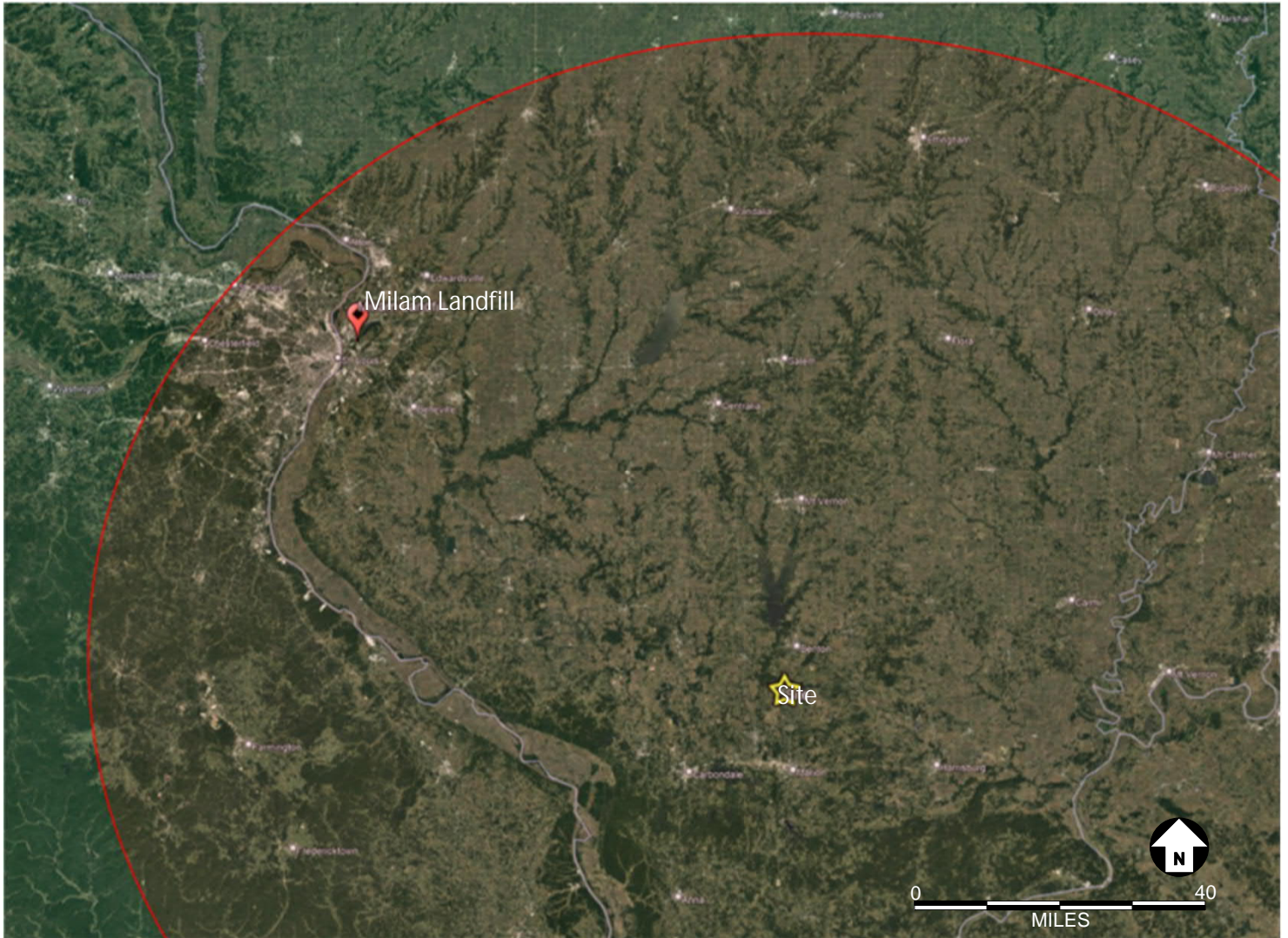


**CCDD/USFO Facilities within 100 miles of project location  
 FAP 873 (IL 149)  
 West Frankfort, Franklin County, Illinois**



Site #	Name	CCDD or USFO	Physical Address	Approx. Distance from Project (mi)	Accepts		Confirmed Date and By
					CCDD	Soil	
1	Milam Landfill	CCDD	601 Madison Road, East St. Louis, Illinois 62201	83	Yes	Yes	EAF 3/24/2023



# Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAS 873 (IL 149) Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):  
11000 block of IL 149

City: West Franfort State: IL Zip Code: 62896

County: Franklin Township: Denning

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 37.89794 Longitude: -88.94817  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

Approximate Start Date (mm/dd/yyyy): \_\_\_\_\_ Approximate End Date (mm/dd/yyyy): \_\_\_\_\_

Estimated Volume of debris (cu. Yd.): 162

### II. Owner/Operator Information for Source Site

Site Owner

Name: Illinois Department of Transportation  
Street Address: State Transportation Building  
PO Box: PO Box 100  
City: Carbondale State: IL  
Zip Code: 62903-0100 Phone: 618-351-5281  
Contact: Christa Mahnken  
Email, if available: Christa.Mahnken@Illinois.gov

Site Operator

Name: Illinois Department of Transportation  
Street Address: State Transportation Building  
PO Box: PO Box 100  
City: Carbondale State: IL  
Zip Code: 62903-0100 Phone: 618-351-5281  
Contact: Christa Mahnken  
Email, if available: Christa.Mahnken@Illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Uncontaminated Soil Certification**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a):

Locations 4062-COV-05-B01 through 4062-COV-05-B03 were sampled within the construction zone adjacent to ISGS #4062-COV-05 (Vacant Lot). Refer to PSI Report for ISGS #4062-COV-05 (Vacant Lot) including Table 4-3, and Figure 4-2.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

See attached data summary table and associated laboratory data package J229911-1.


**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Tom Campbell (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

***Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))***

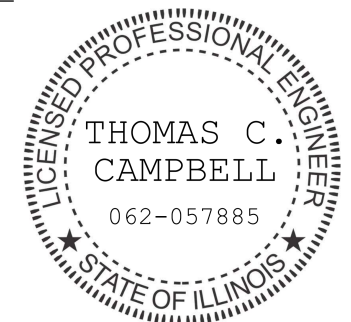
Company Name: WSP USA  
 Street Address: 115 W Washington St., Suite 1270S  
 City: Indianapolis State: IN Zip Code: 46204  
 Phone: (317) 972-1706

Tom Campbell  
 Printed Name:

  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

Apr 21, 2023

Date:



Expires 11/30/2023



P.E or L.P.G. Seal:

**Analytical Data Summary**  
**PTB #172-27; Work Order 112 - IDOT Job # D-99-069-20**

**Key to Data Tables**

- MAC = Maximum Allowable Concentration of Chemical Constituent in Uncontaminated Soil Used as Fill Material At Regulated Fill Operations
- mg/kg = Milligrams per kilogram.
- mg/L = Milligrams per liter.
- MSA = Metropolitan Statistical Area
- TACO = Tiered Approach to Corrective Action Objectives
- TCLP = Toxicity Characteristic Leaching Procedure.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed or not applicable.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.
- PID = Photoionization detector.
- = No PID readings detected above background (within instrument margin of error).

**Criteria Qualifiers and Shading**

- # = pH is less than 6.25 or greater than 9.0 standard units.
- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- \* = Concentration exceeds the MAC for Chicago corporate limits.
- L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
-  = Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
-  = Concentration exceeds applicable comparison criteria.



**PTB #172-27; Work Order 112 - IDOT Job # D-99-069-20  
CONTAMINANTS OF CONCERN**

SITE	ISGS #4062-COV-5 (Vacant Lot)			Comparison Criteria					
	4062-COV-05-B01	4062-COV-05-B02	4062-COV-05-B03	MACs			TACO		
BORING	4062-COV-05-B01 (0-1)	4062-COV-05-B02 (0-1)	4062-COV-05-B03 (0-1)	Most Stringent	Within an MSA	Within Chicago	Residential	Construction Worker	SCGIER
SAMPLE									
MATRIX	Soil	Soil	Soil						
DEPTH (feet)	0-1	0-1	0-1						
pH	7.8	8.5	8.5						
PID (meter units)	--	--	--						
<b>VOCs (None Detected)</b>									
<b>SVOCs (mg/kg)</b>									
2-Methylnaphthalene	0.0077 J	0.34	0.015 J	--	--	--	--	--	--
Acenaphthene	ND U	0.013 J	ND U	570	--	0.94	4,700	120,000	--
Acenaphthylene	ND U	0.013 J	0.0058 J	--	--	0.25	--	--	--
Anthracene	ND U	0.031 J	ND U	12,000	--	2.6	23,000	610,000	--
Benzo(a)anthracene	0.011 J	0.17	0.018 J	0.9	1.8	11	1.8	170	--
Benzo(a)pyrene	0.020 J	0.27 J †	0.024 J	0.09	2.1	11	2.1	17	--
Benzo(b)fluoranthene	0.029 J	0.42 J	0.036 J	0.9	2.1	13	2.1	170	--
Benzo(g,h,i)perylene	ND UJ	0.12 J	0.019 J	--	--	4.4	--	--	--
Benzo(k)fluoranthene	ND UJ	0.14 J	ND U	9	--	8.1	9	1,700	--
Bis(2-ethylhexyl) phthalate	ND U	0.18 J	ND U	46	--	--	46	4,100	--
Chrysene	0.012 J	0.28	0.025 J	88	--	11	88	17,000	--
Dibenz(a,h)anthracene	ND UJ	0.035 J	ND U	0.09	0.42	1	0.42	17	--
Dibenzofuran	ND U	0.21	ND U	--	--	--	--	--	--
Fluoranthene	0.018 J	0.30	0.029 J	3,100	--	28	3,100	82,000	--
Fluorene	ND U	0.0092 J	ND U	560	--	1.1	3,100	82,000	--
Indeno(1,2,3-cd)pyrene	ND UJ	0.11 J	0.014 J	0.9	1.6	5.8	1.6	170	--
Naphthalene	ND U	0.18	0.0089 J	1.8	--	0.26	170	1.8	--
Phenanthrene	0.017 J	0.32	0.028 J	--	--	15	--	--	--
Pyrene	0.020 J	0.37	0.026 J	2,300	--	18	2,300	61,000	--
<b>Inorganics (mg/kg)</b>									
Antimony	ND U	ND U	0.38 J	5	--	--	31	82	--
Arsenic	6.9	6.6	6.7	11.3	13	--	13	61	--
Barium	90	98	100	1,500	--	--	5,500	14,000	--
Beryllium	0.73	0.74	0.67	22	--	--	160	410	--
Boron	1.9 J	3.2	1.7 J	40	--	--	16,000	41,000	--
Cadmium	0.25	0.37	0.23	5.2	--	--	78	200	--
Calcium	5,000	51,000	6,900	--	--	--	--	--	--
Chromium	19	16	11	21	--	--	230	690	--
Cobalt	5.2	6.2	12	20	--	--	4,700	12,000	--
Copper	15	16	13	2,900	--	--	2,900	8,200	--
Iron	18,000 †m	16,000 †m	18,000 †m	15,000	15,900	--	--	--	--
Lead	38	170 †	31	107	--	--	400	700	--
Magnesium	1,800	4,600	3,400	325,000	--	--	--	730,000	--
Manganese	290	290	480	630	636	--	1,600	4,100	--
Mercury	0.041	0.027	0.023	0.89	--	--	10	0.1	--
Nickel	13	15	18	100	--	--	1,600	4,100	--
Potassium	810	840	880	--	--	--	--	--	--
Selenium	0.74	0.42 J	0.42 J	1.3	--	--	390	1,000	--
Sodium	460	660	38 J	--	--	--	--	--	--
Vanadium	29	21	16	550	--	--	550	1,400	--
Zinc	84	93	65	5,100	--	--	23,000	61,000	--
<b>TCLP Metals (mg/L)</b>									
Barium	0.54	0.67	0.70	--	--	--	--	--	2
Iron	0.31 J	ND U	ND U	--	--	--	--	--	5
Lead	ND U	ND U	ND U	--	--	--	--	--	0.0075
Zinc	0.038 J	0.027 J	0.030 J	--	--	--	--	--	5
<b>SPLP Metals (Not Analyzed)</b>									



# ANALYTICAL REPORT

## PREPARED FOR

Attn: Dean Tiebot  
WSP USA Inc.  
30 North LaSalle Street  
Chicago, Illinois 60602  
Generated 3/9/2023 3:55:47 PM

## JOB DESCRIPTION

IDOT-172-027-WO112 West Frankfort

## JOB NUMBER

500-229911-1

# Eurofins Chicago

## Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

## Authorization



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3/9/2023 3:55:47 PM

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Designee for  
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# Case Narrative

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Job ID: 500-229911-1

### Laboratory: Eurofins Chicago

#### Narrative

#### Job Narrative 500-229911-1

#### Receipt

The samples were received on 2/24/2023 11:11 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 3.2° C and 4.0° C.

#### GC/MS VOA

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

#### GC/MS Semi VOA

Method 8270D: The continuing calibration verification (CCV) analyzed in 500-700513 was outside the method criteria for the following analyte(s): 3,3'-Dichlorobenzidine and Carbazole. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: The continuing calibration verification (CCV) analyzed in 500-700668 was outside the method criteria for the following analyte(s): 2,4-Dinitrotoluene and Carbazole. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: The continuing calibration verification (CCV) analyzed in batch 500-700703 was outside the method criteria for the following analyte(s): 2,4-Dinitrophenol, Hexachlorocyclopentadiene and Pentachlorophenol. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: The continuing calibration verification (CCV) analyzed in 500-700703 was outside the method criteria for the following analyte(s): 2-Fluorophenol, Benzo[g,h,i]perylene, Benzo[k]fluoranthene, Bis(2-chloroethyl)ether, Dibenz(a,h)anthracene, Di-n-octyl phthalate and Indeno[1,2,3-cd]pyrene. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: Internal standard Perylene-d12 failed due to nature of the sample matrix. The samples were rerun with passing internal standard recoveries and similar analyte results. The original analysis has been reported to meet client reporting limits. The following samples are affected: 4062-C0V-08-B09 (0-2) (500-229911-2), 4062-C0V-14-B01 (0-1) (500-229911-3), 4062-C0V-08-B06 (0-2) (500-229911-6), 4062-C0V-08-B07 (0-2) (500-229911-7) and 4062-C0V-08-B05 (0-2) (500-229911-8)

Method 8270D: The matrix spike and matrix spike duplicate (MS/MSD) recoveries for preparation batch 500-700448 and analytical batch 500-700703 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8270D: Internal standard responses for Perylene-d12 was outside of acceptance limits for the following samples: 4062-C0V-14-B02 (0-1) (500-229911-4), 4062-C0V-14-B02 (0-1)D (500-229911-5) and 4062-C0V-05-B02 (0-1) (500-229911-14). The samples were run a second time with concurring results. Results with the highest ISTD recovery have been reported.

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

#### Metals

Method 3050B: Samples <500-229911-06 and -10> were homogenized

Method 6010B: The initial calibration verification (ICV) result for batch 700931 recovered above the 90-110% upper control limit for B- (111%). Sample results were all less than the reporting limit and have been reported as qualified data.

Method 6020A: The laboratory control sample (LCS) for preparation batch 500-700755 and analytical batch 500-701031 recovered above control limits for Thallium. The analyte was biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

# Case Narrative

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

---

## Job ID: 500-229911-1 (Continued)

---

### Laboratory: Eurofins Chicago (Continued)

#### General Chemistry

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.

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# Detection Summary

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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**Client Sample ID: 4062-C0V-05-B03 (0-1)**

**Lab Sample ID: 500-229911-13**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Naphthalene	0.0089	J	0.037	0.0058	mg/Kg	1	✳		8270D	Total/NA
2-Methylnaphthalene	0.015	J	0.076	0.0069	mg/Kg	1	✳		8270D	Total/NA
Acenaphthylene	0.0058	J	0.037	0.0049	mg/Kg	1	✳		8270D	Total/NA
Phenanthrene	0.028	J	0.037	0.0052	mg/Kg	1	✳		8270D	Total/NA
Fluoranthene	0.029	J	0.037	0.0070	mg/Kg	1	✳		8270D	Total/NA
Pyrene	0.026	J	0.037	0.0075	mg/Kg	1	✳		8270D	Total/NA
Benzo[a]anthracene	0.018	J	0.037	0.0050	mg/Kg	1	✳		8270D	Total/NA
Chrysene	0.025	J	0.037	0.010	mg/Kg	1	✳		8270D	Total/NA
Benzo[b]fluoranthene	0.036	J	0.037	0.0081	mg/Kg	1	✳		8270D	Total/NA
Benzo[a]pyrene	0.024	J	0.037	0.0073	mg/Kg	1	✳		8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.014	J	0.037	0.0097	mg/Kg	1	✳		8270D	Total/NA
Benzo[g,h,i]perylene	0.019	J	0.037	0.012	mg/Kg	1	✳		8270D	Total/NA
Antimony	0.38	J	1.1	0.22	mg/Kg	1	✳		6010B	Total/NA
Arsenic	6.7		0.56	0.19	mg/Kg	1	✳		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

# Detection Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-05-B03 (0-1) (Continued)**

**Lab Sample ID: 500-229911-13**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	100		0.56	0.064	mg/Kg	1	✳	6010B	Total/NA
Beryllium	0.67		0.22	0.053	mg/Kg	1	✳	6010B	Total/NA
Boron	1.7	J	2.8	0.26	mg/Kg	1	✳	6010B	Total/NA
Cadmium	0.23	B	0.11	0.020	mg/Kg	1	✳	6010B	Total/NA
Calcium	6900		11	1.9	mg/Kg	1	✳	6010B	Total/NA
Chromium	11		0.56	0.28	mg/Kg	1	✳	6010B	Total/NA
Cobalt	12		0.28	0.074	mg/Kg	1	✳	6010B	Total/NA
Copper	13	B	0.56	0.16	mg/Kg	1	✳	6010B	Total/NA
Iron	18000		11	5.8	mg/Kg	1	✳	6010B	Total/NA
Lead	31		0.28	0.13	mg/Kg	1	✳	6010B	Total/NA
Magnesium	3400		5.6	2.8	mg/Kg	1	✳	6010B	Total/NA
Manganese	480		0.56	0.082	mg/Kg	1	✳	6010B	Total/NA
Nickel	18		0.56	0.16	mg/Kg	1	✳	6010B	Total/NA
Potassium	880		28	9.9	mg/Kg	1	✳	6010B	Total/NA
Selenium	0.42	J	0.56	0.33	mg/Kg	1	✳	6010B	Total/NA
Silver	0.36	B	0.28	0.073	mg/Kg	1	✳	6010B	Total/NA
Sodium	38	J	56	8.3	mg/Kg	1	✳	6010B	Total/NA
Vanadium	16		0.28	0.066	mg/Kg	1	✳	6010B	Total/NA
Zinc	65		1.1	0.49	mg/Kg	1	✳	6010B	Total/NA
Barium	0.70		0.50	0.050	mg/L	1		6010B	TCLP
Zinc	0.030	J	0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.023		0.018	0.0094	mg/Kg	1	✳	7471B	Total/NA
pH	8.5		0.2	0.2	SU	1		9045D	Total/NA

**Client Sample ID: 4062-C0V-05-B02 (0-1)**

**Lab Sample ID: 500-229911-14**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.18		0.037	0.0057	mg/Kg	1	✳	8270D	Total/NA
2-Methylnaphthalene	0.34		0.075	0.0068	mg/Kg	1	✳	8270D	Total/NA
Acenaphthylene	0.013	J	0.037	0.0049	mg/Kg	1	✳	8270D	Total/NA
Acenaphthene	0.013	J	0.037	0.0067	mg/Kg	1	✳	8270D	Total/NA
Dibenzofuran	0.21		0.19	0.044	mg/Kg	1	✳	8270D	Total/NA
Fluorene	0.0092	J	0.037	0.0052	mg/Kg	1	✳	8270D	Total/NA
Phenanthrene	0.32		0.037	0.0052	mg/Kg	1	✳	8270D	Total/NA
Anthracene	0.031	J	0.037	0.0062	mg/Kg	1	✳	8270D	Total/NA
Fluoranthene	0.30		0.037	0.0069	mg/Kg	1	✳	8270D	Total/NA
Pyrene	0.37		0.037	0.0074	mg/Kg	1	✳	8270D	Total/NA
Benzo[a]anthracene	0.17		0.037	0.0050	mg/Kg	1	✳	8270D	Total/NA
Chrysene	0.28		0.037	0.010	mg/Kg	1	✳	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.18	J	0.19	0.068	mg/Kg	1	✳	8270D	Total/NA
Benzo[b]fluoranthene	0.42	*3	0.037	0.0080	mg/Kg	1	✳	8270D	Total/NA
Benzo[k]fluoranthene	0.14	*3	0.037	0.011	mg/Kg	1	✳	8270D	Total/NA
Benzo[a]pyrene	0.27	*3	0.037	0.0072	mg/Kg	1	✳	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.11	*3	0.037	0.0096	mg/Kg	1	✳	8270D	Total/NA
Dibenz(a,h)anthracene	0.035	J *3	0.037	0.0072	mg/Kg	1	✳	8270D	Total/NA
Benzo[g,h,i]perylene	0.12	*3	0.037	0.012	mg/Kg	1	✳	8270D	Total/NA
Arsenic	6.6		0.55	0.19	mg/Kg	1	✳	6010B	Total/NA
Barium	98		0.55	0.063	mg/Kg	1	✳	6010B	Total/NA
Beryllium	0.74		0.22	0.052	mg/Kg	1	✳	6010B	Total/NA
Boron	3.2		2.8	0.26	mg/Kg	1	✳	6010B	Total/NA
Cadmium	0.37	B	0.11	0.020	mg/Kg	1	✳	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Chicago



# Detection Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Client Sample ID: 4062-C0V-05-B02 (0-1) (Continued)

## Lab Sample ID: 500-229911-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	51000		55	9.4	mg/Kg	5	✳	6010B	Total/NA
Chromium	16		0.55	0.27	mg/Kg	1	✳	6010B	Total/NA
Cobalt	6.2		0.28	0.073	mg/Kg	1	✳	6010B	Total/NA
Copper	16	B	0.55	0.16	mg/Kg	1	✳	6010B	Total/NA
Iron	16000		11	5.8	mg/Kg	1	✳	6010B	Total/NA
Lead	170		0.28	0.13	mg/Kg	1	✳	6010B	Total/NA
Magnesium	4600		5.5	2.8	mg/Kg	1	✳	6010B	Total/NA
Manganese	290		0.55	0.080	mg/Kg	1	✳	6010B	Total/NA
Nickel	15		0.55	0.16	mg/Kg	1	✳	6010B	Total/NA
Potassium	840		28	9.8	mg/Kg	1	✳	6010B	Total/NA
Selenium	0.42	J	0.55	0.33	mg/Kg	1	✳	6010B	Total/NA
Silver	0.29	B	0.28	0.072	mg/Kg	1	✳	6010B	Total/NA
Sodium	660		55	8.2	mg/Kg	1	✳	6010B	Total/NA
Vanadium	21		0.28	0.065	mg/Kg	1	✳	6010B	Total/NA
Zinc	93		1.1	0.49	mg/Kg	1	✳	6010B	Total/NA
Barium	0.67		0.50	0.050	mg/L	1		6010B	TCLP
Zinc	0.027	J	0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.027		0.017	0.0092	mg/Kg	1	✳	7471B	Total/NA
pH	8.5		0.2	0.2	SU	1		9045D	Total/NA

## Client Sample ID: 4062-C0V-05-B01 (0-1)

## Lab Sample ID: 500-229911-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Methylnaphthalene	0.0077	J F1	0.084	0.0077	mg/Kg	1	✳	8270D	Total/NA
Phenanthrene	0.017	J	0.042	0.0058	mg/Kg	1	✳	8270D	Total/NA
Fluoranthene	0.018	J	0.042	0.0078	mg/Kg	1	✳	8270D	Total/NA
Pyrene	0.020	J	0.042	0.0083	mg/Kg	1	✳	8270D	Total/NA
Benzo[a]anthracene	0.011	J	0.042	0.0056	mg/Kg	1	✳	8270D	Total/NA
Chrysene	0.012	J	0.042	0.011	mg/Kg	1	✳	8270D	Total/NA
Benzo[b]fluoranthene	0.029	J	0.042	0.0090	mg/Kg	1	✳	8270D	Total/NA
Benzo[a]pyrene	0.020	J	0.042	0.0081	mg/Kg	1	✳	8270D	Total/NA
Arsenic	6.9		0.62	0.21	mg/Kg	1	✳	6010B	Total/NA
Barium	90		0.62	0.071	mg/Kg	1	✳	6010B	Total/NA
Beryllium	0.73		0.25	0.058	mg/Kg	1	✳	6010B	Total/NA
Boron	1.9	J	3.1	0.29	mg/Kg	1	✳	6010B	Total/NA
Cadmium	0.25	B	0.12	0.022	mg/Kg	1	✳	6010B	Total/NA
Calcium	5000		12	2.1	mg/Kg	1	✳	6010B	Total/NA
Chromium	19		0.62	0.31	mg/Kg	1	✳	6010B	Total/NA
Cobalt	5.2		0.31	0.081	mg/Kg	1	✳	6010B	Total/NA
Copper	15	B	0.62	0.17	mg/Kg	1	✳	6010B	Total/NA
Iron	18000		12	6.4	mg/Kg	1	✳	6010B	Total/NA
Lead	38		0.31	0.14	mg/Kg	1	✳	6010B	Total/NA
Magnesium	1800		6.2	3.1	mg/Kg	1	✳	6010B	Total/NA
Manganese	290		0.62	0.090	mg/Kg	1	✳	6010B	Total/NA
Nickel	13		0.62	0.18	mg/Kg	1	✳	6010B	Total/NA
Potassium	810		31	11	mg/Kg	1	✳	6010B	Total/NA
Selenium	0.74		0.62	0.36	mg/Kg	1	✳	6010B	Total/NA
Silver	0.37	B	0.31	0.080	mg/Kg	1	✳	6010B	Total/NA
Sodium	460		62	9.2	mg/Kg	1	✳	6010B	Total/NA
Vanadium	29		0.31	0.073	mg/Kg	1	✳	6010B	Total/NA
Zinc	84		1.2	0.54	mg/Kg	1	✳	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

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# Detection Summary

Client: WSP USA Inc.

Job ID: 500-229911-1

Project/Site: IDOT-172-027-WO112 West Frankfort

**Client Sample ID: 4062-C0V-05-B01 (0-1) (Continued)**

**Lab Sample ID: 500-229911-15**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.54		0.50	0.050	mg/L	1		6010B	TCLP
Iron	0.31	J	0.40	0.20	mg/L	1		6010B	TCLP
Zinc	0.038	J	0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.041		0.021	0.011	mg/Kg	1	*	7471B	Total/NA
pH	7.8		0.2	0.2	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

# Method Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET CHI
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET CHI
6010B	Metals (ICP)	SW846	EET CHI
6020A	Metals (ICP/MS)	SW846	EET CHI
7470A	TCLP Mercury	SW846	EET CHI
7471B	Mercury (CVAA)	SW846	EET CHI
9045D	pH	SW846	EET CHI
Moisture	Percent Moisture	EPA	EET CHI
1311	TCLP Extraction	SW846	EET CHI
3010A	Preparation, Total Metals	SW846	EET CHI
3050B	Preparation, Metals	SW846	EET CHI
3541	Automated Soxhlet Extraction	SW846	EET CHI
5035	Closed System Purge and Trap	SW846	EET CHI
7470A	Preparation, Mercury	SW846	EET CHI
7471B	Preparation, Mercury	SW846	EET 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.

#### Laboratory References:

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

# Sample Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-229911-13	4062-C0V-05-B03 (0-1)	Solid	02/23/23 15:30	02/24/23 11:11
500-229911-14	4062-C0V-05-B02 (0-1)	Solid	02/23/23 15:40	02/24/23 11:11
500-229911-15	4062-C0V-05-B01 (0-1)	Solid	02/23/23 15:50	02/24/23 11:11

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15



# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-05-B03 (0-1)**

**Lab Sample ID: 500-229911-13**

Date Collected: 02/23/23 15:30

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 86.2

**Method: SW846 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.025		0.025	0.011	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Benzene	<0.0025		0.0025	0.00063	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Bromodichloromethane	<0.0025		0.0025	0.00050	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Bromoform	<0.0025		0.0025	0.00072	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Bromomethane	<0.0061		0.0061	0.0023	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
2-Butanone (MEK)	<0.0061		0.0061	0.0027	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Carbon disulfide	<0.0061		0.0061	0.0013	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Carbon tetrachloride	<0.0025		0.0025	0.00071	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Chlorobenzene	<0.0025		0.0025	0.00091	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Chloroethane	<0.0061		0.0061	0.0018	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Chloroform	<0.0025		0.0025	0.00085	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Chloromethane	<0.0061		0.0061	0.0025	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
cis-1,2-Dichloroethene	<0.0025		0.0025	0.00069	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
cis-1,3-Dichloropropene	<0.0025		0.0025	0.00074	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Dibromochloromethane	<0.0025		0.0025	0.00080	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
1,1-Dichloroethane	<0.0025		0.0025	0.00084	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
1,2-Dichloroethane	<0.0061		0.0061	0.0019	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
1,1-Dichloroethene	<0.0025		0.0025	0.00085	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
1,2-Dichloropropane	<0.0025		0.0025	0.00064	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
1,3-Dichloropropane, Total	<0.0025		0.0025	0.00086	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Ethylbenzene	<0.0025		0.0025	0.0012	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
2-Hexanone	<0.0061		0.0061	0.0019	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Methylene Chloride	<0.0061		0.0061	0.0024	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
4-Methyl-2-pentanone (MIBK)	<0.0061		0.0061	0.0018	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Methyl tert-butyl ether	<0.0025		0.0025	0.00072	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Styrene	<0.0025		0.0025	0.00074	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
1,1,2,2-Tetrachloroethane	<0.0025		0.0025	0.00079	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Tetrachloroethene	<0.0025		0.0025	0.00084	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Toluene	<0.0025		0.0025	0.00062	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
trans-1,2-Dichloroethene	<0.0025		0.0025	0.0011	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
trans-1,3-Dichloropropene	<0.0025		0.0025	0.00086	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
1,1,1-Trichloroethane	<0.0025		0.0025	0.00083	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
1,1,2-Trichloroethane	<0.0025		0.0025	0.0011	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Trichloroethene	<0.0025		0.0025	0.00083	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Vinyl acetate	<0.0061		0.0061	0.0021	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Vinyl chloride	<0.0025		0.0025	0.0011	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1
Xylenes, Total	<0.0049		0.0049	0.00079	mg/Kg	✱	02/24/23 17:05	02/28/23 17:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		75 - 131	02/24/23 17:05	02/28/23 17:29	1
Dibromofluoromethane	95		75 - 126	02/24/23 17:05	02/28/23 17:29	1
1,2-Dichloroethane-d4 (Surr)	98		70 - 134	02/24/23 17:05	02/28/23 17:29	1
Toluene-d8 (Surr)	89		75 - 124	02/24/23 17:05	02/28/23 17:29	1

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.19		0.19	0.083	mg/Kg	✱	02/28/23 08:18	02/28/23 19:22	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	✱	02/28/23 08:18	02/28/23 19:22	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	✱	02/28/23 08:18	02/28/23 19:22	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	✱	02/28/23 08:18	02/28/23 19:22	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-05-B03 (0-1)**

**Lab Sample ID: 500-229911-13**

Date Collected: 02/23/23 15:30

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 86.2

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
N-Nitrosodi-n-propylamine	<0.076		0.076	0.046	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
Nitrobenzene	<0.037		0.037	0.0094	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
<b>Naphthalene</b>	<b>0.0089</b>	<b>J</b>	0.037	0.0058	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
4-Chloroaniline	<0.76		0.76	0.18	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
2,4,5-Trichlorophenol	<0.37		0.37	0.086	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
Hexachlorocyclopentadiene	<0.76		0.76	0.22	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
<b>2-Methylnaphthalene</b>	<b>0.015</b>	<b>J</b>	0.076	0.0069	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
2-Nitrophenol	<0.37		0.37	0.089	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
2,4-Dinitrophenol	<0.76		0.76	0.66	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
<b>Acenaphthylene</b>	<b>0.0058</b>	<b>J</b>	0.037	0.0049	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
2,4-Dinitrotoluene	<0.19		0.19	0.060	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
4-Nitrophenol	<0.76		0.76	0.36	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
Fluorene	<0.037		0.037	0.0053	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
Hexachlorobenzene	<0.076		0.076	0.0087	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
Diethyl phthalate	<0.19		0.19	0.064	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
Pentachlorophenol	<0.76		0.76	0.60	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
4,6-Dinitro-2-methylphenol	<0.76		0.76	0.30	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
<b>Phenanthrene</b>	<b>0.028</b>	<b>J</b>	0.037	0.0052	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
Anthracene	<0.037		0.037	0.0063	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
Carbazole	<0.19		0.19	0.094	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
<b>Fluoranthene</b>	<b>0.029</b>	<b>J</b>	0.037	0.0070	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
<b>Pyrene</b>	<b>0.026</b>	<b>J</b>	0.037	0.0075	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1
<b>Benzo[a]anthracene</b>	<b>0.018</b>	<b>J</b>	0.037	0.0050	mg/Kg	☼	02/28/23 08:18	02/28/23 19:22	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-05-B03 (0-1)**

**Lab Sample ID: 500-229911-13**

Date Collected: 02/23/23 15:30

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 86.2

## Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chrysene</b>	<b>0.025</b>	<b>J</b>	0.037	0.010	mg/Kg	✳	02/28/23 08:18	02/28/23 19:22	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.053	mg/Kg	✳	02/28/23 08:18	02/28/23 19:22	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.069	mg/Kg	✳	02/28/23 08:18	02/28/23 19:22	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	✳	02/28/23 08:18	02/28/23 19:22	1
<b>Benzo[b]fluoranthene</b>	<b>0.036</b>	<b>J</b>	0.037	0.0081	mg/Kg	✳	02/28/23 08:18	02/28/23 19:22	1
Benzo[k]fluoranthene	<0.037		0.037	0.011	mg/Kg	✳	02/28/23 08:18	02/28/23 19:22	1
<b>Benzo[a]pyrene</b>	<b>0.024</b>	<b>J</b>	0.037	0.0073	mg/Kg	✳	02/28/23 08:18	02/28/23 19:22	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.014</b>	<b>J</b>	0.037	0.0097	mg/Kg	✳	02/28/23 08:18	02/28/23 19:22	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0073	mg/Kg	✳	02/28/23 08:18	02/28/23 19:22	1
<b>Benzo[g,h,i]perylene</b>	<b>0.019</b>	<b>J</b>	0.037	0.012	mg/Kg	✳	02/28/23 08:18	02/28/23 19:22	1
3 & 4 Methylphenol	<0.19		0.19	0.063	mg/Kg	✳	02/28/23 08:18	02/28/23 19:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	104		31 - 166	02/28/23 08:18	02/28/23 19:22	1
Phenol-d5	98		30 - 153	02/28/23 08:18	02/28/23 19:22	1
Nitrobenzene-d5 (Surr)	84		37 - 147	02/28/23 08:18	02/28/23 19:22	1
2-Fluorobiphenyl (Surr)	77		43 - 145	02/28/23 08:18	02/28/23 19:22	1
2,4,6-Tribromophenol	77		31 - 143	02/28/23 08:18	02/28/23 19:22	1
Terphenyl-d14 (Surr)	88		42 - 157	02/28/23 08:18	02/28/23 19:22	1

## Method: SW846 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.38</b>	<b>J</b>	1.1	0.22	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
<b>Arsenic</b>	<b>6.7</b>		0.56	0.19	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
<b>Barium</b>	<b>100</b>		0.56	0.064	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
<b>Beryllium</b>	<b>0.67</b>		0.22	0.053	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
<b>Boron</b>	<b>1.7</b>	<b>J</b>	2.8	0.26	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
<b>Cadmium</b>	<b>0.23</b>	<b>B</b>	0.11	0.020	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
<b>Calcium</b>	<b>6900</b>		11	1.9	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
<b>Chromium</b>	<b>11</b>		0.56	0.28	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
<b>Cobalt</b>	<b>12</b>		0.28	0.074	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
<b>Copper</b>	<b>13</b>	<b>B</b>	0.56	0.16	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
<b>Iron</b>	<b>18000</b>		11	5.8	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
<b>Lead</b>	<b>31</b>		0.28	0.13	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
<b>Magnesium</b>	<b>3400</b>		5.6	2.8	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
<b>Manganese</b>	<b>480</b>		0.56	0.082	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
<b>Nickel</b>	<b>18</b>		0.56	0.16	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
<b>Potassium</b>	<b>880</b>		28	9.9	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
<b>Selenium</b>	<b>0.42</b>	<b>J</b>	0.56	0.33	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
<b>Silver</b>	<b>0.36</b>	<b>B</b>	0.28	0.073	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
<b>Sodium</b>	<b>38</b>	<b>J</b>	56	8.3	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
Thallium	<0.56		0.56	0.28	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
<b>Vanadium</b>	<b>16</b>		0.28	0.066	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1
<b>Zinc</b>	<b>65</b>		1.1	0.49	mg/Kg	✳	02/24/23 15:35	02/27/23 15:54	1

## Method: SW846 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.70</b>		0.50	0.050	mg/L		03/01/23 17:00	03/02/23 13:30	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		03/01/23 17:00	03/02/23 13:30	1
Boron	<0.50	^1+	0.50	0.050	mg/L		03/01/23 17:00	03/02/23 13:30	1

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# Client Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-05-B03 (0-1)**

**Lab Sample ID: 500-229911-13**

Date Collected: 02/23/23 15:30

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 86.2

**Method: SW846 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		03/01/23 17:00	03/02/23 13:30	1
Chromium	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:30	1
Cobalt	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:30	1
Iron	<0.40		0.40	0.20	mg/L		03/01/23 17:00	03/02/23 13:30	1
Lead	<0.0075		0.0075	0.0075	mg/L		03/01/23 17:00	03/02/23 13:30	1
Nickel	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:30	1
Selenium	<0.050		0.050	0.020	mg/L		03/01/23 17:00	03/02/23 13:30	1
Silver	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:30	1
<b>Zinc</b>	<b>0.030</b>	<b>J</b>	0.50	0.020	mg/L		03/01/23 17:00	03/02/23 13:30	1

**Method: SW846 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		03/01/23 17:00	03/02/23 16:01	1
Thallium	<0.0020	*+	0.0020	0.0020	mg/L		03/01/23 17:00	03/02/23 16:01	1

**Method: SW846 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		03/01/23 11:25	03/02/23 12:00	1

**Method: SW846 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<b>0.023</b>		0.018	0.0094	mg/Kg	☆	03/03/23 13:00	03/06/23 09:10	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9045D)	<b>8.5</b>		0.2	0.2	SU			03/01/23 15:47	1



# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-05-B02 (0-1)**

**Lab Sample ID: 500-229911-14**

Date Collected: 02/23/23 15:40

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 86.6

**Method: SW846 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.024		0.024	0.010	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Benzene	<0.0024		0.0024	0.00061	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Bromodichloromethane	<0.0024		0.0024	0.00049	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Bromoform	<0.0024		0.0024	0.00070	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Bromomethane	<0.0060		0.0060	0.0023	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
2-Butanone (MEK)	<0.0060		0.0060	0.0027	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Carbon disulfide	<0.0060		0.0060	0.0012	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Carbon tetrachloride	<0.0024		0.0024	0.00069	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Chlorobenzene	<0.0024		0.0024	0.00088	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Chloroethane	<0.0060		0.0060	0.0018	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Chloroform	<0.0024		0.0024	0.00083	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Chloromethane	<0.0060		0.0060	0.0024	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
cis-1,2-Dichloroethene	<0.0024		0.0024	0.00067	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
cis-1,3-Dichloropropene	<0.0024		0.0024	0.00072	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Dibromochloromethane	<0.0024		0.0024	0.00078	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
1,1-Dichloroethane	<0.0024		0.0024	0.00082	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
1,2-Dichloroethane	<0.0060		0.0060	0.0019	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
1,1-Dichloroethene	<0.0024		0.0024	0.00082	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
1,2-Dichloropropane	<0.0024		0.0024	0.00062	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
1,3-Dichloropropane, Total	<0.0024		0.0024	0.00084	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Ethylbenzene	<0.0024		0.0024	0.0011	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
2-Hexanone	<0.0060		0.0060	0.0019	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Methylene Chloride	<0.0060		0.0060	0.0024	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
4-Methyl-2-pentanone (MIBK)	<0.0060		0.0060	0.0018	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Methyl tert-butyl ether	<0.0024		0.0024	0.00070	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Styrene	<0.0024		0.0024	0.00072	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
1,1,2,2-Tetrachloroethane	<0.0024		0.0024	0.00076	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Tetrachloroethene	<0.0024		0.0024	0.00081	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Toluene	<0.0024		0.0024	0.00060	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
trans-1,2-Dichloroethene	<0.0024		0.0024	0.0011	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
trans-1,3-Dichloropropene	<0.0024		0.0024	0.00084	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
1,1,1-Trichloroethane	<0.0024		0.0024	0.00080	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
1,1,2-Trichloroethane	<0.0024		0.0024	0.0010	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Trichloroethene	<0.0024		0.0024	0.00081	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Vinyl acetate	<0.0060		0.0060	0.0021	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Vinyl chloride	<0.0024		0.0024	0.0011	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1
Xylenes, Total	<0.0048		0.0048	0.00076	mg/Kg	☼	02/24/23 17:05	02/28/23 17:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		75 - 131	02/24/23 17:05	02/28/23 17:55	1
Dibromofluoromethane	92		75 - 126	02/24/23 17:05	02/28/23 17:55	1
1,2-Dichloroethane-d4 (Surr)	94		70 - 134	02/24/23 17:05	02/28/23 17:55	1
Toluene-d8 (Surr)	91		75 - 124	02/24/23 17:05	02/28/23 17:55	1

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.19		0.19	0.083	mg/Kg	☼	02/28/23 08:18	03/08/23 19:48	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	02/28/23 08:18	03/08/23 19:48	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/28/23 08:18	03/08/23 19:48	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	02/28/23 08:18	03/08/23 19:48	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-05-B02 (0-1)**

**Lab Sample ID: 500-229911-14**

Date Collected: 02/23/23 15:40

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 86.6

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.19		0.19	0.044	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
N-Nitrosodi-n-propylamine	<0.075		0.075	0.046	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
Isophorone	<0.19		0.19	0.042	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
<b>Naphthalene</b>	<b>0.18</b>		0.037	0.0057	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
2,4-Dichlorophenol	<0.37		0.37	0.088	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
4-Chloroaniline	<0.75		0.75	0.17	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
Hexachlorocyclopentadiene	<0.75		0.75	0.21	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
<b>2-Methylnaphthalene</b>	<b>0.34</b>		0.075	0.0068	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
2,6-Dinitrotoluene	<0.19		0.19	0.073	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
2,4-Dinitrophenol	<0.75		0.75	0.66	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
<b>Acenaphthylene</b>	<b>0.013 J</b>		0.037	0.0049	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
<b>Acenaphthene</b>	<b>0.013 J</b>		0.037	0.0067	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
<b>Dibenzofuran</b>	<b>0.21</b>		0.19	0.044	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
4-Nitrophenol	<0.75		0.75	0.35	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
<b>Fluorene</b>	<b>0.0092 J</b>		0.037	0.0052	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
Hexachlorobenzene	<0.075		0.075	0.0086	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.043	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
Pentachlorophenol	<0.75		0.75	0.60	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
4,6-Dinitro-2-methylphenol	<0.75		0.75	0.30	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
<b>Phenanthrene</b>	<b>0.32</b>		0.037	0.0052	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
<b>Anthracene</b>	<b>0.031 J</b>		0.037	0.0062	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
Carbazole	<0.19		0.19	0.093	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
<b>Fluoranthene</b>	<b>0.30</b>		0.037	0.0069	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
<b>Pyrene</b>	<b>0.37</b>		0.037	0.0074	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1
<b>Benzo[a]anthracene</b>	<b>0.17</b>		0.037	0.0050	mg/Kg	✱	02/28/23 08:18	03/08/23 19:48	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-05-B02 (0-1)**

**Lab Sample ID: 500-229911-14**

Date Collected: 02/23/23 15:40

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 86.6

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chrysene</b>	<b>0.28</b>		0.037	0.010	mg/Kg	☼	02/28/23 08:18	03/08/23 19:48	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	02/28/23 08:18	03/08/23 19:48	1
<b>Bis(2-ethylhexyl) phthalate</b>	<b>0.18</b>	<b>J</b>	0.19	0.068	mg/Kg	☼	02/28/23 08:18	03/08/23 19:48	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	02/28/23 08:18	03/08/23 19:48	1
<b>Benzo[b]fluoranthene</b>	<b>0.42</b>	<b>*3</b>	0.037	0.0080	mg/Kg	☼	02/28/23 08:18	03/08/23 19:48	1
<b>Benzo[k]fluoranthene</b>	<b>0.14</b>	<b>*3</b>	0.037	0.011	mg/Kg	☼	02/28/23 08:18	03/08/23 19:48	1
<b>Benzo[a]pyrene</b>	<b>0.27</b>	<b>*3</b>	0.037	0.0072	mg/Kg	☼	02/28/23 08:18	03/08/23 19:48	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.11</b>	<b>*3</b>	0.037	0.0096	mg/Kg	☼	02/28/23 08:18	03/08/23 19:48	1
<b>Dibenz(a,h)anthracene</b>	<b>0.035</b>	<b>J *3</b>	0.037	0.0072	mg/Kg	☼	02/28/23 08:18	03/08/23 19:48	1
<b>Benzo[g,h,i]perylene</b>	<b>0.12</b>	<b>*3</b>	0.037	0.012	mg/Kg	☼	02/28/23 08:18	03/08/23 19:48	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/28/23 08:18	03/08/23 19:48	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorophenol	103		31 - 166				02/28/23 08:18	03/08/23 19:48	1
Phenol-d5	94		30 - 153				02/28/23 08:18	03/08/23 19:48	1
Nitrobenzene-d5 (Surr)	77		37 - 147				02/28/23 08:18	03/08/23 19:48	1
2-Fluorobiphenyl (Surr)	77		43 - 145				02/28/23 08:18	03/08/23 19:48	1
2,4,6-Tribromophenol	86		31 - 143				02/28/23 08:18	03/08/23 19:48	1
Terphenyl-d14 (Surr)	105		42 - 157				02/28/23 08:18	03/08/23 19:48	1

**Method: SW846 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.1		1.1	0.22	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1
<b>Arsenic</b>	<b>6.6</b>		0.55	0.19	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1
<b>Barium</b>	<b>98</b>		0.55	0.063	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1
<b>Beryllium</b>	<b>0.74</b>		0.22	0.052	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1
<b>Boron</b>	<b>3.2</b>		2.8	0.26	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1
<b>Cadmium</b>	<b>0.37</b>	<b>B</b>	0.11	0.020	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1
<b>Calcium</b>	<b>51000</b>		55	9.4	mg/Kg	☼	02/24/23 15:35	02/28/23 14:31	5
<b>Chromium</b>	<b>16</b>		0.55	0.27	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1
<b>Cobalt</b>	<b>6.2</b>		0.28	0.073	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1
<b>Copper</b>	<b>16</b>	<b>B</b>	0.55	0.16	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1
<b>Iron</b>	<b>16000</b>		11	5.8	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1
<b>Lead</b>	<b>170</b>		0.28	0.13	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1
<b>Magnesium</b>	<b>4600</b>		5.5	2.8	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1
<b>Manganese</b>	<b>290</b>		0.55	0.080	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1
<b>Nickel</b>	<b>15</b>		0.55	0.16	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1
<b>Potassium</b>	<b>840</b>		28	9.8	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1
<b>Selenium</b>	<b>0.42</b>	<b>J</b>	0.55	0.33	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1
<b>Silver</b>	<b>0.29</b>	<b>B</b>	0.28	0.072	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1
<b>Sodium</b>	<b>660</b>		55	8.2	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1
Thallium	<0.55		0.55	0.28	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1
<b>Vanadium</b>	<b>21</b>		0.28	0.065	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1
<b>Zinc</b>	<b>93</b>		1.1	0.49	mg/Kg	☼	02/24/23 15:35	02/27/23 15:57	1

**Method: SW846 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.67</b>		0.50	0.050	mg/L		03/01/23 17:00	03/02/23 13:33	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		03/01/23 17:00	03/02/23 13:33	1
Boron	<0.50	^1+	0.50	0.050	mg/L		03/01/23 17:00	03/02/23 13:33	1

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# Client Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-05-B02 (0-1)**

**Lab Sample ID: 500-229911-14**

Date Collected: 02/23/23 15:40

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 86.6

**Method: SW846 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		03/01/23 17:00	03/02/23 13:33	1
Chromium	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:33	1
Cobalt	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:33	1
Iron	<0.40		0.40	0.20	mg/L		03/01/23 17:00	03/02/23 13:33	1
Lead	<0.0075		0.0075	0.0075	mg/L		03/01/23 17:00	03/02/23 13:33	1
Nickel	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:33	1
Selenium	<0.050		0.050	0.020	mg/L		03/01/23 17:00	03/02/23 13:33	1
Silver	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:33	1
<b>Zinc</b>	<b>0.027</b>	<b>J</b>	0.50	0.020	mg/L		03/01/23 17:00	03/02/23 13:33	1

**Method: SW846 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		03/01/23 17:00	03/02/23 16:03	1
Thallium	<0.0020	*+	0.0020	0.0020	mg/L		03/01/23 17:00	03/02/23 16:03	1

**Method: SW846 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		03/01/23 11:25	03/02/23 12:02	1

**Method: SW846 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.027</b>		0.017	0.0092	mg/Kg	☆	03/03/23 13:00	03/06/23 09:12	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>pH (SW846 9045D)</b>	<b>8.5</b>		0.2	0.2	SU			03/01/23 15:18	1

# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-05-B01 (0-1)**

**Lab Sample ID: 500-229911-15**

Date Collected: 02/23/23 15:50

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 77.5

**Method: SW846 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.032		0.032	0.014	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Benzene	<0.0032		0.0032	0.00082	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Bromodichloromethane	<0.0032		0.0032	0.00066	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Bromoform	<0.0032		0.0032	0.00094	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Bromomethane	<0.0081		0.0081	0.0030	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
2-Butanone (MEK)	<0.0081		0.0081	0.0036	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Carbon disulfide	<0.0081		0.0081	0.0017	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Carbon tetrachloride	<0.0032		0.0032	0.00094	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Chlorobenzene	<0.0032		0.0032	0.0012	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Chloroethane	<0.0081		0.0081	0.0024	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Chloroform	<0.0032		0.0032	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Chloromethane	<0.0081		0.0081	0.0032	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
cis-1,2-Dichloroethene	<0.0032		0.0032	0.00090	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
cis-1,3-Dichloropropene	<0.0032		0.0032	0.00097	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Dibromochloromethane	<0.0032		0.0032	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
1,1-Dichloroethane	<0.0032		0.0032	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
1,2-Dichloroethane	<0.0081		0.0081	0.0025	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
1,1-Dichloroethene	<0.0032		0.0032	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
1,2-Dichloropropane	<0.0032		0.0032	0.00083	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
1,3-Dichloropropane, Total	<0.0032		0.0032	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Ethylbenzene	<0.0032		0.0032	0.0015	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
2-Hexanone	<0.0081		0.0081	0.0025	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Methylene Chloride	<0.0081		0.0081	0.0032	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
4-Methyl-2-pentanone (MIBK)	<0.0081		0.0081	0.0024	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Methyl tert-butyl ether	<0.0032		0.0032	0.00095	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Styrene	<0.0032		0.0032	0.00097	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
1,1,2,2-Tetrachloroethane	<0.0032		0.0032	0.0010	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Tetrachloroethene	<0.0032		0.0032	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Toluene	<0.0032		0.0032	0.00081	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
trans-1,2-Dichloroethene	<0.0032		0.0032	0.0014	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
trans-1,3-Dichloropropene	<0.0032		0.0032	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
1,1,1-Trichloroethane	<0.0032		0.0032	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
1,1,2-Trichloroethane	<0.0032		0.0032	0.0014	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Trichloroethene	<0.0032		0.0032	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Vinyl acetate	<0.0081		0.0081	0.0028	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Vinyl chloride	<0.0032		0.0032	0.0014	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1
Xylenes, Total	<0.0065		0.0065	0.0010	mg/Kg	✳	02/24/23 17:05	02/28/23 18:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		75 - 131	02/24/23 17:05	02/28/23 18:20	1
Dibromofluoromethane	90		75 - 126	02/24/23 17:05	02/28/23 18:20	1
1,2-Dichloroethane-d4 (Surr)	92		70 - 134	02/24/23 17:05	02/28/23 18:20	1
Toluene-d8 (Surr)	92		75 - 124	02/24/23 17:05	02/28/23 18:20	1

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.21		0.21	0.093	mg/Kg	✳	02/28/23 08:18	03/01/23 21:47	1
Bis(2-chloroethyl)ether	<0.21		0.21	0.063	mg/Kg	✳	02/28/23 08:18	03/01/23 21:47	1
1,3-Dichlorobenzene	<0.21		0.21	0.047	mg/Kg	✳	02/28/23 08:18	03/01/23 21:47	1
1,4-Dichlorobenzene	<0.21		0.21	0.054	mg/Kg	✳	02/28/23 08:18	03/01/23 21:47	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-05-B01 (0-1)**

**Lab Sample ID: 500-229911-15**

Date Collected: 02/23/23 15:50

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 77.5

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.21		0.21	0.050	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
2-Methylphenol	<0.21		0.21	0.067	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
2,2'-oxybis[1-chloropropane]	<0.21		0.21	0.049	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
N-Nitrosodi-n-propylamine	<0.084		0.084	0.051	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
Hexachloroethane	<0.21	F1	0.21	0.064	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
2-Chlorophenol	<0.21		0.21	0.071	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
Nitrobenzene	<0.042		0.042	0.010	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
Bis(2-chloroethoxy)methane	<0.21		0.21	0.043	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
1,2,4-Trichlorobenzene	<0.21		0.21	0.045	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
Isophorone	<0.21		0.21	0.047	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
2,4-Dimethylphenol	<0.42		0.42	0.16	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
Hexachlorobutadiene	<0.21		0.21	0.066	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
Naphthalene	<0.042		0.042	0.0064	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
2,4-Dichlorophenol	<0.42		0.42	0.099	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
4-Chloroaniline	<0.84		0.84	0.20	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
2,4,6-Trichlorophenol	<0.42		0.42	0.14	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
2,4,5-Trichlorophenol	<0.42		0.42	0.096	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
Hexachlorocyclopentadiene	<0.84	F1	0.84	0.24	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
<b>2-Methylnaphthalene</b>	<b>0.0077</b>	<b>J F1</b>	0.084	0.0077	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
2-Nitroaniline	<0.21		0.21	0.056	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
2-Chloronaphthalene	<0.21		0.21	0.046	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
4-Chloro-3-methylphenol	<0.42		0.42	0.14	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
2,6-Dinitrotoluene	<0.21		0.21	0.082	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
2-Nitrophenol	<0.42		0.42	0.099	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
3-Nitroaniline	<0.42		0.42	0.13	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
Dimethyl phthalate	<0.21		0.21	0.055	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
2,4-Dinitrophenol	<0.84	F1	0.84	0.74	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
Acenaphthylene	<0.042		0.042	0.0055	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
2,4-Dinitrotoluene	<0.21		0.21	0.067	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
Acenaphthene	<0.042		0.042	0.0075	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
Dibenzofuran	<0.21		0.21	0.049	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
4-Nitrophenol	<0.84		0.84	0.40	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
Fluorene	<0.042		0.042	0.0059	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
4-Nitroaniline	<0.42		0.42	0.18	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
4-Bromophenyl phenyl ether	<0.21		0.21	0.055	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
Hexachlorobenzene	<0.084		0.084	0.0097	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
Diethyl phthalate	<0.21		0.21	0.071	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
4-Chlorophenyl phenyl ether	<0.21		0.21	0.049	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
Pentachlorophenol	<0.84		0.84	0.67	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
N-Nitrosodiphenylamine	<0.21		0.21	0.049	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
4,6-Dinitro-2-methylphenol	<0.84		0.84	0.34	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
<b>Phenanthrene</b>	<b>0.017</b>	<b>J</b>	0.042	0.0058	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
Anthracene	<0.042		0.042	0.0070	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
Carbazole	<0.21		0.21	0.10	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
Di-n-butyl phthalate	<0.21		0.21	0.064	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
<b>Fluoranthene</b>	<b>0.018</b>	<b>J</b>	0.042	0.0078	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
<b>Pyrene</b>	<b>0.020</b>	<b>J</b>	0.042	0.0083	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
Butyl benzyl phthalate	<0.21		0.21	0.080	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1
<b>Benzo[a]anthracene</b>	<b>0.011</b>	<b>J</b>	0.042	0.0056	mg/Kg	✱	02/28/23 08:18	03/01/23 21:47	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-05-B01 (0-1)**

**Lab Sample ID: 500-229911-15**

Date Collected: 02/23/23 15:50

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 77.5

## Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chrysene</b>	<b>0.012</b>	<b>J</b>	0.042	0.011	mg/Kg	✳	02/28/23 08:18	03/01/23 21:47	1
3,3'-Dichlorobenzidine	<0.21	F2 F1	0.21	0.059	mg/Kg	✳	02/28/23 08:18	03/01/23 21:47	1
Bis(2-ethylhexyl) phthalate	<0.21		0.21	0.077	mg/Kg	✳	02/28/23 08:18	03/01/23 21:47	1
Di-n-octyl phthalate	<0.21		0.21	0.068	mg/Kg	✳	02/28/23 08:18	03/01/23 21:47	1
<b>Benzo[b]fluoranthene</b>	<b>0.029</b>	<b>J</b>	0.042	0.0090	mg/Kg	✳	02/28/23 08:18	03/01/23 21:47	1
Benzo[k]fluoranthene	<0.042		0.042	0.012	mg/Kg	✳	02/28/23 08:18	03/01/23 21:47	1
<b>Benzo[a]pyrene</b>	<b>0.020</b>	<b>J</b>	0.042	0.0081	mg/Kg	✳	02/28/23 08:18	03/01/23 21:47	1
Indeno[1,2,3-cd]pyrene	<0.042		0.042	0.011	mg/Kg	✳	02/28/23 08:18	03/01/23 21:47	1
Dibenz(a,h)anthracene	<0.042		0.042	0.0081	mg/Kg	✳	02/28/23 08:18	03/01/23 21:47	1
Benzo[g,h,i]perylene	<0.042	F1	0.042	0.013	mg/Kg	✳	02/28/23 08:18	03/01/23 21:47	1
3 & 4 Methylphenol	<0.21		0.21	0.070	mg/Kg	✳	02/28/23 08:18	03/01/23 21:47	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorophenol	108		31 - 166				02/28/23 08:18	03/01/23 21:47	1
Phenol-d5	94		30 - 153				02/28/23 08:18	03/01/23 21:47	1
Nitrobenzene-d5 (Surr)	79		37 - 147				02/28/23 08:18	03/01/23 21:47	1
2-Fluorobiphenyl (Surr)	76		43 - 145				02/28/23 08:18	03/01/23 21:47	1
2,4,6-Tribromophenol	63		31 - 143				02/28/23 08:18	03/01/23 21:47	1
Terphenyl-d14 (Surr)	127		42 - 157				02/28/23 08:18	03/01/23 21:47	1

## Method: SW846 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.24	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
<b>Arsenic</b>	<b>6.9</b>		0.62	0.21	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
<b>Barium</b>	<b>90</b>		0.62	0.071	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
<b>Beryllium</b>	<b>0.73</b>		0.25	0.058	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
<b>Boron</b>	<b>1.9</b>	<b>J</b>	3.1	0.29	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
<b>Cadmium</b>	<b>0.25</b>	<b>B</b>	0.12	0.022	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
<b>Calcium</b>	<b>5000</b>		12	2.1	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
<b>Chromium</b>	<b>19</b>		0.62	0.31	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
<b>Cobalt</b>	<b>5.2</b>		0.31	0.081	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
<b>Copper</b>	<b>15</b>	<b>B</b>	0.62	0.17	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
<b>Iron</b>	<b>18000</b>		12	6.4	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
<b>Lead</b>	<b>38</b>		0.31	0.14	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
<b>Magnesium</b>	<b>1800</b>		6.2	3.1	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
<b>Manganese</b>	<b>290</b>		0.62	0.090	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
<b>Nickel</b>	<b>13</b>		0.62	0.18	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
<b>Potassium</b>	<b>810</b>		31	11	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
<b>Selenium</b>	<b>0.74</b>		0.62	0.36	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
<b>Silver</b>	<b>0.37</b>	<b>B</b>	0.31	0.080	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
<b>Sodium</b>	<b>460</b>		62	9.2	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
Thallium	<0.62		0.62	0.31	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
<b>Vanadium</b>	<b>29</b>		0.31	0.073	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1
<b>Zinc</b>	<b>84</b>		1.2	0.54	mg/Kg	✳	02/24/23 15:35	02/27/23 16:00	1

## Method: SW846 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.54</b>		0.50	0.050	mg/L		03/01/23 17:00	03/02/23 13:36	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		03/01/23 17:00	03/02/23 13:36	1
Boron	<0.50	^1+	0.50	0.050	mg/L		03/01/23 17:00	03/02/23 13:36	1

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# Client Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-05-B01 (0-1)**

**Lab Sample ID: 500-229911-15**

Date Collected: 02/23/23 15:50

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 77.5

**Method: SW846 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		03/01/23 17:00	03/02/23 13:36	1
Chromium	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:36	1
Cobalt	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:36	1
<b>Iron</b>	<b>0.31</b>	<b>J</b>	0.40	0.20	mg/L		03/01/23 17:00	03/02/23 13:36	1
Lead	<0.0075		0.0075	0.0075	mg/L		03/01/23 17:00	03/02/23 13:36	1
Nickel	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:36	1
Selenium	<0.050		0.050	0.020	mg/L		03/01/23 17:00	03/02/23 13:36	1
Silver	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:36	1
<b>Zinc</b>	<b>0.038</b>	<b>J</b>	0.50	0.020	mg/L		03/01/23 17:00	03/02/23 13:36	1

**Method: SW846 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		03/01/23 17:00	03/02/23 16:05	1
Thallium	<0.0020	*+	0.0020	0.0020	mg/L		03/01/23 17:00	03/02/23 16:05	1

**Method: SW846 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		03/01/23 11:25	03/02/23 12:04	1

**Method: SW846 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.041</b>		0.021	0.011	mg/Kg	☆	03/03/23 13:00	03/06/23 09:14	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>pH (SW846 9045D)</b>	<b>7.8</b>		0.2	0.2	SU			03/01/23 15:24	1

# Definitions/Glossary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
*3	ISTD response or retention time outside acceptable limits.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
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
*+	LCS and/or LCSD is outside acceptance limits, high biased.
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
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.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

# QC Association Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## GC/MS VOA

### Prep Batch: 700221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	5035	
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	5035	
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	5035	
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	5035	
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	5035	
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	5035	
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	5035	
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	5035	
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	5035	
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	5035	
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	5035	
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	5035	
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	5035	
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	5035	
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	5035	

### Analysis Batch: 700426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	8260B	700221
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	8260B	700221
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	8260B	700221
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	8260B	700221
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	8260B	700221
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	8260B	700221
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	8260B	700221
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	8260B	700221
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	8260B	700221
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	8260B	700221
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	8260B	700221
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	8260B	700221
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	8260B	700221
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	8260B	700221
MB 500-700426/7	Method Blank	Total/NA	Solid	8260B	
LCS 500-700426/4	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 500-700426/5	Lab Control Sample Dup	Total/NA	Solid	8260B	

### Analysis Batch: 700601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	8260B	700221
MB 500-700601/7	Method Blank	Total/NA	Solid	8260B	
LCS 500-700601/4	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 500-700601/5	Lab Control Sample Dup	Total/NA	Solid	8260B	

## GC/MS Semi VOA

### Prep Batch: 700448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	3541	
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	3541	
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	3541	
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	3541	

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# QC Association Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## GC/MS Semi VOA (Continued)

### Prep Batch: 700448 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	3541	
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	3541	
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	3541	
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	3541	
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	3541	
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	3541	
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	3541	
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	3541	
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	3541	
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	3541	
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	3541	
MB 500-700448/1-A	Method Blank	Total/NA	Solid	3541	
LCS 500-700448/2-A	Lab Control Sample	Total/NA	Solid	3541	
500-229911-15 MS	4062-C0V-05-B01 (0-1)	Total/NA	Solid	3541	
500-229911-15 MSD	4062-C0V-05-B01 (0-1)	Total/NA	Solid	3541	

### Analysis Batch: 700513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	8270D	700448
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	8270D	700448
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	8270D	700448
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	8270D	700448
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	8270D	700448
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	8270D	700448
MB 500-700448/1-A	Method Blank	Total/NA	Solid	8270D	700448
LCS 500-700448/2-A	Lab Control Sample	Total/NA	Solid	8270D	700448

### Analysis Batch: 700668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	8270D	700448
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	8270D	700448
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	8270D	700448
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	8270D	700448
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	8270D	700448

### Analysis Batch: 700703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	8270D	700448
500-229911-15 MS	4062-C0V-05-B01 (0-1)	Total/NA	Solid	8270D	700448
500-229911-15 MSD	4062-C0V-05-B01 (0-1)	Total/NA	Solid	8270D	700448

### Analysis Batch: 701587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	8270D	700448
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	8270D	700448
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	8270D	700448

# QC Association Summary

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Metals

### Prep Batch: 700187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	3050B	
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	3050B	
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	3050B	
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	3050B	
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	3050B	
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	3050B	
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	3050B	
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	3050B	
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	3050B	
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	3050B	
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	3050B	
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	3050B	
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	3050B	
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	3050B	
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	3050B	
MB 500-700187/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 500-700187/2-A	Lab Control Sample	Total/NA	Solid	3050B	

### Analysis Batch: 700467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	6010B	700187
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	6010B	700187
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	6010B	700187
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	6010B	700187
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	6010B	700187
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	6010B	700187
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	6010B	700187
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	6010B	700187
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	6010B	700187
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	6010B	700187
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	6010B	700187
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	6010B	700187
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	6010B	700187
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	6010B	700187
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	6010B	700187
MB 500-700187/1-A	Method Blank	Total/NA	Solid	6010B	700187
LCS 500-700187/2-A	Lab Control Sample	Total/NA	Solid	6010B	700187

### Leach Batch: 700531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	TCLP	Solid	1311	
500-229911-2	4062-C0V-08-B09 (0-2)	TCLP	Solid	1311	
500-229911-3	4062-C0V-14-B01 (0-1)	TCLP	Solid	1311	
500-229911-4	4062-C0V-14-B02 (0-1)	TCLP	Solid	1311	
500-229911-5	4062-C0V-14-B02 (0-1)D	TCLP	Solid	1311	
500-229911-6	4062-C0V-08-B06 (0-2)	TCLP	Solid	1311	
500-229911-7	4062-C0V-08-B07 (0-2)	TCLP	Solid	1311	
500-229911-8	4062-C0V-08-B05 (0-2)	TCLP	Solid	1311	
500-229911-9	4062-C0V-08-B04 (0-2)	TCLP	Solid	1311	
500-229911-10	4062-C0V-08-B03 (0-2)	TCLP	Solid	1311	
500-229911-11	4062-C0V-08-B02 (0-2)	TCLP	Solid	1311	

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# QC Association Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Metals (Continued)

### Leach Batch: 700531 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-12	4062-C0V-08-B01 (0-2)	TCLP	Solid	1311	
500-229911-13	4062-C0V-05-B03 (0-1)	TCLP	Solid	1311	
500-229911-14	4062-C0V-05-B02 (0-1)	TCLP	Solid	1311	
500-229911-15	4062-C0V-05-B01 (0-1)	TCLP	Solid	1311	
LB 500-700531/2-B	Method Blank	TCLP	Solid	1311	
LB 500-700531/2-C	Method Blank	TCLP	Solid	1311	
500-229911-4 MS	4062-C0V-14-B02 (0-1)	TCLP	Solid	1311	
500-229911-4 DU	4062-C0V-14-B02 (0-1)	TCLP	Solid	1311	

### Analysis Batch: 700562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	6010B	700187

### Prep Batch: 700697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	TCLP	Solid	7470A	700531
500-229911-2	4062-C0V-08-B09 (0-2)	TCLP	Solid	7470A	700531
500-229911-3	4062-C0V-14-B01 (0-1)	TCLP	Solid	7470A	700531
500-229911-4	4062-C0V-14-B02 (0-1)	TCLP	Solid	7470A	700531
500-229911-5	4062-C0V-14-B02 (0-1)D	TCLP	Solid	7470A	700531
500-229911-6	4062-C0V-08-B06 (0-2)	TCLP	Solid	7470A	700531
500-229911-7	4062-C0V-08-B07 (0-2)	TCLP	Solid	7470A	700531
500-229911-8	4062-C0V-08-B05 (0-2)	TCLP	Solid	7470A	700531
500-229911-9	4062-C0V-08-B04 (0-2)	TCLP	Solid	7470A	700531
500-229911-10	4062-C0V-08-B03 (0-2)	TCLP	Solid	7470A	700531
500-229911-11	4062-C0V-08-B02 (0-2)	TCLP	Solid	7470A	700531
500-229911-12	4062-C0V-08-B01 (0-2)	TCLP	Solid	7470A	700531
500-229911-13	4062-C0V-05-B03 (0-1)	TCLP	Solid	7470A	700531
500-229911-14	4062-C0V-05-B02 (0-1)	TCLP	Solid	7470A	700531
500-229911-15	4062-C0V-05-B01 (0-1)	TCLP	Solid	7470A	700531
LB 500-700531/2-B	Method Blank	TCLP	Solid	7470A	700531
MB 500-700697/12-A	Method Blank	Total/NA	Solid	7470A	
LCS 500-700697/14-A	Lab Control Sample	Total/NA	Solid	7470A	
500-229911-4 MS	4062-C0V-14-B02 (0-1)	TCLP	Solid	7470A	700531
500-229911-4 DU	4062-C0V-14-B02 (0-1)	TCLP	Solid	7470A	700531

### Prep Batch: 700755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	TCLP	Solid	3010A	700531
500-229911-2	4062-C0V-08-B09 (0-2)	TCLP	Solid	3010A	700531
500-229911-3	4062-C0V-14-B01 (0-1)	TCLP	Solid	3010A	700531
500-229911-4	4062-C0V-14-B02 (0-1)	TCLP	Solid	3010A	700531
500-229911-5	4062-C0V-14-B02 (0-1)D	TCLP	Solid	3010A	700531
500-229911-6	4062-C0V-08-B06 (0-2)	TCLP	Solid	3010A	700531
500-229911-7	4062-C0V-08-B07 (0-2)	TCLP	Solid	3010A	700531
500-229911-8	4062-C0V-08-B05 (0-2)	TCLP	Solid	3010A	700531
500-229911-9	4062-C0V-08-B04 (0-2)	TCLP	Solid	3010A	700531
500-229911-10	4062-C0V-08-B03 (0-2)	TCLP	Solid	3010A	700531
500-229911-11	4062-C0V-08-B02 (0-2)	TCLP	Solid	3010A	700531
500-229911-12	4062-C0V-08-B01 (0-2)	TCLP	Solid	3010A	700531
500-229911-13	4062-C0V-05-B03 (0-1)	TCLP	Solid	3010A	700531

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# QC Association Summary

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Metals (Continued)

### Prep Batch: 700755 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-14	4062-C0V-05-B02 (0-1)	TCLP	Solid	3010A	700531
500-229911-15	4062-C0V-05-B01 (0-1)	TCLP	Solid	3010A	700531
LB 500-700531/2-C	Method Blank	TCLP	Solid	3010A	700531
LCS 500-700755/2-A	Lab Control Sample	Total/NA	Solid	3010A	
500-229911-4 MS	4062-C0V-14-B02 (0-1)	TCLP	Solid	3010A	700531
500-229911-4 DU	4062-C0V-14-B02 (0-1)	TCLP	Solid	3010A	700531

### Analysis Batch: 700909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	TCLP	Solid	7470A	700697
500-229911-2	4062-C0V-08-B09 (0-2)	TCLP	Solid	7470A	700697
500-229911-3	4062-C0V-14-B01 (0-1)	TCLP	Solid	7470A	700697
500-229911-4	4062-C0V-14-B02 (0-1)	TCLP	Solid	7470A	700697
500-229911-5	4062-C0V-14-B02 (0-1)D	TCLP	Solid	7470A	700697
500-229911-6	4062-C0V-08-B06 (0-2)	TCLP	Solid	7470A	700697
500-229911-7	4062-C0V-08-B07 (0-2)	TCLP	Solid	7470A	700697
500-229911-8	4062-C0V-08-B05 (0-2)	TCLP	Solid	7470A	700697
500-229911-9	4062-C0V-08-B04 (0-2)	TCLP	Solid	7470A	700697
500-229911-10	4062-C0V-08-B03 (0-2)	TCLP	Solid	7470A	700697
500-229911-11	4062-C0V-08-B02 (0-2)	TCLP	Solid	7470A	700697
500-229911-12	4062-C0V-08-B01 (0-2)	TCLP	Solid	7470A	700697
500-229911-13	4062-C0V-05-B03 (0-1)	TCLP	Solid	7470A	700697
500-229911-14	4062-C0V-05-B02 (0-1)	TCLP	Solid	7470A	700697
500-229911-15	4062-C0V-05-B01 (0-1)	TCLP	Solid	7470A	700697
LB 500-700531/2-B	Method Blank	TCLP	Solid	7470A	700697
MB 500-700697/12-A	Method Blank	Total/NA	Solid	7470A	700697
LCS 500-700697/14-A	Lab Control Sample	Total/NA	Solid	7470A	700697
500-229911-4 MS	4062-C0V-14-B02 (0-1)	TCLP	Solid	7470A	700697
500-229911-4 DU	4062-C0V-14-B02 (0-1)	TCLP	Solid	7470A	700697

### Analysis Batch: 700931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	TCLP	Solid	6010B	700755
500-229911-2	4062-C0V-08-B09 (0-2)	TCLP	Solid	6010B	700755
500-229911-3	4062-C0V-14-B01 (0-1)	TCLP	Solid	6010B	700755
500-229911-4	4062-C0V-14-B02 (0-1)	TCLP	Solid	6010B	700755
500-229911-5	4062-C0V-14-B02 (0-1)D	TCLP	Solid	6010B	700755
500-229911-6	4062-C0V-08-B06 (0-2)	TCLP	Solid	6010B	700755
500-229911-7	4062-C0V-08-B07 (0-2)	TCLP	Solid	6010B	700755
500-229911-8	4062-C0V-08-B05 (0-2)	TCLP	Solid	6010B	700755
500-229911-9	4062-C0V-08-B04 (0-2)	TCLP	Solid	6010B	700755
500-229911-10	4062-C0V-08-B03 (0-2)	TCLP	Solid	6010B	700755
500-229911-11	4062-C0V-08-B02 (0-2)	TCLP	Solid	6010B	700755
500-229911-12	4062-C0V-08-B01 (0-2)	TCLP	Solid	6010B	700755
500-229911-13	4062-C0V-05-B03 (0-1)	TCLP	Solid	6010B	700755
500-229911-14	4062-C0V-05-B02 (0-1)	TCLP	Solid	6010B	700755
500-229911-15	4062-C0V-05-B01 (0-1)	TCLP	Solid	6010B	700755
LB 500-700531/2-C	Method Blank	TCLP	Solid	6010B	700755
LCS 500-700755/2-A	Lab Control Sample	Total/NA	Solid	6010B	700755
500-229911-4 MS	4062-C0V-14-B02 (0-1)	TCLP	Solid	6010B	700755
500-229911-4 DU	4062-C0V-14-B02 (0-1)	TCLP	Solid	6010B	700755

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# QC Association Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Metals

### Prep Batch: 701027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	7471B	
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	7471B	
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	7471B	
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	7471B	
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	7471B	
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	7471B	
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	7471B	
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	7471B	
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	7471B	
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	7471B	
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	7471B	
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	7471B	
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	7471B	
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	7471B	
MB 500-701027/12-A	Method Blank	Total/NA	Solid	7471B	
LCS 500-701027/13-A	Lab Control Sample	Total/NA	Solid	7471B	
500-229911-10 MS	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	
500-229911-10 MSD	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	
500-229911-10 DU	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	

### Analysis Batch: 701031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	TCLP	Solid	6020A	700755
500-229911-2	4062-C0V-08-B09 (0-2)	TCLP	Solid	6020A	700755
500-229911-3	4062-C0V-14-B01 (0-1)	TCLP	Solid	6020A	700755
500-229911-4	4062-C0V-14-B02 (0-1)	TCLP	Solid	6020A	700755
500-229911-5	4062-C0V-14-B02 (0-1)D	TCLP	Solid	6020A	700755
500-229911-6	4062-C0V-08-B06 (0-2)	TCLP	Solid	6020A	700755
500-229911-7	4062-C0V-08-B07 (0-2)	TCLP	Solid	6020A	700755
500-229911-8	4062-C0V-08-B05 (0-2)	TCLP	Solid	6020A	700755
500-229911-9	4062-C0V-08-B04 (0-2)	TCLP	Solid	6020A	700755
500-229911-10	4062-C0V-08-B03 (0-2)	TCLP	Solid	6020A	700755
500-229911-11	4062-C0V-08-B02 (0-2)	TCLP	Solid	6020A	700755
500-229911-12	4062-C0V-08-B01 (0-2)	TCLP	Solid	6020A	700755
500-229911-13	4062-C0V-05-B03 (0-1)	TCLP	Solid	6020A	700755
500-229911-14	4062-C0V-05-B02 (0-1)	TCLP	Solid	6020A	700755
500-229911-15	4062-C0V-05-B01 (0-1)	TCLP	Solid	6020A	700755
LB 500-700531/2-C	Method Blank	TCLP	Solid	6020A	700755
LCS 500-700755/2-A	Lab Control Sample	Total/NA	Solid	6020A	700755
500-229911-4 MS	4062-C0V-14-B02 (0-1)	TCLP	Solid	6020A	700755
500-229911-4 DU	4062-C0V-14-B02 (0-1)	TCLP	Solid	6020A	700755

### Analysis Batch: 701282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	7471B	701027
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	7471B	701027
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	7471B	701027
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	7471B	701027
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	7471B	701027
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	7471B	701027

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# QC Association Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Metals (Continued)

### Analysis Batch: 701282 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	7471B	701027
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	7471B	701027
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	7471B	701027
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	701027
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	7471B	701027
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	7471B	701027
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	7471B	701027
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	7471B	701027
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	7471B	701027
MB 500-701027/12-A	Method Blank	Total/NA	Solid	7471B	701027
LCS 500-701027/13-A	Lab Control Sample	Total/NA	Solid	7471B	701027
500-229911-10 MS	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	701027
500-229911-10 MSD	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	701027
500-229911-10 DU	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	701027

## General Chemistry

### Analysis Batch: 700719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	9045D	
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	9045D	
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	9045D	
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	9045D	
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	9045D	
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	9045D	
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	9045D	
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	9045D	
LCS 500-700719/5	Lab Control Sample	Total/NA	Solid	9045D	
LCSD 500-700719/6	Lab Control Sample Dup	Total/NA	Solid	9045D	

### Analysis Batch: 700725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	9045D	
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	9045D	
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	9045D	
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	9045D	
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	9045D	
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	9045D	
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	9045D	
LCS 500-700725/2	Lab Control Sample	Total/NA	Solid	9045D	
LCSD 500-700725/3	Lab Control Sample Dup	Total/NA	Solid	9045D	

### Analysis Batch: 700804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	Moisture	
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	Moisture	
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	Moisture	
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	Moisture	
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	Moisture	
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	Moisture	
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	Moisture	

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# QC Association Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## General Chemistry (Continued)

### Analysis Batch: 700804 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	Moisture	
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	Moisture	
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	Moisture	
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	Moisture	
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	Moisture	
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	Moisture	
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	Moisture	
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	Moisture	
500-229911-1 DU	4062-C0V-08-B08 (0-2)	Total/NA	Solid	Moisture	

# Surrogate Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (75-131)	DBFM (75-126)	DCA (70-134)	TOL (75-124)
500-229911-1	4062-C0V-08-B08 (0-2)	87	91	95	91
500-229911-2	4062-C0V-08-B09 (0-2)	87	94	97	89
500-229911-3	4062-C0V-14-B01 (0-1)	87	92	94	88
500-229911-4	4062-C0V-14-B02 (0-1)	87	91	95	89
500-229911-5	4062-C0V-14-B02 (0-1)D	89	91	91	89
500-229911-6	4062-C0V-08-B06 (0-2)	85	94	96	89
500-229911-7	4062-C0V-08-B07 (0-2)	86	92	96	90
500-229911-8	4062-C0V-08-B05 (0-2)	88	92	96	91
500-229911-9	4062-C0V-08-B04 (0-2)	88	92	99	89
500-229911-10	4062-C0V-08-B03 (0-2)	86	92	93	89
500-229911-11	4062-C0V-08-B02 (0-2)	88	91	94	91
500-229911-12	4062-C0V-08-B01 (0-2)	88	92	93	89
500-229911-13	4062-C0V-05-B03 (0-1)	87	95	98	89
500-229911-14	4062-C0V-05-B02 (0-1)	89	92	94	91
500-229911-15	4062-C0V-05-B01 (0-1)	87	90	92	92
LCS 500-700426/4	Lab Control Sample	83	87	88	91
LCS 500-700601/4	Lab Control Sample	83	87	87	93
LCSD 500-700426/5	Lab Control Sample Dup	84	87	89	91
LCSD 500-700601/5	Lab Control Sample Dup	83	88	86	91
MB 500-700426/7	Method Blank	88	89	92	91
MB 500-700601/7	Method Blank	88	87	88	93

### Surrogate Legend

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

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		2FP (31-166)	PHL (30-153)	NBZ (37-147)	FBP (43-145)	TBP (31-143)	TPHL (42-157)
500-229911-1	4062-C0V-08-B08 (0-2)	122	112	99	92	97	101
500-229911-2	4062-C0V-08-B09 (0-2)	106	97	84	78	79	118
500-229911-3	4062-C0V-14-B01 (0-1)	100	92	81	78	76	117
500-229911-4	4062-C0V-14-B02 (0-1)	107	96	87	84	88	109
500-229911-5	4062-C0V-14-B02 (0-1)D	104	93	85	82	77	92
500-229911-6	4062-C0V-08-B06 (0-2)	116	105	86	85	92	127
500-229911-7	4062-C0V-08-B07 (0-2)	110	98	87	83	84	124
500-229911-8	4062-C0V-08-B05 (0-2)	102	93	78	75	67	116
500-229911-9	4062-C0V-08-B04 (0-2)	109	109	94	89	100	103
500-229911-10	4062-C0V-08-B03 (0-2)	105	102	83	77	93	97
500-229911-11	4062-C0V-08-B02 (0-2)	96	97	78	75	78	85
500-229911-12	4062-C0V-08-B01 (0-2)	99	97	79	76	72	93
500-229911-13	4062-C0V-05-B03 (0-1)	104	98	84	77	77	88
500-229911-14	4062-C0V-05-B02 (0-1)	103	94	77	77	86	105
500-229911-15	4062-C0V-05-B01 (0-1)	108	94	79	76	63	127
500-229911-15 MS	4062-C0V-05-B01 (0-1)	104	94	75	74	58	96

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# Surrogate Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Matrix: Solid**

**Prep Type: Total/NA**

## Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	2FP (31-166)	PHL (30-153)	NBZ (37-147)	FBP (43-145)	TBP (31-143)	TPHL (42-157)
500-229911-15 MSD	4062-COV-05-B01 (0-1)	102	91	73	76	67	114
LCS 500-700448/2-A	Lab Control Sample	123	110	97	90	101	100
MB 500-700448/1-A	Method Blank	127	120	99	92	92	102

### Surrogate Legend

2FP = 2-Fluorophenol

PHL = Phenol-d5

NBZ = Nitrobenzene-d5 (Surr)

FBP = 2-Fluorobiphenyl (Surr)

TBP = 2,4,6-Tribromophenol

TPHL = Terphenyl-d14 (Surr)

# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: MB 500-700426/7**  
**Matrix: Solid**  
**Analysis Batch: 700426**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	<0.020		0.020	0.0087	mg/Kg			02/28/23 12:02	1
Benzene	<0.0020		0.0020	0.00051	mg/Kg			02/28/23 12:02	1
Bromodichloromethane	<0.0020		0.0020	0.00041	mg/Kg			02/28/23 12:02	1
Bromoform	<0.0020		0.0020	0.00058	mg/Kg			02/28/23 12:02	1
Bromomethane	<0.0050		0.0050	0.0019	mg/Kg			02/28/23 12:02	1
2-Butanone (MEK)	<0.0050		0.0050	0.0022	mg/Kg			02/28/23 12:02	1
Carbon disulfide	<0.0050		0.0050	0.0010	mg/Kg			02/28/23 12:02	1
Carbon tetrachloride	<0.0020		0.0020	0.00058	mg/Kg			02/28/23 12:02	1
Chlorobenzene	<0.0020		0.0020	0.00074	mg/Kg			02/28/23 12:02	1
Chloroethane	<0.0050		0.0050	0.0015	mg/Kg			02/28/23 12:02	1
Chloroform	<0.0020		0.0020	0.00069	mg/Kg			02/28/23 12:02	1
Chloromethane	<0.0050		0.0050	0.0020	mg/Kg			02/28/23 12:02	1
cis-1,2-Dichloroethene	<0.0020		0.0020	0.00056	mg/Kg			02/28/23 12:02	1
cis-1,3-Dichloropropene	<0.0020		0.0020	0.00060	mg/Kg			02/28/23 12:02	1
Dibromochloromethane	<0.0020		0.0020	0.00065	mg/Kg			02/28/23 12:02	1
1,1-Dichloroethane	<0.0020		0.0020	0.00069	mg/Kg			02/28/23 12:02	1
1,2-Dichloroethane	<0.0050		0.0050	0.0016	mg/Kg			02/28/23 12:02	1
1,1-Dichloroethene	<0.0020		0.0020	0.00069	mg/Kg			02/28/23 12:02	1
1,2-Dichloropropane	<0.0020		0.0020	0.00052	mg/Kg			02/28/23 12:02	1
1,3-Dichloropropene, Total	<0.0020		0.0020	0.00070	mg/Kg			02/28/23 12:02	1
Ethylbenzene	<0.0020		0.0020	0.00096	mg/Kg			02/28/23 12:02	1
2-Hexanone	<0.0050		0.0050	0.0016	mg/Kg			02/28/23 12:02	1
Methylene Chloride	<0.0050		0.0050	0.0020	mg/Kg			02/28/23 12:02	1
4-Methyl-2-pentanone (MIBK)	<0.0050		0.0050	0.0015	mg/Kg			02/28/23 12:02	1
Methyl tert-butyl ether	<0.0020		0.0020	0.00059	mg/Kg			02/28/23 12:02	1
Styrene	<0.0020		0.0020	0.00060	mg/Kg			02/28/23 12:02	1
1,1,2,2-Tetrachloroethane	<0.0020		0.0020	0.00064	mg/Kg			02/28/23 12:02	1
Tetrachloroethene	<0.0020		0.0020	0.00068	mg/Kg			02/28/23 12:02	1
Toluene	<0.0020		0.0020	0.00051	mg/Kg			02/28/23 12:02	1
trans-1,2-Dichloroethene	<0.0020		0.0020	0.00089	mg/Kg			02/28/23 12:02	1
trans-1,3-Dichloropropene	<0.0020		0.0020	0.00070	mg/Kg			02/28/23 12:02	1
1,1,1-Trichloroethane	<0.0020		0.0020	0.00067	mg/Kg			02/28/23 12:02	1
1,1,2-Trichloroethane	<0.0020		0.0020	0.00086	mg/Kg			02/28/23 12:02	1
Trichloroethene	<0.0020		0.0020	0.00068	mg/Kg			02/28/23 12:02	1
Vinyl acetate	<0.0050		0.0050	0.0017	mg/Kg			02/28/23 12:02	1
Vinyl chloride	<0.0020		0.0020	0.00089	mg/Kg			02/28/23 12:02	1
Xylenes, Total	<0.0040		0.0040	0.00064	mg/Kg			02/28/23 12:02	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	88		75 - 131		02/28/23 12:02	1
Dibromofluoromethane	89		75 - 126		02/28/23 12:02	1
1,2-Dichloroethane-d4 (Surr)	92		70 - 134		02/28/23 12:02	1
Toluene-d8 (Surr)	91		75 - 124		02/28/23 12:02	1

# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCS 500-700426/4**  
**Matrix: Solid**  
**Analysis Batch: 700426**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	0.0500	0.0500		mg/Kg		100	40 - 150
Benzene	0.0500	0.0482		mg/Kg		96	70 - 125
Bromodichloromethane	0.0500	0.0496		mg/Kg		99	67 - 129
Bromoform	0.0500	0.0470		mg/Kg		94	68 - 136
Bromomethane	0.0500	0.0468		mg/Kg		94	70 - 130
2-Butanone (MEK)	0.0500	0.0449		mg/Kg		90	47 - 138
Carbon disulfide	0.0500	0.0415		mg/Kg		83	70 - 129
Carbon tetrachloride	0.0500	0.0505		mg/Kg		101	75 - 125
Chlorobenzene	0.0500	0.0480		mg/Kg		96	50 - 150
Chloroethane	0.0500	0.0478		mg/Kg		96	75 - 125
Chloroform	0.0500	0.0475		mg/Kg		95	57 - 135
Chloromethane	0.0500	0.0441		mg/Kg		88	70 - 125
cis-1,2-Dichloroethene	0.0500	0.0472		mg/Kg		94	70 - 125
cis-1,3-Dichloropropene	0.0500	0.0454		mg/Kg		91	70 - 125
Dibromochloromethane	0.0500	0.0479		mg/Kg		96	69 - 125
1,1-Dichloroethane	0.0500	0.0476		mg/Kg		95	70 - 125
1,2-Dichloroethane	0.0500	0.0498		mg/Kg		100	70 - 130
1,1-Dichloroethene	0.0500	0.0456		mg/Kg		91	70 - 120
1,2-Dichloropropane	0.0500	0.0495		mg/Kg		99	70 - 125
Ethylbenzene	0.0500	0.0501		mg/Kg		100	61 - 136
2-Hexanone	0.0500	0.0500		mg/Kg		100	48 - 146
Methylene Chloride	0.0500	0.0474		mg/Kg		95	70 - 126
4-Methyl-2-pentanone (MIBK)	0.0500	0.0488		mg/Kg		98	50 - 148
Methyl tert-butyl ether	0.0500	0.0468		mg/Kg		94	50 - 140
Styrene	0.0500	0.0493		mg/Kg		99	70 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.0461		mg/Kg		92	70 - 122
Tetrachloroethene	0.0500	0.0478		mg/Kg		96	70 - 124
Toluene	0.0500	0.0469		mg/Kg		94	70 - 125
trans-1,2-Dichloroethene	0.0500	0.0486		mg/Kg		97	70 - 125
trans-1,3-Dichloropropene	0.0500	0.0472		mg/Kg		94	70 - 125
1,1,1-Trichloroethane	0.0500	0.0484		mg/Kg		97	70 - 128
1,1,2-Trichloroethane	0.0500	0.0490		mg/Kg		98	70 - 125
Trichloroethene	0.0500	0.0471		mg/Kg		94	70 - 125
Vinyl acetate	0.0500	0.0453		mg/Kg		91	40 - 153
Vinyl chloride	0.0500	0.0426		mg/Kg		85	70 - 125
Xylenes, Total	0.100	0.0977		mg/Kg		98	53 - 147

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	83		75 - 131
Dibromofluoromethane	87		75 - 126
1,2-Dichloroethane-d4 (Surr)	88		70 - 134
Toluene-d8 (Surr)	91		75 - 124

# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCSD 500-700426/5**  
**Matrix: Solid**  
**Analysis Batch: 700426**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	0.0500	0.0556		mg/Kg		111	40 - 150	11	30
Benzene	0.0500	0.0493		mg/Kg		99	70 - 125	2	30
Bromodichloromethane	0.0500	0.0501		mg/Kg		100	67 - 129	1	30
Bromoform	0.0500	0.0476		mg/Kg		95	68 - 136	1	30
Bromomethane	0.0500	0.0502		mg/Kg		100	70 - 130	7	30
2-Butanone (MEK)	0.0500	0.0521		mg/Kg		104	47 - 138	15	30
Carbon disulfide	0.0500	0.0437		mg/Kg		87	70 - 129	5	30
Carbon tetrachloride	0.0500	0.0528		mg/Kg		106	75 - 125	5	30
Chlorobenzene	0.0500	0.0494		mg/Kg		99	50 - 150	3	30
Chloroethane	0.0500	0.0512		mg/Kg		102	75 - 125	7	30
Chloroform	0.0500	0.0484		mg/Kg		97	57 - 135	2	30
Chloromethane	0.0500	0.0461		mg/Kg		92	70 - 125	5	30
cis-1,2-Dichloroethene	0.0500	0.0481		mg/Kg		96	70 - 125	2	30
cis-1,3-Dichloropropene	0.0500	0.0474		mg/Kg		95	70 - 125	4	30
Dibromochloromethane	0.0500	0.0484		mg/Kg		97	69 - 125	1	30
1,1-Dichloroethane	0.0500	0.0493		mg/Kg		99	70 - 125	3	30
1,2-Dichloroethane	0.0500	0.0518		mg/Kg		104	70 - 130	4	30
1,1-Dichloroethene	0.0500	0.0481		mg/Kg		96	70 - 120	6	30
1,2-Dichloropropane	0.0500	0.0516		mg/Kg		103	70 - 125	4	30
Ethylbenzene	0.0500	0.0502		mg/Kg		100	61 - 136	0	30
2-Hexanone	0.0500	0.0556		mg/Kg		111	48 - 146	10	30
Methylene Chloride	0.0500	0.0503		mg/Kg		101	70 - 126	6	30
4-Methyl-2-pentanone (MIBK)	0.0500	0.0545		mg/Kg		109	50 - 148	11	30
Methyl tert-butyl ether	0.0500	0.0491		mg/Kg		98	50 - 140	5	30
Styrene	0.0500	0.0504		mg/Kg		101	70 - 125	2	30
1,1,2,2-Tetrachloroethane	0.0500	0.0496		mg/Kg		99	70 - 122	7	30
Tetrachloroethene	0.0500	0.0487		mg/Kg		97	70 - 124	2	30
Toluene	0.0500	0.0479		mg/Kg		96	70 - 125	2	30
trans-1,2-Dichloroethene	0.0500	0.0513		mg/Kg		103	70 - 125	5	30
trans-1,3-Dichloropropene	0.0500	0.0485		mg/Kg		97	70 - 125	3	30
1,1,1-Trichloroethane	0.0500	0.0505		mg/Kg		101	70 - 128	4	30
1,1,2-Trichloroethane	0.0500	0.0492		mg/Kg		98	70 - 125	0	30
Trichloroethene	0.0500	0.0486		mg/Kg		97	70 - 125	3	30
Vinyl acetate	0.0500	0.0519		mg/Kg		104	40 - 153	14	30
Vinyl chloride	0.0500	0.0467		mg/Kg		93	70 - 125	9	30
Xylenes, Total	0.100	0.0993		mg/Kg		99	53 - 147	2	30

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	84		75 - 131
Dibromofluoromethane	87		75 - 126
1,2-Dichloroethane-d4 (Surr)	89		70 - 134
Toluene-d8 (Surr)	91		75 - 124



# QC Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: MB 500-700601/7**  
**Matrix: Solid**  
**Analysis Batch: 700601**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	<0.020		0.020	0.0087	mg/Kg			03/01/23 11:53	1
Benzene	<0.0020		0.0020	0.00051	mg/Kg			03/01/23 11:53	1
Bromodichloromethane	<0.0020		0.0020	0.00041	mg/Kg			03/01/23 11:53	1
Bromoform	<0.0020		0.0020	0.00058	mg/Kg			03/01/23 11:53	1
Bromomethane	<0.0050		0.0050	0.0019	mg/Kg			03/01/23 11:53	1
2-Butanone (MEK)	<0.0050		0.0050	0.0022	mg/Kg			03/01/23 11:53	1
Carbon disulfide	<0.0050		0.0050	0.0010	mg/Kg			03/01/23 11:53	1
Carbon tetrachloride	<0.0020		0.0020	0.00058	mg/Kg			03/01/23 11:53	1
Chlorobenzene	<0.0020		0.0020	0.00074	mg/Kg			03/01/23 11:53	1
Chloroethane	<0.0050		0.0050	0.0015	mg/Kg			03/01/23 11:53	1
Chloroform	<0.0020		0.0020	0.00069	mg/Kg			03/01/23 11:53	1
Chloromethane	<0.0050		0.0050	0.0020	mg/Kg			03/01/23 11:53	1
cis-1,2-Dichloroethene	<0.0020		0.0020	0.00056	mg/Kg			03/01/23 11:53	1
cis-1,3-Dichloropropene	<0.0020		0.0020	0.00060	mg/Kg			03/01/23 11:53	1
Dibromochloromethane	<0.0020		0.0020	0.00065	mg/Kg			03/01/23 11:53	1
1,1-Dichloroethane	<0.0020		0.0020	0.00069	mg/Kg			03/01/23 11:53	1
1,2-Dichloroethane	<0.0050		0.0050	0.0016	mg/Kg			03/01/23 11:53	1
1,1-Dichloroethene	<0.0020		0.0020	0.00069	mg/Kg			03/01/23 11:53	1
1,2-Dichloropropane	<0.0020		0.0020	0.00052	mg/Kg			03/01/23 11:53	1
1,3-Dichloropropane, Total	<0.0020		0.0020	0.00070	mg/Kg			03/01/23 11:53	1
Ethylbenzene	<0.0020		0.0020	0.00096	mg/Kg			03/01/23 11:53	1
2-Hexanone	<0.0050		0.0050	0.0016	mg/Kg			03/01/23 11:53	1
Methylene Chloride	<0.0050		0.0050	0.0020	mg/Kg			03/01/23 11:53	1
4-Methyl-2-pentanone (MIBK)	<0.0050		0.0050	0.0015	mg/Kg			03/01/23 11:53	1
Methyl tert-butyl ether	<0.0020		0.0020	0.00059	mg/Kg			03/01/23 11:53	1
Styrene	<0.0020		0.0020	0.00060	mg/Kg			03/01/23 11:53	1
1,1,2,2-Tetrachloroethane	<0.0020		0.0020	0.00064	mg/Kg			03/01/23 11:53	1
Tetrachloroethene	<0.0020		0.0020	0.00068	mg/Kg			03/01/23 11:53	1
Toluene	<0.0020		0.0020	0.00051	mg/Kg			03/01/23 11:53	1
trans-1,2-Dichloroethene	<0.0020		0.0020	0.00089	mg/Kg			03/01/23 11:53	1
trans-1,3-Dichloropropene	<0.0020		0.0020	0.00070	mg/Kg			03/01/23 11:53	1
1,1,1-Trichloroethane	<0.0020		0.0020	0.00067	mg/Kg			03/01/23 11:53	1
1,1,2-Trichloroethane	<0.0020		0.0020	0.00086	mg/Kg			03/01/23 11:53	1
Trichloroethene	<0.0020		0.0020	0.00068	mg/Kg			03/01/23 11:53	1
Vinyl acetate	<0.0050		0.0050	0.0017	mg/Kg			03/01/23 11:53	1
Vinyl chloride	<0.0020		0.0020	0.00089	mg/Kg			03/01/23 11:53	1
Xylenes, Total	<0.0040		0.0040	0.00064	mg/Kg			03/01/23 11:53	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	88		75 - 131		03/01/23 11:53	1
Dibromofluoromethane	87		75 - 126		03/01/23 11:53	1
1,2-Dichloroethane-d4 (Surr)	88		70 - 134		03/01/23 11:53	1
Toluene-d8 (Surr)	93		75 - 124		03/01/23 11:53	1

# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCS 500-700601/4**  
**Matrix: Solid**  
**Analysis Batch: 700601**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	0.0500	0.0449		mg/Kg		90	40 - 150
Benzene	0.0500	0.0516		mg/Kg		103	70 - 125
Bromodichloromethane	0.0500	0.0496		mg/Kg		99	67 - 129
Bromoform	0.0500	0.0452		mg/Kg		90	68 - 136
Bromomethane	0.0500	0.0508		mg/Kg		102	70 - 130
2-Butanone (MEK)	0.0500	0.0416		mg/Kg		83	47 - 138
Carbon disulfide	0.0500	0.0495		mg/Kg		99	70 - 129
Carbon tetrachloride	0.0500	0.0539		mg/Kg		108	75 - 125
Chlorobenzene	0.0500	0.0504		mg/Kg		101	50 - 150
Chloroethane	0.0500	0.0521		mg/Kg		104	75 - 125
Chloroform	0.0500	0.0504		mg/Kg		101	57 - 135
Chloromethane	0.0500	0.0502		mg/Kg		100	70 - 125
cis-1,2-Dichloroethene	0.0500	0.0507		mg/Kg		101	70 - 125
cis-1,3-Dichloropropene	0.0500	0.0478		mg/Kg		96	70 - 125
Dibromochloromethane	0.0500	0.0475		mg/Kg		95	69 - 125
1,1-Dichloroethane	0.0500	0.0521		mg/Kg		104	70 - 125
1,2-Dichloroethane	0.0500	0.0521		mg/Kg		104	70 - 130
1,1-Dichloroethene	0.0500	0.0520		mg/Kg		104	70 - 120
1,2-Dichloropropane	0.0500	0.0503		mg/Kg		101	70 - 125
Ethylbenzene	0.0500	0.0513		mg/Kg		103	61 - 136
2-Hexanone	0.0500	0.0453		mg/Kg		91	48 - 146
Methylene Chloride	0.0500	0.0506		mg/Kg		101	70 - 126
4-Methyl-2-pentanone (MIBK)	0.0500	0.0448		mg/Kg		90	50 - 148
Methyl tert-butyl ether	0.0500	0.0485		mg/Kg		97	50 - 140
Styrene	0.0500	0.0512		mg/Kg		102	70 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.0450		mg/Kg		90	70 - 122
Tetrachloroethene	0.0500	0.0503		mg/Kg		101	70 - 124
Toluene	0.0500	0.0504		mg/Kg		101	70 - 125
trans-1,2-Dichloroethene	0.0500	0.0539		mg/Kg		108	70 - 125
trans-1,3-Dichloropropene	0.0500	0.0480		mg/Kg		96	70 - 125
1,1,1-Trichloroethane	0.0500	0.0532		mg/Kg		106	70 - 128
1,1,2-Trichloroethane	0.0500	0.0486		mg/Kg		97	70 - 125
Trichloroethene	0.0500	0.0514		mg/Kg		103	70 - 125
Vinyl acetate	0.0500	0.0435		mg/Kg		87	40 - 153
Vinyl chloride	0.0500	0.0482		mg/Kg		96	70 - 125
Xylenes, Total	0.100	0.103		mg/Kg		103	53 - 147

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	83		75 - 131
Dibromofluoromethane	87		75 - 126
1,2-Dichloroethane-d4 (Surr)	87		70 - 134
Toluene-d8 (Surr)	93		75 - 124

# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCSD 500-700601/5**  
**Matrix: Solid**  
**Analysis Batch: 700601**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	0.0500	0.0541		mg/Kg		108	40 - 150	19	30
Benzene	0.0500	0.0517		mg/Kg		103	70 - 125	0	30
Bromodichloromethane	0.0500	0.0520		mg/Kg		104	67 - 129	5	30
Bromoform	0.0500	0.0438		mg/Kg		88	68 - 136	3	30
Bromomethane	0.0500	0.0504		mg/Kg		101	70 - 130	1	30
2-Butanone (MEK)	0.0500	0.0490		mg/Kg		98	47 - 138	16	30
Carbon disulfide	0.0500	0.0510		mg/Kg		102	70 - 129	3	30
Carbon tetrachloride	0.0500	0.0548		mg/Kg		110	75 - 125	2	30
Chlorobenzene	0.0500	0.0500		mg/Kg		100	50 - 150	1	30
Chloroethane	0.0500	0.0512		mg/Kg		102	75 - 125	2	30
Chloroform	0.0500	0.0505		mg/Kg		101	57 - 135	0	30
Chloromethane	0.0500	0.0490		mg/Kg		98	70 - 125	3	30
cis-1,2-Dichloroethene	0.0500	0.0516		mg/Kg		103	70 - 125	2	30
cis-1,3-Dichloropropene	0.0500	0.0479		mg/Kg		96	70 - 125	0	30
Dibromochloromethane	0.0500	0.0477		mg/Kg		95	69 - 125	0	30
1,1-Dichloroethane	0.0500	0.0524		mg/Kg		105	70 - 125	1	30
1,2-Dichloroethane	0.0500	0.0529		mg/Kg		106	70 - 130	1	30
1,1-Dichloroethene	0.0500	0.0533		mg/Kg		107	70 - 120	2	30
1,2-Dichloropropane	0.0500	0.0525		mg/Kg		105	70 - 125	4	30
Ethylbenzene	0.0500	0.0517		mg/Kg		103	61 - 136	1	30
2-Hexanone	0.0500	0.0520		mg/Kg		104	48 - 146	14	30
Methylene Chloride	0.0500	0.0523		mg/Kg		105	70 - 126	3	30
4-Methyl-2-pentanone (MIBK)	0.0500	0.0500		mg/Kg		100	50 - 148	11	30
Methyl tert-butyl ether	0.0500	0.0505		mg/Kg		101	50 - 140	4	30
Styrene	0.0500	0.0508		mg/Kg		102	70 - 125	1	30
1,1,2,2-Tetrachloroethane	0.0500	0.0473		mg/Kg		95	70 - 122	5	30
Tetrachloroethene	0.0500	0.0503		mg/Kg		101	70 - 124	0	30
Toluene	0.0500	0.0505		mg/Kg		101	70 - 125	0	30
trans-1,2-Dichloroethene	0.0500	0.0548		mg/Kg		110	70 - 125	2	30
trans-1,3-Dichloropropene	0.0500	0.0490		mg/Kg		98	70 - 125	2	30
1,1,1-Trichloroethane	0.0500	0.0535		mg/Kg		107	70 - 128	0	30
1,1,2-Trichloroethane	0.0500	0.0489		mg/Kg		98	70 - 125	1	30
Trichloroethene	0.0500	0.0522		mg/Kg		104	70 - 125	2	30
Vinyl acetate	0.0500	0.0453		mg/Kg		91	40 - 153	4	30
Vinyl chloride	0.0500	0.0490		mg/Kg		98	70 - 125	2	30
Xylenes, Total	0.100	0.103		mg/Kg		103	53 - 147	0	30

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	83		75 - 131
Dibromofluoromethane	88		75 - 126
1,2-Dichloroethane-d4 (Surr)	86		70 - 134
Toluene-d8 (Surr)	91		75 - 124

# QC Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: MB 500-700448/1-A**  
**Matrix: Solid**  
**Analysis Batch: 700513**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 700448**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Phenol	<0.17		0.17	0.074	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Bis(2-chloroethyl)ether	<0.17		0.17	0.050	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
1,3-Dichlorobenzene	<0.17		0.17	0.037	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
1,4-Dichlorobenzene	<0.17		0.17	0.043	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
1,2-Dichlorobenzene	<0.17		0.17	0.040	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2-Methylphenol	<0.17		0.17	0.053	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,2'-oxybis[1-chloropropane]	<0.17		0.17	0.039	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
N-Nitrosodi-n-propylamine	<0.067		0.067	0.041	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Hexachloroethane	<0.17		0.17	0.051	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2-Chlorophenol	<0.17		0.17	0.057	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Nitrobenzene	<0.033		0.033	0.0083	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Bis(2-chloroethoxy)methane	<0.17		0.17	0.034	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
1,2,4-Trichlorobenzene	<0.17		0.17	0.036	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Isophorone	<0.17		0.17	0.037	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,4-Dimethylphenol	<0.33		0.33	0.13	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Hexachlorobutadiene	<0.17		0.17	0.052	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Naphthalene	<0.033		0.033	0.0051	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,4-Dichlorophenol	<0.33		0.33	0.079	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4-Chloroaniline	<0.67		0.67	0.16	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,4,6-Trichlorophenol	<0.33		0.33	0.11	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,4,5-Trichlorophenol	<0.33		0.33	0.076	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Hexachlorocyclopentadiene	<0.67		0.67	0.19	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2-Methylnaphthalene	<0.067		0.067	0.0061	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2-Nitroaniline	<0.17		0.17	0.045	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2-Chloronaphthalene	<0.17		0.17	0.037	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4-Chloro-3-methylphenol	<0.33		0.33	0.11	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,6-Dinitrotoluene	<0.17		0.17	0.065	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2-Nitrophenol	<0.33		0.33	0.079	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
3-Nitroaniline	<0.33		0.33	0.10	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Dimethyl phthalate	<0.17		0.17	0.043	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,4-Dinitrophenol	<0.67		0.67	0.59	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Acenaphthylene	<0.033		0.033	0.0044	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,4-Dinitrotoluene	<0.17		0.17	0.053	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Acenaphthene	<0.033		0.033	0.0060	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Dibenzofuran	<0.17		0.17	0.039	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4-Nitrophenol	<0.67		0.67	0.32	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Fluorene	<0.033		0.033	0.0047	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4-Nitroaniline	<0.33		0.33	0.14	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4-Bromophenyl phenyl ether	<0.17		0.17	0.044	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Hexachlorobenzene	<0.067		0.067	0.0077	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Diethyl phthalate	<0.17		0.17	0.056	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4-Chlorophenyl phenyl ether	<0.17		0.17	0.039	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Pentachlorophenol	<0.67		0.67	0.53	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
N-Nitrosodiphenylamine	<0.17		0.17	0.039	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4,6-Dinitro-2-methylphenol	<0.67		0.67	0.27	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Phenanthrene	<0.033		0.033	0.0046	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Anthracene	<0.033		0.033	0.0056	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Carbazole	<0.17		0.17	0.083	mg/Kg		02/28/23 08:18	02/28/23 15:34	1

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# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: MB 500-700448/1-A**  
**Matrix: Solid**  
**Analysis Batch: 700513**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 700448**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	<0.17		0.17	0.051	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Fluoranthene	<0.033		0.033	0.0062	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Pyrene	<0.033		0.033	0.0066	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Butyl benzyl phthalate	<0.17		0.17	0.063	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Benzo[a]anthracene	<0.033		0.033	0.0045	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Chrysene	<0.033		0.033	0.0091	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
3,3'-Dichlorobenzidine	<0.17		0.17	0.047	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Bis(2-ethylhexyl) phthalate	<0.17		0.17	0.061	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Di-n-octyl phthalate	<0.17		0.17	0.054	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Benzo[b]fluoranthene	<0.033		0.033	0.0072	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Benzo[k]fluoranthene	<0.033		0.033	0.0098	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Benzo[a]pyrene	<0.033		0.033	0.0064	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Indeno[1,2,3-cd]pyrene	<0.033		0.033	0.0086	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Dibenz(a,h)anthracene	<0.033		0.033	0.0064	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Benzo[g,h,i]perylene	<0.033		0.033	0.011	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
3 & 4 Methylphenol	<0.17		0.17	0.055	mg/Kg		02/28/23 08:18	02/28/23 15:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	127		31 - 166	02/28/23 08:18	02/28/23 15:34	1
Phenol-d5	120		30 - 153	02/28/23 08:18	02/28/23 15:34	1
Nitrobenzene-d5 (Surr)	99		37 - 147	02/28/23 08:18	02/28/23 15:34	1
2-Fluorobiphenyl (Surr)	92		43 - 145	02/28/23 08:18	02/28/23 15:34	1
2,4,6-Tribromophenol	92		31 - 143	02/28/23 08:18	02/28/23 15:34	1
Terphenyl-d14 (Surr)	102		42 - 157	02/28/23 08:18	02/28/23 15:34	1

**Lab Sample ID: LCS 500-700448/2-A**  
**Matrix: Solid**  
**Analysis Batch: 700513**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700448**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Phenol	1.33	1.42		mg/Kg		106	56 - 122
Bis(2-chloroethyl)ether	1.33	1.29		mg/Kg		97	55 - 111
1,3-Dichlorobenzene	1.33	1.22		mg/Kg		92	65 - 124
1,4-Dichlorobenzene	1.33	1.21		mg/Kg		91	61 - 110
1,2-Dichlorobenzene	1.33	1.25		mg/Kg		94	62 - 110
2-Methylphenol	1.33	1.35		mg/Kg		102	60 - 120
2,2'-oxybis[1-chloropropane]	1.33	1.40		mg/Kg		105	40 - 124
N-Nitrosodi-n-propylamine	1.33	1.43		mg/Kg		107	56 - 118
Hexachloroethane	1.33	1.25		mg/Kg		94	60 - 114
2-Chlorophenol	1.33	1.42		mg/Kg		107	64 - 110
Nitrobenzene	1.33	1.42		mg/Kg		106	60 - 116
Bis(2-chloroethoxy)methane	1.33	1.30		mg/Kg		98	60 - 112
1,2,4-Trichlorobenzene	1.33	1.37		mg/Kg		103	66 - 117
Isophorone	1.33	1.35		mg/Kg		101	55 - 110
2,4-Dimethylphenol	1.33	1.33		mg/Kg		100	60 - 110
Hexachlorobutadiene	1.33	1.39		mg/Kg		105	56 - 120
Naphthalene	1.33	1.26		mg/Kg		95	63 - 110
2,4-Dichlorophenol	1.33	1.38		mg/Kg		103	58 - 120

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# QC Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCS 500-700448/2-A**  
**Matrix: Solid**  
**Analysis Batch: 700513**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700448**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4-Chloroaniline	1.33	1.23		mg/Kg		92	30 - 150
2,4,6-Trichlorophenol	1.33	1.37		mg/Kg		103	57 - 120
2,4,5-Trichlorophenol	1.33	1.40		mg/Kg		105	50 - 120
Hexachlorocyclopentadiene	1.33	1.12		mg/Kg		84	10 - 133
2-Methylnaphthalene	1.33	1.28		mg/Kg		96	69 - 112
2-Nitroaniline	1.33	1.45		mg/Kg		109	57 - 124
2-Chloronaphthalene	1.33	1.28		mg/Kg		96	69 - 114
4-Chloro-3-methylphenol	1.33	1.50		mg/Kg		113	65 - 122
2,6-Dinitrotoluene	1.33	1.47		mg/Kg		110	70 - 123
2-Nitrophenol	1.33	1.40		mg/Kg		105	60 - 120
3-Nitroaniline	1.33	0.921		mg/Kg		69	40 - 122
Dimethyl phthalate	1.33	1.33		mg/Kg		99	69 - 116
2,4-Dinitrophenol	2.67	1.53		mg/Kg		57	10 - 100
Acenaphthylene	1.33	1.31		mg/Kg		98	68 - 120
2,4-Dinitrotoluene	1.33	1.61		mg/Kg		121	69 - 124
Acenaphthene	1.33	1.29		mg/Kg		97	65 - 124
Dibenzofuran	1.33	1.30		mg/Kg		97	66 - 115
4-Nitrophenol	2.67	2.74		mg/Kg		103	30 - 122
Fluorene	1.33	1.32		mg/Kg		99	62 - 120
4-Nitroaniline	1.33	1.37		mg/Kg		103	60 - 160
4-Bromophenyl phenyl ether	1.33	1.35		mg/Kg		101	68 - 118
Hexachlorobenzene	1.33	1.23		mg/Kg		92	63 - 124
Diethyl phthalate	1.33	1.32		mg/Kg		99	58 - 120
4-Chlorophenyl phenyl ether	1.33	1.34		mg/Kg		100	62 - 119
Pentachlorophenol	2.67	2.14		mg/Kg		80	13 - 112
N-Nitrosodiphenylamine	1.33	1.35		mg/Kg		101	65 - 112
4,6-Dinitro-2-methylphenol	2.67	2.15		mg/Kg		81	10 - 110
Phenanthrene	1.33	1.28		mg/Kg		96	62 - 120
Anthracene	1.33	1.31		mg/Kg		98	70 - 114
Carbazole	1.33	1.65		mg/Kg		124	65 - 142
Di-n-butyl phthalate	1.33	1.37		mg/Kg		103	65 - 120
Fluoranthene	1.33	1.34		mg/Kg		100	62 - 120
Pyrene	1.33	1.37		mg/Kg		103	61 - 128
Butyl benzyl phthalate	1.33	1.50		mg/Kg		113	71 - 129
Benzo[a]anthracene	1.33	1.36		mg/Kg		102	67 - 122
Chrysene	1.33	1.34		mg/Kg		101	63 - 120
3,3'-Dichlorobenzidine	1.33	1.25		mg/Kg		94	35 - 128
Bis(2-ethylhexyl) phthalate	1.33	1.52		mg/Kg		114	72 - 131
Di-n-octyl phthalate	1.33	1.47		mg/Kg		110	68 - 134
Benzo[b]fluoranthene	1.33	1.47		mg/Kg		110	69 - 129
Benzo[k]fluoranthene	1.33	1.43		mg/Kg		107	68 - 127
Benzo[a]pyrene	1.33	1.42		mg/Kg		106	65 - 133
Indeno[1,2,3-cd]pyrene	1.33	1.48		mg/Kg		111	68 - 130
Dibenz(a,h)anthracene	1.33	1.43		mg/Kg		107	64 - 131
Benzo[g,h,i]perylene	1.33	1.44		mg/Kg		108	72 - 131
3 & 4 Methylphenol	1.33	1.32		mg/Kg		99	57 - 120



# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCS 500-700448/2-A**  
**Matrix: Solid**  
**Analysis Batch: 700513**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700448**

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorophenol	123		31 - 166
Phenol-d5	110		30 - 153
Nitrobenzene-d5 (Surr)	97		37 - 147
2-Fluorobiphenyl (Surr)	90		43 - 145
2,4,6-Tribromophenol	101		31 - 143
Terphenyl-d14 (Surr)	100		42 - 157

**Lab Sample ID: 500-229911-15 MS**  
**Matrix: Solid**  
**Analysis Batch: 700703**

**Client Sample ID: 4062-C0V-05-B01 (0-1)**  
**Prep Type: Total/NA**  
**Prep Batch: 700448**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	Limits
				Result	Qualifier				
Phenol	<0.21		1.70	1.64		mg/Kg	☼	96	56 - 122
Bis(2-chloroethyl)ether	<0.21		1.70	1.27		mg/Kg	☼	75	55 - 111
1,3-Dichlorobenzene	<0.21		1.70	1.15		mg/Kg	☼	67	60 - 110
1,4-Dichlorobenzene	<0.21		1.70	1.21		mg/Kg	☼	71	61 - 110
1,2-Dichlorobenzene	<0.21		1.70	1.07		mg/Kg	☼	63	62 - 110
2-Methylphenol	<0.21		1.70	1.33		mg/Kg	☼	78	60 - 120
2,2'-oxybis[1-chloropropane]	<0.21		1.70	1.43		mg/Kg	☼	84	40 - 124
N-Nitrosodi-n-propylamine	<0.084		1.70	1.35		mg/Kg	☼	79	56 - 118
Hexachloroethane	<0.21	F1	1.70	0.942	F1	mg/Kg	☼	55	60 - 114
2-Chlorophenol	<0.21		1.70	1.33		mg/Kg	☼	78	64 - 110
Nitrobenzene	<0.042		1.70	1.71		mg/Kg	☼	100	60 - 116
Bis(2-chloroethoxy)methane	<0.21		1.70	1.63		mg/Kg	☼	96	60 - 112
1,2,4-Trichlorobenzene	<0.21		1.70	1.45		mg/Kg	☼	85	66 - 117
Isophorone	<0.21		1.70	1.63		mg/Kg	☼	96	55 - 110
2,4-Dimethylphenol	<0.42		1.70	1.26		mg/Kg	☼	74	60 - 110
Hexachlorobutadiene	<0.21		1.70	1.15		mg/Kg	☼	68	56 - 120
Naphthalene	<0.042		1.70	1.31		mg/Kg	☼	77	63 - 110
2,4-Dichlorophenol	<0.42		1.70	1.36		mg/Kg	☼	80	58 - 120
4-Chloroaniline	<0.84		1.70	1.04		mg/Kg	☼	61	30 - 150
2,4,6-Trichlorophenol	<0.42		1.70	1.43		mg/Kg	☼	84	57 - 120
2,4,5-Trichlorophenol	<0.42		1.70	1.46		mg/Kg	☼	86	50 - 120
Hexachlorocyclopentadiene	<0.84	F1	1.70	<0.86	F1	mg/Kg	☼	0	10 - 133
2-Methylnaphthalene	0.0077	J F1	1.70	1.15	F1	mg/Kg	☼	67	69 - 112
2-Nitroaniline	<0.21		1.70	1.62		mg/Kg	☼	95	57 - 124
2-Chloronaphthalene	<0.21		1.70	1.47		mg/Kg	☼	86	69 - 114
4-Chloro-3-methylphenol	<0.42		1.70	1.53		mg/Kg	☼	90	65 - 122
2,6-Dinitrotoluene	<0.21		1.70	1.53		mg/Kg	☼	90	70 - 123
2-Nitrophenol	<0.42		1.70	1.56		mg/Kg	☼	92	60 - 120
3-Nitroaniline	<0.42		1.70	1.50		mg/Kg	☼	88	40 - 122
Dimethyl phthalate	<0.21		1.70	1.44		mg/Kg	☼	85	69 - 116
2,4-Dinitrophenol	<0.84	F1	3.40	0.919		mg/Kg	☼	27	10 - 100
Acenaphthylene	<0.042		1.70	1.40		mg/Kg	☼	82	68 - 120
2,4-Dinitrotoluene	<0.21		1.70	1.69		mg/Kg	☼	99	69 - 124
Acenaphthene	<0.042		1.70	1.33		mg/Kg	☼	78	65 - 124
Dibenzofuran	<0.21		1.70	1.38		mg/Kg	☼	81	66 - 115
4-Nitrophenol	<0.84		3.40	2.85		mg/Kg	☼	84	30 - 122

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# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: 500-229911-15 MS**

**Matrix: Solid**

**Analysis Batch: 700703**

**Client Sample ID: 4062-C0V-05-B01 (0-1)**

**Prep Type: Total/NA**

**Prep Batch: 700448**

Analyte	Sample	Sample Qualifier	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result			Result	Qualifier				
Fluorene	<0.042		1.70	1.44		mg/Kg	☼	85	62 - 120
4-Nitroaniline	<0.42		1.70	1.57		mg/Kg	☼	92	60 - 160
4-Bromophenyl phenyl ether	<0.21		1.70	1.28		mg/Kg	☼	75	68 - 118
Hexachlorobenzene	<0.084		1.70	1.28		mg/Kg	☼	75	63 - 124
Diethyl phthalate	<0.21		1.70	1.48		mg/Kg	☼	87	58 - 120
4-Chlorophenyl phenyl ether	<0.21		1.70	1.30		mg/Kg	☼	77	62 - 119
Pentachlorophenol	<0.84		3.40	1.05		mg/Kg	☼	31	13 - 112
N-Nitrosodiphenylamine	<0.21		1.70	1.27		mg/Kg	☼	75	65 - 112
4,6-Dinitro-2-methylphenol	<0.84		3.40	1.03		mg/Kg	☼	30	10 - 110
Phenanthrene	0.017	J	1.70	1.55		mg/Kg	☼	90	62 - 120
Anthracene	<0.042		1.70	1.27		mg/Kg	☼	75	70 - 114
Carbazole	<0.21		1.70	1.50		mg/Kg	☼	88	65 - 142
Di-n-butyl phthalate	<0.21		1.70	1.45		mg/Kg	☼	85	65 - 120
Fluoranthene	0.018	J	1.70	1.52		mg/Kg	☼	88	62 - 120
Pyrene	0.020	J	1.70	1.56		mg/Kg	☼	91	61 - 128
Butyl benzyl phthalate	<0.21		1.70	1.72		mg/Kg	☼	101	71 - 129
Benzo[a]anthracene	0.011	J	1.70	1.52		mg/Kg	☼	88	67 - 122
Chrysene	0.012	J	1.70	1.38		mg/Kg	☼	81	63 - 120
3,3'-Dichlorobenzidine	<0.21	F2 F1	1.70	0.943		mg/Kg	☼	55	35 - 128
Bis(2-ethylhexyl) phthalate	<0.21		1.70	1.66		mg/Kg	☼	98	72 - 131
Di-n-octyl phthalate	<0.21		1.70	1.72		mg/Kg	☼	101	68 - 134
Benzo[b]fluoranthene	0.029	J	1.70	1.59		mg/Kg	☼	92	69 - 129
Benzo[k]fluoranthene	<0.042		1.70	1.80		mg/Kg	☼	106	68 - 127
Benzo[a]pyrene	0.020	J	1.70	1.54		mg/Kg	☼	89	65 - 133
Indeno[1,2,3-cd]pyrene	<0.042		1.70	1.49		mg/Kg	☼	87	68 - 130
Dibenz(a,h)anthracene	<0.042		1.70	1.30		mg/Kg	☼	77	64 - 131
Benzo[g,h,i]perylene	<0.042	F1	1.70	1.18	F1	mg/Kg	☼	69	72 - 131
3 & 4 Methylphenol	<0.21		1.70	1.14		mg/Kg	☼	67	57 - 120

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
2-Fluorophenol	104		31 - 166
Phenol-d5	94		30 - 153
Nitrobenzene-d5 (Surr)	75		37 - 147
2-Fluorobiphenyl (Surr)	74		43 - 145
2,4,6-Tribromophenol	58		31 - 143
Terphenyl-d14 (Surr)	96		42 - 157

**Lab Sample ID: 500-229911-15 MSD**

**Matrix: Solid**

**Analysis Batch: 700703**

**Client Sample ID: 4062-C0V-05-B01 (0-1)**

**Prep Type: Total/NA**

**Prep Batch: 700448**

Analyte	Sample	Sample Qualifier	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	
	Result			Result	Qualifier					RPD	Limit
Phenol	<0.21		1.65	1.57		mg/Kg	☼	95	56 - 122	4	30
Bis(2-chloroethyl)ether	<0.21		1.65	1.51		mg/Kg	☼	92	55 - 111	17	30
1,3-Dichlorobenzene	<0.21		1.65	1.06		mg/Kg	☼	64	60 - 110	8	30
1,4-Dichlorobenzene	<0.21		1.65	1.09		mg/Kg	☼	66	61 - 110	10	30
1,2-Dichlorobenzene	<0.21		1.65	1.09		mg/Kg	☼	66	62 - 110	2	30
2-Methylphenol	<0.21		1.65	1.35		mg/Kg	☼	82	60 - 120	2	30

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# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: 500-229911-15 MSD**

**Client Sample ID: 4062-C0V-05-B01 (0-1)**

**Matrix: Solid**

**Prep Type: Total/NA**

**Analysis Batch: 700703**

**Prep Batch: 700448**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		
2,2'-oxybis[1-chloropropane]	<0.21		1.65	1.37		mg/Kg	☼	83	40 - 124	4	30
N-Nitrosodi-n-propylamine	<0.084		1.65	1.33		mg/Kg	☼	81	56 - 118	1	30
Hexachloroethane	<0.21	F1	1.65	0.869	F1	mg/Kg	☼	53	60 - 114	8	30
2-Chlorophenol	<0.21		1.65	1.34		mg/Kg	☼	81	64 - 110	0	30
Nitrobenzene	<0.042		1.65	1.50		mg/Kg	☼	91	60 - 116	13	30
Bis(2-chloroethoxy)methane	<0.21		1.65	1.41		mg/Kg	☼	86	60 - 112	14	30
1,2,4-Trichlorobenzene	<0.21		1.65	1.21		mg/Kg	☼	73	66 - 117	18	30
Isophorone	<0.21		1.65	1.43		mg/Kg	☼	87	55 - 110	13	30
2,4-Dimethylphenol	<0.42		1.65	1.21		mg/Kg	☼	74	60 - 110	4	30
Hexachlorobutadiene	<0.21		1.65	1.11		mg/Kg	☼	68	56 - 120	3	30
Naphthalene	<0.042		1.65	1.28		mg/Kg	☼	78	63 - 110	2	30
2,4-Dichlorophenol	<0.42		1.65	1.28		mg/Kg	☼	78	58 - 120	6	30
4-Chloroaniline	<0.84		1.65	0.901		mg/Kg	☼	55	30 - 150	15	30
2,4,6-Trichlorophenol	<0.42		1.65	1.21		mg/Kg	☼	73	57 - 120	17	30
2,4,5-Trichlorophenol	<0.42		1.65	1.63		mg/Kg	☼	99	50 - 120	11	30
Hexachlorocyclopentadiene	<0.84	F1	1.65	<0.83	F1	mg/Kg	☼	0	10 - 133	NC	30
2-Methylnaphthalene	0.0077	J F1	1.65	1.45		mg/Kg	☼	88	69 - 112	23	30
2-Nitroaniline	<0.21		1.65	1.61		mg/Kg	☼	98	57 - 124	0	30
2-Chloronaphthalene	<0.21		1.65	1.36		mg/Kg	☼	83	69 - 114	7	30
4-Chloro-3-methylphenol	<0.42		1.65	1.58		mg/Kg	☼	96	65 - 122	3	30
2,6-Dinitrotoluene	<0.21		1.65	1.56		mg/Kg	☼	95	70 - 123	2	30
2-Nitrophenol	<0.42		1.65	1.33		mg/Kg	☼	81	60 - 120	16	30
3-Nitroaniline	<0.42		1.65	1.32		mg/Kg	☼	80	40 - 122	13	30
Dimethyl phthalate	<0.21		1.65	1.45		mg/Kg	☼	88	69 - 116	0	30
2,4-Dinitrophenol	<0.84	F1	3.30	<0.83	F1	mg/Kg	☼	0	10 - 100	NC	30
Acenaphthylene	<0.042		1.65	1.47		mg/Kg	☼	89	68 - 120	5	30
2,4-Dinitrotoluene	<0.21		1.65	1.63		mg/Kg	☼	99	69 - 124	4	30
Acenaphthene	<0.042		1.65	1.40		mg/Kg	☼	85	65 - 124	5	30
Dibenzofuran	<0.21		1.65	1.46		mg/Kg	☼	88	66 - 115	5	30
4-Nitrophenol	<0.84		3.30	3.02		mg/Kg	☼	92	30 - 122	6	30
Fluorene	<0.042		1.65	1.44		mg/Kg	☼	87	62 - 120	0	30
4-Nitroaniline	<0.42		1.65	1.51		mg/Kg	☼	92	60 - 160	4	30
4-Bromophenyl phenyl ether	<0.21		1.65	1.37		mg/Kg	☼	83	68 - 118	6	30
Hexachlorobenzene	<0.084		1.65	1.46		mg/Kg	☼	89	63 - 124	13	30
Diethyl phthalate	<0.21		1.65	1.47		mg/Kg	☼	89	58 - 120	1	30
4-Chlorophenyl phenyl ether	<0.21		1.65	1.36		mg/Kg	☼	82	62 - 119	4	30
Pentachlorophenol	<0.84		3.30	1.31		mg/Kg	☼	40	13 - 112	22	30
N-Nitrosodiphenylamine	<0.21		1.65	1.44		mg/Kg	☼	88	65 - 112	13	30
4,6-Dinitro-2-methylphenol	<0.84		3.30	0.811	J	mg/Kg	☼	25	10 - 110	24	30
Phenanthrene	0.017	J	1.65	1.67		mg/Kg	☼	100	62 - 120	7	30
Anthracene	<0.042		1.65	1.51		mg/Kg	☼	92	70 - 114	17	30
Carbazole	<0.21		1.65	1.60		mg/Kg	☼	97	65 - 142	7	30
Di-n-butyl phthalate	<0.21		1.65	1.60		mg/Kg	☼	97	65 - 120	10	30
Fluoranthene	0.018	J	1.65	1.67		mg/Kg	☼	100	62 - 120	9	30
Pyrene	0.020	J	1.65	1.91		mg/Kg	☼	115	61 - 128	20	30
Butyl benzyl phthalate	<0.21		1.65	1.99		mg/Kg	☼	120	71 - 129	14	30
Benzo[a]anthracene	0.011	J	1.65	1.61		mg/Kg	☼	97	67 - 122	6	30
Chrysene	0.012	J	1.65	1.50		mg/Kg	☼	90	63 - 120	8	30
3,3'-Dichlorobenzidine	<0.21	F2 F1	1.65	0.499	F2 F1	mg/Kg	☼	30	35 - 128	62	30

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# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

Lab Sample ID: 500-229911-15 MSD

Client Sample ID: 4062-C0V-05-B01 (0-1)

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 700703

Prep Batch: 700448

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		
Bis(2-ethylhexyl) phthalate	<0.21		1.65	1.91		mg/Kg	☼	116	72 - 131	14	30
Di-n-octyl phthalate	<0.21		1.65	1.59		mg/Kg	☼	96	68 - 134	8	30
Benzo[b]fluoranthene	0.029	J	1.65	1.67		mg/Kg	☼	100	69 - 129	5	30
Benzo[k]fluoranthene	<0.042		1.65	1.89		mg/Kg	☼	115	68 - 127	5	30
Benzo[a]pyrene	0.020	J	1.65	1.58		mg/Kg	☼	94	65 - 133	2	30
Indeno[1,2,3-cd]pyrene	<0.042		1.65	1.36		mg/Kg	☼	82	68 - 130	9	30
Dibenz(a,h)anthracene	<0.042		1.65	1.20		mg/Kg	☼	73	64 - 131	8	30
Benzo[g,h,i]perylene	<0.042	F1	1.65	1.08	F1	mg/Kg	☼	65	72 - 131	9	30
3 & 4 Methylphenol	<0.21		1.65	1.23		mg/Kg	☼	75	57 - 120	8	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2-Fluorophenol	102		31 - 166
Phenol-d5	91		30 - 153
Nitrobenzene-d5 (Surr)	73		37 - 147
2-Fluorobiphenyl (Surr)	76		43 - 145
2,4,6-Tribromophenol	67		31 - 143
Terphenyl-d14 (Surr)	114		42 - 157

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 500-700187/1-A

Client Sample ID: Method Blank

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 700467

Prep Batch: 700187

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<2.0		2.0	0.39	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Arsenic	<1.0		1.0	0.34	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Barium	<1.0		1.0	0.11	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Beryllium	<0.40		0.40	0.093	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Boron	<5.0		5.0	0.47	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Cadmium	0.0444	J	0.20	0.036	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Calcium	<20		20	3.4	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Chromium	<1.0		1.0	0.50	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Cobalt	<0.50		0.50	0.13	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Copper	0.294	J	1.0	0.28	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Iron	<20		20	10	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Lead	<0.50		0.50	0.23	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Magnesium	<10		10	5.0	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Manganese	<1.0		1.0	0.15	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Nickel	<1.0		1.0	0.29	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Potassium	<50		50	18	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Selenium	<1.0		1.0	0.59	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Silver	0.136	J	0.50	0.13	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Sodium	<100		100	15	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Thallium	<1.0		1.0	0.50	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Vanadium	<0.50		0.50	0.12	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Zinc	<2.0		2.0	0.88	mg/Kg		02/24/23 15:35	02/27/23 14:29	1

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# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCS 500-700187/2-A**  
**Matrix: Solid**  
**Analysis Batch: 700467**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700187**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	50.0	47.0		mg/Kg		94	80 - 120
Arsenic	10.0	9.28		mg/Kg		93	80 - 120
Barium	200	205		mg/Kg		103	80 - 120
Beryllium	5.00	4.56		mg/Kg		91	80 - 120
Boron	100	85.4		mg/Kg		85	80 - 120
Cadmium	5.00	4.59		mg/Kg		92	80 - 120
Calcium	1000	931		mg/Kg		93	80 - 120
Chromium	20.0	18.9		mg/Kg		94	80 - 120
Cobalt	50.0	47.8		mg/Kg		96	80 - 120
Copper	25.0	25.0		mg/Kg		100	80 - 120
Iron	100	100		mg/Kg		100	80 - 120
Lead	10.0	8.94		mg/Kg		89	80 - 120
Magnesium	1000	918		mg/Kg		92	80 - 120
Manganese	50.0	45.4		mg/Kg		91	80 - 120
Nickel	50.0	46.1		mg/Kg		92	80 - 120
Potassium	1000	1050		mg/Kg		105	80 - 120
Selenium	10.0	8.35		mg/Kg		84	80 - 120
Silver	5.00	4.14		mg/Kg		83	80 - 120
Sodium	1000	1040		mg/Kg		104	80 - 120
Thallium	10.0	9.07		mg/Kg		91	80 - 120
Vanadium	50.0	47.1		mg/Kg		94	80 - 120
Zinc	50.0	44.3		mg/Kg		89	80 - 120

**Lab Sample ID: LCS 500-700755/2-A**  
**Matrix: Solid**  
**Analysis Batch: 700931**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700755**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	0.500	0.516		mg/L		103	80 - 120
Beryllium	0.0500	0.0489		mg/L		98	80 - 120
Boron	1.00	0.914	^1+	mg/L		91	80 - 120
Cadmium	0.0500	0.0513		mg/L		103	80 - 120
Chromium	0.200	0.195		mg/L		97	80 - 120
Cobalt	0.500	0.514		mg/L		103	80 - 120
Iron	1.00	1.08		mg/L		108	80 - 120
Lead	0.100	0.0911		mg/L		91	80 - 120
Nickel	0.500	0.493		mg/L		99	80 - 120
Selenium	0.100	0.110		mg/L		110	80 - 120
Silver	0.0500	0.0538		mg/L		108	80 - 120
Zinc	0.500	0.520		mg/L		104	80 - 120

**Lab Sample ID: LB 500-700531/2-C**  
**Matrix: Solid**  
**Analysis Batch: 700931**

**Client Sample ID: Method Blank**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Barium	<0.50		0.50	0.050	mg/L		03/01/23 17:00	03/02/23 12:09	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		03/01/23 17:00	03/02/23 12:09	1
Boron	<0.50	^1+	0.50	0.050	mg/L		03/01/23 17:00	03/02/23 12:09	1

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# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LB 500-700531/2-C**  
**Matrix: Solid**  
**Analysis Batch: 700931**

**Client Sample ID: Method Blank**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cadmium	<0.0050		0.0050	0.0020	mg/L		03/01/23 17:00	03/02/23 12:09	1
Chromium	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:09	1
Cobalt	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:09	1
Iron	<0.40		0.40	0.20	mg/L		03/01/23 17:00	03/02/23 12:09	1
Lead	<0.0075		0.0075	0.0075	mg/L		03/01/23 17:00	03/02/23 12:09	1
Nickel	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:09	1
Selenium	<0.050		0.050	0.020	mg/L		03/01/23 17:00	03/02/23 12:09	1
Silver	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:09	1
Zinc	<0.50		0.50	0.020	mg/L		03/01/23 17:00	03/02/23 12:09	1

**Lab Sample ID: 500-229911-4 MS**  
**Matrix: Solid**  
**Analysis Batch: 700931**

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
Barium	1.2		0.500	1.72		mg/L		106	75 - 125
Beryllium	<0.0040		0.0500	0.0512		mg/L		102	75 - 125
Boron	<0.50	^1+	1.00	0.966	^1+	mg/L		97	75 - 125
Cadmium	<0.0050		0.0500	0.0554		mg/L		111	75 - 125
Chromium	<0.025		0.200	0.190		mg/L		95	75 - 125
Cobalt	<0.025		0.500	0.527		mg/L		105	75 - 125
Iron	<0.40		1.00	1.04		mg/L		104	75 - 125
Lead	<0.0075		0.100	0.0933		mg/L		93	75 - 125
Nickel	<0.025		0.500	0.502		mg/L		100	75 - 125
Selenium	<0.050		0.100	0.105		mg/L		105	75 - 125
Silver	<0.025		0.0500	0.0547		mg/L		109	75 - 125
Zinc	0.052	J	0.500	0.565		mg/L		103	75 - 125

**Lab Sample ID: 500-229911-4 DU**  
**Matrix: Solid**  
**Analysis Batch: 700931**

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	Sample Result	Sample Qualifier	DU DU		Unit	D	RPD	Limit
			Result	Qualifier				
Barium	1.2		1.21		mg/L		2	20
Beryllium	<0.0040		<0.0040		mg/L		NC	20
Boron	<0.50	^1+	<0.50	^1+	mg/L		NC	20
Cadmium	<0.0050		<0.0050		mg/L		NC	20
Chromium	<0.025		<0.025		mg/L		NC	20
Cobalt	<0.025		<0.025		mg/L		NC	20
Iron	<0.40		<0.40		mg/L		NC	20
Lead	<0.0075		<0.0075		mg/L		NC	20
Nickel	<0.025		<0.025		mg/L		NC	20
Selenium	<0.050		<0.050		mg/L		NC	20
Silver	<0.025		<0.025		mg/L		NC	20
Zinc	0.052	J	0.0519	J	mg/L		1	20

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# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: LCS 500-700755/2-A**  
**Matrix: Solid**  
**Analysis Batch: 701031**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700755**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.500	0.537		mg/L		107	80 - 120
Thallium	0.100	0.121	*+	mg/L		121	80 - 120

**Lab Sample ID: LB 500-700531/2-C**  
**Matrix: Solid**  
**Analysis Batch: 701031**

**Client Sample ID: Method Blank**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		03/01/23 17:00	03/02/23 15:22	1
Thallium	<0.0020		0.0020	0.0020	mg/L		03/01/23 17:00	03/02/23 15:22	1

**Lab Sample ID: 500-229911-4 MS**  
**Matrix: Solid**  
**Analysis Batch: 701031**

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<0.0060		0.500	0.523		mg/L		105	75 - 125
Thallium	<0.0020	*+	0.100	0.124		mg/L		124	75 - 125

**Lab Sample ID: 500-229911-4 DU**  
**Matrix: Solid**  
**Analysis Batch: 701031**

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	<0.0060		<0.0060		mg/L		NC	20
Thallium	<0.0020	*+	<0.0020	*+	mg/L		NC	20

## Method: 7470A - TCLP Mercury

**Lab Sample ID: MB 500-700697/12-A**  
**Matrix: Solid**  
**Analysis Batch: 700909**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 700697**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		03/01/23 11:25	03/02/23 11:05	1

**Lab Sample ID: LCS 500-700697/14-A**  
**Matrix: Solid**  
**Analysis Batch: 700909**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700697**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00198	0.00205		mg/L		103	80 - 120

**Lab Sample ID: LB 500-700531/2-B**  
**Matrix: Solid**  
**Analysis Batch: 700909**

**Client Sample ID: Method Blank**  
**Prep Type: TCLP**  
**Prep Batch: 700697**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		03/01/23 11:25	03/02/23 11:11	1

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# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Method: 7470A - TCLP Mercury (Continued)

**Lab Sample ID: 500-229911-4 MS**  
**Matrix: Solid**  
**Analysis Batch: 700909**

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
**Prep Type: TCLP**  
**Prep Batch: 700697**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	<0.00020		0.00100	0.000946		mg/L		95	75 - 125

**Lab Sample ID: 500-229911-4 DU**  
**Matrix: Solid**  
**Analysis Batch: 700909**

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
**Prep Type: TCLP**  
**Prep Batch: 700697**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	<0.00020		<0.00020		mg/L		NC	20

## Method: 7471B - Mercury (CVAA)

**Lab Sample ID: MB 500-701027/12-A**  
**Matrix: Solid**  
**Analysis Batch: 701282**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 701027**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.017		0.017	0.0088	mg/Kg		03/03/23 13:00	03/06/23 08:29	1

**Lab Sample ID: LCS 500-701027/13-A**  
**Matrix: Solid**  
**Analysis Batch: 701282**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 701027**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.165	0.161		mg/Kg		97	80 - 120

**Lab Sample ID: 500-229911-10 MS**  
**Matrix: Solid**  
**Analysis Batch: 701282**

**Client Sample ID: 4062-C0V-08-B03 (0-2)**  
**Prep Type: Total/NA**  
**Prep Batch: 701027**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.013	J	0.0958	0.115		mg/Kg	☼	106	75 - 125

**Lab Sample ID: 500-229911-10 MSD**  
**Matrix: Solid**  
**Analysis Batch: 701282**

**Client Sample ID: 4062-C0V-08-B03 (0-2)**  
**Prep Type: Total/NA**  
**Prep Batch: 701027**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.013	J	0.0956	0.113		mg/Kg	☼	104	75 - 125	2	20

**Lab Sample ID: 500-229911-10 DU**  
**Matrix: Solid**  
**Analysis Batch: 701282**

**Client Sample ID: 4062-C0V-08-B03 (0-2)**  
**Prep Type: Total/NA**  
**Prep Batch: 701027**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	0.013	J	0.0133	J	mg/Kg	☼	0.4	20



# Lab Chronicle

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B08 (0-2)**  
Date Collected: 02/23/23 13:35  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-1**  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 12:34
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:26
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:16
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 14:43 - 03/01/23 14:49 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-08-B08 (0-2)**  
Date Collected: 02/23/23 13:35  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-1**  
Matrix: Solid  
Percent Solids: 84.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 12:27
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700513	SS	EET CHI	02/28/23 17:44
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:10
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:33

**Client Sample ID: 4062-C0V-08-B09 (0-2)**  
Date Collected: 02/23/23 13:50  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-2**  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 12:38
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:28
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:18
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:12
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B09 (0-2)**

**Lab Sample ID: 500-229911-2**

**Date Collected: 02/23/23 13:50**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

**Percent Solids: 83.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 12:52
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700668	SS	EET CHI	03/01/23 19:40
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:13
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:35

**Client Sample ID: 4062-C0V-14-B01 (0-1)**

**Lab Sample ID: 500-229911-3**

**Date Collected: 02/23/23 14:05**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 12:41
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:30
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:20
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:14
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-14-B01 (0-1)**

**Lab Sample ID: 500-229911-3**

**Date Collected: 02/23/23 14:05**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

**Percent Solids: 82.4**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 13:18
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700668	SS	EET CHI	03/01/23 20:04
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:16
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:37

# Lab Chronicle

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
Date Collected: 02/23/23 14:10  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-4**  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 12:44
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:32
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:23
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 14:54 - 03/01/23 15:00 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
Date Collected: 02/23/23 14:10  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-4**  
Matrix: Solid  
Percent Solids: 86.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 13:43
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	701587	JJB	EET CHI	03/08/23 19:00
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:19
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:39

**Client Sample ID: 4062-C0V-14-B02 (0-1)D**  
Date Collected: 02/23/23 14:15  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-5**  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 12:57
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:40
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:29
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 15:00 - 03/01/23 15:06 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-14-B02 (0-1)D**

**Lab Sample ID: 500-229911-5**

**Date Collected: 02/23/23 14:15**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

**Percent Solids: 82.6**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 14:07
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	701587	JJB	EET CHI	03/08/23 19:24
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:22
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:41

**Client Sample ID: 4062-C0V-08-B06 (0-2)**

**Lab Sample ID: 500-229911-6**

**Date Collected: 02/23/23 14:25**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:07
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:47
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:31
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:27
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-08-B06 (0-2)**

**Lab Sample ID: 500-229911-6**

**Date Collected: 02/23/23 14:25**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

**Percent Solids: 79.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 14:33
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700668	SS	EET CHI	03/01/23 20:29
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:25
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:47

# Lab Chronicle

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B07 (0-2)**  
Date Collected: 02/23/23 14:30  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-7**  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:10
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:49
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:47
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 15:06 - 03/01/23 15:12 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-08-B07 (0-2)**  
Date Collected: 02/23/23 14:30  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-7**  
Matrix: Solid  
Percent Solids: 81.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700601	PMF	EET CHI	03/01/23 19:02
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700668	SS	EET CHI	03/01/23 20:53
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:28
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:49

**Client Sample ID: 4062-C0V-08-B05 (0-2)**  
Date Collected: 02/23/23 14:35  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-8**  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:14
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:51
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:49
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:17
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B05 (0-2)**

**Lab Sample ID: 500-229911-8**

**Date Collected: 02/23/23 14:35**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

**Percent Solids: 82.6**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 15:23
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700668	SS	EET CHI	03/01/23 21:17
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:32
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:51

**Client Sample ID: 4062-C0V-08-B04 (0-2)**

**Lab Sample ID: 500-229911-9**

**Date Collected: 02/23/23 16:20**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:17
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:53
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:51
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:19
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-08-B04 (0-2)**

**Lab Sample ID: 500-229911-9**

**Date Collected: 02/23/23 16:20**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

**Percent Solids: 82.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 15:48
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700513	SS	EET CHI	02/28/23 18:09
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:35
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:53

# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B03 (0-2)**  
**Date Collected: 02/23/23 16:10**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-10**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:20
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:55
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:53
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:22
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-08-B03 (0-2)**  
**Date Collected: 02/23/23 16:10**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-10**  
**Matrix: Solid**  
**Percent Solids: 81.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 16:13
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700513	SS	EET CHI	02/28/23 18:33
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:44
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:54

**Client Sample ID: 4062-C0V-08-B02 (0-2)**  
**Date Collected: 02/23/23 15:10**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-11**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:23
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:57
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:56
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:24
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06



# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B02 (0-2)**  
**Date Collected: 02/23/23 15:10**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-11**  
**Matrix: Solid**  
**Percent Solids: 81.9**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 16:38
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700513	SS	EET CHI	02/28/23 18:57
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:47
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 09:02

**Client Sample ID: 4062-C0V-08-B01 (0-2)**  
**Date Collected: 02/23/23 15:20**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-12**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:27
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:59
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:58
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 15:12 - 03/01/23 15:18 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-08-B01 (0-2)**  
**Date Collected: 02/23/23 15:20**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-12**  
**Matrix: Solid**  
**Percent Solids: 86.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 17:04
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700513	SS	EET CHI	02/28/23 19:46
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:50
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 09:04

# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-05-B03 (0-1)**  
**Date Collected: 02/23/23 15:30**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-13**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:30
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 16:01
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 12:00
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 15:47 - 03/01/23 15:53 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-05-B03 (0-1)**  
**Date Collected: 02/23/23 15:30**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-13**  
**Matrix: Solid**  
**Percent Solids: 86.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 17:29
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700513	SS	EET CHI	02/28/23 19:22
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:54
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 09:10

**Client Sample ID: 4062-C0V-05-B02 (0-1)**  
**Date Collected: 02/23/23 15:40**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-14**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:33
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 16:03
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 12:02
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 15:18 - 03/01/23 15:24 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

# Lab Chronicle

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-05-B02 (0-1)**  
Date Collected: 02/23/23 15:40  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-14**  
Matrix: Solid  
Percent Solids: 86.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 17:55
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	701587	JJB	EET CHI	03/08/23 19:48
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:57
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		5	700562	CMS	EET CHI	02/28/23 14:31
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 09:12

**Client Sample ID: 4062-C0V-05-B01 (0-1)**  
Date Collected: 02/23/23 15:50  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-15**  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:36
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 16:05
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 12:04
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 15:24 - 03/01/23 15:30 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-05-B01 (0-1)**  
Date Collected: 02/23/23 15:50  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-15**  
Matrix: Solid  
Percent Solids: 77.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 18:20
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700703	SS	EET CHI	03/01/23 21:47
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 16:00
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 09:14

<sup>1</sup> Completion dates and times are reported or not reported per method requirements or individual lab discretion.

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Laboratory: Eurofins Chicago

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

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	IL00035	04-29-23

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

# Chain of Custody Record 640813



Environment Testing  
America

Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Regulatory Program:  DW  NPDES  RCRA  Other

TAL-8210

Client Contact		Project Manager: <b>D. Tiebout</b>		Site Contact: <b>A. Platin</b>		Date: <b>2/23/23</b>		COC No: <b>1</b>	
Company Name: <b>WSP</b>		Tel/Email:		Lab Contact: <b>R. Wozniak</b>		Carrier:		1 of 2 COCs	
Address: <b>30 N. LaSalle</b>		Analysis Turnaround Time <input checked="" type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS		TAT if different from Below <input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		 500-229911 COC		Sampler:	
City/State/Zip: <b>Chicago, IL</b>								For Lab Use Only	
Phone:								Walk-in Client	
Fax:								Lab Sampling	
Project Name: <b>FDOT W0112 - West Frankfort</b>								Job / SDG No	
Site: <b>EP 10012 - West Frankfort</b>								500-229911	
PO#:									

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	pH	% Solids	VOCs	SVOCs	Total Metals	TCU#							Sample Specific Notes	
1 4062-COV-08-B08 (0-2)	2/23/23	1355	C	S	2			X	X	X	X	X	X								(A)
2 4062-COV-08-B09 (0-2)	2/23/23	1350	C	S	2			X	X	X	X	X	X								(A)
3 4062-COV-14-B01 (0-1)	2/23/23	1405	C	S	2			X	X	X	X	X	X								(A)
4 4062-COV-14-B02 (0-1)	02/23/23	1410	C	S	2			X	X	X	X	X	X								(A)
5 4062-COV-14-B02 (0-1) Dup	2/23/23	1415	C	S	2			X	X	X	X	X	X								(A)
6 4062-COV-08-B06 (0-2)	2/23/23	1425	C	S	2			X	X	X	X	X	X								(A)
7 4062-COV-08-B07 (0-2)	2/23/23	1430	C	S	2			X	X	X	X	X	X								(A)
8 4062-COV-08-B05 (0-2)	2/23/23	1435	C	S	2			X	X	X	X	X	X								(A)
9 4062-COV-08-B04 (0-2)	2/23/23	1400	C	S	2			X	X	X	X	X	X								(B)
10 4062-COV-08-B03 (0-2)	2/23/23	1410	C	S	2			X	X	X	X	X	X								(B)
11 4062-COV-08-B02 (0-2)	2/23/23	1510	C	S	2			X	X	X	X	X	X								(B)
12 4062-COV-08-B01 (0-2)	2/23/23	1520	C	S	2			X	X	X	X	X	X								(B)

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other

Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months	
---	--	---	--

Special Instructions/QC Requirements & Comments:  
**\*SPL analysis based on TCLP results** 4.1+3.2, 4.9+4.0 (cover A or B)

Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No		Cooler Temp (°C) Obs'd: <b>4.1</b> Corr'd: <b>3.2</b>		Therm ID No	
Relinquished by: <b>Austin Platin</b>	Company: <b>WSP</b>	Date/Time: <b>2/24/23 1111</b>	Received by: <b>[Signature]</b>	Company:	Date/Time: <b>2/24/23 1111</b>		
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:		
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:		





Address \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Regulatory Program:  DW  NPDES  RCRA  Other

Client Contact		Project Manager: <b>D. Teclout</b>		Site Contact: <b>A. Plath</b>		Date: <b>2/23/23</b>		COC No: <b>2</b>																					
Company Name: <b>WSP</b>		Tel/Email		Lab Contact: <b>R. Wright</b>		Carrier		<b>2</b> of <b>2</b> COCs																					
Address: <b>30 N. LaSalle</b>		Analysis Turnaround Time <input checked="" type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below _____ <input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day																											
City/State/Zip: <b>Chicago</b>																													
Phone																													
Fax																													
Project Name: <b>EDX WSP8 W0112 - West Frankfort</b>		Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	PH	% Solids	VOCs	S.VOCs	Total Metals	TLCPH	Sample Specific Notes												
Site: <b>RP1009008.0112 - West Frankfort</b>		13 4062-COV-05-B03 (0-1)		2/23/23	1530	C	S	2			X	X	X	X	X	X	(B)												
P O #		14 4062-COV-05-B02 (0-1)		2/23/23	1540	C	S	2			X	X	X	X	X	X	(B)												
		15 4062-COV-05-B01 (0-1)		2/23/23	1550	C	S	2			X	X	X	X	X	X	(B)												
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other										Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)																			
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample										<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months																			
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown																													
Special Instructions/QC Requirements & Comments: *SELF ANALYSIS based on TLCP results																													
Custody Seals Intact <input type="checkbox"/> Yes <input type="checkbox"/> No					Custody Seal No					Cooler Temp (°C) Obs'd: <b>4.9</b> Corr'd: <b>4.0</b>					Therm ID No: <b>2/24/23 SH</b>														
Relinquished by: <b>Audrey Plath</b>					Company: <b>WSP</b>					Date/Time: <b>2/24/23 1111</b>					Received by: <b>[Signature]</b>					Company: _____					Date/Time: <b>2/24/23 1111</b>				
Relinquished by:					Company:					Date/Time:					Received by:					Company:					Date/Time:				
Relinquished by:					Company:					Date/Time:					Received in Laboratory by:					Company:					Date/Time:				

# Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 500-229911-1

**Login Number: 229911**

**List Source: Eurofins Chicago**

**List Number: 1**

**Creator: Hernandez, Stephanie**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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	3.2,4.0
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.	True	
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 <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	







# Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAS 873 (IL 149) Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

I-57 at Main Street

City: West Franfort State: IL Zip Code: 62896

County: Franklin Township: Denning

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 37.89778 Longitude: -88.94635  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: 0558995007 BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

Approximate Start Date (mm/dd/yyyy): \_\_\_\_\_ Approximate End Date (mm/dd/yyyy): \_\_\_\_\_

Estimated Volume of debris (cu. Yd.): 811

### II. Owner/Operator Information for Source Site

Site Owner

Name: Illinois Department of Transportation

Street Address: State Transportation Building

PO Box: PO Box 100

City: Carbondale State: IL

Zip Code: 62903-0100 Phone: 618-351-5281

Contact: Christa Mahnken

Email, if available: Christa.Mahnken@Illinois.gov

Site Operator

Name: Illinois Department of Transportation

Street Address: State Transportation Building

PO Box: PO Box 100

City: Carbondale State: IL

Zip Code: 62903-0100 Phone: 618-351-5281

Contact: Christa Mahnken

Email, if available: Christa.Mahnken@Illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Uncontaminated Soil Certification**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a)]:

Locations 4062-COV-08-B01 through 4062-COV-05-B05 and 4062-COV-08-B07 through 4062-COV-05-B09 were sampled within the construction zone adjacent to ISGS #4062-COV-08 (ROW). Refer to PSI Report for ISGS #4062-COV-08 (ROW) including Table 4-3, and Figure 4-2 and 4-3.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

See attached data summary table and associated laboratory data package J229911-1.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Tom Campbell (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

***Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))***

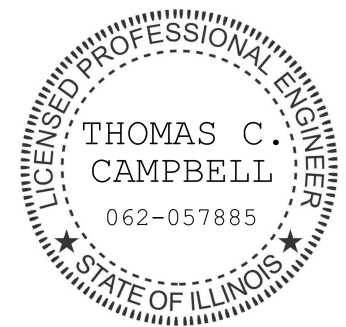
Company Name: WSP USA  
 Street Address: 115 W Washington St., Suite 1270S  
 City: Indianapolis State: IN Zip Code: 46204  
 Phone: (317) 972-1706

Tom Campbell  
 Printed Name:

*Tom Campbell*  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

Apr 21, 2023

Date:



Expires 11/30/2023



P.E or L.P.G. Seal:

**Analytical Data Summary**  
**PTB #172-27; Work Order 112 - IDOT Job # D-99-069-20**

**Key to Data Tables**

- MAC = Maximum Allowable Concentration of Chemical Constituent in Uncontaminated Soil Used as Fill Material At Regulated Fill Operations
- mg/kg = Milligrams per kilogram.
- mg/L = Milligrams per liter.
- MSA = Metropolitan Statistical Area
- TACO = Tiered Approach to Corrective Action Objectives
- TCLP = Toxicity Characteristic Leaching Procedure.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed or not applicable.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.
- PID = Photoionization detector.
- = No PID readings detected above background (within instrument margin of error).

**Criteria Qualifiers and Shading**

- # = pH is less than 6.25 or greater than 9.0 standard units.
- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- \* = Concentration exceeds the MAC for Chicago corporate limits.
- L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
-  = Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
-  = Concentration exceeds applicable comparison criteria.

PTB #172-27; Work Order 112 - IDOT Job # D-99-069-20

CONTAMINANTS OF CONCERN

SITE	ISGS #4062-COV-8 (ROW)									Comparison Criteria					
	4062-COV-08-B01	4062-COV-08-B02	4062-COV-08-B03	4062-COV-08-B04	4062-COV-08-B05	4062-COV-08-B07	4062-COV-08-B08	4062-COV-08-B09	MACs			TACO			
SAMPLE	4062-COV-08-B01 (0-2)	4062-COV-08-B02 (0-2)	4062-COV-08-B03 (0-2)	4062-COV-08-B04 (0-2)	4062-COV-08-B05 (0-2)	4062-COV-08-B07 (0-2)	4062-COV-08-B08 (0-2)	4062-COV-08-B09 (0-2)							
MATRIX	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil							
DEPTH (feet)	0-2	0-2	0-2	0-2	0-2	0-2	0-2	0-2							
pH	8.2	7.9	7.5	8.1	7.5	7.9	7.8	7.2							
PID (meter units)	--	--	--	--	--	--	--	--	Most Stringent	Within an MSA	Within Chicago	Residential	Construction Worker	SCGIER	
<b>VOCs (mg/kg)</b>															
Acetone	ND U	ND U	ND U	ND U	ND U	ND U	0.022	ND U	25	--	--	70,000	100,000	--	
<b>SVOCs (mg/kg)</b>															
2-Methylnaphthalene	0.010 J	ND U	ND U	ND U	0.063 J	0.072 J	0.012 J	0.0096 J	--	--	--	--	--	--	
Anthracene	ND U	ND U	ND U	ND U	0.010 J	0.018 J	ND U	0.012 J	12,000	--	2.6	23,000	610,000	--	
Benzo(a)anthracene	ND U	ND U	ND U	0.0059 J	0.021 J	0.042	ND U	0.055	0.9	1.8	11	1.8	170	--	
Benzo(a)pyrene	ND U	ND U	ND U	0.0098 J	0.023 J	0.049 J	0.011 J	0.18 J †	0.09	2.1	11	2.1	17	--	
Benzo(b)fluoranthene	ND U	ND U	ND U	ND U	0.024 J	ND UJ	ND U	0.22 J	0.9	2.1	13	2.1	170	--	
Benzo(g,h,i)perylene	ND U	ND U	ND U	ND U	0.016 J	ND UJ	ND U	0.39 J	--	--	4.4	--	--	--	
Benzo(k)fluoranthene	ND U	ND U	ND U	ND U	ND UJ	ND UJ	ND U	0.092 J	9	--	8.1	9	1,700	--	
Chrysene	ND U	ND U	ND U	ND U	0.022 J	0.043	ND U	0.067	88	--	11	88	17,000	--	
Dibenz(a,h)anthracene	ND U	ND U	ND U	ND U	ND UJ	ND UJ	ND U	0.054 J	0.09	0.42	1	0.42	17	--	
Dibenzofuran	ND U	ND U	ND U	ND U	ND U	0.047 J	ND U	ND U	--	--	--	--	--	--	
Fluoranthene	ND U	ND U	ND U	ND U	0.021 J	0.044	0.013 J	0.094	3,100	--	28	3,100	82,000	--	
Fluorene	ND U	ND U	ND U	ND U	ND U	ND U	ND U	ND U	560	--	1.1	3,100	82,000	--	
Indeno(1,2,3-cd)pyrene	ND U	ND U	ND U	ND U	ND UJ	ND UJ	ND U	0.24 J	0.9	1.6	5.8	1.6	170	--	
Naphthalene	ND U	ND U	ND U	ND U	0.024 J	0.034 J	0.0063 J	ND U	1.8	--	0.26	170	1.8	--	
Phenanthrene	0.011 J	0.0070 J	ND U	0.0078 J	0.077	0.14	0.011 J	0.058	--	--	15	--	--	--	
Pyrene	ND U	ND U	ND U	ND U	0.051	0.085	0.012 J	0.12	2,300	--	18	2,300	61,000	--	
<b>Inorganics (mg/kg)</b>															
Antimony	0.26 J	0.29 J	ND U	0.29 J	0.33 J	0.34 J	0.26 J	0.42 J	5	--	--	31	82	--	
Arsenic	6.6	5.0	6.8	6.1	6.4	11	5.2	8.4	11.3	13	--	13	61	--	
Barium	110	100	40	76	140	120	110	160	1,500	--	--	5,500	14,000	--	
Beryllium	0.74	0.66	0.47	0.77	0.64	0.77	0.69	0.82	22	--	--	160	410	--	
Boron	1.1 J	1.6 J	1.1 J	1.0 J	2.6 J	4.3	0.60 J	1.4 J	40	--	--	16,000	41,000	--	
Cadmium	ND U	ND U	ND U	ND U	ND U	0.33	ND U	0.24	5.2	--	--	78	200	--	
Calcium	16,000	2,900	1,300	2,000	3,800	11,000	2,900	3,400	--	--	--	--	--	--	
Chromium	12	13	12	13	13	13	13	14	21	--	--	230	690	--	
Cobalt	8.4	8.3	2.9	9.4	10	7.4	8.9	8.9	20	--	--	4,700	12,000	--	
Copper	12	11	5.3	12	15	23	11	15	2,900	--	--	2,900	8,200	--	
Iron	16,000 †m	14,000	14,000	18,000 †m	14,000	16,000 †m	16,000 †m	20,000 †m	15,000	15,900	--	--	--	--	
Lead	22	14	10	13	27	41	13	19	107	--	--	400	700	--	
Magnesium	2,800	2,100	1,300	1,800	1,300	1,800	1,700	2,000	325,000	--	--	--	730,000	--	
Manganese	350	350	120	280	520	350	410	370	630	636	--	1,600	4,100	--	
Mercury	0.022	0.028	0.013 J	0.036	0.026	0.036	0.026	0.026	0.89	--	--	10	0.1	--	
Nickel	17	20	7.7	15	12	16	17	19	100	--	--	1,600	4,100	--	
Potassium	570	570	590	680	570	680	460	700	--	--	--	--	--	--	
Selenium	0.48 J	ND U	0.67	ND U	0.65	0.47 J	ND U	0.44 J	1.3	--	--	390	1,000	--	
Sodium	180	180	65	960	210	250	770	990	--	--	--	--	--	--	
Vanadium	20	21	26	22	23	22	18	22	550	--	--	550	1,400	--	
Zinc	49	49	22	46	60	89	42	85	5,100	--	--	23,000	61,000	--	
<b>TCLP Metals (mg/L)</b>															
Barium	0.84	0.61	0.12 J	0.41 J	0.64	0.99	0.57	0.81	--	--	--	--	--	2	
Boron	ND UJ	0.073 J	ND UJ	ND UJ	ND UJ	ND UJ	ND UJ	ND UJ	--	--	--	--	--	2	
Iron	ND U	0.48	ND U	1.1	0.24 J	ND U	0.60	ND U	--	--	--	--	--	5	
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	--	--	--	--	--	0.15	
Zinc	0.11 J	ND U	0.023 J	0.021 J	0.040 J	ND U	0.040 J	0.029 J	--	--	--	--	--	5	
<b>SPLP Metals (Not Analyzed)</b>															

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Dean Tiebot  
WSP USA Inc.  
30 North LaSalle Street  
Chicago, Illinois 60602  
Generated 3/9/2023 3:55:47 PM

**JOB DESCRIPTION**

IDOT-172-027-WO112 West Frankfort

**JOB NUMBER**

500-229911-1

# Eurofins Chicago

## Job Notes

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## Authorization



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# Case Narrative

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Job ID: 500-229911-1

### Laboratory: Eurofins Chicago

#### Narrative

#### Job Narrative 500-229911-1

#### Receipt

The samples were received on 2/24/2023 11:11 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 3.2° C and 4.0° C.

#### GC/MS VOA

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

#### GC/MS Semi VOA

Method 8270D: The continuing calibration verification (CCV) analyzed in 500-700513 was outside the method criteria for the following analyte(s): 3,3'-Dichlorobenzidine and Carbazole. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: The continuing calibration verification (CCV) analyzed in 500-700668 was outside the method criteria for the following analyte(s): 2,4-Dinitrotoluene and Carbazole. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: The continuing calibration verification (CCV) analyzed in batch 500-700703 was outside the method criteria for the following analyte(s): 2,4-Dinitrophenol, Hexachlorocyclopentadiene and Pentachlorophenol. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: The continuing calibration verification (CCV) analyzed in 500-700703 was outside the method criteria for the following analyte(s): 2-Fluorophenol, Benzo[g,h,i]perylene, Benzo[k]fluoranthene, Bis(2-chloroethyl)ether, Dibenz(a,h)anthracene, Di-n-octyl phthalate and Indeno[1,2,3-cd]pyrene. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: Internal standard Perylene-d12 failed due to nature of the sample matrix. The samples were rerun with passing internal standard recoveries and similar analyte results. The original analysis has been reported to meet client reporting limits. The following samples are affected: 4062-C0V-08-B09 (0-2) (500-229911-2), 4062-C0V-14-B01 (0-1) (500-229911-3), 4062-C0V-08-B06 (0-2) (500-229911-6), 4062-C0V-08-B07 (0-2) (500-229911-7) and 4062-C0V-08-B05 (0-2) (500-229911-8)

Method 8270D: The matrix spike and matrix spike duplicate (MS/MSD) recoveries for preparation batch 500-700448 and analytical batch 500-700703 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8270D: Internal standard responses for Perylene-d12 was outside of acceptance limits for the following samples: 4062-C0V-14-B02 (0-1) (500-229911-4), 4062-C0V-14-B02 (0-1)D (500-229911-5) and 4062-C0V-05-B02 (0-1) (500-229911-14). The samples were run a second time with concurring results. Results with the highest ISTD recovery have been reported.

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

#### Metals

Method 3050B: Samples <500-229911-06 and -10> were homogenized

Method 6010B: The initial calibration verification (ICV) result for batch 700931 recovered above the 90-110% upper control limit for B- (111%). Sample results were all less than the reporting limit and have been reported as qualified data.

Method 6020A: The laboratory control sample (LCS) for preparation batch 500-700755 and analytical batch 500-701031 recovered above control limits for Thallium. The analyte was biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

# Case Narrative

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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## Job ID: 500-229911-1 (Continued)

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### Laboratory: Eurofins Chicago (Continued)

#### General Chemistry

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.

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# Detection Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B08 (0-2)**

**Lab Sample ID: 500-229911-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	0.022		0.021	0.0093	mg/Kg	1	☼	8260B	Total/NA
Naphthalene	0.0063	J	0.037	0.0058	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.012	J	0.075	0.0069	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.011	J	0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.013	J	0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.012	J	0.037	0.0074	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.011	J	0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.26	J	1.2	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	5.2		0.58	0.20	mg/Kg	1	☼	6010B	Total/NA
Barium	110		0.58	0.066	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.69		0.23	0.054	mg/Kg	1	☼	6010B	Total/NA
Boron	0.60	J	2.9	0.27	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.13	B	0.12	0.021	mg/Kg	1	☼	6010B	Total/NA
Calcium	2900		12	2.0	mg/Kg	1	☼	6010B	Total/NA
Chromium	13		0.58	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	8.9		0.29	0.075	mg/Kg	1	☼	6010B	Total/NA
Copper	11	B	0.58	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	16000		12	6.0	mg/Kg	1	☼	6010B	Total/NA
Lead	13		0.29	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	1700		5.8	2.9	mg/Kg	1	☼	6010B	Total/NA
Manganese	410		0.58	0.083	mg/Kg	1	☼	6010B	Total/NA
Nickel	17		0.58	0.17	mg/Kg	1	☼	6010B	Total/NA
Potassium	460		29	10	mg/Kg	1	☼	6010B	Total/NA
Silver	0.33	B	0.29	0.074	mg/Kg	1	☼	6010B	Total/NA
Sodium	770		58	8.5	mg/Kg	1	☼	6010B	Total/NA
Vanadium	18		0.29	0.068	mg/Kg	1	☼	6010B	Total/NA
Zinc	42		1.2	0.51	mg/Kg	1	☼	6010B	Total/NA
Barium	0.57		0.50	0.050	mg/L	1		6010B	TCLP
Iron	0.60		0.40	0.20	mg/L	1		6010B	TCLP
Zinc	0.040	J	0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.026		0.018	0.0097	mg/Kg	1	☼	7471B	Total/NA
pH	7.8		0.2	0.2	SU	1		9045D	Total/NA

**Client Sample ID: 4062-C0V-08-B09 (0-2)**

**Lab Sample ID: 500-229911-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Methylnaphthalene	0.0096	J	0.080	0.0073	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.058		0.039	0.0055	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.012	J	0.039	0.0066	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.094		0.039	0.0073	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.12		0.039	0.0078	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.055		0.039	0.0053	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.067		0.039	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.22	*3	0.039	0.0085	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.092	*3	0.039	0.012	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.18	*3	0.039	0.0076	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.24	*3	0.039	0.010	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.054	*3	0.039	0.0076	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.39	*3	0.039	0.013	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.42	J	1.2	0.23	mg/Kg	1	☼	6010B	Total/NA
Arsenic	8.4		0.60	0.20	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

# Detection Summary

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B09 (0-2) (Continued)**

**Lab Sample ID: 500-229911-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	160		0.60	0.068	mg/Kg	1	✳	6010B	Total/NA
Beryllium	0.82		0.24	0.056	mg/Kg	1	✳	6010B	Total/NA
Boron	1.4	J	3.0	0.28	mg/Kg	1	✳	6010B	Total/NA
Cadmium	0.24	B	0.12	0.022	mg/Kg	1	✳	6010B	Total/NA
Calcium	3400		12	2.0	mg/Kg	1	✳	6010B	Total/NA
Chromium	14		0.60	0.30	mg/Kg	1	✳	6010B	Total/NA
Cobalt	8.9		0.30	0.078	mg/Kg	1	✳	6010B	Total/NA
Copper	15	B	0.60	0.17	mg/Kg	1	✳	6010B	Total/NA
Iron	20000		12	6.2	mg/Kg	1	✳	6010B	Total/NA
Lead	19		0.30	0.14	mg/Kg	1	✳	6010B	Total/NA
Magnesium	2000		6.0	3.0	mg/Kg	1	✳	6010B	Total/NA
Manganese	370		0.60	0.087	mg/Kg	1	✳	6010B	Total/NA
Nickel	19		0.60	0.17	mg/Kg	1	✳	6010B	Total/NA
Potassium	700		30	11	mg/Kg	1	✳	6010B	Total/NA
Selenium	0.44	J	0.60	0.35	mg/Kg	1	✳	6010B	Total/NA
Silver	0.40	B	0.30	0.077	mg/Kg	1	✳	6010B	Total/NA
Sodium	990		60	8.9	mg/Kg	1	✳	6010B	Total/NA
Vanadium	22		0.30	0.071	mg/Kg	1	✳	6010B	Total/NA
Zinc	85		1.2	0.53	mg/Kg	1	✳	6010B	Total/NA
Barium	0.81		0.50	0.050	mg/L	1		6010B	TCLP
Zinc	0.029	J	0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.026		0.019	0.010	mg/Kg	1	✳	7471B	Total/NA
pH	7.2		0.2	0.2	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

# Detection Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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**Client Sample ID: 4062-C0V-08-B07 (0-2)**

**Lab Sample ID: 500-229911-7**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.034	J	0.039	0.0061	mg/Kg	1	✳	8270D	Total/NA
2-Methylnaphthalene	0.072	J	0.080	0.0073	mg/Kg	1	✳	8270D	Total/NA
Dibenzofuran	0.047	J	0.20	0.046	mg/Kg	1	✳	8270D	Total/NA
Phenanthrene	0.14		0.039	0.0055	mg/Kg	1	✳	8270D	Total/NA
Anthracene	0.018	J	0.039	0.0066	mg/Kg	1	✳	8270D	Total/NA
Fluoranthene	0.044		0.039	0.0073	mg/Kg	1	✳	8270D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

# Detection Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B07 (0-2) (Continued)**

**Lab Sample ID: 500-229911-7**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Pyrene	0.085		0.039	0.0079	mg/Kg	1	☒	8270D	Total/NA
Benzo[a]anthracene	0.042		0.039	0.0053	mg/Kg	1	☒	8270D	Total/NA
Chrysene	0.043		0.039	0.011	mg/Kg	1	☒	8270D	Total/NA
Benzo[a]pyrene	0.049	*3	0.039	0.0077	mg/Kg	1	☒	8270D	Total/NA
Antimony	0.34	J	1.2	0.23	mg/Kg	1	☒	6010B	Total/NA
Arsenic	11		0.60	0.21	mg/Kg	1	☒	6010B	Total/NA
Barium	120		0.60	0.069	mg/Kg	1	☒	6010B	Total/NA
Beryllium	0.77		0.24	0.056	mg/Kg	1	☒	6010B	Total/NA
Boron	4.3		3.0	0.28	mg/Kg	1	☒	6010B	Total/NA
Cadmium	0.33	B	0.12	0.022	mg/Kg	1	☒	6010B	Total/NA
Calcium	11000		12	2.0	mg/Kg	1	☒	6010B	Total/NA
Chromium	13		0.60	0.30	mg/Kg	1	☒	6010B	Total/NA
Cobalt	7.4		0.30	0.079	mg/Kg	1	☒	6010B	Total/NA
Copper	23	B	0.60	0.17	mg/Kg	1	☒	6010B	Total/NA
Iron	16000		12	6.3	mg/Kg	1	☒	6010B	Total/NA
Lead	41		0.30	0.14	mg/Kg	1	☒	6010B	Total/NA
Magnesium	1800		6.0	3.0	mg/Kg	1	☒	6010B	Total/NA
Manganese	350		0.60	0.087	mg/Kg	1	☒	6010B	Total/NA
Nickel	16		0.60	0.18	mg/Kg	1	☒	6010B	Total/NA
Potassium	900		30	11	mg/Kg	1	☒	6010B	Total/NA
Selenium	0.47	J	0.60	0.35	mg/Kg	1	☒	6010B	Total/NA
Silver	0.37	B	0.30	0.078	mg/Kg	1	☒	6010B	Total/NA
Sodium	250		60	8.9	mg/Kg	1	☒	6010B	Total/NA
Vanadium	22		0.30	0.071	mg/Kg	1	☒	6010B	Total/NA
Zinc	89		1.2	0.53	mg/Kg	1	☒	6010B	Total/NA
Barium	0.99		0.50	0.050	mg/L	1		6010B	TCLP
Mercury	0.036		0.019	0.0098	mg/Kg	1	☒	7471B	Total/NA
pH	7.9		0.2	0.2	SU	1		9045D	Total/NA

**Client Sample ID: 4062-C0V-08-B05 (0-2)**

**Lab Sample ID: 500-229911-8**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.024	J	0.040	0.0062	mg/Kg	1	☒	8270D	Total/NA
2-Methylnaphthalene	0.063	J	0.081	0.0074	mg/Kg	1	☒	8270D	Total/NA
Phenanthrene	0.077		0.040	0.0056	mg/Kg	1	☒	8270D	Total/NA
Anthracene	0.010	J	0.040	0.0067	mg/Kg	1	☒	8270D	Total/NA
Fluoranthene	0.021	J	0.040	0.0075	mg/Kg	1	☒	8270D	Total/NA
Pyrene	0.051		0.040	0.0080	mg/Kg	1	☒	8270D	Total/NA
Benzo[a]anthracene	0.021	J	0.040	0.0054	mg/Kg	1	☒	8270D	Total/NA
Chrysene	0.022	J	0.040	0.011	mg/Kg	1	☒	8270D	Total/NA
Benzo[b]fluoranthene	0.024	J *3	0.040	0.0087	mg/Kg	1	☒	8270D	Total/NA
Benzo[a]pyrene	0.023	J *3	0.040	0.0078	mg/Kg	1	☒	8270D	Total/NA
Benzo[g,h,i]perylene	0.016	J *3	0.040	0.013	mg/Kg	1	☒	8270D	Total/NA
Antimony	0.33	J	1.2	0.23	mg/Kg	1	☒	6010B	Total/NA
Arsenic	6.4		0.59	0.20	mg/Kg	1	☒	6010B	Total/NA
Barium	140		0.59	0.068	mg/Kg	1	☒	6010B	Total/NA
Beryllium	0.64		0.24	0.055	mg/Kg	1	☒	6010B	Total/NA
Boron	2.6	J	3.0	0.28	mg/Kg	1	☒	6010B	Total/NA
Cadmium	0.22	B	0.12	0.021	mg/Kg	1	☒	6010B	Total/NA
Calcium	3800		12	2.0	mg/Kg	1	☒	6010B	Total/NA
Chromium	13		0.59	0.29	mg/Kg	1	☒	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

# Detection Summary

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Client Sample ID: 4062-C0V-08-B05 (0-2) (Continued)

## Lab Sample ID: 500-229911-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	10		0.30	0.078	mg/Kg	1	✳	6010B	Total/NA
Copper	15	B	0.59	0.17	mg/Kg	1	✳	6010B	Total/NA
Iron	14000		12	6.2	mg/Kg	1	✳	6010B	Total/NA
Lead	27		0.30	0.14	mg/Kg	1	✳	6010B	Total/NA
Magnesium	1300		5.9	2.9	mg/Kg	1	✳	6010B	Total/NA
Manganese	520		0.59	0.086	mg/Kg	1	✳	6010B	Total/NA
Nickel	12		0.59	0.17	mg/Kg	1	✳	6010B	Total/NA
Potassium	680		30	10	mg/Kg	1	✳	6010B	Total/NA
Selenium	0.65		0.59	0.35	mg/Kg	1	✳	6010B	Total/NA
Silver	0.31	B	0.30	0.076	mg/Kg	1	✳	6010B	Total/NA
Sodium	210		59	8.8	mg/Kg	1	✳	6010B	Total/NA
Vanadium	23		0.30	0.070	mg/Kg	1	✳	6010B	Total/NA
Zinc	60		1.2	0.52	mg/Kg	1	✳	6010B	Total/NA
Barium	0.64		0.50	0.050	mg/L	1		6010B	TCLP
Iron	0.24	J	0.40	0.20	mg/L	1		6010B	TCLP
Zinc	0.040	J	0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.026		0.019	0.0099	mg/Kg	1	✳	7471B	Total/NA
pH	7.5		0.2	0.2	SU	1		9045D	Total/NA

## Client Sample ID: 4062-C0V-08-B04 (0-2)

## Lab Sample ID: 500-229911-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.0078	J	0.039	0.0055	mg/Kg	1	✳	8270D	Total/NA
Benzo[a]anthracene	0.0059	J	0.039	0.0053	mg/Kg	1	✳	8270D	Total/NA
Benzo[a]pyrene	0.0098	J	0.039	0.0077	mg/Kg	1	✳	8270D	Total/NA
Antimony	0.29	J	1.2	0.23	mg/Kg	1	✳	6010B	Total/NA
Arsenic	6.1		0.59	0.20	mg/Kg	1	✳	6010B	Total/NA
Barium	76		0.59	0.067	mg/Kg	1	✳	6010B	Total/NA
Beryllium	0.77		0.23	0.055	mg/Kg	1	✳	6010B	Total/NA
Boron	1.0	J	2.9	0.27	mg/Kg	1	✳	6010B	Total/NA
Cadmium	0.086	J B	0.12	0.021	mg/Kg	1	✳	6010B	Total/NA
Calcium	2000		12	2.0	mg/Kg	1	✳	6010B	Total/NA
Chromium	13		0.59	0.29	mg/Kg	1	✳	6010B	Total/NA
Cobalt	9.4		0.29	0.077	mg/Kg	1	✳	6010B	Total/NA
Copper	12	B	0.59	0.16	mg/Kg	1	✳	6010B	Total/NA
Iron	18000		12	6.1	mg/Kg	1	✳	6010B	Total/NA
Lead	13		0.29	0.14	mg/Kg	1	✳	6010B	Total/NA
Magnesium	1800		5.9	2.9	mg/Kg	1	✳	6010B	Total/NA
Manganese	280		0.59	0.085	mg/Kg	1	✳	6010B	Total/NA
Nickel	15		0.59	0.17	mg/Kg	1	✳	6010B	Total/NA
Potassium	670		29	10	mg/Kg	1	✳	6010B	Total/NA
Silver	0.45	B	0.29	0.076	mg/Kg	1	✳	6010B	Total/NA
Sodium	960		59	8.7	mg/Kg	1	✳	6010B	Total/NA
Vanadium	22		0.29	0.069	mg/Kg	1	✳	6010B	Total/NA
Zinc	46		1.2	0.51	mg/Kg	1	✳	6010B	Total/NA
Barium	0.41	J	0.50	0.050	mg/L	1		6010B	TCLP
Iron	1.1		0.40	0.20	mg/L	1		6010B	TCLP
Zinc	0.021	J	0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.036		0.019	0.0099	mg/Kg	1	✳	7471B	Total/NA
pH	8.1		0.2	0.2	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

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# Detection Summary

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B03 (0-2)**

**Lab Sample ID: 500-229911-10**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	6.8		0.59	0.20	mg/Kg	1	✳	6010B	Total/NA
Barium	40		0.59	0.067	mg/Kg	1	✳	6010B	Total/NA
Beryllium	0.47		0.24	0.055	mg/Kg	1	✳	6010B	Total/NA
Boron	1.1	J	2.9	0.27	mg/Kg	1	✳	6010B	Total/NA
Cadmium	0.066	J B	0.12	0.021	mg/Kg	1	✳	6010B	Total/NA
Calcium	1300		12	2.0	mg/Kg	1	✳	6010B	Total/NA
Chromium	12		0.59	0.29	mg/Kg	1	✳	6010B	Total/NA
Cobalt	2.9		0.29	0.077	mg/Kg	1	✳	6010B	Total/NA
Copper	5.3	B	0.59	0.16	mg/Kg	1	✳	6010B	Total/NA
Iron	14000		12	6.1	mg/Kg	1	✳	6010B	Total/NA
Lead	10		0.29	0.14	mg/Kg	1	✳	6010B	Total/NA
Magnesium	1300		5.9	2.9	mg/Kg	1	✳	6010B	Total/NA
Manganese	120		0.59	0.085	mg/Kg	1	✳	6010B	Total/NA
Nickel	7.7		0.59	0.17	mg/Kg	1	✳	6010B	Total/NA
Potassium	590		29	10	mg/Kg	1	✳	6010B	Total/NA
Selenium	0.67		0.59	0.35	mg/Kg	1	✳	6010B	Total/NA
Silver	0.26	J B	0.29	0.076	mg/Kg	1	✳	6010B	Total/NA
Sodium	65		59	8.7	mg/Kg	1	✳	6010B	Total/NA
Vanadium	26		0.29	0.069	mg/Kg	1	✳	6010B	Total/NA
Zinc	22		1.2	0.52	mg/Kg	1	✳	6010B	Total/NA
Barium	0.12	J	0.50	0.050	mg/L	1		6010B	TCLP
Zinc	0.023	J	0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.013	J	0.019	0.010	mg/Kg	1	✳	7471B	Total/NA
pH	7.5		0.2	0.2	SU	1		9045D	Total/NA

**Client Sample ID: 4062-C0V-08-B02 (0-2)**

**Lab Sample ID: 500-229911-11**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	0.0070	J	0.040	0.0056	mg/Kg	1	✳	8270D	Total/NA
Antimony	0.29	J	1.2	0.23	mg/Kg	1	✳	6010B	Total/NA
Arsenic	5.0		0.59	0.20	mg/Kg	1	✳	6010B	Total/NA
Barium	100		0.59	0.067	mg/Kg	1	✳	6010B	Total/NA
Beryllium	0.66		0.24	0.055	mg/Kg	1	✳	6010B	Total/NA
Boron	1.6	J	3.0	0.28	mg/Kg	1	✳	6010B	Total/NA
Cadmium	0.14	B	0.12	0.021	mg/Kg	1	✳	6010B	Total/NA
Calcium	2900		12	2.0	mg/Kg	1	✳	6010B	Total/NA
Chromium	13		0.59	0.29	mg/Kg	1	✳	6010B	Total/NA
Cobalt	8.3		0.30	0.077	mg/Kg	1	✳	6010B	Total/NA
Copper	11	B	0.59	0.17	mg/Kg	1	✳	6010B	Total/NA
Iron	14000		12	6.1	mg/Kg	1	✳	6010B	Total/NA
Lead	14		0.30	0.14	mg/Kg	1	✳	6010B	Total/NA
Magnesium	2100		5.9	2.9	mg/Kg	1	✳	6010B	Total/NA
Manganese	350		0.59	0.086	mg/Kg	1	✳	6010B	Total/NA
Nickel	20		0.59	0.17	mg/Kg	1	✳	6010B	Total/NA
Potassium	570		30	10	mg/Kg	1	✳	6010B	Total/NA
Silver	0.43	B	0.30	0.076	mg/Kg	1	✳	6010B	Total/NA
Sodium	180		59	8.7	mg/Kg	1	✳	6010B	Total/NA
Vanadium	21		0.30	0.070	mg/Kg	1	✳	6010B	Total/NA
Zinc	49		1.2	0.52	mg/Kg	1	✳	6010B	Total/NA
Barium	0.61		0.50	0.050	mg/L	1		6010B	TCLP
Boron	0.073	J ^1+	0.50	0.050	mg/L	1		6010B	TCLP

This Detection Summary does not include radiochemical test results.

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# Detection Summary

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Client Sample ID: 4062-C0V-08-B02 (0-2) (Continued)

## Lab Sample ID: 500-229911-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	0.48		0.40	0.20	mg/L	1		6010B	TCLP
Mercury	0.028		0.019	0.010	mg/Kg	1	☼	7471B	Total/NA
pH	7.9		0.2	0.2	SU	1		9045D	Total/NA

## Client Sample ID: 4062-C0V-08-B01 (0-2)

## Lab Sample ID: 500-229911-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Methylnaphthalene	0.010	J	0.074	0.0067	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.011	J	0.036	0.0051	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.26	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	6.6		0.56	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	110		0.56	0.064	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.74		0.23	0.053	mg/Kg	1	☼	6010B	Total/NA
Boron	1.1	J	2.8	0.26	mg/Kg	1	☼	6010B	Total/NA
Cadmium	0.17	B	0.11	0.020	mg/Kg	1	☼	6010B	Total/NA
Calcium	16000		11	1.9	mg/Kg	1	☼	6010B	Total/NA
Chromium	12		0.56	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	8.4		0.28	0.074	mg/Kg	1	☼	6010B	Total/NA
Copper	12	B	0.56	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	16000		11	5.9	mg/Kg	1	☼	6010B	Total/NA
Lead	22		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	2800		5.6	2.8	mg/Kg	1	☼	6010B	Total/NA
Manganese	350		0.56	0.082	mg/Kg	1	☼	6010B	Total/NA
Nickel	17		0.56	0.16	mg/Kg	1	☼	6010B	Total/NA
Potassium	570		28	10	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.48	J	0.56	0.33	mg/Kg	1	☼	6010B	Total/NA
Silver	0.34	B	0.28	0.073	mg/Kg	1	☼	6010B	Total/NA
Sodium	180		56	8.3	mg/Kg	1	☼	6010B	Total/NA
Vanadium	20		0.28	0.066	mg/Kg	1	☼	6010B	Total/NA
Zinc	49		1.1	0.49	mg/Kg	1	☼	6010B	Total/NA
Barium	0.84		0.50	0.050	mg/L	1		6010B	TCLP
Zinc	0.11	J	0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.022		0.017	0.0092	mg/Kg	1	☼	7471B	Total/NA
pH	8.2		0.2	0.2	SU	1		9045D	Total/NA

This Detection Summary does not include radiochemical test results.

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# Method Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET CHI
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET CHI
6010B	Metals (ICP)	SW846	EET CHI
6020A	Metals (ICP/MS)	SW846	EET CHI
7470A	TCLP Mercury	SW846	EET CHI
7471B	Mercury (CVAA)	SW846	EET CHI
9045D	pH	SW846	EET CHI
Moisture	Percent Moisture	EPA	EET CHI
1311	TCLP Extraction	SW846	EET CHI
3010A	Preparation, Total Metals	SW846	EET CHI
3050B	Preparation, Metals	SW846	EET CHI
3541	Automated Soxhlet Extraction	SW846	EET CHI
5035	Closed System Purge and Trap	SW846	EET CHI
7470A	Preparation, Mercury	SW846	EET CHI
7471B	Preparation, Mercury	SW846	EET 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.

#### Laboratory References:

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

# Sample Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-229911-1	4062-C0V-08-B08 (0-2)	Solid	02/23/23 13:35	02/24/23 11:11
500-229911-2	4062-C0V-08-B09 (0-2)	Solid	02/23/23 13:50	02/24/23 11:11
500-229911-7	4062-C0V-08-B07 (0-2)	Solid	02/23/23 14:30	02/24/23 11:11
500-229911-8	4062-C0V-08-B05 (0-2)	Solid	02/23/23 14:35	02/24/23 11:11
500-229911-9	4062-C0V-08-B04 (0-2)	Solid	02/23/23 16:20	02/24/23 11:11
500-229911-10	4062-C0V-08-B03 (0-2)	Solid	02/23/23 16:10	02/24/23 11:11
500-229911-11	4062-C0V-08-B02 (0-2)	Solid	02/23/23 15:10	02/24/23 11:11
500-229911-12	4062-C0V-08-B01 (0-2)	Solid	02/23/23 15:20	02/24/23 11:11

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B08 (0-2)**

**Lab Sample ID: 500-229911-1**

Date Collected: 02/23/23 13:35

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 84.3

**Method: SW846 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	0.022		0.021	0.0093	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Benzene	<0.0021		0.0021	0.00054	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Bromodichloromethane	<0.0021		0.0021	0.00043	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Bromoform	<0.0021		0.0021	0.00062	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Bromomethane	<0.0053		0.0053	0.0020	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
2-Butanone (MEK)	<0.0053		0.0053	0.0024	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Carbon disulfide	<0.0053		0.0053	0.0011	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Carbon tetrachloride	<0.0021		0.0021	0.00062	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Chlorobenzene	<0.0021		0.0021	0.00079	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Chloroethane	<0.0053		0.0053	0.0016	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Chloroform	<0.0021		0.0021	0.00074	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Chloromethane	<0.0053		0.0053	0.0021	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
cis-1,2-Dichloroethene	<0.0021		0.0021	0.00060	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
cis-1,3-Dichloropropene	<0.0021		0.0021	0.00064	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Dibromochloromethane	<0.0021		0.0021	0.00070	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
1,1-Dichloroethane	<0.0021		0.0021	0.00073	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
1,2-Dichloroethane	<0.0053		0.0053	0.0017	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
1,1-Dichloroethene	<0.0021		0.0021	0.00074	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
1,2-Dichloropropane	<0.0021		0.0021	0.00055	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
1,3-Dichloropropane, Total	<0.0021		0.0021	0.00075	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Ethylbenzene	<0.0021		0.0021	0.0010	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
2-Hexanone	<0.0053		0.0053	0.0017	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Methylene Chloride	<0.0053		0.0053	0.0021	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
4-Methyl-2-pentanone (MIBK)	<0.0053		0.0053	0.0016	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Methyl tert-butyl ether	<0.0021		0.0021	0.00063	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Styrene	<0.0021		0.0021	0.00065	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
1,1,2,2-Tetrachloroethane	<0.0021		0.0021	0.00068	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Tetrachloroethene	<0.0021		0.0021	0.00073	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Toluene	<0.0021		0.0021	0.00054	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
trans-1,2-Dichloroethene	<0.0021		0.0021	0.00095	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
trans-1,3-Dichloropropene	<0.0021		0.0021	0.00075	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
1,1,1-Trichloroethane	<0.0021		0.0021	0.00072	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
1,1,2-Trichloroethane	<0.0021		0.0021	0.00092	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Trichloroethene	<0.0021		0.0021	0.00072	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Vinyl acetate	<0.0053		0.0053	0.0019	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Vinyl chloride	<0.0021		0.0021	0.00095	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1
Xylenes, Total	<0.0043		0.0043	0.00068	mg/Kg	☼	02/24/23 17:05	02/28/23 12:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		75 - 131	02/24/23 17:05	02/28/23 12:27	1
Dibromofluoromethane	91		75 - 126	02/24/23 17:05	02/28/23 12:27	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 134	02/24/23 17:05	02/28/23 12:27	1
Toluene-d8 (Surr)	91		75 - 124	02/24/23 17:05	02/28/23 12:27	1

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.19		0.19	0.083	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B08 (0-2)**

**Lab Sample ID: 500-229911-1**

Date Collected: 02/23/23 13:35

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 84.3

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
N-Nitrosodi-n-propylamine	<0.075		0.075	0.046	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
<b>Naphthalene</b>	<b>0.0063</b>	<b>J</b>	0.037	0.0058	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
4-Chloroaniline	<0.75		0.75	0.18	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
Hexachlorocyclopentadiene	<0.75		0.75	0.21	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
<b>2-Methylnaphthalene</b>	<b>0.012</b>	<b>J</b>	0.075	0.0069	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
2,6-Dinitrotoluene	<0.19		0.19	0.073	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
2,4-Dinitrophenol	<0.75		0.75	0.66	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
Acenaphthene	<0.037		0.037	0.0067	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
Dibenzofuran	<0.19		0.19	0.044	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
4-Nitrophenol	<0.75		0.75	0.36	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
Fluorene	<0.037		0.037	0.0053	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
Hexachlorobenzene	<0.075		0.075	0.0087	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
Pentachlorophenol	<0.75		0.75	0.60	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
4,6-Dinitro-2-methylphenol	<0.75		0.75	0.30	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
<b>Phenanthrene</b>	<b>0.011</b>	<b>J</b>	0.037	0.0052	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
Anthracene	<0.037		0.037	0.0062	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
Carbazole	<0.19		0.19	0.093	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
<b>Fluoranthene</b>	<b>0.013</b>	<b>J</b>	0.037	0.0069	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
<b>Pyrene</b>	<b>0.012</b>	<b>J</b>	0.037	0.0074	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1
Benzo[a]anthracene	<0.037		0.037	0.0050	mg/Kg	☼	02/28/23 08:18	02/28/23 17:44	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B08 (0-2)**

**Lab Sample ID: 500-229911-1**

Date Collected: 02/23/23 13:35

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 84.3

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	<0.037		0.037	0.010	mg/Kg	✳	02/28/23 08:18	02/28/23 17:44	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	✳	02/28/23 08:18	02/28/23 17:44	1
Bis(2-ethylhexyl) phthalate	<0.19		0.19	0.068	mg/Kg	✳	02/28/23 08:18	02/28/23 17:44	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	✳	02/28/23 08:18	02/28/23 17:44	1
Benzo[b]fluoranthene	<0.037		0.037	0.0081	mg/Kg	✳	02/28/23 08:18	02/28/23 17:44	1
Benzo[k]fluoranthene	<0.037		0.037	0.011	mg/Kg	✳	02/28/23 08:18	02/28/23 17:44	1
<b>Benzo[a]pyrene</b>	<b>0.011</b>	<b>J</b>	0.037	0.0072	mg/Kg	✳	02/28/23 08:18	02/28/23 17:44	1
Indeno[1,2,3-cd]pyrene	<0.037		0.037	0.0097	mg/Kg	✳	02/28/23 08:18	02/28/23 17:44	1
Dibenz(a,h)anthracene	<0.037		0.037	0.0072	mg/Kg	✳	02/28/23 08:18	02/28/23 17:44	1
Benzo[g,h,i]perylene	<0.037		0.037	0.012	mg/Kg	✳	02/28/23 08:18	02/28/23 17:44	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	✳	02/28/23 08:18	02/28/23 17:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	122		31 - 166	02/28/23 08:18	02/28/23 17:44	1
Phenol-d5	112		30 - 153	02/28/23 08:18	02/28/23 17:44	1
Nitrobenzene-d5 (Surr)	99		37 - 147	02/28/23 08:18	02/28/23 17:44	1
2-Fluorobiphenyl (Surr)	92		43 - 145	02/28/23 08:18	02/28/23 17:44	1
2,4,6-Tribromophenol	97		31 - 143	02/28/23 08:18	02/28/23 17:44	1
Terphenyl-d14 (Surr)	101		42 - 157	02/28/23 08:18	02/28/23 17:44	1

**Method: SW846 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.26</b>	<b>J</b>	1.2	0.22	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
<b>Arsenic</b>	<b>5.2</b>		0.58	0.20	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
<b>Barium</b>	<b>110</b>		0.58	0.066	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
<b>Beryllium</b>	<b>0.69</b>		0.23	0.054	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
<b>Boron</b>	<b>0.60</b>	<b>J</b>	2.9	0.27	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
<b>Cadmium</b>	<b>0.13</b>	<b>B</b>	0.12	0.021	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
<b>Calcium</b>	<b>2900</b>		12	2.0	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
<b>Chromium</b>	<b>13</b>		0.58	0.28	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
<b>Cobalt</b>	<b>8.9</b>		0.29	0.075	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
<b>Copper</b>	<b>11</b>	<b>B</b>	0.58	0.16	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
<b>Iron</b>	<b>16000</b>		12	6.0	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
<b>Lead</b>	<b>13</b>		0.29	0.13	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
<b>Magnesium</b>	<b>1700</b>		5.8	2.9	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
<b>Manganese</b>	<b>410</b>		0.58	0.083	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
<b>Nickel</b>	<b>17</b>		0.58	0.17	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
<b>Potassium</b>	<b>460</b>		29	10	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
Selenium	<0.58		0.58	0.34	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
<b>Silver</b>	<b>0.33</b>	<b>B</b>	0.29	0.074	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
<b>Sodium</b>	<b>770</b>		58	8.5	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
Thallium	<0.58		0.58	0.29	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
<b>Vanadium</b>	<b>18</b>		0.29	0.068	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1
<b>Zinc</b>	<b>42</b>		1.2	0.51	mg/Kg	✳	02/24/23 15:35	02/27/23 15:10	1

**Method: SW846 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.57</b>		0.50	0.050	mg/L		03/01/23 17:00	03/02/23 12:34	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		03/01/23 17:00	03/02/23 12:34	1
Boron	<0.50	^1+	0.50	0.050	mg/L		03/01/23 17:00	03/02/23 12:34	1

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# Client Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B08 (0-2)**

**Lab Sample ID: 500-229911-1**

Date Collected: 02/23/23 13:35

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 84.3

**Method: SW846 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		03/01/23 17:00	03/02/23 12:34	1
Chromium	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:34	1
Cobalt	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:34	1
<b>Iron</b>	<b>0.60</b>		0.40	0.20	mg/L		03/01/23 17:00	03/02/23 12:34	1
Lead	<0.0075		0.0075	0.0075	mg/L		03/01/23 17:00	03/02/23 12:34	1
Nickel	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:34	1
Selenium	<0.050		0.050	0.020	mg/L		03/01/23 17:00	03/02/23 12:34	1
Silver	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:34	1
<b>Zinc</b>	<b>0.040 J</b>		0.50	0.020	mg/L		03/01/23 17:00	03/02/23 12:34	1

**Method: SW846 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		03/01/23 17:00	03/02/23 15:26	1
Thallium	<0.0020	*+	0.0020	0.0020	mg/L		03/01/23 17:00	03/02/23 15:26	1

**Method: SW846 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		03/01/23 11:25	03/02/23 11:16	1

**Method: SW846 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.026</b>		0.018	0.0097	mg/Kg	☆	03/03/23 13:00	03/06/23 08:33	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>pH (SW846 9045D)</b>	<b>7.8</b>		0.2	0.2	SU			03/01/23 14:43	1

# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B09 (0-2)**

**Lab Sample ID: 500-229911-2**

Date Collected: 02/23/23 13:50

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 83.2

**Method: SW846 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.020		0.020	0.0085	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Benzene	<0.0020		0.0020	0.00050	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Bromodichloromethane	<0.0020		0.0020	0.00040	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Bromoform	<0.0020		0.0020	0.00057	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Bromomethane	<0.0049		0.0049	0.0019	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
2-Butanone (MEK)	<0.0049		0.0049	0.0022	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Carbon disulfide	<0.0049		0.0049	0.0010	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Carbon tetrachloride	<0.0020		0.0020	0.00057	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Chlorobenzene	<0.0020		0.0020	0.00072	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Chloroethane	<0.0049		0.0049	0.0015	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Chloroform	<0.0020		0.0020	0.00068	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Chloromethane	<0.0049		0.0049	0.0020	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
cis-1,2-Dichloroethene	<0.0020		0.0020	0.00055	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
cis-1,3-Dichloropropene	<0.0020		0.0020	0.00059	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Dibromochloromethane	<0.0020		0.0020	0.00064	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
1,1-Dichloroethane	<0.0020		0.0020	0.00067	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
1,2-Dichloroethane	<0.0049		0.0049	0.0015	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
1,1-Dichloroethene	<0.0020		0.0020	0.00067	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
1,2-Dichloropropane	<0.0020		0.0020	0.00051	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
1,3-Dichloropropane, Total	<0.0020		0.0020	0.00069	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Ethylbenzene	<0.0020		0.0020	0.00094	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
2-Hexanone	<0.0049		0.0049	0.0015	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Methylene Chloride	<0.0049		0.0049	0.0019	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
4-Methyl-2-pentanone (MIBK)	<0.0049		0.0049	0.0015	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Methyl tert-butyl ether	<0.0020		0.0020	0.00058	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Styrene	<0.0020		0.0020	0.00059	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
1,1,2,2-Tetrachloroethane	<0.0020		0.0020	0.00063	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Tetrachloroethene	<0.0020		0.0020	0.00067	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Toluene	<0.0020		0.0020	0.00050	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
trans-1,2-Dichloroethene	<0.0020		0.0020	0.00087	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
trans-1,3-Dichloropropene	<0.0020		0.0020	0.00069	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
1,1,1-Trichloroethane	<0.0020		0.0020	0.00066	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
1,1,2-Trichloroethane	<0.0020		0.0020	0.00084	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Trichloroethene	<0.0020		0.0020	0.00066	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Vinyl acetate	<0.0049		0.0049	0.0017	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Vinyl chloride	<0.0020		0.0020	0.00087	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1
Xylenes, Total	<0.0039		0.0039	0.00063	mg/Kg	☆	02/24/23 17:05	02/28/23 12:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		75 - 131	02/24/23 17:05	02/28/23 12:52	1
Dibromofluoromethane	94		75 - 126	02/24/23 17:05	02/28/23 12:52	1
1,2-Dichloroethane-d4 (Surr)	97		70 - 134	02/24/23 17:05	02/28/23 12:52	1
Toluene-d8 (Surr)	89		75 - 124	02/24/23 17:05	02/28/23 12:52	1

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.088	mg/Kg	☆	02/28/23 08:18	03/01/23 19:40	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	☆	02/28/23 08:18	03/01/23 19:40	1
1,3-Dichlorobenzene	<0.20		0.20	0.044	mg/Kg	☆	02/28/23 08:18	03/01/23 19:40	1
1,4-Dichlorobenzene	<0.20		0.20	0.051	mg/Kg	☆	02/28/23 08:18	03/01/23 19:40	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B09 (0-2)**

**Lab Sample ID: 500-229911-2**

Date Collected: 02/23/23 13:50

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 83.2

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.20		0.20	0.047	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
N-Nitrosodi-n-propylamine	<0.080		0.080	0.048	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
Nitrobenzene	<0.039		0.039	0.0099	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
Naphthalene	<0.039		0.039	0.0061	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
2,4-Dichlorophenol	<0.39		0.39	0.094	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
4-Chloroaniline	<0.80		0.80	0.19	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
2,4,6-Trichlorophenol	<0.39		0.39	0.14	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
2,4,5-Trichlorophenol	<0.39		0.39	0.090	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
Hexachlorocyclopentadiene	<0.80		0.80	0.23	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
<b>2-Methylnaphthalene</b>	<b>0.0096</b>	<b>J</b>	0.080	0.0073	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
2,6-Dinitrotoluene	<0.20		0.20	0.078	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
2-Nitrophenol	<0.39		0.39	0.093	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
Dimethyl phthalate	<0.20		0.20	0.052	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
2,4-Dinitrophenol	<0.80		0.80	0.70	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
Acenaphthylene	<0.039		0.039	0.0052	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
2,4-Dinitrotoluene	<0.20		0.20	0.063	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
Acenaphthene	<0.039		0.039	0.0071	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
Dibenzofuran	<0.20		0.20	0.046	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
4-Nitrophenol	<0.80		0.80	0.38	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
Fluorene	<0.039		0.039	0.0056	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
4-Nitroaniline	<0.39		0.39	0.17	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
Hexachlorobenzene	<0.080		0.080	0.0092	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
Diethyl phthalate	<0.20		0.20	0.067	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
Pentachlorophenol	<0.80		0.80	0.63	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
4,6-Dinitro-2-methylphenol	<0.80		0.80	0.32	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
<b>Phenanthrene</b>	<b>0.058</b>		0.039	0.0055	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
<b>Anthracene</b>	<b>0.012</b>	<b>J</b>	0.039	0.0066	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
Carbazole	<0.20		0.20	0.099	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
<b>Fluoranthene</b>	<b>0.094</b>		0.039	0.0073	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
<b>Pyrene</b>	<b>0.12</b>		0.039	0.0078	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
Butyl benzyl phthalate	<0.20		0.20	0.075	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
<b>Benzo[a]anthracene</b>	<b>0.055</b>		0.039	0.0053	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B09 (0-2)**

**Lab Sample ID: 500-229911-2**

Date Collected: 02/23/23 13:50

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 83.2

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chrysene</b>	<b>0.067</b>		0.039	0.011	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.072	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
Di-n-octyl phthalate	<0.20		0.20	0.064	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
<b>Benzo[b]fluoranthene</b>	<b>0.22</b>	<b>*3</b>	0.039	0.0085	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
<b>Benzo[k]fluoranthene</b>	<b>0.092</b>	<b>*3</b>	0.039	0.012	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
<b>Benzo[a]pyrene</b>	<b>0.18</b>	<b>*3</b>	0.039	0.0076	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.24</b>	<b>*3</b>	0.039	0.010	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
<b>Dibenz(a,h)anthracene</b>	<b>0.054</b>	<b>*3</b>	0.039	0.0076	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
<b>Benzo[g,h,i]perylene</b>	<b>0.39</b>	<b>*3</b>	0.039	0.013	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
3 & 4 Methylphenol	<0.20		0.20	0.066	mg/Kg	☼	02/28/23 08:18	03/01/23 19:40	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorophenol	106		31 - 166				02/28/23 08:18	03/01/23 19:40	1
Phenol-d5	97		30 - 153				02/28/23 08:18	03/01/23 19:40	1
Nitrobenzene-d5 (Surr)	84		37 - 147				02/28/23 08:18	03/01/23 19:40	1
2-Fluorobiphenyl (Surr)	78		43 - 145				02/28/23 08:18	03/01/23 19:40	1
2,4,6-Tribromophenol	79		31 - 143				02/28/23 08:18	03/01/23 19:40	1
Terphenyl-d14 (Surr)	118		42 - 157				02/28/23 08:18	03/01/23 19:40	1

**Method: SW846 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.42</b>	<b>J</b>	1.2	0.23	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
<b>Arsenic</b>	<b>8.4</b>		0.60	0.20	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
<b>Barium</b>	<b>160</b>		0.60	0.068	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
<b>Beryllium</b>	<b>0.82</b>		0.24	0.056	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
<b>Boron</b>	<b>1.4</b>	<b>J</b>	3.0	0.28	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
<b>Cadmium</b>	<b>0.24</b>	<b>B</b>	0.12	0.022	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
<b>Calcium</b>	<b>3400</b>		12	2.0	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
<b>Chromium</b>	<b>14</b>		0.60	0.30	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
<b>Cobalt</b>	<b>8.9</b>		0.30	0.078	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
<b>Copper</b>	<b>15</b>	<b>B</b>	0.60	0.17	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
<b>Iron</b>	<b>20000</b>		12	6.2	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
<b>Lead</b>	<b>19</b>		0.30	0.14	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
<b>Magnesium</b>	<b>2000</b>		6.0	3.0	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
<b>Manganese</b>	<b>370</b>		0.60	0.087	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
<b>Nickel</b>	<b>19</b>		0.60	0.17	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
<b>Potassium</b>	<b>700</b>		30	11	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
<b>Selenium</b>	<b>0.44</b>	<b>J</b>	0.60	0.35	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
<b>Silver</b>	<b>0.40</b>	<b>B</b>	0.30	0.077	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
<b>Sodium</b>	<b>990</b>		60	8.9	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
Thallium	<0.60		0.60	0.30	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
<b>Vanadium</b>	<b>22</b>		0.30	0.071	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1
<b>Zinc</b>	<b>85</b>		1.2	0.53	mg/Kg	☼	02/24/23 15:35	02/27/23 15:13	1

**Method: SW846 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.81</b>		0.50	0.050	mg/L		03/01/23 17:00	03/02/23 12:38	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		03/01/23 17:00	03/02/23 12:38	1
Boron	<0.50	^1+	0.50	0.050	mg/L		03/01/23 17:00	03/02/23 12:38	1

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# Client Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B09 (0-2)**

**Lab Sample ID: 500-229911-2**

Date Collected: 02/23/23 13:50

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 83.2

**Method: SW846 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		03/01/23 17:00	03/02/23 12:38	1
Chromium	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:38	1
Cobalt	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:38	1
Iron	<0.40		0.40	0.20	mg/L		03/01/23 17:00	03/02/23 12:38	1
Lead	<0.0075		0.0075	0.0075	mg/L		03/01/23 17:00	03/02/23 12:38	1
Nickel	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:38	1
Selenium	<0.050		0.050	0.020	mg/L		03/01/23 17:00	03/02/23 12:38	1
Silver	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:38	1
<b>Zinc</b>	<b>0.029</b>	<b>J</b>	0.50	0.020	mg/L		03/01/23 17:00	03/02/23 12:38	1

**Method: SW846 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		03/01/23 17:00	03/02/23 15:28	1
Thallium	<0.0020	*+	0.0020	0.0020	mg/L		03/01/23 17:00	03/02/23 15:28	1

**Method: SW846 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		03/01/23 11:25	03/02/23 11:18	1

**Method: SW846 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<b>0.026</b>		0.019	0.010	mg/Kg	☆	03/03/23 13:00	03/06/23 08:35	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9045D)	<b>7.2</b>		0.2	0.2	SU			03/01/23 13:12	1

# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B07 (0-2)**

**Lab Sample ID: 500-229911-7**

Date Collected: 02/23/23 14:30

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 81.4

**Method: SW846 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.023		0.023	0.0098	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Benzene	<0.0023		0.0023	0.00058	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Bromodichloromethane	<0.0023		0.0023	0.00046	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Bromoform	<0.0023		0.0023	0.00066	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Bromomethane	<0.0056		0.0056	0.0021	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
2-Butanone (MEK)	<0.0056		0.0056	0.0025	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Carbon disulfide	<0.0056		0.0056	0.0012	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Carbon tetrachloride	<0.0023		0.0023	0.00065	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Chlorobenzene	<0.0023		0.0023	0.00083	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Chloroethane	<0.0056		0.0056	0.0017	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Chloroform	<0.0023		0.0023	0.00078	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Chloromethane	<0.0056		0.0056	0.0023	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
cis-1,2-Dichloroethene	<0.0023		0.0023	0.00063	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
cis-1,3-Dichloropropene	<0.0023		0.0023	0.00068	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Dibromochloromethane	<0.0023		0.0023	0.00074	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
1,1-Dichloroethane	<0.0023		0.0023	0.00077	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
1,2-Dichloroethane	<0.0056		0.0056	0.0018	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
1,1-Dichloroethene	<0.0023		0.0023	0.00078	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
1,2-Dichloropropane	<0.0023		0.0023	0.00058	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
1,3-Dichloropropane, Total	<0.0023		0.0023	0.00079	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Ethylbenzene	<0.0023		0.0023	0.0011	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
2-Hexanone	<0.0056		0.0056	0.0018	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Methylene Chloride	<0.0056		0.0056	0.0022	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
4-Methyl-2-pentanone (MIBK)	<0.0056		0.0056	0.0017	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Methyl tert-butyl ether	<0.0023		0.0023	0.00066	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Styrene	<0.0023		0.0023	0.00068	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
1,1,2,2-Tetrachloroethane	<0.0023		0.0023	0.00072	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Tetrachloroethene	<0.0023		0.0023	0.00077	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Toluene	<0.0023		0.0023	0.00057	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
trans-1,2-Dichloroethene	<0.0023		0.0023	0.0010	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
trans-1,3-Dichloropropene	<0.0023		0.0023	0.00079	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
1,1,1-Trichloroethane	<0.0023		0.0023	0.00076	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
1,1,2-Trichloroethane	<0.0023		0.0023	0.00097	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Trichloroethene	<0.0023		0.0023	0.00076	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Vinyl acetate	<0.0056		0.0056	0.0020	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Vinyl chloride	<0.0023		0.0023	0.0010	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1
Xylenes, Total	<0.0045		0.0045	0.00072	mg/Kg	✳	02/24/23 17:05	03/01/23 19:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		75 - 131	02/24/23 17:05	03/01/23 19:02	1
Dibromofluoromethane	92		75 - 126	02/24/23 17:05	03/01/23 19:02	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 134	02/24/23 17:05	03/01/23 19:02	1
Toluene-d8 (Surr)	90		75 - 124	02/24/23 17:05	03/01/23 19:02	1

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.088	mg/Kg	✳	02/28/23 08:18	03/01/23 20:53	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	✳	02/28/23 08:18	03/01/23 20:53	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	✳	02/28/23 08:18	03/01/23 20:53	1
1,4-Dichlorobenzene	<0.20		0.20	0.051	mg/Kg	✳	02/28/23 08:18	03/01/23 20:53	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-COV-08-B07 (0-2)**

**Lab Sample ID: 500-229911-7**

**Date Collected: 02/23/23 14:30**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

**Percent Solids: 81.4**

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.20		0.20	0.047	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
2-Methylphenol	<0.20		0.20	0.063	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
N-Nitrosodi-n-propylamine	<0.080		0.080	0.048	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
2-Chlorophenol	<0.20		0.20	0.067	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Nitrobenzene	<0.039		0.039	0.0099	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
<b>Naphthalene</b>	<b>0.034</b>	<b>J</b>	0.039	0.0061	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
2,4-Dichlorophenol	<0.39		0.39	0.094	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
4-Chloroaniline	<0.80		0.80	0.19	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
2,4,6-Trichlorophenol	<0.39		0.39	0.14	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
2,4,5-Trichlorophenol	<0.39		0.39	0.090	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Hexachlorocyclopentadiene	<0.80		0.80	0.23	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
<b>2-Methylnaphthalene</b>	<b>0.072</b>	<b>J</b>	0.080	0.0073	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
2,6-Dinitrotoluene	<0.20		0.20	0.078	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
2-Nitrophenol	<0.39		0.39	0.093	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Dimethyl phthalate	<0.20		0.20	0.052	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
2,4-Dinitrophenol	<0.80		0.80	0.70	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Acenaphthylene	<0.039		0.039	0.0052	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
2,4-Dinitrotoluene	<0.20		0.20	0.063	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Acenaphthene	<0.039		0.039	0.0071	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
<b>Dibenzofuran</b>	<b>0.047</b>	<b>J</b>	0.20	0.046	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
4-Nitrophenol	<0.80		0.80	0.38	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Fluorene	<0.039		0.039	0.0056	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
4-Nitroaniline	<0.39		0.39	0.17	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Hexachlorobenzene	<0.080		0.080	0.0092	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Diethyl phthalate	<0.20		0.20	0.067	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Pentachlorophenol	<0.80		0.80	0.63	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
4,6-Dinitro-2-methylphenol	<0.80		0.80	0.32	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
<b>Phenanthrene</b>	<b>0.14</b>		0.039	0.0055	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
<b>Anthracene</b>	<b>0.018</b>	<b>J</b>	0.039	0.0066	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Carbazole	<0.20		0.20	0.099	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
<b>Fluoranthene</b>	<b>0.044</b>		0.039	0.0073	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
<b>Pyrene</b>	<b>0.085</b>		0.039	0.0079	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Butyl benzyl phthalate	<0.20		0.20	0.075	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
<b>Benzo[a]anthracene</b>	<b>0.042</b>		0.039	0.0053	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B07 (0-2)**

**Lab Sample ID: 500-229911-7**

Date Collected: 02/23/23 14:30

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 81.4

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chrysene</b>	<b>0.043</b>		0.039	0.011	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.072	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Di-n-octyl phthalate	<0.20		0.20	0.065	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Benzo[b]fluoranthene	<0.039	*3	0.039	0.0085	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Benzo[k]fluoranthene	<0.039	*3	0.039	0.012	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
<b>Benzo[a]pyrene</b>	<b>0.049</b>	<b>*3</b>	0.039	0.0077	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Indeno[1,2,3-cd]pyrene	<0.039	*3	0.039	0.010	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Dibenz(a,h)anthracene	<0.039	*3	0.039	0.0076	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
Benzo[g,h,i]perylene	<0.039	*3	0.039	0.013	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1
3 & 4 Methylphenol	<0.20		0.20	0.066	mg/Kg	☆	02/28/23 08:18	03/01/23 20:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	110		31 - 166	02/28/23 08:18	03/01/23 20:53	1
Phenol-d5	98		30 - 153	02/28/23 08:18	03/01/23 20:53	1
Nitrobenzene-d5 (Surr)	87		37 - 147	02/28/23 08:18	03/01/23 20:53	1
2-Fluorobiphenyl (Surr)	83		43 - 145	02/28/23 08:18	03/01/23 20:53	1
2,4,6-Tribromophenol	84		31 - 143	02/28/23 08:18	03/01/23 20:53	1
Terphenyl-d14 (Surr)	124		42 - 157	02/28/23 08:18	03/01/23 20:53	1

**Method: SW846 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.34</b>	<b>J</b>	1.2	0.23	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
<b>Arsenic</b>	<b>11</b>		0.60	0.21	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
<b>Barium</b>	<b>120</b>		0.60	0.069	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
<b>Beryllium</b>	<b>0.77</b>		0.24	0.056	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
<b>Boron</b>	<b>4.3</b>		3.0	0.28	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
<b>Cadmium</b>	<b>0.33</b>	<b>B</b>	0.12	0.022	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
<b>Calcium</b>	<b>11000</b>		12	2.0	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
<b>Chromium</b>	<b>13</b>		0.60	0.30	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
<b>Cobalt</b>	<b>7.4</b>		0.30	0.079	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
<b>Copper</b>	<b>23</b>	<b>B</b>	0.60	0.17	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
<b>Iron</b>	<b>16000</b>		12	6.3	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
<b>Lead</b>	<b>41</b>		0.30	0.14	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
<b>Magnesium</b>	<b>1800</b>		6.0	3.0	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
<b>Manganese</b>	<b>350</b>		0.60	0.087	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
<b>Nickel</b>	<b>16</b>		0.60	0.18	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
<b>Potassium</b>	<b>900</b>		30	11	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
<b>Selenium</b>	<b>0.47</b>	<b>J</b>	0.60	0.35	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
<b>Silver</b>	<b>0.37</b>	<b>B</b>	0.30	0.078	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
<b>Sodium</b>	<b>250</b>		60	8.9	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
Thallium	<0.60		0.60	0.30	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
<b>Vanadium</b>	<b>22</b>		0.30	0.071	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1
<b>Zinc</b>	<b>89</b>		1.2	0.53	mg/Kg	☆	02/24/23 15:35	02/27/23 15:28	1

**Method: SW846 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.99</b>		0.50	0.050	mg/L		03/01/23 17:00	03/02/23 13:10	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		03/01/23 17:00	03/02/23 13:10	1
Boron	<0.50	^1+	0.50	0.050	mg/L		03/01/23 17:00	03/02/23 13:10	1

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# Client Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B07 (0-2)**

**Lab Sample ID: 500-229911-7**

Date Collected: 02/23/23 14:30

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 81.4

**Method: SW846 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		03/01/23 17:00	03/02/23 13:10	1
Chromium	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:10	1
Cobalt	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:10	1
Iron	<0.40		0.40	0.20	mg/L		03/01/23 17:00	03/02/23 13:10	1
Lead	<0.0075		0.0075	0.0075	mg/L		03/01/23 17:00	03/02/23 13:10	1
Nickel	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:10	1
Selenium	<0.050		0.050	0.020	mg/L		03/01/23 17:00	03/02/23 13:10	1
Silver	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:10	1
Zinc	<0.50		0.50	0.020	mg/L		03/01/23 17:00	03/02/23 13:10	1

**Method: SW846 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		03/01/23 17:00	03/02/23 15:49	1
Thallium	<0.0020	*+	0.0020	0.0020	mg/L		03/01/23 17:00	03/02/23 15:49	1

**Method: SW846 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		03/01/23 11:25	03/02/23 11:47	1

**Method: SW846 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.036		0.019	0.0098	mg/Kg	☆	03/03/23 13:00	03/06/23 08:49	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9045D)	7.9		0.2	0.2	SU			03/01/23 15:06	1

# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B05 (0-2)**

**Lab Sample ID: 500-229911-8**

Date Collected: 02/23/23 14:35

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 82.6

**Method: SW846 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.022		0.022	0.0095	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Benzene	<0.0022		0.0022	0.00056	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Bromodichloromethane	<0.0022		0.0022	0.00044	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Bromoform	<0.0022		0.0022	0.00064	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Bromomethane	<0.0054		0.0054	0.0021	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
2-Butanone (MEK)	<0.0054		0.0054	0.0024	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Carbon disulfide	<0.0054		0.0054	0.0011	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Carbon tetrachloride	<0.0022		0.0022	0.00063	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Chlorobenzene	<0.0022		0.0022	0.00080	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Chloroethane	<0.0054		0.0054	0.0016	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Chloroform	<0.0022		0.0022	0.00076	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Chloromethane	<0.0054		0.0054	0.0022	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
cis-1,2-Dichloroethene	<0.0022		0.0022	0.00061	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
cis-1,3-Dichloropropene	<0.0022		0.0022	0.00066	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Dibromochloromethane	<0.0022		0.0022	0.00071	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
1,1-Dichloroethane	<0.0022		0.0022	0.00075	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
1,2-Dichloroethane	<0.0054		0.0054	0.0017	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
1,1-Dichloroethene	<0.0022		0.0022	0.00075	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
1,2-Dichloropropane	<0.0022		0.0022	0.00056	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
1,3-Dichloropropane, Total	<0.0022		0.0022	0.00076	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Ethylbenzene	<0.0022		0.0022	0.0010	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
2-Hexanone	<0.0054		0.0054	0.0017	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Methylene Chloride	<0.0054		0.0054	0.0021	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
4-Methyl-2-pentanone (MIBK)	<0.0054		0.0054	0.0016	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Methyl tert-butyl ether	<0.0022		0.0022	0.00064	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Styrene	<0.0022		0.0022	0.00066	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
1,1,2,2-Tetrachloroethane	<0.0022		0.0022	0.00070	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Tetrachloroethene	<0.0022		0.0022	0.00074	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Toluene	<0.0022		0.0022	0.00055	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
trans-1,2-Dichloroethene	<0.0022		0.0022	0.00096	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
trans-1,3-Dichloropropene	<0.0022		0.0022	0.00076	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
1,1,1-Trichloroethane	<0.0022		0.0022	0.00073	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
1,1,2-Trichloroethane	<0.0022		0.0022	0.00093	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Trichloroethene	<0.0022		0.0022	0.00074	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Vinyl acetate	<0.0054		0.0054	0.0019	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Vinyl chloride	<0.0022		0.0022	0.00096	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1
Xylenes, Total	<0.0044		0.0044	0.00070	mg/Kg	✱	02/24/23 17:05	02/28/23 15:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		75 - 131	02/24/23 17:05	02/28/23 15:23	1
Dibromofluoromethane	92		75 - 126	02/24/23 17:05	02/28/23 15:23	1
1,2-Dichloroethane-d4 (Surr)	96		70 - 134	02/24/23 17:05	02/28/23 15:23	1
Toluene-d8 (Surr)	91		75 - 124	02/24/23 17:05	02/28/23 15:23	1

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.089	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.060	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
1,4-Dichlorobenzene	<0.20		0.20	0.052	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B05 (0-2)**

**Lab Sample ID: 500-229911-8**

Date Collected: 02/23/23 14:35

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 82.6

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.20		0.20	0.048	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
2-Methylphenol	<0.20		0.20	0.065	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.047	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
N-Nitrosodi-n-propylamine	<0.081		0.081	0.049	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
Hexachloroethane	<0.20		0.20	0.061	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
2-Chlorophenol	<0.20		0.20	0.069	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
Nitrobenzene	<0.040		0.040	0.010	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
Isophorone	<0.20		0.20	0.045	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
2,4-Dimethylphenol	<0.40		0.40	0.15	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
Hexachlorobutadiene	<0.20		0.20	0.063	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
<b>Naphthalene</b>	<b>0.024</b>	<b>J</b>	0.040	0.0062	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
2,4-Dichlorophenol	<0.40		0.40	0.095	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
4-Chloroaniline	<0.81		0.81	0.19	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
2,4,6-Trichlorophenol	<0.40		0.40	0.14	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
2,4,5-Trichlorophenol	<0.40		0.40	0.092	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
Hexachlorocyclopentadiene	<0.81		0.81	0.23	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
<b>2-Methylnaphthalene</b>	<b>0.063</b>	<b>J</b>	0.081	0.0074	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
2-Nitroaniline	<0.20		0.20	0.054	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
4-Chloro-3-methylphenol	<0.40		0.40	0.14	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
2,6-Dinitrotoluene	<0.20		0.20	0.079	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
2-Nitrophenol	<0.40		0.40	0.095	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
3-Nitroaniline	<0.40		0.40	0.12	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
Dimethyl phthalate	<0.20		0.20	0.053	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
2,4-Dinitrophenol	<0.81		0.81	0.71	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
Acenaphthylene	<0.040		0.040	0.0053	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
2,4-Dinitrotoluene	<0.20		0.20	0.064	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
Acenaphthene	<0.040		0.040	0.0072	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
Dibenzofuran	<0.20		0.20	0.047	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
4-Nitrophenol	<0.81		0.81	0.38	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
Fluorene	<0.040		0.040	0.0057	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
4-Nitroaniline	<0.40		0.40	0.17	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.053	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
Hexachlorobenzene	<0.081		0.081	0.0093	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
Diethyl phthalate	<0.20		0.20	0.068	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.047	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
Pentachlorophenol	<0.81		0.81	0.65	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
4,6-Dinitro-2-methylphenol	<0.81		0.81	0.32	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
<b>Phenanthrene</b>	<b>0.077</b>		0.040	0.0056	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
<b>Anthracene</b>	<b>0.010</b>	<b>J</b>	0.040	0.0067	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
Carbazole	<0.20		0.20	0.10	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
Di-n-butyl phthalate	<0.20		0.20	0.061	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
<b>Fluoranthene</b>	<b>0.021</b>	<b>J</b>	0.040	0.0075	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
<b>Pyrene</b>	<b>0.051</b>		0.040	0.0080	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
Butyl benzyl phthalate	<0.20		0.20	0.076	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1
<b>Benzo[a]anthracene</b>	<b>0.021</b>	<b>J</b>	0.040	0.0054	mg/Kg	✱	02/28/23 08:18	03/01/23 21:17	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B05 (0-2)**

**Lab Sample ID: 500-229911-8**

Date Collected: 02/23/23 14:35

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 82.6

## Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chrysene</b>	<b>0.022</b>	<b>J</b>	0.040	0.011	mg/Kg	✳	02/28/23 08:18	03/01/23 21:17	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.056	mg/Kg	✳	02/28/23 08:18	03/01/23 21:17	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.073	mg/Kg	✳	02/28/23 08:18	03/01/23 21:17	1
Di-n-octyl phthalate	<0.20		0.20	0.066	mg/Kg	✳	02/28/23 08:18	03/01/23 21:17	1
<b>Benzo[b]fluoranthene</b>	<b>0.024</b>	<b>J *3</b>	0.040	0.0087	mg/Kg	✳	02/28/23 08:18	03/01/23 21:17	1
Benzo[k]fluoranthene	<0.040	*3	0.040	0.012	mg/Kg	✳	02/28/23 08:18	03/01/23 21:17	1
<b>Benzo[a]pyrene</b>	<b>0.023</b>	<b>J *3</b>	0.040	0.0078	mg/Kg	✳	02/28/23 08:18	03/01/23 21:17	1
Indeno[1,2,3-cd]pyrene	<0.040	*3	0.040	0.010	mg/Kg	✳	02/28/23 08:18	03/01/23 21:17	1
Dibenz(a,h)anthracene	<0.040	*3	0.040	0.0078	mg/Kg	✳	02/28/23 08:18	03/01/23 21:17	1
<b>Benzo[g,h,i]perylene</b>	<b>0.016</b>	<b>J *3</b>	0.040	0.013	mg/Kg	✳	02/28/23 08:18	03/01/23 21:17	1
3 & 4 Methylphenol	<0.20		0.20	0.067	mg/Kg	✳	02/28/23 08:18	03/01/23 21:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	102		31 - 166	02/28/23 08:18	03/01/23 21:17	1
Phenol-d5	93		30 - 153	02/28/23 08:18	03/01/23 21:17	1
Nitrobenzene-d5 (Surr)	78		37 - 147	02/28/23 08:18	03/01/23 21:17	1
2-Fluorobiphenyl (Surr)	75		43 - 145	02/28/23 08:18	03/01/23 21:17	1
2,4,6-Tribromophenol	67		31 - 143	02/28/23 08:18	03/01/23 21:17	1
Terphenyl-d14 (Surr)	116		42 - 157	02/28/23 08:18	03/01/23 21:17	1

## Method: SW846 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.33</b>	<b>J</b>	1.2	0.23	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
<b>Arsenic</b>	<b>6.4</b>		0.59	0.20	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
<b>Barium</b>	<b>140</b>		0.59	0.068	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
<b>Beryllium</b>	<b>0.64</b>		0.24	0.055	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
<b>Boron</b>	<b>2.6</b>	<b>J</b>	3.0	0.28	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
<b>Cadmium</b>	<b>0.22</b>	<b>B</b>	0.12	0.021	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
<b>Calcium</b>	<b>3800</b>		12	2.0	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
<b>Chromium</b>	<b>13</b>		0.59	0.29	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
<b>Cobalt</b>	<b>10</b>		0.30	0.078	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
<b>Copper</b>	<b>15</b>	<b>B</b>	0.59	0.17	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
<b>Iron</b>	<b>14000</b>		12	6.2	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
<b>Lead</b>	<b>27</b>		0.30	0.14	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
<b>Magnesium</b>	<b>1300</b>		5.9	2.9	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
<b>Manganese</b>	<b>520</b>		0.59	0.086	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
<b>Nickel</b>	<b>12</b>		0.59	0.17	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
<b>Potassium</b>	<b>680</b>		30	10	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
<b>Selenium</b>	<b>0.65</b>		0.59	0.35	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
<b>Silver</b>	<b>0.31</b>	<b>B</b>	0.30	0.076	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
<b>Sodium</b>	<b>210</b>		59	8.8	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
Thallium	<0.59		0.59	0.30	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
<b>Vanadium</b>	<b>23</b>		0.30	0.070	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1
<b>Zinc</b>	<b>60</b>		1.2	0.52	mg/Kg	✳	02/24/23 15:35	02/27/23 15:32	1

## Method: SW846 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.64</b>		0.50	0.050	mg/L		03/01/23 17:00	03/02/23 13:14	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		03/01/23 17:00	03/02/23 13:14	1
Boron	<0.50	^1+	0.50	0.050	mg/L		03/01/23 17:00	03/02/23 13:14	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B05 (0-2)**

**Lab Sample ID: 500-229911-8**

Date Collected: 02/23/23 14:35

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 82.6

**Method: SW846 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		03/01/23 17:00	03/02/23 13:14	1
Chromium	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:14	1
Cobalt	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:14	1
<b>Iron</b>	<b>0.24</b>	<b>J</b>	0.40	0.20	mg/L		03/01/23 17:00	03/02/23 13:14	1
Lead	<0.0075		0.0075	0.0075	mg/L		03/01/23 17:00	03/02/23 13:14	1
Nickel	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:14	1
Selenium	<0.050		0.050	0.020	mg/L		03/01/23 17:00	03/02/23 13:14	1
Silver	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:14	1
<b>Zinc</b>	<b>0.040</b>	<b>J</b>	0.50	0.020	mg/L		03/01/23 17:00	03/02/23 13:14	1

**Method: SW846 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		03/01/23 17:00	03/02/23 15:51	1
Thallium	<0.0020	*+	0.0020	0.0020	mg/L		03/01/23 17:00	03/02/23 15:51	1

**Method: SW846 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		03/01/23 11:25	03/02/23 11:49	1

**Method: SW846 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.026</b>		0.019	0.0099	mg/Kg	☆	03/03/23 13:00	03/06/23 08:51	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>pH (SW846 9045D)</b>	<b>7.5</b>		0.2	0.2	SU			03/01/23 13:17	1



# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B04 (0-2)**

**Lab Sample ID: 500-229911-9**

Date Collected: 02/23/23 16:20

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 82.3

**Method: SW846 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.023		0.023	0.0098	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Benzene	<0.0023		0.0023	0.00058	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Bromodichloromethane	<0.0023		0.0023	0.00046	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Bromoform	<0.0023		0.0023	0.00066	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Bromomethane	<0.0057		0.0057	0.0021	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
2-Butanone (MEK)	<0.0057		0.0057	0.0025	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Carbon disulfide	<0.0057		0.0057	0.0012	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Carbon tetrachloride	<0.0023		0.0023	0.00066	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Chlorobenzene	<0.0023		0.0023	0.00083	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Chloroethane	<0.0057		0.0057	0.0017	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Chloroform	<0.0023		0.0023	0.00078	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Chloromethane	<0.0057		0.0057	0.0023	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
cis-1,2-Dichloroethene	<0.0023		0.0023	0.00063	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
cis-1,3-Dichloropropene	<0.0023		0.0023	0.00068	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Dibromochloromethane	<0.0023		0.0023	0.00074	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
1,1-Dichloroethane	<0.0023		0.0023	0.00077	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
1,2-Dichloroethane	<0.0057		0.0057	0.0018	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
1,1-Dichloroethene	<0.0023		0.0023	0.00078	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
1,2-Dichloropropane	<0.0023		0.0023	0.00058	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
1,3-Dichloropropane, Total	<0.0023		0.0023	0.00079	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Ethylbenzene	<0.0023		0.0023	0.0011	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
2-Hexanone	<0.0057		0.0057	0.0018	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Methylene Chloride	<0.0057		0.0057	0.0022	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
4-Methyl-2-pentanone (MIBK)	<0.0057		0.0057	0.0017	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Methyl tert-butyl ether	<0.0023		0.0023	0.00066	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Styrene	<0.0023		0.0023	0.00068	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
1,1,2,2-Tetrachloroethane	<0.0023		0.0023	0.00072	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Tetrachloroethene	<0.0023		0.0023	0.00077	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Toluene	<0.0023		0.0023	0.00057	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
trans-1,2-Dichloroethene	<0.0023		0.0023	0.0010	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
trans-1,3-Dichloropropene	<0.0023		0.0023	0.00079	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
1,1,1-Trichloroethane	<0.0023		0.0023	0.00076	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
1,1,2-Trichloroethane	<0.0023		0.0023	0.00097	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Trichloroethene	<0.0023		0.0023	0.00076	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Vinyl acetate	<0.0057		0.0057	0.0020	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Vinyl chloride	<0.0023		0.0023	0.0010	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1
Xylenes, Total	<0.0045		0.0045	0.00072	mg/Kg	☼	02/24/23 17:05	02/28/23 15:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		75 - 131	02/24/23 17:05	02/28/23 15:48	1
Dibromofluoromethane	92		75 - 126	02/24/23 17:05	02/28/23 15:48	1
1,2-Dichloroethane-d4 (Surr)	99		70 - 134	02/24/23 17:05	02/28/23 15:48	1
Toluene-d8 (Surr)	89		75 - 124	02/24/23 17:05	02/28/23 15:48	1

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.088	mg/Kg	☼	02/28/23 08:18	02/28/23 18:09	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.060	mg/Kg	☼	02/28/23 08:18	02/28/23 18:09	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	☼	02/28/23 08:18	02/28/23 18:09	1
1,4-Dichlorobenzene	<0.20		0.20	0.051	mg/Kg	☼	02/28/23 08:18	02/28/23 18:09	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B04 (0-2)**

**Lab Sample ID: 500-229911-9**

Date Collected: 02/23/23 16:20

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 82.3

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.20		0.20	0.047	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
2-Methylphenol	<0.20		0.20	0.064	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
N-Nitrosodi-n-propylamine	<0.080		0.080	0.049	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
2-Chlorophenol	<0.20		0.20	0.068	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Nitrobenzene	<0.039		0.039	0.0099	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Isophorone	<0.20		0.20	0.045	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Naphthalene	<0.039		0.039	0.0061	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
2,4-Dichlorophenol	<0.39		0.39	0.094	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
4-Chloroaniline	<0.80		0.80	0.19	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
2,4,6-Trichlorophenol	<0.39		0.39	0.14	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
2,4,5-Trichlorophenol	<0.39		0.39	0.091	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Hexachlorocyclopentadiene	<0.80		0.80	0.23	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
2-Methylnaphthalene	<0.080		0.080	0.0073	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
4-Chloro-3-methylphenol	<0.39		0.39	0.14	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
2,6-Dinitrotoluene	<0.20		0.20	0.078	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
2-Nitrophenol	<0.39		0.39	0.094	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Dimethyl phthalate	<0.20		0.20	0.052	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
2,4-Dinitrophenol	<0.80		0.80	0.70	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Acenaphthylene	<0.039		0.039	0.0052	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
2,4-Dinitrotoluene	<0.20		0.20	0.063	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Acenaphthene	<0.039		0.039	0.0071	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Dibenzofuran	<0.20		0.20	0.047	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
4-Nitrophenol	<0.80		0.80	0.38	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Fluorene	<0.039		0.039	0.0056	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
4-Nitroaniline	<0.39		0.39	0.17	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Hexachlorobenzene	<0.080		0.080	0.0092	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Diethyl phthalate	<0.20		0.20	0.067	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Pentachlorophenol	<0.80		0.80	0.64	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
4,6-Dinitro-2-methylphenol	<0.80		0.80	0.32	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
<b>Phenanthrene</b>	<b>0.0078</b>	<b>J</b>	0.039	0.0055	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Anthracene	<0.039		0.039	0.0066	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Carbazole	<0.20		0.20	0.099	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Fluoranthene	<0.039		0.039	0.0074	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Pyrene	<0.039		0.039	0.0079	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Butyl benzyl phthalate	<0.20		0.20	0.076	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
<b>Benzo[a]anthracene</b>	<b>0.0059</b>	<b>J</b>	0.039	0.0053	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B04 (0-2)**

**Lab Sample ID: 500-229911-9**

Date Collected: 02/23/23 16:20

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 82.3

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	<0.039		0.039	0.011	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.056	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.073	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Di-n-octyl phthalate	<0.20		0.20	0.065	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Benzo[b]fluoranthene	<0.039		0.039	0.0086	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Benzo[k]fluoranthene	<0.039		0.039	0.012	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
<b>Benzo[a]pyrene</b>	<b>0.0098</b>	<b>J</b>	0.039	0.0077	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Indeno[1,2,3-cd]pyrene	<0.039		0.039	0.010	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Dibenz(a,h)anthracene	<0.039		0.039	0.0077	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
Benzo[g,h,i]perylene	<0.039		0.039	0.013	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1
3 & 4 Methylphenol	<0.20		0.20	0.066	mg/Kg	☆	02/28/23 08:18	02/28/23 18:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	109		31 - 166	02/28/23 08:18	02/28/23 18:09	1
Phenol-d5	109		30 - 153	02/28/23 08:18	02/28/23 18:09	1
Nitrobenzene-d5 (Surr)	94		37 - 147	02/28/23 08:18	02/28/23 18:09	1
2-Fluorobiphenyl (Surr)	89		43 - 145	02/28/23 08:18	02/28/23 18:09	1
2,4,6-Tribromophenol	100		31 - 143	02/28/23 08:18	02/28/23 18:09	1
Terphenyl-d14 (Surr)	103		42 - 157	02/28/23 08:18	02/28/23 18:09	1

**Method: SW846 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.29</b>	<b>J</b>	1.2	0.23	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
<b>Arsenic</b>	<b>6.1</b>		0.59	0.20	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
<b>Barium</b>	<b>76</b>		0.59	0.067	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
<b>Beryllium</b>	<b>0.77</b>		0.23	0.055	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
<b>Boron</b>	<b>1.0</b>	<b>J</b>	2.9	0.27	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
<b>Cadmium</b>	<b>0.086</b>	<b>J B</b>	0.12	0.021	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
<b>Calcium</b>	<b>2000</b>		12	2.0	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
<b>Chromium</b>	<b>13</b>		0.59	0.29	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
<b>Cobalt</b>	<b>9.4</b>		0.29	0.077	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
<b>Copper</b>	<b>12</b>	<b>B</b>	0.59	0.16	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
<b>Iron</b>	<b>18000</b>		12	6.1	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
<b>Lead</b>	<b>13</b>		0.29	0.14	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
<b>Magnesium</b>	<b>1800</b>		5.9	2.9	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
<b>Manganese</b>	<b>280</b>		0.59	0.085	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
<b>Nickel</b>	<b>15</b>		0.59	0.17	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
<b>Potassium</b>	<b>670</b>		29	10	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
Selenium	<0.59		0.59	0.34	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
<b>Silver</b>	<b>0.45</b>	<b>B</b>	0.29	0.076	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
<b>Sodium</b>	<b>960</b>		59	8.7	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
Thallium	<0.59		0.59	0.29	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
<b>Vanadium</b>	<b>22</b>		0.29	0.069	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1
<b>Zinc</b>	<b>46</b>		1.2	0.51	mg/Kg	☆	02/24/23 15:35	02/27/23 15:35	1

**Method: SW846 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.41</b>	<b>J</b>	0.50	0.050	mg/L		03/01/23 17:00	03/02/23 13:17	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		03/01/23 17:00	03/02/23 13:17	1
Boron	<0.50	^1+	0.50	0.050	mg/L		03/01/23 17:00	03/02/23 13:17	1

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# Client Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B04 (0-2)**

**Lab Sample ID: 500-229911-9**

Date Collected: 02/23/23 16:20

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 82.3

**Method: SW846 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		03/01/23 17:00	03/02/23 13:17	1
Chromium	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:17	1
Cobalt	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:17	1
<b>Iron</b>	<b>1.1</b>		0.40	0.20	mg/L		03/01/23 17:00	03/02/23 13:17	1
Lead	<0.0075		0.0075	0.0075	mg/L		03/01/23 17:00	03/02/23 13:17	1
Nickel	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:17	1
Selenium	<0.050		0.050	0.020	mg/L		03/01/23 17:00	03/02/23 13:17	1
Silver	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:17	1
<b>Zinc</b>	<b>0.021 J</b>		0.50	0.020	mg/L		03/01/23 17:00	03/02/23 13:17	1

**Method: SW846 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		03/01/23 17:00	03/02/23 15:53	1
Thallium	<0.0020	*+	0.0020	0.0020	mg/L		03/01/23 17:00	03/02/23 15:53	1

**Method: SW846 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		03/01/23 11:25	03/02/23 11:51	1

**Method: SW846 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.036</b>		0.019	0.0099	mg/Kg	☆	03/03/23 13:00	03/06/23 08:53	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>pH (SW846 9045D)</b>	<b>8.1</b>		0.2	0.2	SU			03/01/23 13:19	1

# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B03 (0-2)**

**Lab Sample ID: 500-229911-10**

Date Collected: 02/23/23 16:10

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 81.3

**Method: SW846 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.031		0.031	0.014	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Benzene	<0.0031		0.0031	0.00079	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Bromodichloromethane	<0.0031		0.0031	0.00063	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Bromoform	<0.0031		0.0031	0.00091	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Bromomethane	<0.0078		0.0078	0.0029	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
2-Butanone (MEK)	<0.0078		0.0078	0.0035	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Carbon disulfide	<0.0078		0.0078	0.0016	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Carbon tetrachloride	<0.0031		0.0031	0.00090	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Chlorobenzene	<0.0031		0.0031	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Chloroethane	<0.0078		0.0078	0.0023	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Chloroform	<0.0031		0.0031	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Chloromethane	<0.0078		0.0078	0.0031	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
cis-1,2-Dichloroethene	<0.0031		0.0031	0.00087	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
cis-1,3-Dichloropropene	<0.0031		0.0031	0.00094	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Dibromochloromethane	<0.0031		0.0031	0.0010	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
1,1-Dichloroethane	<0.0031		0.0031	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
1,2-Dichloroethane	<0.0078		0.0078	0.0024	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
1,1-Dichloroethene	<0.0031		0.0031	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
1,2-Dichloropropane	<0.0031		0.0031	0.00080	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
1,3-Dichloropropane, Total	<0.0031		0.0031	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Ethylbenzene	<0.0031		0.0031	0.0015	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
2-Hexanone	<0.0078		0.0078	0.0024	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Methylene Chloride	<0.0078		0.0078	0.0031	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
4-Methyl-2-pentanone (MIBK)	<0.0078		0.0078	0.0023	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Methyl tert-butyl ether	<0.0031		0.0031	0.00091	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Styrene	<0.0031		0.0031	0.00094	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
1,1,2,2-Tetrachloroethane	<0.0031		0.0031	0.00099	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Tetrachloroethene	<0.0031		0.0031	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Toluene	<0.0031		0.0031	0.00078	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
trans-1,2-Dichloroethene	<0.0031		0.0031	0.0014	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
trans-1,3-Dichloropropene	<0.0031		0.0031	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
1,1,1-Trichloroethane	<0.0031		0.0031	0.0010	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
1,1,2-Trichloroethane	<0.0031		0.0031	0.0013	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Trichloroethene	<0.0031		0.0031	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Vinyl acetate	<0.0078		0.0078	0.0027	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Vinyl chloride	<0.0031		0.0031	0.0014	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1
Xylenes, Total	<0.0062		0.0062	0.00099	mg/Kg	✳	02/24/23 17:05	02/28/23 16:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		75 - 131	02/24/23 17:05	02/28/23 16:13	1
Dibromofluoromethane	92		75 - 126	02/24/23 17:05	02/28/23 16:13	1
1,2-Dichloroethane-d4 (Surr)	93		70 - 134	02/24/23 17:05	02/28/23 16:13	1
Toluene-d8 (Surr)	89		75 - 124	02/24/23 17:05	02/28/23 16:13	1

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.088	mg/Kg	✳	02/28/23 08:18	02/28/23 18:33	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.060	mg/Kg	✳	02/28/23 08:18	02/28/23 18:33	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	✳	02/28/23 08:18	02/28/23 18:33	1
1,4-Dichlorobenzene	<0.20		0.20	0.051	mg/Kg	✳	02/28/23 08:18	02/28/23 18:33	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-COV-08-B03 (0-2)**

**Lab Sample ID: 500-229911-10**

**Date Collected: 02/23/23 16:10**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

**Percent Solids: 81.3**

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.20		0.20	0.048	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
2-Methylphenol	<0.20		0.20	0.064	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
N-Nitrosodi-n-propylamine	<0.080		0.080	0.049	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
2-Chlorophenol	<0.20		0.20	0.068	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Nitrobenzene	<0.039		0.039	0.0099	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Isophorone	<0.20		0.20	0.045	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Naphthalene	<0.039		0.039	0.0061	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
2,4-Dichlorophenol	<0.39		0.39	0.094	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
4-Chloroaniline	<0.80		0.80	0.19	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
2,4,6-Trichlorophenol	<0.39		0.39	0.14	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
2,4,5-Trichlorophenol	<0.39		0.39	0.091	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Hexachlorocyclopentadiene	<0.80		0.80	0.23	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
2-Methylnaphthalene	<0.080		0.080	0.0073	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
2-Nitroaniline	<0.20		0.20	0.054	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
4-Chloro-3-methylphenol	<0.39		0.39	0.14	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
2,6-Dinitrotoluene	<0.20		0.20	0.078	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
2-Nitrophenol	<0.39		0.39	0.094	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Dimethyl phthalate	<0.20		0.20	0.052	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
2,4-Dinitrophenol	<0.80		0.80	0.70	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Acenaphthylene	<0.039		0.039	0.0052	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
2,4-Dinitrotoluene	<0.20		0.20	0.063	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Acenaphthene	<0.039		0.039	0.0071	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Dibenzofuran	<0.20		0.20	0.047	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
4-Nitrophenol	<0.80		0.80	0.38	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Fluorene	<0.039		0.039	0.0056	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
4-Nitroaniline	<0.39		0.39	0.17	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Hexachlorobenzene	<0.080		0.080	0.0092	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Diethyl phthalate	<0.20		0.20	0.067	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Pentachlorophenol	<0.80		0.80	0.64	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
4,6-Dinitro-2-methylphenol	<0.80		0.80	0.32	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Phenanthrene	<0.039		0.039	0.0055	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Anthracene	<0.039		0.039	0.0066	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Carbazole	<0.20		0.20	0.099	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Di-n-butyl phthalate	<0.20		0.20	0.061	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Fluoranthene	<0.039		0.039	0.0074	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Pyrene	<0.039		0.039	0.0079	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Butyl benzyl phthalate	<0.20		0.20	0.076	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Benzo[a]anthracene	<0.039		0.039	0.0054	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B03 (0-2)**

**Lab Sample ID: 500-229911-10**

Date Collected: 02/23/23 16:10

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 81.3

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	<0.039		0.039	0.011	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.056	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.073	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Di-n-octyl phthalate	<0.20		0.20	0.065	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Benzo[b]fluoranthene	<0.039		0.039	0.0086	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Benzo[k]fluoranthene	<0.039		0.039	0.012	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Benzo[a]pyrene	<0.039		0.039	0.0077	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Indeno[1,2,3-cd]pyrene	<0.039		0.039	0.010	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Dibenz(a,h)anthracene	<0.039		0.039	0.0077	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
Benzo[g,h,i]perylene	<0.039		0.039	0.013	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1
3 & 4 Methylphenol	<0.20		0.20	0.066	mg/Kg	☆	02/28/23 08:18	02/28/23 18:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	105		31 - 166	02/28/23 08:18	02/28/23 18:33	1
Phenol-d5	102		30 - 153	02/28/23 08:18	02/28/23 18:33	1
Nitrobenzene-d5 (Surr)	83		37 - 147	02/28/23 08:18	02/28/23 18:33	1
2-Fluorobiphenyl (Surr)	77		43 - 145	02/28/23 08:18	02/28/23 18:33	1
2,4,6-Tribromophenol	93		31 - 143	02/28/23 08:18	02/28/23 18:33	1
Terphenyl-d14 (Surr)	97		42 - 157	02/28/23 08:18	02/28/23 18:33	1

**Method: SW846 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.23	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
<b>Arsenic</b>	<b>6.8</b>		0.59	0.20	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
<b>Barium</b>	<b>40</b>		0.59	0.067	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
<b>Beryllium</b>	<b>0.47</b>		0.24	0.055	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
<b>Boron</b>	<b>1.1</b>	<b>J</b>	2.9	0.27	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
<b>Cadmium</b>	<b>0.066</b>	<b>J B</b>	0.12	0.021	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
<b>Calcium</b>	<b>1300</b>		12	2.0	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
<b>Chromium</b>	<b>12</b>		0.59	0.29	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
<b>Cobalt</b>	<b>2.9</b>		0.29	0.077	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
<b>Copper</b>	<b>5.3</b>	<b>B</b>	0.59	0.16	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
<b>Iron</b>	<b>14000</b>		12	6.1	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
<b>Lead</b>	<b>10</b>		0.29	0.14	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
<b>Magnesium</b>	<b>1300</b>		5.9	2.9	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
<b>Manganese</b>	<b>120</b>		0.59	0.085	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
<b>Nickel</b>	<b>7.7</b>		0.59	0.17	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
<b>Potassium</b>	<b>590</b>		29	10	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
<b>Selenium</b>	<b>0.67</b>		0.59	0.35	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
<b>Silver</b>	<b>0.26</b>	<b>J B</b>	0.29	0.076	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
<b>Sodium</b>	<b>65</b>		59	8.7	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
Thallium	<0.59		0.59	0.29	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
<b>Vanadium</b>	<b>26</b>		0.29	0.069	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1
<b>Zinc</b>	<b>22</b>		1.2	0.52	mg/Kg	☆	02/24/23 15:35	02/27/23 15:44	1

**Method: SW846 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.12</b>	<b>J</b>	0.50	0.050	mg/L		03/01/23 17:00	03/02/23 13:20	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		03/01/23 17:00	03/02/23 13:20	1
Boron	<0.50	^1+	0.50	0.050	mg/L		03/01/23 17:00	03/02/23 13:20	1

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# Client Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B03 (0-2)**

**Lab Sample ID: 500-229911-10**

Date Collected: 02/23/23 16:10

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 81.3

**Method: SW846 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		03/01/23 17:00	03/02/23 13:20	1
Chromium	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:20	1
Cobalt	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:20	1
Iron	<0.40		0.40	0.20	mg/L		03/01/23 17:00	03/02/23 13:20	1
Lead	<0.0075		0.0075	0.0075	mg/L		03/01/23 17:00	03/02/23 13:20	1
Nickel	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:20	1
Selenium	<0.050		0.050	0.020	mg/L		03/01/23 17:00	03/02/23 13:20	1
Silver	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:20	1
<b>Zinc</b>	<b>0.023</b>	<b>J</b>	0.50	0.020	mg/L		03/01/23 17:00	03/02/23 13:20	1

**Method: SW846 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		03/01/23 17:00	03/02/23 15:55	1
Thallium	<0.0020	*+	0.0020	0.0020	mg/L		03/01/23 17:00	03/02/23 15:55	1

**Method: SW846 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		03/01/23 11:25	03/02/23 11:53	1

**Method: SW846 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.013</b>	<b>J</b>	0.019	0.010	mg/Kg	⊛	03/03/23 13:00	03/06/23 08:54	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>pH (SW846 9045D)</b>	<b>7.5</b>		0.2	0.2	SU			03/01/23 13:22	1



# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B02 (0-2)**

**Lab Sample ID: 500-229911-11**

Date Collected: 02/23/23 15:10

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 81.9

**Method: SW846 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.028		0.028	0.012	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Benzene	<0.0028		0.0028	0.00070	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Bromodichloromethane	<0.0028		0.0028	0.00056	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Bromoform	<0.0028		0.0028	0.00081	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Bromomethane	<0.0069		0.0069	0.0026	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
2-Butanone (MEK)	<0.0069		0.0069	0.0031	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Carbon disulfide	<0.0069		0.0069	0.0014	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Carbon tetrachloride	<0.0028		0.0028	0.00080	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Chlorobenzene	<0.0028		0.0028	0.0010	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Chloroethane	<0.0069		0.0069	0.0020	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Chloroform	<0.0028		0.0028	0.00096	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Chloromethane	<0.0069		0.0069	0.0028	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
cis-1,2-Dichloroethene	<0.0028		0.0028	0.00077	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
cis-1,3-Dichloropropene	<0.0028		0.0028	0.00083	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Dibromochloromethane	<0.0028		0.0028	0.00090	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
1,1-Dichloroethane	<0.0028		0.0028	0.00095	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
1,2-Dichloroethane	<0.0069		0.0069	0.0022	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
1,1-Dichloroethene	<0.0028		0.0028	0.00095	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
1,2-Dichloropropane	<0.0028		0.0028	0.00071	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
1,3-Dichloropropane, Total	<0.0028		0.0028	0.00097	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Ethylbenzene	<0.0028		0.0028	0.0013	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
2-Hexanone	<0.0069		0.0069	0.0022	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Methylene Chloride	<0.0069		0.0069	0.0027	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
4-Methyl-2-pentanone (MIBK)	<0.0069		0.0069	0.0020	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Methyl tert-butyl ether	<0.0028		0.0028	0.00081	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Styrene	<0.0028		0.0028	0.00083	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
1,1,2,2-Tetrachloroethane	<0.0028		0.0028	0.00088	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Tetrachloroethene	<0.0028		0.0028	0.00094	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Toluene	<0.0028		0.0028	0.00070	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
trans-1,2-Dichloroethene	<0.0028		0.0028	0.0012	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
trans-1,3-Dichloropropene	<0.0028		0.0028	0.00097	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
1,1,1-Trichloroethane	<0.0028		0.0028	0.00093	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
1,1,2-Trichloroethane	<0.0028		0.0028	0.0012	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Trichloroethene	<0.0028		0.0028	0.00093	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Vinyl acetate	<0.0069		0.0069	0.0024	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Vinyl chloride	<0.0028		0.0028	0.0012	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1
Xylenes, Total	<0.0055		0.0055	0.00088	mg/Kg	✳	02/24/23 17:05	02/28/23 16:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		75 - 131	02/24/23 17:05	02/28/23 16:38	1
Dibromofluoromethane	91		75 - 126	02/24/23 17:05	02/28/23 16:38	1
1,2-Dichloroethane-d4 (Surr)	94		70 - 134	02/24/23 17:05	02/28/23 16:38	1
Toluene-d8 (Surr)	91		75 - 124	02/24/23 17:05	02/28/23 16:38	1

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.088	mg/Kg	✳	02/28/23 08:18	02/28/23 18:57	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.060	mg/Kg	✳	02/28/23 08:18	02/28/23 18:57	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	✳	02/28/23 08:18	02/28/23 18:57	1
1,4-Dichlorobenzene	<0.20		0.20	0.051	mg/Kg	✳	02/28/23 08:18	02/28/23 18:57	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B02 (0-2)**

**Lab Sample ID: 500-229911-11**

Date Collected: 02/23/23 15:10

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 81.9

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.20		0.20	0.048	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
2-Methylphenol	<0.20		0.20	0.064	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
N-Nitrosodi-n-propylamine	<0.080		0.080	0.049	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Hexachloroethane	<0.20		0.20	0.061	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
2-Chlorophenol	<0.20		0.20	0.068	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Nitrobenzene	<0.040		0.040	0.0099	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Isophorone	<0.20		0.20	0.045	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
2,4-Dimethylphenol	<0.40		0.40	0.15	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Hexachlorobutadiene	<0.20		0.20	0.063	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Naphthalene	<0.040		0.040	0.0061	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
2,4-Dichlorophenol	<0.40		0.40	0.095	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
4-Chloroaniline	<0.80		0.80	0.19	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
2,4,6-Trichlorophenol	<0.40		0.40	0.14	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
2,4,5-Trichlorophenol	<0.40		0.40	0.091	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Hexachlorocyclopentadiene	<0.80		0.80	0.23	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
2-Methylnaphthalene	<0.080		0.080	0.0073	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
2-Nitroaniline	<0.20		0.20	0.054	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
4-Chloro-3-methylphenol	<0.40		0.40	0.14	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
2,6-Dinitrotoluene	<0.20		0.20	0.078	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
2-Nitrophenol	<0.40		0.40	0.094	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
3-Nitroaniline	<0.40		0.40	0.12	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Dimethyl phthalate	<0.20		0.20	0.052	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
2,4-Dinitrophenol	<0.80		0.80	0.70	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Acenaphthylene	<0.040		0.040	0.0053	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
2,4-Dinitrotoluene	<0.20		0.20	0.063	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Acenaphthene	<0.040		0.040	0.0072	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Dibenzofuran	<0.20		0.20	0.047	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
4-Nitrophenol	<0.80		0.80	0.38	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Fluorene	<0.040		0.040	0.0056	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
4-Nitroaniline	<0.40		0.40	0.17	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.053	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Hexachlorobenzene	<0.080		0.080	0.0092	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Diethyl phthalate	<0.20		0.20	0.068	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.047	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Pentachlorophenol	<0.80		0.80	0.64	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
4,6-Dinitro-2-methylphenol	<0.80		0.80	0.32	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
<b>Phenanthrene</b>	<b>0.0070</b>	<b>J</b>	0.040	0.0056	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Anthracene	<0.040		0.040	0.0067	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Carbazole	<0.20		0.20	0.10	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Di-n-butyl phthalate	<0.20		0.20	0.061	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Fluoranthene	<0.040		0.040	0.0074	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Pyrene	<0.040		0.040	0.0079	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Butyl benzyl phthalate	<0.20		0.20	0.076	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1
Benzo[a]anthracene	<0.040		0.040	0.0054	mg/Kg	☆	02/28/23 08:18	02/28/23 18:57	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B02 (0-2)**

**Lab Sample ID: 500-229911-11**

Date Collected: 02/23/23 15:10

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 81.9

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	<0.040		0.040	0.011	mg/Kg	✱	02/28/23 08:18	02/28/23 18:57	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.056	mg/Kg	✱	02/28/23 08:18	02/28/23 18:57	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.073	mg/Kg	✱	02/28/23 08:18	02/28/23 18:57	1
Di-n-octyl phthalate	<0.20		0.20	0.065	mg/Kg	✱	02/28/23 08:18	02/28/23 18:57	1
Benzo[b]fluoranthene	<0.040		0.040	0.0086	mg/Kg	✱	02/28/23 08:18	02/28/23 18:57	1
Benzo[k]fluoranthene	<0.040		0.040	0.012	mg/Kg	✱	02/28/23 08:18	02/28/23 18:57	1
Benzo[a]pyrene	<0.040		0.040	0.0077	mg/Kg	✱	02/28/23 08:18	02/28/23 18:57	1
Indeno[1,2,3-cd]pyrene	<0.040		0.040	0.010	mg/Kg	✱	02/28/23 08:18	02/28/23 18:57	1
Dibenz(a,h)anthracene	<0.040		0.040	0.0077	mg/Kg	✱	02/28/23 08:18	02/28/23 18:57	1
Benzo[g,h,i]perylene	<0.040		0.040	0.013	mg/Kg	✱	02/28/23 08:18	02/28/23 18:57	1
3 & 4 Methylphenol	<0.20		0.20	0.066	mg/Kg	✱	02/28/23 08:18	02/28/23 18:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	96		31 - 166	02/28/23 08:18	02/28/23 18:57	1
Phenol-d5	97		30 - 153	02/28/23 08:18	02/28/23 18:57	1
Nitrobenzene-d5 (Surr)	78		37 - 147	02/28/23 08:18	02/28/23 18:57	1
2-Fluorobiphenyl (Surr)	75		43 - 145	02/28/23 08:18	02/28/23 18:57	1
2,4,6-Tribromophenol	78		31 - 143	02/28/23 08:18	02/28/23 18:57	1
Terphenyl-d14 (Surr)	85		42 - 157	02/28/23 08:18	02/28/23 18:57	1

**Method: SW846 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.29</b>	<b>J</b>	1.2	0.23	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
<b>Arsenic</b>	<b>5.0</b>		0.59	0.20	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
<b>Barium</b>	<b>100</b>		0.59	0.067	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
<b>Beryllium</b>	<b>0.66</b>		0.24	0.055	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
<b>Boron</b>	<b>1.6</b>	<b>J</b>	3.0	0.28	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
<b>Cadmium</b>	<b>0.14</b>	<b>B</b>	0.12	0.021	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
<b>Calcium</b>	<b>2900</b>		12	2.0	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
<b>Chromium</b>	<b>13</b>		0.59	0.29	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
<b>Cobalt</b>	<b>8.3</b>		0.30	0.077	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
<b>Copper</b>	<b>11</b>	<b>B</b>	0.59	0.17	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
<b>Iron</b>	<b>14000</b>		12	6.1	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
<b>Lead</b>	<b>14</b>		0.30	0.14	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
<b>Magnesium</b>	<b>2100</b>		5.9	2.9	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
<b>Manganese</b>	<b>350</b>		0.59	0.086	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
<b>Nickel</b>	<b>20</b>		0.59	0.17	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
<b>Potassium</b>	<b>570</b>		30	10	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
Selenium	<0.59		0.59	0.35	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
<b>Silver</b>	<b>0.43</b>	<b>B</b>	0.30	0.076	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
<b>Sodium</b>	<b>180</b>		59	8.7	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
Thallium	<0.59		0.59	0.29	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
<b>Vanadium</b>	<b>21</b>		0.30	0.070	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1
<b>Zinc</b>	<b>49</b>		1.2	0.52	mg/Kg	✱	02/24/23 15:35	02/27/23 15:47	1

**Method: SW846 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.61</b>		0.50	0.050	mg/L		03/01/23 17:00	03/02/23 13:23	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		03/01/23 17:00	03/02/23 13:23	1
<b>Boron</b>	<b>0.073</b>	<b>J ^1+</b>	0.50	0.050	mg/L		03/01/23 17:00	03/02/23 13:23	1

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# Client Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B02 (0-2)**

**Lab Sample ID: 500-229911-11**

Date Collected: 02/23/23 15:10

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 81.9

**Method: SW846 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		03/01/23 17:00	03/02/23 13:23	1
Chromium	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:23	1
Cobalt	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:23	1
<b>Iron</b>	<b>0.48</b>		0.40	0.20	mg/L		03/01/23 17:00	03/02/23 13:23	1
Lead	<0.0075		0.0075	0.0075	mg/L		03/01/23 17:00	03/02/23 13:23	1
Nickel	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:23	1
Selenium	<0.050		0.050	0.020	mg/L		03/01/23 17:00	03/02/23 13:23	1
Silver	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:23	1
Zinc	<0.50		0.50	0.020	mg/L		03/01/23 17:00	03/02/23 13:23	1

**Method: SW846 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		03/01/23 17:00	03/02/23 15:57	1
Thallium	<0.0020	*+	0.0020	0.0020	mg/L		03/01/23 17:00	03/02/23 15:57	1

**Method: SW846 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		03/01/23 11:25	03/02/23 11:56	1

**Method: SW846 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.028</b>		0.019	0.010	mg/Kg	☆	03/03/23 13:00	03/06/23 09:02	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>pH (SW846 9045D)</b>	<b>7.9</b>		0.2	0.2	SU			03/01/23 13:24	1

# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B01 (0-2)**

**Lab Sample ID: 500-229911-12**

Date Collected: 02/23/23 15:20

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 86.2

**Method: SW846 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.016		0.016	0.0070	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Benzene	<0.0016		0.0016	0.00041	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Bromodichloromethane	<0.0016		0.0016	0.00033	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Bromoform	<0.0016		0.0016	0.00047	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Bromomethane	<0.0040		0.0040	0.0015	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
2-Butanone (MEK)	<0.0040		0.0040	0.0018	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Carbon disulfide	<0.0040		0.0040	0.00083	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Carbon tetrachloride	<0.0016		0.0016	0.00047	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Chlorobenzene	<0.0016		0.0016	0.00059	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Chloroethane	<0.0040		0.0040	0.0012	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Chloroform	<0.0016		0.0016	0.00056	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Chloromethane	<0.0040		0.0040	0.0016	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
cis-1,2-Dichloroethene	<0.0016		0.0016	0.00045	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
cis-1,3-Dichloropropene	<0.0016		0.0016	0.00048	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Dibromochloromethane	<0.0016		0.0016	0.00052	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
1,1-Dichloroethane	<0.0016		0.0016	0.00055	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
1,2-Dichloroethane	<0.0040		0.0040	0.0013	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
1,1-Dichloroethene	<0.0016		0.0016	0.00055	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
1,2-Dichloropropane	<0.0016		0.0016	0.00041	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
1,3-Dichloropropane, Total	<0.0016		0.0016	0.00056	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Ethylbenzene	<0.0016		0.0016	0.00077	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
2-Hexanone	<0.0040		0.0040	0.0013	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Methylene Chloride	<0.0040		0.0040	0.0016	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
4-Methyl-2-pentanone (MIBK)	<0.0040		0.0040	0.0012	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Methyl tert-butyl ether	<0.0016		0.0016	0.00047	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Styrene	<0.0016		0.0016	0.00048	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
1,1,2,2-Tetrachloroethane	<0.0016		0.0016	0.00051	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Tetrachloroethene	<0.0016		0.0016	0.00055	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Toluene	<0.0016		0.0016	0.00040	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
trans-1,2-Dichloroethene	<0.0016		0.0016	0.00071	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
trans-1,3-Dichloropropene	<0.0016		0.0016	0.00056	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
1,1,1-Trichloroethane	<0.0016		0.0016	0.00054	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
1,1,2-Trichloroethane	<0.0016		0.0016	0.00069	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Trichloroethene	<0.0016		0.0016	0.00054	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Vinyl acetate	<0.0040		0.0040	0.0014	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Vinyl chloride	<0.0016		0.0016	0.00071	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1
Xylenes, Total	<0.0032		0.0032	0.00051	mg/Kg	✳	02/24/23 17:05	02/28/23 17:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		75 - 131	02/24/23 17:05	02/28/23 17:04	1
Dibromofluoromethane	92		75 - 126	02/24/23 17:05	02/28/23 17:04	1
1,2-Dichloroethane-d4 (Surr)	93		70 - 134	02/24/23 17:05	02/28/23 17:04	1
Toluene-d8 (Surr)	89		75 - 124	02/24/23 17:05	02/28/23 17:04	1

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.18		0.18	0.081	mg/Kg	✳	02/28/23 08:18	02/28/23 19:46	1
Bis(2-chloroethyl)ether	<0.18		0.18	0.055	mg/Kg	✳	02/28/23 08:18	02/28/23 19:46	1
1,3-Dichlorobenzene	<0.18		0.18	0.041	mg/Kg	✳	02/28/23 08:18	02/28/23 19:46	1
1,4-Dichlorobenzene	<0.18		0.18	0.047	mg/Kg	✳	02/28/23 08:18	02/28/23 19:46	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B01 (0-2)**

**Lab Sample ID: 500-229911-12**

Date Collected: 02/23/23 15:20

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 86.2

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.18		0.18	0.044	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
2-Methylphenol	<0.18		0.18	0.059	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
2,2'-oxybis[1-chloropropane]	<0.18		0.18	0.042	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
N-Nitrosodi-n-propylamine	<0.074		0.074	0.045	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Hexachloroethane	<0.18		0.18	0.056	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
2-Chlorophenol	<0.18		0.18	0.062	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Nitrobenzene	<0.036		0.036	0.0091	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Bis(2-chloroethoxy)methane	<0.18		0.18	0.037	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
1,2,4-Trichlorobenzene	<0.18		0.18	0.039	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Isophorone	<0.18		0.18	0.041	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
2,4-Dimethylphenol	<0.36		0.36	0.14	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Hexachlorobutadiene	<0.18		0.18	0.058	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Naphthalene	<0.036		0.036	0.0056	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
2,4-Dichlorophenol	<0.36		0.36	0.087	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
4-Chloroaniline	<0.74		0.74	0.17	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
2,4,6-Trichlorophenol	<0.36		0.36	0.13	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
2,4,5-Trichlorophenol	<0.36		0.36	0.084	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Hexachlorocyclopentadiene	<0.74		0.74	0.21	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
<b>2-Methylnaphthalene</b>	<b>0.010</b>	<b>J</b>	0.074	0.0067	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
2-Nitroaniline	<0.18		0.18	0.049	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
2-Chloronaphthalene	<0.18		0.18	0.040	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
4-Chloro-3-methylphenol	<0.36		0.36	0.12	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
2,6-Dinitrotoluene	<0.18		0.18	0.072	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
2-Nitrophenol	<0.36		0.36	0.086	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
3-Nitroaniline	<0.36		0.36	0.11	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Dimethyl phthalate	<0.18		0.18	0.048	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
2,4-Dinitrophenol	<0.74		0.74	0.64	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Acenaphthylene	<0.036		0.036	0.0048	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
2,4-Dinitrotoluene	<0.18		0.18	0.058	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Acenaphthene	<0.036		0.036	0.0066	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Dibenzofuran	<0.18		0.18	0.043	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
4-Nitrophenol	<0.74		0.74	0.35	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Fluorene	<0.036		0.036	0.0051	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
4-Nitroaniline	<0.36		0.36	0.15	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
4-Bromophenyl phenyl ether	<0.18		0.18	0.048	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Hexachlorobenzene	<0.074		0.074	0.0085	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Diethyl phthalate	<0.18		0.18	0.062	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
4-Chlorophenyl phenyl ether	<0.18		0.18	0.043	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Pentachlorophenol	<0.74		0.74	0.59	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
N-Nitrosodiphenylamine	<0.18		0.18	0.043	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
4,6-Dinitro-2-methylphenol	<0.74		0.74	0.29	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
<b>Phenanthrene</b>	<b>0.011</b>	<b>J</b>	0.036	0.0051	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Anthracene	<0.036		0.036	0.0061	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Carbazole	<0.18		0.18	0.091	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Di-n-butyl phthalate	<0.18		0.18	0.056	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Fluoranthene	<0.036		0.036	0.0068	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Pyrene	<0.036		0.036	0.0073	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Butyl benzyl phthalate	<0.18		0.18	0.070	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1
Benzo[a]anthracene	<0.036		0.036	0.0049	mg/Kg	☼	02/28/23 08:18	02/28/23 19:46	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B01 (0-2)**

**Lab Sample ID: 500-229911-12**

Date Collected: 02/23/23 15:20

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 86.2

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chrysene	<0.036		0.036	0.010	mg/Kg	✳	02/28/23 08:18	02/28/23 19:46	1
3,3'-Dichlorobenzidine	<0.18		0.18	0.051	mg/Kg	✳	02/28/23 08:18	02/28/23 19:46	1
Bis(2-ethylhexyl) phthalate	<0.18		0.18	0.067	mg/Kg	✳	02/28/23 08:18	02/28/23 19:46	1
Di-n-octyl phthalate	<0.18		0.18	0.060	mg/Kg	✳	02/28/23 08:18	02/28/23 19:46	1
Benzo[b]fluoranthene	<0.036		0.036	0.0079	mg/Kg	✳	02/28/23 08:18	02/28/23 19:46	1
Benzo[k]fluoranthene	<0.036		0.036	0.011	mg/Kg	✳	02/28/23 08:18	02/28/23 19:46	1
Benzo[a]pyrene	<0.036		0.036	0.0071	mg/Kg	✳	02/28/23 08:18	02/28/23 19:46	1
Indeno[1,2,3-cd]pyrene	<0.036		0.036	0.0095	mg/Kg	✳	02/28/23 08:18	02/28/23 19:46	1
Dibenz(a,h)anthracene	<0.036		0.036	0.0071	mg/Kg	✳	02/28/23 08:18	02/28/23 19:46	1
Benzo[g,h,i]perylene	<0.036		0.036	0.012	mg/Kg	✳	02/28/23 08:18	02/28/23 19:46	1
3 & 4 Methylphenol	<0.18		0.18	0.061	mg/Kg	✳	02/28/23 08:18	02/28/23 19:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	99		31 - 166	02/28/23 08:18	02/28/23 19:46	1
Phenol-d5	97		30 - 153	02/28/23 08:18	02/28/23 19:46	1
Nitrobenzene-d5 (Surr)	79		37 - 147	02/28/23 08:18	02/28/23 19:46	1
2-Fluorobiphenyl (Surr)	76		43 - 145	02/28/23 08:18	02/28/23 19:46	1
2,4,6-Tribromophenol	72		31 - 143	02/28/23 08:18	02/28/23 19:46	1
Terphenyl-d14 (Surr)	93		42 - 157	02/28/23 08:18	02/28/23 19:46	1

**Method: SW846 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.26	J	1.1	0.22	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Arsenic	6.6		0.56	0.19	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Barium	110		0.56	0.064	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Beryllium	0.74		0.23	0.053	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Boron	1.1	J	2.8	0.26	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Cadmium	0.17	B	0.11	0.020	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Calcium	16000		11	1.9	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Chromium	12		0.56	0.28	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Cobalt	8.4		0.28	0.074	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Copper	12	B	0.56	0.16	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Iron	16000		11	5.9	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Lead	22		0.28	0.13	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Magnesium	2800		5.6	2.8	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Manganese	350		0.56	0.082	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Nickel	17		0.56	0.16	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Potassium	570		28	10	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Selenium	0.48	J	0.56	0.33	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Silver	0.34	B	0.28	0.073	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Sodium	180		56	8.3	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Thallium	<0.56		0.56	0.28	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Vanadium	20		0.28	0.066	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1
Zinc	49		1.1	0.49	mg/Kg	✳	02/24/23 15:35	02/27/23 15:50	1

**Method: SW846 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.84		0.50	0.050	mg/L		03/01/23 17:00	03/02/23 13:27	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		03/01/23 17:00	03/02/23 13:27	1
Boron	<0.50	^1+	0.50	0.050	mg/L		03/01/23 17:00	03/02/23 13:27	1

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# Client Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B01 (0-2)**

**Lab Sample ID: 500-229911-12**

Date Collected: 02/23/23 15:20

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 86.2

**Method: SW846 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		03/01/23 17:00	03/02/23 13:27	1
Chromium	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:27	1
Cobalt	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:27	1
Iron	<0.40		0.40	0.20	mg/L		03/01/23 17:00	03/02/23 13:27	1
Lead	<0.0075		0.0075	0.0075	mg/L		03/01/23 17:00	03/02/23 13:27	1
Nickel	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:27	1
Selenium	<0.050		0.050	0.020	mg/L		03/01/23 17:00	03/02/23 13:27	1
Silver	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 13:27	1
<b>Zinc</b>	<b>0.11</b>	<b>J</b>	0.50	0.020	mg/L		03/01/23 17:00	03/02/23 13:27	1

**Method: SW846 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		03/01/23 17:00	03/02/23 15:59	1
Thallium	<0.0020	*+	0.0020	0.0020	mg/L		03/01/23 17:00	03/02/23 15:59	1

**Method: SW846 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		03/01/23 11:25	03/02/23 11:58	1

**Method: SW846 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.022		0.017	0.0092	mg/Kg	☆	03/03/23 13:00	03/06/23 09:04	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9045D)	8.2		0.2	0.2	SU			03/01/23 15:12	1

# Definitions/Glossary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
*3	ISTD response or retention time outside acceptable limits.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
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
*+	LCS and/or LCSD is outside acceptance limits, high biased.
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
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.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

# QC Association Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## GC/MS VOA

### Prep Batch: 700221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	5035	
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	5035	
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	5035	
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	5035	
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	5035	
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	5035	
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	5035	
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	5035	
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	5035	
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	5035	
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	5035	
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	5035	
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	5035	
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	5035	
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	5035	

### Analysis Batch: 700426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	8260B	700221
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	8260B	700221
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	8260B	700221
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	8260B	700221
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	8260B	700221
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	8260B	700221
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	8260B	700221
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	8260B	700221
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	8260B	700221
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	8260B	700221
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	8260B	700221
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	8260B	700221
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	8260B	700221
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	8260B	700221
MB 500-700426/7	Method Blank	Total/NA	Solid	8260B	
LCS 500-700426/4	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 500-700426/5	Lab Control Sample Dup	Total/NA	Solid	8260B	

### Analysis Batch: 700601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	8260B	700221
MB 500-700601/7	Method Blank	Total/NA	Solid	8260B	
LCS 500-700601/4	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 500-700601/5	Lab Control Sample Dup	Total/NA	Solid	8260B	

## GC/MS Semi VOA

### Prep Batch: 700448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	3541	
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	3541	
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	3541	
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	3541	

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# QC Association Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## GC/MS Semi VOA (Continued)

### Prep Batch: 700448 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	3541	
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	3541	
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	3541	
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	3541	
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	3541	
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	3541	
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	3541	
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	3541	
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	3541	
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	3541	
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	3541	
MB 500-700448/1-A	Method Blank	Total/NA	Solid	3541	
LCS 500-700448/2-A	Lab Control Sample	Total/NA	Solid	3541	
500-229911-15 MS	4062-C0V-05-B01 (0-1)	Total/NA	Solid	3541	
500-229911-15 MSD	4062-C0V-05-B01 (0-1)	Total/NA	Solid	3541	

### Analysis Batch: 700513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	8270D	700448
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	8270D	700448
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	8270D	700448
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	8270D	700448
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	8270D	700448
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	8270D	700448
MB 500-700448/1-A	Method Blank	Total/NA	Solid	8270D	700448
LCS 500-700448/2-A	Lab Control Sample	Total/NA	Solid	8270D	700448

### Analysis Batch: 700668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	8270D	700448
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	8270D	700448
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	8270D	700448
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	8270D	700448
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	8270D	700448

### Analysis Batch: 700703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	8270D	700448
500-229911-15 MS	4062-C0V-05-B01 (0-1)	Total/NA	Solid	8270D	700448
500-229911-15 MSD	4062-C0V-05-B01 (0-1)	Total/NA	Solid	8270D	700448

### Analysis Batch: 701587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	8270D	700448
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	8270D	700448
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	8270D	700448

# QC Association Summary

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Metals

### Prep Batch: 700187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	3050B	
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	3050B	
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	3050B	
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	3050B	
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	3050B	
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	3050B	
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	3050B	
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	3050B	
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	3050B	
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	3050B	
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	3050B	
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	3050B	
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	3050B	
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	3050B	
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	3050B	
MB 500-700187/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 500-700187/2-A	Lab Control Sample	Total/NA	Solid	3050B	

### Analysis Batch: 700467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	6010B	700187
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	6010B	700187
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	6010B	700187
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	6010B	700187
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	6010B	700187
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	6010B	700187
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	6010B	700187
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	6010B	700187
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	6010B	700187
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	6010B	700187
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	6010B	700187
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	6010B	700187
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	6010B	700187
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	6010B	700187
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	6010B	700187
MB 500-700187/1-A	Method Blank	Total/NA	Solid	6010B	700187
LCS 500-700187/2-A	Lab Control Sample	Total/NA	Solid	6010B	700187

### Leach Batch: 700531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	TCLP	Solid	1311	
500-229911-2	4062-C0V-08-B09 (0-2)	TCLP	Solid	1311	
500-229911-3	4062-C0V-14-B01 (0-1)	TCLP	Solid	1311	
500-229911-4	4062-C0V-14-B02 (0-1)	TCLP	Solid	1311	
500-229911-5	4062-C0V-14-B02 (0-1)D	TCLP	Solid	1311	
500-229911-6	4062-C0V-08-B06 (0-2)	TCLP	Solid	1311	
500-229911-7	4062-C0V-08-B07 (0-2)	TCLP	Solid	1311	
500-229911-8	4062-C0V-08-B05 (0-2)	TCLP	Solid	1311	
500-229911-9	4062-C0V-08-B04 (0-2)	TCLP	Solid	1311	
500-229911-10	4062-C0V-08-B03 (0-2)	TCLP	Solid	1311	
500-229911-11	4062-C0V-08-B02 (0-2)	TCLP	Solid	1311	

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# QC Association Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Metals (Continued)

### Leach Batch: 700531 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-12	4062-C0V-08-B01 (0-2)	TCLP	Solid	1311	
500-229911-13	4062-C0V-05-B03 (0-1)	TCLP	Solid	1311	
500-229911-14	4062-C0V-05-B02 (0-1)	TCLP	Solid	1311	
500-229911-15	4062-C0V-05-B01 (0-1)	TCLP	Solid	1311	
LB 500-700531/2-B	Method Blank	TCLP	Solid	1311	
LB 500-700531/2-C	Method Blank	TCLP	Solid	1311	
500-229911-4 MS	4062-C0V-14-B02 (0-1)	TCLP	Solid	1311	
500-229911-4 DU	4062-C0V-14-B02 (0-1)	TCLP	Solid	1311	

### Analysis Batch: 700562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	6010B	700187

### Prep Batch: 700697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	TCLP	Solid	7470A	700531
500-229911-2	4062-C0V-08-B09 (0-2)	TCLP	Solid	7470A	700531
500-229911-3	4062-C0V-14-B01 (0-1)	TCLP	Solid	7470A	700531
500-229911-4	4062-C0V-14-B02 (0-1)	TCLP	Solid	7470A	700531
500-229911-5	4062-C0V-14-B02 (0-1)D	TCLP	Solid	7470A	700531
500-229911-6	4062-C0V-08-B06 (0-2)	TCLP	Solid	7470A	700531
500-229911-7	4062-C0V-08-B07 (0-2)	TCLP	Solid	7470A	700531
500-229911-8	4062-C0V-08-B05 (0-2)	TCLP	Solid	7470A	700531
500-229911-9	4062-C0V-08-B04 (0-2)	TCLP	Solid	7470A	700531
500-229911-10	4062-C0V-08-B03 (0-2)	TCLP	Solid	7470A	700531
500-229911-11	4062-C0V-08-B02 (0-2)	TCLP	Solid	7470A	700531
500-229911-12	4062-C0V-08-B01 (0-2)	TCLP	Solid	7470A	700531
500-229911-13	4062-C0V-05-B03 (0-1)	TCLP	Solid	7470A	700531
500-229911-14	4062-C0V-05-B02 (0-1)	TCLP	Solid	7470A	700531
500-229911-15	4062-C0V-05-B01 (0-1)	TCLP	Solid	7470A	700531
LB 500-700531/2-B	Method Blank	TCLP	Solid	7470A	700531
MB 500-700697/12-A	Method Blank	Total/NA	Solid	7470A	
LCS 500-700697/14-A	Lab Control Sample	Total/NA	Solid	7470A	
500-229911-4 MS	4062-C0V-14-B02 (0-1)	TCLP	Solid	7470A	700531
500-229911-4 DU	4062-C0V-14-B02 (0-1)	TCLP	Solid	7470A	700531

### Prep Batch: 700755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	TCLP	Solid	3010A	700531
500-229911-2	4062-C0V-08-B09 (0-2)	TCLP	Solid	3010A	700531
500-229911-3	4062-C0V-14-B01 (0-1)	TCLP	Solid	3010A	700531
500-229911-4	4062-C0V-14-B02 (0-1)	TCLP	Solid	3010A	700531
500-229911-5	4062-C0V-14-B02 (0-1)D	TCLP	Solid	3010A	700531
500-229911-6	4062-C0V-08-B06 (0-2)	TCLP	Solid	3010A	700531
500-229911-7	4062-C0V-08-B07 (0-2)	TCLP	Solid	3010A	700531
500-229911-8	4062-C0V-08-B05 (0-2)	TCLP	Solid	3010A	700531
500-229911-9	4062-C0V-08-B04 (0-2)	TCLP	Solid	3010A	700531
500-229911-10	4062-C0V-08-B03 (0-2)	TCLP	Solid	3010A	700531
500-229911-11	4062-C0V-08-B02 (0-2)	TCLP	Solid	3010A	700531
500-229911-12	4062-C0V-08-B01 (0-2)	TCLP	Solid	3010A	700531
500-229911-13	4062-C0V-05-B03 (0-1)	TCLP	Solid	3010A	700531

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# QC Association Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Metals (Continued)

### Prep Batch: 700755 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-14	4062-C0V-05-B02 (0-1)	TCLP	Solid	3010A	700531
500-229911-15	4062-C0V-05-B01 (0-1)	TCLP	Solid	3010A	700531
LB 500-700531/2-C	Method Blank	TCLP	Solid	3010A	700531
LCS 500-700755/2-A	Lab Control Sample	Total/NA	Solid	3010A	
500-229911-4 MS	4062-C0V-14-B02 (0-1)	TCLP	Solid	3010A	700531
500-229911-4 DU	4062-C0V-14-B02 (0-1)	TCLP	Solid	3010A	700531

### Analysis Batch: 700909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	TCLP	Solid	7470A	700697
500-229911-2	4062-C0V-08-B09 (0-2)	TCLP	Solid	7470A	700697
500-229911-3	4062-C0V-14-B01 (0-1)	TCLP	Solid	7470A	700697
500-229911-4	4062-C0V-14-B02 (0-1)	TCLP	Solid	7470A	700697
500-229911-5	4062-C0V-14-B02 (0-1)D	TCLP	Solid	7470A	700697
500-229911-6	4062-C0V-08-B06 (0-2)	TCLP	Solid	7470A	700697
500-229911-7	4062-C0V-08-B07 (0-2)	TCLP	Solid	7470A	700697
500-229911-8	4062-C0V-08-B05 (0-2)	TCLP	Solid	7470A	700697
500-229911-9	4062-C0V-08-B04 (0-2)	TCLP	Solid	7470A	700697
500-229911-10	4062-C0V-08-B03 (0-2)	TCLP	Solid	7470A	700697
500-229911-11	4062-C0V-08-B02 (0-2)	TCLP	Solid	7470A	700697
500-229911-12	4062-C0V-08-B01 (0-2)	TCLP	Solid	7470A	700697
500-229911-13	4062-C0V-05-B03 (0-1)	TCLP	Solid	7470A	700697
500-229911-14	4062-C0V-05-B02 (0-1)	TCLP	Solid	7470A	700697
500-229911-15	4062-C0V-05-B01 (0-1)	TCLP	Solid	7470A	700697
LB 500-700531/2-B	Method Blank	TCLP	Solid	7470A	700697
MB 500-700697/12-A	Method Blank	Total/NA	Solid	7470A	700697
LCS 500-700697/14-A	Lab Control Sample	Total/NA	Solid	7470A	700697
500-229911-4 MS	4062-C0V-14-B02 (0-1)	TCLP	Solid	7470A	700697
500-229911-4 DU	4062-C0V-14-B02 (0-1)	TCLP	Solid	7470A	700697

### Analysis Batch: 700931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	TCLP	Solid	6010B	700755
500-229911-2	4062-C0V-08-B09 (0-2)	TCLP	Solid	6010B	700755
500-229911-3	4062-C0V-14-B01 (0-1)	TCLP	Solid	6010B	700755
500-229911-4	4062-C0V-14-B02 (0-1)	TCLP	Solid	6010B	700755
500-229911-5	4062-C0V-14-B02 (0-1)D	TCLP	Solid	6010B	700755
500-229911-6	4062-C0V-08-B06 (0-2)	TCLP	Solid	6010B	700755
500-229911-7	4062-C0V-08-B07 (0-2)	TCLP	Solid	6010B	700755
500-229911-8	4062-C0V-08-B05 (0-2)	TCLP	Solid	6010B	700755
500-229911-9	4062-C0V-08-B04 (0-2)	TCLP	Solid	6010B	700755
500-229911-10	4062-C0V-08-B03 (0-2)	TCLP	Solid	6010B	700755
500-229911-11	4062-C0V-08-B02 (0-2)	TCLP	Solid	6010B	700755
500-229911-12	4062-C0V-08-B01 (0-2)	TCLP	Solid	6010B	700755
500-229911-13	4062-C0V-05-B03 (0-1)	TCLP	Solid	6010B	700755
500-229911-14	4062-C0V-05-B02 (0-1)	TCLP	Solid	6010B	700755
500-229911-15	4062-C0V-05-B01 (0-1)	TCLP	Solid	6010B	700755
LB 500-700531/2-C	Method Blank	TCLP	Solid	6010B	700755
LCS 500-700755/2-A	Lab Control Sample	Total/NA	Solid	6010B	700755
500-229911-4 MS	4062-C0V-14-B02 (0-1)	TCLP	Solid	6010B	700755
500-229911-4 DU	4062-C0V-14-B02 (0-1)	TCLP	Solid	6010B	700755

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# QC Association Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Metals

### Prep Batch: 701027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	7471B	
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	7471B	
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	7471B	
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	7471B	
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	7471B	
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	7471B	
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	7471B	
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	7471B	
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	7471B	
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	7471B	
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	7471B	
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	7471B	
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	7471B	
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	7471B	
MB 500-701027/12-A	Method Blank	Total/NA	Solid	7471B	
LCS 500-701027/13-A	Lab Control Sample	Total/NA	Solid	7471B	
500-229911-10 MS	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	
500-229911-10 MSD	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	
500-229911-10 DU	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	

### Analysis Batch: 701031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	TCLP	Solid	6020A	700755
500-229911-2	4062-C0V-08-B09 (0-2)	TCLP	Solid	6020A	700755
500-229911-3	4062-C0V-14-B01 (0-1)	TCLP	Solid	6020A	700755
500-229911-4	4062-C0V-14-B02 (0-1)	TCLP	Solid	6020A	700755
500-229911-5	4062-C0V-14-B02 (0-1)D	TCLP	Solid	6020A	700755
500-229911-6	4062-C0V-08-B06 (0-2)	TCLP	Solid	6020A	700755
500-229911-7	4062-C0V-08-B07 (0-2)	TCLP	Solid	6020A	700755
500-229911-8	4062-C0V-08-B05 (0-2)	TCLP	Solid	6020A	700755
500-229911-9	4062-C0V-08-B04 (0-2)	TCLP	Solid	6020A	700755
500-229911-10	4062-C0V-08-B03 (0-2)	TCLP	Solid	6020A	700755
500-229911-11	4062-C0V-08-B02 (0-2)	TCLP	Solid	6020A	700755
500-229911-12	4062-C0V-08-B01 (0-2)	TCLP	Solid	6020A	700755
500-229911-13	4062-C0V-05-B03 (0-1)	TCLP	Solid	6020A	700755
500-229911-14	4062-C0V-05-B02 (0-1)	TCLP	Solid	6020A	700755
500-229911-15	4062-C0V-05-B01 (0-1)	TCLP	Solid	6020A	700755
LB 500-700531/2-C	Method Blank	TCLP	Solid	6020A	700755
LCS 500-700755/2-A	Lab Control Sample	Total/NA	Solid	6020A	700755
500-229911-4 MS	4062-C0V-14-B02 (0-1)	TCLP	Solid	6020A	700755
500-229911-4 DU	4062-C0V-14-B02 (0-1)	TCLP	Solid	6020A	700755

### Analysis Batch: 701282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	7471B	701027
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	7471B	701027
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	7471B	701027
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	7471B	701027
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	7471B	701027
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	7471B	701027

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# QC Association Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Metals (Continued)

### Analysis Batch: 701282 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	7471B	701027
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	7471B	701027
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	7471B	701027
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	701027
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	7471B	701027
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	7471B	701027
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	7471B	701027
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	7471B	701027
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	7471B	701027
MB 500-701027/12-A	Method Blank	Total/NA	Solid	7471B	701027
LCS 500-701027/13-A	Lab Control Sample	Total/NA	Solid	7471B	701027
500-229911-10 MS	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	701027
500-229911-10 MSD	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	701027
500-229911-10 DU	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	701027

## General Chemistry

### Analysis Batch: 700719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	9045D	
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	9045D	
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	9045D	
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	9045D	
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	9045D	
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	9045D	
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	9045D	
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	9045D	
LCS 500-700719/5	Lab Control Sample	Total/NA	Solid	9045D	
LCSD 500-700719/6	Lab Control Sample Dup	Total/NA	Solid	9045D	

### Analysis Batch: 700725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	9045D	
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	9045D	
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	9045D	
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	9045D	
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	9045D	
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	9045D	
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	9045D	
LCS 500-700725/2	Lab Control Sample	Total/NA	Solid	9045D	
LCSD 500-700725/3	Lab Control Sample Dup	Total/NA	Solid	9045D	

### Analysis Batch: 700804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	Moisture	
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	Moisture	
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	Moisture	
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	Moisture	
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	Moisture	
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	Moisture	
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	Moisture	

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# QC Association Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## General Chemistry (Continued)

### Analysis Batch: 700804 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	Moisture	
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	Moisture	
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	Moisture	
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	Moisture	
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	Moisture	
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	Moisture	
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	Moisture	
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	Moisture	
500-229911-1 DU	4062-C0V-08-B08 (0-2)	Total/NA	Solid	Moisture	

# Surrogate Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (75-131)	DBFM (75-126)	DCA (70-134)	TOL (75-124)
500-229911-1	4062-C0V-08-B08 (0-2)	87	91	95	91
500-229911-2	4062-C0V-08-B09 (0-2)	87	94	97	89
500-229911-3	4062-C0V-14-B01 (0-1)	87	92	94	88
500-229911-4	4062-C0V-14-B02 (0-1)	87	91	95	89
500-229911-5	4062-C0V-14-B02 (0-1)D	89	91	91	89
500-229911-6	4062-C0V-08-B06 (0-2)	85	94	96	89
500-229911-7	4062-C0V-08-B07 (0-2)	86	92	96	90
500-229911-8	4062-C0V-08-B05 (0-2)	88	92	96	91
500-229911-9	4062-C0V-08-B04 (0-2)	88	92	99	89
500-229911-10	4062-C0V-08-B03 (0-2)	86	92	93	89
500-229911-11	4062-C0V-08-B02 (0-2)	88	91	94	91
500-229911-12	4062-C0V-08-B01 (0-2)	88	92	93	89
500-229911-13	4062-C0V-05-B03 (0-1)	87	95	98	89
500-229911-14	4062-C0V-05-B02 (0-1)	89	92	94	91
500-229911-15	4062-C0V-05-B01 (0-1)	87	90	92	92
LCS 500-700426/4	Lab Control Sample	83	87	88	91
LCS 500-700601/4	Lab Control Sample	83	87	87	93
LCSD 500-700426/5	Lab Control Sample Dup	84	87	89	91
LCSD 500-700601/5	Lab Control Sample Dup	83	88	86	91
MB 500-700426/7	Method Blank	88	89	92	91
MB 500-700601/7	Method Blank	88	87	88	93

### Surrogate Legend

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

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		2FP (31-166)	PHL (30-153)	NBZ (37-147)	FBP (43-145)	TBP (31-143)	TPHL (42-157)
500-229911-1	4062-C0V-08-B08 (0-2)	122	112	99	92	97	101
500-229911-2	4062-C0V-08-B09 (0-2)	106	97	84	78	79	118
500-229911-3	4062-C0V-14-B01 (0-1)	100	92	81	78	76	117
500-229911-4	4062-C0V-14-B02 (0-1)	107	96	87	84	88	109
500-229911-5	4062-C0V-14-B02 (0-1)D	104	93	85	82	77	92
500-229911-6	4062-C0V-08-B06 (0-2)	116	105	86	85	92	127
500-229911-7	4062-C0V-08-B07 (0-2)	110	98	87	83	84	124
500-229911-8	4062-C0V-08-B05 (0-2)	102	93	78	75	67	116
500-229911-9	4062-C0V-08-B04 (0-2)	109	109	94	89	100	103
500-229911-10	4062-C0V-08-B03 (0-2)	105	102	83	77	93	97
500-229911-11	4062-C0V-08-B02 (0-2)	96	97	78	75	78	85
500-229911-12	4062-C0V-08-B01 (0-2)	99	97	79	76	72	93
500-229911-13	4062-C0V-05-B03 (0-1)	104	98	84	77	77	88
500-229911-14	4062-C0V-05-B02 (0-1)	103	94	77	77	86	105
500-229911-15	4062-C0V-05-B01 (0-1)	108	94	79	76	63	127
500-229911-15 MS	4062-C0V-05-B01 (0-1)	104	94	75	74	58	96

Eurofins Chicago

# Surrogate Summary

Client: WSP USA Inc.

Job ID: 500-229911-1

Project/Site: IDOT-172-027-WO112 West Frankfort

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

**Matrix: Solid**

**Prep Type: Total/NA**

## Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	2FP (31-166)	PHL (30-153)	NBZ (37-147)	FBP (43-145)	TBP (31-143)	TPHL (42-157)
500-229911-15 MSD	4062-COV-05-B01 (0-1)	102	91	73	76	67	114
LCS 500-700448/2-A	Lab Control Sample	123	110	97	90	101	100
MB 500-700448/1-A	Method Blank	127	120	99	92	92	102

### Surrogate Legend

2FP = 2-Fluorophenol

PHL = Phenol-d5

NBZ = Nitrobenzene-d5 (Surr)

FBP = 2-Fluorobiphenyl (Surr)

TBP = 2,4,6-Tribromophenol

TPHL = Terphenyl-d14 (Surr)

# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: MB 500-700426/7**  
**Matrix: Solid**  
**Analysis Batch: 700426**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	<0.020		0.020	0.0087	mg/Kg			02/28/23 12:02	1
Benzene	<0.0020		0.0020	0.00051	mg/Kg			02/28/23 12:02	1
Bromodichloromethane	<0.0020		0.0020	0.00041	mg/Kg			02/28/23 12:02	1
Bromoform	<0.0020		0.0020	0.00058	mg/Kg			02/28/23 12:02	1
Bromomethane	<0.0050		0.0050	0.0019	mg/Kg			02/28/23 12:02	1
2-Butanone (MEK)	<0.0050		0.0050	0.0022	mg/Kg			02/28/23 12:02	1
Carbon disulfide	<0.0050		0.0050	0.0010	mg/Kg			02/28/23 12:02	1
Carbon tetrachloride	<0.0020		0.0020	0.00058	mg/Kg			02/28/23 12:02	1
Chlorobenzene	<0.0020		0.0020	0.00074	mg/Kg			02/28/23 12:02	1
Chloroethane	<0.0050		0.0050	0.0015	mg/Kg			02/28/23 12:02	1
Chloroform	<0.0020		0.0020	0.00069	mg/Kg			02/28/23 12:02	1
Chloromethane	<0.0050		0.0050	0.0020	mg/Kg			02/28/23 12:02	1
cis-1,2-Dichloroethene	<0.0020		0.0020	0.00056	mg/Kg			02/28/23 12:02	1
cis-1,3-Dichloropropene	<0.0020		0.0020	0.00060	mg/Kg			02/28/23 12:02	1
Dibromochloromethane	<0.0020		0.0020	0.00065	mg/Kg			02/28/23 12:02	1
1,1-Dichloroethane	<0.0020		0.0020	0.00069	mg/Kg			02/28/23 12:02	1
1,2-Dichloroethane	<0.0050		0.0050	0.0016	mg/Kg			02/28/23 12:02	1
1,1-Dichloroethene	<0.0020		0.0020	0.00069	mg/Kg			02/28/23 12:02	1
1,2-Dichloropropane	<0.0020		0.0020	0.00052	mg/Kg			02/28/23 12:02	1
1,3-Dichloropropane, Total	<0.0020		0.0020	0.00070	mg/Kg			02/28/23 12:02	1
Ethylbenzene	<0.0020		0.0020	0.00096	mg/Kg			02/28/23 12:02	1
2-Hexanone	<0.0050		0.0050	0.0016	mg/Kg			02/28/23 12:02	1
Methylene Chloride	<0.0050		0.0050	0.0020	mg/Kg			02/28/23 12:02	1
4-Methyl-2-pentanone (MIBK)	<0.0050		0.0050	0.0015	mg/Kg			02/28/23 12:02	1
Methyl tert-butyl ether	<0.0020		0.0020	0.00059	mg/Kg			02/28/23 12:02	1
Styrene	<0.0020		0.0020	0.00060	mg/Kg			02/28/23 12:02	1
1,1,2,2-Tetrachloroethane	<0.0020		0.0020	0.00064	mg/Kg			02/28/23 12:02	1
Tetrachloroethene	<0.0020		0.0020	0.00068	mg/Kg			02/28/23 12:02	1
Toluene	<0.0020		0.0020	0.00051	mg/Kg			02/28/23 12:02	1
trans-1,2-Dichloroethene	<0.0020		0.0020	0.00089	mg/Kg			02/28/23 12:02	1
trans-1,3-Dichloropropene	<0.0020		0.0020	0.00070	mg/Kg			02/28/23 12:02	1
1,1,1-Trichloroethane	<0.0020		0.0020	0.00067	mg/Kg			02/28/23 12:02	1
1,1,2-Trichloroethane	<0.0020		0.0020	0.00086	mg/Kg			02/28/23 12:02	1
Trichloroethene	<0.0020		0.0020	0.00068	mg/Kg			02/28/23 12:02	1
Vinyl acetate	<0.0050		0.0050	0.0017	mg/Kg			02/28/23 12:02	1
Vinyl chloride	<0.0020		0.0020	0.00089	mg/Kg			02/28/23 12:02	1
Xylenes, Total	<0.0040		0.0040	0.00064	mg/Kg			02/28/23 12:02	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	88		75 - 131		02/28/23 12:02	1
Dibromofluoromethane	89		75 - 126		02/28/23 12:02	1
1,2-Dichloroethane-d4 (Surr)	92		70 - 134		02/28/23 12:02	1
Toluene-d8 (Surr)	91		75 - 124		02/28/23 12:02	1

# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCS 500-700426/4**  
**Matrix: Solid**  
**Analysis Batch: 700426**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	0.0500	0.0500		mg/Kg		100	40 - 150
Benzene	0.0500	0.0482		mg/Kg		96	70 - 125
Bromodichloromethane	0.0500	0.0496		mg/Kg		99	67 - 129
Bromoform	0.0500	0.0470		mg/Kg		94	68 - 136
Bromomethane	0.0500	0.0468		mg/Kg		94	70 - 130
2-Butanone (MEK)	0.0500	0.0449		mg/Kg		90	47 - 138
Carbon disulfide	0.0500	0.0415		mg/Kg		83	70 - 129
Carbon tetrachloride	0.0500	0.0505		mg/Kg		101	75 - 125
Chlorobenzene	0.0500	0.0480		mg/Kg		96	50 - 150
Chloroethane	0.0500	0.0478		mg/Kg		96	75 - 125
Chloroform	0.0500	0.0475		mg/Kg		95	57 - 135
Chloromethane	0.0500	0.0441		mg/Kg		88	70 - 125
cis-1,2-Dichloroethene	0.0500	0.0472		mg/Kg		94	70 - 125
cis-1,3-Dichloropropene	0.0500	0.0454		mg/Kg		91	70 - 125
Dibromochloromethane	0.0500	0.0479		mg/Kg		96	69 - 125
1,1-Dichloroethane	0.0500	0.0476		mg/Kg		95	70 - 125
1,2-Dichloroethane	0.0500	0.0498		mg/Kg		100	70 - 130
1,1-Dichloroethene	0.0500	0.0456		mg/Kg		91	70 - 120
1,2-Dichloropropane	0.0500	0.0495		mg/Kg		99	70 - 125
Ethylbenzene	0.0500	0.0501		mg/Kg		100	61 - 136
2-Hexanone	0.0500	0.0500		mg/Kg		100	48 - 146
Methylene Chloride	0.0500	0.0474		mg/Kg		95	70 - 126
4-Methyl-2-pentanone (MIBK)	0.0500	0.0488		mg/Kg		98	50 - 148
Methyl tert-butyl ether	0.0500	0.0468		mg/Kg		94	50 - 140
Styrene	0.0500	0.0493		mg/Kg		99	70 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.0461		mg/Kg		92	70 - 122
Tetrachloroethene	0.0500	0.0478		mg/Kg		96	70 - 124
Toluene	0.0500	0.0469		mg/Kg		94	70 - 125
trans-1,2-Dichloroethene	0.0500	0.0486		mg/Kg		97	70 - 125
trans-1,3-Dichloropropene	0.0500	0.0472		mg/Kg		94	70 - 125
1,1,1-Trichloroethane	0.0500	0.0484		mg/Kg		97	70 - 128
1,1,2-Trichloroethane	0.0500	0.0490		mg/Kg		98	70 - 125
Trichloroethene	0.0500	0.0471		mg/Kg		94	70 - 125
Vinyl acetate	0.0500	0.0453		mg/Kg		91	40 - 153
Vinyl chloride	0.0500	0.0426		mg/Kg		85	70 - 125
Xylenes, Total	0.100	0.0977		mg/Kg		98	53 - 147

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	83		75 - 131
Dibromofluoromethane	87		75 - 126
1,2-Dichloroethane-d4 (Surr)	88		70 - 134
Toluene-d8 (Surr)	91		75 - 124



# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCSD 500-700426/5**  
**Matrix: Solid**  
**Analysis Batch: 700426**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	0.0500	0.0556		mg/Kg		111	40 - 150	11	30
Benzene	0.0500	0.0493		mg/Kg		99	70 - 125	2	30
Bromodichloromethane	0.0500	0.0501		mg/Kg		100	67 - 129	1	30
Bromoform	0.0500	0.0476		mg/Kg		95	68 - 136	1	30
Bromomethane	0.0500	0.0502		mg/Kg		100	70 - 130	7	30
2-Butanone (MEK)	0.0500	0.0521		mg/Kg		104	47 - 138	15	30
Carbon disulfide	0.0500	0.0437		mg/Kg		87	70 - 129	5	30
Carbon tetrachloride	0.0500	0.0528		mg/Kg		106	75 - 125	5	30
Chlorobenzene	0.0500	0.0494		mg/Kg		99	50 - 150	3	30
Chloroethane	0.0500	0.0512		mg/Kg		102	75 - 125	7	30
Chloroform	0.0500	0.0484		mg/Kg		97	57 - 135	2	30
Chloromethane	0.0500	0.0461		mg/Kg		92	70 - 125	5	30
cis-1,2-Dichloroethene	0.0500	0.0481		mg/Kg		96	70 - 125	2	30
cis-1,3-Dichloropropene	0.0500	0.0474		mg/Kg		95	70 - 125	4	30
Dibromochloromethane	0.0500	0.0484		mg/Kg		97	69 - 125	1	30
1,1-Dichloroethane	0.0500	0.0493		mg/Kg		99	70 - 125	3	30
1,2-Dichloroethane	0.0500	0.0518		mg/Kg		104	70 - 130	4	30
1,1-Dichloroethene	0.0500	0.0481		mg/Kg		96	70 - 120	6	30
1,2-Dichloropropane	0.0500	0.0516		mg/Kg		103	70 - 125	4	30
Ethylbenzene	0.0500	0.0502		mg/Kg		100	61 - 136	0	30
2-Hexanone	0.0500	0.0556		mg/Kg		111	48 - 146	10	30
Methylene Chloride	0.0500	0.0503		mg/Kg		101	70 - 126	6	30
4-Methyl-2-pentanone (MIBK)	0.0500	0.0545		mg/Kg		109	50 - 148	11	30
Methyl tert-butyl ether	0.0500	0.0491		mg/Kg		98	50 - 140	5	30
Styrene	0.0500	0.0504		mg/Kg		101	70 - 125	2	30
1,1,2,2-Tetrachloroethane	0.0500	0.0496		mg/Kg		99	70 - 122	7	30
Tetrachloroethene	0.0500	0.0487		mg/Kg		97	70 - 124	2	30
Toluene	0.0500	0.0479		mg/Kg		96	70 - 125	2	30
trans-1,2-Dichloroethene	0.0500	0.0513		mg/Kg		103	70 - 125	5	30
trans-1,3-Dichloropropene	0.0500	0.0485		mg/Kg		97	70 - 125	3	30
1,1,1-Trichloroethane	0.0500	0.0505		mg/Kg		101	70 - 128	4	30
1,1,2-Trichloroethane	0.0500	0.0492		mg/Kg		98	70 - 125	0	30
Trichloroethene	0.0500	0.0486		mg/Kg		97	70 - 125	3	30
Vinyl acetate	0.0500	0.0519		mg/Kg		104	40 - 153	14	30
Vinyl chloride	0.0500	0.0467		mg/Kg		93	70 - 125	9	30
Xylenes, Total	0.100	0.0993		mg/Kg		99	53 - 147	2	30

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	84		75 - 131
Dibromofluoromethane	87		75 - 126
1,2-Dichloroethane-d4 (Surr)	89		70 - 134
Toluene-d8 (Surr)	91		75 - 124

# QC Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: MB 500-700601/7**  
**Matrix: Solid**  
**Analysis Batch: 700601**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	<0.020		0.020	0.0087	mg/Kg			03/01/23 11:53	1
Benzene	<0.0020		0.0020	0.00051	mg/Kg			03/01/23 11:53	1
Bromodichloromethane	<0.0020		0.0020	0.00041	mg/Kg			03/01/23 11:53	1
Bromoform	<0.0020		0.0020	0.00058	mg/Kg			03/01/23 11:53	1
Bromomethane	<0.0050		0.0050	0.0019	mg/Kg			03/01/23 11:53	1
2-Butanone (MEK)	<0.0050		0.0050	0.0022	mg/Kg			03/01/23 11:53	1
Carbon disulfide	<0.0050		0.0050	0.0010	mg/Kg			03/01/23 11:53	1
Carbon tetrachloride	<0.0020		0.0020	0.00058	mg/Kg			03/01/23 11:53	1
Chlorobenzene	<0.0020		0.0020	0.00074	mg/Kg			03/01/23 11:53	1
Chloroethane	<0.0050		0.0050	0.0015	mg/Kg			03/01/23 11:53	1
Chloroform	<0.0020		0.0020	0.00069	mg/Kg			03/01/23 11:53	1
Chloromethane	<0.0050		0.0050	0.0020	mg/Kg			03/01/23 11:53	1
cis-1,2-Dichloroethene	<0.0020		0.0020	0.00056	mg/Kg			03/01/23 11:53	1
cis-1,3-Dichloropropene	<0.0020		0.0020	0.00060	mg/Kg			03/01/23 11:53	1
Dibromochloromethane	<0.0020		0.0020	0.00065	mg/Kg			03/01/23 11:53	1
1,1-Dichloroethane	<0.0020		0.0020	0.00069	mg/Kg			03/01/23 11:53	1
1,2-Dichloroethane	<0.0050		0.0050	0.0016	mg/Kg			03/01/23 11:53	1
1,1-Dichloroethene	<0.0020		0.0020	0.00069	mg/Kg			03/01/23 11:53	1
1,2-Dichloropropane	<0.0020		0.0020	0.00052	mg/Kg			03/01/23 11:53	1
1,3-Dichloropropane, Total	<0.0020		0.0020	0.00070	mg/Kg			03/01/23 11:53	1
Ethylbenzene	<0.0020		0.0020	0.00096	mg/Kg			03/01/23 11:53	1
2-Hexanone	<0.0050		0.0050	0.0016	mg/Kg			03/01/23 11:53	1
Methylene Chloride	<0.0050		0.0050	0.0020	mg/Kg			03/01/23 11:53	1
4-Methyl-2-pentanone (MIBK)	<0.0050		0.0050	0.0015	mg/Kg			03/01/23 11:53	1
Methyl tert-butyl ether	<0.0020		0.0020	0.00059	mg/Kg			03/01/23 11:53	1
Styrene	<0.0020		0.0020	0.00060	mg/Kg			03/01/23 11:53	1
1,1,2,2-Tetrachloroethane	<0.0020		0.0020	0.00064	mg/Kg			03/01/23 11:53	1
Tetrachloroethene	<0.0020		0.0020	0.00068	mg/Kg			03/01/23 11:53	1
Toluene	<0.0020		0.0020	0.00051	mg/Kg			03/01/23 11:53	1
trans-1,2-Dichloroethene	<0.0020		0.0020	0.00089	mg/Kg			03/01/23 11:53	1
trans-1,3-Dichloropropene	<0.0020		0.0020	0.00070	mg/Kg			03/01/23 11:53	1
1,1,1-Trichloroethane	<0.0020		0.0020	0.00067	mg/Kg			03/01/23 11:53	1
1,1,2-Trichloroethane	<0.0020		0.0020	0.00086	mg/Kg			03/01/23 11:53	1
Trichloroethene	<0.0020		0.0020	0.00068	mg/Kg			03/01/23 11:53	1
Vinyl acetate	<0.0050		0.0050	0.0017	mg/Kg			03/01/23 11:53	1
Vinyl chloride	<0.0020		0.0020	0.00089	mg/Kg			03/01/23 11:53	1
Xylenes, Total	<0.0040		0.0040	0.00064	mg/Kg			03/01/23 11:53	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	88		75 - 131		03/01/23 11:53	1
Dibromofluoromethane	87		75 - 126		03/01/23 11:53	1
1,2-Dichloroethane-d4 (Surr)	88		70 - 134		03/01/23 11:53	1
Toluene-d8 (Surr)	93		75 - 124		03/01/23 11:53	1

# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCS 500-700601/4**  
**Matrix: Solid**  
**Analysis Batch: 700601**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	0.0500	0.0449		mg/Kg		90	40 - 150
Benzene	0.0500	0.0516		mg/Kg		103	70 - 125
Bromodichloromethane	0.0500	0.0496		mg/Kg		99	67 - 129
Bromoform	0.0500	0.0452		mg/Kg		90	68 - 136
Bromomethane	0.0500	0.0508		mg/Kg		102	70 - 130
2-Butanone (MEK)	0.0500	0.0416		mg/Kg		83	47 - 138
Carbon disulfide	0.0500	0.0495		mg/Kg		99	70 - 129
Carbon tetrachloride	0.0500	0.0539		mg/Kg		108	75 - 125
Chlorobenzene	0.0500	0.0504		mg/Kg		101	50 - 150
Chloroethane	0.0500	0.0521		mg/Kg		104	75 - 125
Chloroform	0.0500	0.0504		mg/Kg		101	57 - 135
Chloromethane	0.0500	0.0502		mg/Kg		100	70 - 125
cis-1,2-Dichloroethene	0.0500	0.0507		mg/Kg		101	70 - 125
cis-1,3-Dichloropropene	0.0500	0.0478		mg/Kg		96	70 - 125
Dibromochloromethane	0.0500	0.0475		mg/Kg		95	69 - 125
1,1-Dichloroethane	0.0500	0.0521		mg/Kg		104	70 - 125
1,2-Dichloroethane	0.0500	0.0521		mg/Kg		104	70 - 130
1,1-Dichloroethene	0.0500	0.0520		mg/Kg		104	70 - 120
1,2-Dichloropropane	0.0500	0.0503		mg/Kg		101	70 - 125
Ethylbenzene	0.0500	0.0513		mg/Kg		103	61 - 136
2-Hexanone	0.0500	0.0453		mg/Kg		91	48 - 146
Methylene Chloride	0.0500	0.0506		mg/Kg		101	70 - 126
4-Methyl-2-pentanone (MIBK)	0.0500	0.0448		mg/Kg		90	50 - 148
Methyl tert-butyl ether	0.0500	0.0485		mg/Kg		97	50 - 140
Styrene	0.0500	0.0512		mg/Kg		102	70 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.0450		mg/Kg		90	70 - 122
Tetrachloroethene	0.0500	0.0503		mg/Kg		101	70 - 124
Toluene	0.0500	0.0504		mg/Kg		101	70 - 125
trans-1,2-Dichloroethene	0.0500	0.0539		mg/Kg		108	70 - 125
trans-1,3-Dichloropropene	0.0500	0.0480		mg/Kg		96	70 - 125
1,1,1-Trichloroethane	0.0500	0.0532		mg/Kg		106	70 - 128
1,1,2-Trichloroethane	0.0500	0.0486		mg/Kg		97	70 - 125
Trichloroethene	0.0500	0.0514		mg/Kg		103	70 - 125
Vinyl acetate	0.0500	0.0435		mg/Kg		87	40 - 153
Vinyl chloride	0.0500	0.0482		mg/Kg		96	70 - 125
Xylenes, Total	0.100	0.103		mg/Kg		103	53 - 147

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	83		75 - 131
Dibromofluoromethane	87		75 - 126
1,2-Dichloroethane-d4 (Surr)	87		70 - 134
Toluene-d8 (Surr)	93		75 - 124

# QC Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCSD 500-700601/5**  
**Matrix: Solid**  
**Analysis Batch: 700601**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	0.0500	0.0541		mg/Kg		108	40 - 150	19	30
Benzene	0.0500	0.0517		mg/Kg		103	70 - 125	0	30
Bromodichloromethane	0.0500	0.0520		mg/Kg		104	67 - 129	5	30
Bromoform	0.0500	0.0438		mg/Kg		88	68 - 136	3	30
Bromomethane	0.0500	0.0504		mg/Kg		101	70 - 130	1	30
2-Butanone (MEK)	0.0500	0.0490		mg/Kg		98	47 - 138	16	30
Carbon disulfide	0.0500	0.0510		mg/Kg		102	70 - 129	3	30
Carbon tetrachloride	0.0500	0.0548		mg/Kg		110	75 - 125	2	30
Chlorobenzene	0.0500	0.0500		mg/Kg		100	50 - 150	1	30
Chloroethane	0.0500	0.0512		mg/Kg		102	75 - 125	2	30
Chloroform	0.0500	0.0505		mg/Kg		101	57 - 135	0	30
Chloromethane	0.0500	0.0490		mg/Kg		98	70 - 125	3	30
cis-1,2-Dichloroethene	0.0500	0.0516		mg/Kg		103	70 - 125	2	30
cis-1,3-Dichloropropene	0.0500	0.0479		mg/Kg		96	70 - 125	0	30
Dibromochloromethane	0.0500	0.0477		mg/Kg		95	69 - 125	0	30
1,1-Dichloroethane	0.0500	0.0524		mg/Kg		105	70 - 125	1	30
1,2-Dichloroethane	0.0500	0.0529		mg/Kg		106	70 - 130	1	30
1,1-Dichloroethene	0.0500	0.0533		mg/Kg		107	70 - 120	2	30
1,2-Dichloropropane	0.0500	0.0525		mg/Kg		105	70 - 125	4	30
Ethylbenzene	0.0500	0.0517		mg/Kg		103	61 - 136	1	30
2-Hexanone	0.0500	0.0520		mg/Kg		104	48 - 146	14	30
Methylene Chloride	0.0500	0.0523		mg/Kg		105	70 - 126	3	30
4-Methyl-2-pentanone (MIBK)	0.0500	0.0500		mg/Kg		100	50 - 148	11	30
Methyl tert-butyl ether	0.0500	0.0505		mg/Kg		101	50 - 140	4	30
Styrene	0.0500	0.0508		mg/Kg		102	70 - 125	1	30
1,1,2,2-Tetrachloroethane	0.0500	0.0473		mg/Kg		95	70 - 122	5	30
Tetrachloroethene	0.0500	0.0503		mg/Kg		101	70 - 124	0	30
Toluene	0.0500	0.0505		mg/Kg		101	70 - 125	0	30
trans-1,2-Dichloroethene	0.0500	0.0548		mg/Kg		110	70 - 125	2	30
trans-1,3-Dichloropropene	0.0500	0.0490		mg/Kg		98	70 - 125	2	30
1,1,1-Trichloroethane	0.0500	0.0535		mg/Kg		107	70 - 128	0	30
1,1,2-Trichloroethane	0.0500	0.0489		mg/Kg		98	70 - 125	1	30
Trichloroethene	0.0500	0.0522		mg/Kg		104	70 - 125	2	30
Vinyl acetate	0.0500	0.0453		mg/Kg		91	40 - 153	4	30
Vinyl chloride	0.0500	0.0490		mg/Kg		98	70 - 125	2	30
Xylenes, Total	0.100	0.103		mg/Kg		103	53 - 147	0	30

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	83		75 - 131
Dibromofluoromethane	88		75 - 126
1,2-Dichloroethane-d4 (Surr)	86		70 - 134
Toluene-d8 (Surr)	91		75 - 124

# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: MB 500-700448/1-A**  
**Matrix: Solid**  
**Analysis Batch: 700513**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 700448**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Phenol	<0.17		0.17	0.074	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Bis(2-chloroethyl)ether	<0.17		0.17	0.050	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
1,3-Dichlorobenzene	<0.17		0.17	0.037	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
1,4-Dichlorobenzene	<0.17		0.17	0.043	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
1,2-Dichlorobenzene	<0.17		0.17	0.040	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2-Methylphenol	<0.17		0.17	0.053	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,2'-oxybis[1-chloropropane]	<0.17		0.17	0.039	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
N-Nitrosodi-n-propylamine	<0.067		0.067	0.041	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Hexachloroethane	<0.17		0.17	0.051	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2-Chlorophenol	<0.17		0.17	0.057	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Nitrobenzene	<0.033		0.033	0.0083	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Bis(2-chloroethoxy)methane	<0.17		0.17	0.034	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
1,2,4-Trichlorobenzene	<0.17		0.17	0.036	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Isophorone	<0.17		0.17	0.037	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,4-Dimethylphenol	<0.33		0.33	0.13	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Hexachlorobutadiene	<0.17		0.17	0.052	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Naphthalene	<0.033		0.033	0.0051	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,4-Dichlorophenol	<0.33		0.33	0.079	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4-Chloroaniline	<0.67		0.67	0.16	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,4,6-Trichlorophenol	<0.33		0.33	0.11	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,4,5-Trichlorophenol	<0.33		0.33	0.076	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Hexachlorocyclopentadiene	<0.67		0.67	0.19	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2-Methylnaphthalene	<0.067		0.067	0.0061	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2-Nitroaniline	<0.17		0.17	0.045	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2-Chloronaphthalene	<0.17		0.17	0.037	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4-Chloro-3-methylphenol	<0.33		0.33	0.11	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,6-Dinitrotoluene	<0.17		0.17	0.065	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2-Nitrophenol	<0.33		0.33	0.079	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
3-Nitroaniline	<0.33		0.33	0.10	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Dimethyl phthalate	<0.17		0.17	0.043	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,4-Dinitrophenol	<0.67		0.67	0.59	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Acenaphthylene	<0.033		0.033	0.0044	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,4-Dinitrotoluene	<0.17		0.17	0.053	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Acenaphthene	<0.033		0.033	0.0060	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Dibenzofuran	<0.17		0.17	0.039	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4-Nitrophenol	<0.67		0.67	0.32	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Fluorene	<0.033		0.033	0.0047	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4-Nitroaniline	<0.33		0.33	0.14	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4-Bromophenyl phenyl ether	<0.17		0.17	0.044	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Hexachlorobenzene	<0.067		0.067	0.0077	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Diethyl phthalate	<0.17		0.17	0.056	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4-Chlorophenyl phenyl ether	<0.17		0.17	0.039	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Pentachlorophenol	<0.67		0.67	0.53	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
N-Nitrosodiphenylamine	<0.17		0.17	0.039	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4,6-Dinitro-2-methylphenol	<0.67		0.67	0.27	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Phenanthrene	<0.033		0.033	0.0046	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Anthracene	<0.033		0.033	0.0056	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Carbazole	<0.17		0.17	0.083	mg/Kg		02/28/23 08:18	02/28/23 15:34	1

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# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: MB 500-700448/1-A**  
**Matrix: Solid**  
**Analysis Batch: 700513**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 700448**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	<0.17		0.17	0.051	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Fluoranthene	<0.033		0.033	0.0062	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Pyrene	<0.033		0.033	0.0066	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Butyl benzyl phthalate	<0.17		0.17	0.063	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Benzo[a]anthracene	<0.033		0.033	0.0045	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Chrysene	<0.033		0.033	0.0091	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
3,3'-Dichlorobenzidine	<0.17		0.17	0.047	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Bis(2-ethylhexyl) phthalate	<0.17		0.17	0.061	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Di-n-octyl phthalate	<0.17		0.17	0.054	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Benzo[b]fluoranthene	<0.033		0.033	0.0072	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Benzo[k]fluoranthene	<0.033		0.033	0.0098	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Benzo[a]pyrene	<0.033		0.033	0.0064	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Indeno[1,2,3-cd]pyrene	<0.033		0.033	0.0086	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Dibenz(a,h)anthracene	<0.033		0.033	0.0064	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Benzo[g,h,i]perylene	<0.033		0.033	0.011	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
3 & 4 Methylphenol	<0.17		0.17	0.055	mg/Kg		02/28/23 08:18	02/28/23 15:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	127		31 - 166	02/28/23 08:18	02/28/23 15:34	1
Phenol-d5	120		30 - 153	02/28/23 08:18	02/28/23 15:34	1
Nitrobenzene-d5 (Surr)	99		37 - 147	02/28/23 08:18	02/28/23 15:34	1
2-Fluorobiphenyl (Surr)	92		43 - 145	02/28/23 08:18	02/28/23 15:34	1
2,4,6-Tribromophenol	92		31 - 143	02/28/23 08:18	02/28/23 15:34	1
Terphenyl-d14 (Surr)	102		42 - 157	02/28/23 08:18	02/28/23 15:34	1

**Lab Sample ID: LCS 500-700448/2-A**  
**Matrix: Solid**  
**Analysis Batch: 700513**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700448**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Phenol	1.33	1.42		mg/Kg		106	56 - 122
Bis(2-chloroethyl)ether	1.33	1.29		mg/Kg		97	55 - 111
1,3-Dichlorobenzene	1.33	1.22		mg/Kg		92	65 - 124
1,4-Dichlorobenzene	1.33	1.21		mg/Kg		91	61 - 110
1,2-Dichlorobenzene	1.33	1.25		mg/Kg		94	62 - 110
2-Methylphenol	1.33	1.35		mg/Kg		102	60 - 120
2,2'-oxybis[1-chloropropane]	1.33	1.40		mg/Kg		105	40 - 124
N-Nitrosodi-n-propylamine	1.33	1.43		mg/Kg		107	56 - 118
Hexachloroethane	1.33	1.25		mg/Kg		94	60 - 114
2-Chlorophenol	1.33	1.42		mg/Kg		107	64 - 110
Nitrobenzene	1.33	1.42		mg/Kg		106	60 - 116
Bis(2-chloroethoxy)methane	1.33	1.30		mg/Kg		98	60 - 112
1,2,4-Trichlorobenzene	1.33	1.37		mg/Kg		103	66 - 117
Isophorone	1.33	1.35		mg/Kg		101	55 - 110
2,4-Dimethylphenol	1.33	1.33		mg/Kg		100	60 - 110
Hexachlorobutadiene	1.33	1.39		mg/Kg		105	56 - 120
Naphthalene	1.33	1.26		mg/Kg		95	63 - 110
2,4-Dichlorophenol	1.33	1.38		mg/Kg		103	58 - 120

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# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCS 500-700448/2-A**  
**Matrix: Solid**  
**Analysis Batch: 700513**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700448**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4-Chloroaniline	1.33	1.23		mg/Kg		92	30 - 150
2,4,6-Trichlorophenol	1.33	1.37		mg/Kg		103	57 - 120
2,4,5-Trichlorophenol	1.33	1.40		mg/Kg		105	50 - 120
Hexachlorocyclopentadiene	1.33	1.12		mg/Kg		84	10 - 133
2-Methylnaphthalene	1.33	1.28		mg/Kg		96	69 - 112
2-Nitroaniline	1.33	1.45		mg/Kg		109	57 - 124
2-Chloronaphthalene	1.33	1.28		mg/Kg		96	69 - 114
4-Chloro-3-methylphenol	1.33	1.50		mg/Kg		113	65 - 122
2,6-Dinitrotoluene	1.33	1.47		mg/Kg		110	70 - 123
2-Nitrophenol	1.33	1.40		mg/Kg		105	60 - 120
3-Nitroaniline	1.33	0.921		mg/Kg		69	40 - 122
Dimethyl phthalate	1.33	1.33		mg/Kg		99	69 - 116
2,4-Dinitrophenol	2.67	1.53		mg/Kg		57	10 - 100
Acenaphthylene	1.33	1.31		mg/Kg		98	68 - 120
2,4-Dinitrotoluene	1.33	1.61		mg/Kg		121	69 - 124
Acenaphthene	1.33	1.29		mg/Kg		97	65 - 124
Dibenzofuran	1.33	1.30		mg/Kg		97	66 - 115
4-Nitrophenol	2.67	2.74		mg/Kg		103	30 - 122
Fluorene	1.33	1.32		mg/Kg		99	62 - 120
4-Nitroaniline	1.33	1.37		mg/Kg		103	60 - 160
4-Bromophenyl phenyl ether	1.33	1.35		mg/Kg		101	68 - 118
Hexachlorobenzene	1.33	1.23		mg/Kg		92	63 - 124
Diethyl phthalate	1.33	1.32		mg/Kg		99	58 - 120
4-Chlorophenyl phenyl ether	1.33	1.34		mg/Kg		100	62 - 119
Pentachlorophenol	2.67	2.14		mg/Kg		80	13 - 112
N-Nitrosodiphenylamine	1.33	1.35		mg/Kg		101	65 - 112
4,6-Dinitro-2-methylphenol	2.67	2.15		mg/Kg		81	10 - 110
Phenanthrene	1.33	1.28		mg/Kg		96	62 - 120
Anthracene	1.33	1.31		mg/Kg		98	70 - 114
Carbazole	1.33	1.65		mg/Kg		124	65 - 142
Di-n-butyl phthalate	1.33	1.37		mg/Kg		103	65 - 120
Fluoranthene	1.33	1.34		mg/Kg		100	62 - 120
Pyrene	1.33	1.37		mg/Kg		103	61 - 128
Butyl benzyl phthalate	1.33	1.50		mg/Kg		113	71 - 129
Benzo[a]anthracene	1.33	1.36		mg/Kg		102	67 - 122
Chrysene	1.33	1.34		mg/Kg		101	63 - 120
3,3'-Dichlorobenzidine	1.33	1.25		mg/Kg		94	35 - 128
Bis(2-ethylhexyl) phthalate	1.33	1.52		mg/Kg		114	72 - 131
Di-n-octyl phthalate	1.33	1.47		mg/Kg		110	68 - 134
Benzo[b]fluoranthene	1.33	1.47		mg/Kg		110	69 - 129
Benzo[k]fluoranthene	1.33	1.43		mg/Kg		107	68 - 127
Benzo[a]pyrene	1.33	1.42		mg/Kg		106	65 - 133
Indeno[1,2,3-cd]pyrene	1.33	1.48		mg/Kg		111	68 - 130
Dibenz(a,h)anthracene	1.33	1.43		mg/Kg		107	64 - 131
Benzo[g,h,i]perylene	1.33	1.44		mg/Kg		108	72 - 131
3 & 4 Methylphenol	1.33	1.32		mg/Kg		99	57 - 120



# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCS 500-700448/2-A**  
**Matrix: Solid**  
**Analysis Batch: 700513**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700448**

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorophenol	123		31 - 166
Phenol-d5	110		30 - 153
Nitrobenzene-d5 (Surr)	97		37 - 147
2-Fluorobiphenyl (Surr)	90		43 - 145
2,4,6-Tribromophenol	101		31 - 143
Terphenyl-d14 (Surr)	100		42 - 157

**Lab Sample ID: 500-229911-15 MS**  
**Matrix: Solid**  
**Analysis Batch: 700703**

**Client Sample ID: 4062-C0V-05-B01 (0-1)**  
**Prep Type: Total/NA**  
**Prep Batch: 700448**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	Limits
				Result	Qualifier				
Phenol	<0.21		1.70	1.64		mg/Kg	☼	96	56 - 122
Bis(2-chloroethyl)ether	<0.21		1.70	1.27		mg/Kg	☼	75	55 - 111
1,3-Dichlorobenzene	<0.21		1.70	1.15		mg/Kg	☼	67	60 - 110
1,4-Dichlorobenzene	<0.21		1.70	1.21		mg/Kg	☼	71	61 - 110
1,2-Dichlorobenzene	<0.21		1.70	1.07		mg/Kg	☼	63	62 - 110
2-Methylphenol	<0.21		1.70	1.33		mg/Kg	☼	78	60 - 120
2,2'-oxybis[1-chloropropane]	<0.21		1.70	1.43		mg/Kg	☼	84	40 - 124
N-Nitrosodi-n-propylamine	<0.084		1.70	1.35		mg/Kg	☼	79	56 - 118
Hexachloroethane	<0.21	F1	1.70	0.942	F1	mg/Kg	☼	55	60 - 114
2-Chlorophenol	<0.21		1.70	1.33		mg/Kg	☼	78	64 - 110
Nitrobenzene	<0.042		1.70	1.71		mg/Kg	☼	100	60 - 116
Bis(2-chloroethoxy)methane	<0.21		1.70	1.63		mg/Kg	☼	96	60 - 112
1,2,4-Trichlorobenzene	<0.21		1.70	1.45		mg/Kg	☼	85	66 - 117
Isophorone	<0.21		1.70	1.63		mg/Kg	☼	96	55 - 110
2,4-Dimethylphenol	<0.42		1.70	1.26		mg/Kg	☼	74	60 - 110
Hexachlorobutadiene	<0.21		1.70	1.15		mg/Kg	☼	68	56 - 120
Naphthalene	<0.042		1.70	1.31		mg/Kg	☼	77	63 - 110
2,4-Dichlorophenol	<0.42		1.70	1.36		mg/Kg	☼	80	58 - 120
4-Chloroaniline	<0.84		1.70	1.04		mg/Kg	☼	61	30 - 150
2,4,6-Trichlorophenol	<0.42		1.70	1.43		mg/Kg	☼	84	57 - 120
2,4,5-Trichlorophenol	<0.42		1.70	1.46		mg/Kg	☼	86	50 - 120
Hexachlorocyclopentadiene	<0.84	F1	1.70	<0.86	F1	mg/Kg	☼	0	10 - 133
2-Methylnaphthalene	0.0077	J F1	1.70	1.15	F1	mg/Kg	☼	67	69 - 112
2-Nitroaniline	<0.21		1.70	1.62		mg/Kg	☼	95	57 - 124
2-Chloronaphthalene	<0.21		1.70	1.47		mg/Kg	☼	86	69 - 114
4-Chloro-3-methylphenol	<0.42		1.70	1.53		mg/Kg	☼	90	65 - 122
2,6-Dinitrotoluene	<0.21		1.70	1.53		mg/Kg	☼	90	70 - 123
2-Nitrophenol	<0.42		1.70	1.56		mg/Kg	☼	92	60 - 120
3-Nitroaniline	<0.42		1.70	1.50		mg/Kg	☼	88	40 - 122
Dimethyl phthalate	<0.21		1.70	1.44		mg/Kg	☼	85	69 - 116
2,4-Dinitrophenol	<0.84	F1	3.40	0.919		mg/Kg	☼	27	10 - 100
Acenaphthylene	<0.042		1.70	1.40		mg/Kg	☼	82	68 - 120
2,4-Dinitrotoluene	<0.21		1.70	1.69		mg/Kg	☼	99	69 - 124
Acenaphthene	<0.042		1.70	1.33		mg/Kg	☼	78	65 - 124
Dibenzofuran	<0.21		1.70	1.38		mg/Kg	☼	81	66 - 115
4-Nitrophenol	<0.84		3.40	2.85		mg/Kg	☼	84	30 - 122

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# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: 500-229911-15 MS**

**Matrix: Solid**

**Analysis Batch: 700703**

**Client Sample ID: 4062-C0V-05-B01 (0-1)**

**Prep Type: Total/NA**

**Prep Batch: 700448**

Analyte	Sample	Sample Qualifier	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result			Result	Qualifier				
Fluorene	<0.042		1.70	1.44		mg/Kg	☼	85	62 - 120
4-Nitroaniline	<0.42		1.70	1.57		mg/Kg	☼	92	60 - 160
4-Bromophenyl phenyl ether	<0.21		1.70	1.28		mg/Kg	☼	75	68 - 118
Hexachlorobenzene	<0.084		1.70	1.28		mg/Kg	☼	75	63 - 124
Diethyl phthalate	<0.21		1.70	1.48		mg/Kg	☼	87	58 - 120
4-Chlorophenyl phenyl ether	<0.21		1.70	1.30		mg/Kg	☼	77	62 - 119
Pentachlorophenol	<0.84		3.40	1.05		mg/Kg	☼	31	13 - 112
N-Nitrosodiphenylamine	<0.21		1.70	1.27		mg/Kg	☼	75	65 - 112
4,6-Dinitro-2-methylphenol	<0.84		3.40	1.03		mg/Kg	☼	30	10 - 110
Phenanthrene	0.017	J	1.70	1.55		mg/Kg	☼	90	62 - 120
Anthracene	<0.042		1.70	1.27		mg/Kg	☼	75	70 - 114
Carbazole	<0.21		1.70	1.50		mg/Kg	☼	88	65 - 142
Di-n-butyl phthalate	<0.21		1.70	1.45		mg/Kg	☼	85	65 - 120
Fluoranthene	0.018	J	1.70	1.52		mg/Kg	☼	88	62 - 120
Pyrene	0.020	J	1.70	1.56		mg/Kg	☼	91	61 - 128
Butyl benzyl phthalate	<0.21		1.70	1.72		mg/Kg	☼	101	71 - 129
Benzo[a]anthracene	0.011	J	1.70	1.52		mg/Kg	☼	88	67 - 122
Chrysene	0.012	J	1.70	1.38		mg/Kg	☼	81	63 - 120
3,3'-Dichlorobenzidine	<0.21	F2 F1	1.70	0.943		mg/Kg	☼	55	35 - 128
Bis(2-ethylhexyl) phthalate	<0.21		1.70	1.66		mg/Kg	☼	98	72 - 131
Di-n-octyl phthalate	<0.21		1.70	1.72		mg/Kg	☼	101	68 - 134
Benzo[b]fluoranthene	0.029	J	1.70	1.59		mg/Kg	☼	92	69 - 129
Benzo[k]fluoranthene	<0.042		1.70	1.80		mg/Kg	☼	106	68 - 127
Benzo[a]pyrene	0.020	J	1.70	1.54		mg/Kg	☼	89	65 - 133
Indeno[1,2,3-cd]pyrene	<0.042		1.70	1.49		mg/Kg	☼	87	68 - 130
Dibenz(a,h)anthracene	<0.042		1.70	1.30		mg/Kg	☼	77	64 - 131
Benzo[g,h,i]perylene	<0.042	F1	1.70	1.18	F1	mg/Kg	☼	69	72 - 131
3 & 4 Methylphenol	<0.21		1.70	1.14		mg/Kg	☼	67	57 - 120

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
2-Fluorophenol	104		31 - 166
Phenol-d5	94		30 - 153
Nitrobenzene-d5 (Surr)	75		37 - 147
2-Fluorobiphenyl (Surr)	74		43 - 145
2,4,6-Tribromophenol	58		31 - 143
Terphenyl-d14 (Surr)	96		42 - 157

**Lab Sample ID: 500-229911-15 MSD**

**Matrix: Solid**

**Analysis Batch: 700703**

**Client Sample ID: 4062-C0V-05-B01 (0-1)**

**Prep Type: Total/NA**

**Prep Batch: 700448**

Analyte	Sample	Sample Qualifier	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	
	Result			Result	Qualifier					RPD	Limit
Phenol	<0.21		1.65	1.57		mg/Kg	☼	95	56 - 122	4	30
Bis(2-chloroethyl)ether	<0.21		1.65	1.51		mg/Kg	☼	92	55 - 111	17	30
1,3-Dichlorobenzene	<0.21		1.65	1.06		mg/Kg	☼	64	60 - 110	8	30
1,4-Dichlorobenzene	<0.21		1.65	1.09		mg/Kg	☼	66	61 - 110	10	30
1,2-Dichlorobenzene	<0.21		1.65	1.09		mg/Kg	☼	66	62 - 110	2	30
2-Methylphenol	<0.21		1.65	1.35		mg/Kg	☼	82	60 - 120	2	30

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# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: 500-229911-15 MSD**

**Client Sample ID: 4062-C0V-05-B01 (0-1)**

**Matrix: Solid**

**Prep Type: Total/NA**

**Analysis Batch: 700703**

**Prep Batch: 700448**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
2,2'-oxybis[1-chloropropane]	<0.21		1.65	1.37		mg/Kg	☼	83	40 - 124	4	30
N-Nitrosodi-n-propylamine	<0.084		1.65	1.33		mg/Kg	☼	81	56 - 118	1	30
Hexachloroethane	<0.21	F1	1.65	0.869	F1	mg/Kg	☼	53	60 - 114	8	30
2-Chlorophenol	<0.21		1.65	1.34		mg/Kg	☼	81	64 - 110	0	30
Nitrobenzene	<0.042		1.65	1.50		mg/Kg	☼	91	60 - 116	13	30
Bis(2-chloroethoxy)methane	<0.21		1.65	1.41		mg/Kg	☼	86	60 - 112	14	30
1,2,4-Trichlorobenzene	<0.21		1.65	1.21		mg/Kg	☼	73	66 - 117	18	30
Isophorone	<0.21		1.65	1.43		mg/Kg	☼	87	55 - 110	13	30
2,4-Dimethylphenol	<0.42		1.65	1.21		mg/Kg	☼	74	60 - 110	4	30
Hexachlorobutadiene	<0.21		1.65	1.11		mg/Kg	☼	68	56 - 120	3	30
Naphthalene	<0.042		1.65	1.28		mg/Kg	☼	78	63 - 110	2	30
2,4-Dichlorophenol	<0.42		1.65	1.28		mg/Kg	☼	78	58 - 120	6	30
4-Chloroaniline	<0.84		1.65	0.901		mg/Kg	☼	55	30 - 150	15	30
2,4,6-Trichlorophenol	<0.42		1.65	1.21		mg/Kg	☼	73	57 - 120	17	30
2,4,5-Trichlorophenol	<0.42		1.65	1.63		mg/Kg	☼	99	50 - 120	11	30
Hexachlorocyclopentadiene	<0.84	F1	1.65	<0.83	F1	mg/Kg	☼	0	10 - 133	NC	30
2-Methylnaphthalene	0.0077	J F1	1.65	1.45		mg/Kg	☼	88	69 - 112	23	30
2-Nitroaniline	<0.21		1.65	1.61		mg/Kg	☼	98	57 - 124	0	30
2-Chloronaphthalene	<0.21		1.65	1.36		mg/Kg	☼	83	69 - 114	7	30
4-Chloro-3-methylphenol	<0.42		1.65	1.58		mg/Kg	☼	96	65 - 122	3	30
2,6-Dinitrotoluene	<0.21		1.65	1.56		mg/Kg	☼	95	70 - 123	2	30
2-Nitrophenol	<0.42		1.65	1.33		mg/Kg	☼	81	60 - 120	16	30
3-Nitroaniline	<0.42		1.65	1.32		mg/Kg	☼	80	40 - 122	13	30
Dimethyl phthalate	<0.21		1.65	1.45		mg/Kg	☼	88	69 - 116	0	30
2,4-Dinitrophenol	<0.84	F1	3.30	<0.83	F1	mg/Kg	☼	0	10 - 100	NC	30
Acenaphthylene	<0.042		1.65	1.47		mg/Kg	☼	89	68 - 120	5	30
2,4-Dinitrotoluene	<0.21		1.65	1.63		mg/Kg	☼	99	69 - 124	4	30
Acenaphthene	<0.042		1.65	1.40		mg/Kg	☼	85	65 - 124	5	30
Dibenzofuran	<0.21		1.65	1.46		mg/Kg	☼	88	66 - 115	5	30
4-Nitrophenol	<0.84		3.30	3.02		mg/Kg	☼	92	30 - 122	6	30
Fluorene	<0.042		1.65	1.44		mg/Kg	☼	87	62 - 120	0	30
4-Nitroaniline	<0.42		1.65	1.51		mg/Kg	☼	92	60 - 160	4	30
4-Bromophenyl phenyl ether	<0.21		1.65	1.37		mg/Kg	☼	83	68 - 118	6	30
Hexachlorobenzene	<0.084		1.65	1.46		mg/Kg	☼	89	63 - 124	13	30
Diethyl phthalate	<0.21		1.65	1.47		mg/Kg	☼	89	58 - 120	1	30
4-Chlorophenyl phenyl ether	<0.21		1.65	1.36		mg/Kg	☼	82	62 - 119	4	30
Pentachlorophenol	<0.84		3.30	1.31		mg/Kg	☼	40	13 - 112	22	30
N-Nitrosodiphenylamine	<0.21		1.65	1.44		mg/Kg	☼	88	65 - 112	13	30
4,6-Dinitro-2-methylphenol	<0.84		3.30	0.811	J	mg/Kg	☼	25	10 - 110	24	30
Phenanthrene	0.017	J	1.65	1.67		mg/Kg	☼	100	62 - 120	7	30
Anthracene	<0.042		1.65	1.51		mg/Kg	☼	92	70 - 114	17	30
Carbazole	<0.21		1.65	1.60		mg/Kg	☼	97	65 - 142	7	30
Di-n-butyl phthalate	<0.21		1.65	1.60		mg/Kg	☼	97	65 - 120	10	30
Fluoranthene	0.018	J	1.65	1.67		mg/Kg	☼	100	62 - 120	9	30
Pyrene	0.020	J	1.65	1.91		mg/Kg	☼	115	61 - 128	20	30
Butyl benzyl phthalate	<0.21		1.65	1.99		mg/Kg	☼	120	71 - 129	14	30
Benzo[a]anthracene	0.011	J	1.65	1.61		mg/Kg	☼	97	67 - 122	6	30
Chrysene	0.012	J	1.65	1.50		mg/Kg	☼	90	63 - 120	8	30
3,3'-Dichlorobenzidine	<0.21	F2 F1	1.65	0.499	F2 F1	mg/Kg	☼	30	35 - 128	62	30

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# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: 500-229911-15 MSD**  
**Matrix: Solid**  
**Analysis Batch: 700703**

**Client Sample ID: 4062-C0V-05-B01 (0-1)**  
**Prep Type: Total/NA**  
**Prep Batch: 700448**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						
Bis(2-ethylhexyl) phthalate	<0.21		1.65	1.91		mg/Kg	☼	116	72 - 131	14	30
Di-n-octyl phthalate	<0.21		1.65	1.59		mg/Kg	☼	96	68 - 134	8	30
Benzo[b]fluoranthene	0.029	J	1.65	1.67		mg/Kg	☼	100	69 - 129	5	30
Benzo[k]fluoranthene	<0.042		1.65	1.89		mg/Kg	☼	115	68 - 127	5	30
Benzo[a]pyrene	0.020	J	1.65	1.58		mg/Kg	☼	94	65 - 133	2	30
Indeno[1,2,3-cd]pyrene	<0.042		1.65	1.36		mg/Kg	☼	82	68 - 130	9	30
Dibenz(a,h)anthracene	<0.042		1.65	1.20		mg/Kg	☼	73	64 - 131	8	30
Benzo[g,h,i]perylene	<0.042	F1	1.65	1.08	F1	mg/Kg	☼	65	72 - 131	9	30
3 & 4 Methylphenol	<0.21		1.65	1.23		mg/Kg	☼	75	57 - 120	8	30
<b>Surrogate</b>	<b>MSD</b>	<b>MSD</b>	<b>Limits</b>								
	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>								
2-Fluorophenol	102		31 - 166								
Phenol-d5	91		30 - 153								
Nitrobenzene-d5 (Surr)	73		37 - 147								
2-Fluorobiphenyl (Surr)	76		43 - 145								
2,4,6-Tribromophenol	67		31 - 143								
Terphenyl-d14 (Surr)	114		42 - 157								

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 500-700187/1-A**  
**Matrix: Solid**  
**Analysis Batch: 700467**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 700187**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<2.0		2.0	0.39	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Arsenic	<1.0		1.0	0.34	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Barium	<1.0		1.0	0.11	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Beryllium	<0.40		0.40	0.093	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Boron	<5.0		5.0	0.47	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Cadmium	0.0444	J	0.20	0.036	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Calcium	<20		20	3.4	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Chromium	<1.0		1.0	0.50	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Cobalt	<0.50		0.50	0.13	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Copper	0.294	J	1.0	0.28	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Iron	<20		20	10	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Lead	<0.50		0.50	0.23	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Magnesium	<10		10	5.0	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Manganese	<1.0		1.0	0.15	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Nickel	<1.0		1.0	0.29	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Potassium	<50		50	18	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Selenium	<1.0		1.0	0.59	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Silver	0.136	J	0.50	0.13	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Sodium	<100		100	15	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Thallium	<1.0		1.0	0.50	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Vanadium	<0.50		0.50	0.12	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Zinc	<2.0		2.0	0.88	mg/Kg		02/24/23 15:35	02/27/23 14:29	1

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# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCS 500-700187/2-A**  
**Matrix: Solid**  
**Analysis Batch: 700467**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700187**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	50.0	47.0		mg/Kg		94	80 - 120
Arsenic	10.0	9.28		mg/Kg		93	80 - 120
Barium	200	205		mg/Kg		103	80 - 120
Beryllium	5.00	4.56		mg/Kg		91	80 - 120
Boron	100	85.4		mg/Kg		85	80 - 120
Cadmium	5.00	4.59		mg/Kg		92	80 - 120
Calcium	1000	931		mg/Kg		93	80 - 120
Chromium	20.0	18.9		mg/Kg		94	80 - 120
Cobalt	50.0	47.8		mg/Kg		96	80 - 120
Copper	25.0	25.0		mg/Kg		100	80 - 120
Iron	100	100		mg/Kg		100	80 - 120
Lead	10.0	8.94		mg/Kg		89	80 - 120
Magnesium	1000	918		mg/Kg		92	80 - 120
Manganese	50.0	45.4		mg/Kg		91	80 - 120
Nickel	50.0	46.1		mg/Kg		92	80 - 120
Potassium	1000	1050		mg/Kg		105	80 - 120
Selenium	10.0	8.35		mg/Kg		84	80 - 120
Silver	5.00	4.14		mg/Kg		83	80 - 120
Sodium	1000	1040		mg/Kg		104	80 - 120
Thallium	10.0	9.07		mg/Kg		91	80 - 120
Vanadium	50.0	47.1		mg/Kg		94	80 - 120
Zinc	50.0	44.3		mg/Kg		89	80 - 120

**Lab Sample ID: LCS 500-700755/2-A**  
**Matrix: Solid**  
**Analysis Batch: 700931**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700755**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	0.500	0.516		mg/L		103	80 - 120
Beryllium	0.0500	0.0489		mg/L		98	80 - 120
Boron	1.00	0.914	^1+	mg/L		91	80 - 120
Cadmium	0.0500	0.0513		mg/L		103	80 - 120
Chromium	0.200	0.195		mg/L		97	80 - 120
Cobalt	0.500	0.514		mg/L		103	80 - 120
Iron	1.00	1.08		mg/L		108	80 - 120
Lead	0.100	0.0911		mg/L		91	80 - 120
Nickel	0.500	0.493		mg/L		99	80 - 120
Selenium	0.100	0.110		mg/L		110	80 - 120
Silver	0.0500	0.0538		mg/L		108	80 - 120
Zinc	0.500	0.520		mg/L		104	80 - 120

**Lab Sample ID: LB 500-700531/2-C**  
**Matrix: Solid**  
**Analysis Batch: 700931**

**Client Sample ID: Method Blank**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Barium	<0.50		0.50	0.050	mg/L		03/01/23 17:00	03/02/23 12:09	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		03/01/23 17:00	03/02/23 12:09	1
Boron	<0.50	^1+	0.50	0.050	mg/L		03/01/23 17:00	03/02/23 12:09	1

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# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LB 500-700531/2-C**  
**Matrix: Solid**  
**Analysis Batch: 700931**

**Client Sample ID: Method Blank**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cadmium	<0.0050		0.0050	0.0020	mg/L		03/01/23 17:00	03/02/23 12:09	1
Chromium	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:09	1
Cobalt	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:09	1
Iron	<0.40		0.40	0.20	mg/L		03/01/23 17:00	03/02/23 12:09	1
Lead	<0.0075		0.0075	0.0075	mg/L		03/01/23 17:00	03/02/23 12:09	1
Nickel	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:09	1
Selenium	<0.050		0.050	0.020	mg/L		03/01/23 17:00	03/02/23 12:09	1
Silver	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:09	1
Zinc	<0.50		0.50	0.020	mg/L		03/01/23 17:00	03/02/23 12:09	1

**Lab Sample ID: 500-229911-4 MS**  
**Matrix: Solid**  
**Analysis Batch: 700931**

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
Barium	1.2		0.500	1.72		mg/L		106	75 - 125
Beryllium	<0.0040		0.0500	0.0512		mg/L		102	75 - 125
Boron	<0.50	^1+	1.00	0.966	^1+	mg/L		97	75 - 125
Cadmium	<0.0050		0.0500	0.0554		mg/L		111	75 - 125
Chromium	<0.025		0.200	0.190		mg/L		95	75 - 125
Cobalt	<0.025		0.500	0.527		mg/L		105	75 - 125
Iron	<0.40		1.00	1.04		mg/L		104	75 - 125
Lead	<0.0075		0.100	0.0933		mg/L		93	75 - 125
Nickel	<0.025		0.500	0.502		mg/L		100	75 - 125
Selenium	<0.050		0.100	0.105		mg/L		105	75 - 125
Silver	<0.025		0.0500	0.0547		mg/L		109	75 - 125
Zinc	0.052	J	0.500	0.565		mg/L		103	75 - 125

**Lab Sample ID: 500-229911-4 DU**  
**Matrix: Solid**  
**Analysis Batch: 700931**

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	Sample Result	Sample Qualifier	DU DU		Unit	D	RPD	Limit
			Result	Qualifier				
Barium	1.2		1.21		mg/L		2	20
Beryllium	<0.0040		<0.0040		mg/L		NC	20
Boron	<0.50	^1+	<0.50	^1+	mg/L		NC	20
Cadmium	<0.0050		<0.0050		mg/L		NC	20
Chromium	<0.025		<0.025		mg/L		NC	20
Cobalt	<0.025		<0.025		mg/L		NC	20
Iron	<0.40		<0.40		mg/L		NC	20
Lead	<0.0075		<0.0075		mg/L		NC	20
Nickel	<0.025		<0.025		mg/L		NC	20
Selenium	<0.050		<0.050		mg/L		NC	20
Silver	<0.025		<0.025		mg/L		NC	20
Zinc	0.052	J	0.0519	J	mg/L		1	20

# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: LCS 500-700755/2-A**  
**Matrix: Solid**  
**Analysis Batch: 701031**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700755**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.500	0.537		mg/L		107	80 - 120
Thallium	0.100	0.121	*+	mg/L		121	80 - 120

**Lab Sample ID: LB 500-700531/2-C**  
**Matrix: Solid**  
**Analysis Batch: 701031**

**Client Sample ID: Method Blank**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		03/01/23 17:00	03/02/23 15:22	1
Thallium	<0.0020		0.0020	0.0020	mg/L		03/01/23 17:00	03/02/23 15:22	1

**Lab Sample ID: 500-229911-4 MS**  
**Matrix: Solid**  
**Analysis Batch: 701031**

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<0.0060		0.500	0.523		mg/L		105	75 - 125
Thallium	<0.0020	*+	0.100	0.124		mg/L		124	75 - 125

**Lab Sample ID: 500-229911-4 DU**  
**Matrix: Solid**  
**Analysis Batch: 701031**

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	<0.0060		<0.0060		mg/L		NC	20
Thallium	<0.0020	*+	<0.0020	*+	mg/L		NC	20

## Method: 7470A - TCLP Mercury

**Lab Sample ID: MB 500-700697/12-A**  
**Matrix: Solid**  
**Analysis Batch: 700909**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 700697**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		03/01/23 11:25	03/02/23 11:05	1

**Lab Sample ID: LCS 500-700697/14-A**  
**Matrix: Solid**  
**Analysis Batch: 700909**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700697**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00198	0.00205		mg/L		103	80 - 120

**Lab Sample ID: LB 500-700531/2-B**  
**Matrix: Solid**  
**Analysis Batch: 700909**

**Client Sample ID: Method Blank**  
**Prep Type: TCLP**  
**Prep Batch: 700697**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		03/01/23 11:25	03/02/23 11:11	1

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# QC Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Method: 7470A - TCLP Mercury (Continued)

**Lab Sample ID: 500-229911-4 MS**  
**Matrix: Solid**  
**Analysis Batch: 700909**

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
**Prep Type: TCLP**  
**Prep Batch: 700697**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	<0.00020		0.00100	0.000946		mg/L		95	75 - 125

**Lab Sample ID: 500-229911-4 DU**  
**Matrix: Solid**  
**Analysis Batch: 700909**

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
**Prep Type: TCLP**  
**Prep Batch: 700697**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	<0.00020		<0.00020		mg/L		NC	20

## Method: 7471B - Mercury (CVAA)

**Lab Sample ID: MB 500-701027/12-A**  
**Matrix: Solid**  
**Analysis Batch: 701282**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 701027**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.017		0.017	0.0088	mg/Kg		03/03/23 13:00	03/06/23 08:29	1

**Lab Sample ID: LCS 500-701027/13-A**  
**Matrix: Solid**  
**Analysis Batch: 701282**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 701027**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.165	0.161		mg/Kg		97	80 - 120

**Lab Sample ID: 500-229911-10 MS**  
**Matrix: Solid**  
**Analysis Batch: 701282**

**Client Sample ID: 4062-C0V-08-B03 (0-2)**  
**Prep Type: Total/NA**  
**Prep Batch: 701027**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.013	J	0.0958	0.115		mg/Kg	⊛	106	75 - 125

**Lab Sample ID: 500-229911-10 MSD**  
**Matrix: Solid**  
**Analysis Batch: 701282**

**Client Sample ID: 4062-C0V-08-B03 (0-2)**  
**Prep Type: Total/NA**  
**Prep Batch: 701027**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.013	J	0.0956	0.113		mg/Kg	⊛	104	75 - 125	2	20

**Lab Sample ID: 500-229911-10 DU**  
**Matrix: Solid**  
**Analysis Batch: 701282**

**Client Sample ID: 4062-C0V-08-B03 (0-2)**  
**Prep Type: Total/NA**  
**Prep Batch: 701027**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	0.013	J	0.0133	J	mg/Kg	⊛	0.4	20

# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B08 (0-2)**  
**Date Collected: 02/23/23 13:35**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-1**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 12:34
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:26
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:16
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 14:43 - 03/01/23 14:49 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-08-B08 (0-2)**  
**Date Collected: 02/23/23 13:35**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-1**  
**Matrix: Solid**  
**Percent Solids: 84.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 12:27
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700513	SS	EET CHI	02/28/23 17:44
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:10
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:33

**Client Sample ID: 4062-C0V-08-B09 (0-2)**  
**Date Collected: 02/23/23 13:50**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-2**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 12:38
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:28
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:18
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:12
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B09 (0-2)**  
**Date Collected: 02/23/23 13:50**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-2**  
**Matrix: Solid**  
**Percent Solids: 83.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 12:52
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700668	SS	EET CHI	03/01/23 19:40
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:13
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:35

**Client Sample ID: 4062-C0V-14-B01 (0-1)**  
**Date Collected: 02/23/23 14:05**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-3**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 12:41
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:30
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:20
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:14
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-14-B01 (0-1)**  
**Date Collected: 02/23/23 14:05**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-3**  
**Matrix: Solid**  
**Percent Solids: 82.4**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 13:18
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700668	SS	EET CHI	03/01/23 20:04
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:16
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:37

# Lab Chronicle

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
Date Collected: 02/23/23 14:10  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-4**  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 12:44
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:32
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:23
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 14:54 - 03/01/23 15:00 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
Date Collected: 02/23/23 14:10  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-4**  
Matrix: Solid  
Percent Solids: 86.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 13:43
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	701587	JJB	EET CHI	03/08/23 19:00
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:19
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:39

**Client Sample ID: 4062-C0V-14-B02 (0-1)D**  
Date Collected: 02/23/23 14:15  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-5**  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 12:57
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:40
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:29
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 15:00 - 03/01/23 15:06 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-14-B02 (0-1D)**

**Lab Sample ID: 500-229911-5**

**Date Collected: 02/23/23 14:15**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

**Percent Solids: 82.6**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 14:07
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	701587	JJB	EET CHI	03/08/23 19:24
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:22
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:41

**Client Sample ID: 4062-C0V-08-B06 (0-2)**

**Lab Sample ID: 500-229911-6**

**Date Collected: 02/23/23 14:25**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:07
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:47
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:31
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:27
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-08-B06 (0-2)**

**Lab Sample ID: 500-229911-6**

**Date Collected: 02/23/23 14:25**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

**Percent Solids: 79.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 14:33
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700668	SS	EET CHI	03/01/23 20:29
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:25
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:47

# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B07 (0-2)**  
**Date Collected: 02/23/23 14:30**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-7**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:10
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:49
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:47
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 15:06 - 03/01/23 15:12 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-08-B07 (0-2)**  
**Date Collected: 02/23/23 14:30**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-7**  
**Matrix: Solid**  
**Percent Solids: 81.4**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700601	PMF	EET CHI	03/01/23 19:02
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700668	SS	EET CHI	03/01/23 20:53
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:28
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:49

**Client Sample ID: 4062-C0V-08-B05 (0-2)**  
**Date Collected: 02/23/23 14:35**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-8**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:14
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:51
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:49
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:17
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B05 (0-2)**

**Lab Sample ID: 500-229911-8**

**Date Collected: 02/23/23 14:35**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

**Percent Solids: 82.6**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 15:23
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700668	SS	EET CHI	03/01/23 21:17
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:32
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:51

**Client Sample ID: 4062-C0V-08-B04 (0-2)**

**Lab Sample ID: 500-229911-9**

**Date Collected: 02/23/23 16:20**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:17
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:53
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:51
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:19
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-08-B04 (0-2)**

**Lab Sample ID: 500-229911-9**

**Date Collected: 02/23/23 16:20**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

**Percent Solids: 82.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 15:48
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700513	SS	EET CHI	02/28/23 18:09
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:35
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:53



# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B03 (0-2)**  
**Date Collected: 02/23/23 16:10**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-10**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:20
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:55
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:53
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:22
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-08-B03 (0-2)**  
**Date Collected: 02/23/23 16:10**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-10**  
**Matrix: Solid**  
**Percent Solids: 81.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 16:13
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700513	SS	EET CHI	02/28/23 18:33
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:44
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:54

**Client Sample ID: 4062-C0V-08-B02 (0-2)**  
**Date Collected: 02/23/23 15:10**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-11**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:23
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:57
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:56
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:24
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B02 (0-2)**  
**Date Collected: 02/23/23 15:10**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-11**  
**Matrix: Solid**  
**Percent Solids: 81.9**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 16:38
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700513	SS	EET CHI	02/28/23 18:57
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:47
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 09:02

**Client Sample ID: 4062-C0V-08-B01 (0-2)**  
**Date Collected: 02/23/23 15:20**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-12**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:27
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:59
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:58
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 15:12 - 03/01/23 15:18 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-08-B01 (0-2)**  
**Date Collected: 02/23/23 15:20**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-12**  
**Matrix: Solid**  
**Percent Solids: 86.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 17:04
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700513	SS	EET CHI	02/28/23 19:46
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:50
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 09:04

# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-05-B03 (0-1)**  
**Date Collected: 02/23/23 15:30**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-13**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:30
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 16:01
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 12:00
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 15:47 - 03/01/23 15:53 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-05-B03 (0-1)**  
**Date Collected: 02/23/23 15:30**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-13**  
**Matrix: Solid**  
**Percent Solids: 86.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 17:29
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700513	SS	EET CHI	02/28/23 19:22
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:54
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 09:10

**Client Sample ID: 4062-C0V-05-B02 (0-1)**  
**Date Collected: 02/23/23 15:40**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-14**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:33
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 16:03
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 12:02
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 15:18 - 03/01/23 15:24 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

# Lab Chronicle

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-05-B02 (0-1)**  
Date Collected: 02/23/23 15:40  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-14**  
Matrix: Solid  
Percent Solids: 86.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 17:55
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	701587	JJB	EET CHI	03/08/23 19:48
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:57
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		5	700562	CMS	EET CHI	02/28/23 14:31
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 09:12

**Client Sample ID: 4062-C0V-05-B01 (0-1)**  
Date Collected: 02/23/23 15:50  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-15**  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:36
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 16:05
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 12:04
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 15:24 - 03/01/23 15:30 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-05-B01 (0-1)**  
Date Collected: 02/23/23 15:50  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-15**  
Matrix: Solid  
Percent Solids: 77.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 18:20
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700703	SS	EET CHI	03/01/23 21:47
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 16:00
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 09:14

<sup>1</sup> Completion dates and times are reported or not reported per method requirements or individual lab discretion.

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Laboratory: Eurofins Chicago

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

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	IL00035	04-29-23

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15



# Chain of Custody Record 640813



Environment Testing  
America

Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Regulatory Program:  DW  NPDES  RCRA  Other

TAL-8210

Client Contact		Project Manager: <b>D. Tiebout</b>		Site Contact: <b>A. Platin</b>		Date: <b>2/23/23</b>		COC No: <b>1</b>	
Company Name: <b>WSP</b>		Tel/Email:		Lab Contact: <b>R. Wozniak</b>		Carrier:		1 of 2 COCs	
Address: <b>30 N. LaSalle</b>		Analysis Turnaround Time <input checked="" type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS		TAT if different from Below _____		500-229911 COC		Sampler:	
City/State/Zip: <b>Chicago, IL</b>								For Lab Use Only	
Phone:		<input checked="" type="checkbox"/> 2 weeks		<input type="checkbox"/> 1 week		<input type="checkbox"/> 2 days		<input type="checkbox"/> 1 day	
Fax:		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		Walk-in Client	
Project Name: <b>FDOT W0112 - West Frankfort</b>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		Lab Sampling	
Site: <b>EP 10012 - West Frankfort</b>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		Job / SDG No	
PO#:		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<b>500-229911</b>	

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	pH	% Solids	VOCs	SVOCs	Total Metals	TCU#	Sample Specific Notes
1 4062-COV-08-B08 (0-2)	2/23/23	1355	C	S	2			X	X	X	X	X	X	(A)
2 4062-COV-08-B09 (0-2)	2/23/23	1350	C	S	2			X	X	X	X	X	X	(A)
3 4062-COV-14-B01 (0-1)	2/23/23	1405	C	S	2			X	X	X	X	X	X	(A)
4 4062-COV-14-B02 (0-1)	02/23/23	1410	C	S	2			X	X	X	X	X	X	(A)
5 4062-COV-14-B02 (0-1) Dup	2/23/23	1415	C	S	2			X	X	X	X	X	X	(A)
6 4062-COV-08-B06 (0-2)	2/23/23	1425	C	S	2			X	X	X	X	X	X	(A)
7 4062-COV-08-B07 (0-2)	2/23/23	1430	C	S	2			X	X	X	X	X	X	(A)
8 4062-COV-08-B05 (0-2)	2/23/23	1435	C	S	2			X	X	X	X	X	X	(A)
9 4062-COV-08-B04 (0-2)	2/23/23	1400	C	S	2			X	X	X	X	X	X	(B)
10 4062-COV-08-B03 (0-2)	2/23/23	1410	C	S	2			X	X	X	X	X	X	(B)
11 4062-COV-08-B02 (0-2)	2/23/23	1510	C	S	2			X	X	X	X	X	X	(B)
12 4062-COV-08-B01 (0-2)	2/23/23	1520	C	S	2			X	X	X	X	X	X	(B)

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other

Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown		<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months	

Special Instructions/QC Requirements & Comments:  
**\*SPL analysis based on TCU results**      **4.1+3.2, 4.9+4.0**      **(Cover A or B)**

Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No		Cooler Temp (°C) Obs'd: <b>4.1</b> Corr'd: <b>3.2</b>		Therm ID No	
Relinquished by: <b>Austin Platin</b>	Company: <b>WSP</b>	Date/Time: <b>2/24/23 1111</b>	Received by: <b>[Signature]</b>	Company:	Date/Time: <b>2/24/23 1111</b>		
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:		
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:		

4804





# Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 500-229911-1

**Login Number: 229911**

**List Number: 1**

**Creator: Hernandez, Stephanie**

**List Source: Eurofins Chicago**

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	3.2,4.0
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.	True	
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	





# Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

## Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

### I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: FAS 873 (IL 149) Office Phone Number, if available: \_\_\_\_\_

Physical Site Location (address, including number and street):

1401 W. Main Street

City: West Franfort State: IL Zip Code: 62896

County: Franklin Township: Denning

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 37.89801 Longitude: -88.94424  
(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

- GPS  Map Interpolation  Photo Interpolation  Survey  Other

IEPA Site Number(s), if assigned: BOL: \_\_\_\_\_ BOW: \_\_\_\_\_ BOA: \_\_\_\_\_

Approximate Start Date (mm/dd/yyyy): \_\_\_\_\_ Approximate End Date (mm/dd/yyyy): \_\_\_\_\_

Estimated Volume of debris (cu. Yd.): 110

### II. Owner/Operator Information for Source Site

Site Owner

Name: Illinois Department of Transportation

Street Address: State Transportation Building

PO Box: PO Box 100

City: Carbondale State: IL

Zip Code: 62903-0100 Phone: 618-351-5281

Contact: Christa Mahnken

Email, if available: Christa.Mahnken@Illinois.gov

Site Operator

Name: Illinois Department of Transportation

Street Address: State Transportation Building

PO Box: PO Box 100

City: Carbondale State: IL

Zip Code: 62903-0100 Phone: 618-351-5281

Contact: Christa Mahnken

Email, if available: Christa.Mahnken@Illinois.gov

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Uncontaminated Soil Certification**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a):

Locations 4062-COV-14-B01 through 4062-COV-14-B02 were sampled within the construction zone adjacent to ISGS #4062-COV-14 (Residential Building). Refer to PSI Report for ISGS #4062-COV-14 (Residential Building) including Table 4-3, and Figure 4-3.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201(g), 1100.205(a), 1100.610]:

See attached data summary table and associated laboratory data package J229911-1.

**IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist**

I, Tom Campbell (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

***Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))***

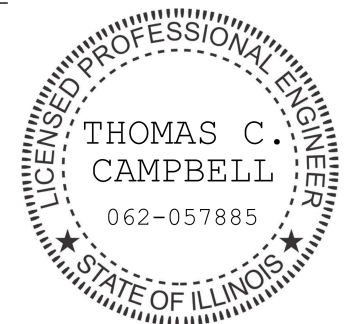
Company Name: WSP USA  
 Street Address: 115 W Washington St., Suite 1270S  
 City: Indianapolis State: IN Zip Code: 46204  
 Phone: (317) 972-1706

Tom Campbell  
 Printed Name:

  
 Licensed Professional Engineer or  
 Licensed Professional Geologist Signature:

Apr 21, 2023

Date:



Expires 11/30/2023



P.E or L.P.G. Seal:

**Analytical Data Summary**  
**PTB #172-27; Work Order 112 - IDOT Job # D-99-069-20**

**Key to Data Tables**

- MAC = Maximum Allowable Concentration of Chemical Constituent in Uncontaminated Soil Used as Fill Material At Regulated Fill Operations
- mg/kg = Milligrams per kilogram.
- mg/L = Milligrams per liter.
- MSA = Metropolitan Statistical Area
- TACO = Tiered Approach to Corrective Action Objectives
- TCLP = Toxicity Characteristic Leaching Procedure.
- SCGIER = Soil Component of the Groundwater Ingestion Exposure Route
- SPLP = Synthetic Precipitation Leaching Procedure.
- ND = Not detected.
- NA = Not analyzed or not applicable.
- J = Estimated value.
- U = Analyte was analyzed for but not detected.
- PID = Photoionization detector.
- = No PID readings detected above background (within instrument margin of error).

**Criteria Qualifiers and Shading**

- # = pH is less than 6.25 or greater than 9.0 standard units.
- † = Concentration exceeds the most stringent MAC.
- m = Concentration exceeds the MAC for an MSA.
- \* = Concentration exceeds the MAC for Chicago corporate limits.
- L = The detected TCLP/SPLP concentration exceeds the TACO Tier 1 RO for the SCGIER.
-  = Concentration exceeds the most stringent MAC, but is below the MAC for an MSA.
-  = Concentration exceeds applicable comparison criteria.

PTB #172-27; Work Order 112 - IDOT Job # D-99-069-20

CONTAMINANTS OF CONCERN

SITE	ISGS #4062-COV-14 (Residential Building)			Comparison Criteria					
	4062-COV-14-B01	4062-COV-14-B02		MACs			TACO		
BORING	4062-COV-14-B01 (0-1)	4062-COV-14-B02 (0-1)	4062-COV-14-B02 (0-1)D	Most Stringent	Within an MSA	Within Chicago	Residential	Construction Worker	SCGIER
SAMPLE									
MATRIX	Soil	Soil	Soil						
DEPTH (feet)	0-1	0-1	0-1						
pH	7.6	7.9	8.3						
PID (meter units)	--	--	--						
<b>VOCs (None Detected)</b>									
<b>SVOCs (mg/kg)</b>									
2-Methylnaphthalene	0.040 J	0.41	0.24	--	--	--	--	--	--
Acenaphthene	ND U	0.027 J	0.020 J	570	--	0.94	4,700	120,000	--
Acenaphthylene	ND U	ND U	0.036 J	--	--	0.25	--	--	--
Anthracene	0.016 J	0.098	0.092	12,000	--	2.6	23,000	610,000	--
Benzo(a)anthracene	0.035 J	0.29	0.30	0.9	1.8	11	1.8	170	--
Benzo(a)pyrene	0.058 J	0.34 J †	0.35 J †	0.09	2.1	11	2.1	17	--
Benzo(b)fluoranthene	ND UJ	0.53 J	0.50 J	0.9	2.1	13	2.1	170	--
Benzo(g,h,i)perylene	0.039 J	0.13 J	0.13 J	--	--	4.4	--	--	--
Benzo(k)fluoranthene	ND UJ	0.17 J	0.20 J	9	--	8.1	9	1,700	--
Bis(2-ethylhexyl) phthalate	ND U	0.082 J	ND U	46	--	--	46	4,100	--
Chrysene	0.047	0.38	0.33	88	--	11	88	17,000	--
Dibenz(a,h)anthracene	ND UJ	0.012 J	ND UJ	0.09	0.42	1	0.42	17	--
Dibenzofuran	ND U	0.22	0.11 J	--	--	--	--	--	--
Fluoranthene	0.026 J	0.52	0.53	3,100	--	28	3,100	82,000	--
Fluorene	ND U	0.017 J	0.020 J	560	--	1.1	3,100	82,000	--
Indeno(1,2,3-cd)pyrene	ND UJ	0.11 J	0.11 J	0.9	1.6	5.8	1.6	170	--
Naphthalene	0.016 J	0.19	0.11	1.8	--	0.26	170	1.8	--
Phenanthrene	0.087	0.68	0.47	--	--	15	--	--	--
Pyrene	0.072	0.58	0.54	2,300	--	18	2,300	61,000	--
<b>Inorganics (mg/kg)</b>									
Antimony	ND U	0.44 J	0.39 J	5	--	--	31	82	--
Arsenic	5.6	8.0	9.1	11.3	13	--	13	61	--
Barium	120	130	100	1,500	--	--	5,500	14,000	--
Beryllium	0.72	0.67	0.73	22	--	--	160	410	--
Boron	1.2 J	3.5	4.0	40	--	--	16,000	41,000	--
Cadmium	ND U	3.1 J	0.83 J	5.2	--	--	78	200	--
Calcium	2,800	11,000 J	25,000 J	--	--	--	--	--	--
Chromium	12	14	15	21	--	--	230	690	--
Cobalt	7.6	8.5	7.0	20	--	--	4,700	12,000	--
Copper	12	20	34	2,900	--	--	2,900	8,200	--
Iron	16,000 †m	14,000	19,000 †m	15,000	15,900	--	--	--	--
Lead	18	150 †	280 †	107	--	--	400	700	--
Magnesium	1,500	1,500	2,700	325,000	--	--	--	730,000	--
Manganese	260	390	350	630	636	--	1,600	4,100	--
Mercury	0.032	0.078	0.041	0.89	--	--	10	0.1	--
Nickel	19	17	19	100	--	--	1,600	4,100	--
Potassium	640	880	1,000	--	--	--	--	--	--
Selenium	0.38 J	0.51 J	0.57 J	1.3	--	--	390	1,000	--
Sodium	73	260	270	--	--	--	--	--	--
Vanadium	20	19	17	550	--	--	550	1,400	--
Zinc	54	920 J	160 J	5,100	--	--	23,000	61,000	--
<b>TCLP Metals (mg/L)</b>									
Barium	0.78	1.2	0.95	--	--	--	--	--	2
Iron	0.50	ND U	ND U	--	--	--	--	--	5
Lead	ND U	ND U	ND U	--	--	--	--	--	0.0075
Zinc	ND U	0.052 J	0.055 J	--	--	--	--	--	5
<b>SPLP Metals (Not Analyzed)</b>									



# ANALYTICAL REPORT

## PREPARED FOR

Attn: Dean Tiebot  
WSP USA Inc.  
30 North LaSalle Street  
Chicago, Illinois 60602  
Generated 3/9/2023 3:55:47 PM

## JOB DESCRIPTION

IDOT-172-027-WO112 West Frankfort

## JOB NUMBER

500-229911-1

# Eurofins Chicago

## Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Chicago Project Manager.

## Authorization



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# Case Narrative

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Job ID: 500-229911-1

### Laboratory: Eurofins Chicago

#### Narrative

#### Job Narrative 500-229911-1

#### Receipt

The samples were received on 2/24/2023 11:11 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 3.2° C and 4.0° C.

#### GC/MS VOA

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

#### GC/MS Semi VOA

Method 8270D: The continuing calibration verification (CCV) analyzed in 500-700513 was outside the method criteria for the following analyte(s): 3,3'-Dichlorobenzidine and Carbazole. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: The continuing calibration verification (CCV) analyzed in 500-700668 was outside the method criteria for the following analyte(s): 2,4-Dinitrotoluene and Carbazole. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: The continuing calibration verification (CCV) analyzed in batch 500-700703 was outside the method criteria for the following analyte(s): 2,4-Dinitrophenol, Hexachlorocyclopentadiene and Pentachlorophenol. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: The continuing calibration verification (CCV) analyzed in 500-700703 was outside the method criteria for the following analyte(s): 2-Fluorophenol, Benzo[g,h,i]perylene, Benzo[k]fluoranthene, Bis(2-chloroethyl)ether, Dibenz(a,h)anthracene, Di-n-octyl phthalate and Indeno[1,2,3-cd]pyrene. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: Internal standard Perylene-d12 failed due to nature of the sample matrix. The samples were rerun with passing internal standard recoveries and similar analyte results. The original analysis has been reported to meet client reporting limits. The following samples are affected: 4062-C0V-08-B09 (0-2) (500-229911-2), 4062-C0V-14-B01 (0-1) (500-229911-3), 4062-C0V-08-B06 (0-2) (500-229911-6), 4062-C0V-08-B07 (0-2) (500-229911-7) and 4062-C0V-08-B05 (0-2) (500-229911-8)

Method 8270D: The matrix spike and matrix spike duplicate (MS/MSD) recoveries for preparation batch 500-700448 and analytical batch 500-700703 were outside control limits for one or more analytes, see QC Sample Results for detail. Sample matrix interference and/or non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8270D: Internal standard responses for Perylene-d12 was outside of acceptance limits for the following samples: 4062-C0V-14-B02 (0-1) (500-229911-4), 4062-C0V-14-B02 (0-1)D (500-229911-5) and 4062-C0V-05-B02 (0-1) (500-229911-14). The samples were run a second time with concurring results. Results with the highest ISTD recovery have been reported.

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

#### Metals

Method 3050B: Samples <500-229911-06 and -10> were homogenized

Method 6010B: The initial calibration verification (ICV) result for batch 700931 recovered above the 90-110% upper control limit for B- (111%). Sample results were all less than the reporting limit and have been reported as qualified data.

Method 6020A: The laboratory control sample (LCS) for preparation batch 500-700755 and analytical batch 500-701031 recovered above control limits for Thallium. The analyte was biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

# Case Narrative

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

---

## Job ID: 500-229911-1 (Continued)

---

### Laboratory: Eurofins Chicago (Continued)

#### General Chemistry

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.

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# Detection Summary

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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**Client Sample ID: 4062-C0V-14-B01 (0-1)**

**Lab Sample ID: 500-229911-3**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Naphthalene	0.016	J	0.040	0.0062	mg/Kg	1	✳		8270D	Total/NA
2-Methylnaphthalene	0.040	J	0.081	0.0074	mg/Kg	1	✳		8270D	Total/NA
Phenanthrene	0.087		0.040	0.0056	mg/Kg	1	✳		8270D	Total/NA
Anthracene	0.016	J	0.040	0.0067	mg/Kg	1	✳		8270D	Total/NA
Fluoranthene	0.026	J	0.040	0.0075	mg/Kg	1	✳		8270D	Total/NA
Pyrene	0.072		0.040	0.0080	mg/Kg	1	✳		8270D	Total/NA
Benzo[a]anthracene	0.035	J	0.040	0.0054	mg/Kg	1	✳		8270D	Total/NA
Chrysene	0.047		0.040	0.011	mg/Kg	1	✳		8270D	Total/NA
Benzo[a]pyrene	0.058	*3	0.040	0.0078	mg/Kg	1	✳		8270D	Total/NA
Benzo[g,h,i]perylene	0.039	J *3	0.040	0.013	mg/Kg	1	✳		8270D	Total/NA
Arsenic	5.6		0.59	0.20	mg/Kg	1	✳		6010B	Total/NA
Barium	120		0.59	0.067	mg/Kg	1	✳		6010B	Total/NA
Beryllium	0.72		0.23	0.055	mg/Kg	1	✳		6010B	Total/NA
Boron	1.2	J	2.9	0.27	mg/Kg	1	✳		6010B	Total/NA
Cadmium	0.096	J B	0.12	0.021	mg/Kg	1	✳		6010B	Total/NA
Calcium	2800		12	2.0	mg/Kg	1	✳		6010B	Total/NA
Chromium	12		0.59	0.29	mg/Kg	1	✳		6010B	Total/NA
Cobalt	7.6		0.29	0.077	mg/Kg	1	✳		6010B	Total/NA
Copper	12	B	0.59	0.16	mg/Kg	1	✳		6010B	Total/NA
Iron	16000		12	6.1	mg/Kg	1	✳		6010B	Total/NA
Lead	18		0.29	0.14	mg/Kg	1	✳		6010B	Total/NA
Magnesium	1500		5.9	2.9	mg/Kg	1	✳		6010B	Total/NA
Manganese	260		0.59	0.085	mg/Kg	1	✳		6010B	Total/NA
Nickel	19		0.59	0.17	mg/Kg	1	✳		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

# Detection Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Client Sample ID: 4062-C0V-14-B01 (0-1) (Continued)

## Lab Sample ID: 500-229911-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Potassium	640		29	10	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.38	J	0.59	0.34	mg/Kg	1	☼	6010B	Total/NA
Silver	0.43	B	0.29	0.076	mg/Kg	1	☼	6010B	Total/NA
Sodium	73		59	8.7	mg/Kg	1	☼	6010B	Total/NA
Vanadium	20		0.29	0.069	mg/Kg	1	☼	6010B	Total/NA
Zinc	54		1.2	0.51	mg/Kg	1	☼	6010B	Total/NA
Barium	0.78		0.50	0.050	mg/L	1		6010B	TCLP
Iron	0.50		0.40	0.20	mg/L	1		6010B	TCLP
Mercury	0.032		0.019	0.010	mg/Kg	1	☼	7471B	Total/NA
pH	7.6		0.2	0.2	SU	1		9045D	Total/NA

## Client Sample ID: 4062-C0V-14-B02 (0-1)

## Lab Sample ID: 500-229911-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.19		0.037	0.0058	mg/Kg	1	☼	8270D	Total/NA
2-Methylnaphthalene	0.41		0.075	0.0069	mg/Kg	1	☼	8270D	Total/NA
Acenaphthene	0.027	J	0.037	0.0067	mg/Kg	1	☼	8270D	Total/NA
Dibenzofuran	0.22		0.19	0.044	mg/Kg	1	☼	8270D	Total/NA
Fluorene	0.017	J	0.037	0.0053	mg/Kg	1	☼	8270D	Total/NA
Phenanthrene	0.68		0.037	0.0052	mg/Kg	1	☼	8270D	Total/NA
Anthracene	0.098		0.037	0.0062	mg/Kg	1	☼	8270D	Total/NA
Fluoranthene	0.52		0.037	0.0069	mg/Kg	1	☼	8270D	Total/NA
Pyrene	0.58		0.037	0.0074	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]anthracene	0.29		0.037	0.0050	mg/Kg	1	☼	8270D	Total/NA
Chrysene	0.38		0.037	0.010	mg/Kg	1	☼	8270D	Total/NA
Bis(2-ethylhexyl) phthalate	0.082	J	0.19	0.068	mg/Kg	1	☼	8270D	Total/NA
Benzo[b]fluoranthene	0.53	*3	0.037	0.0081	mg/Kg	1	☼	8270D	Total/NA
Benzo[k]fluoranthene	0.17	*3	0.037	0.011	mg/Kg	1	☼	8270D	Total/NA
Benzo[a]pyrene	0.34	*3	0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.11	*3	0.037	0.0097	mg/Kg	1	☼	8270D	Total/NA
Dibenz(a,h)anthracene	0.012	J *3	0.037	0.0072	mg/Kg	1	☼	8270D	Total/NA
Benzo[g,h,i]perylene	0.13	*3	0.037	0.012	mg/Kg	1	☼	8270D	Total/NA
Antimony	0.44	J	1.1	0.22	mg/Kg	1	☼	6010B	Total/NA
Arsenic	8.0		0.57	0.19	mg/Kg	1	☼	6010B	Total/NA
Barium	130		0.57	0.065	mg/Kg	1	☼	6010B	Total/NA
Beryllium	0.67		0.23	0.053	mg/Kg	1	☼	6010B	Total/NA
Boron	3.5		2.8	0.27	mg/Kg	1	☼	6010B	Total/NA
Cadmium	3.1	B	0.11	0.021	mg/Kg	1	☼	6010B	Total/NA
Calcium	11000		11	1.9	mg/Kg	1	☼	6010B	Total/NA
Chromium	14		0.57	0.28	mg/Kg	1	☼	6010B	Total/NA
Cobalt	8.5		0.28	0.075	mg/Kg	1	☼	6010B	Total/NA
Copper	20	B	0.57	0.16	mg/Kg	1	☼	6010B	Total/NA
Iron	14000		11	5.9	mg/Kg	1	☼	6010B	Total/NA
Lead	150		0.28	0.13	mg/Kg	1	☼	6010B	Total/NA
Magnesium	1500		5.7	2.8	mg/Kg	1	☼	6010B	Total/NA
Manganese	390		0.57	0.083	mg/Kg	1	☼	6010B	Total/NA
Nickel	17		0.57	0.17	mg/Kg	1	☼	6010B	Total/NA
Potassium	880		28	10	mg/Kg	1	☼	6010B	Total/NA
Selenium	0.51	J	0.57	0.33	mg/Kg	1	☼	6010B	Total/NA
Silver	0.40	B	0.28	0.073	mg/Kg	1	☼	6010B	Total/NA
Sodium	260		57	8.4	mg/Kg	1	☼	6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Chicago

# Detection Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-14-B02 (0-1) (Continued)**

**Lab Sample ID: 500-229911-4**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vanadium	19		0.28	0.067	mg/Kg	1	☒	6010B	Total/NA
Zinc	920		1.1	0.50	mg/Kg	1	☒	6010B	Total/NA
Barium	1.2		0.50	0.050	mg/L	1		6010B	TCLP
Zinc	0.052	J	0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.078		0.018	0.0096	mg/Kg	1	☒	7471B	Total/NA
pH	7.9		0.2	0.2	SU	1		9045D	Total/NA

**Client Sample ID: 4062-C0V-14-B02 (0-1)D**

**Lab Sample ID: 500-229911-5**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.11		0.039	0.0061	mg/Kg	1	☒	8270D	Total/NA
2-Methylnaphthalene	0.24		0.080	0.0073	mg/Kg	1	☒	8270D	Total/NA
Acenaphthylene	0.036	J	0.039	0.0052	mg/Kg	1	☒	8270D	Total/NA
Acenaphthene	0.020	J	0.039	0.0071	mg/Kg	1	☒	8270D	Total/NA
Dibenzofuran	0.11	J	0.20	0.046	mg/Kg	1	☒	8270D	Total/NA
Fluorene	0.020	J	0.039	0.0056	mg/Kg	1	☒	8270D	Total/NA
Phenanthrene	0.47		0.039	0.0055	mg/Kg	1	☒	8270D	Total/NA
Anthracene	0.092		0.039	0.0066	mg/Kg	1	☒	8270D	Total/NA
Fluoranthene	0.53		0.039	0.0073	mg/Kg	1	☒	8270D	Total/NA
Pyrene	0.54		0.039	0.0079	mg/Kg	1	☒	8270D	Total/NA
Benzo[a]anthracene	0.30		0.039	0.0053	mg/Kg	1	☒	8270D	Total/NA
Chrysene	0.33		0.039	0.011	mg/Kg	1	☒	8270D	Total/NA
Benzo[b]fluoranthene	0.50	*3	0.039	0.0085	mg/Kg	1	☒	8270D	Total/NA
Benzo[k]fluoranthene	0.20	*3	0.039	0.012	mg/Kg	1	☒	8270D	Total/NA
Benzo[a]pyrene	0.35	*3	0.039	0.0077	mg/Kg	1	☒	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	0.11	*3	0.039	0.010	mg/Kg	1	☒	8270D	Total/NA
Benzo[g,h,i]perylene	0.13	*3	0.039	0.013	mg/Kg	1	☒	8270D	Total/NA
Antimony	0.39	J	1.2	0.23	mg/Kg	1	☒	6010B	Total/NA
Arsenic	9.1		0.58	0.20	mg/Kg	1	☒	6010B	Total/NA
Barium	100		0.58	0.066	mg/Kg	1	☒	6010B	Total/NA
Beryllium	0.73		0.23	0.054	mg/Kg	1	☒	6010B	Total/NA
Boron	4.0		2.9	0.27	mg/Kg	1	☒	6010B	Total/NA
Cadmium	0.83	B	0.12	0.021	mg/Kg	1	☒	6010B	Total/NA
Calcium	25000		12	2.0	mg/Kg	1	☒	6010B	Total/NA
Chromium	15		0.58	0.29	mg/Kg	1	☒	6010B	Total/NA
Cobalt	7.0		0.29	0.076	mg/Kg	1	☒	6010B	Total/NA
Copper	34	B	0.58	0.16	mg/Kg	1	☒	6010B	Total/NA
Iron	19000		12	6.1	mg/Kg	1	☒	6010B	Total/NA
Lead	280		0.29	0.13	mg/Kg	1	☒	6010B	Total/NA
Magnesium	2700		5.8	2.9	mg/Kg	1	☒	6010B	Total/NA
Manganese	350		0.58	0.084	mg/Kg	1	☒	6010B	Total/NA
Nickel	19		0.58	0.17	mg/Kg	1	☒	6010B	Total/NA
Potassium	1000		29	10	mg/Kg	1	☒	6010B	Total/NA
Selenium	0.57	J	0.58	0.34	mg/Kg	1	☒	6010B	Total/NA
Silver	0.30	B	0.29	0.075	mg/Kg	1	☒	6010B	Total/NA
Sodium	270		58	8.6	mg/Kg	1	☒	6010B	Total/NA
Vanadium	17		0.29	0.069	mg/Kg	1	☒	6010B	Total/NA
Zinc	160		1.2	0.51	mg/Kg	1	☒	6010B	Total/NA
Barium	0.95		0.50	0.050	mg/L	1		6010B	TCLP
Zinc	0.055	J	0.50	0.020	mg/L	1		6010B	TCLP
Mercury	0.041		0.018	0.0095	mg/Kg	1	☒	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

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# Detection Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-14-B02 (0-1)D (Continued)**

**Lab Sample ID: 500-229911-5**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
pH	8.3		0.2	0.2	SU	1		9045D	Total/NA

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This Detection Summary does not include radiochemical test results.

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# Method Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET CHI
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET CHI
6010B	Metals (ICP)	SW846	EET CHI
6020A	Metals (ICP/MS)	SW846	EET CHI
7470A	TCLP Mercury	SW846	EET CHI
7471B	Mercury (CVAA)	SW846	EET CHI
9045D	pH	SW846	EET CHI
Moisture	Percent Moisture	EPA	EET CHI
1311	TCLP Extraction	SW846	EET CHI
3010A	Preparation, Total Metals	SW846	EET CHI
3050B	Preparation, Metals	SW846	EET CHI
3541	Automated Soxhlet Extraction	SW846	EET CHI
5035	Closed System Purge and Trap	SW846	EET CHI
7470A	Preparation, Mercury	SW846	EET CHI
7471B	Preparation, Mercury	SW846	EET 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.

#### Laboratory References:

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

# Sample Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-229911-3	4062-COV-14-B01 (0-1)	Solid	02/23/23 14:05	02/24/23 11:11
500-229911-4	4062-COV-14-B02 (0-1)	Solid	02/23/23 14:10	02/24/23 11:11
500-229911-5	4062-COV-14-B02 (0-1)D	Solid	02/23/23 14:15	02/24/23 11:11

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-14-B01 (0-1)**

**Lab Sample ID: 500-229911-3**

Date Collected: 02/23/23 14:05

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 82.4

**Method: SW846 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.029		0.029	0.013	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Benzene	<0.0029		0.0029	0.00075	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Bromodichloromethane	<0.0029		0.0029	0.00060	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Bromoform	<0.0029		0.0029	0.00086	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Bromomethane	<0.0074		0.0074	0.0028	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
2-Butanone (MEK)	<0.0074		0.0074	0.0033	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Carbon disulfide	<0.0074		0.0074	0.0015	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Carbon tetrachloride	<0.0029		0.0029	0.00085	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Chlorobenzene	<0.0029		0.0029	0.0011	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Chloroethane	<0.0074		0.0074	0.0022	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Chloroform	<0.0029		0.0029	0.0010	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Chloromethane	<0.0074		0.0074	0.0030	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
cis-1,2-Dichloroethene	<0.0029		0.0029	0.00082	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
cis-1,3-Dichloropropene	<0.0029		0.0029	0.00089	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Dibromochloromethane	<0.0029		0.0029	0.00096	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
1,1-Dichloroethane	<0.0029		0.0029	0.0010	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
1,2-Dichloroethane	<0.0074		0.0074	0.0023	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
1,1-Dichloroethene	<0.0029		0.0029	0.0010	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
1,2-Dichloropropane	<0.0029		0.0029	0.00076	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
1,3-Dichloropropane, Total	<0.0029		0.0029	0.0010	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Ethylbenzene	<0.0029		0.0029	0.0014	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
2-Hexanone	<0.0074		0.0074	0.0023	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Methylene Chloride	<0.0074		0.0074	0.0029	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
4-Methyl-2-pentanone (MIBK)	<0.0074		0.0074	0.0022	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Methyl tert-butyl ether	<0.0029		0.0029	0.00086	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Styrene	<0.0029		0.0029	0.00089	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
1,1,2,2-Tetrachloroethane	<0.0029		0.0029	0.00094	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Tetrachloroethene	<0.0029		0.0029	0.0010	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Toluene	<0.0029		0.0029	0.00074	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
trans-1,2-Dichloroethene	<0.0029		0.0029	0.0013	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
trans-1,3-Dichloropropene	<0.0029		0.0029	0.0010	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
1,1,1-Trichloroethane	<0.0029		0.0029	0.00099	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
1,1,2-Trichloroethane	<0.0029		0.0029	0.0013	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Trichloroethene	<0.0029		0.0029	0.00099	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Vinyl acetate	<0.0074		0.0074	0.0026	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Vinyl chloride	<0.0029		0.0029	0.0013	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1
Xylenes, Total	<0.0059		0.0059	0.00094	mg/Kg	☆	02/24/23 17:05	02/28/23 13:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		75 - 131	02/24/23 17:05	02/28/23 13:18	1
Dibromofluoromethane	92		75 - 126	02/24/23 17:05	02/28/23 13:18	1
1,2-Dichloroethane-d4 (Surr)	94		70 - 134	02/24/23 17:05	02/28/23 13:18	1
Toluene-d8 (Surr)	88		75 - 124	02/24/23 17:05	02/28/23 13:18	1

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.089	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.060	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
1,4-Dichlorobenzene	<0.20		0.20	0.052	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-14-B01 (0-1)**

**Lab Sample ID: 500-229911-3**

Date Collected: 02/23/23 14:05

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 82.4

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.20		0.20	0.048	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
2-Methylphenol	<0.20		0.20	0.065	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.047	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
N-Nitrosodi-n-propylamine	<0.081		0.081	0.049	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
Hexachloroethane	<0.20		0.20	0.061	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
2-Chlorophenol	<0.20		0.20	0.069	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
Nitrobenzene	<0.040		0.040	0.010	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.041	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
Isophorone	<0.20		0.20	0.045	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
2,4-Dimethylphenol	<0.40		0.40	0.15	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
Hexachlorobutadiene	<0.20		0.20	0.063	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
<b>Naphthalene</b>	<b>0.016</b>	<b>J</b>	0.040	0.0062	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
2,4-Dichlorophenol	<0.40		0.40	0.095	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
4-Chloroaniline	<0.81		0.81	0.19	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
2,4,6-Trichlorophenol	<0.40		0.40	0.14	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
2,4,5-Trichlorophenol	<0.40		0.40	0.092	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
Hexachlorocyclopentadiene	<0.81		0.81	0.23	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
<b>2-Methylnaphthalene</b>	<b>0.040</b>	<b>J</b>	0.081	0.0074	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
2-Nitroaniline	<0.20		0.20	0.054	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
4-Chloro-3-methylphenol	<0.40		0.40	0.14	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
2,6-Dinitrotoluene	<0.20		0.20	0.079	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
2-Nitrophenol	<0.40		0.40	0.095	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
3-Nitroaniline	<0.40		0.40	0.12	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
Dimethyl phthalate	<0.20		0.20	0.053	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
2,4-Dinitrophenol	<0.81		0.81	0.71	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
Acenaphthylene	<0.040		0.040	0.0053	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
2,4-Dinitrotoluene	<0.20		0.20	0.064	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
Acenaphthene	<0.040		0.040	0.0072	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
Dibenzofuran	<0.20		0.20	0.047	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
4-Nitrophenol	<0.81		0.81	0.38	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
Fluorene	<0.040		0.040	0.0057	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
4-Nitroaniline	<0.40		0.40	0.17	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.053	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
Hexachlorobenzene	<0.081		0.081	0.0093	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
Diethyl phthalate	<0.20		0.20	0.068	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.047	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
Pentachlorophenol	<0.81		0.81	0.65	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
4,6-Dinitro-2-methylphenol	<0.81		0.81	0.32	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
<b>Phenanthrene</b>	<b>0.087</b>		0.040	0.0056	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
<b>Anthracene</b>	<b>0.016</b>	<b>J</b>	0.040	0.0067	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
Carbazole	<0.20		0.20	0.10	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
Di-n-butyl phthalate	<0.20		0.20	0.061	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
<b>Fluoranthene</b>	<b>0.026</b>	<b>J</b>	0.040	0.0075	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
<b>Pyrene</b>	<b>0.072</b>		0.040	0.0080	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
Butyl benzyl phthalate	<0.20		0.20	0.076	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1
<b>Benzo[a]anthracene</b>	<b>0.035</b>	<b>J</b>	0.040	0.0054	mg/Kg	☆	02/28/23 08:18	03/01/23 20:04	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-14-B01 (0-1)**

**Lab Sample ID: 500-229911-3**

Date Collected: 02/23/23 14:05

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 82.4

## Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chrysene</b>	<b>0.047</b>		0.040	0.011	mg/Kg	✱	02/28/23 08:18	03/01/23 20:04	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.056	mg/Kg	✱	02/28/23 08:18	03/01/23 20:04	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.073	mg/Kg	✱	02/28/23 08:18	03/01/23 20:04	1
Di-n-octyl phthalate	<0.20		0.20	0.066	mg/Kg	✱	02/28/23 08:18	03/01/23 20:04	1
Benzo[b]fluoranthene	<0.040	*3	0.040	0.0087	mg/Kg	✱	02/28/23 08:18	03/01/23 20:04	1
Benzo[k]fluoranthene	<0.040	*3	0.040	0.012	mg/Kg	✱	02/28/23 08:18	03/01/23 20:04	1
<b>Benzo[a]pyrene</b>	<b>0.058</b>	<b>*3</b>	0.040	0.0078	mg/Kg	✱	02/28/23 08:18	03/01/23 20:04	1
Indeno[1,2,3-cd]pyrene	<0.040	*3	0.040	0.010	mg/Kg	✱	02/28/23 08:18	03/01/23 20:04	1
Dibenz(a,h)anthracene	<0.040	*3	0.040	0.0078	mg/Kg	✱	02/28/23 08:18	03/01/23 20:04	1
<b>Benzo[g,h,i]perylene</b>	<b>0.039</b>	<b>J *3</b>	0.040	0.013	mg/Kg	✱	02/28/23 08:18	03/01/23 20:04	1
3 & 4 Methylphenol	<0.20		0.20	0.067	mg/Kg	✱	02/28/23 08:18	03/01/23 20:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	100		31 - 166	02/28/23 08:18	03/01/23 20:04	1
Phenol-d5	92		30 - 153	02/28/23 08:18	03/01/23 20:04	1
Nitrobenzene-d5 (Surr)	81		37 - 147	02/28/23 08:18	03/01/23 20:04	1
2-Fluorobiphenyl (Surr)	78		43 - 145	02/28/23 08:18	03/01/23 20:04	1
2,4,6-Tribromophenol	76		31 - 143	02/28/23 08:18	03/01/23 20:04	1
Terphenyl-d14 (Surr)	117		42 - 157	02/28/23 08:18	03/01/23 20:04	1

## Method: SW846 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.2		1.2	0.23	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
<b>Arsenic</b>	<b>5.6</b>		0.59	0.20	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
<b>Barium</b>	<b>120</b>		0.59	0.067	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
<b>Beryllium</b>	<b>0.72</b>		0.23	0.055	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
<b>Boron</b>	<b>1.2</b>	<b>J</b>	2.9	0.27	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
<b>Cadmium</b>	<b>0.096</b>	<b>J B</b>	0.12	0.021	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
<b>Calcium</b>	<b>2800</b>		12	2.0	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
<b>Chromium</b>	<b>12</b>		0.59	0.29	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
<b>Cobalt</b>	<b>7.6</b>		0.29	0.077	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
<b>Copper</b>	<b>12</b>	<b>B</b>	0.59	0.16	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
<b>Iron</b>	<b>16000</b>		12	6.1	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
<b>Lead</b>	<b>18</b>		0.29	0.14	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
<b>Magnesium</b>	<b>1500</b>		5.9	2.9	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
<b>Manganese</b>	<b>260</b>		0.59	0.085	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
<b>Nickel</b>	<b>19</b>		0.59	0.17	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
<b>Potassium</b>	<b>640</b>		29	10	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
<b>Selenium</b>	<b>0.38</b>	<b>J</b>	0.59	0.34	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
<b>Silver</b>	<b>0.43</b>	<b>B</b>	0.29	0.076	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
<b>Sodium</b>	<b>73</b>		59	8.7	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
Thallium	<0.59		0.59	0.29	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
<b>Vanadium</b>	<b>20</b>		0.29	0.069	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1
<b>Zinc</b>	<b>54</b>		1.2	0.51	mg/Kg	✱	02/24/23 15:35	02/27/23 15:16	1

## Method: SW846 6010B - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.78</b>		0.50	0.050	mg/L		03/01/23 17:00	03/02/23 12:41	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		03/01/23 17:00	03/02/23 12:41	1
Boron	<0.50	^1+	0.50	0.050	mg/L		03/01/23 17:00	03/02/23 12:41	1

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# Client Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-14-B01 (0-1)**

**Lab Sample ID: 500-229911-3**

Date Collected: 02/23/23 14:05

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 82.4

**Method: SW846 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		03/01/23 17:00	03/02/23 12:41	1
Chromium	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:41	1
Cobalt	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:41	1
<b>Iron</b>	<b>0.50</b>		0.40	0.20	mg/L		03/01/23 17:00	03/02/23 12:41	1
Lead	<0.0075		0.0075	0.0075	mg/L		03/01/23 17:00	03/02/23 12:41	1
Nickel	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:41	1
Selenium	<0.050		0.050	0.020	mg/L		03/01/23 17:00	03/02/23 12:41	1
Silver	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:41	1
Zinc	<0.50		0.50	0.020	mg/L		03/01/23 17:00	03/02/23 12:41	1

**Method: SW846 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		03/01/23 17:00	03/02/23 15:30	1
Thallium	<0.0020	*+	0.0020	0.0020	mg/L		03/01/23 17:00	03/02/23 15:30	1

**Method: SW846 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		03/01/23 11:25	03/02/23 11:20	1

**Method: SW846 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.032</b>		0.019	0.010	mg/Kg	☆	03/03/23 13:00	03/06/23 08:37	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>pH (SW846 9045D)</b>	<b>7.6</b>		0.2	0.2	SU			03/01/23 13:14	1

# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-14-B02 (0-1)**

**Lab Sample ID: 500-229911-4**

Date Collected: 02/23/23 14:10

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 86.2

**Method: SW846 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.043		0.043	0.019	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Benzene	<0.0043		0.0043	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Bromodichloromethane	<0.0043		0.0043	0.00088	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Bromoform	<0.0043		0.0043	0.0013	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Bromomethane	<0.011		0.011	0.0041	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
2-Butanone (MEK)	<0.011		0.011	0.0048	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Carbon disulfide	<0.011		0.011	0.0022	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Carbon tetrachloride	<0.0043		0.0043	0.0012	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Chlorobenzene	<0.0043		0.0043	0.0016	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Chloroethane	<0.011		0.011	0.0032	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Chloroform	<0.0043		0.0043	0.0015	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Chloromethane	<0.011		0.011	0.0043	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
cis-1,2-Dichloroethene	<0.0043		0.0043	0.0012	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
cis-1,3-Dichloropropene	<0.0043		0.0043	0.0013	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Dibromochloromethane	<0.0043		0.0043	0.0014	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
1,1-Dichloroethane	<0.0043		0.0043	0.0015	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
1,2-Dichloroethane	<0.011		0.011	0.0034	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
1,1-Dichloroethene	<0.0043		0.0043	0.0015	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
1,2-Dichloropropane	<0.0043		0.0043	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
1,3-Dichloropropane, Total	<0.0043		0.0043	0.0015	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Ethylbenzene	<0.0043		0.0043	0.0021	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
2-Hexanone	<0.011		0.011	0.0034	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Methylene Chloride	<0.011		0.011	0.0042	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
4-Methyl-2-pentanone (MIBK)	<0.011		0.011	0.0032	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Methyl tert-butyl ether	<0.0043		0.0043	0.0013	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Styrene	<0.0043		0.0043	0.0013	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
1,1,2,2-Tetrachloroethane	<0.0043		0.0043	0.0014	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Tetrachloroethene	<0.0043		0.0043	0.0015	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Toluene	<0.0043		0.0043	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
trans-1,2-Dichloroethene	<0.0043		0.0043	0.0019	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
trans-1,3-Dichloropropene	<0.0043		0.0043	0.0015	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
1,1,1-Trichloroethane	<0.0043		0.0043	0.0014	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
1,1,2-Trichloroethane	<0.0043		0.0043	0.0018	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Trichloroethene	<0.0043		0.0043	0.0015	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Vinyl acetate	<0.011		0.011	0.0037	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Vinyl chloride	<0.0043		0.0043	0.0019	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1
Xylenes, Total	<0.0086		0.0086	0.0014	mg/Kg	✳	02/24/23 17:05	02/28/23 13:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		75 - 131	02/24/23 17:05	02/28/23 13:43	1
Dibromofluoromethane	91		75 - 126	02/24/23 17:05	02/28/23 13:43	1
1,2-Dichloroethane-d4 (Surr)	95		70 - 134	02/24/23 17:05	02/28/23 13:43	1
Toluene-d8 (Surr)	89		75 - 124	02/24/23 17:05	02/28/23 13:43	1

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.19		0.19	0.083	mg/Kg	✳	02/28/23 08:18	03/08/23 19:00	1
Bis(2-chloroethyl)ether	<0.19		0.19	0.056	mg/Kg	✳	02/28/23 08:18	03/08/23 19:00	1
1,3-Dichlorobenzene	<0.19		0.19	0.042	mg/Kg	✳	02/28/23 08:18	03/08/23 19:00	1
1,4-Dichlorobenzene	<0.19		0.19	0.048	mg/Kg	✳	02/28/23 08:18	03/08/23 19:00	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-14-B02 (0-1)**

**Lab Sample ID: 500-229911-4**

Date Collected: 02/23/23 14:10

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 86.2

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.19		0.19	0.045	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
2-Methylphenol	<0.19		0.19	0.060	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
2,2'-oxybis[1-chloropropane]	<0.19		0.19	0.043	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
N-Nitrosodi-n-propylamine	<0.075		0.075	0.046	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
Hexachloroethane	<0.19		0.19	0.057	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
2-Chlorophenol	<0.19		0.19	0.064	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
Nitrobenzene	<0.037		0.037	0.0093	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
Bis(2-chloroethoxy)methane	<0.19		0.19	0.038	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
1,2,4-Trichlorobenzene	<0.19		0.19	0.040	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
Isophorone	<0.19		0.19	0.042	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
2,4-Dimethylphenol	<0.37		0.37	0.14	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
Hexachlorobutadiene	<0.19		0.19	0.059	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
<b>Naphthalene</b>	<b>0.19</b>		0.037	0.0058	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
2,4-Dichlorophenol	<0.37		0.37	0.089	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
4-Chloroaniline	<0.75		0.75	0.18	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
2,4,6-Trichlorophenol	<0.37		0.37	0.13	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
2,4,5-Trichlorophenol	<0.37		0.37	0.085	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
Hexachlorocyclopentadiene	<0.75		0.75	0.22	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
<b>2-Methylnaphthalene</b>	<b>0.41</b>		0.075	0.0069	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
2-Nitroaniline	<0.19		0.19	0.050	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
2-Chloronaphthalene	<0.19		0.19	0.041	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
4-Chloro-3-methylphenol	<0.37		0.37	0.13	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
2,6-Dinitrotoluene	<0.19		0.19	0.074	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
2-Nitrophenol	<0.37		0.37	0.088	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
3-Nitroaniline	<0.37		0.37	0.12	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
Dimethyl phthalate	<0.19		0.19	0.049	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
2,4-Dinitrophenol	<0.75		0.75	0.66	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
Acenaphthylene	<0.037		0.037	0.0049	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
2,4-Dinitrotoluene	<0.19		0.19	0.059	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
<b>Acenaphthene</b>	<b>0.027 J</b>		0.037	0.0067	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
<b>Dibenzofuran</b>	<b>0.22</b>		0.19	0.044	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
4-Nitrophenol	<0.75		0.75	0.36	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
<b>Fluorene</b>	<b>0.017 J</b>		0.037	0.0053	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
4-Nitroaniline	<0.37		0.37	0.16	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
4-Bromophenyl phenyl ether	<0.19		0.19	0.049	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
Hexachlorobenzene	<0.075		0.075	0.0087	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
Diethyl phthalate	<0.19		0.19	0.063	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
4-Chlorophenyl phenyl ether	<0.19		0.19	0.044	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
Pentachlorophenol	<0.75		0.75	0.60	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
N-Nitrosodiphenylamine	<0.19		0.19	0.044	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
4,6-Dinitro-2-methylphenol	<0.75		0.75	0.30	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
<b>Phenanthrene</b>	<b>0.68</b>		0.037	0.0052	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
<b>Anthracene</b>	<b>0.098</b>		0.037	0.0062	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
Carbazole	<0.19		0.19	0.093	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
Di-n-butyl phthalate	<0.19		0.19	0.057	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
<b>Fluoranthene</b>	<b>0.52</b>		0.037	0.0069	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
<b>Pyrene</b>	<b>0.58</b>		0.037	0.0074	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
Butyl benzyl phthalate	<0.19		0.19	0.071	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1
<b>Benzo[a]anthracene</b>	<b>0.29</b>		0.037	0.0050	mg/Kg	☆	02/28/23 08:18	03/08/23 19:00	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-14-B02 (0-1)**

**Lab Sample ID: 500-229911-4**

Date Collected: 02/23/23 14:10

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 86.2

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chrysene</b>	<b>0.38</b>		0.037	0.010	mg/Kg	☼	02/28/23 08:18	03/08/23 19:00	1
3,3'-Dichlorobenzidine	<0.19		0.19	0.052	mg/Kg	☼	02/28/23 08:18	03/08/23 19:00	1
<b>Bis(2-ethylhexyl) phthalate</b>	<b>0.082</b>	<b>J</b>	0.19	0.068	mg/Kg	☼	02/28/23 08:18	03/08/23 19:00	1
Di-n-octyl phthalate	<0.19		0.19	0.061	mg/Kg	☼	02/28/23 08:18	03/08/23 19:00	1
<b>Benzo[b]fluoranthene</b>	<b>0.53</b>	<b>*3</b>	0.037	0.0081	mg/Kg	☼	02/28/23 08:18	03/08/23 19:00	1
<b>Benzo[k]fluoranthene</b>	<b>0.17</b>	<b>*3</b>	0.037	0.011	mg/Kg	☼	02/28/23 08:18	03/08/23 19:00	1
<b>Benzo[a]pyrene</b>	<b>0.34</b>	<b>*3</b>	0.037	0.0072	mg/Kg	☼	02/28/23 08:18	03/08/23 19:00	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.11</b>	<b>*3</b>	0.037	0.0097	mg/Kg	☼	02/28/23 08:18	03/08/23 19:00	1
<b>Dibenz(a,h)anthracene</b>	<b>0.012</b>	<b>J *3</b>	0.037	0.0072	mg/Kg	☼	02/28/23 08:18	03/08/23 19:00	1
<b>Benzo[g,h,i]perylene</b>	<b>0.13</b>	<b>*3</b>	0.037	0.012	mg/Kg	☼	02/28/23 08:18	03/08/23 19:00	1
3 & 4 Methylphenol	<0.19		0.19	0.062	mg/Kg	☼	02/28/23 08:18	03/08/23 19:00	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorophenol	107		31 - 166				02/28/23 08:18	03/08/23 19:00	1
Phenol-d5	96		30 - 153				02/28/23 08:18	03/08/23 19:00	1
Nitrobenzene-d5 (Surr)	87		37 - 147				02/28/23 08:18	03/08/23 19:00	1
2-Fluorobiphenyl (Surr)	84		43 - 145				02/28/23 08:18	03/08/23 19:00	1
2,4,6-Tribromophenol	88		31 - 143				02/28/23 08:18	03/08/23 19:00	1
Terphenyl-d14 (Surr)	109		42 - 157				02/28/23 08:18	03/08/23 19:00	1

**Method: SW846 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.44</b>	<b>J</b>	1.1	0.22	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
<b>Arsenic</b>	<b>8.0</b>		0.57	0.19	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
<b>Barium</b>	<b>130</b>		0.57	0.065	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
<b>Beryllium</b>	<b>0.67</b>		0.23	0.053	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
<b>Boron</b>	<b>3.5</b>		2.8	0.27	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
<b>Cadmium</b>	<b>3.1</b>	<b>B</b>	0.11	0.021	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
<b>Calcium</b>	<b>11000</b>		11	1.9	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
<b>Chromium</b>	<b>14</b>		0.57	0.28	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
<b>Cobalt</b>	<b>8.5</b>		0.28	0.075	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
<b>Copper</b>	<b>20</b>	<b>B</b>	0.57	0.16	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
<b>Iron</b>	<b>14000</b>		11	5.9	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
<b>Lead</b>	<b>150</b>		0.28	0.13	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
<b>Magnesium</b>	<b>1500</b>		5.7	2.8	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
<b>Manganese</b>	<b>390</b>		0.57	0.083	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
<b>Nickel</b>	<b>17</b>		0.57	0.17	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
<b>Potassium</b>	<b>880</b>		28	10	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
<b>Selenium</b>	<b>0.51</b>	<b>J</b>	0.57	0.33	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
<b>Silver</b>	<b>0.40</b>	<b>B</b>	0.28	0.073	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
<b>Sodium</b>	<b>260</b>		57	8.4	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
Thallium	<0.57		0.57	0.28	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
<b>Vanadium</b>	<b>19</b>		0.28	0.067	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1
<b>Zinc</b>	<b>920</b>		1.1	0.50	mg/Kg	☼	02/24/23 15:35	02/27/23 15:19	1

**Method: SW846 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>1.2</b>		0.50	0.050	mg/L		03/01/23 17:00	03/02/23 12:44	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		03/01/23 17:00	03/02/23 12:44	1
Boron	<0.50	^1+	0.50	0.050	mg/L		03/01/23 17:00	03/02/23 12:44	1

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# Client Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-14-B02 (0-1)**

**Lab Sample ID: 500-229911-4**

Date Collected: 02/23/23 14:10

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 86.2

**Method: SW846 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		03/01/23 17:00	03/02/23 12:44	1
Chromium	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:44	1
Cobalt	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:44	1
Iron	<0.40		0.40	0.20	mg/L		03/01/23 17:00	03/02/23 12:44	1
Lead	<0.0075		0.0075	0.0075	mg/L		03/01/23 17:00	03/02/23 12:44	1
Nickel	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:44	1
Selenium	<0.050		0.050	0.020	mg/L		03/01/23 17:00	03/02/23 12:44	1
Silver	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:44	1
<b>Zinc</b>	<b>0.052</b>	<b>J</b>	0.50	0.020	mg/L		03/01/23 17:00	03/02/23 12:44	1

**Method: SW846 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		03/01/23 17:00	03/02/23 15:32	1
Thallium	<0.0020	*+	0.0020	0.0020	mg/L		03/01/23 17:00	03/02/23 15:32	1

**Method: SW846 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		03/01/23 11:25	03/02/23 11:23	1

**Method: SW846 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.078</b>		0.018	0.0096	mg/Kg	☆	03/03/23 13:00	03/06/23 08:39	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>pH (SW846 9045D)</b>	<b>7.9</b>		0.2	0.2	SU			03/01/23 14:54	1

# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-14-B02 (0-1)D**

**Lab Sample ID: 500-229911-5**

Date Collected: 02/23/23 14:15

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 82.6

**Method: SW846 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<0.022		0.022	0.0097	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Benzene	<0.0022		0.0022	0.00057	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Bromodichloromethane	<0.0022		0.0022	0.00045	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Bromoform	<0.0022		0.0022	0.00065	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Bromomethane	<0.0056		0.0056	0.0021	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
2-Butanone (MEK)	<0.0056		0.0056	0.0025	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Carbon disulfide	<0.0056		0.0056	0.0012	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Carbon tetrachloride	<0.0022		0.0022	0.00065	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Chlorobenzene	<0.0022		0.0022	0.00082	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Chloroethane	<0.0056		0.0056	0.0017	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Chloroform	<0.0022		0.0022	0.00077	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Chloromethane	<0.0056		0.0056	0.0022	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
cis-1,2-Dichloroethene	<0.0022		0.0022	0.00062	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
cis-1,3-Dichloropropene	<0.0022		0.0022	0.00067	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Dibromochloromethane	<0.0022		0.0022	0.00073	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
1,1-Dichloroethane	<0.0022		0.0022	0.00076	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
1,2-Dichloroethane	<0.0056		0.0056	0.0017	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
1,1-Dichloroethene	<0.0022		0.0022	0.00077	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
1,2-Dichloropropane	<0.0022		0.0022	0.00058	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
1,3-Dichloropropane, Total	<0.0022		0.0022	0.00078	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Ethylbenzene	<0.0022		0.0022	0.0011	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
2-Hexanone	<0.0056		0.0056	0.0017	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Methylene Chloride	<0.0056		0.0056	0.0022	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
4-Methyl-2-pentanone (MIBK)	<0.0056		0.0056	0.0017	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Methyl tert-butyl ether	<0.0022		0.0022	0.00066	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Styrene	<0.0022		0.0022	0.00067	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
1,1,2,2-Tetrachloroethane	<0.0022		0.0022	0.00071	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Tetrachloroethene	<0.0022		0.0022	0.00076	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Toluene	<0.0022		0.0022	0.00056	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
trans-1,2-Dichloroethene	<0.0022		0.0022	0.00099	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
trans-1,3-Dichloropropene	<0.0022		0.0022	0.00078	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
1,1,1-Trichloroethane	<0.0022		0.0022	0.00075	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
1,1,2-Trichloroethane	<0.0022		0.0022	0.00096	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Trichloroethene	<0.0022		0.0022	0.00075	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Vinyl acetate	<0.0056		0.0056	0.0019	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Vinyl chloride	<0.0022		0.0022	0.00099	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1
Xylenes, Total	<0.0045		0.0045	0.00071	mg/Kg	✳	02/24/23 17:05	02/28/23 14:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		75 - 131	02/24/23 17:05	02/28/23 14:07	1
Dibromofluoromethane	91		75 - 126	02/24/23 17:05	02/28/23 14:07	1
1,2-Dichloroethane-d4 (Surr)	91		70 - 134	02/24/23 17:05	02/28/23 14:07	1
Toluene-d8 (Surr)	89		75 - 124	02/24/23 17:05	02/28/23 14:07	1

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	<0.20		0.20	0.088	mg/Kg	✳	02/28/23 08:18	03/08/23 19:24	1
Bis(2-chloroethyl)ether	<0.20		0.20	0.059	mg/Kg	✳	02/28/23 08:18	03/08/23 19:24	1
1,3-Dichlorobenzene	<0.20		0.20	0.045	mg/Kg	✳	02/28/23 08:18	03/08/23 19:24	1
1,4-Dichlorobenzene	<0.20		0.20	0.051	mg/Kg	✳	02/28/23 08:18	03/08/23 19:24	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-14-B02 (0-1)D**

**Lab Sample ID: 500-229911-5**

**Date Collected: 02/23/23 14:15**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

**Percent Solids: 82.6**

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<0.20		0.20	0.047	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
2-Methylphenol	<0.20		0.20	0.064	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
2,2'-oxybis[1-chloropropane]	<0.20		0.20	0.046	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
N-Nitrosodi-n-propylamine	<0.080		0.080	0.048	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
Hexachloroethane	<0.20		0.20	0.060	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
2-Chlorophenol	<0.20		0.20	0.068	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
Nitrobenzene	<0.039		0.039	0.0099	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
Bis(2-chloroethoxy)methane	<0.20		0.20	0.040	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
1,2,4-Trichlorobenzene	<0.20		0.20	0.043	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
Isophorone	<0.20		0.20	0.044	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
2,4-Dimethylphenol	<0.39		0.39	0.15	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
Hexachlorobutadiene	<0.20		0.20	0.062	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
<b>Naphthalene</b>	<b>0.11</b>		0.039	0.0061	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
2,4-Dichlorophenol	<0.39		0.39	0.094	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
4-Chloroaniline	<0.80		0.80	0.19	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
2,4,6-Trichlorophenol	<0.39		0.39	0.14	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
2,4,5-Trichlorophenol	<0.39		0.39	0.090	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
Hexachlorocyclopentadiene	<0.80		0.80	0.23	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
<b>2-Methylnaphthalene</b>	<b>0.24</b>		0.080	0.0073	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
2-Nitroaniline	<0.20		0.20	0.053	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
2-Chloronaphthalene	<0.20		0.20	0.044	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
4-Chloro-3-methylphenol	<0.39		0.39	0.13	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
2,6-Dinitrotoluene	<0.20		0.20	0.078	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
2-Nitrophenol	<0.39		0.39	0.094	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
3-Nitroaniline	<0.39		0.39	0.12	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
Dimethyl phthalate	<0.20		0.20	0.052	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
2,4-Dinitrophenol	<0.80		0.80	0.70	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
<b>Acenaphthylene</b>	<b>0.036 J</b>		0.039	0.0052	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
2,4-Dinitrotoluene	<0.20		0.20	0.063	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
<b>Acenaphthene</b>	<b>0.020 J</b>		0.039	0.0071	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
<b>Dibenzofuran</b>	<b>0.11 J</b>		0.20	0.046	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
4-Nitrophenol	<0.80		0.80	0.38	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
<b>Fluorene</b>	<b>0.020 J</b>		0.039	0.0056	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
4-Nitroaniline	<0.39		0.39	0.17	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
4-Bromophenyl phenyl ether	<0.20		0.20	0.052	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
Hexachlorobenzene	<0.080		0.080	0.0092	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
Diethyl phthalate	<0.20		0.20	0.067	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
4-Chlorophenyl phenyl ether	<0.20		0.20	0.046	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
Pentachlorophenol	<0.80		0.80	0.64	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
N-Nitrosodiphenylamine	<0.20		0.20	0.047	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
4,6-Dinitro-2-methylphenol	<0.80		0.80	0.32	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
<b>Phenanthrene</b>	<b>0.47</b>		0.039	0.0055	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
<b>Anthracene</b>	<b>0.092</b>		0.039	0.0066	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
Carbazole	<0.20		0.20	0.099	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
Di-n-butyl phthalate	<0.20		0.20	0.060	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
<b>Fluoranthene</b>	<b>0.53</b>		0.039	0.0073	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
<b>Pyrene</b>	<b>0.54</b>		0.039	0.0079	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
Butyl benzyl phthalate	<0.20		0.20	0.075	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
<b>Benzo[a]anthracene</b>	<b>0.30</b>		0.039	0.0053	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-14-B02 (0-1)D**

**Lab Sample ID: 500-229911-5**

Date Collected: 02/23/23 14:15

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 82.6

**Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chrysene</b>	<b>0.33</b>		0.039	0.011	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
3,3'-Dichlorobenzidine	<0.20		0.20	0.055	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
Bis(2-ethylhexyl) phthalate	<0.20		0.20	0.072	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
Di-n-octyl phthalate	<0.20		0.20	0.065	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
<b>Benzo[b]fluoranthene</b>	<b>0.50</b>	<b>*3</b>	0.039	0.0085	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
<b>Benzo[k]fluoranthene</b>	<b>0.20</b>	<b>*3</b>	0.039	0.012	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
<b>Benzo[a]pyrene</b>	<b>0.35</b>	<b>*3</b>	0.039	0.0077	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.11</b>	<b>*3</b>	0.039	0.010	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
Dibenz(a,h)anthracene	<0.039	*3	0.039	0.0077	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
<b>Benzo[g,h,i]perylene</b>	<b>0.13</b>	<b>*3</b>	0.039	0.013	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
3 & 4 Methylphenol	<0.20		0.20	0.066	mg/Kg	☼	02/28/23 08:18	03/08/23 19:24	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2-Fluorophenol	104		31 - 166				02/28/23 08:18	03/08/23 19:24	1
Phenol-d5	93		30 - 153				02/28/23 08:18	03/08/23 19:24	1
Nitrobenzene-d5 (Surr)	85		37 - 147				02/28/23 08:18	03/08/23 19:24	1
2-Fluorobiphenyl (Surr)	82		43 - 145				02/28/23 08:18	03/08/23 19:24	1
2,4,6-Tribromophenol	77		31 - 143				02/28/23 08:18	03/08/23 19:24	1
Terphenyl-d14 (Surr)	92		42 - 157				02/28/23 08:18	03/08/23 19:24	1

**Method: SW846 6010B - Metals (ICP)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Antimony</b>	<b>0.39</b>	<b>J</b>	1.2	0.23	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
<b>Arsenic</b>	<b>9.1</b>		0.58	0.20	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
<b>Barium</b>	<b>100</b>		0.58	0.066	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
<b>Beryllium</b>	<b>0.73</b>		0.23	0.054	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
<b>Boron</b>	<b>4.0</b>		2.9	0.27	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
<b>Cadmium</b>	<b>0.83</b>	<b>B</b>	0.12	0.021	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
<b>Calcium</b>	<b>25000</b>		12	2.0	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
<b>Chromium</b>	<b>15</b>		0.58	0.29	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
<b>Cobalt</b>	<b>7.0</b>		0.29	0.076	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
<b>Copper</b>	<b>34</b>	<b>B</b>	0.58	0.16	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
<b>Iron</b>	<b>19000</b>		12	6.1	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
<b>Lead</b>	<b>280</b>		0.29	0.13	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
<b>Magnesium</b>	<b>2700</b>		5.8	2.9	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
<b>Manganese</b>	<b>350</b>		0.58	0.084	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
<b>Nickel</b>	<b>19</b>		0.58	0.17	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
<b>Potassium</b>	<b>1000</b>		29	10	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
<b>Selenium</b>	<b>0.57</b>	<b>J</b>	0.58	0.34	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
<b>Silver</b>	<b>0.30</b>	<b>B</b>	0.29	0.075	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
<b>Sodium</b>	<b>270</b>		58	8.6	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
Thallium	<0.58		0.58	0.29	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
<b>Vanadium</b>	<b>17</b>		0.29	0.069	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1
<b>Zinc</b>	<b>160</b>		1.2	0.51	mg/Kg	☼	02/24/23 15:35	02/27/23 15:22	1

**Method: SW846 6010B - Metals (ICP) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Barium</b>	<b>0.95</b>		0.50	0.050	mg/L		03/01/23 17:00	03/02/23 12:57	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		03/01/23 17:00	03/02/23 12:57	1
Boron	<0.50	^1+	0.50	0.050	mg/L		03/01/23 17:00	03/02/23 12:57	1

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# Client Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-14-B02 (0-1)D**

**Lab Sample ID: 500-229911-5**

Date Collected: 02/23/23 14:15

Matrix: Solid

Date Received: 02/24/23 11:11

Percent Solids: 82.6

**Method: SW846 6010B - Metals (ICP) - TCLP (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.0050		0.0050	0.0020	mg/L		03/01/23 17:00	03/02/23 12:57	1
Chromium	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:57	1
Cobalt	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:57	1
Iron	<0.40		0.40	0.20	mg/L		03/01/23 17:00	03/02/23 12:57	1
Lead	<0.0075		0.0075	0.0075	mg/L		03/01/23 17:00	03/02/23 12:57	1
Nickel	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:57	1
Selenium	<0.050		0.050	0.020	mg/L		03/01/23 17:00	03/02/23 12:57	1
Silver	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:57	1
<b>Zinc</b>	<b>0.055</b>	<b>J</b>	0.50	0.020	mg/L		03/01/23 17:00	03/02/23 12:57	1

**Method: SW846 6020A - Metals (ICP/MS) - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		03/01/23 17:00	03/02/23 15:40	1
Thallium	<0.0020	*+	0.0020	0.0020	mg/L		03/01/23 17:00	03/02/23 15:40	1

**Method: SW846 7470A - TCLP Mercury - TCLP**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		03/01/23 11:25	03/02/23 11:29	1

**Method: SW846 7471B - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<b>0.041</b>		0.018	0.0095	mg/Kg	☆	03/03/23 13:00	03/06/23 08:41	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9045D)	<b>8.3</b>		0.2	0.2	SU			03/01/23 15:00	1



# Definitions/Glossary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
*3	ISTD response or retention time outside acceptable limits.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
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
*+	LCS and/or LCSD is outside acceptance limits, high biased.
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
B	Compound was found in the blank and sample.
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.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

# QC Association Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## GC/MS VOA

### Prep Batch: 700221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	5035	
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	5035	
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	5035	
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	5035	
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	5035	
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	5035	
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	5035	
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	5035	
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	5035	
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	5035	
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	5035	
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	5035	
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	5035	
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	5035	
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	5035	

### Analysis Batch: 700426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	8260B	700221
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	8260B	700221
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	8260B	700221
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	8260B	700221
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	8260B	700221
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	8260B	700221
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	8260B	700221
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	8260B	700221
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	8260B	700221
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	8260B	700221
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	8260B	700221
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	8260B	700221
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	8260B	700221
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	8260B	700221
MB 500-700426/7	Method Blank	Total/NA	Solid	8260B	
LCS 500-700426/4	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 500-700426/5	Lab Control Sample Dup	Total/NA	Solid	8260B	

### Analysis Batch: 700601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	8260B	700221
MB 500-700601/7	Method Blank	Total/NA	Solid	8260B	
LCS 500-700601/4	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 500-700601/5	Lab Control Sample Dup	Total/NA	Solid	8260B	

## GC/MS Semi VOA

### Prep Batch: 700448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	3541	
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	3541	
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	3541	
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	3541	

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# QC Association Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## GC/MS Semi VOA (Continued)

### Prep Batch: 700448 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	3541	
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	3541	
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	3541	
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	3541	
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	3541	
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	3541	
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	3541	
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	3541	
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	3541	
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	3541	
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	3541	
MB 500-700448/1-A	Method Blank	Total/NA	Solid	3541	
LCS 500-700448/2-A	Lab Control Sample	Total/NA	Solid	3541	
500-229911-15 MS	4062-C0V-05-B01 (0-1)	Total/NA	Solid	3541	
500-229911-15 MSD	4062-C0V-05-B01 (0-1)	Total/NA	Solid	3541	

### Analysis Batch: 700513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	8270D	700448
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	8270D	700448
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	8270D	700448
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	8270D	700448
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	8270D	700448
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	8270D	700448
MB 500-700448/1-A	Method Blank	Total/NA	Solid	8270D	700448
LCS 500-700448/2-A	Lab Control Sample	Total/NA	Solid	8270D	700448

### Analysis Batch: 700668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	8270D	700448
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	8270D	700448
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	8270D	700448
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	8270D	700448
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	8270D	700448

### Analysis Batch: 700703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	8270D	700448
500-229911-15 MS	4062-C0V-05-B01 (0-1)	Total/NA	Solid	8270D	700448
500-229911-15 MSD	4062-C0V-05-B01 (0-1)	Total/NA	Solid	8270D	700448

### Analysis Batch: 701587

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	8270D	700448
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	8270D	700448
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	8270D	700448

# QC Association Summary

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Metals

### Prep Batch: 700187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	3050B	
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	3050B	
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	3050B	
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	3050B	
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	3050B	
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	3050B	
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	3050B	
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	3050B	
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	3050B	
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	3050B	
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	3050B	
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	3050B	
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	3050B	
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	3050B	
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	3050B	
MB 500-700187/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 500-700187/2-A	Lab Control Sample	Total/NA	Solid	3050B	

### Analysis Batch: 700467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	6010B	700187
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	6010B	700187
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	6010B	700187
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	6010B	700187
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	6010B	700187
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	6010B	700187
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	6010B	700187
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	6010B	700187
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	6010B	700187
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	6010B	700187
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	6010B	700187
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	6010B	700187
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	6010B	700187
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	6010B	700187
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	6010B	700187
MB 500-700187/1-A	Method Blank	Total/NA	Solid	6010B	700187
LCS 500-700187/2-A	Lab Control Sample	Total/NA	Solid	6010B	700187

### Leach Batch: 700531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	TCLP	Solid	1311	
500-229911-2	4062-C0V-08-B09 (0-2)	TCLP	Solid	1311	
500-229911-3	4062-C0V-14-B01 (0-1)	TCLP	Solid	1311	
500-229911-4	4062-C0V-14-B02 (0-1)	TCLP	Solid	1311	
500-229911-5	4062-C0V-14-B02 (0-1)D	TCLP	Solid	1311	
500-229911-6	4062-C0V-08-B06 (0-2)	TCLP	Solid	1311	
500-229911-7	4062-C0V-08-B07 (0-2)	TCLP	Solid	1311	
500-229911-8	4062-C0V-08-B05 (0-2)	TCLP	Solid	1311	
500-229911-9	4062-C0V-08-B04 (0-2)	TCLP	Solid	1311	
500-229911-10	4062-C0V-08-B03 (0-2)	TCLP	Solid	1311	
500-229911-11	4062-C0V-08-B02 (0-2)	TCLP	Solid	1311	

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# QC Association Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Metals (Continued)

### Leach Batch: 700531 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-12	4062-C0V-08-B01 (0-2)	TCLP	Solid	1311	
500-229911-13	4062-C0V-05-B03 (0-1)	TCLP	Solid	1311	
500-229911-14	4062-C0V-05-B02 (0-1)	TCLP	Solid	1311	
500-229911-15	4062-C0V-05-B01 (0-1)	TCLP	Solid	1311	
LB 500-700531/2-B	Method Blank	TCLP	Solid	1311	
LB 500-700531/2-C	Method Blank	TCLP	Solid	1311	
500-229911-4 MS	4062-C0V-14-B02 (0-1)	TCLP	Solid	1311	
500-229911-4 DU	4062-C0V-14-B02 (0-1)	TCLP	Solid	1311	

### Analysis Batch: 700562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	6010B	700187

### Prep Batch: 700697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	TCLP	Solid	7470A	700531
500-229911-2	4062-C0V-08-B09 (0-2)	TCLP	Solid	7470A	700531
500-229911-3	4062-C0V-14-B01 (0-1)	TCLP	Solid	7470A	700531
500-229911-4	4062-C0V-14-B02 (0-1)	TCLP	Solid	7470A	700531
500-229911-5	4062-C0V-14-B02 (0-1)D	TCLP	Solid	7470A	700531
500-229911-6	4062-C0V-08-B06 (0-2)	TCLP	Solid	7470A	700531
500-229911-7	4062-C0V-08-B07 (0-2)	TCLP	Solid	7470A	700531
500-229911-8	4062-C0V-08-B05 (0-2)	TCLP	Solid	7470A	700531
500-229911-9	4062-C0V-08-B04 (0-2)	TCLP	Solid	7470A	700531
500-229911-10	4062-C0V-08-B03 (0-2)	TCLP	Solid	7470A	700531
500-229911-11	4062-C0V-08-B02 (0-2)	TCLP	Solid	7470A	700531
500-229911-12	4062-C0V-08-B01 (0-2)	TCLP	Solid	7470A	700531
500-229911-13	4062-C0V-05-B03 (0-1)	TCLP	Solid	7470A	700531
500-229911-14	4062-C0V-05-B02 (0-1)	TCLP	Solid	7470A	700531
500-229911-15	4062-C0V-05-B01 (0-1)	TCLP	Solid	7470A	700531
LB 500-700531/2-B	Method Blank	TCLP	Solid	7470A	700531
MB 500-700697/12-A	Method Blank	Total/NA	Solid	7470A	
LCS 500-700697/14-A	Lab Control Sample	Total/NA	Solid	7470A	
500-229911-4 MS	4062-C0V-14-B02 (0-1)	TCLP	Solid	7470A	700531
500-229911-4 DU	4062-C0V-14-B02 (0-1)	TCLP	Solid	7470A	700531

### Prep Batch: 700755

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	TCLP	Solid	3010A	700531
500-229911-2	4062-C0V-08-B09 (0-2)	TCLP	Solid	3010A	700531
500-229911-3	4062-C0V-14-B01 (0-1)	TCLP	Solid	3010A	700531
500-229911-4	4062-C0V-14-B02 (0-1)	TCLP	Solid	3010A	700531
500-229911-5	4062-C0V-14-B02 (0-1)D	TCLP	Solid	3010A	700531
500-229911-6	4062-C0V-08-B06 (0-2)	TCLP	Solid	3010A	700531
500-229911-7	4062-C0V-08-B07 (0-2)	TCLP	Solid	3010A	700531
500-229911-8	4062-C0V-08-B05 (0-2)	TCLP	Solid	3010A	700531
500-229911-9	4062-C0V-08-B04 (0-2)	TCLP	Solid	3010A	700531
500-229911-10	4062-C0V-08-B03 (0-2)	TCLP	Solid	3010A	700531
500-229911-11	4062-C0V-08-B02 (0-2)	TCLP	Solid	3010A	700531
500-229911-12	4062-C0V-08-B01 (0-2)	TCLP	Solid	3010A	700531
500-229911-13	4062-C0V-05-B03 (0-1)	TCLP	Solid	3010A	700531

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# QC Association Summary

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Metals (Continued)

### Prep Batch: 700755 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-14	4062-C0V-05-B02 (0-1)	TCLP	Solid	3010A	700531
500-229911-15	4062-C0V-05-B01 (0-1)	TCLP	Solid	3010A	700531
LB 500-700531/2-C	Method Blank	TCLP	Solid	3010A	700531
LCS 500-700755/2-A	Lab Control Sample	Total/NA	Solid	3010A	
500-229911-4 MS	4062-C0V-14-B02 (0-1)	TCLP	Solid	3010A	700531
500-229911-4 DU	4062-C0V-14-B02 (0-1)	TCLP	Solid	3010A	700531

### Analysis Batch: 700909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	TCLP	Solid	7470A	700697
500-229911-2	4062-C0V-08-B09 (0-2)	TCLP	Solid	7470A	700697
500-229911-3	4062-C0V-14-B01 (0-1)	TCLP	Solid	7470A	700697
500-229911-4	4062-C0V-14-B02 (0-1)	TCLP	Solid	7470A	700697
500-229911-5	4062-C0V-14-B02 (0-1)D	TCLP	Solid	7470A	700697
500-229911-6	4062-C0V-08-B06 (0-2)	TCLP	Solid	7470A	700697
500-229911-7	4062-C0V-08-B07 (0-2)	TCLP	Solid	7470A	700697
500-229911-8	4062-C0V-08-B05 (0-2)	TCLP	Solid	7470A	700697
500-229911-9	4062-C0V-08-B04 (0-2)	TCLP	Solid	7470A	700697
500-229911-10	4062-C0V-08-B03 (0-2)	TCLP	Solid	7470A	700697
500-229911-11	4062-C0V-08-B02 (0-2)	TCLP	Solid	7470A	700697
500-229911-12	4062-C0V-08-B01 (0-2)	TCLP	Solid	7470A	700697
500-229911-13	4062-C0V-05-B03 (0-1)	TCLP	Solid	7470A	700697
500-229911-14	4062-C0V-05-B02 (0-1)	TCLP	Solid	7470A	700697
500-229911-15	4062-C0V-05-B01 (0-1)	TCLP	Solid	7470A	700697
LB 500-700531/2-B	Method Blank	TCLP	Solid	7470A	700697
MB 500-700697/12-A	Method Blank	Total/NA	Solid	7470A	700697
LCS 500-700697/14-A	Lab Control Sample	Total/NA	Solid	7470A	700697
500-229911-4 MS	4062-C0V-14-B02 (0-1)	TCLP	Solid	7470A	700697
500-229911-4 DU	4062-C0V-14-B02 (0-1)	TCLP	Solid	7470A	700697

### Analysis Batch: 700931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	TCLP	Solid	6010B	700755
500-229911-2	4062-C0V-08-B09 (0-2)	TCLP	Solid	6010B	700755
500-229911-3	4062-C0V-14-B01 (0-1)	TCLP	Solid	6010B	700755
500-229911-4	4062-C0V-14-B02 (0-1)	TCLP	Solid	6010B	700755
500-229911-5	4062-C0V-14-B02 (0-1)D	TCLP	Solid	6010B	700755
500-229911-6	4062-C0V-08-B06 (0-2)	TCLP	Solid	6010B	700755
500-229911-7	4062-C0V-08-B07 (0-2)	TCLP	Solid	6010B	700755
500-229911-8	4062-C0V-08-B05 (0-2)	TCLP	Solid	6010B	700755
500-229911-9	4062-C0V-08-B04 (0-2)	TCLP	Solid	6010B	700755
500-229911-10	4062-C0V-08-B03 (0-2)	TCLP	Solid	6010B	700755
500-229911-11	4062-C0V-08-B02 (0-2)	TCLP	Solid	6010B	700755
500-229911-12	4062-C0V-08-B01 (0-2)	TCLP	Solid	6010B	700755
500-229911-13	4062-C0V-05-B03 (0-1)	TCLP	Solid	6010B	700755
500-229911-14	4062-C0V-05-B02 (0-1)	TCLP	Solid	6010B	700755
500-229911-15	4062-C0V-05-B01 (0-1)	TCLP	Solid	6010B	700755
LB 500-700531/2-C	Method Blank	TCLP	Solid	6010B	700755
LCS 500-700755/2-A	Lab Control Sample	Total/NA	Solid	6010B	700755
500-229911-4 MS	4062-C0V-14-B02 (0-1)	TCLP	Solid	6010B	700755
500-229911-4 DU	4062-C0V-14-B02 (0-1)	TCLP	Solid	6010B	700755

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# QC Association Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Metals

### Prep Batch: 701027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	7471B	
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	7471B	
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	7471B	
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	7471B	
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	7471B	
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	7471B	
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	7471B	
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	7471B	
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	7471B	
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	7471B	
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	7471B	
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	7471B	
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	7471B	
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	7471B	
MB 500-701027/12-A	Method Blank	Total/NA	Solid	7471B	
LCS 500-701027/13-A	Lab Control Sample	Total/NA	Solid	7471B	
500-229911-10 MS	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	
500-229911-10 MSD	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	
500-229911-10 DU	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	

### Analysis Batch: 701031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	TCLP	Solid	6020A	700755
500-229911-2	4062-C0V-08-B09 (0-2)	TCLP	Solid	6020A	700755
500-229911-3	4062-C0V-14-B01 (0-1)	TCLP	Solid	6020A	700755
500-229911-4	4062-C0V-14-B02 (0-1)	TCLP	Solid	6020A	700755
500-229911-5	4062-C0V-14-B02 (0-1)D	TCLP	Solid	6020A	700755
500-229911-6	4062-C0V-08-B06 (0-2)	TCLP	Solid	6020A	700755
500-229911-7	4062-C0V-08-B07 (0-2)	TCLP	Solid	6020A	700755
500-229911-8	4062-C0V-08-B05 (0-2)	TCLP	Solid	6020A	700755
500-229911-9	4062-C0V-08-B04 (0-2)	TCLP	Solid	6020A	700755
500-229911-10	4062-C0V-08-B03 (0-2)	TCLP	Solid	6020A	700755
500-229911-11	4062-C0V-08-B02 (0-2)	TCLP	Solid	6020A	700755
500-229911-12	4062-C0V-08-B01 (0-2)	TCLP	Solid	6020A	700755
500-229911-13	4062-C0V-05-B03 (0-1)	TCLP	Solid	6020A	700755
500-229911-14	4062-C0V-05-B02 (0-1)	TCLP	Solid	6020A	700755
500-229911-15	4062-C0V-05-B01 (0-1)	TCLP	Solid	6020A	700755
LB 500-700531/2-C	Method Blank	TCLP	Solid	6020A	700755
LCS 500-700755/2-A	Lab Control Sample	Total/NA	Solid	6020A	700755
500-229911-4 MS	4062-C0V-14-B02 (0-1)	TCLP	Solid	6020A	700755
500-229911-4 DU	4062-C0V-14-B02 (0-1)	TCLP	Solid	6020A	700755

### Analysis Batch: 701282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	7471B	701027
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	7471B	701027
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	7471B	701027
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	7471B	701027
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	7471B	701027
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	7471B	701027

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# QC Association Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Metals (Continued)

### Analysis Batch: 701282 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	7471B	701027
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	7471B	701027
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	7471B	701027
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	701027
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	7471B	701027
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	7471B	701027
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	7471B	701027
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	7471B	701027
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	7471B	701027
MB 500-701027/12-A	Method Blank	Total/NA	Solid	7471B	701027
LCS 500-701027/13-A	Lab Control Sample	Total/NA	Solid	7471B	701027
500-229911-10 MS	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	701027
500-229911-10 MSD	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	701027
500-229911-10 DU	4062-C0V-08-B03 (0-2)	Total/NA	Solid	7471B	701027

## General Chemistry

### Analysis Batch: 700719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	9045D	
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	9045D	
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	9045D	
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	9045D	
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	9045D	
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	9045D	
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	9045D	
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	9045D	
LCS 500-700719/5	Lab Control Sample	Total/NA	Solid	9045D	
LCSD 500-700719/6	Lab Control Sample Dup	Total/NA	Solid	9045D	

### Analysis Batch: 700725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	9045D	
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	9045D	
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	9045D	
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	9045D	
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	9045D	
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	9045D	
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	9045D	
LCS 500-700725/2	Lab Control Sample	Total/NA	Solid	9045D	
LCSD 500-700725/3	Lab Control Sample Dup	Total/NA	Solid	9045D	

### Analysis Batch: 700804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-1	4062-C0V-08-B08 (0-2)	Total/NA	Solid	Moisture	
500-229911-2	4062-C0V-08-B09 (0-2)	Total/NA	Solid	Moisture	
500-229911-3	4062-C0V-14-B01 (0-1)	Total/NA	Solid	Moisture	
500-229911-4	4062-C0V-14-B02 (0-1)	Total/NA	Solid	Moisture	
500-229911-5	4062-C0V-14-B02 (0-1)D	Total/NA	Solid	Moisture	
500-229911-6	4062-C0V-08-B06 (0-2)	Total/NA	Solid	Moisture	
500-229911-7	4062-C0V-08-B07 (0-2)	Total/NA	Solid	Moisture	

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# QC Association Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## General Chemistry (Continued)

### Analysis Batch: 700804 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-229911-8	4062-C0V-08-B05 (0-2)	Total/NA	Solid	Moisture	
500-229911-9	4062-C0V-08-B04 (0-2)	Total/NA	Solid	Moisture	
500-229911-10	4062-C0V-08-B03 (0-2)	Total/NA	Solid	Moisture	
500-229911-11	4062-C0V-08-B02 (0-2)	Total/NA	Solid	Moisture	
500-229911-12	4062-C0V-08-B01 (0-2)	Total/NA	Solid	Moisture	
500-229911-13	4062-C0V-05-B03 (0-1)	Total/NA	Solid	Moisture	
500-229911-14	4062-C0V-05-B02 (0-1)	Total/NA	Solid	Moisture	
500-229911-15	4062-C0V-05-B01 (0-1)	Total/NA	Solid	Moisture	
500-229911-1 DU	4062-C0V-08-B08 (0-2)	Total/NA	Solid	Moisture	



# Surrogate Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (75-131)	DBFM (75-126)	DCA (70-134)	TOL (75-124)
500-229911-1	4062-C0V-08-B08 (0-2)	87	91	95	91
500-229911-2	4062-C0V-08-B09 (0-2)	87	94	97	89
500-229911-3	4062-C0V-14-B01 (0-1)	87	92	94	88
500-229911-4	4062-C0V-14-B02 (0-1)	87	91	95	89
500-229911-5	4062-C0V-14-B02 (0-1)D	89	91	91	89
500-229911-6	4062-C0V-08-B06 (0-2)	85	94	96	89
500-229911-7	4062-C0V-08-B07 (0-2)	86	92	96	90
500-229911-8	4062-C0V-08-B05 (0-2)	88	92	96	91
500-229911-9	4062-C0V-08-B04 (0-2)	88	92	99	89
500-229911-10	4062-C0V-08-B03 (0-2)	86	92	93	89
500-229911-11	4062-C0V-08-B02 (0-2)	88	91	94	91
500-229911-12	4062-C0V-08-B01 (0-2)	88	92	93	89
500-229911-13	4062-C0V-05-B03 (0-1)	87	95	98	89
500-229911-14	4062-C0V-05-B02 (0-1)	89	92	94	91
500-229911-15	4062-C0V-05-B01 (0-1)	87	90	92	92
LCS 500-700426/4	Lab Control Sample	83	87	88	91
LCS 500-700601/4	Lab Control Sample	83	87	87	93
LCSD 500-700426/5	Lab Control Sample Dup	84	87	89	91
LCSD 500-700601/5	Lab Control Sample Dup	83	88	86	91
MB 500-700426/7	Method Blank	88	89	92	91
MB 500-700601/7	Method Blank	88	87	88	93

### Surrogate Legend

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

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		2FP (31-166)	PHL (30-153)	NBZ (37-147)	FBP (43-145)	TBP (31-143)	TPHL (42-157)
500-229911-1	4062-C0V-08-B08 (0-2)	122	112	99	92	97	101
500-229911-2	4062-C0V-08-B09 (0-2)	106	97	84	78	79	118
500-229911-3	4062-C0V-14-B01 (0-1)	100	92	81	78	76	117
500-229911-4	4062-C0V-14-B02 (0-1)	107	96	87	84	88	109
500-229911-5	4062-C0V-14-B02 (0-1)D	104	93	85	82	77	92
500-229911-6	4062-C0V-08-B06 (0-2)	116	105	86	85	92	127
500-229911-7	4062-C0V-08-B07 (0-2)	110	98	87	83	84	124
500-229911-8	4062-C0V-08-B05 (0-2)	102	93	78	75	67	116
500-229911-9	4062-C0V-08-B04 (0-2)	109	109	94	89	100	103
500-229911-10	4062-C0V-08-B03 (0-2)	105	102	83	77	93	97
500-229911-11	4062-C0V-08-B02 (0-2)	96	97	78	75	78	85
500-229911-12	4062-C0V-08-B01 (0-2)	99	97	79	76	72	93
500-229911-13	4062-C0V-05-B03 (0-1)	104	98	84	77	77	88
500-229911-14	4062-C0V-05-B02 (0-1)	103	94	77	77	86	105
500-229911-15	4062-C0V-05-B01 (0-1)	108	94	79	76	63	127
500-229911-15 MS	4062-C0V-05-B01 (0-1)	104	94	75	74	58	96

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# Surrogate Summary

Client: WSP USA Inc.

Job ID: 500-229911-1

Project/Site: IDOT-172-027-WO112 West Frankfort

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

**Matrix: Solid**

**Prep Type: Total/NA**

## Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	2FP (31-166)	PHL (30-153)	NBZ (37-147)	FBP (43-145)	TBP (31-143)	TPHL (42-157)
500-229911-15 MSD	4062-COV-05-B01 (0-1)	102	91	73	76	67	114
LCS 500-700448/2-A	Lab Control Sample	123	110	97	90	101	100
MB 500-700448/1-A	Method Blank	127	120	99	92	92	102

### Surrogate Legend

2FP = 2-Fluorophenol

PHL = Phenol-d5

NBZ = Nitrobenzene-d5 (Surr)

FBP = 2-Fluorobiphenyl (Surr)

TBP = 2,4,6-Tribromophenol

TPHL = Terphenyl-d14 (Surr)

# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: MB 500-700426/7**  
**Matrix: Solid**  
**Analysis Batch: 700426**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	<0.020		0.020	0.0087	mg/Kg			02/28/23 12:02	1
Benzene	<0.0020		0.0020	0.00051	mg/Kg			02/28/23 12:02	1
Bromodichloromethane	<0.0020		0.0020	0.00041	mg/Kg			02/28/23 12:02	1
Bromoform	<0.0020		0.0020	0.00058	mg/Kg			02/28/23 12:02	1
Bromomethane	<0.0050		0.0050	0.0019	mg/Kg			02/28/23 12:02	1
2-Butanone (MEK)	<0.0050		0.0050	0.0022	mg/Kg			02/28/23 12:02	1
Carbon disulfide	<0.0050		0.0050	0.0010	mg/Kg			02/28/23 12:02	1
Carbon tetrachloride	<0.0020		0.0020	0.00058	mg/Kg			02/28/23 12:02	1
Chlorobenzene	<0.0020		0.0020	0.00074	mg/Kg			02/28/23 12:02	1
Chloroethane	<0.0050		0.0050	0.0015	mg/Kg			02/28/23 12:02	1
Chloroform	<0.0020		0.0020	0.00069	mg/Kg			02/28/23 12:02	1
Chloromethane	<0.0050		0.0050	0.0020	mg/Kg			02/28/23 12:02	1
cis-1,2-Dichloroethene	<0.0020		0.0020	0.00056	mg/Kg			02/28/23 12:02	1
cis-1,3-Dichloropropene	<0.0020		0.0020	0.00060	mg/Kg			02/28/23 12:02	1
Dibromochloromethane	<0.0020		0.0020	0.00065	mg/Kg			02/28/23 12:02	1
1,1-Dichloroethane	<0.0020		0.0020	0.00069	mg/Kg			02/28/23 12:02	1
1,2-Dichloroethane	<0.0050		0.0050	0.0016	mg/Kg			02/28/23 12:02	1
1,1-Dichloroethene	<0.0020		0.0020	0.00069	mg/Kg			02/28/23 12:02	1
1,2-Dichloropropane	<0.0020		0.0020	0.00052	mg/Kg			02/28/23 12:02	1
1,3-Dichloropropane, Total	<0.0020		0.0020	0.00070	mg/Kg			02/28/23 12:02	1
Ethylbenzene	<0.0020		0.0020	0.00096	mg/Kg			02/28/23 12:02	1
2-Hexanone	<0.0050		0.0050	0.0016	mg/Kg			02/28/23 12:02	1
Methylene Chloride	<0.0050		0.0050	0.0020	mg/Kg			02/28/23 12:02	1
4-Methyl-2-pentanone (MIBK)	<0.0050		0.0050	0.0015	mg/Kg			02/28/23 12:02	1
Methyl tert-butyl ether	<0.0020		0.0020	0.00059	mg/Kg			02/28/23 12:02	1
Styrene	<0.0020		0.0020	0.00060	mg/Kg			02/28/23 12:02	1
1,1,2,2-Tetrachloroethane	<0.0020		0.0020	0.00064	mg/Kg			02/28/23 12:02	1
Tetrachloroethene	<0.0020		0.0020	0.00068	mg/Kg			02/28/23 12:02	1
Toluene	<0.0020		0.0020	0.00051	mg/Kg			02/28/23 12:02	1
trans-1,2-Dichloroethene	<0.0020		0.0020	0.00089	mg/Kg			02/28/23 12:02	1
trans-1,3-Dichloropropene	<0.0020		0.0020	0.00070	mg/Kg			02/28/23 12:02	1
1,1,1-Trichloroethane	<0.0020		0.0020	0.00067	mg/Kg			02/28/23 12:02	1
1,1,2-Trichloroethane	<0.0020		0.0020	0.00086	mg/Kg			02/28/23 12:02	1
Trichloroethene	<0.0020		0.0020	0.00068	mg/Kg			02/28/23 12:02	1
Vinyl acetate	<0.0050		0.0050	0.0017	mg/Kg			02/28/23 12:02	1
Vinyl chloride	<0.0020		0.0020	0.00089	mg/Kg			02/28/23 12:02	1
Xylenes, Total	<0.0040		0.0040	0.00064	mg/Kg			02/28/23 12:02	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	88		75 - 131		02/28/23 12:02	1
Dibromofluoromethane	89		75 - 126		02/28/23 12:02	1
1,2-Dichloroethane-d4 (Surr)	92		70 - 134		02/28/23 12:02	1
Toluene-d8 (Surr)	91		75 - 124		02/28/23 12:02	1

# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCS 500-700426/4**  
**Matrix: Solid**  
**Analysis Batch: 700426**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	0.0500	0.0500		mg/Kg		100	40 - 150
Benzene	0.0500	0.0482		mg/Kg		96	70 - 125
Bromodichloromethane	0.0500	0.0496		mg/Kg		99	67 - 129
Bromoform	0.0500	0.0470		mg/Kg		94	68 - 136
Bromomethane	0.0500	0.0468		mg/Kg		94	70 - 130
2-Butanone (MEK)	0.0500	0.0449		mg/Kg		90	47 - 138
Carbon disulfide	0.0500	0.0415		mg/Kg		83	70 - 129
Carbon tetrachloride	0.0500	0.0505		mg/Kg		101	75 - 125
Chlorobenzene	0.0500	0.0480		mg/Kg		96	50 - 150
Chloroethane	0.0500	0.0478		mg/Kg		96	75 - 125
Chloroform	0.0500	0.0475		mg/Kg		95	57 - 135
Chloromethane	0.0500	0.0441		mg/Kg		88	70 - 125
cis-1,2-Dichloroethene	0.0500	0.0472		mg/Kg		94	70 - 125
cis-1,3-Dichloropropene	0.0500	0.0454		mg/Kg		91	70 - 125
Dibromochloromethane	0.0500	0.0479		mg/Kg		96	69 - 125
1,1-Dichloroethane	0.0500	0.0476		mg/Kg		95	70 - 125
1,2-Dichloroethane	0.0500	0.0498		mg/Kg		100	70 - 130
1,1-Dichloroethene	0.0500	0.0456		mg/Kg		91	70 - 120
1,2-Dichloropropane	0.0500	0.0495		mg/Kg		99	70 - 125
Ethylbenzene	0.0500	0.0501		mg/Kg		100	61 - 136
2-Hexanone	0.0500	0.0500		mg/Kg		100	48 - 146
Methylene Chloride	0.0500	0.0474		mg/Kg		95	70 - 126
4-Methyl-2-pentanone (MIBK)	0.0500	0.0488		mg/Kg		98	50 - 148
Methyl tert-butyl ether	0.0500	0.0468		mg/Kg		94	50 - 140
Styrene	0.0500	0.0493		mg/Kg		99	70 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.0461		mg/Kg		92	70 - 122
Tetrachloroethene	0.0500	0.0478		mg/Kg		96	70 - 124
Toluene	0.0500	0.0469		mg/Kg		94	70 - 125
trans-1,2-Dichloroethene	0.0500	0.0486		mg/Kg		97	70 - 125
trans-1,3-Dichloropropene	0.0500	0.0472		mg/Kg		94	70 - 125
1,1,1-Trichloroethane	0.0500	0.0484		mg/Kg		97	70 - 128
1,1,2-Trichloroethane	0.0500	0.0490		mg/Kg		98	70 - 125
Trichloroethene	0.0500	0.0471		mg/Kg		94	70 - 125
Vinyl acetate	0.0500	0.0453		mg/Kg		91	40 - 153
Vinyl chloride	0.0500	0.0426		mg/Kg		85	70 - 125
Xylenes, Total	0.100	0.0977		mg/Kg		98	53 - 147

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	83		75 - 131
Dibromofluoromethane	87		75 - 126
1,2-Dichloroethane-d4 (Surr)	88		70 - 134
Toluene-d8 (Surr)	91		75 - 124

# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCSD 500-700426/5**  
**Matrix: Solid**  
**Analysis Batch: 700426**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	0.0500	0.0556		mg/Kg		111	40 - 150	11	30
Benzene	0.0500	0.0493		mg/Kg		99	70 - 125	2	30
Bromodichloromethane	0.0500	0.0501		mg/Kg		100	67 - 129	1	30
Bromoform	0.0500	0.0476		mg/Kg		95	68 - 136	1	30
Bromomethane	0.0500	0.0502		mg/Kg		100	70 - 130	7	30
2-Butanone (MEK)	0.0500	0.0521		mg/Kg		104	47 - 138	15	30
Carbon disulfide	0.0500	0.0437		mg/Kg		87	70 - 129	5	30
Carbon tetrachloride	0.0500	0.0528		mg/Kg		106	75 - 125	5	30
Chlorobenzene	0.0500	0.0494		mg/Kg		99	50 - 150	3	30
Chloroethane	0.0500	0.0512		mg/Kg		102	75 - 125	7	30
Chloroform	0.0500	0.0484		mg/Kg		97	57 - 135	2	30
Chloromethane	0.0500	0.0461		mg/Kg		92	70 - 125	5	30
cis-1,2-Dichloroethene	0.0500	0.0481		mg/Kg		96	70 - 125	2	30
cis-1,3-Dichloropropene	0.0500	0.0474		mg/Kg		95	70 - 125	4	30
Dibromochloromethane	0.0500	0.0484		mg/Kg		97	69 - 125	1	30
1,1-Dichloroethane	0.0500	0.0493		mg/Kg		99	70 - 125	3	30
1,2-Dichloroethane	0.0500	0.0518		mg/Kg		104	70 - 130	4	30
1,1-Dichloroethene	0.0500	0.0481		mg/Kg		96	70 - 120	6	30
1,2-Dichloropropane	0.0500	0.0516		mg/Kg		103	70 - 125	4	30
Ethylbenzene	0.0500	0.0502		mg/Kg		100	61 - 136	0	30
2-Hexanone	0.0500	0.0556		mg/Kg		111	48 - 146	10	30
Methylene Chloride	0.0500	0.0503		mg/Kg		101	70 - 126	6	30
4-Methyl-2-pentanone (MIBK)	0.0500	0.0545		mg/Kg		109	50 - 148	11	30
Methyl tert-butyl ether	0.0500	0.0491		mg/Kg		98	50 - 140	5	30
Styrene	0.0500	0.0504		mg/Kg		101	70 - 125	2	30
1,1,2,2-Tetrachloroethane	0.0500	0.0496		mg/Kg		99	70 - 122	7	30
Tetrachloroethene	0.0500	0.0487		mg/Kg		97	70 - 124	2	30
Toluene	0.0500	0.0479		mg/Kg		96	70 - 125	2	30
trans-1,2-Dichloroethene	0.0500	0.0513		mg/Kg		103	70 - 125	5	30
trans-1,3-Dichloropropene	0.0500	0.0485		mg/Kg		97	70 - 125	3	30
1,1,1-Trichloroethane	0.0500	0.0505		mg/Kg		101	70 - 128	4	30
1,1,2-Trichloroethane	0.0500	0.0492		mg/Kg		98	70 - 125	0	30
Trichloroethene	0.0500	0.0486		mg/Kg		97	70 - 125	3	30
Vinyl acetate	0.0500	0.0519		mg/Kg		104	40 - 153	14	30
Vinyl chloride	0.0500	0.0467		mg/Kg		93	70 - 125	9	30
Xylenes, Total	0.100	0.0993		mg/Kg		99	53 - 147	2	30

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	84		75 - 131
Dibromofluoromethane	87		75 - 126
1,2-Dichloroethane-d4 (Surr)	89		70 - 134
Toluene-d8 (Surr)	91		75 - 124



# QC Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: MB 500-700601/7**  
**Matrix: Solid**  
**Analysis Batch: 700601**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	<0.020		0.020	0.0087	mg/Kg			03/01/23 11:53	1
Benzene	<0.0020		0.0020	0.00051	mg/Kg			03/01/23 11:53	1
Bromodichloromethane	<0.0020		0.0020	0.00041	mg/Kg			03/01/23 11:53	1
Bromoform	<0.0020		0.0020	0.00058	mg/Kg			03/01/23 11:53	1
Bromomethane	<0.0050		0.0050	0.0019	mg/Kg			03/01/23 11:53	1
2-Butanone (MEK)	<0.0050		0.0050	0.0022	mg/Kg			03/01/23 11:53	1
Carbon disulfide	<0.0050		0.0050	0.0010	mg/Kg			03/01/23 11:53	1
Carbon tetrachloride	<0.0020		0.0020	0.00058	mg/Kg			03/01/23 11:53	1
Chlorobenzene	<0.0020		0.0020	0.00074	mg/Kg			03/01/23 11:53	1
Chloroethane	<0.0050		0.0050	0.0015	mg/Kg			03/01/23 11:53	1
Chloroform	<0.0020		0.0020	0.00069	mg/Kg			03/01/23 11:53	1
Chloromethane	<0.0050		0.0050	0.0020	mg/Kg			03/01/23 11:53	1
cis-1,2-Dichloroethene	<0.0020		0.0020	0.00056	mg/Kg			03/01/23 11:53	1
cis-1,3-Dichloropropene	<0.0020		0.0020	0.00060	mg/Kg			03/01/23 11:53	1
Dibromochloromethane	<0.0020		0.0020	0.00065	mg/Kg			03/01/23 11:53	1
1,1-Dichloroethane	<0.0020		0.0020	0.00069	mg/Kg			03/01/23 11:53	1
1,2-Dichloroethane	<0.0050		0.0050	0.0016	mg/Kg			03/01/23 11:53	1
1,1-Dichloroethene	<0.0020		0.0020	0.00069	mg/Kg			03/01/23 11:53	1
1,2-Dichloropropane	<0.0020		0.0020	0.00052	mg/Kg			03/01/23 11:53	1
1,3-Dichloropropane, Total	<0.0020		0.0020	0.00070	mg/Kg			03/01/23 11:53	1
Ethylbenzene	<0.0020		0.0020	0.00096	mg/Kg			03/01/23 11:53	1
2-Hexanone	<0.0050		0.0050	0.0016	mg/Kg			03/01/23 11:53	1
Methylene Chloride	<0.0050		0.0050	0.0020	mg/Kg			03/01/23 11:53	1
4-Methyl-2-pentanone (MIBK)	<0.0050		0.0050	0.0015	mg/Kg			03/01/23 11:53	1
Methyl tert-butyl ether	<0.0020		0.0020	0.00059	mg/Kg			03/01/23 11:53	1
Styrene	<0.0020		0.0020	0.00060	mg/Kg			03/01/23 11:53	1
1,1,2,2-Tetrachloroethane	<0.0020		0.0020	0.00064	mg/Kg			03/01/23 11:53	1
Tetrachloroethene	<0.0020		0.0020	0.00068	mg/Kg			03/01/23 11:53	1
Toluene	<0.0020		0.0020	0.00051	mg/Kg			03/01/23 11:53	1
trans-1,2-Dichloroethene	<0.0020		0.0020	0.00089	mg/Kg			03/01/23 11:53	1
trans-1,3-Dichloropropene	<0.0020		0.0020	0.00070	mg/Kg			03/01/23 11:53	1
1,1,1-Trichloroethane	<0.0020		0.0020	0.00067	mg/Kg			03/01/23 11:53	1
1,1,2-Trichloroethane	<0.0020		0.0020	0.00086	mg/Kg			03/01/23 11:53	1
Trichloroethene	<0.0020		0.0020	0.00068	mg/Kg			03/01/23 11:53	1
Vinyl acetate	<0.0050		0.0050	0.0017	mg/Kg			03/01/23 11:53	1
Vinyl chloride	<0.0020		0.0020	0.00089	mg/Kg			03/01/23 11:53	1
Xylenes, Total	<0.0040		0.0040	0.00064	mg/Kg			03/01/23 11:53	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	88		75 - 131		03/01/23 11:53	1
Dibromofluoromethane	87		75 - 126		03/01/23 11:53	1
1,2-Dichloroethane-d4 (Surr)	88		70 - 134		03/01/23 11:53	1
Toluene-d8 (Surr)	93		75 - 124		03/01/23 11:53	1

# QC Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCS 500-700601/4**  
**Matrix: Solid**  
**Analysis Batch: 700601**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	0.0500	0.0449		mg/Kg		90	40 - 150
Benzene	0.0500	0.0516		mg/Kg		103	70 - 125
Bromodichloromethane	0.0500	0.0496		mg/Kg		99	67 - 129
Bromoform	0.0500	0.0452		mg/Kg		90	68 - 136
Bromomethane	0.0500	0.0508		mg/Kg		102	70 - 130
2-Butanone (MEK)	0.0500	0.0416		mg/Kg		83	47 - 138
Carbon disulfide	0.0500	0.0495		mg/Kg		99	70 - 129
Carbon tetrachloride	0.0500	0.0539		mg/Kg		108	75 - 125
Chlorobenzene	0.0500	0.0504		mg/Kg		101	50 - 150
Chloroethane	0.0500	0.0521		mg/Kg		104	75 - 125
Chloroform	0.0500	0.0504		mg/Kg		101	57 - 135
Chloromethane	0.0500	0.0502		mg/Kg		100	70 - 125
cis-1,2-Dichloroethene	0.0500	0.0507		mg/Kg		101	70 - 125
cis-1,3-Dichloropropene	0.0500	0.0478		mg/Kg		96	70 - 125
Dibromochloromethane	0.0500	0.0475		mg/Kg		95	69 - 125
1,1-Dichloroethane	0.0500	0.0521		mg/Kg		104	70 - 125
1,2-Dichloroethane	0.0500	0.0521		mg/Kg		104	70 - 130
1,1-Dichloroethene	0.0500	0.0520		mg/Kg		104	70 - 120
1,2-Dichloropropane	0.0500	0.0503		mg/Kg		101	70 - 125
Ethylbenzene	0.0500	0.0513		mg/Kg		103	61 - 136
2-Hexanone	0.0500	0.0453		mg/Kg		91	48 - 146
Methylene Chloride	0.0500	0.0506		mg/Kg		101	70 - 126
4-Methyl-2-pentanone (MIBK)	0.0500	0.0448		mg/Kg		90	50 - 148
Methyl tert-butyl ether	0.0500	0.0485		mg/Kg		97	50 - 140
Styrene	0.0500	0.0512		mg/Kg		102	70 - 125
1,1,2,2-Tetrachloroethane	0.0500	0.0450		mg/Kg		90	70 - 122
Tetrachloroethene	0.0500	0.0503		mg/Kg		101	70 - 124
Toluene	0.0500	0.0504		mg/Kg		101	70 - 125
trans-1,2-Dichloroethene	0.0500	0.0539		mg/Kg		108	70 - 125
trans-1,3-Dichloropropene	0.0500	0.0480		mg/Kg		96	70 - 125
1,1,1-Trichloroethane	0.0500	0.0532		mg/Kg		106	70 - 128
1,1,2-Trichloroethane	0.0500	0.0486		mg/Kg		97	70 - 125
Trichloroethene	0.0500	0.0514		mg/Kg		103	70 - 125
Vinyl acetate	0.0500	0.0435		mg/Kg		87	40 - 153
Vinyl chloride	0.0500	0.0482		mg/Kg		96	70 - 125
Xylenes, Total	0.100	0.103		mg/Kg		103	53 - 147

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	83		75 - 131
Dibromofluoromethane	87		75 - 126
1,2-Dichloroethane-d4 (Surr)	87		70 - 134
Toluene-d8 (Surr)	93		75 - 124

# QC Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCSD 500-700601/5**  
**Matrix: Solid**  
**Analysis Batch: 700601**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	0.0500	0.0541		mg/Kg		108	40 - 150	19	30
Benzene	0.0500	0.0517		mg/Kg		103	70 - 125	0	30
Bromodichloromethane	0.0500	0.0520		mg/Kg		104	67 - 129	5	30
Bromoform	0.0500	0.0438		mg/Kg		88	68 - 136	3	30
Bromomethane	0.0500	0.0504		mg/Kg		101	70 - 130	1	30
2-Butanone (MEK)	0.0500	0.0490		mg/Kg		98	47 - 138	16	30
Carbon disulfide	0.0500	0.0510		mg/Kg		102	70 - 129	3	30
Carbon tetrachloride	0.0500	0.0548		mg/Kg		110	75 - 125	2	30
Chlorobenzene	0.0500	0.0500		mg/Kg		100	50 - 150	1	30
Chloroethane	0.0500	0.0512		mg/Kg		102	75 - 125	2	30
Chloroform	0.0500	0.0505		mg/Kg		101	57 - 135	0	30
Chloromethane	0.0500	0.0490		mg/Kg		98	70 - 125	3	30
cis-1,2-Dichloroethene	0.0500	0.0516		mg/Kg		103	70 - 125	2	30
cis-1,3-Dichloropropene	0.0500	0.0479		mg/Kg		96	70 - 125	0	30
Dibromochloromethane	0.0500	0.0477		mg/Kg		95	69 - 125	0	30
1,1-Dichloroethane	0.0500	0.0524		mg/Kg		105	70 - 125	1	30
1,2-Dichloroethane	0.0500	0.0529		mg/Kg		106	70 - 130	1	30
1,1-Dichloroethene	0.0500	0.0533		mg/Kg		107	70 - 120	2	30
1,2-Dichloropropane	0.0500	0.0525		mg/Kg		105	70 - 125	4	30
Ethylbenzene	0.0500	0.0517		mg/Kg		103	61 - 136	1	30
2-Hexanone	0.0500	0.0520		mg/Kg		104	48 - 146	14	30
Methylene Chloride	0.0500	0.0523		mg/Kg		105	70 - 126	3	30
4-Methyl-2-pentanone (MIBK)	0.0500	0.0500		mg/Kg		100	50 - 148	11	30
Methyl tert-butyl ether	0.0500	0.0505		mg/Kg		101	50 - 140	4	30
Styrene	0.0500	0.0508		mg/Kg		102	70 - 125	1	30
1,1,2,2-Tetrachloroethane	0.0500	0.0473		mg/Kg		95	70 - 122	5	30
Tetrachloroethene	0.0500	0.0503		mg/Kg		101	70 - 124	0	30
Toluene	0.0500	0.0505		mg/Kg		101	70 - 125	0	30
trans-1,2-Dichloroethene	0.0500	0.0548		mg/Kg		110	70 - 125	2	30
trans-1,3-Dichloropropene	0.0500	0.0490		mg/Kg		98	70 - 125	2	30
1,1,1-Trichloroethane	0.0500	0.0535		mg/Kg		107	70 - 128	0	30
1,1,2-Trichloroethane	0.0500	0.0489		mg/Kg		98	70 - 125	1	30
Trichloroethene	0.0500	0.0522		mg/Kg		104	70 - 125	2	30
Vinyl acetate	0.0500	0.0453		mg/Kg		91	40 - 153	4	30
Vinyl chloride	0.0500	0.0490		mg/Kg		98	70 - 125	2	30
Xylenes, Total	0.100	0.103		mg/Kg		103	53 - 147	0	30

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	83		75 - 131
Dibromofluoromethane	88		75 - 126
1,2-Dichloroethane-d4 (Surr)	86		70 - 134
Toluene-d8 (Surr)	91		75 - 124

# QC Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: MB 500-700448/1-A**  
**Matrix: Solid**  
**Analysis Batch: 700513**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 700448**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Phenol	<0.17		0.17	0.074	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Bis(2-chloroethyl)ether	<0.17		0.17	0.050	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
1,3-Dichlorobenzene	<0.17		0.17	0.037	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
1,4-Dichlorobenzene	<0.17		0.17	0.043	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
1,2-Dichlorobenzene	<0.17		0.17	0.040	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2-Methylphenol	<0.17		0.17	0.053	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,2'-oxybis[1-chloropropane]	<0.17		0.17	0.039	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
N-Nitrosodi-n-propylamine	<0.067		0.067	0.041	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Hexachloroethane	<0.17		0.17	0.051	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2-Chlorophenol	<0.17		0.17	0.057	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Nitrobenzene	<0.033		0.033	0.0083	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Bis(2-chloroethoxy)methane	<0.17		0.17	0.034	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
1,2,4-Trichlorobenzene	<0.17		0.17	0.036	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Isophorone	<0.17		0.17	0.037	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,4-Dimethylphenol	<0.33		0.33	0.13	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Hexachlorobutadiene	<0.17		0.17	0.052	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Naphthalene	<0.033		0.033	0.0051	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,4-Dichlorophenol	<0.33		0.33	0.079	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4-Chloroaniline	<0.67		0.67	0.16	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,4,6-Trichlorophenol	<0.33		0.33	0.11	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,4,5-Trichlorophenol	<0.33		0.33	0.076	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Hexachlorocyclopentadiene	<0.67		0.67	0.19	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2-Methylnaphthalene	<0.067		0.067	0.0061	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2-Nitroaniline	<0.17		0.17	0.045	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2-Chloronaphthalene	<0.17		0.17	0.037	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4-Chloro-3-methylphenol	<0.33		0.33	0.11	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,6-Dinitrotoluene	<0.17		0.17	0.065	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2-Nitrophenol	<0.33		0.33	0.079	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
3-Nitroaniline	<0.33		0.33	0.10	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Dimethyl phthalate	<0.17		0.17	0.043	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,4-Dinitrophenol	<0.67		0.67	0.59	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Acenaphthylene	<0.033		0.033	0.0044	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
2,4-Dinitrotoluene	<0.17		0.17	0.053	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Acenaphthene	<0.033		0.033	0.0060	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Dibenzofuran	<0.17		0.17	0.039	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4-Nitrophenol	<0.67		0.67	0.32	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Fluorene	<0.033		0.033	0.0047	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4-Nitroaniline	<0.33		0.33	0.14	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4-Bromophenyl phenyl ether	<0.17		0.17	0.044	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Hexachlorobenzene	<0.067		0.067	0.0077	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Diethyl phthalate	<0.17		0.17	0.056	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4-Chlorophenyl phenyl ether	<0.17		0.17	0.039	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Pentachlorophenol	<0.67		0.67	0.53	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
N-Nitrosodiphenylamine	<0.17		0.17	0.039	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
4,6-Dinitro-2-methylphenol	<0.67		0.67	0.27	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Phenanthrene	<0.033		0.033	0.0046	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Anthracene	<0.033		0.033	0.0056	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Carbazole	<0.17		0.17	0.083	mg/Kg		02/28/23 08:18	02/28/23 15:34	1

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# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: MB 500-700448/1-A**  
**Matrix: Solid**  
**Analysis Batch: 700513**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 700448**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	<0.17		0.17	0.051	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Fluoranthene	<0.033		0.033	0.0062	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Pyrene	<0.033		0.033	0.0066	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Butyl benzyl phthalate	<0.17		0.17	0.063	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Benzo[a]anthracene	<0.033		0.033	0.0045	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Chrysene	<0.033		0.033	0.0091	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
3,3'-Dichlorobenzidine	<0.17		0.17	0.047	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Bis(2-ethylhexyl) phthalate	<0.17		0.17	0.061	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Di-n-octyl phthalate	<0.17		0.17	0.054	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Benzo[b]fluoranthene	<0.033		0.033	0.0072	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Benzo[k]fluoranthene	<0.033		0.033	0.0098	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Benzo[a]pyrene	<0.033		0.033	0.0064	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Indeno[1,2,3-cd]pyrene	<0.033		0.033	0.0086	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Dibenz(a,h)anthracene	<0.033		0.033	0.0064	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
Benzo[g,h,i]perylene	<0.033		0.033	0.011	mg/Kg		02/28/23 08:18	02/28/23 15:34	1
3 & 4 Methylphenol	<0.17		0.17	0.055	mg/Kg		02/28/23 08:18	02/28/23 15:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	127		31 - 166	02/28/23 08:18	02/28/23 15:34	1
Phenol-d5	120		30 - 153	02/28/23 08:18	02/28/23 15:34	1
Nitrobenzene-d5 (Surr)	99		37 - 147	02/28/23 08:18	02/28/23 15:34	1
2-Fluorobiphenyl (Surr)	92		43 - 145	02/28/23 08:18	02/28/23 15:34	1
2,4,6-Tribromophenol	92		31 - 143	02/28/23 08:18	02/28/23 15:34	1
Terphenyl-d14 (Surr)	102		42 - 157	02/28/23 08:18	02/28/23 15:34	1

**Lab Sample ID: LCS 500-700448/2-A**  
**Matrix: Solid**  
**Analysis Batch: 700513**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700448**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Phenol	1.33	1.42		mg/Kg		106	56 - 122
Bis(2-chloroethyl)ether	1.33	1.29		mg/Kg		97	55 - 111
1,3-Dichlorobenzene	1.33	1.22		mg/Kg		92	65 - 124
1,4-Dichlorobenzene	1.33	1.21		mg/Kg		91	61 - 110
1,2-Dichlorobenzene	1.33	1.25		mg/Kg		94	62 - 110
2-Methylphenol	1.33	1.35		mg/Kg		102	60 - 120
2,2'-oxybis[1-chloropropane]	1.33	1.40		mg/Kg		105	40 - 124
N-Nitrosodi-n-propylamine	1.33	1.43		mg/Kg		107	56 - 118
Hexachloroethane	1.33	1.25		mg/Kg		94	60 - 114
2-Chlorophenol	1.33	1.42		mg/Kg		107	64 - 110
Nitrobenzene	1.33	1.42		mg/Kg		106	60 - 116
Bis(2-chloroethoxy)methane	1.33	1.30		mg/Kg		98	60 - 112
1,2,4-Trichlorobenzene	1.33	1.37		mg/Kg		103	66 - 117
Isophorone	1.33	1.35		mg/Kg		101	55 - 110
2,4-Dimethylphenol	1.33	1.33		mg/Kg		100	60 - 110
Hexachlorobutadiene	1.33	1.39		mg/Kg		105	56 - 120
Naphthalene	1.33	1.26		mg/Kg		95	63 - 110
2,4-Dichlorophenol	1.33	1.38		mg/Kg		103	58 - 120

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# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCS 500-700448/2-A**  
**Matrix: Solid**  
**Analysis Batch: 700513**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700448**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4-Chloroaniline	1.33	1.23		mg/Kg		92	30 - 150
2,4,6-Trichlorophenol	1.33	1.37		mg/Kg		103	57 - 120
2,4,5-Trichlorophenol	1.33	1.40		mg/Kg		105	50 - 120
Hexachlorocyclopentadiene	1.33	1.12		mg/Kg		84	10 - 133
2-Methylnaphthalene	1.33	1.28		mg/Kg		96	69 - 112
2-Nitroaniline	1.33	1.45		mg/Kg		109	57 - 124
2-Chloronaphthalene	1.33	1.28		mg/Kg		96	69 - 114
4-Chloro-3-methylphenol	1.33	1.50		mg/Kg		113	65 - 122
2,6-Dinitrotoluene	1.33	1.47		mg/Kg		110	70 - 123
2-Nitrophenol	1.33	1.40		mg/Kg		105	60 - 120
3-Nitroaniline	1.33	0.921		mg/Kg		69	40 - 122
Dimethyl phthalate	1.33	1.33		mg/Kg		99	69 - 116
2,4-Dinitrophenol	2.67	1.53		mg/Kg		57	10 - 100
Acenaphthylene	1.33	1.31		mg/Kg		98	68 - 120
2,4-Dinitrotoluene	1.33	1.61		mg/Kg		121	69 - 124
Acenaphthene	1.33	1.29		mg/Kg		97	65 - 124
Dibenzofuran	1.33	1.30		mg/Kg		97	66 - 115
4-Nitrophenol	2.67	2.74		mg/Kg		103	30 - 122
Fluorene	1.33	1.32		mg/Kg		99	62 - 120
4-Nitroaniline	1.33	1.37		mg/Kg		103	60 - 160
4-Bromophenyl phenyl ether	1.33	1.35		mg/Kg		101	68 - 118
Hexachlorobenzene	1.33	1.23		mg/Kg		92	63 - 124
Diethyl phthalate	1.33	1.32		mg/Kg		99	58 - 120
4-Chlorophenyl phenyl ether	1.33	1.34		mg/Kg		100	62 - 119
Pentachlorophenol	2.67	2.14		mg/Kg		80	13 - 112
N-Nitrosodiphenylamine	1.33	1.35		mg/Kg		101	65 - 112
4,6-Dinitro-2-methylphenol	2.67	2.15		mg/Kg		81	10 - 110
Phenanthrene	1.33	1.28		mg/Kg		96	62 - 120
Anthracene	1.33	1.31		mg/Kg		98	70 - 114
Carbazole	1.33	1.65		mg/Kg		124	65 - 142
Di-n-butyl phthalate	1.33	1.37		mg/Kg		103	65 - 120
Fluoranthene	1.33	1.34		mg/Kg		100	62 - 120
Pyrene	1.33	1.37		mg/Kg		103	61 - 128
Butyl benzyl phthalate	1.33	1.50		mg/Kg		113	71 - 129
Benzo[a]anthracene	1.33	1.36		mg/Kg		102	67 - 122
Chrysene	1.33	1.34		mg/Kg		101	63 - 120
3,3'-Dichlorobenzidine	1.33	1.25		mg/Kg		94	35 - 128
Bis(2-ethylhexyl) phthalate	1.33	1.52		mg/Kg		114	72 - 131
Di-n-octyl phthalate	1.33	1.47		mg/Kg		110	68 - 134
Benzo[b]fluoranthene	1.33	1.47		mg/Kg		110	69 - 129
Benzo[k]fluoranthene	1.33	1.43		mg/Kg		107	68 - 127
Benzo[a]pyrene	1.33	1.42		mg/Kg		106	65 - 133
Indeno[1,2,3-cd]pyrene	1.33	1.48		mg/Kg		111	68 - 130
Dibenz(a,h)anthracene	1.33	1.43		mg/Kg		107	64 - 131
Benzo[g,h,i]perylene	1.33	1.44		mg/Kg		108	72 - 131
3 & 4 Methylphenol	1.33	1.32		mg/Kg		99	57 - 120



# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCS 500-700448/2-A**  
**Matrix: Solid**  
**Analysis Batch: 700513**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700448**

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorophenol	123		31 - 166
Phenol-d5	110		30 - 153
Nitrobenzene-d5 (Surr)	97		37 - 147
2-Fluorobiphenyl (Surr)	90		43 - 145
2,4,6-Tribromophenol	101		31 - 143
Terphenyl-d14 (Surr)	100		42 - 157

**Lab Sample ID: 500-229911-15 MS**  
**Matrix: Solid**  
**Analysis Batch: 700703**

**Client Sample ID: 4062-C0V-05-B01 (0-1)**  
**Prep Type: Total/NA**  
**Prep Batch: 700448**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	Limits
				Result	Qualifier				
Phenol	<0.21		1.70	1.64		mg/Kg	☼	96	56 - 122
Bis(2-chloroethyl)ether	<0.21		1.70	1.27		mg/Kg	☼	75	55 - 111
1,3-Dichlorobenzene	<0.21		1.70	1.15		mg/Kg	☼	67	60 - 110
1,4-Dichlorobenzene	<0.21		1.70	1.21		mg/Kg	☼	71	61 - 110
1,2-Dichlorobenzene	<0.21		1.70	1.07		mg/Kg	☼	63	62 - 110
2-Methylphenol	<0.21		1.70	1.33		mg/Kg	☼	78	60 - 120
2,2'-oxybis[1-chloropropane]	<0.21		1.70	1.43		mg/Kg	☼	84	40 - 124
N-Nitrosodi-n-propylamine	<0.084		1.70	1.35		mg/Kg	☼	79	56 - 118
Hexachloroethane	<0.21	F1	1.70	0.942	F1	mg/Kg	☼	55	60 - 114
2-Chlorophenol	<0.21		1.70	1.33		mg/Kg	☼	78	64 - 110
Nitrobenzene	<0.042		1.70	1.71		mg/Kg	☼	100	60 - 116
Bis(2-chloroethoxy)methane	<0.21		1.70	1.63		mg/Kg	☼	96	60 - 112
1,2,4-Trichlorobenzene	<0.21		1.70	1.45		mg/Kg	☼	85	66 - 117
Isophorone	<0.21		1.70	1.63		mg/Kg	☼	96	55 - 110
2,4-Dimethylphenol	<0.42		1.70	1.26		mg/Kg	☼	74	60 - 110
Hexachlorobutadiene	<0.21		1.70	1.15		mg/Kg	☼	68	56 - 120
Naphthalene	<0.042		1.70	1.31		mg/Kg	☼	77	63 - 110
2,4-Dichlorophenol	<0.42		1.70	1.36		mg/Kg	☼	80	58 - 120
4-Chloroaniline	<0.84		1.70	1.04		mg/Kg	☼	61	30 - 150
2,4,6-Trichlorophenol	<0.42		1.70	1.43		mg/Kg	☼	84	57 - 120
2,4,5-Trichlorophenol	<0.42		1.70	1.46		mg/Kg	☼	86	50 - 120
Hexachlorocyclopentadiene	<0.84	F1	1.70	<0.86	F1	mg/Kg	☼	0	10 - 133
2-Methylnaphthalene	0.0077	J F1	1.70	1.15	F1	mg/Kg	☼	67	69 - 112
2-Nitroaniline	<0.21		1.70	1.62		mg/Kg	☼	95	57 - 124
2-Chloronaphthalene	<0.21		1.70	1.47		mg/Kg	☼	86	69 - 114
4-Chloro-3-methylphenol	<0.42		1.70	1.53		mg/Kg	☼	90	65 - 122
2,6-Dinitrotoluene	<0.21		1.70	1.53		mg/Kg	☼	90	70 - 123
2-Nitrophenol	<0.42		1.70	1.56		mg/Kg	☼	92	60 - 120
3-Nitroaniline	<0.42		1.70	1.50		mg/Kg	☼	88	40 - 122
Dimethyl phthalate	<0.21		1.70	1.44		mg/Kg	☼	85	69 - 116
2,4-Dinitrophenol	<0.84	F1	3.40	0.919		mg/Kg	☼	27	10 - 100
Acenaphthylene	<0.042		1.70	1.40		mg/Kg	☼	82	68 - 120
2,4-Dinitrotoluene	<0.21		1.70	1.69		mg/Kg	☼	99	69 - 124
Acenaphthene	<0.042		1.70	1.33		mg/Kg	☼	78	65 - 124
Dibenzofuran	<0.21		1.70	1.38		mg/Kg	☼	81	66 - 115
4-Nitrophenol	<0.84		3.40	2.85		mg/Kg	☼	84	30 - 122



# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: 500-229911-15 MS**

**Matrix: Solid**

**Analysis Batch: 700703**

**Client Sample ID: 4062-C0V-05-B01 (0-1)**

**Prep Type: Total/NA**

**Prep Batch: 700448**

Analyte	Sample	Sample Qualifier	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result			Result	Qualifier				
Fluorene	<0.042		1.70	1.44		mg/Kg	☼	85	62 - 120
4-Nitroaniline	<0.42		1.70	1.57		mg/Kg	☼	92	60 - 160
4-Bromophenyl phenyl ether	<0.21		1.70	1.28		mg/Kg	☼	75	68 - 118
Hexachlorobenzene	<0.084		1.70	1.28		mg/Kg	☼	75	63 - 124
Diethyl phthalate	<0.21		1.70	1.48		mg/Kg	☼	87	58 - 120
4-Chlorophenyl phenyl ether	<0.21		1.70	1.30		mg/Kg	☼	77	62 - 119
Pentachlorophenol	<0.84		3.40	1.05		mg/Kg	☼	31	13 - 112
N-Nitrosodiphenylamine	<0.21		1.70	1.27		mg/Kg	☼	75	65 - 112
4,6-Dinitro-2-methylphenol	<0.84		3.40	1.03		mg/Kg	☼	30	10 - 110
Phenanthrene	0.017	J	1.70	1.55		mg/Kg	☼	90	62 - 120
Anthracene	<0.042		1.70	1.27		mg/Kg	☼	75	70 - 114
Carbazole	<0.21		1.70	1.50		mg/Kg	☼	88	65 - 142
Di-n-butyl phthalate	<0.21		1.70	1.45		mg/Kg	☼	85	65 - 120
Fluoranthene	0.018	J	1.70	1.52		mg/Kg	☼	88	62 - 120
Pyrene	0.020	J	1.70	1.56		mg/Kg	☼	91	61 - 128
Butyl benzyl phthalate	<0.21		1.70	1.72		mg/Kg	☼	101	71 - 129
Benzo[a]anthracene	0.011	J	1.70	1.52		mg/Kg	☼	88	67 - 122
Chrysene	0.012	J	1.70	1.38		mg/Kg	☼	81	63 - 120
3,3'-Dichlorobenzidine	<0.21	F2 F1	1.70	0.943		mg/Kg	☼	55	35 - 128
Bis(2-ethylhexyl) phthalate	<0.21		1.70	1.66		mg/Kg	☼	98	72 - 131
Di-n-octyl phthalate	<0.21		1.70	1.72		mg/Kg	☼	101	68 - 134
Benzo[b]fluoranthene	0.029	J	1.70	1.59		mg/Kg	☼	92	69 - 129
Benzo[k]fluoranthene	<0.042		1.70	1.80		mg/Kg	☼	106	68 - 127
Benzo[a]pyrene	0.020	J	1.70	1.54		mg/Kg	☼	89	65 - 133
Indeno[1,2,3-cd]pyrene	<0.042		1.70	1.49		mg/Kg	☼	87	68 - 130
Dibenz(a,h)anthracene	<0.042		1.70	1.30		mg/Kg	☼	77	64 - 131
Benzo[g,h,i]perylene	<0.042	F1	1.70	1.18	F1	mg/Kg	☼	69	72 - 131
3 & 4 Methylphenol	<0.21		1.70	1.14		mg/Kg	☼	67	57 - 120

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
2-Fluorophenol	104		31 - 166
Phenol-d5	94		30 - 153
Nitrobenzene-d5 (Surr)	75		37 - 147
2-Fluorobiphenyl (Surr)	74		43 - 145
2,4,6-Tribromophenol	58		31 - 143
Terphenyl-d14 (Surr)	96		42 - 157

**Lab Sample ID: 500-229911-15 MSD**

**Matrix: Solid**

**Analysis Batch: 700703**

**Client Sample ID: 4062-C0V-05-B01 (0-1)**

**Prep Type: Total/NA**

**Prep Batch: 700448**

Analyte	Sample	Sample Qualifier	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	
	Result			Result	Qualifier					RPD	Limit
Phenol	<0.21		1.65	1.57		mg/Kg	☼	95	56 - 122	4	30
Bis(2-chloroethyl)ether	<0.21		1.65	1.51		mg/Kg	☼	92	55 - 111	17	30
1,3-Dichlorobenzene	<0.21		1.65	1.06		mg/Kg	☼	64	60 - 110	8	30
1,4-Dichlorobenzene	<0.21		1.65	1.09		mg/Kg	☼	66	61 - 110	10	30
1,2-Dichlorobenzene	<0.21		1.65	1.09		mg/Kg	☼	66	62 - 110	2	30
2-Methylphenol	<0.21		1.65	1.35		mg/Kg	☼	82	60 - 120	2	30

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# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

Lab Sample ID: 500-229911-15 MSD

Client Sample ID: 4062-C0V-05-B01 (0-1)

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 700703

Prep Batch: 700448

Analyte	Sample	Sample Qualifier	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result			Result	Qualifier				Limits		Limit
2,2'-oxybis[1-chloropropane]	<0.21		1.65	1.37		mg/Kg	☼	83	40 - 124	4	30
N-Nitrosodi-n-propylamine	<0.084		1.65	1.33		mg/Kg	☼	81	56 - 118	1	30
Hexachloroethane	<0.21	F1	1.65	0.869	F1	mg/Kg	☼	53	60 - 114	8	30
2-Chlorophenol	<0.21		1.65	1.34		mg/Kg	☼	81	64 - 110	0	30
Nitrobenzene	<0.042		1.65	1.50		mg/Kg	☼	91	60 - 116	13	30
Bis(2-chloroethoxy)methane	<0.21		1.65	1.41		mg/Kg	☼	86	60 - 112	14	30
1,2,4-Trichlorobenzene	<0.21		1.65	1.21		mg/Kg	☼	73	66 - 117	18	30
Isophorone	<0.21		1.65	1.43		mg/Kg	☼	87	55 - 110	13	30
2,4-Dimethylphenol	<0.42		1.65	1.21		mg/Kg	☼	74	60 - 110	4	30
Hexachlorobutadiene	<0.21		1.65	1.11		mg/Kg	☼	68	56 - 120	3	30
Naphthalene	<0.042		1.65	1.28		mg/Kg	☼	78	63 - 110	2	30
2,4-Dichlorophenol	<0.42		1.65	1.28		mg/Kg	☼	78	58 - 120	6	30
4-Chloroaniline	<0.84		1.65	0.901		mg/Kg	☼	55	30 - 150	15	30
2,4,6-Trichlorophenol	<0.42		1.65	1.21		mg/Kg	☼	73	57 - 120	17	30
2,4,5-Trichlorophenol	<0.42		1.65	1.63		mg/Kg	☼	99	50 - 120	11	30
Hexachlorocyclopentadiene	<0.84	F1	1.65	<0.83	F1	mg/Kg	☼	0	10 - 133	NC	30
2-Methylnaphthalene	0.0077	J F1	1.65	1.45		mg/Kg	☼	88	69 - 112	23	30
2-Nitroaniline	<0.21		1.65	1.61		mg/Kg	☼	98	57 - 124	0	30
2-Chloronaphthalene	<0.21		1.65	1.36		mg/Kg	☼	83	69 - 114	7	30
4-Chloro-3-methylphenol	<0.42		1.65	1.58		mg/Kg	☼	96	65 - 122	3	30
2,6-Dinitrotoluene	<0.21		1.65	1.56		mg/Kg	☼	95	70 - 123	2	30
2-Nitrophenol	<0.42		1.65	1.33		mg/Kg	☼	81	60 - 120	16	30
3-Nitroaniline	<0.42		1.65	1.32		mg/Kg	☼	80	40 - 122	13	30
Dimethyl phthalate	<0.21		1.65	1.45		mg/Kg	☼	88	69 - 116	0	30
2,4-Dinitrophenol	<0.84	F1	3.30	<0.83	F1	mg/Kg	☼	0	10 - 100	NC	30
Acenaphthylene	<0.042		1.65	1.47		mg/Kg	☼	89	68 - 120	5	30
2,4-Dinitrotoluene	<0.21		1.65	1.63		mg/Kg	☼	99	69 - 124	4	30
Acenaphthene	<0.042		1.65	1.40		mg/Kg	☼	85	65 - 124	5	30
Dibenzofuran	<0.21		1.65	1.46		mg/Kg	☼	88	66 - 115	5	30
4-Nitrophenol	<0.84		3.30	3.02		mg/Kg	☼	92	30 - 122	6	30
Fluorene	<0.042		1.65	1.44		mg/Kg	☼	87	62 - 120	0	30
4-Nitroaniline	<0.42		1.65	1.51		mg/Kg	☼	92	60 - 160	4	30
4-Bromophenyl phenyl ether	<0.21		1.65	1.37		mg/Kg	☼	83	68 - 118	6	30
Hexachlorobenzene	<0.084		1.65	1.46		mg/Kg	☼	89	63 - 124	13	30
Diethyl phthalate	<0.21		1.65	1.47		mg/Kg	☼	89	58 - 120	1	30
4-Chlorophenyl phenyl ether	<0.21		1.65	1.36		mg/Kg	☼	82	62 - 119	4	30
Pentachlorophenol	<0.84		3.30	1.31		mg/Kg	☼	40	13 - 112	22	30
N-Nitrosodiphenylamine	<0.21		1.65	1.44		mg/Kg	☼	88	65 - 112	13	30
4,6-Dinitro-2-methylphenol	<0.84		3.30	0.811	J	mg/Kg	☼	25	10 - 110	24	30
Phenanthrene	0.017	J	1.65	1.67		mg/Kg	☼	100	62 - 120	7	30
Anthracene	<0.042		1.65	1.51		mg/Kg	☼	92	70 - 114	17	30
Carbazole	<0.21		1.65	1.60		mg/Kg	☼	97	65 - 142	7	30
Di-n-butyl phthalate	<0.21		1.65	1.60		mg/Kg	☼	97	65 - 120	10	30
Fluoranthene	0.018	J	1.65	1.67		mg/Kg	☼	100	62 - 120	9	30
Pyrene	0.020	J	1.65	1.91		mg/Kg	☼	115	61 - 128	20	30
Butyl benzyl phthalate	<0.21		1.65	1.99		mg/Kg	☼	120	71 - 129	14	30
Benzo[a]anthracene	0.011	J	1.65	1.61		mg/Kg	☼	97	67 - 122	6	30
Chrysene	0.012	J	1.65	1.50		mg/Kg	☼	90	63 - 120	8	30
3,3'-Dichlorobenzidine	<0.21	F2 F1	1.65	0.499	F2 F1	mg/Kg	☼	30	35 - 128	62	30

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# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: 500-229911-15 MSD**  
**Matrix: Solid**  
**Analysis Batch: 700703**

**Client Sample ID: 4062-C0V-05-B01 (0-1)**  
**Prep Type: Total/NA**  
**Prep Batch: 700448**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						
Bis(2-ethylhexyl) phthalate	<0.21		1.65	1.91		mg/Kg	☼	116	72 - 131	14	30
Di-n-octyl phthalate	<0.21		1.65	1.59		mg/Kg	☼	96	68 - 134	8	30
Benzo[b]fluoranthene	0.029	J	1.65	1.67		mg/Kg	☼	100	69 - 129	5	30
Benzo[k]fluoranthene	<0.042		1.65	1.89		mg/Kg	☼	115	68 - 127	5	30
Benzo[a]pyrene	0.020	J	1.65	1.58		mg/Kg	☼	94	65 - 133	2	30
Indeno[1,2,3-cd]pyrene	<0.042		1.65	1.36		mg/Kg	☼	82	68 - 130	9	30
Dibenz(a,h)anthracene	<0.042		1.65	1.20		mg/Kg	☼	73	64 - 131	8	30
Benzo[g,h,i]perylene	<0.042	F1	1.65	1.08	F1	mg/Kg	☼	65	72 - 131	9	30
3 & 4 Methylphenol	<0.21		1.65	1.23		mg/Kg	☼	75	57 - 120	8	30
<b>MSD MSD</b>											
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>								
2-Fluorophenol	102		31 - 166								
Phenol-d5	91		30 - 153								
Nitrobenzene-d5 (Surr)	73		37 - 147								
2-Fluorobiphenyl (Surr)	76		43 - 145								
2,4,6-Tribromophenol	67		31 - 143								
Terphenyl-d14 (Surr)	114		42 - 157								

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 500-700187/1-A**  
**Matrix: Solid**  
**Analysis Batch: 700467**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 700187**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<2.0		2.0	0.39	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Arsenic	<1.0		1.0	0.34	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Barium	<1.0		1.0	0.11	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Beryllium	<0.40		0.40	0.093	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Boron	<5.0		5.0	0.47	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Cadmium	0.0444	J	0.20	0.036	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Calcium	<20		20	3.4	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Chromium	<1.0		1.0	0.50	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Cobalt	<0.50		0.50	0.13	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Copper	0.294	J	1.0	0.28	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Iron	<20		20	10	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Lead	<0.50		0.50	0.23	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Magnesium	<10		10	5.0	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Manganese	<1.0		1.0	0.15	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Nickel	<1.0		1.0	0.29	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Potassium	<50		50	18	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Selenium	<1.0		1.0	0.59	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Silver	0.136	J	0.50	0.13	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Sodium	<100		100	15	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Thallium	<1.0		1.0	0.50	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Vanadium	<0.50		0.50	0.12	mg/Kg		02/24/23 15:35	02/27/23 14:29	1
Zinc	<2.0		2.0	0.88	mg/Kg		02/24/23 15:35	02/27/23 14:29	1

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# QC Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LCS 500-700187/2-A**  
**Matrix: Solid**  
**Analysis Batch: 700467**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700187**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	50.0	47.0		mg/Kg		94	80 - 120
Arsenic	10.0	9.28		mg/Kg		93	80 - 120
Barium	200	205		mg/Kg		103	80 - 120
Beryllium	5.00	4.56		mg/Kg		91	80 - 120
Boron	100	85.4		mg/Kg		85	80 - 120
Cadmium	5.00	4.59		mg/Kg		92	80 - 120
Calcium	1000	931		mg/Kg		93	80 - 120
Chromium	20.0	18.9		mg/Kg		94	80 - 120
Cobalt	50.0	47.8		mg/Kg		96	80 - 120
Copper	25.0	25.0		mg/Kg		100	80 - 120
Iron	100	100		mg/Kg		100	80 - 120
Lead	10.0	8.94		mg/Kg		89	80 - 120
Magnesium	1000	918		mg/Kg		92	80 - 120
Manganese	50.0	45.4		mg/Kg		91	80 - 120
Nickel	50.0	46.1		mg/Kg		92	80 - 120
Potassium	1000	1050		mg/Kg		105	80 - 120
Selenium	10.0	8.35		mg/Kg		84	80 - 120
Silver	5.00	4.14		mg/Kg		83	80 - 120
Sodium	1000	1040		mg/Kg		104	80 - 120
Thallium	10.0	9.07		mg/Kg		91	80 - 120
Vanadium	50.0	47.1		mg/Kg		94	80 - 120
Zinc	50.0	44.3		mg/Kg		89	80 - 120

**Lab Sample ID: LCS 500-700755/2-A**  
**Matrix: Solid**  
**Analysis Batch: 700931**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700755**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	0.500	0.516		mg/L		103	80 - 120
Beryllium	0.0500	0.0489		mg/L		98	80 - 120
Boron	1.00	0.914	^1+	mg/L		91	80 - 120
Cadmium	0.0500	0.0513		mg/L		103	80 - 120
Chromium	0.200	0.195		mg/L		97	80 - 120
Cobalt	0.500	0.514		mg/L		103	80 - 120
Iron	1.00	1.08		mg/L		108	80 - 120
Lead	0.100	0.0911		mg/L		91	80 - 120
Nickel	0.500	0.493		mg/L		99	80 - 120
Selenium	0.100	0.110		mg/L		110	80 - 120
Silver	0.0500	0.0538		mg/L		108	80 - 120
Zinc	0.500	0.520		mg/L		104	80 - 120

**Lab Sample ID: LB 500-700531/2-C**  
**Matrix: Solid**  
**Analysis Batch: 700931**

**Client Sample ID: Method Blank**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Barium	<0.50		0.50	0.050	mg/L		03/01/23 17:00	03/02/23 12:09	1
Beryllium	<0.0040		0.0040	0.0040	mg/L		03/01/23 17:00	03/02/23 12:09	1
Boron	<0.50	^1+	0.50	0.050	mg/L		03/01/23 17:00	03/02/23 12:09	1

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# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

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

**Lab Sample ID: LB 500-700531/2-C**  
**Matrix: Solid**  
**Analysis Batch: 700931**

**Client Sample ID: Method Blank**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cadmium	<0.0050		0.0050	0.0020	mg/L		03/01/23 17:00	03/02/23 12:09	1
Chromium	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:09	1
Cobalt	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:09	1
Iron	<0.40		0.40	0.20	mg/L		03/01/23 17:00	03/02/23 12:09	1
Lead	<0.0075		0.0075	0.0075	mg/L		03/01/23 17:00	03/02/23 12:09	1
Nickel	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:09	1
Selenium	<0.050		0.050	0.020	mg/L		03/01/23 17:00	03/02/23 12:09	1
Silver	<0.025		0.025	0.010	mg/L		03/01/23 17:00	03/02/23 12:09	1
Zinc	<0.50		0.50	0.020	mg/L		03/01/23 17:00	03/02/23 12:09	1

**Lab Sample ID: 500-229911-4 MS**  
**Matrix: Solid**  
**Analysis Batch: 700931**

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
Barium	1.2		0.500	1.72		mg/L		106	75 - 125
Beryllium	<0.0040		0.0500	0.0512		mg/L		102	75 - 125
Boron	<0.50	^1+	1.00	0.966	^1+	mg/L		97	75 - 125
Cadmium	<0.0050		0.0500	0.0554		mg/L		111	75 - 125
Chromium	<0.025		0.200	0.190		mg/L		95	75 - 125
Cobalt	<0.025		0.500	0.527		mg/L		105	75 - 125
Iron	<0.40		1.00	1.04		mg/L		104	75 - 125
Lead	<0.0075		0.100	0.0933		mg/L		93	75 - 125
Nickel	<0.025		0.500	0.502		mg/L		100	75 - 125
Selenium	<0.050		0.100	0.105		mg/L		105	75 - 125
Silver	<0.025		0.0500	0.0547		mg/L		109	75 - 125
Zinc	0.052	J	0.500	0.565		mg/L		103	75 - 125

**Lab Sample ID: 500-229911-4 DU**  
**Matrix: Solid**  
**Analysis Batch: 700931**

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	Sample Result	Sample Qualifier	DU DU		Unit	D	RPD	Limit
			Result	Qualifier				
Barium	1.2		1.21		mg/L		2	20
Beryllium	<0.0040		<0.0040		mg/L		NC	20
Boron	<0.50	^1+	<0.50	^1+	mg/L		NC	20
Cadmium	<0.0050		<0.0050		mg/L		NC	20
Chromium	<0.025		<0.025		mg/L		NC	20
Cobalt	<0.025		<0.025		mg/L		NC	20
Iron	<0.40		<0.40		mg/L		NC	20
Lead	<0.0075		<0.0075		mg/L		NC	20
Nickel	<0.025		<0.025		mg/L		NC	20
Selenium	<0.050		<0.050		mg/L		NC	20
Silver	<0.025		<0.025		mg/L		NC	20
Zinc	0.052	J	0.0519	J	mg/L		1	20

# QC Sample Results

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Method: 6020A - Metals (ICP/MS)

**Lab Sample ID: LCS 500-700755/2-A**  
**Matrix: Solid**  
**Analysis Batch: 701031**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700755**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.500	0.537		mg/L		107	80 - 120
Thallium	0.100	0.121	*+	mg/L		121	80 - 120

**Lab Sample ID: LB 500-700531/2-C**  
**Matrix: Solid**  
**Analysis Batch: 701031**

**Client Sample ID: Method Blank**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0060		0.0060	0.0060	mg/L		03/01/23 17:00	03/02/23 15:22	1
Thallium	<0.0020		0.0020	0.0020	mg/L		03/01/23 17:00	03/02/23 15:22	1

**Lab Sample ID: 500-229911-4 MS**  
**Matrix: Solid**  
**Analysis Batch: 701031**

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<0.0060		0.500	0.523		mg/L		105	75 - 125
Thallium	<0.0020	*+	0.100	0.124		mg/L		124	75 - 125

**Lab Sample ID: 500-229911-4 DU**  
**Matrix: Solid**  
**Analysis Batch: 701031**

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
**Prep Type: TCLP**  
**Prep Batch: 700755**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Antimony	<0.0060		<0.0060		mg/L		NC	20
Thallium	<0.0020	*+	<0.0020	*+	mg/L		NC	20

## Method: 7470A - TCLP Mercury

**Lab Sample ID: MB 500-700697/12-A**  
**Matrix: Solid**  
**Analysis Batch: 700909**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 700697**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		03/01/23 11:25	03/02/23 11:05	1

**Lab Sample ID: LCS 500-700697/14-A**  
**Matrix: Solid**  
**Analysis Batch: 700909**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 700697**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00198	0.00205		mg/L		103	80 - 120

**Lab Sample ID: LB 500-700531/2-B**  
**Matrix: Solid**  
**Analysis Batch: 700909**

**Client Sample ID: Method Blank**  
**Prep Type: TCLP**  
**Prep Batch: 700697**

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00020		0.00020	0.00020	mg/L		03/01/23 11:25	03/02/23 11:11	1

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# QC Sample Results

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Method: 7470A - TCLP Mercury (Continued)

**Lab Sample ID: 500-229911-4 MS**  
**Matrix: Solid**  
**Analysis Batch: 700909**

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
**Prep Type: TCLP**  
**Prep Batch: 700697**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	<0.00020		0.00100	0.000946		mg/L		95	75 - 125

**Lab Sample ID: 500-229911-4 DU**  
**Matrix: Solid**  
**Analysis Batch: 700909**

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
**Prep Type: TCLP**  
**Prep Batch: 700697**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	<0.00020		<0.00020		mg/L		NC	20

## Method: 7471B - Mercury (CVAA)

**Lab Sample ID: MB 500-701027/12-A**  
**Matrix: Solid**  
**Analysis Batch: 701282**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 701027**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.017		0.017	0.0088	mg/Kg		03/03/23 13:00	03/06/23 08:29	1

**Lab Sample ID: LCS 500-701027/13-A**  
**Matrix: Solid**  
**Analysis Batch: 701282**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 701027**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.165	0.161		mg/Kg		97	80 - 120

**Lab Sample ID: 500-229911-10 MS**  
**Matrix: Solid**  
**Analysis Batch: 701282**

**Client Sample ID: 4062-C0V-08-B03 (0-2)**  
**Prep Type: Total/NA**  
**Prep Batch: 701027**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.013	J	0.0958	0.115		mg/Kg	⊛	106	75 - 125

**Lab Sample ID: 500-229911-10 MSD**  
**Matrix: Solid**  
**Analysis Batch: 701282**

**Client Sample ID: 4062-C0V-08-B03 (0-2)**  
**Prep Type: Total/NA**  
**Prep Batch: 701027**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.013	J	0.0956	0.113		mg/Kg	⊛	104	75 - 125	2	20

**Lab Sample ID: 500-229911-10 DU**  
**Matrix: Solid**  
**Analysis Batch: 701282**

**Client Sample ID: 4062-C0V-08-B03 (0-2)**  
**Prep Type: Total/NA**  
**Prep Batch: 701027**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	0.013	J	0.0133	J	mg/Kg	⊛	0.4	20



# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B08 (0-2)**  
**Date Collected: 02/23/23 13:35**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-1**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 12:34
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:26
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:16
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 14:43 - 03/01/23 14:49 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-08-B08 (0-2)**  
**Date Collected: 02/23/23 13:35**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-1**  
**Matrix: Solid**  
**Percent Solids: 84.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 12:27
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700513	SS	EET CHI	02/28/23 17:44
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:10
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:33

**Client Sample ID: 4062-C0V-08-B09 (0-2)**  
**Date Collected: 02/23/23 13:50**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-2**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 12:38
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:28
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:18
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:12
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B09 (0-2)**

**Lab Sample ID: 500-229911-2**

**Date Collected: 02/23/23 13:50**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

**Percent Solids: 83.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 12:52
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700668	SS	EET CHI	03/01/23 19:40
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:13
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:35

**Client Sample ID: 4062-C0V-14-B01 (0-1)**

**Lab Sample ID: 500-229911-3**

**Date Collected: 02/23/23 14:05**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 12:41
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:30
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:20
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:14
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-14-B01 (0-1)**

**Lab Sample ID: 500-229911-3**

**Date Collected: 02/23/23 14:05**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

**Percent Solids: 82.4**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 13:18
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700668	SS	EET CHI	03/01/23 20:04
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:16
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:37

# Lab Chronicle

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
Date Collected: 02/23/23 14:10  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-4**  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 12:44
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:32
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:23
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 14:54 - 03/01/23 15:00 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-14-B02 (0-1)**  
Date Collected: 02/23/23 14:10  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-4**  
Matrix: Solid  
Percent Solids: 86.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 13:43
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	701587	JJB	EET CHI	03/08/23 19:00
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:19
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:39

**Client Sample ID: 4062-C0V-14-B02 (0-1)D**  
Date Collected: 02/23/23 14:15  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-5**  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 12:57
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:40
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:29
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 15:00 - 03/01/23 15:06 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-14-B02 (0-1)D**

**Lab Sample ID: 500-229911-5**

**Date Collected: 02/23/23 14:15**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

**Percent Solids: 82.6**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 14:07
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	701587	JJB	EET CHI	03/08/23 19:24
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:22
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:41

**Client Sample ID: 4062-C0V-08-B06 (0-2)**

**Lab Sample ID: 500-229911-6**

**Date Collected: 02/23/23 14:25**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:07
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:47
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:31
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:27
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-08-B06 (0-2)**

**Lab Sample ID: 500-229911-6**

**Date Collected: 02/23/23 14:25**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

**Percent Solids: 79.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 14:33
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700668	SS	EET CHI	03/01/23 20:29
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:25
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:47

# Lab Chronicle

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B07 (0-2)**  
Date Collected: 02/23/23 14:30  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-7**  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:10
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:49
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:47
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 15:06 - 03/01/23 15:12 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-08-B07 (0-2)**  
Date Collected: 02/23/23 14:30  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-7**  
Matrix: Solid  
Percent Solids: 81.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700601	PMF	EET CHI	03/01/23 19:02
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700668	SS	EET CHI	03/01/23 20:53
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:28
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:49

**Client Sample ID: 4062-C0V-08-B05 (0-2)**  
Date Collected: 02/23/23 14:35  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-8**  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:14
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:51
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:49
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:17
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B05 (0-2)**

**Lab Sample ID: 500-229911-8**

**Date Collected: 02/23/23 14:35**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

**Percent Solids: 82.6**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 15:23
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700668	SS	EET CHI	03/01/23 21:17
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:32
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:51

**Client Sample ID: 4062-C0V-08-B04 (0-2)**

**Lab Sample ID: 500-229911-9**

**Date Collected: 02/23/23 16:20**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:17
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:53
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:51
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:19
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-08-B04 (0-2)**

**Lab Sample ID: 500-229911-9**

**Date Collected: 02/23/23 16:20**

**Matrix: Solid**

**Date Received: 02/24/23 11:11**

**Percent Solids: 82.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 15:48
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700513	SS	EET CHI	02/28/23 18:09
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:35
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:53

# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B03 (0-2)**  
**Date Collected: 02/23/23 16:10**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-10**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:20
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:55
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:53
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:22
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-08-B03 (0-2)**  
**Date Collected: 02/23/23 16:10**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-10**  
**Matrix: Solid**  
**Percent Solids: 81.3**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 16:13
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700513	SS	EET CHI	02/28/23 18:33
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:44
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 08:54

**Client Sample ID: 4062-C0V-08-B02 (0-2)**  
**Date Collected: 02/23/23 15:10**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-11**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:23
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:57
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:56
Total/NA	Analysis	9045D		1	700725	EH	EET CHI	03/01/23 13:24
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06



# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-08-B02 (0-2)**  
**Date Collected: 02/23/23 15:10**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-11**  
**Matrix: Solid**  
**Percent Solids: 81.9**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 16:38
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700513	SS	EET CHI	02/28/23 18:57
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:47
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 09:02

**Client Sample ID: 4062-C0V-08-B01 (0-2)**  
**Date Collected: 02/23/23 15:20**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-12**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:27
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 15:59
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 11:58
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 15:12 - 03/01/23 15:18 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-08-B01 (0-2)**  
**Date Collected: 02/23/23 15:20**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-12**  
**Matrix: Solid**  
**Percent Solids: 86.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 17:04
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700513	SS	EET CHI	02/28/23 19:46
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:50
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 09:04

# Lab Chronicle

Client: WSP USA Inc.  
 Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-05-B03 (0-1)**  
**Date Collected: 02/23/23 15:30**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-13**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:30
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 16:01
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 12:00
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 15:47 - 03/01/23 15:53 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-05-B03 (0-1)**  
**Date Collected: 02/23/23 15:30**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-13**  
**Matrix: Solid**  
**Percent Solids: 86.2**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 17:29
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700513	SS	EET CHI	02/28/23 19:22
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:54
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 09:10

**Client Sample ID: 4062-C0V-05-B02 (0-1)**  
**Date Collected: 02/23/23 15:40**  
**Date Received: 02/24/23 11:11**

**Lab Sample ID: 500-229911-14**  
**Matrix: Solid**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:33
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 16:03
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 12:02
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 15:18 - 03/01/23 15:24 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

# Lab Chronicle

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

**Client Sample ID: 4062-C0V-05-B02 (0-1)**  
Date Collected: 02/23/23 15:40  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-14**  
Matrix: Solid  
Percent Solids: 86.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 17:55
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	701587	JJB	EET CHI	03/08/23 19:48
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 15:57
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		5	700562	CMS	EET CHI	02/28/23 14:31
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 09:12

**Client Sample ID: 4062-C0V-05-B01 (0-1)**  
Date Collected: 02/23/23 15:50  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-15**  
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6010B		1	700931	CMS	EET CHI	03/02/23 13:36
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	3010A			700755	RN	EET CHI	03/01/23 17:00 - 03/01/23 17:30 <sup>1</sup>
TCLP	Analysis	6020A		1	701031	FXG	EET CHI	03/02/23 16:05
TCLP	Leach	1311			700531	JM	EET CHI	02/28/23 12:46 - 03/01/23 06:46 <sup>1</sup>
TCLP	Prep	7470A			700697	MJG	EET CHI	03/01/23 11:25 - 03/01/23 13:25 <sup>1</sup>
TCLP	Analysis	7470A		1	700909	MJG	EET CHI	03/02/23 12:04
Total/NA	Analysis	9045D		1	700719	MB	EET CHI	03/01/23 15:24 - 03/01/23 15:30 <sup>1</sup>
Total/NA	Analysis	Moisture		1	700804	AM	EET CHI	03/02/23 09:06

**Client Sample ID: 4062-C0V-05-B01 (0-1)**  
Date Collected: 02/23/23 15:50  
Date Received: 02/24/23 11:11

**Lab Sample ID: 500-229911-15**  
Matrix: Solid  
Percent Solids: 77.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			700221	WRE	EET CHI	02/24/23 17:05
Total/NA	Analysis	8260B		1	700426	W1T	EET CHI	02/28/23 18:20
Total/NA	Prep	3541			700448	GM	EET CHI	02/28/23 08:18 - 02/28/23 13:48 <sup>1</sup>
Total/NA	Analysis	8270D		1	700703	SS	EET CHI	03/01/23 21:47
Total/NA	Prep	3050B			700187	RN	EET CHI	02/24/23 15:35 - 02/24/23 16:05 <sup>1</sup>
Total/NA	Analysis	6010B		1	700467	CMS	EET CHI	02/27/23 16:00
Total/NA	Prep	7471B			701027	MJG	EET CHI	03/03/23 13:00
Total/NA	Analysis	7471B		1	701282	MJG	EET CHI	03/06/23 09:14

<sup>1</sup> Completion dates and times are reported or not reported per method requirements or individual lab discretion.

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: WSP USA Inc.  
Project/Site: IDOT-172-027-WO112 West Frankfort

Job ID: 500-229911-1

## Laboratory: Eurofins Chicago

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

Authority	Program	Identification Number	Expiration Date
Illinois	NELAP	IL00035	04-29-23

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

# Chain of Custody Record 640813



Environment Testing  
America

Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Regulatory Program:  DW  NPDES  RCRA  Other

TAL-8210

Client Contact		Project Manager: <b>D. Tiebout</b>		Site Contact: <b>A. Platin</b>		Date: <b>2/23/23</b>		COC No: <b>1</b>	
Company Name: <b>WSP</b>		Tel/Email:		Lab Contact: <b>R. Wozniak</b>		Carrier:		1 of 2 COCs	
Address: <b>30 N. LaSalle</b>		Analysis Turnaround Time <input checked="" type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS		TAT if different from Below _____		500-229911 COC		Sampler:	
City/State/Zip: <b>Chicago, IL</b>								For Lab Use Only	
Phone:		<input checked="" type="checkbox"/> 2 weeks		<input type="checkbox"/> 1 week		<input type="checkbox"/> 2 days		<input type="checkbox"/> 1 day	
Fax:		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		Walk-in Client	
Project Name: <b>FDOT W0112 - West Frankfort</b>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		Lab Sampling	
Site: <b>EP 10012 - West Frankfort</b>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		Job / SDG No	
PO#:		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<b>500-229911</b>	

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	pH	% Solids	VOCs	SVOCs	Total Metals	TCLP #	Sample Specific Notes
1 4062-COV-08-B08 (0-2)	2/23/23	1355	C	S	2			X	X	X	X	X	X	(A)
2 4062-COV-08-B09 (0-2)	2/23/23	1350	C	S	2			X	X	X	X	X	X	(A)
3 4062-COV-14-B01 (0-1)	2/23/23	1405	C	S	2			X	X	X	X	X	X	(A)
4 4062-COV-14-B02 (0-1)	02/23/23	1410	C	S	2			X	X	X	X	X	X	(A)
5 4062-COV-14-B02 (0-1) Dup	2/23/23	1415	C	S	2			X	X	X	X	X	X	(A)
6 4062-COV-08-B06 (0-2)	2/23/23	1425	C	S	2			X	X	X	X	X	X	(A)
7 4062-COV-08-B07 (0-2)	2/23/23	1430	C	S	2			X	X	X	X	X	X	(A)
8 4062-COV-08-B05 (0-2)	2/23/23	1435	C	S	2			X	X	X	X	X	X	(A)
9 4062-COV-08-B04 (0-2)	2/23/23	1400	C	S	2			X	X	X	X	X	X	(B)
10 4062-COV-08-B03 (0-2)	2/23/23	1410	C	S	2			X	X	X	X	X	X	(B)
11 4062-COV-08-B02 (0-2)	2/23/23	1510	C	S	2			X	X	X	X	X	X	(B)
12 4062-COV-08-B01 (0-2)	2/23/23	1520	C	S	2			X	X	X	X	X	X	(B)

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4= HNO3, 5= NaOH, 6= Other

Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown		<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months	

Special Instructions/QC Requirements & Comments:  
**\*SPL analysis based on TCLP results**      **4.1+3.2, 4.9+4.0**      **(Cover A or B)**

Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No		Cooler Temp (°C) Obs'd: <b>4.1</b> Corr'd: <b>3.2</b>		Therm ID No	
Relinquished by: <b>Austin Platin</b>	Company: <b>WSP</b>	Date/Time: <b>2/24/23 1111</b>	Received by: <b>[Signature]</b>	Company:	Date/Time: <b>2/24/23 1111</b>		
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:		
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:		

4804





Address \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Regulatory Program:  DW  NPDES  RCRA  Other

Client Contact		Project Manager: <b>D. Teclout</b>		Site Contact: <b>A. Plath</b>		Date: <b>2/23/23</b>		COC No: <b>2</b>																					
Company Name: <b>WSP</b>		Tel/Email		Lab Contact: <b>R. Wright</b>		Carrier		<b>2</b> of <b>2</b> COCs																					
Address: <b>30 N. LaSalle</b>		Analysis Turnaround Time <input checked="" type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below _____ <input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day																											
City/State/Zip: <b>Chicago</b>																													
Phone																													
Fax																													
Project Name: <b>EDX WSP8 W0112 - West Frankfort</b>		Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	PH	% Solids	VOCs	S.VOCs	Total Metals	TLCPH	Sample Specific Notes												
Site: <b>RP1009008.0112 - West Frankfort</b>		13 4062-COV-05-B03 (0-1)		2/23/23	1530	C	S	2			X	X	X	X	X	X	(B)												
PO#		14 4062-COV-05-B02 (0-1)		2/23/23	1540	C	S	2			X	X	X	X	X	X	(B)												
		15 4062-COV-05-B01 (0-1)		2/23/23	1550	C	S	2			X	X	X	X	X	X	(B)												
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other										Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)																			
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample										<input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months																			
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown																													
Special Instructions/QC Requirements & Comments: *SELF ANALYSIS based on TLCP results																													
Custody Seals Intact <input type="checkbox"/> Yes <input type="checkbox"/> No					Custody Seal No					Cooler Temp (°C) Obs'd <b>4.9</b> Corr'd <b>4.0</b>					Therm ID No <b>2/24/23 SH</b>														
Relinquished by: <b>Audrey Plath</b>					Company: <b>WSP</b>					Date/Time: <b>2/24/23 1111</b>					Received by: <b>[Signature]</b>					Company: _____					Date/Time: <b>2/24/23 1111</b>				
Relinquished by					Company					Date/Time					Received by					Company					Date/Time				
Relinquished by					Company					Date/Time					Received in Laboratory by					Company					Date/Time				

# Login Sample Receipt Checklist

Client: WSP USA Inc.

Job Number: 500-229911-1

**Login Number: 229911**

**List Number: 1**

**Creator: Hernandez, Stephanie**

**List Source: Eurofins Chicago**

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	3.2,4.0
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.	True	
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	

