:53	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/Kg			09/16/19 22:53	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/Kg			09/16/19 22:53	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/Kg			09/16/19 22:53	1
1,2,3-Trichloropropane	<0.41		2.0	0.41	ug/Kg			09/16/19 22:53	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/Kg			09/16/19 22:53	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/Kg			09/16/19 22:53	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/Kg			09/16/19 22:53	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/Kg			09/16/19 22:53	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/Kg			09/16/19 22:53	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/Kg			09/16/19 22:53	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/Kg			09/16/19 22:53	1
1,3,5-Trimethylbenzene	<0.38		1.0	0.38	ug/Kg			09/16/19 22:53	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/Kg			09/16/19 22:53	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/Kg			09/16/19 22:53	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/Kg			09/16/19 22:53	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/Kg			09/16/19 22:53	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/Kg			09/16/19 22:53	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/Kg			09/16/19 22:53	1
Benzene	<0.15		0.25	0.15	ug/Kg			09/16/19 22:53	1
Bromobenzene	<0.36		1.0	0.36	ug/Kg			09/16/19 22:53	1
Bromochloromethane	<0.43		1.0	0.43	ug/Kg			09/16/19 22:53	1
Bromodichloromethane	<0.37		1.0	0.37	ug/Kg			09/16/19 22:53	1
Bromoform	<0.48		1.0	0.48	ug/Kg			09/16/19 22:53	1
Bromomethane	<0.80		3.0	0.80	ug/Kg			09/16/19 22:53	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/Kg			09/16/19 22:53	1
Chlorobenzene	<0.39		1.0	0.39	ug/Kg			09/16/19 22:53	1
Chloroethane	<0.50		1.0	0.50	ug/Kg			09/16/19 22:53	1
Chloroform	<0.37		2.0	0.37	ug/Kg			09/16/19 22:53	1
Chloromethane	<0.32		1.0	0.32	ug/Kg			09/16/19 22:53	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/Kg			09/16/19 22:53	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/Kg			09/16/19 22:53	1
Dibromochloromethane	<0.49		1.0	0.49	ug/Kg			09/16/19 22:53	1
Dibromomethane	<0.27		1.0	0.27	ug/Kg			09/16/19 22:53	1
Dichlorodifluoromethane	<0.67		3.0	0.67	ug/Kg			09/16/19 22:53	1
Ethylbenzene	<0.18		0.25	0.18	ug/Kg			09/16/19 22:53	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/Kg			09/16/19 22:53	1
Isopropyl ether	<0.28		1.0	0.28	ug/Kg			09/16/19 22:53	1
Isopropylbenzene	<0.38		1.0	0.38	ug/Kg			09/16/19 22:53	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/Kg			09/16/19 22:53	1
Methylene Chloride	<1.6		5.0	1.6	ug/Kg			09/16/19 22:53	1
Naphthalene	<0.33		1.0	0.33	ug/Kg			09/16/19 22:53	1
n-Butylbenzene	<0.39		1.0	0.39	ug/Kg			09/16/19 22:53	1
N-Propylbenzene	<0.41		1.0	0.41	ug/Kg			09/16/19 22:53	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/Kg			09/16/19 22:53	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/Kg			09/16/19 22:53	1
Styrene	<0.39		1.0	0.39	ug/Kg			09/16/19 22:53	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/Kg			09/16/19 22:53	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-505112/6
Matrix: Solid
Analysis Batch: 505112

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	<0.37		1.0	0.37	ug/Kg			09/16/19 22:53	1
Toluene	<0.15		0.25	0.15	ug/Kg			09/16/19 22:53	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/Kg			09/16/19 22:53	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/Kg			09/16/19 22:53	1
Trichloroethene	<0.16		0.50	0.16	ug/Kg			09/16/19 22:53	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/Kg			09/16/19 22:53	1
Vinyl chloride	<0.26		1.0	0.26	ug/Kg			09/16/19 22:53	1
Xylenes, Total	<0.22		0.50	0.22	ug/Kg			09/16/19 22:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*119*		*75 - 126*		*09/16/19 22:53*	*1*
4-Bromofluorobenzene (Surr)	*111*		*72 - 124*		*09/16/19 22:53*	*1*
Dibromofluoromethane	*101*		*75 - 120*		*09/16/19 22:53*	*1*
Toluene-d8 (Surr)	*103*		*75 - 120*		*09/16/19 22:53*	*1*

Lab Sample ID: LCS 500-505112/7
Matrix: Solid
Analysis Batch: 505112

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	50.0	46.8		ug/Kg		94	70 - 125
1,1,1-Trichloroethane	50.0	51.5		ug/Kg		103	70 - 125
1,1,2,2-Tetrachloroethane	50.0	50.4		ug/Kg		101	62 - 140
1,1,2-Trichloroethane	50.0	47.7		ug/Kg		95	71 - 130
1,1-Dichloroethane	50.0	55.9		ug/Kg		112	70 - 125
1,1-Dichloroethene	50.0	52.7		ug/Kg		105	67 - 122
1,1-Dichloropropene	50.0	54.3		ug/Kg		109	70 - 121
1,2,3-Trichlorobenzene	50.0	44.4		ug/Kg		89	51 - 145
1,2,3-Trichloropropane	50.0	52.0		ug/Kg		104	50 - 133
1,2,4-Trichlorobenzene	50.0	46.1		ug/Kg		92	57 - 137
1,2,4-Trimethylbenzene	50.0	53.4		ug/Kg		107	70 - 123
1,2-Dibromo-3-Chloropropane	50.0	47.9		ug/Kg		96	56 - 123
1,2-Dibromoethane	50.0	47.2		ug/Kg		94	70 - 125
1,2-Dichlorobenzene	50.0	48.1		ug/Kg		96	70 - 125
1,2-Dichloroethane	50.0	57.3		ug/Kg		115	68 - 127
1,2-Dichloropropane	50.0	54.5		ug/Kg		109	67 - 130
1,3,5-Trimethylbenzene	50.0	55.1		ug/Kg		110	70 - 123
1,3-Dichlorobenzene	50.0	49.7		ug/Kg		99	70 - 125
1,3-Dichloropropane	50.0	49.2		ug/Kg		98	62 - 136
1,4-Dichlorobenzene	50.0	48.4		ug/Kg		97	70 - 120
2,2-Dichloropropane	50.0	50.8		ug/Kg		102	58 - 139
2-Chlorotoluene	50.0	53.9		ug/Kg		108	70 - 125
4-Chlorotoluene	50.0	54.9		ug/Kg		110	68 - 124
Benzene	50.0	50.0		ug/Kg		100	70 - 120
Bromobenzene	50.0	47.9		ug/Kg		96	70 - 122
Bromochloromethane	50.0	46.5		ug/Kg		93	65 - 122
Bromodichloromethane	50.0	47.9		ug/Kg		96	69 - 120
Bromoform	50.0	39.8		ug/Kg		80	56 - 132

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-505112/7
Matrix: Solid
Analysis Batch: 505112

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromomethane	50.0	39.1		ug/Kg		78	40 - 152
Carbon tetrachloride	50.0	51.0		ug/Kg		102	59 - 133
Chlorobenzene	50.0	49.1		ug/Kg		98	70 - 120
Chloroethane	50.0	59.1		ug/Kg		118	48 - 136
Chloroform	50.0	49.6		ug/Kg		99	70 - 120
Chloromethane	50.0	39.0		ug/Kg		78	56 - 152
cis-1,2-Dichloroethene	50.0	49.6		ug/Kg		99	70 - 125
cis-1,3-Dichloropropene	50.0	47.7		ug/Kg		95	64 - 127
Dibromochloromethane	50.0	45.1		ug/Kg		90	68 - 125
Dibromomethane	50.0	47.1		ug/Kg		94	70 - 120
Dichlorodifluoromethane	50.0	24.6		ug/Kg		49	40 - 159
Ethylbenzene	50.0	52.1		ug/Kg		104	70 - 123
Hexachlorobutadiene	50.0	47.5		ug/Kg		95	51 - 150
Isopropylbenzene	50.0	54.4		ug/Kg		109	70 - 126
Methyl tert-butyl ether	50.0	45.4		ug/Kg		91	55 - 123
Methylene Chloride	50.0	47.7		ug/Kg		95	69 - 125
Naphthalene	50.0	45.7		ug/Kg		91	53 - 144
n-Butylbenzene	50.0	56.7		ug/Kg		113	68 - 125
N-Propylbenzene	50.0	56.0		ug/Kg		112	69 - 127
p-Isopropyltoluene	50.0	54.9		ug/Kg		110	70 - 125
sec-Butylbenzene	50.0	55.3		ug/Kg		111	70 - 123
Styrene	50.0	50.4		ug/Kg		101	70 - 120
tert-Butylbenzene	50.0	54.7		ug/Kg		109	70 - 121
Tetrachloroethene	50.0	48.2		ug/Kg		96	70 - 128
Toluene	50.0	50.1		ug/Kg		100	70 - 125
trans-1,2-Dichloroethene	50.0	51.0		ug/Kg		102	70 - 125
trans-1,3-Dichloropropene	50.0	47.4		ug/Kg		95	62 - 128
Trichloroethene	50.0	51.7		ug/Kg		103	70 - 125
Trichlorofluoromethane	50.0	45.0		ug/Kg		90	55 - 128
Vinyl chloride	50.0	44.2		ug/Kg		88	64 - 126
Xylenes, Total	100	102		ug/Kg		102	70 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*109*		*75 - 126*
4-Bromofluorobenzene (Surr)	*109*		*72 - 124*
Dibromofluoromethane	*96*		*75 - 120*
Toluene-d8 (Surr)	*104*		*75 - 120*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 500-505862/1-A
Matrix: Solid
Analysis Batch: 506027

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 505862

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<36		170	36	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
1,2-Dichlorobenzene	<40		170	40	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
1,3-Dichlorobenzene	<37		170	37	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
1,4-Dichlorobenzene	<43		170	43	ug/Kg		09/20/19 07:27	09/20/19 23:04	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-505862/1-A
Matrix: Solid
Analysis Batch: 506027

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 505862

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<8.1		67	8.1	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
2,2'-oxybis[1-chloropropane]	<39		170	39	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
2,4,5-Trichlorophenol	<76		330	76	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
2,4,6-Trichlorophenol	<110		330	110	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
2,4-Dichlorophenol	<79		330	79	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
2,4-Dimethylphenol	<130		330	130	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
2,4-Dinitrophenol	<590		670	590	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
2,4-Dinitrotoluene	<53		170	53	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
2,6-Dinitrotoluene	<65		170	65	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
2-Chloronaphthalene	<37		170	37	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
2-Chlorophenol	<57		170	57	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
2-Methylnaphthalene	<6.1		67	6.1	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
2-Methylphenol	<53		170	53	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
2-Nitroaniline	<45		170	45	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
2-Nitrophenol	<79		330	79	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
3 & 4 Methylphenol	<55		170	55	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
3,3'-Dichlorobenzidine	<47		170	47	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
3-Nitroaniline	<100		330	100	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
4,6-Dinitro-2-methylphenol	<270		670	270	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
4-Bromophenyl phenyl ether	<44		170	44	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
4-Chloro-3-methylphenol	<110		330	110	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
4-Chloroaniline	<160		670	160	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
4-Chlorophenyl phenyl ether	<39		170	39	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
4-Nitroaniline	<140		330	140	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
4-Nitrophenol	<320		670	320	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Acenaphthene	<6.0		33	6.0	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Acenaphthylene	<4.4		33	4.4	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Anthracene	<5.6		33	5.6	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Benzo[a]anthracene	<4.5		33	4.5	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Benzo[a]pyrene	<6.4		33	6.4	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Benzo[b]fluoranthene	<7.2		33	7.2	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Benzo[g,h,i]perylene	<11		33	11	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Benzo[k]fluoranthene	<9.8		33	9.8	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Benzoic acid	<330		1700	330	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Benzyl alcohol	<330		670	330	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Bis(2-chloroethoxy)methane	<34		170	34	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Bis(2-chloroethyl)ether	<50		170	50	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Bis(2-ethylhexyl) phthalate	<61		170	61	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Butyl benzyl phthalate	<63		170	63	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Carbazole	<83		170	83	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Chrysene	<9.1		33	9.1	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Dibenz(a,h)anthracene	<6.4		33	6.4	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Dibenzofuran	<39		170	39	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Diethyl phthalate	<56		170	56	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Dimethyl phthalate	<43		170	43	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Di-n-butyl phthalate	<51		170	51	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Di-n-octyl phthalate	<54		170	54	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Fluoranthene	<6.2		33	6.2	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Fluorene	<4.7		33	4.7	ug/Kg		09/20/19 07:27	09/20/19 23:04	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 500-505862/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 506027 — **Prep Batch: 505862**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	<7.7		67	7.7	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Hexachlorobutadiene	<52		170	52	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Hexachlorocyclopentadiene	<190		670	190	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Hexachloroethane	<51		170	51	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Indeno[1,2,3-cd]pyrene	<8.6		33	8.6	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Isophorone	<37		170	37	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Naphthalene	<5.1		33	5.1	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Nitrobenzene	<8.3		33	8.3	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
N-Nitrosodi-n-propylamine	<41		67	41	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
N-Nitrosodiphenylamine	<39		170	39	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Pentachlorophenol	<530		670	530	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Phenanthrene	<4.6		33	4.6	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Phenol	<74		170	74	ug/Kg		09/20/19 07:27	09/20/19 23:04	1
Pyrene	<6.6		33	6.6	ug/Kg		09/20/19 07:27	09/20/19 23:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*60*		*31 - 143*	*09/20/19 07:27*	*09/20/19 23:04*	*1*
2-Fluorobiphenyl (Surr)	*76*		*43 - 145*	*09/20/19 07:27*	*09/20/19 23:04*	*1*
2-Fluorophenol (Surr)	*107*		*31 - 166*	*09/20/19 07:27*	*09/20/19 23:04*	*1*
Nitrobenzene-d5 (Surr)	*76*		*37 - 147*	*09/20/19 07:27*	*09/20/19 23:04*	*1*
Phenol-d5 (Surr)	*91*		*30 - 153*	*09/20/19 07:27*	*09/20/19 23:04*	*1*
Terphenyl-d14 (Surr)	*94*		*42 - 157*	*09/20/19 07:27*	*09/20/19 23:04*	*1*

Lab Sample ID: LCS 500-505862/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 506027 — **Prep Batch: 505862**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	1330	1210		ug/Kg		90	66 - 117
1,2-Dichlorobenzene	1330	1200		ug/Kg		90	62 - 110
1,3-Dichlorobenzene	1330	1210		ug/Kg		91	65 - 124
1,4-Dichlorobenzene	1330	1200		ug/Kg		90	61 - 110
1-Methylnaphthalene	1330	1240		ug/Kg		93	68 - 111
2,2'-oxybis[1-chloropropane]	1330	1310		ug/Kg		98	40 - 124
2,4,5-Trichlorophenol	1330	1110		ug/Kg		84	50 - 120
2,4,6-Trichlorophenol	1330	1130		ug/Kg		85	57 - 120
2,4-Dichlorophenol	1330	1190		ug/Kg		89	58 - 120
2,4-Dimethylphenol	1330	1210		ug/Kg		91	60 - 110
2,4-Dinitrophenol	2670	<590		ug/Kg		17	10 - 100
2,4-Dinitrotoluene	1330	1300		ug/Kg		98	69 - 124
2,6-Dinitrotoluene	1330	1310		ug/Kg		98	70 - 123
2-Chloronaphthalene	1330	1230		ug/Kg		92	69 - 114
2-Chlorophenol	1330	1310		ug/Kg		98	64 - 110
2-Methylnaphthalene	1330	1180		ug/Kg		88	69 - 112
2-Methylphenol	1330	1200		ug/Kg		90	60 - 120
2-Nitroaniline	1330	1360		ug/Kg		102	57 - 124
2-Nitrophenol	1330	1220		ug/Kg		92	60 - 120
3 & 4 Methylphenol	1330	1290		ug/Kg		97	57 - 120

Client: TRC Environmental Corporation. Job ID: 500-169724-1
Project/Site: WisDOT STH 100 Intersections - 356814

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-505862/2-A **Client Sample ID: Lab Control Sample**
Matrix: Solid **Prep Type: Total/NA**
Analysis Batch: 506027 **Prep Batch: 505862**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
3,3'-Dichlorobenzidine	1330	1010		ug/Kg		76	35 - 128
3-Nitroaniline	1330	1170		ug/Kg		88	40 - 122
4,6-Dinitro-2-methylphenol	2670	638	J	ug/Kg		24	10 - 110
4-Bromophenyl phenyl ether	1330	1170		ug/Kg		88	68 - 118
4-Chloro-3-methylphenol	1330	1260		ug/Kg		95	65 - 122
4-Chloroaniline	1330	1000		ug/Kg		75	30 - 150
4-Chlorophenyl phenyl ether	1330	1210		ug/Kg		91	62 - 119
4-Nitroaniline	1330	1190		ug/Kg		89	60 - 160
4-Nitrophenol	2670	2220		ug/Kg		83	30 - 122
Acenaphthene	1330	1120		ug/Kg		84	65 - 124
Acenaphthylene	1330	1240		ug/Kg		93	68 - 120
Anthracene	1330	1170		ug/Kg		88	70 - 114
Benzo[a]anthracene	1330	1250		ug/Kg		94	67 - 122
Benzo[a]pyrene	1330	1200		ug/Kg		90	65 - 133
Benzo[b]fluoranthene	1330	1280		ug/Kg		96	69 - 129
Benzo[g,h,i]perylene	1330	1440		ug/Kg		108	72 - 131
Benzo[k]fluoranthene	1330	1240		ug/Kg		93	68 - 127
Benzoic acid	2670	652	J	ug/Kg		24	10 - 100
Benzyl alcohol	1330	970		ug/Kg		73	21 - 139
Bis(2-chloroethoxy)methane	1330	1210		ug/Kg		91	60 - 112
Bis(2-chloroethyl)ether	1330	1170		ug/Kg		88	55 - 111
Bis(2-ethylhexyl) phthalate	1330	1170		ug/Kg		88	72 - 131
Butyl benzyl phthalate	1330	1270		ug/Kg		96	71 - 129
Carbazole	1330	1270		ug/Kg		96	65 - 142
Chrysene	1330	1360		ug/Kg		102	63 - 120
Dibenz(a,h)anthracene	1330	1280		ug/Kg		96	64 - 131
Dibenzofuran	1330	1230		ug/Kg		93	66 - 115
Diethyl phthalate	1330	1140		ug/Kg		85	58 - 120
Dimethyl phthalate	1330	1380		ug/Kg		103	69 - 116
Di-n-butyl phthalate	1330	1250		ug/Kg		94	65 - 120
Di-n-octyl phthalate	1330	1310		ug/Kg		99	68 - 134
Fluoranthene	1330	1230		ug/Kg		92	62 - 120
Fluorene	1330	1240		ug/Kg		93	62 - 120
Hexachlorobenzene	1330	1180		ug/Kg		89	63 - 124
Hexachlorobutadiene	1330	1180		ug/Kg		88	56 - 120
Hexachlorocyclopentadiene	1330	742		ug/Kg		56	10 - 133
Hexachloroethane	1330	1170		ug/Kg		88	60 - 114
Indeno[1,2,3-cd]pyrene	1330	1220		ug/Kg		91	68 - 130
Isophorone	1330	1280		ug/Kg		96	55 - 110
Naphthalene	1330	1270		ug/Kg		95	63 - 110
Nitrobenzene	1330	1270		ug/Kg		95	60 - 116
N-Nitrosodi-n-propylamine	1330	1180		ug/Kg		88	56 - 118
N-Nitrosodiphenylamine	1330	1230		ug/Kg		92	65 - 112
Pentachlorophenol	2670	929		ug/Kg		35	13 - 112
Phenanthrene	1330	1200		ug/Kg		90	62 - 120
Phenol	1330	1210		ug/Kg		90	56 - 122
Pyrene	1330	1350		ug/Kg		101	61 - 128

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-505862/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 506027 — **Prep Batch: 505862**

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*70*		*31 - 143*
2-Fluorobiphenyl (Surr)	*86*		*43 - 145*
2-Fluorophenol (Surr)	*99*		*31 - 166*
Nitrobenzene-d5 (Surr)	*83*		*37 - 147*
Phenol-d5 (Surr)	*88*		*30 - 153*
Terphenyl-d14 (Surr)	*92*		*42 - 157*

Method: WI-GRO - Wisconsin - Gasoline Range Organics (GC)

Lab Sample ID: LB3 500-504467/18-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 504518 — **Prep Batch: 504467**

Analyte	LB3 Result	LB3 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
WI Gasoline Range Organics (C5-C10)	<500		1500	500	ug/Kg		09/12/19 08:00	09/12/19 20:22	50

Lab Sample ID: LCS 500-504467/20-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 504518 — **Prep Batch: 504467**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
WI Gasoline Range Organics (C5-C10)	10000	10500		ug/Kg		105	80 - 120

Lab Sample ID: LCSD 500-504467/21-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 504518 — **Prep Batch: 504467**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
WI Gasoline Range Organics (C5-C10)	10000	10700		ug/Kg		107	80 - 120	2	20

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 500-505767/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 505681 — **Prep Batch: 505767**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<5.9		17	5.9	ug/Kg		09/19/19 15:51	09/20/19 02:02	1
PCB-1221	<7.3		17	7.3	ug/Kg		09/19/19 15:51	09/20/19 02:02	1
PCB-1232	<7.3		17	7.3	ug/Kg		09/19/19 15:51	09/20/19 02:02	1
PCB-1242	<5.5		17	5.5	ug/Kg		09/19/19 15:51	09/20/19 02:02	1
PCB-1248	<6.6		17	6.6	ug/Kg		09/19/19 15:51	09/20/19 02:02	1
PCB-1254	<3.6		17	3.6	ug/Kg		09/19/19 15:51	09/20/19 02:02	1
PCB-1260	<8.2		17	8.2	ug/Kg		09/19/19 15:51	09/20/19 02:02	1
Polychlorinated biphenyls, Total	<3.2		17	3.2	ug/Kg		09/19/19 15:51	09/20/19 02:02	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 500-505767/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 505681 — **Prep Batch: 505767**

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	100		49 - 129	09/19/19 15:51	09/20/19 02:02	1
DCB Decachlorobiphenyl	112		37 - 121	09/19/19 15:51	09/20/19 02:02	1

Lab Sample ID: LCS 500-505767/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 505681 — **Prep Batch: 505767**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			167	144		ug/Kg		86	57 - 120		
PCB-1260			167	150		ug/Kg		90	61 - 125		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	93		49 - 129
DCB Decachlorobiphenyl	100		37 - 121

Method: WI-DRO - Wisconsin - Diesel Range Organics (GC)

Lab Sample ID: MB 500-504764/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 504964 — **Prep Batch: 504764**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
WI Diesel Range Organics (C10-C28)	<1.6		4.0	1.6	mg/Kg		09/13/19 14:05	09/16/19 12:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Nonane	79		44 - 148	09/13/19 14:05	09/16/19 12:30	1

Lab Sample ID: LCS 500-504764/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 504964 — **Prep Batch: 504764**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
WI Diesel Range Organics (C10-C28)			20.0	17.4		mg/Kg		87	70 - 120		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
n-Nonane	84		44 - 148

Lab Sample ID: LCSD 500-504764/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 504964 — **Prep Batch: 504764**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
WI Diesel Range Organics (C10-C28)			20.0	17.3		mg/Kg		87	70 - 120	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
n-Nonane	83		44 - 148

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 500-506290/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 506449 — **Prep Batch: 506290**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.34		1.0	0.34	mg/Kg		09/23/19 09:59	09/23/19 21:38	1
Barium	<0.11		1.0	0.11	mg/Kg		09/23/19 09:59	09/23/19 21:38	1
Cadmium	<0.036		0.20	0.036	mg/Kg		09/23/19 09:59	09/23/19 21:38	1
Chromium	<0.50		1.0	0.50	mg/Kg		09/23/19 09:59	09/23/19 21:38	1
Copper	<0.28		1.0	0.28	mg/Kg		09/23/19 09:59	09/23/19 21:38	1
Lead	<0.23		0.50	0.23	mg/Kg		09/23/19 09:59	09/23/19 21:38	1
Nickel	<0.29		1.0	0.29	mg/Kg		09/23/19 09:59	09/23/19 21:38	1
Silver	<0.13		0.50	0.13	mg/Kg		09/23/19 09:59	09/23/19 21:38	1

Lab Sample ID: MB 500-506290/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 506529 — **Prep Batch: 506290**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	<0.59		1.0	0.59	mg/Kg		09/23/19 09:59	09/24/19 11:02	1
Zinc	1.89	J	2.0	0.88	mg/Kg		09/23/19 09:59	09/24/19 11:02	1

Lab Sample ID: LCS 500-506290/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 506449 — **Prep Batch: 506290**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	10.0	8.98		mg/Kg		90	80 - 120
Barium	200	187		mg/Kg		93	80 - 120
Cadmium	5.00	4.62		mg/Kg		92	80 - 120
Chromium	20.0	19.1		mg/Kg		96	80 - 120
Copper	25.0	24.0		mg/Kg		96	80 - 120
Lead	10.0	9.54		mg/Kg		95	80 - 120
Nickel	50.0	48.4		mg/Kg		97	80 - 120
Silver	5.00	4.51		mg/Kg		90	80 - 120

Lab Sample ID: LCS 500-506290/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 506529 — **Prep Batch: 506290**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	10.0	9.24		mg/Kg		92	80 - 120
Zinc	50.0	44.6		mg/Kg		89	80 - 120

Lab Sample ID: 500-169724-1 MS — **Client Sample ID: GP-31 (4'-6')**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 506449 — **Prep Batch: 506290**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	4.9		16.6	19.0		mg/Kg	☼	85	75 - 125
Barium	88	V	331	380		mg/Kg	☼	88	75 - 125
Cadmium	0.52		8.28	7.65		mg/Kg	☼	86	75 - 125
Chromium	26		33.1	59.0		mg/Kg	☼	101	75 - 125
Copper	30		41.4	65.4		mg/Kg	☼	86	75 - 125

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 500-169724-1 MS — **Client Sample ID: GP-31 (4'-6')**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 506449 — **Prep Batch: 506290**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	27	F1 F2	16.6	30.9	F1	mg/Kg	☼	26	75 - 125
Nickel	26		82.8	107		mg/Kg	☼	98	75 - 125
Silver	3.5		8.28	10.6		mg/Kg	☼	85	75 - 125

Lab Sample ID: 500-169724-1 MS — **Client Sample ID: GP-31 (4'-6')**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 506529 — **Prep Batch: 506290**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	3.3		16.6	16.5		mg/Kg	☼	80	75 - 125
Zinc	81	B	82.8	146		mg/Kg	☼	79	75 - 125

Lab Sample ID: 500-169724-1 MSD — **Client Sample ID: GP-31 (4'-6')**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 506449 — **Prep Batch: 506290**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	4.9		15.3	18.1		mg/Kg	☼	86	75 - 125	5	20
Barium	88	V	307	374		mg/Kg	☼	93	75 - 125	2	20
Cadmium	0.52		7.67	7.45		mg/Kg	☼	90	75 - 125	3	20
Chromium	26		30.7	59.2		mg/Kg	☼	109	75 - 125	0	20
Copper	30		38.4	65.5		mg/Kg	☼	93	75 - 125	0	20
Lead	27	F1 F2	15.3	38.9	F2	mg/Kg	☼	81	75 - 125	23	20
Nickel	26		76.7	104		mg/Kg	☼	102	75 - 125	3	20
Silver	3.5		7.67	10.2		mg/Kg	☼	86	75 - 125	4	20

Lab Sample ID: 500-169724-1 MSD — **Client Sample ID: GP-31 (4'-6')**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 506529 — **Prep Batch: 506290**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Selenium	3.3		15.3	15.7		mg/Kg	☼	81	75 - 125	5	20
Zinc	81	B	76.7	150		mg/Kg	☼	90	75 - 125	2	20

Lab Sample ID: 500-169724-1 DU — **Client Sample ID: GP-31 (4'-6')**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 506449 — **Prep Batch: 506290**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	4.9		4.35		mg/Kg	☼	11	20
Barium	88	V	82.0		mg/Kg	☼	8	20
Cadmium	0.52		0.393	F5	mg/Kg	☼	28	20
Chromium	26		25.2		mg/Kg	☼	2	20
Copper	30		26.5		mg/Kg	☼	11	20
Lead	27	F1 F2	20.3	F3	mg/Kg	☼	27	20
Nickel	26		25.3		mg/Kg	☼	2	20
Silver	3.5		3.53		mg/Kg	☼	0.2	20

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 500-169724-1 DU — **Client Sample ID: GP-31 (4'-6')**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 506529 — **Prep Batch: 506290**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Selenium	3.3		3.25		mg/Kg	☼	0.6	20
Zinc	81	B	76.6		mg/Kg	☼	5	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 500-505905/12-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 506307 — **Prep Batch: 505905**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.0056		0.017	0.0056	mg/Kg		09/20/19 12:55	09/23/19 08:53	1

Lab Sample ID: LCS 500-505905/13-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 506307 — **Prep Batch: 505905**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.167	0.170		mg/Kg		102	80 - 120

Lab Chronicle

Client: TRC Environmental Corporation. Job ID: 500-169724-1
Project/Site: WisDOT STH 100 Intersections - 356814

Client Sample ID: GP-31 (4'-6') Lab Sample ID: 500-169724-1
Date Collected: 09/09/19 07:50 **Matrix: Solid**
Date Received: 09/10/19 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	505711	09/19/19 11:10	LWN	TAL CHI

Client Sample ID: GP-31 (4'-6') Lab Sample ID: 500-169724-1
Date Collected: 09/09/19 07:50 **Matrix: Solid**
Date Received: 09/10/19 08:45 **Percent Solids: 59.1**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	WI GRO			504467	09/09/19 07:50	WRE	TAL CHI
Total/NA	Analysis	8260B		50	505112	09/17/19 03:10	JLC	TAL CHI
Total/NA	Prep	WI GRO			504467	09/09/19 07:50	WRE	TAL CHI
Total/NA	Analysis	WI-GRO		50	504518	09/12/19 22:41	WRE	TAL CHI
Total/NA	Prep	3050B			506290	09/23/19 09:59	BDE	TAL CHI
Total/NA	Analysis	6010B		1	506449	09/23/19 21:46	EEN	TAL CHI

Client Sample ID: GP-32 (6'-8') Lab Sample ID: 500-169724-2
Date Collected: 09/09/19 08:15 **Matrix: Solid**
Date Received: 09/10/19 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	505711	09/19/19 11:10	LWN	TAL CHI

Client Sample ID: GP-32 (6'-8') Lab Sample ID: 500-169724-2
Date Collected: 09/09/19 08:15 **Matrix: Solid**
Date Received: 09/10/19 08:45 **Percent Solids: 79.7**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	WI GRO			504467	09/09/19 08:15	WRE	TAL CHI
Total/NA	Analysis	8260B		50	505112	09/17/19 03:36	JLC	TAL CHI
Total/NA	Prep	3541			505862	09/20/19 07:27	JRD	TAL CHI
Total/NA	Analysis	8270D		1	506027	09/21/19 07:23	NRJ	TAL CHI
Total/NA	Prep	WI GRO			504467	09/09/19 08:15	WRE	TAL CHI
Total/NA	Analysis	WI-GRO		50	504518	09/12/19 23:16	WRE	TAL CHI
Total/NA	Prep	3541			505767	09/19/19 15:51	JP1	TAL CHI
Total/NA	Analysis	8082A		10	505681	09/20/19 02:33	BJH	TAL CHI
Total/NA	Prep	WI DRO PREP			504764	09/13/19 14:05	BSO	TAL CHI
Total/NA	Analysis	WI-DRO		1	504964	09/16/19 13:22	JBJ	TAL CHI
Total/NA	Prep	3050B			506290	09/23/19 09:59	BDE	TAL CHI
Total/NA	Analysis	6010B		1	506449	09/23/19 22:06	EEN	TAL CHI
Total/NA	Prep	3050B			506290	09/23/19 09:59	BDE	TAL CHI
Total/NA	Analysis	6010B		1	506529	09/24/19 11:30	JEF	TAL CHI
Total/NA	Prep	7471B			505905	09/20/19 12:55	MJG	TAL CHI
Total/NA	Analysis	7471B		1	506307	09/23/19 09:59	MJG	TAL CHI

Lab Chronicle

Client: TRC Environmental Corporation. Job ID: 500-169724-1
Project/Site: WisDOT STH 100 Intersections - 356814

Client Sample ID: GP-33 (4'-6') Lab Sample ID: 500-169724-3

Date Collected: 09/09/19 09:30 **Matrix: Solid**
Date Received: 09/10/19 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	505711	09/19/19 11:10	LWN	TAL CHI

Client Sample ID: GP-33 (4'-6') Lab Sample ID: 500-169724-3

Date Collected: 09/09/19 09:30 **Matrix: Solid**
Date Received: 09/10/19 08:45 **Percent Solids: 89.1**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			504467	09/09/19 09:30	WRE	TAL CHI
Total/NA	Analysis	8260B		50	505112	09/17/19 04:02	JLC	TAL CHI

Client Sample ID: Trip Blank Lab Sample ID: 500-169724-4

Date Collected: 09/09/19 00:00 **Matrix: Solid**
Date Received: 09/10/19 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			504467	09/09/19 00:00	WRE	TAL CHI
Total/NA	Analysis	8260B		50	505112	09/17/19 04:28	JLC	TAL CHI

Laboratory References:

TAL CHI = Eurofins TestAmerica, Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Accreditation/Certification Summary

Client: TRC Environmental Corporation. Job ID: 500-169724-1
Project/Site: WisDOT STH 100 Intersections - 356814

Laboratory: Eurofins TestAmerica, Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Wisconsin	State Program	999580010	08-31-20

TestAmerica

THE LEADER IN ENVIRONMENTAL

2417 Bond Street, University Park, IL 60
Phone: 708.534.5200 Fax: 708.534

500-169724 COC

Chain of Custody Record

Lab Job #: 500-169724

Chain of Custody Number:

Page _____ of _____

Temperature °C of Cooler: 1.2 + 2.2

(optional) Report To	(optional) Bill To
Contact: Bryan Bergmann	Contact:
Company: TRC Companies	Company:
Address:	Address:
Address:	Address:
Phone:	Phone:
Fax:	Fax:
E-Mail: bbergmann@trccompanies.com	PO#/Reference#

Client: WisDOT	Client Project #: 3556814
Project Name: STH 100 Intersections	
Project Location/State: Greenfield, WestAllis, WI	Lab Project #:
Sampler: A Sobba	Lab PM:

Preservative Key
1. HCL, Cool to 4°
2. H2SO4, Cool to 4°
3. HNO3, Cool to 4°
4. NaOH, Cool to 4°
5. NaOH/Zn, Cool to 4°
6. NaHSO4
7. Cool to 4°
8. None
9. Other

Lab ID	MS/MSD	Sample ID	Sampling Date	Sampling Time	# of Containers	Matrix	Preservative	PVOCs + naphthalene	GRO	Lead	DRO	VOCs full scan 8260	SVOCs full scan	PCBs	11 RCRA metals		Comments
1		GP-31 (4-6)	9-9-19	750	5	S		X	X	X							
2		GP-32 (6'-8')	1	815	7	S			X		X	X	X	X	X		
3		GP-33 (4'-6')	1	930	2	S						X					
4		Trip Blank	—	—	1	W						X					

Parameter

Turnaround Time Required (Business Days)
___ 1 Day ___ 2 Days ___ 5 Days ___ 7 Days X 10 Days ___ 15 Days _____ Other
Requested Due Date _____

Sample Disposal
[ ] Return to Client [X] Disposal by Lab [ ] Archive for _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
				[illegible]	TA-CHI	9/10/19	0845

Lab Courier
Shipped FedEx
Hand Delivered

Matrix Key
WW – Wastewater
W – Water
S – Soil
SL – Sludge
MS – Miscellaneous
OL – Oil
A – Air
SE – Sediment
SO – Soil
L – Leachate
WI – Wipe
DW – Drinking Water
O – Other

Client Comments: PVOCs ; VOCs 8260 method

Lab Comments:

Login Sample Receipt Checklist

Client: TRC Environmental Corporation. Job Number: 500-169724-1

Login Number: 169724 **List Source: Eurofins TestAmerica, Chicago**
List Number: 1
Creator: Scott, Sherri L

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	TB is MeOH
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix E: Cumulative Hazard Index and Cancer Risk Calculations

NR 720 Direct-Contact ***Exceedance*** - ***Hazard*** - ***Risk*** Calculation Summary from Soil Data

BRRTS # :
GP-33 (4'-6')

# of Soil-Concentration Entries: 1

Number of Individual Exceedance	(Cumulative) Hazard Index	(Cumulative) Cancer Risk
0	0.001	3.9E-09

Bottom-Line: Yes, levels are below INDUSTRIAL direct-contact concern.

Date of Entry: 9/30/2019.
Date of Worksheet Used: 11/20/2018.

List below only has contaminants with data.

Contaminant	CAS Number	NC RCL (mg/kg)	C RCL (mg/kg)	Not-To-Exceed D-C RCL (mg/kg)	Basis	BTV (mg/kg)	INPUTTED Site Data (mg/kg)	Flag E = Individual Exceedance!	Hazard Quotient (HQ) from Data	Cancer Risk (CR) from Data
Tetrachloroethylene	127-18-4	547.	145.	145.	ca		0.57		0.001	3.9E-09

NR 720 Direct-Contact ***Exceedance*** - ***Hazard*** - ***Risk*** Calculation Summary from Soil Data

BRRTS # :
GP-33 (4'-6')

# of Soil-Concentration Entries: 1

Number of Individual Exceedance	(Cumulative) Hazard Index	(Cumulative) Cancer Risk
0	0.0052	1.7E-08

Bottom-Line: Yes, levels are below direct-contact concern.

Date of Entry: 9/30/2019.
Date of Worksheet Used: 11/20/2018.

List below only has contaminants with data.

Contaminant	CAS Number	NC RCL (mg/kg)	C RCL (mg/kg)	Not-To-Exceed D-C RCL (mg/kg)	Basis	BTV (mg/kg)	INPUTTED Site Data (mg/kg)	Flag E = Individual Exceedance!	Hazard Quotient (HQ) from Data	Cancer Risk (CR) from Data
Tetrachloroethylene	127-18-4	109.	33.	33.	ca		0.57		0.0052	1.7E-08

NR 720 Direct-Contact ***Exceedance*** - ***Hazard*** - ***Risk*** Calculation Summary from Soil Data

BRRTS # :
GP-32 (6'-8')

# of Soil-Concentration Entries: 20

Number of Individual Exceedance	(Cumulative) Hazard Index	(Cumulative) Cancer Risk
0	0.0033	4.6E-08

Bottom-Line: Yes, levels are below INDUSTRIAL direct-contact concern.

Date of Entry: 9/30/2019.
Date of Worksheet Used: 11/20/2018.

List below only has contaminants with data.

Contaminant	CAS Number	NC RCL (mg/kg)	C RCL (mg/kg)	Not-To-Exceed D-C RCL (mg/kg)	Basis	BTV (mg/kg)	INPUTTED Site Data (mg/kg)	Flag E = Individual Exceedance!	Hazard Quotient (HQ) from Data	Cancer Risk (CR) from Data
Benzo[a]pyrene	50-32-8	222.	2.11	2.11	ca		0.082		0.0004	3.9E-08
Anthracene	120-12-7	226,000.	-	100,000.	ceiling		0.022		0.	
Benz[a]anthracene	56-55-3	-	20.8	20.8	ca		0.05			2.4E-09
Benzo[b]fluoranthene	205-99-2	-	21.1	21.1	ca		0.085			4.0E-09
Benzo[g,h,i]perylene	191-24-2	-	-				0.019			
Benzo[k]fluoranthene	207-08-9	-	211.	211.	ca		0.056			2.7E-10
Chrysene	218-01-9	-	2,110.	2,110.	ca		0.051			2.4E-11
Fluoranthene	206-44-0	30,100.	-	30,100.	nc		0.14		0.	
Phenanthrene	85-01-8	-	-				0.058			
Pyrene	129-00-0	22,600.	-	22,600.	nc		0.088		0.	
Arsenic, Inorganic	7440-38-2	480.	3.	3.	ca	8.	5.3			
Barium	7440-39-3	219,000.	-	100,000.	ceiling	364.	88.			
Cadmium (Diet)	7440-43-9	985.	10,600.	985.	nc	1.	0.31			
Chromium, Total	7440-47-3	-	-			44.	23.			
Copper	7440-50-8	46,700.	-	46,700.	nc	35.	23.			
Mercury (elemental)	7439-97-6	65.8	-	3.13	Csat		0.14		0.0021	
Lead and Compounds	7439-92-1	800.	-	800.	nc	52.	18.			
Nickel Soluble Salts	7440-02-0	22,500.	73,600.	22,500.	nc	31.	23.			
Zinc and Compounds	7440-66-6	350,000.	-	100,000.	ceiling	150.	65.			
Silver	7440-22-4	5,840.	-	5,840.	nc		4.6		0.0008	

NR 720 Direct-Contact ***Exceedance*** - ***Hazard*** - ***Risk*** Calculation Summary from Soil Data

BRRTS # :
GP-32 (6'-8')

# of Soil-Concentration Entries: 20

Bottom-Line: Yes, levels are below direct-contact concern.

Number of Individual Exceedance	(Cumulative) Hazard Index	(Cumulative) Cancer Risk
0	0.0254	8.4E-07

Date of Entry: 9/30/2019.
Date of Worksheet Used: 11/20/2018.

List below only has contaminants with data.

Contaminant	CAS Number	NC RCL (mg/kg)	C RCL (mg/kg)	Not-To-Exceed D-C RCL (mg/kg)	Basis	BTV (mg/kg)	INPUTTED Site Data (mg/kg)	Flag E = Individual Exceedance!	Hazard Quotient (HQ) from Data	Cancer Risk (CR) from Data
Benzo[a]pyrene	50-32-8	17.8	0.115	0.115	ca		0.082		0.0046	7.1E-07
Anthracene	120-12-7	17,900.	-	17,900.	nc		0.022		0.	
Benz[a]anthracene	56-55-3	-	1.14	1.14	ca		0.05			4.4E-08
Benzo[b]fluoranthene	205-99-2	-	1.15	1.15	ca		0.085			7.4E-08
Benzo[g,h,i]perylene	191-24-2	-	-				0.019			
Benzo[k]fluoranthene	207-08-9	-	11.5	11.5	ca		0.056			4.9E-09
Chrysene	218-01-9	-	115.	115.	ca		0.051			4.4E-10
Fluoranthene	206-44-0	2,390.	-	2,390.	nc		0.14		0.0001	
Phenanthrene	85-01-8	-	-				0.058			
Pyrene	129-00-0	1,790.	-	1,790.	nc		0.088		0.	
Arsenic, Inorganic	7440-38-2	34.9	0.677	0.677	ca	8.	5.3			
Barium	7440-39-3	15,300.	-	15,300.	nc	364.	88.			
Cadmium (Diet)	7440-43-9	71.1	2,430.	71.1	nc	1.	0.31			
Chromium, Total	7440-47-3	-	-			44.	23.			
Copper	7440-50-8	3,130.	-	3,130.	nc	35.	23.			
Mercury (elemental)	7439-97-6	15.7	-	3.13	Csat		0.14		0.0089	
Lead and Compounds	7439-92-1	400.	-	400.	nc	52.	18.			
Nickel Soluble Salts	7440-02-0	1,550.	16,900.	1,550.	nc	31.	23.			
Zinc and Compounds	7440-66-6	23,500.	-	23,500.	nc	150.	65.			
Silver	7440-22-4	391.	-	391.	nc		4.6		0.0118	

NR 720 Direct-Contact ***Exceedance*** - ***Hazard*** - ***Risk*** Calculation Summary from Soil Data

BRRTS # :
GP-31 (4'-6')

# of Soil-Concentration Entries: 1

Number of Individual Exceedance	(Cumulative) Hazard Index	(Cumulative) Cancer Risk
0	0.	0.0E+00

Bottom-Line: Yes, levels are below INDUSTRIAL direct-contact concern.

Date of Entry: 9/30/2019.
Date of Worksheet Used: 11/20/2018.

List below only has contaminants with data.

Contaminant	CAS Number	NC RCL (mg/kg)	C RCL (mg/kg)	Not-To-Exceed D-C RCL (mg/kg)	Basis	BTV (mg/kg)	INPUTTED Site Data (mg/kg)	Flag E = Individual Exceedance!	Hazard Quotient (HQ) from Data	Cancer Risk (CR) from Data
Lead and Compounds	7439-92-1	800.	-	800.	nc	52.	27.			

NR 720 Direct-Contact ***Exceedance*** - ***Hazard*** - ***Risk*** Calculation Summary from Soil Data

BRRTS # :
GP-31 (4'-6')

# of Soil-Concentration Entries: 1

Number of Individual Exceedance	(Cumulative) Hazard Index	(Cumulative) Cancer Risk
0	0.	0.0E+00

Bottom-Line: Yes, levels are below direct-contact concern.

Date of Entry: 9/30/2019.
Date of Worksheet Used: 11/20/2018.

List below only has contaminants with data.

Contaminant	CAS Number	NC RCL (mg/kg)	C RCL (mg/kg)	Not-To-Exceed D-C RCL (mg/kg)	Basis	BTV (mg/kg)	INPUTTED Site Data (mg/kg)	Flag E = Individual Exceedance!	Hazard Quotient (HQ) from Data	Cancer Risk (CR) from Data
Lead and Compounds	7439-92-1	400.	-	400.	nc	52.	27.			

Appendix F: Draft Special Provisions

Management of Solid Waste, Item SPV.0195.01.

A General

A.1 Description

This work will conform with the requirements of Section 205 of the Standard Specifications; to pertinent parts of the Wisconsin Administrative Code, Chapters NR 700-736 Environmental Investigation and Remediation of Environmental Contamination; Wisconsin Administration Code, Chapters NR 500-538, Solid Waste; and as shown on the plans and as supplemented herein.

Soil considered to be solid waste due to chlorinated VOCs will be encountered within the construction limits. The solid waste may contain NR 500 non-exempt industrial wastes including soil mixed with foundry sand. Impacted waste material excavated during construction which cannot in the opinion of the environmental consultant be managed as common excavation or as petroleum-contaminated soil will be managed as solid waste.

This work consists of excavating, segregating, temporary stockpiling, loading, hauling, and disposing of solid waste material at a WDNR-approved disposal facility. The nearest WDNR-approved disposal facilities are:

Waste Management Metro Recycling and Disposal Facility
10712 South 124th Street
Franklin, WI 35132
(414) 529-6180

Advanced Disposal Emerald Park Landfill
W124 S10629 South 124th Street
Muskego, WI 53150
(414) 529-1360

Provide information to the environmental consultant and engineer that indicates the WDNR-approved disposal facility that the contractor will use.

A.2 Notice to the Contractor–Solid Waste Location

The department and others completed hazardous materials assessment for locations within this project where excavation is required. Investigation for soil contamination was conducted at select locations. Results indicate that solid waste (soil contaminated with chlorinated solvents) is present at the following location as shown on the plans:

- Station 240+00 to 240+60, from 30’ right of the reference line to project limits right, from 1 to 8+ feet bgs. The estimated volume of contaminated soil to be excavated at this location is 37 CY (approximately 63 tons using a conversion factor of 1.7 tons per cubic yard).

Directly load solid waste soil excavated by the project at the above locations into trucks that will transport the material to a WDNR-licensed landfill facility for landfill disposal.

If obviously contaminated soils or signs of NR 500 non-exempt solid waste and hazardous materials are unexpectedly encountered elsewhere on the project, terminate excavation activities in the area and notify the engineer. Examples of these unexpected conditions may include, but are not limited to, buried containers or tanks, noxious odors and fumes, stained soils, sheen on ground water, other industrial wastes, and significant volumes of municipal or domestic garbage.

Active groundwater monitoring wells were not observed within the construction limits during the hazardous materials assessment. If active groundwater monitoring wells are encountered during construction, notify the engineer and protect the wells to maintain their integrity. The environmental consultant will determine if monitoring wells need to be maintained. For monitoring wells that do need to be maintained, adjust the wells that do not conflict with structures or curb and gutter to be flush with the final grade. For wells that conflict with the previously mentioned items or if monitoring wells are not required to be maintained, they will be abandoned by others.

If dewatering is required at the above location, conduct the dewatering in accordance with Section C below.

A.3 Excavation Management Plan Approval

The excavation management plan for this project has been designed to minimize the off-site disposal of contaminated waste. The excavation management plan, including these special provisions, has been developed in cooperation with the WDNR. The WDNR concurrence letter is on file at the Wisconsin Department of Transportation. For further information regarding previous investigation and remediation activities in these areas contact:

Name:	Andrew Malsom
Address:	141 NW Barstow Street, Waukesha, WI 53187-0798
Phone:	262-548-6705
Fax:	262-548-6891
e-mail:	andrew.malsom@dot.state.wi.us

A.4 Coordination

Coordinate work under this contract with the environment consultant:

Consultant:	TRC Environmental Corporation
Address:	150 N. Patrick Blvd. Ste. 180, Brookfield, WI 53045
Contact:	Bryan Bergmann
Phone:	262-901-2126 (office), 262-227-9210 (cell)
Fax:	262-879-1220
E-mail:	bbergmann@trccompanies.com

The role of the environmental consultant will be limited to:

1. Determining the location and limits of solid waste to be excavated based on soil analytical results from previous investigations, visual observations, and field screening of soil that is excavated;
2. Identifying soils to be hauled to the landfill facility;
3. Documenting that activities associated with management of solid waste are in conformance with the solid waste management methods for this project as specified herein; and
4. Obtaining the necessary approvals for disposal of solid waste from the landfill facility.

Provide at least a 14-calendar day notice of the preconstruction conference date to the environmental consultant. At the preconstruction conference, provide a schedule for all excavation activities in the area of solid waste fill described in A.2 to the environmental consultant. Identify the WDNR licensed landfill facility that will be used for disposal of solid waste, and provide this information to the environmental consultant no later than 30 calendar days prior to commencement of excavation in the impacted area or at the preconstruction conference, whichever comes first. The environmental consultant will be responsible for obtaining the necessary approvals from the landfill facility for disposal of the solid waste.

Coordinate with the environmental consultant to ensure that the environmental consultant is present during excavation in the impacted area. Notify the environmental consultant at least three calendar days prior to commencement of excavation in the impacted area. Perform excavation in the impacted area on a continuous basis until excavation work is completed. Do not transport soil containing solid waste offsite without prior approval from the environmental consultant.

A.5 Health and Safety Requirements
Supplement standard spec 107.1 with the following:

During excavation activities, expect to encounter historic fill contaminated with industrial waste (foundry sand) and associated regulated metals and organic compounds. Site workers taking part in activities that will result in the reasonable probability of exposure to safety and health hazards associated with hazardous materials shall have completed health and safety training that meets the Occupational Safety and Health Administration (OSHA) requirements for Hazardous Waste Operations and Emergency Response (HAZWOPER), as provided in 29 CFR 1910.120.

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

B (Vacant)

C Construction
Subsection 205.3 of the Standard Specification is supplemented with the following:

Control operations in the impacted area to minimize the quantity of soil excavated.

The environmental consultant will periodically monitor soil excavated from the area identified in A.2 above. The environmental consultant will evaluate excavated soil based on field screening results, visual observations, and soil analytical results from previous environmental investigations. Assist the environmental consultant in collecting soil samples for evaluation using excavation equipment. The sampling frequency shall be a maximum of one sample for every 20 cubic yards excavated.

Directly load and haul solid waste soil designated by the environmental consultant for offsite disposal to the WDNR approved landfill facility. Use loading and hauling practices that are appropriate to prevent any spills or releases of the material. Prior to transport, sufficiently dewater soils designated for off-site disposal so as not to contain free liquids.

Verify that the vehicles used to transport material are licensed for such activity in accordance with applicable state and federal regulations. Obtain the necessary disposal facility approvals and WDNR approvals for disposal. Do not transport regulated solid waste off-site without obtaining the approval of the environmental consultant and engineer and notifying the disposal facility.

During excavations in the areas of known contamination, larger chunks of clean concrete (~2 cubic feet), asphalt and bricks shall be segregated from the fill, to the extent practical and managed as common excavation. Under NR 500.08 this material is exempt from licensing and requirements of Wisconsin Administrative Code NR 500-538 of the solid waste regulations and will be reused as designated by the engineer as fill on the project, or it will be disposed of off-site at the contractor's disposal site(s).

If dewatering is required in areas of known contamination, water generated from dewatering activities may contain CVOCs, petroleum compounds and/or metals. Such water may require analytical testing, and with approval from the City of West Allis and the Milwaukee Metropolitan Sewerage District (MMSD) be discharged to the sanitary sewer as follows:

1. Meet all applicable requirements of the MMSD including the control of suspended solids. Perform all necessary monitoring to document compliance with the MMSD requirements. Furnish, install, operate, maintain, disassemble, and remove treatment equipment necessary to comply with the MMSD requirements.
2. Ensure continuous dewatering and excavation safety at all times. Provide, operate, and maintain adequate pumping equipment and drainage and disposal facilities.

Groundwater with a petroleum sheen cannot be discharge to the sanitary sewer per MMSD guidelines. If dewatering is necessary where the groundwater has a sheen on the

surface, the water shall be pumped into a holding tank or tanker truck for off-site testing and disposal.

Notify the engineer of any dewatering activities. Contractor shall obtain any permits necessary to discharge water. Provide copies of such permits to the engineer. Meet any requirements and pay any costs for obtaining and complying with such permit use. Follow all applicable legislative statutes, judiciary decisions, and regulations of the State of Wisconsin.

Costs associated with excavation dewatering in contaminated areas are considered incidental to this pay item. The Wisconsin Department of Transportation will be the generator of regulated solid waste from this construction project.

D Measurement

The department will measure solid waste by the ton of waste accepted by the disposal facility and as documented by weight tickets.

E Payment

The department will pay for measured quantities at the contract unit price under the following item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.01	Management of Solid Waste	Ton

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