

IOWA DEPARTMENT OF NATURAL RESOURCES
LAND QUALITY BUREAU
502 EAST 9th STREET - DES MOINES, IA 50319-0034
Telephone: (515) 725-8200; Fax: (515) 725-8202



PETITION FOR WAIVER

Pursuant to 561 Iowa Administrative Code (IAC) Chapter 10, Waivers from Administrative Rules, a petitioner must provide comprehensive justification of a proposed request for a waiver to an administrative rule as adopted by the Department of Natural Resources (DNR).

This form will assist you in providing all pertinent information that is necessary for the DNR to grant a waiver. The form must be submitted to the DNR and must contain an adequate amount of factual and concise information. The obligation rests with the petitioner to provide convincing evidence to justify the granting of a waiver. You may provide additional information or attach additional pages if needed. The DNR reserves the right to require additional information to further support request for a waiver.

Petitions will be comprehensively evaluated by the DNR. The DNR reserves the right to place any condition on the waiver. If information is not inclusive, concise, or does not adhere to the justifications and/or proof the petitioner has submitted, the waiver may be denied. Upon review, the DNR will grant or deny the waiver in writing.

Waivers are temporary unless evidence is shown that a temporary waiver would be impracticable. Once the waiver expires the rule will be enforceable. There is no automatic renewal of waivers. The DNR may renew a waiver at its sole discretion. Please note that the DNR is not allowed to waive or alter a statutory duty or requirement.

CONTACT INFORMATION

Petitioner Name: Matthew J. Morris - Compliance Coordinator
Address: 12169 NE University Avenue
City: Mitchellville State: Iowa Zip: 50169
Telephone: (515)-333-4450 Fax: (515)-967-7965
Facility Name: Metro Park East Landfill
Address: 12169 NE University Avenue
City: Mitchville State: Iowa Zip: 50169

PETITIONER JUSTIFICATION

Petitioner must provide clear and convincing evidence to prove the following:

1. Please describe the specific requested waiver.

MWA is requesting a waiver to 567-109.5(2)d which limits the concentrations of polynuclear aromatic hydrocarbon (PAH) in soil. The request is for PAH impacted soils to be generated during a removal action which is being implemented under an Administrative Order issued by USEPA Region 7 to John Deere Des Moines Works. The volume of soil exceeding the requirements stated in 567-109.5(2)d is approximately 235 tons (13 truck loads). The total volume of soil to be disposed in this project is 580 tons (32 truck loads).

2. Cite the specific administrative rule from which the waiver is requested.

MWA is requesting a variance to 567 Iowa Administrative Code, Chapter 109.5(2)d

3. What permit is the waiver requested for?

Metro Park East Landfill - Permit No. 77-SDP-01-72

4. What operation(s) will the waiver include?

The waiver would allow a one time disposal of PAH impacted soil exceeding 1600 ppm for non-carcinogenic PAHs and 200 ppm for carcinogenic PAHs to be disposed at the facility.

5. Pursuant to 561 IAC 10.5(17A,455A) a waiver will not be permanent. Is a temporary waiver impractical? If so, how?

This is a request for a temporary waiver for a specific site clean-up at the John Deere Des Moines Works.

6. Requested time extent of waiver?

It is estimated that the project can be completed in 6 months time, weather dependent. Total project time is 2 weeks.

7. Please list relevant facts that justify the waiver.

The excavation and disposal of the PAH impacted soil is the accepted Remedy for the Site as presented in the the EPA's Final Remedy Decision and Response To Comments dated August 4, 2022.

In March 2024, additional sampling was conducted to further characterize the soils as non-hazardous.

8. How and why is the absence of the waiver posing an undue hardship?

In the absence of the waiver, the soils will need to be transported out of state for disposal removing revenue from the landfill.

9. How will equal protection of public health, safety, and welfare be maintained if the waiver is granted? Provide any analytical data and/or studies to support your justification.

If the waiver is granted, fewer trucks will travel fewer miles resulting in GHG emissions generated from transportation being minimized, public safety will increase by reducing the potential for accident or release in the event of an accident. In addition, this will remove the PAH impacted soil from the environment and place it in a secure managed disposal cell.

10. In the past 5 years:

Has the petitioner been issued an NOV? ☐ Yes ☒ No

If yes, please explain:

11. Administrative Order? ☐ Yes ☒ No

If yes, please explain:

12. Involved in contested case proceedings? ☐ Yes ☒ No

If yes, please explain:

13. In a court of law? ☐ Yes ☒ No

If yes, please explain:

14. Are there any public agencies, political subdivisions of the state or federal government, person or entity that may be affected by the granting of the waiver? ☐ Yes ☒ No

If yes, please explain and provide the name(s), address(es), telephone number(s), and other relevant contact information.

15. If the waiver is granted, would it adversely affect any person's rights? ☐ Yes ☒ No

If yes, please explain and provide the name(s), address(es), telephone number(s), and other relevant contact information.

16. Do you know how the DNR has treated similar situations? ☒ Yes ☐ No

If yes, describe how similar situations were handled:

Loess Hills requested a permanent variance to dispose of PAH impacted soil in January 2024 (Doc. 109149 & Doc. 109102) which was denied by the IDNR for not demonstrating how disposal of PAH contaminated soil in the landfill in excess of levels specified in 567 IAC 109.5(2)"d" would be equally protective of public health, safety, and welfare as the alternative of not disposing of PAH contaminated soil in the landfill in excess of levels specified in 567 IAC 109.5(2)"d".

PETITIONER CERTIFICATION

The DNR shall grant or deny a petition for a waiver with 120 days of the receipt of the petition. Failure of the DNR to grant or deny a petition within the required time period shall be deemed a denial of that petition by the DNR. A waiver is void if the material facts are not true or if facts have been withheld. The DNR reserves the right to cancel a waiver at any time if the DNR finds that the facts as stated in the request are not true, material facts have been withheld, the alternative means of compliance provided in the waiver have failed to achieve the objectives of the statute, or the requester has failed to comply with the conditions of the waiver.

By signing this petition, I certify that all information listed on this petition and any attached information is factual and accurate.

Signature: Matthew J. Morris Date: June 5th, 2024
Name: Matthew J. Morris Position: Compliance Coordinator



Digitally signed by
Matthew Morris
Date: 2024.06.05
09:35:21 -05'00'

On March 7, 2024, GHD collected additional samples at the SWMU 25 North Area Site to replicate the historical data where exceedances occurred at one point in each area that is to be excavated. Samples were collected at the discrete intervals of the historical samples and analyzed for PAHs. In addition, a composite sample through the depth of the proposed excavation was collected and analyzed for PAHs, TCLP RCRA Metals, and paint filter. Testing was completed by Eurofins Environment Testing (Eurofins) in Cedar Falls, Iowa.

The analysis for TCLP RCRA Metals and paint filter were below regulatory limits and indicated the material is non-hazardous and does not contain free liquids as presented in the attached Table 1.

Table 2 presents the sample identification for the historical sample and 2024 sample along with the excavation area and sample location. Sample locations are presented in Figure 1. Excavation areas are presented in Figure 2.

Table 2

| Excavation Area | Sample Location | Historical Sample ID | 2024 Sample ID |
|-----------------|-----------------|--|--|
| 1 | B | TSD25-B-1 TSD25-B-3 TSD25-B1-4 TSD25-B1-5 | HA-B-34-SL-1 HA-B-35-SL-3 HA-B-36-SL-4 HA-B-37-SL-5 HA-B-50-SL-0-5 |
| 2 | SD25 | S25-25-SD-0-1 S25-25-SD-1-2 | HA-B-47-SL-1 HA-B-48-SL-2 HA-B-49-SL-0-2 |
| 3 | E | TSD25-E-1 | HA-B-40-SL-1 HA-B-41-SL-0-1 |
| 4 | H1 | TSD25-H-1 TSD25-H-3 TSD25-H1-4 | HA-B-42-SL-1 HA-B-43-SL-3 HA-B-44-SL-4 HA-B-45-SL-0-4 |
| 5 | M1 | TSD25-M1-1 | HA-B-38-SL-1 HA-B-39-SL-0-1 |

The analytical results correlated with the historical data taking into consideration the common variability with PAH analysis in soils. Tables presenting this correlation are presented in Attachment A. The analytical reports for the 2024 Sampling are present in Attachment B. A data verification memorandum is presented in Attachment C. One sample location (SD25 in Excavation Area 2) exhibited an apparent anomaly between the PAH concentrations in the individual sample intervals (HA-B-47-SL-1, HA-B-48-SL-2) and the composited sample for that location (HA-B-49-SL-0-2). The composited sample for the SD25 location was an order of magnitude higher in total PAH concentrations than the individual 0-1 and 1-2 ft samples. GHD inquired with the laboratory regarding the quality of the sample analysis and the laboratory indicated that matrix interference (typical of samples with elevated concentrations) required dilution, however, there was no obvious issue with the analysis. GHD requested the sample be reanalyzed even though the result would be flagged for having the analysis performed outside of the 14-day holding time specified in the Quality Assurance Project Plan (QAPP). The reanalysis provided a result similar to the individual sample intervals, e.g. an order of magnitude less than the original sample.

Table 1

**Validated Analytical Results Summary–TCLP Soil
SWMU 25 Waste Characterization Soil Sampling
John Deere Des Moines Works
Ankeny, Iowa
March 2024**

| | | | | | | |
|--------------------------|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Location ID: | | HA-B-39 | HA-B-41 | HA-B-45 | HA-B-49 | HA-B-50 |
| Sample Name: | | HA-B-39-SL-0-1 | HA-B-41-SL-0-1 | HA-B-45-SL-0-4 | HA-B-49-SL-0-2 | HA-B-50-SL-0-5 |
| Sample Date: | | 03/07/2024 | 03/07/2024 | 03/07/2024 | 03/07/2024 | 03/07/2024 |
| Depth: | | 0-1 ft BGS | 0-1 ft BGS | 0-4 ft BGS | 0-2 ft BGS | 0-5 ft BGS |
| Parameters | Unit | | | | | |
| Metals, TCLP | | | | | | |
| Arsenic | mg/L | 0.100 U | 0.300 U | 0.100 U | 0.100 U | 0.100 U |
| Barium | mg/L | 0.751 | 0.631 | 0.637 | 0.369 | 0.388 |
| Cadmium | mg/L | 0.0200 U | 0.0600 U | 0.0200 U | 0.0200 U | 0.0200 U |
| Chromium | mg/L | 0.0200 U | 0.0600 U | 0.0200 U | 0.0200 U | 0.0200 U |
| Lead | mg/L | 0.100 U | 0.300 U | 0.100 U | 0.100 U | 0.100 U |
| Mercury | mg/L | 0.00200 U | 0.00200 U | 0.00200 U | 0.00200 U | 0.00200 U |
| Selenium | mg/L | 0.100 U | 0.300 U | 0.100 U | 0.100 U | 0.100 U |
| Silver | mg/L | 0.0500 U | 0.150 U | 0.0500 U | 0.0500 U | 0.0500 U |
| General Chemistry | | | | | | |
| Free liquid | none | CNF | CNF | CNF | CNF | CNF |

Notes:

TCLP - Toxicity Characteristic Leaching Procedure

U - Not detected at the associated reporting limit

CNF - Contains no free liquid

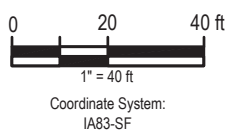
Figures

LEGEND

- AOC/SWMU LOCATION (APPROX.)
- SOIL SAMPLE LOCATION (THAT EXCEEDS CLEAN-UP STANDARDS)
- LIMIT OF EXCAVATION
- EXCAVATION CORNER POINT



| ID | EASTING | NORTHING |
|------|-------------|------------|
| 1 | 1606357.113 | 628396.771 |
| 2 | 1606365.155 | 628403.39 |
| 3 | 1606388.584 | 628383.751 |
| 4 | 1606393.775 | 628379.988 |
| 5 | 1606399.069 | 628369.406 |
| 6 | 1606405.364 | 628356.823 |
| 7 | 1606410.093 | 628350.618 |
| 8 | 1606427.439 | 628327.858 |
| 9 | 1606436.349 | 628316.166 |
| 10 | 1606436.113 | 628266.054 |
| 11 | 1606425.706 | 628265.108 |
| 12 | 1606412.933 | 628304.347 |
| 13 | 1606418.61 | 628321.13 |
| 14 | 1606399.841 | 628342.805 |
| 15 | 1606397.322 | 628345.713 |
| 16 | 1606387.388 | 628348.55 |
| 17 | 1606385.26 | 628362.496 |
| 18 | 1606376.613 | 628373.025 |
| B | 1606379.875 | 628383.503 |
| B1 | 1606379.875 | 628383.503 |
| B2 | 1606379.875 | 628383.503 |
| BB | 1606369.981 | 628391.653 |
| E | 1606394.145 | 628353.641 |
| E1 | 1606394.145 | 628353.641 |
| H1 | 1606412.318 | 628336.827 |
| J | 1606420.38 | 628304.78 |
| K | 1606430.483 | 628312.912 |
| M1 | 1606429.862 | 628274.562 |
| SD25 | 1606388.283 | 628375.132 |

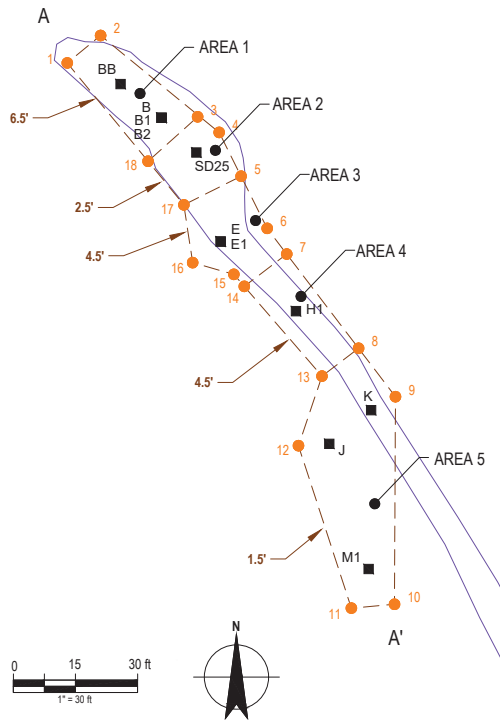
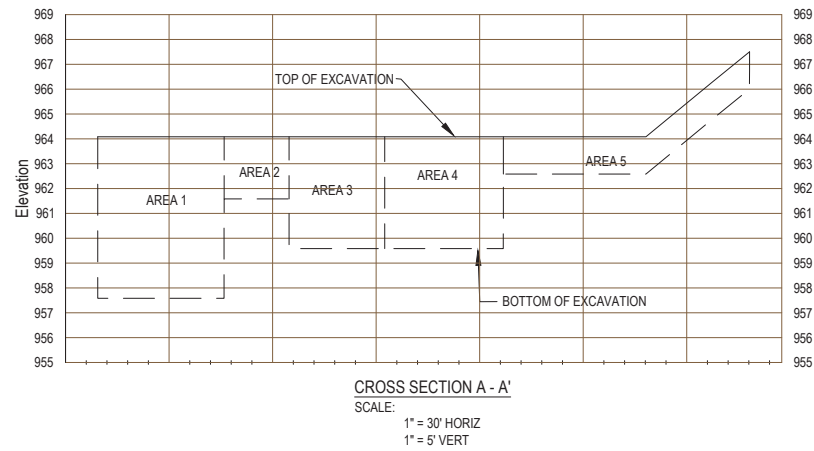
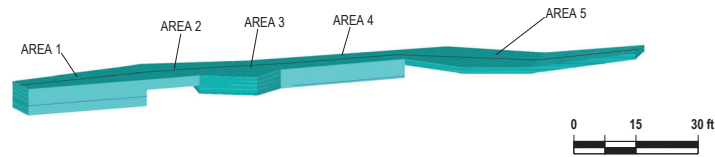


JOHN DEERE DES MOINES WORKS
ANKENY, IOWA

SMWU 25 NORTH AREA
HISTORICAL SAMPLE LOCATIONS

Project No. 11103217
Date May 2023

FIGURE 1



- LEGEND**
- AOC/SWMU LOCATION (APPROX.)
 - SOIL SAMPLE LOCATION
 - LIMIT OF EXCAVATION
 - EXCAVATION CORNER POINT

| AREA | DEPTH OF EXCAVATION (FEET BGS) | VOLUME TO BE REMOVED (CUBIC FEET) |
|--------------|-----------------------------------|--------------------------------------|
| 1 | 6.5 | 2620 |
| 2 | 2.5 | 660 |
| 3 | 4.5 | 1730 |
| 4 | 4.5 | 1540 |
| 5 | 1.5 | 1560 |
| TOTAL | | 8110 |



JOHN DEERE DES MOINES WORKS
ANKENY, IOWA

**SWMU 25 NORTH AREA EXCAVATION
AREA AND QUANTITIES**

Project No. 11103217
Date May 2023

FIGURE 2

Attachments

Attachment A

Tables

Attachment A
Table 1
Soil Sample Results
SWMU 25 North Area Excavation
John Deere Des Moines Works
Ankeny, Iowa

Excavation Area 1

| | | B | | | | |
|------------------------|-------|----------------|----------------|--------------|----------------|--------------|
| Sample Group: | | Group B | Group B | | Group B | |
| Sample Area: | | SWMU 25 (SD25) | SWMU 25 (SD25) | | SWMU 25 (SD25) | |
| Sample Location: | | B | B | HA-B-34 | B | HA-B-35 |
| Sample ID: | | TSD25-B-1 | DP05-SL-0413 | HA-B-34-SL-1 | TSD25-B-3 | HA-B-35-SL-3 |
| Sample Date: | | 4/15/2013 | 4/15/2013 | 3/7/2024 | 4/15/2013 | 3/7/2024 |
| Sample Depth: | | 1 ft BGS | 1 ft BGS | 1 ft BGS | 3 ft BGS | 3 ft BGS |
| | | | Duplicate | | | |
| Parameters | Units | | | | | |
| Semi-Volatiles | | | | | | |
| 2-Methylnaphthalene | mg/kg | - | - | 3.39 | - | 0.179 |
| Acenaphthene | mg/kg | 1.0 U | 4.99 U | 17.3 | 0.994 U | 0.634 |
| Acenaphthylene | mg/kg | 1.0 U | 4.99 U | 0.510 | 0.994 U | 0.119 U |
| Anthracene | mg/kg | 1.33 | 11.8 | 90.3 | 20.8 | 1.72 |
| Benzo(a)anthracene | mg/kg | 6.03 | 46 | 181 | 38.3 | 4.40 |
| Benzo(a)pyrene | mg/kg | 4.44 | 43.6 | 166 | 45.5 | 3.89 |
| Benzo(b)fluoranthene | mg/kg | 5.58 | 52 | 204 | 46.3 | 5.15 |
| Benzo(g,h,i)perylene | mg/kg | 1.54 | 23.9 | 98.6 | 31.7 | 2.66 |
| Benzo(k)fluoranthene | mg/kg | 2.88 | 27.2 | 83.1 | 26.7 | 1.67 |
| Chrysene | mg/kg | 7.63 | 55.7 | 180 | 47.9 | 5.09 |
| Dibenz(a,h)anthracene | mg/kg | 1.0 U | 4.99 U | 23.2 | 0.994 U | 0.796 |
| Fluoranthene | mg/kg | 19 | 132 | 450 | 133 | 17.4 |
| Fluorene | mg/kg | 1.02 | 6.55 | 40.9 | 17.7 | 0.904 |
| Indeno(1,2,3-cd)pyrene | mg/kg | 4.86 | 30 | 116 | 28.2 | 3.31 |
| Naphthalene | mg/kg | 1.0 U | 4.99 U | 8.10 | 0.994 U | 0.390 |
| Phenanthrene | mg/kg | 13.9 | 83.8 | 373 | 117 | 14.3 |
| Pyrene | mg/kg | 11.1 | 83.6 | 341 | 90 | 7.29 |
| Metals | | | | | | |
| Arsenic | mg/kg | - | - | - | - | - |
| Barium | mg/kg | - | - | - | - | - |
| Cadmium | mg/kg | - | - | - | - | - |
| Chromium | mg/kg | - | - | - | - | - |
| Lead | mg/kg | - | - | - | - | - |
| Mercury | mg/kg | - | - | - | - | - |
| Selenium | mg/kg | - | - | - | - | - |
| Silver | mg/kg | - | - | - | - | - |

Notes:

J Estimated Concentration.

U Not detected at the associated reporting limit.

- Not applicable.

Attachment A
Table 1
Soil Sample Results
SWMU 25 North Area Excavation
John Deere Des Moines Works
Ankeny, Iowa

Excavation Area 1

B

Sample Group:
Sample Area:
Sample Location:
Sample ID:
Sample Date:
Sample Depth:

| Group B SWMU 25 (SD25) B1 | HA-B-36 HA-B-36-SL-4 | Group B SWMU 25 (SD25) B1 | HA-B-37 HA-B-37-SL-5 | HA-B-50 HA-B-50-SL-0-5 | HA-B-50 HA-B-51-SL-0-5 |
|---------------------------------|-------------------------|---------------------------------|-------------------------|---------------------------|---------------------------|
| TSD25-B1-4 | 6/5/2013 | TSD25-B1-5 | 6/5/2013 | 3/7/2024 | 3/7/2024 |
| 4 ft BGS | 4 ft BGS | 5 ft BGS | 5 ft BGS | 0-5 ft BGS | 0-5 ft BGS Duplicate |

Parameters

Units

Semi-Volatiles

| | | | | | | | |
|------------------------|-------|--------|---------|--------|---------|--------|--------|
| 2-Methylnaphthalene | mg/kg | - | 0.996 | - | 0.544 | 12.1 U | 3.08 U |
| Acenaphthene | mg/kg | 4.92 U | 6.84 | 1.99 U | 2.66 | 12.1 U | 3.08 U |
| Acenaphthylene | mg/kg | 4.92 U | 0.235 U | 1.99 U | 0.173 U | 12.1 U | 3.08 U |
| Anthracene | mg/kg | 42.1 | 45.4 | 23.9 | 9.15 | 38.0 J | 7.52 J |
| Benzo(a)anthracene | mg/kg | 107 | 99.3 | 120 | 30.4 | 101 J | 19.0 J |
| Benzo(a)pyrene | mg/kg | 82.5 | 98.1 | 62.1 | 27.3 | 92.1 J | 18.6 J |
| Benzo(b)fluoranthene | mg/kg | 86.3 | 127 | 51.3 | 34.8 | 122 J | 24.2 J |
| Benzo(g,h,i)perylene | mg/kg | 52 | 57.5 | 41.4 | 11.0 | 68.7 J | 14.2 J |
| Benzo(k)fluoranthene | mg/kg | 58.8 | 46.1 | 71.2 | 8.30 | 47.8 J | 8.61 J |
| Chrysene | mg/kg | 128 | 103 | 23.4 | 31.1 | 105 J | 22.9 J |
| Dibenz(a,h)anthracene | mg/kg | 4.92 U | 15.5 | 1.99 U | 3.64 | 18.9 J | 4.02 J |
| Fluoranthene | mg/kg | 361 | 254 | 218 | 76.0 | 310 J | 62.3 J |
| Fluorene | mg/kg | 52 | 9.94 | 27.5 | 3.71 | 14.1 | 3.53 |
| Indeno(1,2,3-cd)pyrene | mg/kg | 54.4 | 68.5 | 42.2 | 22.1 | 81.5 J | 16.5 J |
| Naphthalene | mg/kg | 24.9 | 2.29 | 11.8 | 1.36 | 12.1 U | 3.08 U |
| Phenanthrene | mg/kg | 302 | 183 | 148 | 56.4 | 204 J | 46.0 J |
| Pyrene | mg/kg | 232 | 189 | 146 | 56.3 | 228 J | 46.1 J |

Metals

| | | | | | | | |
|----------|-------|---|---|---|---|----------|----------|
| Arsenic | mg/kg | - | - | - | - | 12.7 U | 14.6 U |
| Barium | mg/kg | - | - | - | - | 62.1 | 38.3 |
| Cadmium | mg/kg | - | - | - | - | 3.17 U | 3.66 U |
| Chromium | mg/kg | - | - | - | - | 32.8 | 46.0 |
| Lead | mg/kg | - | - | - | - | 54.2 | 129 |
| Mercury | mg/kg | - | - | - | - | 0.0190 U | 0.0193 U |
| Selenium | mg/kg | - | - | - | - | 15.8 U | 18.3 U |
| Silver | mg/kg | - | - | - | - | 3.17 U | 3.66 U |

Notes:

J Estimated Concentration.

U Not detected at the associated reporting limit.

- Not applicable.

Attachment A
Table 1
Soil Sample Results
SWMU 25 North Area Excavation
John Deere Des Moines Works
Ankeny, Iowa

Excavation Area 2

SD25

| | | | | | | |
|-------------------------|----------------------|-----------------------|---------------------|----------------------|---------------------|-----------------------|
| Sample Group: | Group B | Group B | | Group B | | |
| Sample Area: | SWMU 25 | SWMU 25 | | SWMU 25 | | |
| Sample Location: | SD25 | SD25 | HA-B-47 | SD25 | HA-B-48 | HA-B-49 |
| Sample ID: | S25-25-SD-0-1 | S25-25A-SD-0-1 | HA-B-47-SL-1 | S25-25-SD-1-2 | HA-B-48-SL-2 | HA-B-49-SL-0-2 |
| Sample Date: | 1/8/2009 | 1/8/2009 | 3/7/2024 | 1/8/2009 | 3/7/2024 | 3/7/2024 |
| Sample Depth: | 0-1 ft BGS | 0-1 ft BGS | 1 ft BGS | 1-2 ft BGS | 2 ft BGS | 0-2 ft BGS |

Duplicate

| Parameters | Units | | | | | | |
|------------------------|-------|----------------|----------------|----------|----------------------|--------|----------|
| Semi-Volatiles | | | | | | | |
| 2-Methylnaphthalene | mg/kg | 8.11 U | 12.5 U | 0.627 U | 2.39 U I-06 | 3.20 U | 49.8 U |
| Acenaphthene | mg/kg | 5.00 U /9.48 | 7.61 U /5.30 J | 0.864 | 0.728 U /2.39 U I-06 | 3.71 | 9.12 |
| Acenaphthylene | mg/kg | 8.11 U/5.00 U | 12.5 U/7.61 U | 0.0627 U | 0.728 U/2.39 U I-06 | 3.20 U | 6.39 U |
| Anthracene | mg/kg | 19.2 /33.2 | 20.4 /30.2 | 2.64 | 1.47 I-06 J /1.64 | 11.5 | 25.5 |
| Benzo(a)anthracene | mg/kg | 69.1 /49.0 | 88.1 /49.4 | 6.68 | 3.62 I-06 /6.10 | 37.8 | 54.1 |
| Benzo(a)pyrene | mg/kg | 74.4 /38.0 | 54.6 /67.6 | 6.16 | 4.67 /3.29 I-06 | 38.1 | 52.9 |
| Benzo(b)fluoranthene | mg/kg | 75.0 /38.2 | 58.1 /71.9 | 7.86 | 3.97 I-06 /6.16 | 48.8 | 71.1 |
| Benzo(g,h,i)perylene | mg/kg | 25.0/26.2 | 16.5/42.3 | 3.71 | 2.39 U I-06/3.76 | 27.1 | 29.0 |
| Benzo(k)fluoranthene | mg/kg | 23.3 /94.6 | 40.8 /71.6 | 2.15 | 3.28 /4.45 I-06 | 18.2 | 28.4 |
| Chrysene | mg/kg | 80.8 /55.4 | 109 /58.4 | 6.75 | 4.37 I-06 /7.74 | 44.3 | 58.9 |
| Dibenz(a,h)anthracene | mg/kg | 6.27 /8.03 J | 4.73 J /20.1 | 1.09 | 0.728 U /2.39 U I-06 | 7.04 | 7.86 |
| Fluoranthene | mg/kg | 148 /188 | 138 /317 | 14.6 | 12.8 I-06 /18.4 | 116 | 127 |
| Fluorene | mg/kg | 12.2 /14.5 | 20.8 /6.88 J | 1.35 | 1.89 /0.60 I-06 J | 4.88 | 11.2 |
| Indeno(1,2,3-cd)pyrene | mg/kg | 26.7 /25.9 | 17.8 /46.7 | 5.42 | 2.39 U I-06 /2.96 | 32.4 | 33.2 |
| Naphthalene | mg/kg | 3.81 J /5.00 U | 7.61 U /12.5 U | 0.790 | 0.728 U /2.39 U I-06 | 3.20 U | 6.39 U |
| Phenanthrene | mg/kg | 105/147 | 90.6/205 | 13.4 | 14.9/10.4 I-06 | 59.8 | 121 |
| Pyrene | mg/kg | 134 /97.7 | 182 /105 | 10.5 | 12.5 /8.24 I-06 | 93.7 | 91.4 |
| Metals | | | | | | | |
| Arsenic | mg/kg | 2.6 | 1.6 J | - | 1.8 J | - | 17.0 U |
| Barium | mg/kg | 57.8 | 47.6 | - | 32.5 | - | 39.8 |
| Cadmium | mg/kg | 0.5 J | 0.6 J | - | 0.6 J | - | 4.25 U |
| Chromium | mg/kg | 19.5 | 26.5 | - | 21.1 | - | 19.6 |
| Lead | mg/kg | 44.6 | 78.6 | - | 40.5 | - | 34.3 |
| Mercury | mg/kg | 0.11 U | 0.10 U | - | 0.19 U | - | 0.0227 U |
| Selenium | mg/kg | 2.0 U | 2.4 U | - | 1.0 J | - | 21.2 U |
| Silver | mg/kg | 1.0 U | 8.4 | - | 1.5 U | - | 4.25 U |

Notes:

J Estimated Concentration.

U Not detected at the associated reporting limit.

- Not applicable.

Attachment A
Table 1
Soil Sample Results
SWMU 25 North Area Excavation
John Deere Des Moines Works
Ankeny, Iowa

Excavation Area 3

| E | | | | | |
|------------------------|----------------|--------|----------------|--------|--------------|
| Sample Group: | Group B | | Group B | | |
| Sample Area: | SWMU 25 (SD25) | | SWMU 25 (SD25) | | |
| Sample Location: | E | | E | | HA-B-40 |
| Sample ID: | TSD25-E-1 | | DP06-SL-0413 | | HA-B-40-SL-1 |
| Sample Date: | 4/15/2013 | | 4/15/2013 | | 3/7/2024 |
| Sample Depth: | 1 ft BGS | | 1 ft BGS | | 1 ft BGS |
| | | | Duplicate | | 0-1 ft BGS |
| Parameters | Units | | | | |
| Semi-Volatiles | | | | | |
| 2-Methylnaphthalene | mg/kg | - | - | 11.2 U | 0.461 U |
| Acenaphthene | mg/kg | 7.71 U | 0.999 U | 11.2 U | 0.461 U |
| Acenaphthylene | mg/kg | 7.71 U | 1.65 | 11.2 U | 0.461 U |
| Anthracene | mg/kg | 7.71 U | 9.99 U | 9.50 | 1.37 |
| Benzo(a)anthracene | mg/kg | 34.5 | 41.2 | 29.9 | 5.11 |
| Benzo(a)pyrene | mg/kg | 29 | 34.5 | 28.5 | 5.26 |
| Benzo(b)fluoranthene | mg/kg | 34.9 | 40.8 | 37.8 | 6.84 |
| Benzo(g,h,i)perylene | mg/kg | 7.71 U | 11.9 | 14.6 | 5.31 |
| Benzo(k)fluoranthene | mg/kg | 20.8 | 25.2 | 11.3 | 2.47 |
| Chrysene | mg/kg | 43.8 | 46.3 | 30.2 | 6.02 |
| Dibenz(a,h)anthracene | mg/kg | 7.71 U | 0.999 U | 4.82 | 1.27 |
| Fluoranthene | mg/kg | 88.1 | 101 | 73.1 | 11.0 |
| Fluorene | mg/kg | 7.71 U | 5.86 | 11.2 U | 0.482 |
| Indeno(1,2,3-cd)pyrene | mg/kg | 20.9 | 22.7 | 20.0 | 5.90 |
| Naphthalene | mg/kg | 7.71 U | 5.97 | 11.2 U | 0.461 U |
| Phenanthrene | mg/kg | 55.4 | 65.5 | 63.6 | 7.10 |
| Pyrene | mg/kg | 53.8 | 68.1 | 52.7 | 8.24 |
| Metals | | | | | |
| Arsenic | mg/kg | - | - | - | 14.1 U |
| Barium | mg/kg | - | - | - | 96.5 |
| Cadmium | mg/kg | - | - | - | 3.54 U |
| Chromium | mg/kg | - | - | - | 33.9 |
| Lead | mg/kg | - | - | - | 65.3 |
| Mercury | mg/kg | - | - | - | 0.0185 U |
| Selenium | mg/kg | - | - | - | 17.7 U |
| Silver | mg/kg | - | - | - | 3.54 U |

Notes:

J Estimated Concentration.

U Not detected at the associated reporting limit.

- Not applicable.

Attachment A
Table 1
Soil Sample Results
SWMU 25 North Area Excavation
John Deere Des Moines Works
Ankeny, Iowa

Excavation Area 4

H1

| | | |
|-------------------------|-----------------------|-----------------------|
| Sample Group: | Group B | Group B |
| Sample Area: | SWMU 25 (SD25) | SWMU 25 (SD25) |
| Sample Location: | H | H |
| Sample ID: | TSD25-H-1 | TSD25-H-3 |
| Sample Date: | 4/15/2013 | 4/15/2013 |
| Sample Depth: | 1 ft BGS | 3 ft BGS |

| Parameters | Units | | | | |
|------------------------|--------------|---------|---------|---------|----------|
| Semi-Volatiles | | | | | |
| 2-Methylnaphthalene | mg/kg | - | 0.403 U | - | 0.0580 U |
| Acenaphthene | mg/kg | 0.582 U | 0.506 | 2.16 | 0.0580 U |
| Acenaphthylene | mg/kg | 0.582 U | 0.403 U | 0.248 U | 0.0580 U |
| Anthracene | mg/kg | 1.09 | 1.26 | 0.338 | 0.0580 U |
| Benzo(a)anthracene | mg/kg | 4.63 | 4.46 | 1.16 | 0.0632 |
| Benzo(a)pyrene | mg/kg | 3.66 | 4.61 | 1.32 | 0.0692 |
| Benzo(b)fluoranthene | mg/kg | 4.07 | 6.26 | 1.4 | 0.0947 |
| Benzo(g,h,i)perylene | mg/kg | 1.67 | 3.48 | 0.71 | 0.0714 |
| Benzo(k)fluoranthene | mg/kg | 3.04 | 2.29 | 0.687 | 0.0580 U |
| Chrysene | mg/kg | 6.34 | 5.59 | 1.42 | 0.0757 |
| Dibenz(a,h)anthracene | mg/kg | 0.873 | 0.875 | 0.248 U | 0.0580 U |
| Fluoranthene | mg/kg | 12 | 14.7 | 3.46 | 0.168 |
| Fluorene | mg/kg | 0.582 U | 0.692 | 0.259 | 0.0580 U |
| Indeno(1,2,3-cd)pyrene | mg/kg | 3.27 | 3.99 | 0.845 | 0.0736 |
| Naphthalene | mg/kg | 0.582 U | 0.403 U | 0.259 | 0.0580 U |
| Phenanthrene | mg/kg | 6.3 | 7.95 | 2.32 | 0.111 |
| Pyrene | mg/kg | 7.88 | 11.7 | 2.4 | 0.128 |
| Metals | | | | | |
| Arsenic | mg/kg | - | - | - | - |
| Barium | mg/kg | - | - | - | - |
| Cadmium | mg/kg | - | - | - | - |
| Chromium | mg/kg | - | - | - | - |
| Lead | mg/kg | - | - | - | - |
| Mercury | mg/kg | - | - | - | - |
| Selenium | mg/kg | - | - | - | - |
| Silver | mg/kg | - | - | - | - |

Notes:

J Estimated Concentration.

U Not detected at the associated reporting limit.

- Not applicable.

Attachment A
Table 1
Soil Sample Results
SWMU 25 North Area Excavation
John Deere Des Moines Works
Ankeny, Iowa

Excavation Area 4

H1

| | | | | |
|-------------------------|-----------------------|---------------------|---------------------|-----------------------|
| Sample Group: | Group B | | | |
| Sample Area: | SWMU 25 (SD25) | | | |
| Sample Location: | H1 | HA-B-44 | HA-B-44 | HA-B-45 |
| Sample ID: | TSD25-H1-4 | HA-B-44-SL-4 | HA-B-46-SL-4 | HA-B-45-SL-0-4 |
| Sample Date: | 6/5/2013 | 3/7/2024 | 3/7/2024 | 3/7/2024 |
| Sample Depth: | 4 ft BGS | 4 ft BGS | 4 ft BGS | 0-4 ft BGS |
| | | | Duplicate | |

Parameters

Units

Semi-Volatiles

| | | | | | |
|------------------------|-------|---------|----------|----------|---------|
| 2-Methylnaphthalene | mg/kg | - | 0.0115 U | 0.0112 U | 0.124 U |
| Acenaphthene | mg/kg | 0.181 U | 0.0115 U | 0.0112 U | 0.253 |
| Acenaphthylene | mg/kg | 0.181 U | 0.0115 U | 0.0112 U | 0.124 U |
| Anthracene | mg/kg | 16.2 | 0.0115 U | 0.0112 U | 0.826 |
| Benzo(a)anthracene | mg/kg | 44.9 | 0.0292 | 0.0127 | 3.41 |
| Benzo(a)pyrene | mg/kg | 39 | 0.0340 | 0.0143 | 3.44 |
| Benzo(b)fluoranthene | mg/kg | 35.9 | 0.0496 | 0.0212 | 4.37 |
| Benzo(g,h,i)perylene | mg/kg | 15.9 | 0.0298 | 0.0139 | 3.35 |
| Benzo(k)fluoranthene | mg/kg | 23.5 | 0.0202 | 0.0112 U | 1.69 |
| Chrysene | mg/kg | 62.9 | 0.0381 | 0.0146 | 4.01 |
| Dibenz(a,h)anthracene | mg/kg | 0.181 U | 0.0115 U | 0.0112 U | 0.708 |
| Fluoranthene | mg/kg | 143 | 0.0670 | 0.0283 | 6.81 |
| Fluorene | mg/kg | 9.35 | 0.0115 U | 0.0112 U | 0.333 |
| Indeno(1,2,3-cd)pyrene | mg/kg | 18.5 | 0.0322 | 0.0132 | 3.82 |
| Naphthalene | mg/kg | 0.181 U | 0.0115 U | 0.0112 U | 0.124 U |
| Phenanthrene | mg/kg | 103 | 0.0382 | 0.0163 | 4.68 |
| Pyrene | mg/kg | 91 | 0.0505 | 0.0225 | 5.05 |

Metals

| | | | | | |
|----------|-------|---|---|---|--------|
| Arsenic | mg/kg | - | - | - | 8.37 U |
| Barium | mg/kg | - | - | - | 71.9 |
| Cadmium | mg/kg | - | - | - | 2.09 U |
| Chromium | mg/kg | - | - | - | 24.3 |
| Lead | mg/kg | - | - | - | 40.8 |
| Mercury | mg/kg | - | - | - | 0.0267 |
| Selenium | mg/kg | - | - | - | 10.5 U |
| Silver | mg/kg | - | - | - | 2.09 U |

Notes:

J Estimated Concentration.

U Not detected at the associated reporting limit.

- Not applicable.

Attachment A
Table 1
Soil Sample Results
SWMU 25 North Area Excavation
John Deere Des Moines Works
Ankeny, Iowa

Excavation Area 5

M1

| | |
|-------------------------|-----------------------|
| Sample Group: | Group B |
| Sample Area: | SWMU 25 (SD25) |
| Sample Location: | M1 |
| Sample ID: | TSD25-M1-1 |
| Sample Date: | 7/16/2013 |
| Sample Depth: | 1 ft BGS |

| Parameters | Units | | | |
|------------------------|-------|-------|----------|---------|
| Semi-Volatiles | | | | |
| 2-Methylnaphthalene | mg/kg | - | 0.0570 U | 0.306 |
| Acenaphthene | mg/kg | 10.6 | 0.0936 | 0.867 |
| Acenaphthylene | mg/kg | 0.425 | 0.0570 U | 0.172 U |
| Anthracene | mg/kg | 5.75 | 0.222 | 1.90 |
| Benzo(a)anthracene | mg/kg | 16.9 | 0.535 | 5.50 |
| Benzo(a)pyrene | mg/kg | 12.4 | 0.506 | 4.63 |
| Benzo(b)fluoranthene | mg/kg | 18.0 | 0.737 | 6.33 |
| Benzo(g,h,i)perylene | mg/kg | 10.0 | 0.349 | 2.90 |
| Benzo(k)fluoranthene | mg/kg | 9.48 | 0.243 | 2.52 |
| Chrysene | mg/kg | 23.6 | 0.697 | 6.69 |
| Dibenz(a,h)anthracene | mg/kg | 5.37 | 0.0893 | 0.928 |
| Fluoranthene | mg/kg | 77.7 | 1.41 | 22.6 |
| Fluorene | mg/kg | 6.87 | 0.134 | 1.02 |
| Indeno(1,2,3-cd)pyrene | mg/kg | 11.0 | 0.423 | 3.55 |
| Naphthalene | mg/kg | 6.14 | 0.0678 | 0.685 |
| Phenanthrene | mg/kg | 67 | 1.53 | 20.8 |
| Pyrene | mg/kg | 47.3 | 0.965 | 9.18 |
| Metals | | | | |
| Arsenic | mg/kg | - | - | 8.94 U |
| Barium | mg/kg | - | - | 91.9 |
| Cadmium | mg/kg | - | - | 2.24 U |
| Chromium | mg/kg | - | - | 54.9 |
| Lead | mg/kg | - | - | 123 |
| Mercury | mg/kg | - | - | 0.0514 |
| Selenium | mg/kg | - | - | 11.2 U |
| Silver | mg/kg | - | - | 2.24 U |

Notes:
J Estimated Concentration.
U Not detected at the associated reporting limit.
- Not applicable.

Attachment B

Laboratory Reports

ANALYTICAL REPORT

PREPARED FOR

Attn: Brian Broderick
GHD Services Inc.
11228 Aurora Avenue
Des Moines, Iowa 50322-7905

Generated 3/25/2024 10:03:07 AM

JOB DESCRIPTION

John Deere Des Moines Works

JOB NUMBER

310-276447-1

Eurofins Cedar Falls

Job Notes

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Authorization



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Case Narrative

Client: GHD Services Inc.
Project: John Deere Des Moines Works

Job ID: 310-276447-1

Job ID: 310-276447-1

Eurofins Cedar Falls

Job Narrative 310-276447-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 3/8/2024 4:30 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.3°C.

GC/MS Semi VOA

Method 8270E_SIM: The following samples were diluted due to the nature of the sample matrix: HA-B-34-SL-1 (310-276447-1), HA-B-35-SL-3 (310-276447-2), HA-B-36-SL-4 (310-276447-3), HA-B-37-SL-5 (310-276447-4), HA-B-38-SL-1 (310-276447-5) and HA-B-39-SL-0-1 (310-276447-6). Elevated reporting limits (RLs) are provided.

Method 8270E_SIM: Surrogate recovery for the following samples were outside control limits: HA-B-34-SL-1 (310-276447-1) and HA-B-36-SL-4 (310-276447-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8270E_SIM: Surrogate recovery for the following samples were outside control limits: HA-B-40-SL-1 (310-276447-7), (310-276447-A-7-A MS) and (310-276447-A-7-B MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8270E_SIM: The following samples were diluted due to the nature of the sample matrix: HA-B-41-SL-0-1 (310-276447-8), HA-B-42-SL-1 (310-276447-9), HA-B-48-SL-2 (310-276447-15), HA-B-49-SL-0-2 (310-276447-16), HA-B-50-SL-0-5 (310-276447-17) and HA-B-51-SL-0-5 (310-276447-18). Elevated reporting limits (RLs) are provided.

Method 8270E_SIM: Surrogate recovery for the following samples were outside control limits: HA-B-48-SL-2 (310-276447-15), HA-B-49-SL-0-2 (310-276447-16), HA-B-50-SL-0-5 (310-276447-17) and HA-B-51-SL-0-5 (310-276447-18). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

Metals

Method 6010D: The following sample(s) was diluted due to the presence of an interferent. >: HA-B-39-SL-0-1 (310-276447-6), HA-B-41-SL-0-1 (310-276447-8), HA-B-49-SL-0-2 (310-276447-16), HA-B-50-SL-0-5 (310-276447-17) and HA-B-51-SL-0-5 (310-276447-18). Elevated reporting limits (RLs) are provided.

Method 6010D - TCLP: The following sample(s) was diluted due to the presence of an interferent. >: HA-B-41-SL-0-1 (310-276447-8). Elevated reporting limits (RLs) are provided.

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

General Chemistry

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

Eurofins Cedar Falls

Sample Summary

Client: GHD Services Inc.

Job ID: 310-276447-1

Project/Site: John Deere Des Moines Works

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---------------|------------------|--------|----------------|----------------|
| 310-276447-1 | HA-B-34-SL-1 | Solid | 03/07/24 08:30 | 03/08/24 16:30 |
| 310-276447-2 | HA-B-35-SL-3 | Solid | 03/07/24 08:35 | 03/08/24 16:30 |
| 310-276447-3 | HA-B-36-SL-4 | Solid | 03/07/24 08:40 | 03/08/24 16:30 |
| 310-276447-4 | HA-B-37-SL-5 | Solid | 03/07/24 08:55 | 03/08/24 16:30 |
| 310-276447-5 | HA-B-38-SL-1 | Solid | 03/07/24 09:25 | 03/08/24 16:30 |
| 310-276447-6 | HA-B-39-SL-0-1 | Solid | 03/07/24 09:30 | 03/08/24 16:30 |
| 310-276447-7 | HA-B-40-SL-1 | Solid | 03/07/24 10:00 | 03/08/24 16:30 |
| 310-276447-8 | HA-B-41-SL-0-1 | Solid | 03/07/24 10:05 | 03/08/24 16:30 |
| 310-276447-9 | HA-B-42-SL-1 | Solid | 03/07/24 10:30 | 03/08/24 16:30 |
| 310-276447-10 | HA-B-43-SL-3 | Solid | 03/07/24 10:40 | 03/08/24 16:30 |
| 310-276447-11 | HA-B-44-SL-4 | Solid | 03/07/24 10:45 | 03/08/24 16:30 |
| 310-276447-12 | HA-B-45-SL-0-4 | Solid | 03/07/24 11:00 | 03/08/24 16:30 |
| 310-276447-13 | HA-B-46-SL-4 | Solid | 03/07/24 10:45 | 03/08/24 16:30 |
| 310-276447-14 | HA-B-47-SL-1 | Solid | 03/07/24 11:05 | 03/08/24 16:30 |
| 310-276447-15 | HA-B-48-SL-2 | Solid | 03/07/24 11:10 | 03/08/24 16:30 |
| 310-276447-16 | HA-B-49-SL-0-2 | Solid | 03/07/24 11:15 | 03/08/24 16:30 |
| 310-276447-17 | HA-B-50-SL-0-5 | Solid | 03/07/24 11:50 | 03/08/24 16:30 |
| 310-276447-18 | HA-B-51-SL-0-5 | Solid | 03/07/24 11:55 | 03/08/24 16:30 |

Detection Summary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-34-SL-1

Lab Sample ID: 310-276447-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------|--------|-----------|-------|-----|-------|---------|---|-----------|-----------|
| Acenaphthene | 17.3 | | 0.268 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Acenaphthylene | 0.510 | | 0.268 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Anthracene | 90.3 | | 13.4 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)anthracene | 181 | | 13.4 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)pyrene | 166 | | 13.4 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Benzo(b)fluoranthene | 204 | | 13.4 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Benzo(g,h,i)perylene | 98.6 | | 13.4 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Benzo(k)fluoranthene | 83.1 | | 13.4 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Chrysene | 180 | | 13.4 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Dibenz(a,h)anthracene | 23.2 | | 13.4 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Fluoranthene | 450 | | 13.4 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Fluorene | 40.9 | | 13.4 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Indeno(1,2,3-cd)pyrene | 116 | | 13.4 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| 2-Methylnaphthalene | 3.39 | | 0.268 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Naphthalene | 8.10 | | 0.268 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Phenanthrene | 373 | | 13.4 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Pyrene | 341 | | 13.4 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |

Client Sample ID: HA-B-35-SL-3

Lab Sample ID: 310-276447-2

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------|--------|-----------|-------|-----|-------|---------|---|-----------|-----------|
| Acenaphthene | 0.634 | | 0.119 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Anthracene | 1.72 | | 0.119 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)anthracene | 4.40 | | 0.119 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)pyrene | 3.89 | | 0.119 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Benzo(b)fluoranthene | 5.15 | | 0.119 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Benzo(g,h,i)perylene | 2.66 | | 0.119 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Benzo(k)fluoranthene | 1.67 | | 0.119 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Chrysene | 5.09 | | 0.119 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Dibenz(a,h)anthracene | 0.796 | | 0.119 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Fluoranthene | 17.4 | | 1.19 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Fluorene | 0.904 | | 0.119 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Indeno(1,2,3-cd)pyrene | 3.31 | | 0.119 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| 2-Methylnaphthalene | 0.179 | | 0.119 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Naphthalene | 0.390 | | 0.119 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Phenanthrene | 14.3 | | 1.19 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Pyrene | 7.29 | | 0.119 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |

Client Sample ID: HA-B-36-SL-4

Lab Sample ID: 310-276447-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|-----------------------|--------|-----------|-------|-----|-------|---------|---|-----------|-----------|
| Acenaphthene | 6.84 | | 0.235 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Anthracene | 45.4 | | 11.7 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)anthracene | 99.3 | | 11.7 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)pyrene | 98.1 | | 11.7 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Benzo(b)fluoranthene | 127 | | 11.7 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Benzo(g,h,i)perylene | 57.5 | | 11.7 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Benzo(k)fluoranthene | 46.1 | | 11.7 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Chrysene | 103 | | 11.7 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Dibenz(a,h)anthracene | 15.5 | | 11.7 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Fluoranthene | 254 | | 11.7 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Fluorene | 9.94 | | 0.235 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-36-SL-4 (Continued)

Lab Sample ID: 310-276447-3

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------|--------|-----------|-------|-----|-------|---------|---|-----------|-----------|
| Indeno(1,2,3-cd)pyrene | 68.5 | | 11.7 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| 2-Methylnaphthalene | 0.996 | | 0.235 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Naphthalene | 2.29 | | 0.235 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Phenanthrene | 183 | | 11.7 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |
| Pyrene | 189 | | 11.7 | | mg/Kg | 250 | ✱ | 8270E SIM | Total/NA |

Client Sample ID: HA-B-37-SL-5

Lab Sample ID: 310-276447-4

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------|--------|-----------|-------|-----|-------|---------|---|-----------|-----------|
| Acenaphthene | 2.66 | | 0.173 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Anthracene | 9.15 | | 0.173 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)anthracene | 30.4 | | 1.73 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)pyrene | 27.3 | | 1.73 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Benzo(b)fluoranthene | 34.8 | | 1.73 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Benzo(g,h,i)perylene | 11.0 | | 0.173 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Benzo(k)fluoranthene | 8.30 | | 0.173 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Chrysene | 31.1 | | 1.73 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Dibenz(a,h)anthracene | 3.64 | | 0.173 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Fluoranthene | 76.0 | | 1.73 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Fluorene | 3.71 | | 0.173 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Indeno(1,2,3-cd)pyrene | 22.1 | | 1.73 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| 2-Methylnaphthalene | 0.544 | | 0.173 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Naphthalene | 1.36 | | 0.173 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Phenanthrene | 56.4 | | 1.73 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Pyrene | 56.3 | | 1.73 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |

Client Sample ID: HA-B-38-SL-1

Lab Sample ID: 310-276447-5

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------|--------|-----------|--------|-----|-------|---------|---|-----------|-----------|
| Acenaphthene | 0.0936 | | 0.0570 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Anthracene | 0.222 | | 0.0570 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)anthracene | 0.535 | | 0.0570 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)pyrene | 0.506 | | 0.0570 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Benzo(b)fluoranthene | 0.737 | | 0.0570 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Benzo(g,h,i)perylene | 0.349 | | 0.0570 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Benzo(k)fluoranthene | 0.243 | | 0.0570 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Chrysene | 0.697 | | 0.0570 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Dibenz(a,h)anthracene | 0.0893 | | 0.0570 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Fluoranthene | 1.41 | | 0.0570 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Fluorene | 0.134 | | 0.0570 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Indeno(1,2,3-cd)pyrene | 0.423 | | 0.0570 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Naphthalene | 0.0678 | | 0.0570 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Phenanthrene | 1.53 | | 0.0570 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Pyrene | 0.965 | | 0.0570 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |

Client Sample ID: HA-B-39-SL-0-1

Lab Sample ID: 310-276447-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|--------------------|--------|-----------|-------|-----|-------|---------|---|-----------|-----------|
| Acenaphthene | 0.867 | | 0.172 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Anthracene | 1.90 | | 0.172 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)anthracene | 5.50 | | 0.172 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)pyrene | 4.63 | | 0.172 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-39-SL-0-1 (Continued)

Lab Sample ID: 310-276447-6

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------|--------|-----------|--------|-----|-------|---------|---|-----------|-----------|
| Benzo(b)fluoranthene | 6.33 | | 0.172 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Benzo(g,h,i)perylene | 2.90 | | 0.172 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Benzo(k)fluoranthene | 2.52 | | 0.172 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Chrysene | 6.69 | | 0.172 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Dibenz(a,h)anthracene | 0.928 | | 0.172 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Fluoranthene | 22.6 | | 1.72 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Fluorene | 1.02 | | 0.172 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Indeno(1,2,3-cd)pyrene | 3.55 | | 0.172 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| 2-Methylnaphthalene | 0.306 | | 0.172 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Naphthalene | 0.685 | | 0.172 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Phenanthrene | 20.8 | | 1.72 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Pyrene | 9.18 | | 0.172 | | mg/Kg | 5 | ✱ | 8270E SIM | Total/NA |
| Barium | 91.9 | | 2.24 | | mg/Kg | 2 | ✱ | 6010D | Total/NA |
| Chromium | 54.9 | | 2.24 | | mg/Kg | 2 | ✱ | 6010D | Total/NA |
| Lead | 123 | | 11.2 | | mg/Kg | 2 | ✱ | 6010D | Total/NA |
| Barium | 0.751 | | 0.200 | | mg/L | 1 | | 6010D | TCLP |
| Mercury | 0.0514 | | 0.0176 | | mg/Kg | 1 | ✱ | 7471B | Total/NA |
| Free Liquid | CNF | | | | NONE | 1 | | 9095B | Total/NA |

Client Sample ID: HA-B-40-SL-1

Lab Sample ID: 310-276447-7

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------|--------|-----------|-------|-----|-------|---------|---|-----------|-----------|
| Anthracene | 9.50 | F2 | 0.225 | | mg/Kg | 10 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)anthracene | 29.9 | F2 | 11.2 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)pyrene | 28.5 | F2 | 11.2 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Benzo(b)fluoranthene | 37.8 | F2 | 11.2 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Benzo(g,h,i)perylene | 14.6 | F2 | 0.225 | | mg/Kg | 10 | ✱ | 8270E SIM | Total/NA |
| Benzo(k)fluoranthene | 11.3 | F2 | 0.225 | | mg/Kg | 10 | ✱ | 8270E SIM | Total/NA |
| Chrysene | 30.2 | F2 | 11.2 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Dibenz(a,h)anthracene | 4.82 | | 0.225 | | mg/Kg | 10 | ✱ | 8270E SIM | Total/NA |
| Fluoranthene | 73.1 | F2 | 11.2 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Indeno(1,2,3-cd)pyrene | 20.0 | F2 | 11.2 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Phenanthrene | 63.6 | F2 | 11.2 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Pyrene | 52.7 | F2 | 11.2 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |

Client Sample ID: HA-B-41-SL-0-1

Lab Sample ID: 310-276447-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------|--------|-----------|-------|-----|-------|---------|---|-----------|-----------|
| Anthracene | 1.37 | | 0.461 | | mg/Kg | 10 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)anthracene | 5.11 | | 0.461 | | mg/Kg | 10 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)pyrene | 5.26 | | 0.461 | | mg/Kg | 10 | ✱ | 8270E SIM | Total/NA |
| Benzo(b)fluoranthene | 6.84 | | 0.461 | | mg/Kg | 10 | ✱ | 8270E SIM | Total/NA |
| Benzo(g,h,i)perylene | 5.31 | | 0.461 | | mg/Kg | 10 | ✱ | 8270E SIM | Total/NA |
| Benzo(k)fluoranthene | 2.47 | | 0.461 | | mg/Kg | 10 | ✱ | 8270E SIM | Total/NA |
| Chrysene | 6.02 | | 0.461 | | mg/Kg | 10 | ✱ | 8270E SIM | Total/NA |
| Dibenz(a,h)anthracene | 1.27 | | 0.461 | | mg/Kg | 10 | ✱ | 8270E SIM | Total/NA |
| Fluoranthene | 11.0 | | 0.461 | | mg/Kg | 10 | ✱ | 8270E SIM | Total/NA |
| Fluorene | 0.482 | | 0.461 | | mg/Kg | 10 | ✱ | 8270E SIM | Total/NA |
| Indeno(1,2,3-cd)pyrene | 5.90 | | 0.461 | | mg/Kg | 10 | ✱ | 8270E SIM | Total/NA |
| Phenanthrene | 7.10 | | 0.461 | | mg/Kg | 10 | ✱ | 8270E SIM | Total/NA |
| Pyrene | 8.24 | | 0.461 | | mg/Kg | 10 | ✱ | 8270E SIM | Total/NA |
| Barium | 96.5 | | 3.54 | | mg/Kg | 3 | ✱ | 6010D | Total/NA |

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-41-SL-0-1 (Continued)

Lab Sample ID: 310-276447-8

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|-------------|--------|-----------|-------|-----|-------|-----|-----|---|--------|-----------|
| Chromium | 33.9 | | 3.54 | | mg/Kg | 3 | | ✖ | 6010D | Total/NA |
| Lead | 65.3 | | 17.7 | | mg/Kg | 3 | | ✖ | 6010D | Total/NA |
| Barium | 0.631 | | 0.600 | | mg/L | 3 | | | 6010D | TCLP |
| Free Liquid | CNF | | | | NONE | 1 | | | 9095B | Total/NA |

Client Sample ID: HA-B-42-SL-1

Lab Sample ID: 310-276447-9

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|------------------------|--------|-----------|-------|-----|-------|-----|-----|---|-----------|-----------|
| Acenaphthene | 0.506 | | 0.403 | | mg/Kg | 10 | | ✖ | 8270E SIM | Total/NA |
| Anthracene | 1.26 | | 0.403 | | mg/Kg | 10 | | ✖ | 8270E SIM | Total/NA |
| Benzo(a)anthracene | 4.46 | | 0.403 | | mg/Kg | 10 | | ✖ | 8270E SIM | Total/NA |
| Benzo(a)pyrene | 4.61 | | 0.403 | | mg/Kg | 10 | | ✖ | 8270E SIM | Total/NA |
| Benzo(b)fluoranthene | 6.26 | | 0.403 | | mg/Kg | 10 | | ✖ | 8270E SIM | Total/NA |
| Benzo(g,h,i)perylene | 3.48 | | 0.403 | | mg/Kg | 10 | | ✖ | 8270E SIM | Total/NA |
| Benzo(k)fluoranthene | 2.29 | | 0.403 | | mg/Kg | 10 | | ✖ | 8270E SIM | Total/NA |
| Chrysene | 5.59 | | 0.403 | | mg/Kg | 10 | | ✖ | 8270E SIM | Total/NA |
| Dibenz(a,h)anthracene | 0.875 | | 0.403 | | mg/Kg | 10 | | ✖ | 8270E SIM | Total/NA |
| Fluoranthene | 14.7 | | 0.403 | | mg/Kg | 10 | | ✖ | 8270E SIM | Total/NA |
| Fluorene | 0.692 | | 0.403 | | mg/Kg | 10 | | ✖ | 8270E SIM | Total/NA |
| Indeno(1,2,3-cd)pyrene | 3.99 | | 0.403 | | mg/Kg | 10 | | ✖ | 8270E SIM | Total/NA |
| Phenanthrene | 7.95 | | 0.403 | | mg/Kg | 10 | | ✖ | 8270E SIM | Total/NA |
| Pyrene | 11.7 | | 0.403 | | mg/Kg | 10 | | ✖ | 8270E SIM | Total/NA |

Client Sample ID: HA-B-43-SL-3

Lab Sample ID: 310-276447-10

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|------------------------|--------|-----------|--------|-----|-------|-----|-----|---|-----------|-----------|
| Benzo(a)anthracene | 0.0632 | | 0.0580 | | mg/Kg | 5 | | ✖ | 8270E SIM | Total/NA |
| Benzo(a)pyrene | 0.0692 | | 0.0580 | | mg/Kg | 5 | | ✖ | 8270E SIM | Total/NA |
| Benzo(b)fluoranthene | 0.0947 | | 0.0580 | | mg/Kg | 5 | | ✖ | 8270E SIM | Total/NA |
| Benzo(g,h,i)perylene | 0.0714 | | 0.0580 | | mg/Kg | 5 | | ✖ | 8270E SIM | Total/NA |
| Chrysene | 0.0757 | | 0.0580 | | mg/Kg | 5 | | ✖ | 8270E SIM | Total/NA |
| Fluoranthene | 0.168 | | 0.0580 | | mg/Kg | 5 | | ✖ | 8270E SIM | Total/NA |
| Indeno(1,2,3-cd)pyrene | 0.0736 | | 0.0580 | | mg/Kg | 5 | | ✖ | 8270E SIM | Total/NA |
| Phenanthrene | 0.111 | | 0.0580 | | mg/Kg | 5 | | ✖ | 8270E SIM | Total/NA |
| Pyrene | 0.128 | | 0.0580 | | mg/Kg | 5 | | ✖ | 8270E SIM | Total/NA |

Client Sample ID: HA-B-44-SL-4

Lab Sample ID: 310-276447-11

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|------------------------|--------|-----------|--------|-----|-------|-----|-----|---|-----------|-----------|
| Benzo(a)anthracene | 0.0292 | | 0.0115 | | mg/Kg | 1 | | ✖ | 8270E SIM | Total/NA |
| Benzo(a)pyrene | 0.0340 | | 0.0115 | | mg/Kg | 1 | | ✖ | 8270E SIM | Total/NA |
| Benzo(b)fluoranthene | 0.0496 | | 0.0115 | | mg/Kg | 1 | | ✖ | 8270E SIM | Total/NA |
| Benzo(g,h,i)perylene | 0.0298 | | 0.0115 | | mg/Kg | 1 | | ✖ | 8270E SIM | Total/NA |
| Benzo(k)fluoranthene | 0.0202 | | 0.0115 | | mg/Kg | 1 | | ✖ | 8270E SIM | Total/NA |
| Chrysene | 0.0381 | | 0.0115 | | mg/Kg | 1 | | ✖ | 8270E SIM | Total/NA |
| Fluoranthene | 0.0670 | | 0.0115 | | mg/Kg | 1 | | ✖ | 8270E SIM | Total/NA |
| Indeno(1,2,3-cd)pyrene | 0.0322 | | 0.0115 | | mg/Kg | 1 | | ✖ | 8270E SIM | Total/NA |
| Phenanthrene | 0.0382 | | 0.0115 | | mg/Kg | 1 | | ✖ | 8270E SIM | Total/NA |
| Pyrene | 0.0505 | | 0.0115 | | mg/Kg | 1 | | ✖ | 8270E SIM | Total/NA |

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-45-SL-0-4

Lab Sample ID: 310-276447-12

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|------------------------|--------|-----------|--------|-----|-------|-----|-----|---|-----------|-----------|
| Acenaphthene | 0.253 | | 0.124 | | mg/Kg | 5 | ✱ | | 8270E SIM | Total/NA |
| Anthracene | 0.826 | | 0.124 | | mg/Kg | 5 | ✱ | | 8270E SIM | Total/NA |
| Benzo(a)anthracene | 3.41 | | 0.124 | | mg/Kg | 5 | ✱ | | 8270E SIM | Total/NA |
| Benzo(a)pyrene | 3.44 | | 0.124 | | mg/Kg | 5 | ✱ | | 8270E SIM | Total/NA |
| Benzo(b)fluoranthene | 4.37 | | 0.124 | | mg/Kg | 5 | ✱ | | 8270E SIM | Total/NA |
| Benzo(g,h,i)perylene | 3.35 | | 0.124 | | mg/Kg | 5 | ✱ | | 8270E SIM | Total/NA |
| Benzo(k)fluoranthene | 1.69 | | 0.124 | | mg/Kg | 5 | ✱ | | 8270E SIM | Total/NA |
| Chrysene | 4.01 | | 0.124 | | mg/Kg | 5 | ✱ | | 8270E SIM | Total/NA |
| Dibenz(a,h)anthracene | 0.708 | | 0.124 | | mg/Kg | 5 | ✱ | | 8270E SIM | Total/NA |
| Fluoranthene | 6.81 | | 0.124 | | mg/Kg | 5 | ✱ | | 8270E SIM | Total/NA |
| Fluorene | 0.333 | | 0.124 | | mg/Kg | 5 | ✱ | | 8270E SIM | Total/NA |
| Indeno(1,2,3-cd)pyrene | 3.82 | | 0.124 | | mg/Kg | 5 | ✱ | | 8270E SIM | Total/NA |
| Phenanthrene | 4.68 | | 0.124 | | mg/Kg | 5 | ✱ | | 8270E SIM | Total/NA |
| Pyrene | 5.05 | | 0.124 | | mg/Kg | 5 | ✱ | | 8270E SIM | Total/NA |
| Barium | 71.9 | | 2.09 | | mg/Kg | 2 | ✱ | | 6010D | Total/NA |
| Chromium | 24.3 | | 2.09 | | mg/Kg | 2 | ✱ | | 6010D | Total/NA |
| Lead | 40.8 | | 10.5 | | mg/Kg | 2 | ✱ | | 6010D | Total/NA |
| Barium | 0.637 | | 0.200 | | mg/L | 1 | | | 6010D | TCPLP |
| Mercury | 0.0267 | | 0.0207 | | mg/Kg | 1 | ✱ | | 7471B | Total/NA |
| Free Liquid | CNF | | | | NONE | 1 | | | 9095B | Total/NA |

Client Sample ID: HA-B-46-SL-4

Lab Sample ID: 310-276447-13

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|------------------------|--------|-----------|--------|-----|-------|-----|-----|---|-----------|-----------|
| Benzo(a)anthracene | 0.0127 | | 0.0112 | | mg/Kg | 1 | ✱ | | 8270E SIM | Total/NA |
| Benzo(a)pyrene | 0.0143 | | 0.0112 | | mg/Kg | 1 | ✱ | | 8270E SIM | Total/NA |
| Benzo(b)fluoranthene | 0.0212 | | 0.0112 | | mg/Kg | 1 | ✱ | | 8270E SIM | Total/NA |
| Benzo(g,h,i)perylene | 0.0139 | | 0.0112 | | mg/Kg | 1 | ✱ | | 8270E SIM | Total/NA |
| Chrysene | 0.0146 | | 0.0112 | | mg/Kg | 1 | ✱ | | 8270E SIM | Total/NA |
| Fluoranthene | 0.0283 | | 0.0112 | | mg/Kg | 1 | ✱ | | 8270E SIM | Total/NA |
| Indeno(1,2,3-cd)pyrene | 0.0132 | | 0.0112 | | mg/Kg | 1 | ✱ | | 8270E SIM | Total/NA |
| Phenanthrene | 0.0163 | | 0.0112 | | mg/Kg | 1 | ✱ | | 8270E SIM | Total/NA |
| Pyrene | 0.0225 | | 0.0112 | | mg/Kg | 1 | ✱ | | 8270E SIM | Total/NA |

Client Sample ID: HA-B-47-SL-1

Lab Sample ID: 310-276447-14

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|------------------------|--------|-----------|--------|-----|-------|-----|-----|---|-----------|-----------|
| Acenaphthene | 0.864 | | 0.0627 | | mg/Kg | 5 | ✱ | | 8270E SIM | Total/NA |
| Anthracene | 2.64 | | 0.0627 | | mg/Kg | 5 | ✱ | | 8270E SIM | Total/NA |
| Benzo(a)anthracene | 6.68 | | 0.627 | | mg/Kg | 50 | ✱ | | 8270E SIM | Total/NA |
| Benzo(a)pyrene | 6.16 | | 0.627 | | mg/Kg | 50 | ✱ | | 8270E SIM | Total/NA |
| Benzo(b)fluoranthene | 7.86 | | 0.627 | | mg/Kg | 50 | ✱ | | 8270E SIM | Total/NA |
| Benzo(g,h,i)perylene | 3.71 | | 0.0627 | | mg/Kg | 5 | ✱ | | 8270E SIM | Total/NA |
| Benzo(k)fluoranthene | 2.15 | | 0.0627 | | mg/Kg | 5 | ✱ | | 8270E SIM | Total/NA |
| Chrysene | 6.75 | | 0.627 | | mg/Kg | 50 | ✱ | | 8270E SIM | Total/NA |
| Dibenz(a,h)anthracene | 1.09 | | 0.0627 | | mg/Kg | 5 | ✱ | | 8270E SIM | Total/NA |
| Fluoranthene | 14.6 | | 0.627 | | mg/Kg | 50 | ✱ | | 8270E SIM | Total/NA |
| Fluorene | 1.35 | | 0.0627 | | mg/Kg | 5 | ✱ | | 8270E SIM | Total/NA |
| Indeno(1,2,3-cd)pyrene | 5.42 | | 0.627 | | mg/Kg | 50 | ✱ | | 8270E SIM | Total/NA |
| Naphthalene | 0.790 | | 0.627 | | mg/Kg | 50 | ✱ | | 8270E SIM | Total/NA |
| Phenanthrene | 13.4 | | 0.627 | | mg/Kg | 50 | ✱ | | 8270E SIM | Total/NA |
| Pyrene | 10.5 | | 0.627 | | mg/Kg | 50 | ✱ | | 8270E SIM | Total/NA |

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-48-SL-2

Lab Sample ID: 310-276447-15

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------|--------|-----------|------|-----|-------|---------|---|-----------|-----------|
| Acenaphthene | 3.71 | | 3.20 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Anthracene | 11.5 | | 3.20 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)anthracene | 37.8 | | 3.20 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)pyrene | 38.1 | | 3.20 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Benzo(b)fluoranthene | 48.8 | | 3.20 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Benzo(g,h,i)perylene | 27.1 | | 3.20 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Benzo(k)fluoranthene | 18.2 | | 3.20 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Chrysene | 44.3 | | 3.20 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Dibenz(a,h)anthracene | 7.04 | | 3.20 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Fluoranthene | 116 | | 3.20 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Fluorene | 4.88 | | 3.20 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Indeno(1,2,3-cd)pyrene | 32.4 | | 3.20 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Phenanthrene | 59.8 | | 3.20 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Pyrene | 93.7 | | 3.20 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |

Client Sample ID: HA-B-49-SL-0-2

Lab Sample ID: 310-276447-16

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------|--------|-----------|-------|-----|-------|---------|---|-----------|-----------|
| Acenaphthene | 93.1 | | 49.8 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Anthracene | 324 | | 49.8 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)anthracene | 525 | | 49.8 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)pyrene | 417 | | 49.8 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Benzo(b)fluoranthene | 521 | | 49.8 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Benzo(g,h,i)perylene | 266 | | 49.8 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Benzo(k)fluoranthene | 195 | | 49.8 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Chrysene | 478 | | 49.8 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Dibenz(a,h)anthracene | 84.8 | | 49.8 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Fluoranthene | 1480 | | 49.8 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Fluorene | 212 | | 49.8 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Indeno(1,2,3-cd)pyrene | 319 | | 49.8 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Naphthalene | 99.5 | | 49.8 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Phenanthrene | 1370 | | 49.8 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Pyrene | 1080 | | 49.8 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Barium | 39.8 | | 4.25 | | mg/Kg | 4 | ✱ | 6010D | Total/NA |
| Chromium | 19.6 | | 4.25 | | mg/Kg | 4 | ✱ | 6010D | Total/NA |
| Lead | 34.3 | | 21.2 | | mg/Kg | 4 | ✱ | 6010D | Total/NA |
| Barium | 0.369 | | 0.200 | | mg/L | 1 | | 6010D | TCPLP |
| Free Liquid | CNF | | | | NONE | 1 | | 9095B | Total/NA |

Client Sample ID: HA-B-50-SL-0-5

Lab Sample ID: 310-276447-17

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|-----------------------|--------|-----------|------|-----|-------|---------|---|-----------|-----------|
| Anthracene | 38.0 | | 12.1 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)anthracene | 101 | | 12.1 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)pyrene | 92.1 | | 12.1 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Benzo(b)fluoranthene | 122 | | 12.1 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Benzo(g,h,i)perylene | 68.7 | | 12.1 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Benzo(k)fluoranthene | 47.8 | | 12.1 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Chrysene | 105 | | 12.1 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Dibenz(a,h)anthracene | 18.9 | | 12.1 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Fluoranthene | 310 | | 12.1 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Fluorene | 14.1 | | 12.1 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-50-SL-0-5 (Continued)

Lab Sample ID: 310-276447-17

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------|--------|-----------|-------|-----|-------|---------|---|-----------|-----------|
| Indeno(1,2,3-cd)pyrene | 81.5 | | 12.1 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Phenanthrene | 204 | | 12.1 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Pyrene | 228 | | 12.1 | | mg/Kg | 500 | ✱ | 8270E SIM | Total/NA |
| Barium | 62.1 | | 3.17 | | mg/Kg | 3 | ✱ | 6010D | Total/NA |
| Chromium | 32.8 | | 3.17 | | mg/Kg | 3 | ✱ | 6010D | Total/NA |
| Lead | 54.2 | | 15.8 | | mg/Kg | 3 | ✱ | 6010D | Total/NA |
| Barium | 0.388 | | 0.200 | | mg/L | 1 | | 6010D | TCLP |
| Free Liquid | CNF | | | | NONE | 1 | | 9095B | Total/NA |

Client Sample ID: HA-B-51-SL-0-5

Lab Sample ID: 310-276447-18

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------|--------|-----------|------|-----|-------|---------|---|-----------|-----------|
| Anthracene | 7.52 | | 3.08 | | mg/Kg | 100 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)anthracene | 19.0 | | 3.08 | | mg/Kg | 100 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)pyrene | 18.6 | | 3.08 | | mg/Kg | 100 | ✱ | 8270E SIM | Total/NA |
| Benzo(b)fluoranthene | 24.2 | | 3.08 | | mg/Kg | 100 | ✱ | 8270E SIM | Total/NA |
| Benzo(g,h,i)perylene | 14.2 | | 3.08 | | mg/Kg | 100 | ✱ | 8270E SIM | Total/NA |
| Benzo(k)fluoranthene | 8.61 | | 3.08 | | mg/Kg | 100 | ✱ | 8270E SIM | Total/NA |
| Chrysene | 22.9 | | 3.08 | | mg/Kg | 100 | ✱ | 8270E SIM | Total/NA |
| Dibenz(a,h)anthracene | 4.02 | | 3.08 | | mg/Kg | 100 | ✱ | 8270E SIM | Total/NA |
| Fluoranthene | 62.3 | | 3.08 | | mg/Kg | 100 | ✱ | 8270E SIM | Total/NA |
| Fluorene | 3.53 | | 3.08 | | mg/Kg | 100 | ✱ | 8270E SIM | Total/NA |
| Indeno(1,2,3-cd)pyrene | 16.5 | | 3.08 | | mg/Kg | 100 | ✱ | 8270E SIM | Total/NA |
| Phenanthrene | 46.0 | | 3.08 | | mg/Kg | 100 | ✱ | 8270E SIM | Total/NA |
| Pyrene | 46.1 | | 3.08 | | mg/Kg | 100 | ✱ | 8270E SIM | Total/NA |
| Barium | 38.3 | | 3.66 | | mg/Kg | 3 | ✱ | 6010D | Total/NA |
| Chromium | 46.0 | | 3.66 | | mg/Kg | 3 | ✱ | 6010D | Total/NA |
| Lead | 129 | | 18.3 | | mg/Kg | 3 | ✱ | 6010D | Total/NA |

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-34-SL-1

Lab Sample ID: 310-276447-1

Date Collected: 03/07/24 08:30

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 82.0

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|--------|-----------|-------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | 17.3 | | 0.268 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:19 | 5 |
| Acenaphthylene | 0.510 | | 0.268 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:19 | 5 |
| Anthracene | 90.3 | | 13.4 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:15 | 250 |
| Benzo(a)anthracene | 181 | | 13.4 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:15 | 250 |
| Benzo(a)pyrene | 166 | | 13.4 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:15 | 250 |
| Benzo(b)fluoranthene | 204 | | 13.4 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:15 | 250 |
| Benzo(g,h,i)perylene | 98.6 | | 13.4 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:15 | 250 |
| Benzo(k)fluoranthene | 83.1 | | 13.4 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:15 | 250 |
| Chrysene | 180 | | 13.4 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:15 | 250 |
| Dibenz(a,h)anthracene | 23.2 | | 13.4 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:15 | 250 |
| Fluoranthene | 450 | | 13.4 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:15 | 250 |
| Fluorene | 40.9 | | 13.4 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:15 | 250 |
| Indeno(1,2,3-cd)pyrene | 116 | | 13.4 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:15 | 250 |
| 2-Methylnaphthalene | 3.39 | | 0.268 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:19 | 5 |
| Naphthalene | 8.10 | | 0.268 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:19 | 5 |
| Phenanthrene | 373 | | 13.4 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:15 | 250 |
| Pyrene | 341 | | 13.4 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:15 | 250 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 77 | | 37 - 131 | 03/11/24 10:54 | 03/12/24 15:19 | 5 |
| Nitrobenzene-d5 (Surr) | 77 | | 30 - 138 | 03/11/24 10:54 | 03/12/24 15:19 | 5 |
| Terphenyl-d14 (Surr) | 439 | S1+ | 24 - 145 | 03/11/24 10:54 | 03/12/24 15:19 | 5 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| Percent Moisture (EPA Moisture) | 18.0 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |
| Percent Solids (EPA Moisture) | 82.0 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-35-SL-3

Lab Sample ID: 310-276447-2

Date Collected: 03/07/24 08:35

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 80.1

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|--------|-----------|-------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | 0.634 | | 0.119 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:38 | 5 |
| Acenaphthylene | <0.119 | | 0.119 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:38 | 5 |
| Anthracene | 1.72 | | 0.119 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:38 | 5 |
| Benzo(a)anthracene | 4.40 | | 0.119 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:38 | 5 |
| Benzo(a)pyrene | 3.89 | | 0.119 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:38 | 5 |
| Benzo(b)fluoranthene | 5.15 | | 0.119 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:38 | 5 |
| Benzo(g,h,i)perylene | 2.66 | | 0.119 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:38 | 5 |
| Benzo(k)fluoranthene | 1.67 | | 0.119 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:38 | 5 |
| Chrysene | 5.09 | | 0.119 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:38 | 5 |
| Dibenz(a,h)anthracene | 0.796 | | 0.119 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:38 | 5 |
| Fluoranthene | 17.4 | | 1.19 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:35 | 50 |
| Fluorene | 0.904 | | 0.119 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:38 | 5 |
| Indeno(1,2,3-cd)pyrene | 3.31 | | 0.119 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:38 | 5 |
| 2-Methylnaphthalene | 0.179 | | 0.119 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:38 | 5 |
| Naphthalene | 0.390 | | 0.119 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:38 | 5 |
| Phenanthrene | 14.3 | | 1.19 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:35 | 50 |
| Pyrene | 7.29 | | 0.119 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:38 | 5 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 70 | | 37 - 131 | 03/11/24 10:54 | 03/12/24 15:38 | 5 |
| Nitrobenzene-d5 (Surr) | 66 | | 30 - 138 | 03/11/24 10:54 | 03/12/24 15:38 | 5 |
| Terphenyl-d14 (Surr) | 70 | | 24 - 145 | 03/11/24 10:54 | 03/12/24 15:38 | 5 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| Percent Moisture (EPA Moisture) | 19.9 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |
| Percent Solids (EPA Moisture) | 80.1 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-36-SL-4

Lab Sample ID: 310-276447-3

Date Collected: 03/07/24 08:40

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 83.1

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|--------|-----------|-------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | 6.84 | | 0.235 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:58 | 5 |
| Acenaphthylene | <0.235 | | 0.235 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:58 | 5 |
| Anthracene | 45.4 | | 11.7 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:54 | 250 |
| Benzo(a)anthracene | 99.3 | | 11.7 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:54 | 250 |
| Benzo(a)pyrene | 98.1 | | 11.7 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:54 | 250 |
| Benzo(b)fluoranthene | 127 | | 11.7 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:54 | 250 |
| Benzo(g,h,i)perylene | 57.5 | | 11.7 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:54 | 250 |
| Benzo(k)fluoranthene | 46.1 | | 11.7 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:54 | 250 |
| Chrysene | 103 | | 11.7 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:54 | 250 |
| Dibenz(a,h)anthracene | 15.5 | | 11.7 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:54 | 250 |
| Fluoranthene | 254 | | 11.7 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:54 | 250 |
| Fluorene | 9.94 | | 0.235 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:58 | 5 |
| Indeno(1,2,3-cd)pyrene | 68.5 | | 11.7 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:54 | 250 |
| 2-Methylnaphthalene | 0.996 | | 0.235 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:58 | 5 |
| Naphthalene | 2.29 | | 0.235 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 15:58 | 5 |
| Phenanthrene | 183 | | 11.7 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:54 | 250 |
| Pyrene | 189 | | 11.7 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 09:54 | 250 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 76 | | 37 - 131 | 03/11/24 10:54 | 03/12/24 15:58 | 5 |
| Nitrobenzene-d5 (Surr) | 67 | | 30 - 138 | 03/11/24 10:54 | 03/12/24 15:58 | 5 |
| Terphenyl-d14 (Surr) | 240 | S1+ | 24 - 145 | 03/11/24 10:54 | 03/12/24 15:58 | 5 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| Percent Moisture (EPA Moisture) | 16.9 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |
| Percent Solids (EPA Moisture) | 83.1 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-37-SL-5

Lab Sample ID: 310-276447-4

Date Collected: 03/07/24 08:55

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 83.2

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|--------|-----------|-------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | 2.66 | | 0.173 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:17 | 5 |
| Acenaphthylene | <0.173 | | 0.173 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:17 | 5 |
| Anthracene | 9.15 | | 0.173 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:17 | 5 |
| Benzo(a)anthracene | 30.4 | | 1.73 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 10:14 | 50 |
| Benzo(a)pyrene | 27.3 | | 1.73 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 10:14 | 50 |
| Benzo(b)fluoranthene | 34.8 | | 1.73 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 10:14 | 50 |
| Benzo(g,h,i)perylene | 11.0 | | 0.173 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:17 | 5 |
| Benzo(k)fluoranthene | 8.30 | | 0.173 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:17 | 5 |
| Chrysene | 31.1 | | 1.73 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 10:14 | 50 |
| Dibenz(a,h)anthracene | 3.64 | | 0.173 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:17 | 5 |
| Fluoranthene | 76.0 | | 1.73 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 10:14 | 50 |
| Fluorene | 3.71 | | 0.173 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:17 | 5 |
| Indeno(1,2,3-cd)pyrene | 22.1 | | 1.73 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 10:14 | 50 |
| 2-Methylnaphthalene | 0.544 | | 0.173 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:17 | 5 |
| Naphthalene | 1.36 | | 0.173 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:17 | 5 |
| Phenanthrene | 56.4 | | 1.73 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 10:14 | 50 |
| Pyrene | 56.3 | | 1.73 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 10:14 | 50 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 67 | | 37 - 131 | 03/11/24 10:54 | 03/12/24 16:17 | 5 |
| Nitrobenzene-d5 (Surr) | 59 | | 30 - 138 | 03/11/24 10:54 | 03/12/24 16:17 | 5 |
| Terphenyl-d14 (Surr) | 104 | | 24 - 145 | 03/11/24 10:54 | 03/12/24 16:17 | 5 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| Percent Moisture (EPA Moisture) | 16.8 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |
| Percent Solids (EPA Moisture) | 83.2 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-38-SL-1

Lab Sample ID: 310-276447-5

Date Collected: 03/07/24 09:25

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 86.9

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|---------|-----------|--------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | 0.0936 | | 0.0570 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:36 | 5 |
| Acenaphthylene | <0.0570 | | 0.0570 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:36 | 5 |
| Anthracene | 0.222 | | 0.0570 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:36 | 5 |
| Benzo(a)anthracene | 0.535 | | 0.0570 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:36 | 5 |
| Benzo(a)pyrene | 0.506 | | 0.0570 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:36 | 5 |
| Benzo(b)fluoranthene | 0.737 | | 0.0570 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:36 | 5 |
| Benzo(g,h,i)perylene | 0.349 | | 0.0570 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:36 | 5 |
| Benzo(k)fluoranthene | 0.243 | | 0.0570 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:36 | 5 |
| Chrysene | 0.697 | | 0.0570 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:36 | 5 |
| Dibenz(a,h)anthracene | 0.0893 | | 0.0570 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:36 | 5 |
| Fluoranthene | 1.41 | | 0.0570 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:36 | 5 |
| Fluorene | 0.134 | | 0.0570 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:36 | 5 |
| Indeno(1,2,3-cd)pyrene | 0.423 | | 0.0570 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:36 | 5 |
| 2-Methylnaphthalene | <0.0570 | | 0.0570 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:36 | 5 |
| Naphthalene | 0.0678 | | 0.0570 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:36 | 5 |
| Phenanthrene | 1.53 | | 0.0570 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:36 | 5 |
| Pyrene | 0.965 | | 0.0570 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:36 | 5 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 76 | | 37 - 131 | 03/11/24 10:54 | 03/12/24 16:36 | 5 |
| Nitrobenzene-d5 (Surr) | 76 | | 30 - 138 | 03/11/24 10:54 | 03/12/24 16:36 | 5 |
| Terphenyl-d14 (Surr) | 62 | | 24 - 145 | 03/11/24 10:54 | 03/12/24 16:36 | 5 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| Percent Moisture (EPA Moisture) | 13.1 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |
| Percent Solids (EPA Moisture) | 86.9 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-39-SL-0-1

Lab Sample ID: 310-276447-6

Date Collected: 03/07/24 09:30

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 85.8

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|--------|-----------|-------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | 0.867 | | 0.172 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:56 | 5 |
| Acenaphthylene | <0.172 | | 0.172 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:56 | 5 |
| Anthracene | 1.90 | | 0.172 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:56 | 5 |
| Benzo(a)anthracene | 5.50 | | 0.172 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:56 | 5 |
| Benzo(a)pyrene | 4.63 | | 0.172 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:56 | 5 |
| Benzo(b)fluoranthene | 6.33 | | 0.172 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:56 | 5 |
| Benzo(g,h,i)perylene | 2.90 | | 0.172 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:56 | 5 |
| Benzo(k)fluoranthene | 2.52 | | 0.172 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:56 | 5 |
| Chrysene | 6.69 | | 0.172 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:56 | 5 |
| Dibenz(a,h)anthracene | 0.928 | | 0.172 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:56 | 5 |
| Fluoranthene | 22.6 | | 1.72 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 10:34 | 50 |
| Fluorene | 1.02 | | 0.172 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:56 | 5 |
| Indeno(1,2,3-cd)pyrene | 3.55 | | 0.172 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:56 | 5 |
| 2-Methylnaphthalene | 0.306 | | 0.172 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:56 | 5 |
| Naphthalene | 0.685 | | 0.172 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:56 | 5 |
| Phenanthrene | 20.8 | | 1.72 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/13/24 10:34 | 50 |
| Pyrene | 9.18 | | 0.172 | | mg/Kg | ✱ | 03/11/24 10:54 | 03/12/24 16:56 | 5 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 71 | | 37 - 131 | 03/11/24 10:54 | 03/12/24 16:56 | 5 |
| Nitrobenzene-d5 (Surr) | 77 | | 30 - 138 | 03/11/24 10:54 | 03/12/24 16:56 | 5 |
| Terphenyl-d14 (Surr) | 75 | | 24 - 145 | 03/11/24 10:54 | 03/12/24 16:56 | 5 |

Method: SW846 6010D - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|------|-----|-------|---|----------------|----------------|---------|
| Arsenic | <8.94 | | 8.94 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:06 | 2 |
| Barium | 91.9 | | 2.24 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:06 | 2 |
| Cadmium | <2.24 | | 2.24 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:06 | 2 |
| Chromium | 54.9 | | 2.24 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:06 | 2 |
| Lead | 123 | | 11.2 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:06 | 2 |
| Selenium | <11.2 | | 11.2 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:06 | 2 |
| Silver | <2.24 | | 2.24 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:06 | 2 |

Method: SW846 6010D - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|---------|-----------|--------|-----|------|---|----------------|----------------|---------|
| Arsenic | <0.100 | | 0.100 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:34 | 1 |
| Barium | 0.751 | | 0.200 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:34 | 1 |
| Cadmium | <0.0200 | | 0.0200 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:34 | 1 |
| Chromium | <0.0200 | | 0.0200 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:34 | 1 |
| Lead | <0.100 | | 0.100 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:34 | 1 |
| Selenium | <0.100 | | 0.100 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:34 | 1 |
| Silver | <0.0500 | | 0.0500 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:34 | 1 |

Method: SW846 7470A - Mercury (CVAA) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|----------|-----------|---------|-----|------|---|----------------|----------------|---------|
| Mercury | <0.00200 | | 0.00200 | | mg/L | | 03/14/24 09:01 | 03/14/24 14:26 | 1 |

Method: SW846 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|--------|-----|-------|---|----------------|----------------|---------|
| Mercury | 0.0514 | | 0.0176 | | mg/Kg | ✱ | 03/14/24 09:10 | 03/15/24 13:55 | 1 |

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-39-SL-0-1

Lab Sample ID: 310-276447-6

Date Collected: 03/07/24 09:30

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 85.8

| General Chemistry | | | | | | | | | |
|---------------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
| Free Liquid (SW846 9095B) | CNF | | | | NONE | | | 03/15/24 08:58 | 1 |
| Percent Moisture (EPA Moisture) | 14.2 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |
| Percent Solids (EPA Moisture) | 85.8 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-40-SL-1

Lab Sample ID: 310-276447-7

Date Collected: 03/07/24 10:00

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 84.1

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------------|-------------|-----------|-------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | <11.2 | F2 | 11.2 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/18/24 11:13 | 500 |
| Acenaphthylene | <11.2 | | 11.2 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/18/24 11:13 | 500 |
| Anthracene | 9.50 | F2 | 0.225 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 18:59 | 10 |
| Benzo(a)anthracene | 29.9 | F2 | 11.2 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/18/24 11:13 | 500 |
| Benzo(a)pyrene | 28.5 | F2 | 11.2 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/18/24 11:13 | 500 |
| Benzo(b)fluoranthene | 37.8 | F2 | 11.2 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/18/24 11:13 | 500 |
| Benzo(g,h,i)perylene | 14.6 | F2 | 0.225 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 18:59 | 10 |
| Benzo(k)fluoranthene | 11.3 | F2 | 0.225 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 18:59 | 10 |
| Chrysene | 30.2 | F2 | 11.2 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/18/24 11:13 | 500 |
| Dibenz(a,h)anthracene | 4.82 | | 0.225 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 18:59 | 10 |
| Fluoranthene | 73.1 | F2 | 11.2 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/18/24 11:13 | 500 |
| Fluorene | <11.2 | F2 | 11.2 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/18/24 11:13 | 500 |
| Indeno(1,2,3-cd)pyrene | 20.0 | F2 | 11.2 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/18/24 11:13 | 500 |
| 2-Methylnaphthalene | <11.2 | | 11.2 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/18/24 11:13 | 500 |
| Naphthalene | <11.2 | F2 | 11.2 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/18/24 11:13 | 500 |
| Phenanthrene | 63.6 | F2 | 11.2 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/18/24 11:13 | 500 |
| Pyrene | 52.7 | F2 | 11.2 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/18/24 11:13 | 500 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 101 | *3 | 37 - 131 | 03/12/24 11:44 | 03/13/24 18:59 | 10 |
| Nitrobenzene-d5 (Surr) | 103 | *3 | 30 - 138 | 03/12/24 11:44 | 03/13/24 18:59 | 10 |
| Terphenyl-d14 (Surr) | 215 | S1+ | 24 - 145 | 03/12/24 11:44 | 03/13/24 18:59 | 10 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--|-------------|-----------|-----|-----|------|---|----------|----------------|---------|
| Percent Moisture (EPA Moisture) | 15.9 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |
| Percent Solids (EPA Moisture) | 84.1 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-41-SL-0-1

Lab Sample ID: 310-276447-8

Date Collected: 03/07/24 10:05

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 83.6

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------------|--------------|-----------|-------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | <0.461 | | 0.461 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 07:46 | 10 |
| Acenaphthylene | <0.461 | | 0.461 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 07:46 | 10 |
| Anthracene | 1.37 | | 0.461 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 07:46 | 10 |
| Benzo(a)anthracene | 5.11 | | 0.461 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 07:46 | 10 |
| Benzo(a)pyrene | 5.26 | | 0.461 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 07:46 | 10 |
| Benzo(b)fluoranthene | 6.84 | | 0.461 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 07:46 | 10 |
| Benzo(g,h,i)perylene | 5.31 | | 0.461 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 07:46 | 10 |
| Benzo(k)fluoranthene | 2.47 | | 0.461 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 07:46 | 10 |
| Chrysene | 6.02 | | 0.461 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 07:46 | 10 |
| Dibenz(a,h)anthracene | 1.27 | | 0.461 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 07:46 | 10 |
| Fluoranthene | 11.0 | | 0.461 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 07:46 | 10 |
| Fluorene | 0.482 | | 0.461 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 07:46 | 10 |
| Indeno(1,2,3-cd)pyrene | 5.90 | | 0.461 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 07:46 | 10 |
| 2-Methylnaphthalene | <0.461 | | 0.461 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 07:46 | 10 |
| Naphthalene | <0.461 | | 0.461 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 07:46 | 10 |
| Phenanthrene | 7.10 | | 0.461 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 07:46 | 10 |
| Pyrene | 8.24 | | 0.461 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 07:46 | 10 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 77 | | 37 - 131 | 03/12/24 11:44 | 03/15/24 07:46 | 10 |
| Nitrobenzene-d5 (Surr) | 89 | | 30 - 138 | 03/12/24 11:44 | 03/15/24 07:46 | 10 |
| Terphenyl-d14 (Surr) | 103 | | 24 - 145 | 03/12/24 11:44 | 03/15/24 07:46 | 10 |

Method: SW846 6010D - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------|-------------|-----------|------|-----|-------|---|----------------|----------------|---------|
| Arsenic | <14.1 | | 14.1 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:52 | 3 |
| Barium | 96.5 | | 3.54 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:52 | 3 |
| Cadmium | <3.54 | | 3.54 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:52 | 3 |
| Chromium | 33.9 | | 3.54 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:52 | 3 |
| Lead | 65.3 | | 17.7 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:52 | 3 |
| Selenium | <17.7 | | 17.7 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:52 | 3 |
| Silver | <3.54 | | 3.54 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:52 | 3 |

Method: SW846 6010D - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------|--------------|-----------|--------|-----|------|---|----------------|----------------|---------|
| Arsenic | <0.300 | | 0.300 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:59 | 3 |
| Barium | 0.631 | | 0.600 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:59 | 3 |
| Cadmium | <0.0600 | | 0.0600 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:59 | 3 |
| Chromium | <0.0600 | | 0.0600 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:59 | 3 |
| Lead | <0.300 | | 0.300 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:59 | 3 |
| Selenium | <0.300 | | 0.300 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:59 | 3 |
| Silver | <0.150 | | 0.150 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:59 | 3 |

Method: SW846 7470A - Mercury (CVAA) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|----------|-----------|---------|-----|------|---|----------------|----------------|---------|
| Mercury | <0.00200 | | 0.00200 | | mg/L | | 03/15/24 10:54 | 03/18/24 11:03 | 1 |

Method: SW846 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|---------|-----------|--------|-----|-------|---|----------------|----------------|---------|
| Mercury | <0.0185 | | 0.0185 | | mg/Kg | ✱ | 03/14/24 09:10 | 03/15/24 13:57 | 1 |

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-41-SL-0-1

Lab Sample ID: 310-276447-8

Date Collected: 03/07/24 10:05

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 83.6

| General Chemistry | | | | | | | | | |
|---------------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
| Free Liquid (SW846 9095B) | CNF | | | | NONE | | | 03/15/24 08:58 | 1 |
| Percent Moisture (EPA Moisture) | 16.4 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |
| Percent Solids (EPA Moisture) | 83.6 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-42-SL-1

Lab Sample ID: 310-276447-9

Date Collected: 03/07/24 10:30

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 72.6

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|--------|-----------|-------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | 0.506 | | 0.403 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:06 | 10 |
| Acenaphthylene | <0.403 | | 0.403 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:06 | 10 |
| Anthracene | 1.26 | | 0.403 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:06 | 10 |
| Benzo(a)anthracene | 4.46 | | 0.403 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:06 | 10 |
| Benzo(a)pyrene | 4.61 | | 0.403 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:06 | 10 |
| Benzo(b)fluoranthene | 6.26 | | 0.403 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:06 | 10 |
| Benzo(g,h,i)perylene | 3.48 | | 0.403 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:06 | 10 |
| Benzo(k)fluoranthene | 2.29 | | 0.403 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:06 | 10 |
| Chrysene | 5.59 | | 0.403 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:06 | 10 |
| Dibenz(a,h)anthracene | 0.875 | | 0.403 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:06 | 10 |
| Fluoranthene | 14.7 | | 0.403 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:06 | 10 |
| Fluorene | 0.692 | | 0.403 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:06 | 10 |
| Indeno(1,2,3-cd)pyrene | 3.99 | | 0.403 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:06 | 10 |
| 2-Methylnaphthalene | <0.403 | | 0.403 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/14/24 08:33 | 10 |
| Naphthalene | <0.403 | | 0.403 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/14/24 08:33 | 10 |
| Phenanthrene | 7.95 | | 0.403 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:06 | 10 |
| Pyrene | 11.7 | | 0.403 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:06 | 10 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 73 | | 37 - 131 | 03/12/24 11:44 | 03/14/24 08:33 | 10 |
| Nitrobenzene-d5 (Surr) | 49 | | 30 - 138 | 03/12/24 11:44 | 03/14/24 08:33 | 10 |
| Terphenyl-d14 (Surr) | 141 | | 24 - 145 | 03/12/24 11:44 | 03/15/24 08:06 | 10 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| Percent Moisture (EPA Moisture) | 27.4 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |
| Percent Solids (EPA Moisture) | 72.6 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-43-SL-3

Lab Sample ID: 310-276447-10

Date Collected: 03/07/24 10:40

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 83.2

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|---------|-----------|--------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | <0.0580 | | 0.0580 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:03 | 5 |
| Acenaphthylene | <0.0580 | | 0.0580 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:03 | 5 |
| Anthracene | <0.0580 | | 0.0580 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:03 | 5 |
| Benzo(a)anthracene | 0.0632 | | 0.0580 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:03 | 5 |
| Benzo(a)pyrene | 0.0692 | | 0.0580 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:03 | 5 |
| Benzo(b)fluoranthene | 0.0947 | | 0.0580 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:03 | 5 |
| Benzo(g,h,i)perylene | 0.0714 | | 0.0580 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:03 | 5 |
| Benzo(k)fluoranthene | <0.0580 | | 0.0580 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:03 | 5 |
| Chrysene | 0.0757 | | 0.0580 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:03 | 5 |
| Dibenz(a,h)anthracene | <0.0580 | | 0.0580 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:03 | 5 |
| Fluoranthene | 0.168 | | 0.0580 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:03 | 5 |
| Fluorene | <0.0580 | | 0.0580 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:03 | 5 |
| Indeno(1,2,3-cd)pyrene | 0.0736 | | 0.0580 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:03 | 5 |
| 2-Methylnaphthalene | <0.0580 | | 0.0580 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:03 | 5 |
| Naphthalene | <0.0580 | | 0.0580 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:03 | 5 |
| Phenanthrene | 0.111 | | 0.0580 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:03 | 5 |
| Pyrene | 0.128 | | 0.0580 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:03 | 5 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 98 | | 37 - 131 | 03/12/24 11:44 | 03/13/24 17:03 | 5 |
| Nitrobenzene-d5 (Surr) | 82 | | 30 - 138 | 03/12/24 11:44 | 03/13/24 17:03 | 5 |
| Terphenyl-d14 (Surr) | 101 | | 24 - 145 | 03/12/24 11:44 | 03/13/24 17:03 | 5 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| Percent Moisture (EPA Moisture) | 16.8 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |
| Percent Solids (EPA Moisture) | 83.2 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-44-SL-4

Lab Sample ID: 310-276447-11

Date Collected: 03/07/24 10:45

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 85.7

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|---------|-----------|--------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | <0.0115 | | 0.0115 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:27 | 1 |
| Acenaphthylene | <0.0115 | | 0.0115 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:27 | 1 |
| Anthracene | <0.0115 | | 0.0115 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:27 | 1 |
| Benzo(a)anthracene | 0.0292 | | 0.0115 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:27 | 1 |
| Benzo(a)pyrene | 0.0340 | | 0.0115 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:27 | 1 |
| Benzo(b)fluoranthene | 0.0496 | | 0.0115 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:27 | 1 |
| Benzo(g,h,i)perylene | 0.0298 | | 0.0115 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:27 | 1 |
| Benzo(k)fluoranthene | 0.0202 | | 0.0115 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:27 | 1 |
| Chrysene | 0.0381 | | 0.0115 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:27 | 1 |
| Dibenz(a,h)anthracene | <0.0115 | | 0.0115 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:27 | 1 |
| Fluoranthene | 0.0670 | | 0.0115 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:27 | 1 |
| Fluorene | <0.0115 | | 0.0115 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:27 | 1 |
| Indeno(1,2,3-cd)pyrene | 0.0322 | | 0.0115 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:27 | 1 |
| 2-Methylnaphthalene | <0.0115 | | 0.0115 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:27 | 1 |
| Naphthalene | <0.0115 | | 0.0115 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:27 | 1 |
| Phenanthrene | 0.0382 | | 0.0115 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:27 | 1 |
| Pyrene | 0.0505 | | 0.0115 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:27 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 82 | | 37 - 131 | 03/12/24 11:44 | 03/13/24 14:27 | 1 |
| Nitrobenzene-d5 (Surr) | 77 | | 30 - 138 | 03/12/24 11:44 | 03/13/24 14:27 | 1 |
| Terphenyl-d14 (Surr) | 73 | | 24 - 145 | 03/12/24 11:44 | 03/13/24 14:27 | 1 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| Percent Moisture (EPA Moisture) | 14.3 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |
| Percent Solids (EPA Moisture) | 85.7 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |

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Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-45-SL-0-4

Lab Sample ID: 310-276447-12

Date Collected: 03/07/24 11:00

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 78.4

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|--------|-----------|-------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | 0.253 | | 0.124 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:22 | 5 |
| Acenaphthylene | <0.124 | | 0.124 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:22 | 5 |
| Anthracene | 0.826 | | 0.124 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:22 | 5 |
| Benzo(a)anthracene | 3.41 | | 0.124 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:22 | 5 |
| Benzo(a)pyrene | 3.44 | | 0.124 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:22 | 5 |
| Benzo(b)fluoranthene | 4.37 | | 0.124 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:22 | 5 |
| Benzo(g,h,i)perylene | 3.35 | | 0.124 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:22 | 5 |
| Benzo(k)fluoranthene | 1.69 | | 0.124 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:22 | 5 |
| Chrysene | 4.01 | | 0.124 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:22 | 5 |
| Dibenz(a,h)anthracene | 0.708 | | 0.124 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:22 | 5 |
| Fluoranthene | 6.81 | | 0.124 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:22 | 5 |
| Fluorene | 0.333 | | 0.124 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:22 | 5 |
| Indeno(1,2,3-cd)pyrene | 3.82 | | 0.124 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:22 | 5 |
| 2-Methylnaphthalene | <0.124 | | 0.124 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:22 | 5 |
| Naphthalene | <0.124 | | 0.124 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:22 | 5 |
| Phenanthrene | 4.68 | | 0.124 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:22 | 5 |
| Pyrene | 5.05 | | 0.124 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:22 | 5 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 92 | | 37 - 131 | 03/12/24 11:44 | 03/13/24 17:22 | 5 |
| Nitrobenzene-d5 (Surr) | 86 | | 30 - 138 | 03/12/24 11:44 | 03/13/24 17:22 | 5 |
| Terphenyl-d14 (Surr) | 89 | | 24 - 145 | 03/12/24 11:44 | 03/13/24 17:22 | 5 |

Method: SW846 6010D - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|------|-----|-------|---|----------------|----------------|---------|
| Arsenic | <8.37 | | 8.37 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:55 | 2 |
| Barium | 71.9 | | 2.09 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:55 | 2 |
| Cadmium | <2.09 | | 2.09 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:55 | 2 |
| Chromium | 24.3 | | 2.09 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:55 | 2 |
| Lead | 40.8 | | 10.5 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:55 | 2 |
| Selenium | <10.5 | | 10.5 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:55 | 2 |
| Silver | <2.09 | | 2.09 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:55 | 2 |

Method: SW846 6010D - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|---------|-----------|--------|-----|------|---|----------------|----------------|---------|
| Arsenic | <0.100 | | 0.100 | | mg/L | | 03/18/24 09:00 | 03/19/24 10:58 | 1 |
| Barium | 0.637 | | 0.200 | | mg/L | | 03/18/24 09:00 | 03/19/24 10:58 | 1 |
| Cadmium | <0.0200 | | 0.0200 | | mg/L | | 03/18/24 09:00 | 03/19/24 10:58 | 1 |
| Chromium | <0.0200 | | 0.0200 | | mg/L | | 03/18/24 09:00 | 03/19/24 10:58 | 1 |
| Lead | <0.100 | | 0.100 | | mg/L | | 03/18/24 09:00 | 03/19/24 10:58 | 1 |
| Selenium | <0.100 | | 0.100 | | mg/L | | 03/18/24 09:00 | 03/19/24 10:58 | 1 |
| Silver | <0.0500 | | 0.0500 | | mg/L | | 03/18/24 09:00 | 03/19/24 10:58 | 1 |

Method: SW846 7470A - Mercury (CVAA) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|----------|-----------|---------|-----|------|---|----------------|----------------|---------|
| Mercury | <0.00200 | | 0.00200 | | mg/L | | 03/21/24 11:54 | 03/22/24 11:59 | 1 |

Method: SW846 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|--------|-----|-------|---|----------------|----------------|---------|
| Mercury | 0.0267 | | 0.0207 | | mg/Kg | ✱ | 03/14/24 09:10 | 03/15/24 13:59 | 1 |

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-45-SL-0-4
Date Collected: 03/07/24 11:00
Date Received: 03/08/24 16:30

Lab Sample ID: 310-276447-12
Matrix: Solid
Percent Solids: 78.4

| General Chemistry | | | | | | | | | |
|---------------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
| Free Liquid (SW846 9095B) | CNF | | | | NONE | | | 03/15/24 08:58 | 1 |
| Percent Moisture (EPA Moisture) | 21.6 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |
| Percent Solids (EPA Moisture) | 78.4 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-46-SL-4

Lab Sample ID: 310-276447-13

Date Collected: 03/07/24 10:45

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 86.2

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|---------|-----------|--------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | <0.0112 | | 0.0112 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:47 | 1 |
| Acenaphthylene | <0.0112 | | 0.0112 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:47 | 1 |
| Anthracene | <0.0112 | | 0.0112 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:47 | 1 |
| Benzo(a)anthracene | 0.0127 | | 0.0112 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:47 | 1 |
| Benzo(a)pyrene | 0.0143 | | 0.0112 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:47 | 1 |
| Benzo(b)fluoranthene | 0.0212 | | 0.0112 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:47 | 1 |
| Benzo(g,h,i)perylene | 0.0139 | | 0.0112 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:47 | 1 |
| Benzo(k)fluoranthene | <0.0112 | | 0.0112 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:47 | 1 |
| Chrysene | 0.0146 | | 0.0112 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:47 | 1 |
| Dibenz(a,h)anthracene | <0.0112 | | 0.0112 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:47 | 1 |
| Fluoranthene | 0.0283 | | 0.0112 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:47 | 1 |
| Fluorene | <0.0112 | | 0.0112 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:47 | 1 |
| Indeno(1,2,3-cd)pyrene | 0.0132 | | 0.0112 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:47 | 1 |
| 2-Methylnaphthalene | <0.0112 | | 0.0112 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:47 | 1 |
| Naphthalene | <0.0112 | | 0.0112 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:47 | 1 |
| Phenanthrene | 0.0163 | | 0.0112 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:47 | 1 |
| Pyrene | 0.0225 | | 0.0112 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 14:47 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 76 | | 37 - 131 | 03/12/24 11:44 | 03/13/24 14:47 | 1 |
| Nitrobenzene-d5 (Surr) | 77 | | 30 - 138 | 03/12/24 11:44 | 03/13/24 14:47 | 1 |
| Terphenyl-d14 (Surr) | 67 | | 24 - 145 | 03/12/24 11:44 | 03/13/24 14:47 | 1 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| Percent Moisture (EPA Moisture) | 13.8 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |
| Percent Solids (EPA Moisture) | 86.2 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-47-SL-1

Lab Sample ID: 310-276447-14

Date Collected: 03/07/24 11:05

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 79.3

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|---------|-----------|--------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | 0.864 | | 0.0627 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:42 | 5 |
| Acenaphthylene | <0.0627 | | 0.0627 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:42 | 5 |
| Anthracene | 2.64 | | 0.0627 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:42 | 5 |
| Benzo(a)anthracene | 6.68 | | 0.627 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:44 | 50 |
| Benzo(a)pyrene | 6.16 | | 0.627 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:44 | 50 |
| Benzo(b)fluoranthene | 7.86 | | 0.627 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:44 | 50 |
| Benzo(g,h,i)perylene | 3.71 | | 0.0627 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:42 | 5 |
| Benzo(k)fluoranthene | 2.15 | | 0.0627 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:42 | 5 |
| Chrysene | 6.75 | | 0.627 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:44 | 50 |
| Dibenz(a,h)anthracene | 1.09 | | 0.0627 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:42 | 5 |
| Fluoranthene | 14.6 | | 0.627 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/14/24 09:12 | 50 |
| Fluorene | 1.35 | | 0.0627 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/13/24 17:42 | 5 |
| Indeno(1,2,3-cd)pyrene | 5.42 | | 0.627 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:44 | 50 |
| 2-Methylnaphthalene | <0.627 | | 0.627 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/14/24 09:12 | 50 |
| Naphthalene | 0.790 | | 0.627 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/14/24 09:12 | 50 |
| Phenanthrene | 13.4 | | 0.627 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/14/24 09:12 | 50 |
| Pyrene | 10.5 | | 0.627 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/14/24 09:12 | 50 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 103 | *3 | 37 - 131 | 03/12/24 11:44 | 03/13/24 17:42 | 5 |
| 2-Fluorobiphenyl (Surr) | 91 | | 37 - 131 | 03/12/24 11:44 | 03/14/24 09:12 | 50 |
| Nitrobenzene-d5 (Surr) | 88 | *3 | 30 - 138 | 03/12/24 11:44 | 03/13/24 17:42 | 5 |
| Nitrobenzene-d5 (Surr) | 77 | | 30 - 138 | 03/12/24 11:44 | 03/14/24 09:12 | 50 |
| Terphenyl-d14 (Surr) | 133 | | 24 - 145 | 03/12/24 11:44 | 03/13/24 17:42 | 5 |
| Terphenyl-d14 (Surr) | 101 | | 24 - 145 | 03/12/24 11:44 | 03/14/24 09:12 | 50 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| Percent Moisture (EPA Moisture) | 20.7 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |
| Percent Solids (EPA Moisture) | 79.3 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-48-SL-2

Lab Sample ID: 310-276447-15

Date Collected: 03/07/24 11:10

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 68.9

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|--------|-----------|------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | 3.71 | | 3.20 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:25 | 50 |
| Acenaphthylene | <3.20 | | 3.20 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:25 | 50 |
| Anthracene | 11.5 | | 3.20 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:25 | 50 |
| Benzo(a)anthracene | 37.8 | | 3.20 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:25 | 50 |
| Benzo(a)pyrene | 38.1 | | 3.20 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:25 | 50 |
| Benzo(b)fluoranthene | 48.8 | | 3.20 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:25 | 50 |
| Benzo(g,h,i)perylene | 27.1 | | 3.20 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:25 | 50 |
| Benzo(k)fluoranthene | 18.2 | | 3.20 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:25 | 50 |
| Chrysene | 44.3 | | 3.20 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:25 | 50 |
| Dibenz(a,h)anthracene | 7.04 | | 3.20 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:25 | 50 |
| Fluoranthene | 116 | | 3.20 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:25 | 50 |
| Fluorene | 4.88 | | 3.20 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:25 | 50 |
| Indeno(1,2,3-cd)pyrene | 32.4 | | 3.20 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:25 | 50 |
| 2-Methylnaphthalene | <3.20 | | 3.20 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/14/24 08:52 | 50 |
| Naphthalene | <3.20 | | 3.20 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/14/24 08:52 | 50 |
| Phenanthrene | 59.8 | | 3.20 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:25 | 50 |
| Pyrene | 93.7 | | 3.20 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 08:25 | 50 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 79 | | 37 - 131 | 03/12/24 11:44 | 03/14/24 08:52 | 50 |
| Nitrobenzene-d5 (Surr) | 100 | | 30 - 138 | 03/12/24 11:44 | 03/14/24 08:52 | 50 |
| Terphenyl-d14 (Surr) | 384 | S1+ | 24 - 145 | 03/12/24 11:44 | 03/15/24 08:25 | 50 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| Percent Moisture (EPA Moisture) | 31.1 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |
| Percent Solids (EPA Moisture) | 68.9 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |

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Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-49-SL-0-2

Lab Sample ID: 310-276447-16

Date Collected: 03/07/24 11:15

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 74.6

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|--------|-----------|------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | 93.1 | | 49.8 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:21 | 500 |
| Acenaphthylene | <49.8 | | 49.8 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:21 | 500 |
| Anthracene | 324 | | 49.8 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:21 | 500 |
| Benzo(a)anthracene | 525 | | 49.8 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:21 | 500 |
| Benzo(a)pyrene | 417 | | 49.8 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:21 | 500 |
| Benzo(b)fluoranthene | 521 | | 49.8 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:21 | 500 |
| Benzo(g,h,i)perylene | 266 | | 49.8 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:21 | 500 |
| Benzo(k)fluoranthene | 195 | | 49.8 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:21 | 500 |
| Chrysene | 478 | | 49.8 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:21 | 500 |
| Dibenz(a,h)anthracene | 84.8 | | 49.8 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:21 | 500 |
| Fluoranthene | 1480 | | 49.8 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:21 | 500 |
| Fluorene | 212 | | 49.8 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:21 | 500 |
| Indeno(1,2,3-cd)pyrene | 319 | | 49.8 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:21 | 500 |
| 2-Methylnaphthalene | <49.8 | | 49.8 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:21 | 500 |
| Naphthalene | 99.5 | | 49.8 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:21 | 500 |
| Phenanthrene | 1370 | | 49.8 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:21 | 500 |
| Pyrene | 1080 | | 49.8 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:21 | 500 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 129 | | 37 - 131 | 03/12/24 11:44 | 03/15/24 10:21 | 500 |
| Nitrobenzene-d5 (Surr) | 331 | S1+ | 30 - 138 | 03/12/24 11:44 | 03/15/24 10:21 | 500 |
| Terphenyl-d14 (Surr) | 1474 | S1+ | 24 - 145 | 03/12/24 11:44 | 03/15/24 10:21 | 500 |

Method: SW846 6010D - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|------|-----|-------|---|----------------|----------------|---------|
| Arsenic | <17.0 | | 17.0 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:57 | 4 |
| Barium | 39.8 | | 4.25 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:57 | 4 |
| Cadmium | <4.25 | | 4.25 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:57 | 4 |
| Chromium | 19.6 | | 4.25 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:57 | 4 |
| Lead | 34.3 | | 21.2 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:57 | 4 |
| Selenium | <21.2 | | 21.2 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:57 | 4 |
| Silver | <4.25 | | 4.25 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:57 | 4 |

Method: SW846 6010D - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|---------|-----------|--------|-----|------|---|----------------|----------------|---------|
| Arsenic | <0.100 | | 0.100 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:36 | 1 |
| Barium | 0.369 | | 0.200 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:36 | 1 |
| Cadmium | <0.0200 | | 0.0200 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:36 | 1 |
| Chromium | <0.0200 | | 0.0200 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:36 | 1 |
| Lead | <0.100 | | 0.100 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:36 | 1 |
| Selenium | <0.100 | | 0.100 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:36 | 1 |
| Silver | <0.0500 | | 0.0500 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:36 | 1 |

Method: SW846 7470A - Mercury (CVAA) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|----------|-----------|---------|-----|------|---|----------------|----------------|---------|
| Mercury | <0.00200 | | 0.00200 | | mg/L | | 03/14/24 09:01 | 03/14/24 14:28 | 1 |

Method: SW846 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|---------|-----------|--------|-----|-------|---|----------------|----------------|---------|
| Mercury | <0.0227 | | 0.0227 | | mg/Kg | ✱ | 03/14/24 09:10 | 03/15/24 14:01 | 1 |

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Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-49-SL-0-2
Date Collected: 03/07/24 11:15
Date Received: 03/08/24 16:30

Lab Sample ID: 310-276447-16
Matrix: Solid
Percent Solids: 74.6

| General Chemistry | | | | | | | | | |
|---------------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
| Free Liquid (SW846 9095B) | CNF | | | | NONE | | | 03/15/24 08:58 | 1 |
| Percent Moisture (EPA Moisture) | 25.4 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |
| Percent Solids (EPA Moisture) | 74.6 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-50-SL-0-5

Lab Sample ID: 310-276447-17

Date Collected: 03/07/24 11:50

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 82.9

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------------|-------------|-----------|------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | <12.1 | | 12.1 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:40 | 500 |
| Acenaphthylene | <12.1 | | 12.1 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:40 | 500 |
| Anthracene | 38.0 | | 12.1 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:40 | 500 |
| Benzo(a)anthracene | 101 | | 12.1 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:40 | 500 |
| Benzo(a)pyrene | 92.1 | | 12.1 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:40 | 500 |
| Benzo(b)fluoranthene | 122 | | 12.1 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:40 | 500 |
| Benzo(g,h,i)perylene | 68.7 | | 12.1 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:40 | 500 |
| Benzo(k)fluoranthene | 47.8 | | 12.1 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:40 | 500 |
| Chrysene | 105 | | 12.1 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:40 | 500 |
| Dibenz(a,h)anthracene | 18.9 | | 12.1 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:40 | 500 |
| Fluoranthene | 310 | | 12.1 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:40 | 500 |
| Fluorene | 14.1 | | 12.1 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:40 | 500 |
| Indeno(1,2,3-cd)pyrene | 81.5 | | 12.1 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:40 | 500 |
| 2-Methylnaphthalene | <12.1 | | 12.1 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:40 | 500 |
| Naphthalene | <12.1 | | 12.1 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:40 | 500 |
| Phenanthrene | 204 | | 12.1 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:40 | 500 |
| Pyrene | 228 | | 12.1 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 10:40 | 500 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 420 | S1+ | 37 - 131 | 03/12/24 11:44 | 03/15/24 10:40 | 500 |
| Nitrobenzene-d5 (Surr) | 580 | S1+ | 30 - 138 | 03/12/24 11:44 | 03/15/24 10:40 | 500 |
| Terphenyl-d14 (Surr) | 832 | S1+ | 24 - 145 | 03/12/24 11:44 | 03/15/24 10:40 | 500 |

Method: SW846 6010D - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------|-------------|-----------|------|-----|-------|---|----------------|----------------|---------|
| Arsenic | <12.7 | | 12.7 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:59 | 3 |
| Barium | 62.1 | | 3.17 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:59 | 3 |
| Cadmium | <3.17 | | 3.17 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:59 | 3 |
| Chromium | 32.8 | | 3.17 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:59 | 3 |
| Lead | 54.2 | | 15.8 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:59 | 3 |
| Selenium | <15.8 | | 15.8 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:59 | 3 |
| Silver | <3.17 | | 3.17 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 14:59 | 3 |

Method: SW846 6010D - Metals (ICP) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------|--------------|-----------|--------|-----|------|---|----------------|----------------|---------|
| Arsenic | <0.100 | | 0.100 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:38 | 1 |
| Barium | 0.388 | | 0.200 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:38 | 1 |
| Cadmium | <0.0200 | | 0.0200 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:38 | 1 |
| Chromium | <0.0200 | | 0.0200 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:38 | 1 |
| Lead | <0.100 | | 0.100 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:38 | 1 |
| Selenium | <0.100 | | 0.100 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:38 | 1 |
| Silver | <0.0500 | | 0.0500 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:38 | 1 |

Method: SW846 7470A - Mercury (CVAA) - TCLP

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|----------|-----------|---------|-----|------|---|----------------|----------------|---------|
| Mercury | <0.00200 | | 0.00200 | | mg/L | | 03/14/24 09:01 | 03/14/24 14:35 | 1 |

Method: SW846 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|---------|-----------|--------|-----|-------|---|----------------|----------------|---------|
| Mercury | <0.0190 | | 0.0190 | | mg/Kg | ✱ | 03/14/24 09:10 | 03/15/24 14:03 | 1 |

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-50-SL-0-5

Lab Sample ID: 310-276447-17

Date Collected: 03/07/24 11:50

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 82.9

| General Chemistry | | | | | | | | | |
|---------------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
| Free Liquid (SW846 9095B) | CNF | | | | NONE | | | 03/15/24 08:58 | 1 |
| Percent Moisture (EPA Moisture) | 17.1 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |
| Percent Solids (EPA Moisture) | 82.9 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-51-SL-0-5

Lab Sample ID: 310-276447-18

Date Collected: 03/07/24 11:55

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 80.6

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------------|-------------|-----------|------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | <3.08 | | 3.08 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 11:00 | 100 |
| Acenaphthylene | <3.08 | | 3.08 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 11:00 | 100 |
| Anthracene | 7.52 | | 3.08 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 11:00 | 100 |
| Benzo(a)anthracene | 19.0 | | 3.08 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 11:00 | 100 |
| Benzo(a)pyrene | 18.6 | | 3.08 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 11:00 | 100 |
| Benzo(b)fluoranthene | 24.2 | | 3.08 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 11:00 | 100 |
| Benzo(g,h,i)perylene | 14.2 | | 3.08 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 11:00 | 100 |
| Benzo(k)fluoranthene | 8.61 | | 3.08 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 11:00 | 100 |
| Chrysene | 22.9 | | 3.08 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 11:00 | 100 |
| Dibenz(a,h)anthracene | 4.02 | | 3.08 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 11:00 | 100 |
| Fluoranthene | 62.3 | | 3.08 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 11:00 | 100 |
| Fluorene | 3.53 | | 3.08 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 11:00 | 100 |
| Indeno(1,2,3-cd)pyrene | 16.5 | | 3.08 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 11:00 | 100 |
| 2-Methylnaphthalene | <3.08 | | 3.08 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 11:00 | 100 |
| Naphthalene | <3.08 | | 3.08 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 11:00 | 100 |
| Phenanthrene | 46.0 | | 3.08 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 11:00 | 100 |
| Pyrene | 46.1 | | 3.08 | | mg/Kg | ✱ | 03/12/24 11:44 | 03/15/24 11:00 | 100 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 81 | | 37 - 131 | 03/12/24 11:44 | 03/15/24 11:00 | 100 |
| Nitrobenzene-d5 (Surr) | 99 | | 30 - 138 | 03/12/24 11:44 | 03/15/24 11:00 | 100 |
| Terphenyl-d14 (Surr) | 233 | S1+ | 24 - 145 | 03/12/24 11:44 | 03/15/24 11:00 | 100 |

Method: SW846 6010D - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------|-------------|-----------|------|-----|-------|---|----------------|----------------|---------|
| Arsenic | <14.6 | | 14.6 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 15:01 | 3 |
| Barium | 38.3 | | 3.66 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 15:01 | 3 |
| Cadmium | <3.66 | | 3.66 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 15:01 | 3 |
| Chromium | 46.0 | | 3.66 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 15:01 | 3 |
| Lead | 129 | | 18.3 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 15:01 | 3 |
| Selenium | <18.3 | | 18.3 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 15:01 | 3 |
| Silver | <3.66 | | 3.66 | | mg/Kg | ✱ | 03/13/24 10:00 | 03/13/24 15:01 | 3 |

Method: SW846 7471B - Mercury (CVAA)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|---------|-----------|--------|-----|-------|---|----------------|----------------|---------|
| Mercury | <0.0193 | | 0.0193 | | mg/Kg | ✱ | 03/14/24 09:10 | 03/15/24 14:10 | 1 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------------|-------------|-----------|-----|-----|------|---|----------|----------------|---------|
| Percent Moisture (EPA Moisture) | 19.4 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |
| Percent Solids (EPA Moisture) | 80.6 | | 0.1 | | % | | | 03/11/24 13:56 | 1 |

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Definitions/Glossary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Qualifiers

GC/MS Semi VOA

| Qualifier | Qualifier Description |
|-----------|---|
| *3 | ISTD response or retention time outside acceptable limits. |
| 4 | MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. |
| F2 | MS/MSD RPD exceeds control limits |
| S1+ | Surrogate recovery exceeds control limits, high biased. |

Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|----------------|---|
| □ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| 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 |
| SQL | 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 |

Surrogate Summary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

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

Matrix: Solid

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) | | |
|--------------------|--------------------|--|-----------------|------------------|
| | | FBP (37-131) | NBZ (30-138) | TPHL (24-145) |
| 310-276447-1 | HA-B-34-SL-1 | 77 | 77 | 439 S1+ |
| 310-276447-2 | HA-B-35-SL-3 | 70 | 66 | 70 |
| 310-276447-3 | HA-B-36-SL-4 | 76 | 67 | 240 S1+ |
| 310-276447-4 | HA-B-37-SL-5 | 67 | 59 | 104 |
| 310-276447-5 | HA-B-38-SL-1 | 76 | 76 | 62 |
| 310-276447-6 | HA-B-39-SL-0-1 | 71 | 77 | 75 |
| 310-276447-7 | HA-B-40-SL-1 | 101 *3 | 103 *3 | 215 S1+ |
| 310-276447-7 MS | HA-B-40-SL-1 | 97 *3 | 174 S1+ | 366 S1+ |
| | | | *3 | |
| 310-276447-7 MSD | HA-B-40-SL-1 | 90 *3 | 91 *3 | 517 S1+ |
| 310-276447-8 | HA-B-41-SL-0-1 | 77 | 89 | 103 |
| 310-276447-9 | HA-B-42-SL-1 | 73 | 49 | |
| 310-276447-9 | HA-B-42-SL-1 | | | 141 |
| 310-276447-10 | HA-B-43-SL-3 | 98 | 82 | 101 |
| 310-276447-11 | HA-B-44-SL-4 | 82 | 77 | 73 |
| 310-276447-12 | HA-B-45-SL-0-4 | 92 | 86 | 89 |
| 310-276447-13 | HA-B-46-SL-4 | 76 | 77 | 67 |
| 310-276447-14 | HA-B-47-SL-1 | 103 *3 | 88 *3 | 133 |
| 310-276447-14 | HA-B-47-SL-1 | 91 | 77 | 101 |
| 310-276447-15 | HA-B-48-SL-2 | 79 | 100 | |
| 310-276447-15 | HA-B-48-SL-2 | | | 384 S1+ |
| 310-276447-16 | HA-B-49-SL-0-2 | 129 | 331 S1+ | 1474 S1+ |
| 310-276447-17 | HA-B-50-SL-0-5 | 420 S1+ | 580 S1+ | 832 S1+ |
| 310-276447-18 | HA-B-51-SL-0-5 | 81 | 99 | 233 S1+ |
| LCS 310-415654/2-A | Lab Control Sample | 91 | 119 | 97 |
| LCS 310-415783/2-A | Lab Control Sample | 85 | 87 | 81 |
| MB 310-415654/1-A | Method Blank | 91 | 121 | 97 |
| MB 310-415783/1-A | Method Blank | 85 | 82 | 78 |

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)

NBZ = Nitrobenzene-d5 (Surr)

TPHL = Terphenyl-d14 (Surr)

QC Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

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

Lab Sample ID: MB 310-415654/1-A

Matrix: Solid

Analysis Batch: 415726

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 415654

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|-----------|--------------|---------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | <0.00993 | | 0.00993 | | mg/Kg | | 03/11/24 10:54 | 03/12/24 09:28 | 1 |
| Acenaphthylene | <0.00993 | | 0.00993 | | mg/Kg | | 03/11/24 10:54 | 03/12/24 09:28 | 1 |
| Anthracene | <0.00993 | | 0.00993 | | mg/Kg | | 03/11/24 10:54 | 03/12/24 09:28 | 1 |
| Benzo(a)anthracene | <0.00993 | | 0.00993 | | mg/Kg | | 03/11/24 10:54 | 03/12/24 09:28 | 1 |
| Benzo(a)pyrene | <0.00993 | | 0.00993 | | mg/Kg | | 03/11/24 10:54 | 03/12/24 09:28 | 1 |
| Benzo(b)fluoranthene | <0.00993 | | 0.00993 | | mg/Kg | | 03/11/24 10:54 | 03/12/24 09:28 | 1 |
| Benzo(g,h,i)perylene | <0.00993 | | 0.00993 | | mg/Kg | | 03/11/24 10:54 | 03/12/24 09:28 | 1 |
| Benzo(k)fluoranthene | <0.00993 | | 0.00993 | | mg/Kg | | 03/11/24 10:54 | 03/12/24 09:28 | 1 |
| Chrysene | <0.00993 | | 0.00993 | | mg/Kg | | 03/11/24 10:54 | 03/12/24 09:28 | 1 |
| Dibenz(a,h)anthracene | <0.00993 | | 0.00993 | | mg/Kg | | 03/11/24 10:54 | 03/12/24 09:28 | 1 |
| Fluoranthene | <0.00993 | | 0.00993 | | mg/Kg | | 03/11/24 10:54 | 03/12/24 09:28 | 1 |
| Fluorene | <0.00993 | | 0.00993 | | mg/Kg | | 03/11/24 10:54 | 03/12/24 09:28 | 1 |
| Indeno(1,2,3-cd)pyrene | <0.00993 | | 0.00993 | | mg/Kg | | 03/11/24 10:54 | 03/12/24 09:28 | 1 |
| 2-Methylnaphthalene | <0.00993 | | 0.00993 | | mg/Kg | | 03/11/24 10:54 | 03/12/24 09:28 | 1 |
| Naphthalene | <0.00993 | | 0.00993 | | mg/Kg | | 03/11/24 10:54 | 03/12/24 09:28 | 1 |
| Phenanthrene | <0.00993 | | 0.00993 | | mg/Kg | | 03/11/24 10:54 | 03/12/24 09:28 | 1 |
| Pyrene | <0.00993 | | 0.00993 | | mg/Kg | | 03/11/24 10:54 | 03/12/24 09:28 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|--------------|--------------|-----------|---------------|---------------|---------|
| 2-Fluorobiphenyl (Surr) | 73 | | 10 - 313 | / 1432: 3/ 5t | / 1422: / 729 | 3 |
| 1-methyl-8N(Surr) | 323 | | 1/ - 319 | / 1432: 3/ 5t | / 1422: / 729 | 3 |
| Terphenyl-83: (Surr) | 70 | | 2: - 3: N | / 1432: 3/ 5t | / 1422: / 729 | 3 |

Lab Sample ID: LCS 310-415654/2-A

Matrix: Solid

Analysis Batch: 415726

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 415654

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|------------------------|-------------|------------|---------------|-------|---|------|-------------|
| Acenaphthene | 0.0649 | 0.05496 | | mg/Kg | | 85 | 50 - 124 |
| Acenaphthylene | 0.0649 | 0.05658 | | mg/Kg | | 87 | 52 - 119 |
| Anthracene | 0.0649 | 0.05532 | | mg/Kg | | 85 | 47 - 124 |
| Benzo(a)anthracene | 0.0649 | 0.05815 | | mg/Kg | | 90 | 54 - 138 |
| Benzo(a)pyrene | 0.0649 | 0.05693 | | mg/Kg | | 88 | 47 - 125 |
| Benzo(b)fluoranthene | 0.0649 | 0.06024 | | mg/Kg | | 93 | 49 - 138 |
| Benzo(g,h,i)perylene | 0.0649 | 0.05192 | | mg/Kg | | 80 | 33 - 143 |
| Benzo(k)fluoranthene | 0.0649 | 0.05764 | | mg/Kg | | 89 | 47 - 134 |
| Chrysene | 0.0649 | 0.05712 | | mg/Kg | | 88 | 48 - 127 |
| Dibenz(a,h)anthracene | 0.0649 | 0.05808 | | mg/Kg | | 90 | 40 - 141 |
| Fluoranthene | 0.0649 | 0.05678 | | mg/Kg | | 88 | 43 - 133 |
| Fluorene | 0.0649 | 0.05782 | | mg/Kg | | 89 | 52 - 126 |
| Indeno(1,2,3-cd)pyrene | 0.0649 | 0.05529 | | mg/Kg | | 85 | 40 - 139 |
| 2-Methylnaphthalene | 0.0649 | 0.05597 | | mg/Kg | | 86 | 47 - 128 |
| Naphthalene | 0.0649 | 0.05242 | | mg/Kg | | 81 | 46 - 118 |
| Phenanthrene | 0.0649 | 0.05468 | | mg/Kg | | 84 | 47 - 132 |
| Pyrene | 0.0649 | 0.05565 | | mg/Kg | | 86 | 37 - 135 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|-------------------------|---------------|---------------|----------|
| 2-Fluorobiphenyl (Surr) | 73 | | 10 - 313 |

Eurofins Cedar Falls

QC Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

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

Lab Sample ID: LCS 310-415654/2-A

Matrix: Solid

Analysis Batch: 415726

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 415654

| | LCS | LCS | |
|-------------------------------|-----------|-----------|-----------|
| Surrogate | %Recovery | Qualifier | Limits |
| <i>t</i> izobendene-8N (Surr) | 337 | | 1/ - 319 |
| Terphenyl-83: (Surr) | 70 | | 2: - 3: N |

Lab Sample ID: MB 310-415783/1-A

Matrix: Solid

Analysis Batch: 415819

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 415783

| Analyte | MB | MB | | | | | | | |
|------------------------|----------|-----------|---------|-----|-------|---|----------------|----------------|---------|
| | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
| Acenaphthene | <0.00963 | | 0.00963 | | mg/Kg | | 03/12/24 11:44 | 03/13/24 13:48 | 1 |
| Acenaphthylene | <0.00963 | | 0.00963 | | mg/Kg | | 03/12/24 11:44 | 03/13/24 13:48 | 1 |
| Anthracene | <0.00963 | | 0.00963 | | mg/Kg | | 03/12/24 11:44 | 03/13/24 13:48 | 1 |
| Benzo(a)anthracene | <0.00963 | | 0.00963 | | mg/Kg | | 03/12/24 11:44 | 03/13/24 13:48 | 1 |
| Benzo(a)pyrene | <0.00963 | | 0.00963 | | mg/Kg | | 03/12/24 11:44 | 03/13/24 13:48 | 1 |
| Benzo(b)fluoranthene | <0.00963 | | 0.00963 | | mg/Kg | | 03/12/24 11:44 | 03/13/24 13:48 | 1 |
| Benzo(g,h,i)perylene | <0.00963 | | 0.00963 | | mg/Kg | | 03/12/24 11:44 | 03/13/24 13:48 | 1 |
| Benzo(k)fluoranthene | <0.00963 | | 0.00963 | | mg/Kg | | 03/12/24 11:44 | 03/13/24 13:48 | 1 |
| Chrysene | <0.00963 | | 0.00963 | | mg/Kg | | 03/12/24 11:44 | 03/13/24 13:48 | 1 |
| Dibenz(a,h)anthracene | <0.00963 | | 0.00963 | | mg/Kg | | 03/12/24 11:44 | 03/13/24 13:48 | 1 |
| Fluoranthene | <0.00963 | | 0.00963 | | mg/Kg | | 03/12/24 11:44 | 03/13/24 13:48 | 1 |
| Fluorene | <0.00963 | | 0.00963 | | mg/Kg | | 03/12/24 11:44 | 03/13/24 13:48 | 1 |
| Indeno(1,2,3-cd)pyrene | <0.00963 | | 0.00963 | | mg/Kg | | 03/12/24 11:44 | 03/13/24 13:48 | 1 |
| 2-Methylnaphthalene | <0.00963 | | 0.00963 | | mg/Kg | | 03/12/24 11:44 | 03/13/24 13:48 | 1 |
| Naphthalene | <0.00963 | | 0.00963 | | mg/Kg | | 03/12/24 11:44 | 03/13/24 13:48 | 1 |
| Phenanthrene | <0.00963 | | 0.00963 | | mg/Kg | | 03/12/24 11:44 | 03/13/24 13:48 | 1 |
| Pyrene | <0.00963 | | 0.00963 | | mg/Kg | | 03/12/24 11:44 | 03/13/24 13:48 | 1 |

| | MB | MB | | | | | | | |
|-------------------------------|-----------|-----------|-----------|--|--|--|----------------|----------------|---------|
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 2-Fluorobiphenyl (Surr) | 9N | | 10 - 313 | | | | / 14824: 335 : | / 14814: 315 9 | 3 |
| <i>t</i> izobendene-8N (Surr) | 92 | | 1/ - 319 | | | | / 14824: 335 : | / 14814: 315 9 | 3 |
| Terphenyl-83: (Surr) | 09 | | 2: - 3: N | | | | / 14824: 335 : | / 14814: 315 9 | 3 |

Lab Sample ID: LCS 310-415783/2-A

Matrix: Solid

Analysis Batch: 415819

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 415783

| | Spike | LCS | LCS | | | | | | |
|-----------------------|--------|---------|-----------|-------|---|------|----------|--------|--|
| Analyte | Added | Result | Qualifier | Unit | D | %Rec | %Rec | Limits | |
| Acenaphthene | 0.0626 | 0.04743 | | mg/Kg | | 76 | 50 - 124 | | |
| Acenaphthylene | 0.0626 | 0.04841 | | mg/Kg | | 77 | 52 - 119 | | |
| Anthracene | 0.0626 | 0.04689 | | mg/Kg | | 75 | 47 - 124 | | |
| Benzo(a)anthracene | 0.0626 | 0.04832 | | mg/Kg | | 77 | 54 - 138 | | |
| Benzo(a)pyrene | 0.0626 | 0.04758 | | mg/Kg | | 76 | 47 - 125 | | |
| Benzo(b)fluoranthene | 0.0626 | 0.04926 | | mg/Kg | | 79 | 49 - 138 | | |
| Benzo(g,h,i)perylene | 0.0626 | 0.05160 | | mg/Kg | | 82 | 33 - 143 | | |
| Benzo(k)fluoranthene | 0.0626 | 0.04816 | | mg/Kg | | 77 | 47 - 134 | | |
| Chrysene | 0.0626 | 0.04777 | | mg/Kg | | 76 | 48 - 127 | | |
| Dibenz(a,h)anthracene | 0.0626 | 0.05370 | | mg/Kg | | 86 | 40 - 141 | | |
| Fluoranthene | 0.0626 | 0.04686 | | mg/Kg | | 75 | 43 - 133 | | |
| Fluorene | 0.0626 | 0.05015 | | mg/Kg | | 80 | 52 - 126 | | |

Eurofins Cedar Falls

QC Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

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

Lab Sample ID: LCS 310-415783/2-A

Matrix: Solid

Analysis Batch: 415819

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 415783

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|------------------------|-------------|------------|---------------|-------|---|------|-------------|
| Indeno(1,2,3-cd)pyrene | 0.0626 | 0.05181 | | mg/Kg | | 83 | 40 - 139 |
| 2-Methylnaphthalene | 0.0626 | 0.04958 | | mg/Kg | | 79 | 47 - 128 |
| Naphthalene | 0.0626 | 0.04693 | | mg/Kg | | 75 | 46 - 118 |
| Phenanthrene | 0.0626 | 0.04771 | | mg/Kg | | 76 | 47 - 132 |
| Pyrene | 0.0626 | 0.04584 | | mg/Kg | | 73 | 37 - 135 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|-------------------------|---------------|---------------|-----------|
| 2-Fluorobiphenyl (Surr) | 9N | | 10 - 313 |
| t izobendene-8N(Surr) | 90 | | 1/ - 319 |
| Terphenyl-83: (Surr) | 93 | | 2: - 3: N |

Lab Sample ID: 310-276447-7 MS

Matrix: Solid

Analysis Batch: 415819

Client Sample ID: HA-B-40-SL-1

Prep Type: Total/NA

Prep Batch: 415783

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|-----------------------|---------------|------------------|-------------|-----------|--------------|-------|---|-------|-------------|
| Acenaphthene | 3.21 | *3 F2 | 0.0765 | 9.242 | 4 | mg/Kg | ⊛ | 7894 | 33 - 132 |
| Acenaphthylene | 0.441 | *3 | 0.0765 | 0.3959 | 4 | mg/Kg | ⊛ | -59 | 30 - 131 |
| Dibenz(a,h)anthracene | 4.82 | | 0.0765 | 10.40 | 4 | mg/Kg | ⊛ | 7300 | 15 - 150 |
| Fluorene | 5.08 | *3 F2 | 0.0765 | 14.53 | 4 | mg/Kg | ⊛ | 12353 | 26 - 141 |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|-------------------------|--------------|--------------|-----------|
| 2-Fluorobiphenyl (Surr) | 70 | +1 | 10 - 313 |
| t izobendene-8N(Surr) | 30: | S36 +1 | 1/ - 319 |
| Terphenyl-83: (Surr) | 1** | S36 | 2: - 3: N |

Lab Sample ID: 310-276447-7 MS

Matrix: Solid

Analysis Batch: 416191

Client Sample ID: HA-B-40-SL-1

Prep Type: Total/NA

Prep Batch: 415783

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|------------------------|---------------|------------------|-------------|-----------|--------------|-------|---|-------|-------------|
| Acenaphthene | <11.2 | F2 | 0.0765 | <17.2 | 4 | mg/Kg | ⊛ | 8965 | 33 - 132 |
| Acenaphthylene | <11.2 | | 0.0765 | <17.2 | | mg/Kg | ⊛ | NC | 30 - 131 |
| Benzo(a)anthracene | 29.9 | F2 | 0.0765 | 70.16 | 4 | mg/Kg | ⊛ | 52645 | 27 - 150 |
| Benzo(a)pyrene | 28.5 | F2 | 0.0765 | 66.82 | 4 | mg/Kg | ⊛ | 50095 | 16 - 141 |
| Benzo(b)fluoranthene | 37.8 | F2 | 0.0765 | 83.39 | 4 | mg/Kg | ⊛ | 59667 | 19 - 148 |
| Chrysene | 30.2 | F2 | 0.0765 | 67.80 | 4 | mg/Kg | ⊛ | 49186 | 19 - 140 |
| Fluoranthene | 73.1 | F2 | 0.0765 | 156.1 | 4 | mg/Kg | ⊛ | 10866 | 11 - 147 |
| Fluorene | <11.2 | F2 | 0.0765 | <17.2 | 4 | mg/Kg | ⊛ | 13447 | 26 - 141 |
| Indeno(1,2,3-cd)pyrene | 20.0 | F2 | 0.0765 | 47.61 | 4 | mg/Kg | ⊛ | 36056 | 14 - 150 |
| 2-Methylnaphthalene | <11.2 | | 0.0765 | <17.2 | | mg/Kg | ⊛ | NC | 25 - 138 |
| Naphthalene | <11.2 | F2 | 0.0765 | <17.2 | | mg/Kg | ⊛ | NC | 24 - 130 |
| Phenanthrene | 63.6 | F2 | 0.0765 | 138.3 | 4 | mg/Kg | ⊛ | 97583 | 19 - 144 |
| Pyrene | 52.7 | F2 | 0.0765 | 116.0 | 4 | mg/Kg | ⊛ | 82835 | 10 - 146 |

Eurofins Cedar Falls

QC Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

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

Lab Sample ID: 310-276447-7 MSD

Matrix: Solid

Analysis Batch: 415819

Client Sample ID: HA-B-40-SL-1

Prep Type: Total/NA

Prep Batch: 415783

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|-------------------------------------|---------------|------------------|-------------|------------|---------------|-------|---|-------|-------------|-----|-----------|
| Acenaphthylene | 0.441 | *3 | 0.0753 | 0.4946 | 4 | mg/Kg | ✱ | 71 | 30 - 131 | 22 | 40 |
| Dibenz(a,h)anthracene | 4.82 | | 0.0753 | 13.73 | 4 | mg/Kg | ✱ | 11836 | 15 - 150 | 28 | 40 |
| Surrogate | MSD %Recovery | MSD Qualifier | Limits | | | | | | | | |
| 2-Fluorobiphenyl (Surr) | 7/ | +1 | 10 - 313 | | | | | | | | |
| 1,2,3,4-tetrafluorobenzene-8N(Surr) | 73 | +1 | 1/ - 319 | | | | | | | | |
| Terphenyl-83: (Surr) | N80 | S36 | 2: - 3: N | | | | | | | | |

Lab Sample ID: 310-276447-7 MSD

Matrix: Solid

Analysis Batch: 416191

Client Sample ID: HA-B-40-SL-1

Prep Type: Total/NA

Prep Batch: 415783

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|------------------------|---------------|------------------|-------------|------------|---------------|-------|---|-------|-------------|-----|-----------|
| Acenaphthene | <11.2 | F2 | 0.0753 | 21.01 | 4 F2 | mg/Kg | ✱ | 23107 | 33 - 132 | 67 | 40 |
| Acenaphthylene | <11.2 | | 0.0753 | <16.9 | | mg/Kg | ✱ | NC | 30 - 131 | NC | 40 |
| Benzo(a)anthracene | 29.9 | F2 | 0.0753 | 125.3 | 4 F2 | mg/Kg | ✱ | 12663 | 27 - 150 | 56 | 40 |
| Benzo(a)pyrene | 28.5 | F2 | 0.0753 | 117.2 | 4 F2 | mg/Kg | ✱ | 11778 | 16 - 141 | 55 | 40 |
| Benzo(b)fluoranthene | 37.8 | F2 | 0.0753 | 134.6 | 4 F2 | mg/Kg | ✱ | 12852 | 19 - 148 | 47 | 40 |
| Chrysene | 30.2 | F2 | 0.0753 | 112.9 | 4 F2 | mg/Kg | ✱ | 10983 | 19 - 140 | 50 | 40 |
| Fluoranthene | 73.1 | F2 | 0.0753 | 298.8 | 4 F2 | mg/Kg | ✱ | 29965 | 11 - 147 | 63 | 40 |
| Fluorene | <11.2 | F2 | 0.0753 | 33.36 | 4 F2 | mg/Kg | ✱ | 37184 | 26 - 141 | 72 | 40 |
| Indeno(1,2,3-cd)pyrene | 20.0 | F2 | 0.0753 | 80.88 | 4 F2 | mg/Kg | ✱ | 80777 | 14 - 150 | 52 | 40 |
| 2-Methylnaphthalene | <11.2 | | 0.0753 | <16.9 | | mg/Kg | ✱ | NC | 25 - 138 | NC | 40 |
| Naphthalene | <11.2 | F2 | 0.0753 | <16.9 | F2 | mg/Kg | ✱ | NC | 24 - 130 | 51 | 40 |
| Phenanthrene | 63.6 | F2 | 0.0753 | 280.6 | 4 F2 | mg/Kg | ✱ | 28803 | 19 - 144 | 68 | 40 |
| Pyrene | 52.7 | F2 | 0.0753 | 218.1 | 4 F2 | mg/Kg | ✱ | 21960 | 10 - 146 | 61 | 40 |

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 310-415728/1-A

Matrix: Solid

Analysis Batch: 415910

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 415728

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|-----------|--------------|-------|-----|-------|---|----------------|----------------|---------|
| Arsenic | <3.57 | | 3.57 | | mg/Kg | | 03/13/24 10:00 | 03/13/24 13:23 | 1 |
| Barium | <0.891 | | 0.891 | | mg/Kg | | 03/13/24 10:00 | 03/13/24 13:23 | 1 |
| Cadmium | <0.891 | | 0.891 | | mg/Kg | | 03/13/24 10:00 | 03/13/24 13:23 | 1 |
| Chromium | <0.891 | | 0.891 | | mg/Kg | | 03/13/24 10:00 | 03/13/24 13:23 | 1 |
| Lead | <4.46 | | 4.46 | | mg/Kg | | 03/13/24 10:00 | 03/13/24 13:23 | 1 |
| Selenium | <4.46 | | 4.46 | | mg/Kg | | 03/13/24 10:00 | 03/13/24 13:23 | 1 |
| Silver | <0.891 | | 0.891 | | mg/Kg | | 03/13/24 10:00 | 03/13/24 13:23 | 1 |

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QC Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

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

Lab Sample ID: LCS 310-415728/2-A

Matrix: Solid

Analysis Batch: 415910

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 415728

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec | |
|----------|-------------|------------|---------------|-------|---|------|----------|--|
| | | | | | | | Limits | |
| Arsenic | 157 | 159.1 | | mg/Kg | | 101 | 80 - 120 | |
| Barium | 78.5 | 79.82 | | mg/Kg | | 102 | 80 - 120 | |
| Cadmium | 78.5 | 76.13 | | mg/Kg | | 97 | 80 - 120 | |
| Chromium | 78.5 | 78.39 | | mg/Kg | | 100 | 80 - 120 | |
| Lead | 157 | 153.0 | | mg/Kg | | 97 | 80 - 120 | |
| Selenium | 314 | 316.4 | | mg/Kg | | 101 | 80 - 120 | |
| Silver | 78.5 | 74.56 | | mg/Kg | | 95 | 80 - 120 | |

Lab Sample ID: 310-276447-6 MS

Matrix: Solid

Analysis Batch: 415910

Client Sample ID: HA-B-39-SL-0-1

Prep Type: Total/NA

Prep Batch: 415728

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec | |
|----------|---------------|------------------|-------------|-----------|--------------|-------|---|------|----------|--|
| | | | | | | | | | Limits | |
| Arsenic | <8.94 | | 198 | 199.2 | | mg/Kg | ✱ | 97 | 75 - 125 | |
| Barium | 91.9 | | 98.8 | 180.4 | | mg/Kg | ✱ | 90 | 75 - 125 | |
| Cadmium | <2.24 | | 98.8 | 88.23 | | mg/Kg | ✱ | 88 | 75 - 125 | |
| Chromium | 54.9 | | 98.8 | 158.0 | | mg/Kg | ✱ | 104 | 75 - 125 | |
| Lead | 123 | | 198 | 296.6 | | mg/Kg | ✱ | 88 | 75 - 125 | |
| Selenium | <11.2 | | 395 | 389.0 | | mg/Kg | ✱ | 98 | 75 - 125 | |
| Silver | <2.24 | | 98.8 | 91.03 | | mg/Kg | ✱ | 92 | 75 - 125 | |

Lab Sample ID: 310-276447-6 MSD

Matrix: Solid

Analysis Batch: 415910

Client Sample ID: HA-B-39-SL-0-1

Prep Type: Total/NA

Prep Batch: 415728

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec | | RPD | |
|----------|---------------|------------------|-------------|------------|---------------|-------|---|------|----------|--|-----|-------|
| | | | | | | | | | Limits | | RPD | Limit |
| Arsenic | <8.94 | | 230 | 221.9 | | mg/Kg | ✱ | 94 | 75 - 125 | | 11 | 20 |
| Barium | 91.9 | | 115 | 194.2 | | mg/Kg | ✱ | 89 | 75 - 125 | | 7 | 20 |
| Cadmium | <2.24 | | 115 | 99.40 | | mg/Kg | ✱ | 86 | 75 - 125 | | 12 | 20 |
| Chromium | 54.9 | | 115 | 164.4 | | mg/Kg | ✱ | 95 | 75 - 125 | | 4 | 20 |
| Lead | 123 | | 230 | 308.7 | | mg/Kg | ✱ | 81 | 75 - 125 | | 4 | 20 |
| Selenium | <11.2 | | 459 | 434.4 | | mg/Kg | ✱ | 95 | 75 - 125 | | 11 | 20 |
| Silver | <2.24 | | 115 | 102.7 | | mg/Kg | ✱ | 89 | 75 - 125 | | 12 | 20 |

Lab Sample ID: LB 310-415930/1-C

Matrix: Solid

Analysis Batch: 416042

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 415964

| Analyte | LB LB | | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|---------|-----------|--------|-----|------|---|----------------|----------------|---------|
| | Result | Qualifier | | | | | | | |
| Arsenic | <0.100 | | 0.100 | | mg/L | | 03/14/24 09:50 | 03/14/24 16:29 | 1 |
| Barium | <0.200 | | 0.200 | | mg/L | | 03/14/24 09:50 | 03/14/24 16:29 | 1 |
| Cadmium | <0.0200 | | 0.0200 | | mg/L | | 03/14/24 09:50 | 03/14/24 16:29 | 1 |
| Chromium | <0.0200 | | 0.0200 | | mg/L | | 03/14/24 09:50 | 03/14/24 16:29 | 1 |
| Lead | <0.100 | | 0.100 | | mg/L | | 03/14/24 09:50 | 03/14/24 16:29 | 1 |
| Selenium | <0.100 | | 0.100 | | mg/L | | 03/14/24 09:50 | 03/14/24 16:29 | 1 |
| Silver | <0.0500 | | 0.0500 | | mg/L | | 03/14/24 09:50 | 03/14/24 16:29 | 1 |

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QC Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

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

Lab Sample ID: LCS 310-415930/2-C

Matrix: Solid

Analysis Batch: 416042

Client Sample ID: Lab Control Sample

Prep Type: TCLP

Prep Batch: 415964

| Analyte | Spike | | LCS | | Unit | D | %Rec | %Rec | |
|----------|-------|--------|-----------|--|------|---|------|----------|--|
| | Added | Result | Qualifier | | | | | Limits | |
| Arsenic | 4.00 | 4.022 | | | mg/L | | 101 | 80 - 120 | |
| Barium | 2.00 | 1.979 | | | mg/L | | 99 | 80 - 120 | |
| Cadmium | 2.00 | 1.882 | | | mg/L | | 94 | 80 - 120 | |
| Chromium | 2.00 | 1.913 | | | mg/L | | 96 | 80 - 120 | |
| Lead | 4.00 | 3.720 | | | mg/L | | 93 | 80 - 120 | |
| Selenium | 8.00 | 7.915 | | | mg/L | | 99 | 80 - 120 | |
| Silver | 2.00 | 1.868 | | | mg/L | | 93 | 80 - 120 | |

Lab Sample ID: LB 310-415931/1-B

Matrix: Solid

Analysis Batch: 416043

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 415967

| Analyte | LB | | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|---------|-----------|--------|-----|------|---|----------------|----------------|---------|
| | Result | Qualifier | | | | | | | |
| Arsenic | <0.100 | | 0.100 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:46 | 1 |
| Barium | <0.200 | | 0.200 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:46 | 1 |
| Cadmium | <0.0200 | | 0.0200 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:46 | 1 |
| Chromium | <0.0200 | | 0.0200 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:46 | 1 |
| Lead | <0.100 | | 0.100 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:46 | 1 |
| Selenium | <0.100 | | 0.100 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:46 | 1 |
| Silver | <0.0500 | | 0.0500 | | mg/L | | 03/14/24 09:50 | 03/14/24 17:46 | 1 |

Lab Sample ID: LCS 310-415931/2-B

Matrix: Solid

Analysis Batch: 416043

Client Sample ID: Lab Control Sample

Prep Type: TCLP

Prep Batch: 415967

| Analyte | Spike | | LCS | | Unit | D | %Rec | %Rec | |
|----------|-------|--------|-----------|--|------|---|------|----------|--|
| | Added | Result | Qualifier | | | | | Limits | |
| Arsenic | 4.00 | 3.772 | | | mg/L | | 94 | 80 - 120 | |
| Barium | 2.00 | 1.905 | | | mg/L | | 95 | 80 - 120 | |
| Cadmium | 2.00 | 1.801 | | | mg/L | | 90 | 80 - 120 | |
| Chromium | 2.00 | 1.831 | | | mg/L | | 92 | 80 - 120 | |
| Lead | 4.00 | 3.564 | | | mg/L | | 89 | 80 - 120 | |
| Selenium | 8.00 | 7.465 | | | mg/L | | 93 | 80 - 120 | |
| Silver | 2.00 | 1.762 | | | mg/L | | 88 | 80 - 120 | |

Lab Sample ID: 310-276447-8 MS

Matrix: Solid

Analysis Batch: 416043

Client Sample ID: HA-B-41-SL-0-1

Prep Type: TCLP

Prep Batch: 415967

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS | | Unit | D | %Rec | %Rec | |
|----------|---------------|------------------|-------------|--------|-----------|------|---|------|----------|--|
| | | | | Result | Qualifier | | | | Limits | |
| Arsenic | <0.300 | | 4.00 | 3.917 | | mg/L | | 98 | 75 - 125 | |
| Barium | 0.631 | | 2.00 | 2.614 | | mg/L | | 99 | 75 - 125 | |
| Cadmium | <0.0600 | | 2.00 | 1.815 | | mg/L | | 91 | 75 - 125 | |
| Chromium | <0.0600 | | 2.00 | 1.853 | | mg/L | | 93 | 75 - 125 | |
| Lead | <0.300 | | 4.00 | 3.633 | | mg/L | | 91 | 75 - 125 | |
| Selenium | <0.300 | | 8.00 | 7.616 | | mg/L | | 95 | 75 - 125 | |
| Silver | <0.150 | | 2.00 | 1.879 | | mg/L | | 94 | 75 - 125 | |

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QC Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

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

Lab Sample ID: LB 310-416052/1-B

Matrix: Solid

Analysis Batch: 416364

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 416136

| Analyte | LB Result | LB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|-----------|--------------|--------|-----|------|---|----------------|----------------|---------|
| Arsenic | <0.100 | | 0.100 | | mg/L | | 03/18/24 09:00 | 03/19/24 10:50 | 1 |
| Barium | <0.200 | | 0.200 | | mg/L | | 03/18/24 09:00 | 03/19/24 10:50 | 1 |
| Cadmium | <0.0200 | | 0.0200 | | mg/L | | 03/18/24 09:00 | 03/19/24 10:50 | 1 |
| Chromium | <0.0200 | | 0.0200 | | mg/L | | 03/18/24 09:00 | 03/19/24 10:50 | 1 |
| Lead | <0.100 | | 0.100 | | mg/L | | 03/18/24 09:00 | 03/19/24 10:50 | 1 |
| Selenium | <0.100 | | 0.100 | | mg/L | | 03/18/24 09:00 | 03/19/24 10:50 | 1 |
| Silver | <0.0500 | | 0.0500 | | mg/L | | 03/18/24 09:00 | 03/19/24 10:50 | 1 |

Lab Sample ID: LCS 310-416052/2-B

Matrix: Solid

Analysis Batch: 416364

Client Sample ID: Lab Control Sample

Prep Type: TCLP

Prep Batch: 416136

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|----------|-------------|------------|---------------|------|---|------|-------------|
| Arsenic | 4.00 | 3.564 | | mg/L | | 89 | 80 - 120 |
| Barium | 2.00 | 1.924 | | mg/L | | 96 | 80 - 120 |
| Cadmium | 2.00 | 1.673 | | mg/L | | 84 | 80 - 120 |
| Chromium | 2.00 | 1.745 | | mg/L | | 87 | 80 - 120 |
| Lead | 4.00 | 3.312 | | mg/L | | 83 | 80 - 120 |
| Selenium | 8.00 | 7.262 | | mg/L | | 91 | 80 - 120 |
| Silver | 2.00 | 1.788 | | mg/L | | 89 | 80 - 120 |

Lab Sample ID: 310-276447-12 MS

Matrix: Solid

Analysis Batch: 416364

Client Sample ID: HA-B-45-SL-0-4

Prep Type: TCLP

Prep Batch: 416136

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|----------|---------------|------------------|-------------|-----------|--------------|------|---|------|-------------|
| Arsenic | <0.100 | | 4.00 | 3.694 | | mg/L | | 92 | 75 - 125 |
| Barium | 0.637 | | 2.00 | 2.597 | | mg/L | | 98 | 75 - 125 |
| Cadmium | <0.0200 | | 2.00 | 1.656 | | mg/L | | 83 | 75 - 125 |
| Chromium | <0.0200 | | 2.00 | 1.775 | | mg/L | | 89 | 75 - 125 |
| Lead | <0.100 | | 4.00 | 3.312 | | mg/L | | 83 | 75 - 125 |
| Selenium | <0.100 | | 8.00 | 7.506 | | mg/L | | 94 | 75 - 125 |
| Silver | <0.0500 | | 2.00 | 1.812 | | mg/L | | 91 | 75 - 125 |

Method: 7470A - Mercury (CVAA)

Lab Sample ID: LB 310-415930/1-B

Matrix: Solid

Analysis Batch: 416023

Client Sample ID: Method Blank

Prep Type: TCLP

Prep Batch: 415953

| Analyte | LB Result | LB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|-----------|--------------|---------|-----|------|---|----------------|----------------|---------|
| Mercury | <0.00200 | | 0.00200 | | mg/L | | 03/14/24 09:00 | 03/14/24 14:18 | 1 |

Lab Sample ID: LCS 310-415930/2-B

Matrix: Solid

Analysis Batch: 416023

Client Sample ID: Lab Control Sample

Prep Type: TCLP

Prep Batch: 415953

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|-------------|------------|---------------|------|---|------|-------------|
| Mercury | 0.0167 | 0.01883 | | mg/L | | 113 | 80 - 120 |

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QC Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LB 310-415931/1-C
Matrix: Solid
Analysis Batch: 416244

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 416096

| Analyte | LB Result | LB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------------|-----------------|---------|-----|------|---|----------------|----------------|---------|
| Mercury | <0.00200 | | 0.00200 | | mg/L | | 03/15/24 10:54 | 03/18/24 10:58 | 1 |

Lab Sample ID: LCS 310-415931/2-C
Matrix: Solid
Analysis Batch: 416244

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 416096

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|----------------|---------------|------------------|------|---|------|----------------|
| Mercury | 0.0167 | 0.01579 | | mg/L | | 95 | 80 - 120 |

Lab Sample ID: 310-276447-8 MS
Matrix: Solid
Analysis Batch: 416244

Client Sample ID: HA-B-41-SL-0-1
Prep Type: TCLP
Prep Batch: 416096

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|------------------|---------------------|----------------|--------------|-----------------|------|---|------|----------------|
| Mercury | <0.00200 | | 0.0167 | 0.01657 | | mg/L | | 99 | 80 - 120 |

Lab Sample ID: LB 310-416052/1-D
Matrix: Solid
Analysis Batch: 416777

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 416603

| Analyte | LB Result | LB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------------|-----------------|---------|-----|------|---|----------------|----------------|---------|
| Mercury | <0.00200 | | 0.00200 | | mg/L | | 03/21/24 11:54 | 03/22/24 11:54 | 1 |

Lab Sample ID: LCS 310-416052/2-D
Matrix: Solid
Analysis Batch: 416777

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 416603

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|----------------|---------------|------------------|------|---|------|----------------|
| Mercury | 0.0167 | 0.01783 | | mg/L | | 107 | 80 - 120 |

Lab Sample ID: 310-276447-12 MS
Matrix: Solid
Analysis Batch: 416777

Client Sample ID: HA-B-45-SL-0-4
Prep Type: TCLP
Prep Batch: 416603

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|------------------|---------------------|----------------|--------------|-----------------|------|---|------|----------------|
| Mercury | <0.00200 | | 0.0167 | 0.01721 | | mg/L | | 103 | 80 - 120 |

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 310-415955/1-A
Matrix: Solid
Analysis Batch: 416137

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 415955

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------------|-----------------|--------|-----|-------|---|----------------|----------------|---------|
| Mercury | <0.0174 | | 0.0174 | | mg/Kg | | 03/14/24 09:10 | 03/15/24 13:16 | 1 |

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QC Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 310-415955/2-A
Matrix: Solid
Analysis Batch: 416137

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 415955

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|-------------|------------|---------------|-------|---|------|-------------|
| Mercury | 0.139 | 0.1569 | | mg/Kg | | 113 | 80 - 120 |

Method: 9095B - Paint Filter Liquids Test

Lab Sample ID: 310-276447-6 DU
Matrix: Solid
Analysis Batch: 416074

Client Sample ID: HA-B-39-SL-0-1
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|-------------|---------------|------------------|-----------|--------------|------|---|-----|-----------|
| Free Liquid | CNF | | CNF | | NONE | | NC | 10 |

Method: Moisture - Percent Moisture

Lab Sample ID: 310-276447-8 DU
Matrix: Solid
Analysis Batch: 415696

Client Sample ID: HA-B-41-SL-0-1
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|------------------|---------------|------------------|-----------|--------------|------|---|-----|-----------|
| Percent Moisture | 16.4 | | 17.8 | | % | | 8 | 39 |
| Percent Solids | 83.6 | | 82.2 | | % | | 2 | 10 |

Lab Sample ID: 310-276447-18 DU
Matrix: Solid
Analysis Batch: 415696

Client Sample ID: HA-B-51-SL-0-5
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|------------------|---------------|------------------|-----------|--------------|------|---|-----|-----------|
| Percent Moisture | 19.4 | | 18.9 | | % | | 3 | 39 |
| Percent Solids | 80.6 | | 81.1 | | % | | 0.7 | 10 |

QC Association Summary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

GC/MS Semi VOA

Prep Batch: 415654

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-1 | HA-B-34-SL-1 | Total/NA | Solid | 3546 | |
| 310-276447-2 | HA-B-35-SL-3 | Total/NA | Solid | 3546 | |
| 310-276447-3 | HA-B-36-SL-4 | Total/NA | Solid | 3546 | |
| 310-276447-4 | HA-B-37-SL-5 | Total/NA | Solid | 3546 | |
| 310-276447-5 | HA-B-38-SL-1 | Total/NA | Solid | 3546 | |
| 310-276447-6 | HA-B-39-SL-0-1 | Total/NA | Solid | 3546 | |
| MB 310-415654/1-A | Method Blank | Total/NA | Solid | 3546 | |
| LCS 310-415654/2-A | Lab Control Sample | Total/NA | Solid | 3546 | |

Analysis Batch: 415726

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|-----------|------------|
| 310-276447-1 | HA-B-34-SL-1 | Total/NA | Solid | 8270E SIM | 415654 |
| 310-276447-2 | HA-B-35-SL-3 | Total/NA | Solid | 8270E SIM | 415654 |
| 310-276447-3 | HA-B-36-SL-4 | Total/NA | Solid | 8270E SIM | 415654 |
| 310-276447-4 | HA-B-37-SL-5 | Total/NA | Solid | 8270E SIM | 415654 |
| 310-276447-5 | HA-B-38-SL-1 | Total/NA | Solid | 8270E SIM | 415654 |
| 310-276447-6 | HA-B-39-SL-0-1 | Total/NA | Solid | 8270E SIM | 415654 |
| MB 310-415654/1-A | Method Blank | Total/NA | Solid | 8270E SIM | 415654 |
| LCS 310-415654/2-A | Lab Control Sample | Total/NA | Solid | 8270E SIM | 415654 |

Prep Batch: 415783

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-7 | HA-B-40-SL-1 | Total/NA | Solid | 3546 | |
| 310-276447-8 | HA-B-41-SL-0-1 | Total/NA | Solid | 3546 | |
| 310-276447-9 | HA-B-42-SL-1 | Total/NA | Solid | 3546 | |
| 310-276447-10 | HA-B-43-SL-3 | Total/NA | Solid | 3546 | |
| 310-276447-11 | HA-B-44-SL-4 | Total/NA | Solid | 3546 | |
| 310-276447-12 | HA-B-45-SL-0-4 | Total/NA | Solid | 3546 | |
| 310-276447-13 | HA-B-46-SL-4 | Total/NA | Solid | 3546 | |
| 310-276447-14 | HA-B-47-SL-1 | Total/NA | Solid | 3546 | |
| 310-276447-15 | HA-B-48-SL-2 | Total/NA | Solid | 3546 | |
| 310-276447-16 | HA-B-49-SL-0-2 | Total/NA | Solid | 3546 | |
| 310-276447-17 | HA-B-50-SL-0-5 | Total/NA | Solid | 3546 | |
| 310-276447-18 | HA-B-51-SL-0-5 | Total/NA | Solid | 3546 | |
| MB 310-415783/1-A | Method Blank | Total/NA | Solid | 3546 | |
| LCS 310-415783/2-A | Lab Control Sample | Total/NA | Solid | 3546 | |
| 310-276447-7 MS | HA-B-40-SL-1 | Total/NA | Solid | 3546 | |
| 310-276447-7 MSD | HA-B-40-SL-1 | Total/NA | Solid | 3546 | |

Analysis Batch: 415819

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------|-----------|--------|-----------|------------|
| 310-276447-1 | HA-B-34-SL-1 | Total/NA | Solid | 8270E SIM | 415654 |
| 310-276447-2 | HA-B-35-SL-3 | Total/NA | Solid | 8270E SIM | 415654 |
| 310-276447-3 | HA-B-36-SL-4 | Total/NA | Solid | 8270E SIM | 415654 |
| 310-276447-4 | HA-B-37-SL-5 | Total/NA | Solid | 8270E SIM | 415654 |
| 310-276447-6 | HA-B-39-SL-0-1 | Total/NA | Solid | 8270E SIM | 415654 |
| 310-276447-7 | HA-B-40-SL-1 | Total/NA | Solid | 8270E SIM | 415783 |
| 310-276447-10 | HA-B-43-SL-3 | Total/NA | Solid | 8270E SIM | 415783 |
| 310-276447-11 | HA-B-44-SL-4 | Total/NA | Solid | 8270E SIM | 415783 |
| 310-276447-12 | HA-B-45-SL-0-4 | Total/NA | Solid | 8270E SIM | 415783 |
| 310-276447-13 | HA-B-46-SL-4 | Total/NA | Solid | 8270E SIM | 415783 |

Eurofins Cedar Falls

QC Association Summary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

GC/MS Semi VOA (Continued)

Analysis Batch: 415819 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|-----------|------------|
| 310-276447-14 | HA-B-47-SL-1 | Total/NA | Solid | 8270E SIM | 415783 |
| MB 310-415783/1-A | Method Blank | Total/NA | Solid | 8270E SIM | 415783 |
| LCS 310-415783/2-A | Lab Control Sample | Total/NA | Solid | 8270E SIM | 415783 |
| 310-276447-7 MS | HA-B-40-SL-1 | Total/NA | Solid | 8270E SIM | 415783 |
| 310-276447-7 MSD | HA-B-40-SL-1 | Total/NA | Solid | 8270E SIM | 415783 |

Analysis Batch: 415927

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------|-----------|--------|-----------|------------|
| 310-276447-9 | HA-B-42-SL-1 | Total/NA | Solid | 8270E SIM | 415783 |
| 310-276447-14 | HA-B-47-SL-1 | Total/NA | Solid | 8270E SIM | 415783 |
| 310-276447-15 | HA-B-48-SL-2 | Total/NA | Solid | 8270E SIM | 415783 |

Analysis Batch: 416056

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------|-----------|--------|-----------|------------|
| 310-276447-8 | HA-B-41-SL-0-1 | Total/NA | Solid | 8270E SIM | 415783 |
| 310-276447-9 | HA-B-42-SL-1 | Total/NA | Solid | 8270E SIM | 415783 |
| 310-276447-14 | HA-B-47-SL-1 | Total/NA | Solid | 8270E SIM | 415783 |
| 310-276447-15 | HA-B-48-SL-2 | Total/NA | Solid | 8270E SIM | 415783 |
| 310-276447-16 | HA-B-49-SL-0-2 | Total/NA | Solid | 8270E SIM | 415783 |
| 310-276447-17 | HA-B-50-SL-0-5 | Total/NA | Solid | 8270E SIM | 415783 |
| 310-276447-18 | HA-B-51-SL-0-5 | Total/NA | Solid | 8270E SIM | 415783 |

Analysis Batch: 416191

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|------------------|------------------|-----------|--------|-----------|------------|
| 310-276447-7 | HA-B-40-SL-1 | Total/NA | Solid | 8270E SIM | 415783 |
| 310-276447-7 MS | HA-B-40-SL-1 | Total/NA | Solid | 8270E SIM | 415783 |
| 310-276447-7 MSD | HA-B-40-SL-1 | Total/NA | Solid | 8270E SIM | 415783 |

Metals

Prep Batch: 415728

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-6 | HA-B-39-SL-0-1 | Total/NA | Solid | 3050B | |
| 310-276447-8 | HA-B-41-SL-0-1 | Total/NA | Solid | 3050B | |
| 310-276447-12 | HA-B-45-SL-0-4 | Total/NA | Solid | 3050B | |
| 310-276447-16 | HA-B-49-SL-0-2 | Total/NA | Solid | 3050B | |
| 310-276447-17 | HA-B-50-SL-0-5 | Total/NA | Solid | 3050B | |
| 310-276447-18 | HA-B-51-SL-0-5 | Total/NA | Solid | 3050B | |
| MB 310-415728/1-A | Method Blank | Total/NA | Solid | 3050B | |
| LCS 310-415728/2-A | Lab Control Sample | Total/NA | Solid | 3050B | |
| 310-276447-6 MS | HA-B-39-SL-0-1 | Total/NA | Solid | 3050B | |
| 310-276447-6 MSD | HA-B-39-SL-0-1 | Total/NA | Solid | 3050B | |

Analysis Batch: 415910

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------|-----------|--------|--------|------------|
| 310-276447-6 | HA-B-39-SL-0-1 | Total/NA | Solid | 6010D | 415728 |
| 310-276447-8 | HA-B-41-SL-0-1 | Total/NA | Solid | 6010D | 415728 |
| 310-276447-12 | HA-B-45-SL-0-4 | Total/NA | Solid | 6010D | 415728 |
| 310-276447-16 | HA-B-49-SL-0-2 | Total/NA | Solid | 6010D | 415728 |
| 310-276447-17 | HA-B-50-SL-0-5 | Total/NA | Solid | 6010D | 415728 |
| 310-276447-18 | HA-B-51-SL-0-5 | Total/NA | Solid | 6010D | 415728 |

Eurofins Cedar Falls

QC Association Summary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Metals (Continued)

Analysis Batch: 415910 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| MB 310-415728/1-A | Method Blank | Total/NA | Solid | 6010D | 415728 |
| LCS 310-415728/2-A | Lab Control Sample | Total/NA | Solid | 6010D | 415728 |
| 310-276447-6 MS | HA-B-39-SL-0-1 | Total/NA | Solid | 6010D | 415728 |
| 310-276447-6 MSD | HA-B-39-SL-0-1 | Total/NA | Solid | 6010D | 415728 |

Leach Batch: 415930

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-6 | HA-B-39-SL-0-1 | TCLP | Solid | 1311 | |
| 310-276447-16 | HA-B-49-SL-0-2 | TCLP | Solid | 1311 | |
| 310-276447-17 | HA-B-50-SL-0-5 | TCLP | Solid | 1311 | |
| LB 310-415930/1-B | Method Blank | TCLP | Solid | 1311 | |
| LB 310-415930/1-C | Method Blank | TCLP | Solid | 1311 | |
| LCS 310-415930/2-B | Lab Control Sample | TCLP | Solid | 1311 | |
| LCS 310-415930/2-C | Lab Control Sample | TCLP | Solid | 1311 | |

Leach Batch: 415931

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-8 | HA-B-41-SL-0-1 | TCLP | Solid | 1311 | |
| LB 310-415931/1-B | Method Blank | TCLP | Solid | 1311 | |
| LB 310-415931/1-C | Method Blank | TCLP | Solid | 1311 | |
| LCS 310-415931/2-B | Lab Control Sample | TCLP | Solid | 1311 | |
| LCS 310-415931/2-C | Lab Control Sample | TCLP | Solid | 1311 | |
| 310-276447-8 MS | HA-B-41-SL-0-1 | TCLP | Solid | 1311 | |

Prep Batch: 415953

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-6 | HA-B-39-SL-0-1 | TCLP | Solid | 7470A | 415930 |
| 310-276447-16 | HA-B-49-SL-0-2 | TCLP | Solid | 7470A | 415930 |
| 310-276447-17 | HA-B-50-SL-0-5 | TCLP | Solid | 7470A | 415930 |
| LB 310-415930/1-B | Method Blank | TCLP | Solid | 7470A | 415930 |
| LCS 310-415930/2-B | Lab Control Sample | TCLP | Solid | 7470A | 415930 |

Prep Batch: 415955

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-6 | HA-B-39-SL-0-1 | Total/NA | Solid | 7471B | |
| 310-276447-8 | HA-B-41-SL-0-1 | Total/NA | Solid | 7471B | |
| 310-276447-12 | HA-B-45-SL-0-4 | Total/NA | Solid | 7471B | |
| 310-276447-16 | HA-B-49-SL-0-2 | Total/NA | Solid | 7471B | |
| 310-276447-17 | HA-B-50-SL-0-5 | Total/NA | Solid | 7471B | |
| 310-276447-18 | HA-B-51-SL-0-5 | Total/NA | Solid | 7471B | |
| MB 310-415955/1-A | Method Blank | Total/NA | Solid | 7471B | |
| LCS 310-415955/2-A | Lab Control Sample | Total/NA | Solid | 7471B | |

Prep Batch: 415964

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-6 | HA-B-39-SL-0-1 | TCLP | Solid | 3010A | 415930 |
| 310-276447-16 | HA-B-49-SL-0-2 | TCLP | Solid | 3010A | 415930 |
| 310-276447-17 | HA-B-50-SL-0-5 | TCLP | Solid | 3010A | 415930 |
| LB 310-415930/1-C | Method Blank | TCLP | Solid | 3010A | 415930 |
| LCS 310-415930/2-C | Lab Control Sample | TCLP | Solid | 3010A | 415930 |

Eurofins Cedar Falls

QC Association Summary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Metals

Prep Batch: 415967

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-8 | HA-B-41-SL-0-1 | TCLP | Solid | 3010A | 415931 |
| LB 310-415931/1-B | Method Blank | TCLP | Solid | 3010A | 415931 |
| LCS 310-415931/2-B | Lab Control Sample | TCLP | Solid | 3010A | 415931 |
| 310-276447-8 MS | HA-B-41-SL-0-1 | TCLP | Solid | 3010A | 415931 |

Analysis Batch: 416023

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-6 | HA-B-39-SL-0-1 | TCLP | Solid | 7470A | 415953 |
| 310-276447-16 | HA-B-49-SL-0-2 | TCLP | Solid | 7470A | 415953 |
| 310-276447-17 | HA-B-50-SL-0-5 | TCLP | Solid | 7470A | 415953 |
| LB 310-415930/1-B | Method Blank | TCLP | Solid | 7470A | 415953 |
| LCS 310-415930/2-B | Lab Control Sample | TCLP | Solid | 7470A | 415953 |

Analysis Batch: 416042

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-6 | HA-B-39-SL-0-1 | TCLP | Solid | 6010D | 415964 |
| 310-276447-16 | HA-B-49-SL-0-2 | TCLP | Solid | 6010D | 415964 |
| 310-276447-17 | HA-B-50-SL-0-5 | TCLP | Solid | 6010D | 415964 |
| LB 310-415930/1-C | Method Blank | TCLP | Solid | 6010D | 415964 |
| LCS 310-415930/2-C | Lab Control Sample | TCLP | Solid | 6010D | 415964 |

Analysis Batch: 416043

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-8 | HA-B-41-SL-0-1 | TCLP | Solid | 6010D | 415967 |
| LB 310-415931/1-B | Method Blank | TCLP | Solid | 6010D | 415967 |
| LCS 310-415931/2-B | Lab Control Sample | TCLP | Solid | 6010D | 415967 |
| 310-276447-8 MS | HA-B-41-SL-0-1 | TCLP | Solid | 6010D | 415967 |

Leach Batch: 416052

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-12 | HA-B-45-SL-0-4 | TCLP | Solid | 1311 | |
| LB 310-416052/1-B | Method Blank | TCLP | Solid | 1311 | |
| LB 310-416052/1-D | Method Blank | TCLP | Solid | 1311 | |
| LCS 310-416052/2-B | Lab Control Sample | TCLP | Solid | 1311 | |
| LCS 310-416052/2-D | Lab Control Sample | TCLP | Solid | 1311 | |
| 310-276447-12 MS | HA-B-45-SL-0-4 | TCLP | Solid | 1311 | |

Prep Batch: 416096

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-8 | HA-B-41-SL-0-1 | TCLP | Solid | 7470A | 415931 |
| LB 310-415931/1-C | Method Blank | TCLP | Solid | 7470A | 415931 |
| LCS 310-415931/2-C | Lab Control Sample | TCLP | Solid | 7470A | 415931 |
| 310-276447-8 MS | HA-B-41-SL-0-1 | TCLP | Solid | 7470A | 415931 |

Prep Batch: 416136

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-12 | HA-B-45-SL-0-4 | TCLP | Solid | 3010A | 416052 |
| LB 310-416052/1-B | Method Blank | TCLP | Solid | 3010A | 416052 |
| LCS 310-416052/2-B | Lab Control Sample | TCLP | Solid | 3010A | 416052 |
| 310-276447-12 MS | HA-B-45-SL-0-4 | TCLP | Solid | 3010A | 416052 |

Eurofins Cedar Falls

QC Association Summary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Metals

Analysis Batch: 416137

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-6 | HA-B-39-SL-0-1 | Total/NA | Solid | 7471B | 415955 |
| 310-276447-8 | HA-B-41-SL-0-1 | Total/NA | Solid | 7471B | 415955 |
| 310-276447-12 | HA-B-45-SL-0-4 | Total/NA | Solid | 7471B | 415955 |
| 310-276447-16 | HA-B-49-SL-0-2 | Total/NA | Solid | 7471B | 415955 |
| 310-276447-17 | HA-B-50-SL-0-5 | Total/NA | Solid | 7471B | 415955 |
| 310-276447-18 | HA-B-51-SL-0-5 | Total/NA | Solid | 7471B | 415955 |
| MB 310-415955/1-A | Method Blank | Total/NA | Solid | 7471B | 415955 |
| LCS 310-415955/2-A | Lab Control Sample | Total/NA | Solid | 7471B | 415955 |

Analysis Batch: 416244

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-8 | HA-B-41-SL-0-1 | TCLP | Solid | 7470A | 416096 |
| LB 310-415931/1-C | Method Blank | TCLP | Solid | 7470A | 416096 |
| LCS 310-415931/2-C | Lab Control Sample | TCLP | Solid | 7470A | 416096 |
| 310-276447-8 MS | HA-B-41-SL-0-1 | TCLP | Solid | 7470A | 416096 |

Analysis Batch: 416364

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-12 | HA-B-45-SL-0-4 | TCLP | Solid | 6010D | 416136 |
| LB 310-416052/1-B | Method Blank | TCLP | Solid | 6010D | 416136 |
| LCS 310-416052/2-B | Lab Control Sample | TCLP | Solid | 6010D | 416136 |
| 310-276447-12 MS | HA-B-45-SL-0-4 | TCLP | Solid | 6010D | 416136 |

Prep Batch: 416603

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-12 | HA-B-45-SL-0-4 | TCLP | Solid | 7470A | 416052 |
| LB 310-416052/1-D | Method Blank | TCLP | Solid | 7470A | 416052 |
| LCS 310-416052/2-D | Lab Control Sample | TCLP | Solid | 7470A | 416052 |
| 310-276447-12 MS | HA-B-45-SL-0-4 | TCLP | Solid | 7470A | 416052 |

Analysis Batch: 416777

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-12 | HA-B-45-SL-0-4 | TCLP | Solid | 7470A | 416603 |
| LB 310-416052/1-D | Method Blank | TCLP | Solid | 7470A | 416603 |
| LCS 310-416052/2-D | Lab Control Sample | TCLP | Solid | 7470A | 416603 |
| 310-276447-12 MS | HA-B-45-SL-0-4 | TCLP | Solid | 7470A | 416603 |

General Chemistry

Analysis Batch: 415696

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------|-----------|--------|----------|------------|
| 310-276447-1 | HA-B-34-SL-1 | Total/NA | Solid | Moisture | |
| 310-276447-2 | HA-B-35-SL-3 | Total/NA | Solid | Moisture | |
| 310-276447-3 | HA-B-36-SL-4 | Total/NA | Solid | Moisture | |
| 310-276447-4 | HA-B-37-SL-5 | Total/NA | Solid | Moisture | |
| 310-276447-5 | HA-B-38-SL-1 | Total/NA | Solid | Moisture | |
| 310-276447-6 | HA-B-39-SL-0-1 | Total/NA | Solid | Moisture | |
| 310-276447-7 | HA-B-40-SL-1 | Total/NA | Solid | Moisture | |
| 310-276447-8 | HA-B-41-SL-0-1 | Total/NA | Solid | Moisture | |
| 310-276447-9 | HA-B-42-SL-1 | Total/NA | Solid | Moisture | |
| 310-276447-10 | HA-B-43-SL-3 | Total/NA | Solid | Moisture | |

Eurofins Cedar Falls

QC Association Summary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

General Chemistry (Continued)

Analysis Batch: 415696 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|------------------|------------------|-----------|--------|----------|------------|
| 310-276447-11 | HA-B-44-SL-4 | Total/NA | Solid | Moisture | |
| 310-276447-12 | HA-B-45-SL-0-4 | Total/NA | Solid | Moisture | |
| 310-276447-13 | HA-B-46-SL-4 | Total/NA | Solid | Moisture | |
| 310-276447-14 | HA-B-47-SL-1 | Total/NA | Solid | Moisture | |
| 310-276447-15 | HA-B-48-SL-2 | Total/NA | Solid | Moisture | |
| 310-276447-16 | HA-B-49-SL-0-2 | Total/NA | Solid | Moisture | |
| 310-276447-17 | HA-B-50-SL-0-5 | Total/NA | Solid | Moisture | |
| 310-276447-18 | HA-B-51-SL-0-5 | Total/NA | Solid | Moisture | |
| 310-276447-8 DU | HA-B-41-SL-0-1 | Total/NA | Solid | Moisture | |
| 310-276447-18 DU | HA-B-51-SL-0-5 | Total/NA | Solid | Moisture | |

Analysis Batch: 416074

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-----------------|------------------|-----------|--------|--------|------------|
| 310-276447-6 | HA-B-39-SL-0-1 | Total/NA | Solid | 9095B | |
| 310-276447-8 | HA-B-41-SL-0-1 | Total/NA | Solid | 9095B | |
| 310-276447-12 | HA-B-45-SL-0-4 | Total/NA | Solid | 9095B | |
| 310-276447-16 | HA-B-49-SL-0-2 | Total/NA | Solid | 9095B | |
| 310-276447-17 | HA-B-50-SL-0-5 | Total/NA | Solid | 9095B | |
| 310-276447-6 DU | HA-B-39-SL-0-1 | Total/NA | Solid | 9095B | |

Lab Chronicle

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-34-SL-1
Date Collected: 03/07/24 08:30
Date Received: 03/08/24 16:30

Lab Sample ID: 310-276447-1
Matrix: Solid

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Analysis | Moisture | | 1 | 415696 | HE7K | EET CF | 03/11/24 13:56 |

Client Sample ID: HA-B-34-SL-1
Date Collected: 03/07/24 08:30
Date Received: 03/08/24 16:30

Lab Sample ID: 310-276447-1
Matrix: Solid
Percent Solids: 82.0

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Prep | 3546 | | | 415654 | YU9M | EET CF | 03/11/24 10:54 |
| Total/NA | Analysis | 8270E SIM | | 5 | 415726 | V7YZ | EET CF | 03/12/24 15:19 |
| Total/NA | Prep | 3546 | | | 415654 | YU9M | EET CF | 03/11/24 10:54 |
| Total/NA | Analysis | 8270E SIM | | 250 | 415819 | V7YZ | EET CF | 03/13/24 09:15 |

Client Sample ID: HA-B-35-SL-3
Date Collected: 03/07/24 08:35
Date Received: 03/08/24 16:30

Lab Sample ID: 310-276447-2
Matrix: Solid

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Analysis | Moisture | | 1 | 415696 | HE7K | EET CF | 03/11/24 13:56 |

Client Sample ID: HA-B-35-SL-3
Date Collected: 03/07/24 08:35
Date Received: 03/08/24 16:30

Lab Sample ID: 310-276447-2
Matrix: Solid
Percent Solids: 80.1

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Prep | 3546 | | | 415654 | YU9M | EET CF | 03/11/24 10:54 |
| Total/NA | Analysis | 8270E SIM | | 5 | 415726 | V7YZ | EET CF | 03/12/24 15:38 |
| Total/NA | Prep | 3546 | | | 415654 | YU9M | EET CF | 03/11/24 10:54 |
| Total/NA | Analysis | 8270E SIM | | 50 | 415819 | V7YZ | EET CF | 03/13/24 09:35 |

Client Sample ID: HA-B-36-SL-4
Date Collected: 03/07/24 08:40
Date Received: 03/08/24 16:30

Lab Sample ID: 310-276447-3
Matrix: Solid

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Analysis | Moisture | | 1 | 415696 | HE7K | EET CF | 03/11/24 13:56 |

Client Sample ID: HA-B-36-SL-4
Date Collected: 03/07/24 08:40
Date Received: 03/08/24 16:30

Lab Sample ID: 310-276447-3
Matrix: Solid
Percent Solids: 83.1

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Prep | 3546 | | | 415654 | YU9M | EET CF | 03/11/24 10:54 |
| Total/NA | Analysis | 8270E SIM | | 5 | 415726 | V7YZ | EET CF | 03/12/24 15:58 |
| Total/NA | Prep | 3546 | | | 415654 | YU9M | EET CF | 03/11/24 10:54 |
| Total/NA | Analysis | 8270E SIM | | 250 | 415819 | V7YZ | EET CF | 03/13/24 09:54 |

Lab Chronicle

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-37-SL-5

Lab Sample ID: 310-276447-4

Date Collected: 03/07/24 08:55

Matrix: Solid

Date Received: 03/08/24 16:30

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Analysis | Moisture | | 1 | 415696 | HE7K | EET CF | 03/11/24 13:56 |

Client Sample ID: HA-B-37-SL-5

Lab Sample ID: 310-276447-4

Date Collected: 03/07/24 08:55

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 83.2

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Prep | 3546 | | | 415654 | YU9M | EET CF | 03/11/24 10:54 |
| Total/NA | Analysis | 8270E SIM | | 5 | 415726 | V7YZ | EET CF | 03/12/24 16:17 |
| Total/NA | Prep | 3546 | | | 415654 | YU9M | EET CF | 03/11/24 10:54 |
| Total/NA | Analysis | 8270E SIM | | 50 | 415819 | V7YZ | EET CF | 03/13/24 10:14 |

Client Sample ID: HA-B-38-SL-1

Lab Sample ID: 310-276447-5

Date Collected: 03/07/24 09:25

Matrix: Solid

Date Received: 03/08/24 16:30

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Analysis | Moisture | | 1 | 415696 | HE7K | EET CF | 03/11/24 13:56 |

Client Sample ID: HA-B-38-SL-1

Lab Sample ID: 310-276447-5

Date Collected: 03/07/24 09:25

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 86.9

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Prep | 3546 | | | 415654 | YU9M | EET CF | 03/11/24 10:54 |
| Total/NA | Analysis | 8270E SIM | | 5 | 415726 | V7YZ | EET CF | 03/12/24 16:36 |

Client Sample ID: HA-B-39-SL-0-1

Lab Sample ID: 310-276447-6

Date Collected: 03/07/24 09:30

Matrix: Solid

Date Received: 03/08/24 16:30

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|--|
| TCLP | Leach | 1311 | | | 415930 | HSP8 | EET CF | 03/13/24 16:00 - 03/14/24 06:30 ¹ |
| TCLP | Prep | 3010A | | | 415964 | QTZ5 | EET CF | 03/14/24 09:50 |
| TCLP | Analysis | 6010D | | 1 | 416042 | ZRI4 | EET CF | 03/14/24 17:34 |
| TCLP | Leach | 1311 | | | 415930 | HSP8 | EET CF | 03/13/24 16:00 - 03/14/24 06:30 ¹ |
| TCLP | Prep | 7470A | | | 415953 | NFT2 | EET CF | 03/14/24 09:01 |
| TCLP | Analysis | 7470A | | 1 | 416023 | NFT2 | EET CF | 03/14/24 14:26 |
| Total/NA | Analysis | 9095B | | 1 | 416074 | WZC8 | EET CF | 03/15/24 08:58 |
| Total/NA | Analysis | Moisture | | 1 | 415696 | HE7K | EET CF | 03/11/24 13:56 |

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Lab Chronicle

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-39-SL-0-1

Lab Sample ID: 310-276447-6

Date Collected: 03/07/24 09:30

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 85.8

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Prep | 3546 | | | 415654 | YU9M | EET CF | 03/11/24 10:54 |
| Total/NA | Analysis | 8270E SIM | | 5 | 415726 | V7YZ | EET CF | 03/12/24 16:56 |
| Total/NA | Prep | 3546 | | | 415654 | YU9M | EET CF | 03/11/24 10:54 |
| Total/NA | Analysis | 8270E SIM | | 50 | 415819 | V7YZ | EET CF | 03/13/24 10:34 |
| Total/NA | Prep | 3050B | | | 415728 | QTZ5 | EET CF | 03/13/24 10:00 |
| Total/NA | Analysis | 6010D | | 2 | 415910 | ZRI4 | EET CF | 03/13/24 14:06 |
| Total/NA | Prep | 7471B | | | 415955 | NFT2 | EET CF | 03/14/24 09:10 |
| Total/NA | Analysis | 7471B | | 1 | 416137 | NFT2 | EET CF | 03/15/24 13:55 |

Client Sample ID: HA-B-40-SL-1

Lab Sample ID: 310-276447-7

Date Collected: 03/07/24 10:00

Matrix: Solid

Date Received: 03/08/24 16:30

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Analysis | Moisture | | 1 | 415696 | HE7K | EET CF | 03/11/24 13:56 |

Client Sample ID: HA-B-40-SL-1

Lab Sample ID: 310-276447-7

Date Collected: 03/07/24 10:00

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 84.1

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Prep | 3546 | | | 415783 | YU9M | EET CF | 03/12/24 11:44 |
| Total/NA | Analysis | 8270E SIM | | 10 | 415819 | V7YZ | EET CF | 03/13/24 18:59 |
| Total/NA | Prep | 3546 | | | 415783 | YU9M | EET CF | 03/12/24 11:44 |
| Total/NA | Analysis | 8270E SIM | | 500 | 416191 | L0FS | EET CF | 03/18/24 11:13 |

Client Sample ID: HA-B-41-SL-0-1

Lab Sample ID: 310-276447-8

Date Collected: 03/07/24 10:05

Matrix: Solid

Date Received: 03/08/24 16:30

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|--|
| TCLP | Leach | 1311 | | | 415931 | HSP8 | EET CF | 03/13/24 16:00 - 03/14/24 06:30 ¹ |
| TCLP | Prep | 3010A | | | 415967 | QTZ5 | EET CF | 03/14/24 09:50 |
| TCLP | Analysis | 6010D | | 3 | 416043 | ZRI4 | EET CF | 03/14/24 17:59 |
| TCLP | Leach | 1311 | | | 415931 | HSP8 | EET CF | 03/13/24 16:00 - 03/14/24 06:30 ¹ |
| TCLP | Prep | 7470A | | | 416096 | NFT2 | EET CF | 03/15/24 10:54 |
| TCLP | Analysis | 7470A | | 1 | 416244 | A6US | EET CF | 03/18/24 11:03 |
| Total/NA | Analysis | 9095B | | 1 | 416074 | WZC8 | EET CF | 03/15/24 08:58 |
| Total/NA | Analysis | Moisture | | 1 | 415696 | HE7K | EET CF | 03/11/24 13:56 |

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Lab Chronicle

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-41-SL-0-1

Lab Sample ID: 310-276447-8

Date Collected: 03/07/24 10:05

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 83.6

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Prep | 3546 | | | 415783 | YU9M | EET CF | 03/12/24 11:44 |
| Total/NA | Analysis | 8270E SIM | | 10 | 416056 | L0FS | EET CF | 03/15/24 07:46 |
| Total/NA | Prep | 3050B | | | 415728 | QTZ5 | EET CF | 03/13/24 10:00 |
| Total/NA | Analysis | 6010D | | 3 | 415910 | ZRI4 | EET CF | 03/13/24 14:52 |
| Total/NA | Prep | 7471B | | | 415955 | NFT2 | EET CF | 03/14/24 09:10 |
| Total/NA | Analysis | 7471B | | 1 | 416137 | NFT2 | EET CF | 03/15/24 13:57 |

Client Sample ID: HA-B-42-SL-1

Lab Sample ID: 310-276447-9

Date Collected: 03/07/24 10:30

Matrix: Solid

Date Received: 03/08/24 16:30

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Analysis | Moisture | | 1 | 415696 | HE7K | EET CF | 03/11/24 13:56 |

Client Sample ID: HA-B-42-SL-1

Lab Sample ID: 310-276447-9

Date Collected: 03/07/24 10:30

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 72.6

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Prep | 3546 | | | 415783 | YU9M | EET CF | 03/12/24 11:44 |
| Total/NA | Analysis | 8270E SIM | | 10 | 415927 | L0FS | EET CF | 03/14/24 08:33 |
| Total/NA | Prep | 3546 | | | 415783 | YU9M | EET CF | 03/12/24 11:44 |
| Total/NA | Analysis | 8270E SIM | | 10 | 416056 | L0FS | EET CF | 03/15/24 08:06 |

Client Sample ID: HA-B-43-SL-3

Lab Sample ID: 310-276447-10

Date Collected: 03/07/24 10:40

Matrix: Solid

Date Received: 03/08/24 16:30

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Analysis | Moisture | | 1 | 415696 | HE7K | EET CF | 03/11/24 13:56 |

Client Sample ID: HA-B-43-SL-3

Lab Sample ID: 310-276447-10

Date Collected: 03/07/24 10:40

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 83.2

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Prep | 3546 | | | 415783 | YU9M | EET CF | 03/12/24 11:44 |
| Total/NA | Analysis | 8270E SIM | | 5 | 415819 | V7YZ | EET CF | 03/13/24 17:03 |

Client Sample ID: HA-B-44-SL-4

Lab Sample ID: 310-276447-11

Date Collected: 03/07/24 10:45

Matrix: Solid

Date Received: 03/08/24 16:30

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Analysis | Moisture | | 1 | 415696 | HE7K | EET CF | 03/11/24 13:56 |

Eurofins Cedar Falls

Lab Chronicle

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-44-SL-4

Lab Sample ID: 310-276447-11

Date Collected: 03/07/24 10:45

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 85.7

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Prep | 3546 | | | 415783 | YU9M | EET CF | 03/12/24 11:44 |
| Total/NA | Analysis | 8270E SIM | | 1 | 415819 | V7YZ | EET CF | 03/13/24 14:27 |

Client Sample ID: HA-B-45-SL-0-4

Lab Sample ID: 310-276447-12

Date Collected: 03/07/24 11:00

Matrix: Solid

Date Received: 03/08/24 16:30

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|--|
| TCLP | Leach | 1311 | | | 416052 | HSP8 | EET CF | 03/14/24 15:30 - 03/15/24 06:30 ¹ |
| TCLP | Prep | 3010A | | | 416136 | QTZ5 | EET CF | 03/18/24 09:00 |
| TCLP | Analysis | 6010D | | 1 | 416364 | ZRI4 | EET CF | 03/19/24 10:58 |
| TCLP | Leach | 1311 | | | 416052 | HSP8 | EET CF | 03/14/24 15:30 - 03/15/24 06:30 ¹ |
| TCLP | Prep | 7470A | | | 416603 | A6US | EET CF | 03/21/24 11:54 |
| TCLP | Analysis | 7470A | | 1 | 416777 | A6US | EET CF | 03/22/24 11:59 |
| Total/NA | Analysis | 9095B | | 1 | 416074 | WZC8 | EET CF | 03/15/24 08:58 |
| Total/NA | Analysis | Moisture | | 1 | 415696 | HE7K | EET CF | 03/11/24 13:56 |

Client Sample ID: HA-B-45-SL-0-4

Lab Sample ID: 310-276447-12

Date Collected: 03/07/24 11:00

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 78.4

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Prep | 3546 | | | 415783 | YU9M | EET CF | 03/12/24 11:44 |
| Total/NA | Analysis | 8270E SIM | | 5 | 415819 | V7YZ | EET CF | 03/13/24 17:22 |
| Total/NA | Prep | 3050B | | | 415728 | QTZ5 | EET CF | 03/13/24 10:00 |
| Total/NA | Analysis | 6010D | | 2 | 415910 | ZRI4 | EET CF | 03/13/24 14:55 |
| Total/NA | Prep | 7471B | | | 415955 | NFT2 | EET CF | 03/14/24 09:10 |
| Total/NA | Analysis | 7471B | | 1 | 416137 | NFT2 | EET CF | 03/15/24 13:59 |

Client Sample ID: HA-B-46-SL-4

Lab Sample ID: 310-276447-13

Date Collected: 03/07/24 10:45

Matrix: Solid

Date Received: 03/08/24 16:30

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Analysis | Moisture | | 1 | 415696 | HE7K | EET CF | 03/11/24 13:56 |

Client Sample ID: HA-B-46-SL-4

Lab Sample ID: 310-276447-13

Date Collected: 03/07/24 10:45

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 86.2

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Prep | 3546 | | | 415783 | YU9M | EET CF | 03/12/24 11:44 |
| Total/NA | Analysis | 8270E SIM | | 1 | 415819 | V7YZ | EET CF | 03/13/24 14:47 |

Eurofins Cedar Falls

Lab Chronicle

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-47-SL-1

Lab Sample ID: 310-276447-14

Date Collected: 03/07/24 11:05

Matrix: Solid

Date Received: 03/08/24 16:30

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Analysis | Moisture | | 1 | 415696 | HE7K | EET CF | 03/11/24 13:56 |

Client Sample ID: HA-B-47-SL-1

Lab Sample ID: 310-276447-14

Date Collected: 03/07/24 11:05

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 79.3

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Prep | 3546 | | | 415783 | YU9M | EET CF | 03/12/24 11:44 |
| Total/NA | Analysis | 8270E SIM | | 5 | 415819 | V7YZ | EET CF | 03/13/24 17:42 |
| Total/NA | Prep | 3546 | | | 415783 | YU9M | EET CF | 03/12/24 11:44 |
| Total/NA | Analysis | 8270E SIM | | 50 | 415927 | L0FS | EET CF | 03/14/24 09:12 |
| Total/NA | Prep | 3546 | | | 415783 | YU9M | EET CF | 03/12/24 11:44 |
| Total/NA | Analysis | 8270E SIM | | 50 | 416056 | L0FS | EET CF | 03/15/24 08:44 |

Client Sample ID: HA-B-48-SL-2

Lab Sample ID: 310-276447-15

Date Collected: 03/07/24 11:10

Matrix: Solid

Date Received: 03/08/24 16:30

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Analysis | Moisture | | 1 | 415696 | HE7K | EET CF | 03/11/24 13:56 |

Client Sample ID: HA-B-48-SL-2

Lab Sample ID: 310-276447-15

Date Collected: 03/07/24 11:10

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 68.9

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Prep | 3546 | | | 415783 | YU9M | EET CF | 03/12/24 11:44 |
| Total/NA | Analysis | 8270E SIM | | 50 | 415927 | L0FS | EET CF | 03/14/24 08:52 |
| Total/NA | Prep | 3546 | | | 415783 | YU9M | EET CF | 03/12/24 11:44 |
| Total/NA | Analysis | 8270E SIM | | 50 | 416056 | L0FS | EET CF | 03/15/24 08:25 |

Client Sample ID: HA-B-49-SL-0-2

Lab Sample ID: 310-276447-16

Date Collected: 03/07/24 11:15

Matrix: Solid

Date Received: 03/08/24 16:30

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|--|
| TCLP | Leach | 1311 | | | 415930 | HSP8 | EET CF | 03/13/24 16:00 - 03/14/24 06:30 ¹ |
| TCLP | Prep | 3010A | | | 415964 | QTZ5 | EET CF | 03/14/24 09:50 |
| TCLP | Analysis | 6010D | | 1 | 416042 | ZRI4 | EET CF | 03/14/24 17:36 |
| TCLP | Leach | 1311 | | | 415930 | HSP8 | EET CF | 03/13/24 16:00 - 03/14/24 06:30 ¹ |
| TCLP | Prep | 7470A | | | 415953 | NFT2 | EET CF | 03/14/24 09:01 |
| TCLP | Analysis | 7470A | | 1 | 416023 | NFT2 | EET CF | 03/14/24 14:28 |
| Total/NA | Analysis | 9095B | | 1 | 416074 | WZC8 | EET CF | 03/15/24 08:58 |
| Total/NA | Analysis | Moisture | | 1 | 415696 | HE7K | EET CF | 03/11/24 13:56 |

Eurofins Cedar Falls

Lab Chronicle

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-49-SL-0-2

Lab Sample ID: 310-276447-16

Date Collected: 03/07/24 11:15

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 74.6

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Prep | 3546 | | | 415783 | YU9M | EET CF | 03/12/24 11:44 |
| Total/NA | Analysis | 8270E SIM | | 500 | 416056 | L0FS | EET CF | 03/15/24 10:21 |
| Total/NA | Prep | 3050B | | | 415728 | QTZ5 | EET CF | 03/13/24 10:00 |
| Total/NA | Analysis | 6010D | | 4 | 415910 | ZRI4 | EET CF | 03/13/24 14:57 |
| Total/NA | Prep | 7471B | | | 415955 | NFT2 | EET CF | 03/14/24 09:10 |
| Total/NA | Analysis | 7471B | | 1 | 416137 | NFT2 | EET CF | 03/15/24 14:01 |

Client Sample ID: HA-B-50-SL-0-5

Lab Sample ID: 310-276447-17

Date Collected: 03/07/24 11:50

Matrix: Solid

Date Received: 03/08/24 16:30

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|--|
| TCLP | Leach | 1311 | | | 415930 | HSP8 | EET CF | 03/13/24 16:00 - 03/14/24 06:30 ¹ |
| TCLP | Prep | 3010A | | | 415964 | QTZ5 | EET CF | 03/14/24 09:50 |
| TCLP | Analysis | 6010D | | 1 | 416042 | ZRI4 | EET CF | 03/14/24 17:38 |
| TCLP | Leach | 1311 | | | 415930 | HSP8 | EET CF | 03/13/24 16:00 - 03/14/24 06:30 ¹ |
| TCLP | Prep | 7470A | | | 415953 | NFT2 | EET CF | 03/14/24 09:01 |
| TCLP | Analysis | 7470A | | 1 | 416023 | NFT2 | EET CF | 03/14/24 14:35 |
| Total/NA | Analysis | 9095B | | 1 | 416074 | WZC8 | EET CF | 03/15/24 08:58 |
| Total/NA | Analysis | Moisture | | 1 | 415696 | HE7K | EET CF | 03/11/24 13:56 |

Client Sample ID: HA-B-50-SL-0-5

Lab Sample ID: 310-276447-17

Date Collected: 03/07/24 11:50

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 82.9

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Prep | 3546 | | | 415783 | YU9M | EET CF | 03/12/24 11:44 |
| Total/NA | Analysis | 8270E SIM | | 500 | 416056 | L0FS | EET CF | 03/15/24 10:40 |
| Total/NA | Prep | 3050B | | | 415728 | QTZ5 | EET CF | 03/13/24 10:00 |
| Total/NA | Analysis | 6010D | | 3 | 415910 | ZRI4 | EET CF | 03/13/24 14:59 |
| Total/NA | Prep | 7471B | | | 415955 | NFT2 | EET CF | 03/14/24 09:10 |
| Total/NA | Analysis | 7471B | | 1 | 416137 | NFT2 | EET CF | 03/15/24 14:03 |

Client Sample ID: HA-B-51-SL-0-5

Lab Sample ID: 310-276447-18

Date Collected: 03/07/24 11:55

Matrix: Solid

Date Received: 03/08/24 16:30

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Analysis | Moisture | | 1 | 415696 | HE7K | EET CF | 03/11/24 13:56 |

Lab Chronicle

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Client Sample ID: HA-B-51-SL-0-5

Lab Sample ID: 310-276447-18

Date Collected: 03/07/24 11:55

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 80.6

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA | Prep | 3546 | | | 415783 | YU9M | EET CF | 03/12/24 11:44 |
| Total/NA | Analysis | 8270E SIM | | 100 | 416056 | L0FS | EET CF | 03/15/24 11:00 |
| Total/NA | Prep | 3050B | | | 415728 | QTZ5 | EET CF | 03/13/24 10:00 |
| Total/NA | Analysis | 6010D | | 3 | 415910 | ZRI4 | EET CF | 03/13/24 15:01 |
| Total/NA | Prep | 7471B | | | 415955 | NFT2 | EET CF | 03/14/24 09:10 |
| Total/NA | Analysis | 7471B | | 1 | 416137 | NFT2 | EET CF | 03/15/24 14:10 |

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:
EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

Laboratory: Eurofins Cedar Falls

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | Identification Number | Expiration Date |
|---|-------------|-----------------------|------------------|
| Iowa | State | 007 | 12-01-25 |
| The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification. | | | |
| Analysis Method | Prep Method | Matrix | Analyte |
| Moisture | | Solid | Percent Moisture |
| Moisture | | Solid | Percent Solids |

Method Summary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-1

| Method | Method Description | Protocol | Laboratory |
|-----------|--|----------|------------|
| 8270E SIM | Semivolatile Organic Compounds (GC/MS SIM) | SW846 | EET CF |
| 6010D | Metals (ICP) | SW846 | EET CF |
| 7470A | Mercury (CVAA) | SW846 | EET CF |
| 7471B | Mercury (CVAA) | SW846 | EET CF |
| 9095B | Paint Filter Liquids Test | SW846 | EET CF |
| Moisture | Percent Moisture | EPA | EET CF |
| 1311 | TCLP Extraction | SW846 | EET CF |
| 3010A | Preparation, Total Metals | SW846 | EET CF |
| 3050B | Preparation, Metals | SW846 | EET CF |
| 3546 | Microwave Extraction | SW846 | EET CF |
| 7470A | Preparation, Mercury | SW846 | EET CF |
| 7471B | Preparation, Mercury | SW846 | EET CF |

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 CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401



310-276447 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

| | | | |
|---|----------------------|---|---|
| Client Information | | | |
| Client: <u>GHD Services Inc</u> | | | |
| City/State: | <u>Des Moines</u> | STATE <u>IA</u> | Project: |
| Receipt Information | | | |
| Date/Time Received: | DATE <u>3/8/2024</u> | TIME <u>1630</u> | Received By: <u>JB</u> |
| Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____ | | | |
| Condition of Cooler/Containers | | | |
| Sample(s) received in Cooler? | | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | If yes: Cooler ID: _____ |
| Multiple Coolers? | | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | If yes: Cooler # _____ of _____ |
| Cooler Custody Seals Present? | | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Sample Custody Seals Present? | | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Trip Blank Present? | | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | If yes: Which VOA samples are in cooler? ↓ |
| Temperature Record | | | |
| Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE | | | |
| Thermometer ID: <u>2</u> | | Correction Factor (°C): <u>0</u> | |
| • Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature | | | |
| Uncorrected Temp (°C): <u>3.3</u> | | Corrected Temp (°C): <u>3.3</u> | |
| • Sample Container Temperature | | | |
| Container(s) used: | <u>CONTAINER 1</u> | | <u>CONTAINER 2</u> |
| Uncorrected Temp (°C): | | | |
| Corrected Temp (°C): | | | |
| Exceptions Noted | | | |
| 1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| 2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| NOTE If yes, contact PM before proceeding If no, proceed with login | | | |
| Additional Comments | | | |
| | | | |
| | | | |
| | | | |

Chain of Custody Record

DSM 214



Environment Testing

| | | | | | | | | | |
|--|--|--|--|---|--|--|--|---|--|
| Client Information | | Sampler Thao Larson | | Lab PM. Zach Bindert | | Carrier Tracking No(s) | | COC No. | |
| Client Contact: Brian Broderick | | Phone: 515-414-3938 | | E-Mail: Zach.Bindert@ET.eurofinsUS.com | | State of Origin: Iowa | | Page: Page 1 of 1 | |
| Company: GHD Services Inc. | | PWSID: | | Analysis Requested | | Job #: | | | |
| Address: 11228 Aurora Avenue | | Due Date Requested | | Field Filtered Sample (Yes or No) | | TCLP Extraction - SW1311 | | TCLP RCRA Metals - SW 60107470A | |
| City: Des Moines | | TAT Requested (days): Standard | | Perform MS/MSD (Yes or No) | | Paint Filter - SW 9095 | | Total RCRA Metals - SW6107471A | |
| State Zip: IA, 50322-7905 | | Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | Sample Type (C=Comp, G=Grab) <input checked="" type="checkbox"/> G=Grab | | Matrix (W=Water, S=solid, O=waste/oli, B=to Tissue, A=Air) | | PHs - SW 8720SIM | |
| Phone: 515-414-3936(Tel) | | PO #: 340-017223 | | Sample Date | | Sample Time | | Preservation Codes | |
| Email: Brian.Broderick@ghd.com | | WO #: | | 3/7/24 | | 0830 | | G S | |
| Project Name: John Deere Des Moines Works | | Project #: | | 3/7/24 | | 0835 | | G S | |
| Site: John Deere Des Moines Works | | SSOW#: 1103217-022-2024-03 | | 3/7/24 | | 0840 | | G S | |
| | | | | 3/7/24 | | 0855 | | G S | |
| | | | | 3/7/24 | | 0925 | | G S | |
| | | | | 3/7/24 | | 0930 | | C S | |
| | | | | 3/7/24 | | 1000 | | G S | |
| | | | | 3/7/24 | | 1005 | | C S | |
| | | | | 3/7/24 | | 1030 | | G S | |
| | | | | 3/7/24 | | 1040 | | G S | |
| | | | | 3/7/24 | | 1045 | | G S | |
| Possible Hazard Identification | | <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Irritant <input type="checkbox"/> Other (specify) | | <input type="checkbox"/> on B <input type="checkbox"/> own <input type="checkbox"/> logical | | Ra | | Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) | |
| Deliverable Requested I II III IV Other (specify) | | <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab | | Archive For | | Months | | | |
| Empty Kit Relinquished by | | Date: | | Time: | | Method of Shipment: | | | |
| Relinquished by Thao Larson | | Date/Time: 3/8/24 0900 | | Company GHD | | Received by Eunp | | Date/Time: 3/8/24 900 | |
| Relinquished by | | Date/Time: | | Company | | Received by SH | | Date/Time: 3/8/24 1630 | |
| Relinquished by | | Date/Time: | | Company | | Received by | | Date/Time: | |
| Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | Custody Seal No | | Cooler Temperature(s) °C and Other Remarks: | | | | | |

Sampler

Ver- 01/16/2019

Zachary Bindert

From: Thao Larson <Thao.Larson@ghd.com>
Sent: Monday, March 11, 2024 11:43 AM
To: Zachary Bindert
Cc: Brian Broderick
Subject: RE: 310-276447-1 John Deere Des Moines Works Sample Confirmation files from Eurofins North Central

You don't often get email from thao.larson@ghd.com. [Learn why this is important](#)

CAUTION: EXTERNAL EMAIL - Sent from an email domain that is not formally trusted by Eurofins.

Do not click on links or open attachments unless you recognise the sender and are certain that the content is safe.

Hi Zach,

Please cancel the TCLP and the paint filter test for HA-B-51-SL-0-5 and run the Total RCRA Metals and the Total PAH analysis.

Thank you,

Thao Larson

D +1 515 414 3938 | M 01 515 491 7791 | E Thao.Larson@ghd.com

From: Zach Bindert <TALS@reports.et.eurofinsus.com>
Sent: Monday, March 11, 2024 8:36 AM
To: Brian Broderick <brian.broderick@ghd.com>; Clint Oberbroeckling <clint.oberbroeckling@ghd.com>; Grant Anderson <grant.anderson@ghd.com>; Tim Harris <tim.harris@ghd.com>
Subject: 310-276447-1 John Deere Des Moines Works Sample Confirmation files from Eurofins North Central

Some people who received this message don't often get email from tals@reports.et.eurofinsus.com. [Learn why this is important](#)

Hello,

Attached, please find the Sample Confirmation files for job 310-276447-1; John Deere Des Moines Works

Please feel free to contact me if you have any questions.

Thank you.

Zach T Bindert

Client Services Manager

Eurofins Cedar Falls
Phone: 319-277-2401

E-mail: www.eurofinsus.com/env



Reference: [310-700250]
Attachments: 3

CONFIDENTIALITY NOTICE: This email, including any attachments, is confidential and may be privileged. If you are not the intended recipient please notify the sender immediately, and please delete it; you should not copy it or use it for any purpose or disclose its contents to any other person. GHD and its affiliates reserve the right to monitor and modify all email communications through their networks.

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Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 310-276447-1

Login Number: 276447

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Bennett, Samantha

| Question | Answer | Comment |
|--|--------|---------|
| Radioactivity wasn't checked or is \leq background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | N/A | |
| Sample custody seals, if present, are intact. | N/A | |
| 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 | |
| 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 $<6\text{mm}$ (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

ANALYTICAL REPORT

PREPARED FOR

Attn: Brian Broderick
GHD Services Inc.
11228 Aurora Avenue
Des Moines, Iowa 50322-7905

Generated 4/5/2024 1:49:49 PM

JOB DESCRIPTION

John Deere Des Moines Works

JOB NUMBER

310-276447-2

Eurofins Cedar Falls

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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 Environment Testing North Central, LLC Project Manager.

Authorization



Generated
4/5/2024 1:49:49 PM

Authorized for release by
Zach Bindert, Client Service Manager
Zach.Bindert@et.eurofinsus.com
(319)277-2401

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Case Narrative

Client: GHD Services Inc.
Project: John Deere Des Moines Works

Job ID: 310-276447-2

Job ID: 310-276447-2

Eurofins Cedar Falls

Job Narrative 310-276447-2

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 3/8/2024 4:30 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.3°C.

GC/MS Semi VOA

Method 8270E_SIM: The following sample(s) was received with less than 2 days remaining on the holding time. As such, the laboratory had insufficient time remaining to perform the analysis within holding time.

Method 8270E_SIM: The following sample was diluted due to the nature of the sample matrix: HA-B-49-SL-0-2 (310-276447-16). Elevated reporting limits (RLs) are provided.

Method 8270E_SIM: Surrogate recovery for the following sample was outside control limits: HA-B-49-SL-0-2 (310-276447-16). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

Eurofins Cedar Falls

Sample Summary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-2

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---------------|------------------|--------|----------------|----------------|
| 310-276447-16 | HA-B-4L-Sd-0-2 | Soli8 | 03/07/24 11:15 | 03/09/24 16:30 |

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Detection Summary

Client: GHD Services Inc.

Job ID: 310-276447-2

Project/Site: John Deere Des Moines Works

Client Sample ID: HA-B-49-SL-0-2

Lab Sample ID: 310-276447-16

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------|--------|-----------|------|-----|-------|---------|---|-----------|-----------|
| Acenaphthene | 9.12 | H | 6.39 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Anthracene | 25.5 | H | 6.39 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)anthracene | 54.1 | H | 6.39 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Benzo(a)pyrene | 52.9 | H | 6.39 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Benzo(b)fluoranthene | 71.1 | H | 6.39 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Benzo(g,h,i)perylene | 29.0 | H | 6.39 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Benzo(k)fluoranthene | 28.4 | H | 6.39 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Chrysene | 58.9 | H | 6.39 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Dibenz(a,h)anthracene | 7.86 | H | 6.39 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Fluoranthene | 127 | H | 6.39 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Fluorene | 11.2 | H | 6.39 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Indeno(1,2,3-cd)pyrene | 33.2 | H | 6.39 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Phenanthrene | 121 | H | 6.39 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |
| Pyrene | 91.4 | H | 6.39 | | mg/Kg | 50 | ✱ | 8270E SIM | Total/NA |

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-2

Client Sample ID: HA-B-49-SL-0-2

Lab Sample ID: 310-276447-16

Date Collected: 03/07/24 11:15

Matrix: Solid

Date Received: 03/08/24 16:30

Percent Solids: 74.6

Method: SW846 8270E SIM - Semivolatile Organic Compounds (GC/MS SIM)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|--------|-----------|------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | 9.12 | H | 6.39 | | mg/Kg | ✱ | 04/03/24 09:40 | 04/05/24 11:04 | 50 |
| Acenaphthylene | <6.39 | H | 6.39 | | mg/Kg | ✱ | 04/03/24 09:40 | 04/05/24 11:04 | 50 |
| Anthracene | 25.5 | H | 6.39 | | mg/Kg | ✱ | 04/03/24 09:40 | 04/05/24 11:04 | 50 |
| Benzo(a)anthracene | 54.1 | H | 6.39 | | mg/Kg | ✱ | 04/03/24 09:40 | 04/05/24 11:04 | 50 |
| Benzo(a)pyrene | 52.9 | H | 6.39 | | mg/Kg | ✱ | 04/03/24 09:40 | 04/05/24 11:04 | 50 |
| Benzo(b)fluoranthene | 71.1 | H | 6.39 | | mg/Kg | ✱ | 04/03/24 09:40 | 04/05/24 11:04 | 50 |
| Benzo(g,h,i)perylene | 29.0 | H | 6.39 | | mg/Kg | ✱ | 04/03/24 09:40 | 04/05/24 11:04 | 50 |
| Benzo(k)fluoranthene | 28.4 | H | 6.39 | | mg/Kg | ✱ | 04/03/24 09:40 | 04/05/24 11:04 | 50 |
| Chrysene | 58.9 | H | 6.39 | | mg/Kg | ✱ | 04/03/24 09:40 | 04/05/24 11:04 | 50 |
| Dibenz(a,h)anthracene | 7.86 | H | 6.39 | | mg/Kg | ✱ | 04/03/24 09:40 | 04/05/24 11:04 | 50 |
| Fluoranthene | 127 | H | 6.39 | | mg/Kg | ✱ | 04/03/24 09:40 | 04/05/24 11:04 | 50 |
| Fluorene | 11.2 | H | 6.39 | | mg/Kg | ✱ | 04/03/24 09:40 | 04/05/24 11:04 | 50 |
| Indeno(1,2,3-cd)pyrene | 33.2 | H | 6.39 | | mg/Kg | ✱ | 04/03/24 09:40 | 04/05/24 11:04 | 50 |
| 2-Methylnaphthalene | <6.39 | H | 6.39 | | mg/Kg | ✱ | 04/03/24 09:40 | 04/05/24 11:04 | 50 |
| Naphthalene | <6.39 | H | 6.39 | | mg/Kg | ✱ | 04/03/24 09:40 | 04/05/24 11:04 | 50 |
| Phenanthrene | 121 | H | 6.39 | | mg/Kg | ✱ | 04/03/24 09:40 | 04/05/24 11:04 | 50 |
| Pyrene | 91.4 | H | 6.39 | | mg/Kg | ✱ | 04/03/24 09:40 | 04/05/24 11:04 | 50 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 119 | | 37 - 131 | 04/03/24 09:40 | 04/05/24 11:04 | 50 |
| Nitrobenzene-d5 (Surr) | 101 | | 30 - 138 | 04/03/24 09:40 | 04/05/24 11:04 | 50 |
| Terphenyl-d14 (Surr) | 303 | S1+ | 24 - 145 | 04/03/24 09:40 | 04/05/24 11:04 | 50 |

Eurofins Cedar Falls

Definitions/Glossary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-2

Qualifiers

GC/MS Semi VOA

| Qualifier | Qualifier Description |
|-----------|---|
| H | Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements. |
| S1+ | Surrogate recovery exceeds control limits, high biased. |

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 |

Surrogate Summary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-2

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

Matrix: Solid

Prep Type: Total/NA

| | | Percent Surrogate Recovery (Acceptance Limits) | | |
|-------------------------------|--------------------|--|-----------------|------------------|
| Lab Sample ID | Client Sample ID | FBP (37-131) | NBZ (30-138) | TPHL (24-145) |
| 310-276447-16 | HA-B-49-SL-0-2 | 119 | 101 | 303 S1+ |
| LCS 310-417716/2-A | Lab Control Sample | 87 | 103 | 88 |
| MB 310-417716/1-A | Method Blank | 85 | 97 | 89 |
| Surrogate Legend | | | | |
| FBP = 2-Fluorobiphenyl (Surr) | | | | |
| NBZ = Nitrobenzene-d5 (Surr) | | | | |
| TPHL = Terphenyl-d14 (Surr) | | | | |

QC Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-2

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

Lab Sample ID: MB 310-417716/1-A

Matrix: Solid

Analysis Batch: 417943

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 417716

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------|-----------|--------------|--------|-----|-------|---|----------------|----------------|---------|
| Acenaphthene | <0.0100 | | 0.0100 | | mg/Kg | | 04/03/24 09:40 | 04/05/24 10:25 | 1 |
| Acenaphthylene | <0.0100 | | 0.0100 | | mg/Kg | | 04/03/24 09:40 | 04/05/24 10:25 | 1 |
| Anthracene | <0.0100 | | 0.0100 | | mg/Kg | | 04/03/24 09:40 | 04/05/24 10:25 | 1 |
| Benzo(a)anthracene | <0.0100 | | 0.0100 | | mg/Kg | | 04/03/24 09:40 | 04/05/24 10:25 | 1 |
| Benzo(a)pyrene | <0.0100 | | 0.0100 | | mg/Kg | | 04/03/24 09:40 | 04/05/24 10:25 | 1 |
| Benzo(b)fluoranthene | <0.0100 | | 0.0100 | | mg/Kg | | 04/03/24 09:40 | 04/05/24 10:25 | 1 |
| Benzo(g,h,i)perylene | <0.0100 | | 0.0100 | | mg/Kg | | 04/03/24 09:40 | 04/05/24 10:25 | 1 |
| Benzo(k)fluoranthene | <0.0100 | | 0.0100 | | mg/Kg | | 04/03/24 09:40 | 04/05/24 10:25 | 1 |
| Chrysene | <0.0100 | | 0.0100 | | mg/Kg | | 04/03/24 09:40 | 04/05/24 10:25 | 1 |
| Dibenz(a,h)anthracene | <0.0100 | | 0.0100 | | mg/Kg | | 04/03/24 09:40 | 04/05/24 10:25 | 1 |
| Fluoranthene | <0.0100 | | 0.0100 | | mg/Kg | | 04/03/24 09:40 | 04/05/24 10:25 | 1 |
| Fluorene | <0.0100 | | 0.0100 | | mg/Kg | | 04/03/24 09:40 | 04/05/24 10:25 | 1 |
| Indeno(1,2,3-cd)pyrene | <0.0100 | | 0.0100 | | mg/Kg | | 04/03/24 09:40 | 04/05/24 10:25 | 1 |
| 2-Methylnaphthalene | <0.0100 | | 0.0100 | | mg/Kg | | 04/03/24 09:40 | 04/05/24 10:25 | 1 |
| Naphthalene | <0.0100 | | 0.0100 | | mg/Kg | | 04/03/24 09:40 | 04/05/24 10:25 | 1 |
| Phenanthrene | <0.0100 | | 0.0100 | | mg/Kg | | 04/03/24 09:40 | 04/05/24 10:25 | 1 |
| Pyrene | <0.0100 | | 0.0100 | | mg/Kg | | 04/03/24 09:40 | 04/05/24 10:25 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|--------------|--------------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 85 | | 37 - 131 | 04/03/24 09:40 | 04/05/24 10:25 | 1 |
| Nitrobenzene-d5 (Surr) | 97 | | 30 - 138 | 04/03/24 09:40 | 04/05/24 10:25 | 1 |
| Terphenyl-d14 (Surr) | 89 | | 24 - 145 | 04/03/24 09:40 | 04/05/24 10:25 | 1 |

Lab Sample ID: LCS 310-417716/2-A

Matrix: Solid

Analysis Batch: 417943

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 417716

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|------------------------|-------------|------------|---------------|-------|---|------|-------------|
| Acenaphthene | 0.0642 | 0.06132 | | mg/Kg | | 96 | 50 - 124 |
| Acenaphthylene | 0.0642 | 0.06289 | | mg/Kg | | 98 | 52 - 119 |
| Anthracene | 0.0642 | 0.06376 | | mg/Kg | | 99 | 47 - 124 |
| Benzo(a)anthracene | 0.0642 | 0.06303 | | mg/Kg | | 98 | 54 - 138 |
| Benzo(a)pyrene | 0.0642 | 0.06312 | | mg/Kg | | 98 | 47 - 125 |
| Benzo(b)fluoranthene | 0.0642 | 0.06541 | | mg/Kg | | 102 | 49 - 138 |
| Benzo(g,h,i)perylene | 0.0642 | 0.05354 | | mg/Kg | | 83 | 33 - 143 |
| Benzo(k)fluoranthene | 0.0642 | 0.06539 | | mg/Kg | | 102 | 47 - 134 |
| Chrysene | 0.0642 | 0.06327 | | mg/Kg | | 99 | 48 - 127 |
| Dibenz(a,h)anthracene | 0.0642 | 0.05471 | | mg/Kg | | 85 | 40 - 141 |
| Fluoranthene | 0.0642 | 0.06324 | | mg/Kg | | 99 | 43 - 133 |
| Fluorene | 0.0642 | 0.06108 | | mg/Kg | | 95 | 52 - 126 |
| Indeno(1,2,3-cd)pyrene | 0.0642 | 0.05549 | | mg/Kg | | 86 | 40 - 139 |
| 2-Methylnaphthalene | 0.0642 | 0.06091 | | mg/Kg | | 95 | 47 - 128 |
| Naphthalene | 0.0642 | 0.05994 | | mg/Kg | | 93 | 46 - 118 |
| Phenanthrene | 0.0642 | 0.06437 | | mg/Kg | | 100 | 47 - 132 |
| Pyrene | 0.0642 | 0.06177 | | mg/Kg | | 96 | 37 - 135 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|-------------------------|---------------|---------------|----------|
| 2-Fluorobiphenyl (Surr) | 87 | | 37 - 131 |

Eurofins Cedar Falls

QC Sample Results

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-2

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

Lab Sample ID: LCS 310-417716/2-A
Matrix: Solid
Analysis Batch: 417943

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 417716

| Surrogate | LCS | | Limits |
|------------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| Nitrobenzene-d5 (Surr) | 103 | | 30 - 138 |
| Terphenyl-d14 (Surr) | 88 | | 24 - 145 |

QC Association Summary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-2

GC/MS Semi VOA

Prep Batch: 417716

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 310-276447-16 | HA-B-49-SL-0-2 | Total/NA | Solid | 3546 | |
| MB 310-417716/1-A | Method Blank | Total/NA | Solid | 3546 | |
| LCS 310-417716/2-A | Lab Control Sample | Total/NA | Solid | 3546 | |

Analysis Batch: 417943

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|-----------|------------|
| 310-276447-16 | HA-B-49-SL-0-2 | Total/NA | Solid | 8270E SIM | 417716 |
| MB 310-417716/1-A | Method Blank | Total/NA | Solid | 8270E SIM | 417716 |
| LCS 310-417716/2-A | Lab Control Sample | Total/NA | Solid | 8270E SIM | 417716 |

Lab Chronicle

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-2

Client Sample ID: HA-B-34-SL-1-0
Date Collecte/ : 12816803 77:7R
Date Peceise/ : 1281u803 7M21

Lab Sample ID: 271-06MB36-7M
x atrid: Soli/
vercent Soli/ T: 63yM

| v rep zNpe | Batch zNpe | Batch x etho/ | PFn | DilFtion 9actor | Batch 5 Fmber | AnalNTt | Lab | v repare/ or AnalN e/ |
|------------|---------------|------------------|-----|--------------------|------------------|---------|--------|--------------------------|
| Total/NA | Prep | 3546 | | | 417716 | YU9M | EET CF | 04/03/24 09:40 |
| Total/NA | Analysis | 8270E SIM | | 50 | 417943 | V7YZ | EET CF | 04/05/24 11:04 |

LaboratorNPeferenceT:
EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: GHD Services Inc.
Project/Site: John Deere Des Moines Works

Job ID: 310-276447-2

Laboratory: Eurofins Cedar Falls

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

| Authority | Program | Identification Number | Expiration Date |
|-----------|---------|-----------------------|-----------------|
| Iowa | State | 007 | 12-01-25 |

| |
|----|
| 1 |
| 2 |
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| 6 |
| 7 |
| 8 |
| 9 |
| 10 |
| 11 |
| 12 |
| 13 |
| 14 |

Method Summary

Client: GHD Services Inc.

Project/Site: John Deere Des Moines Works

Job ID: 310-276447-2

| Method | Method Description | Protocol | Laboratory |
|-----------|--|----------|------------|
| 8270E SIM | Semivolatile Organic Compounds (GC/MS SIM) | SW846 | EET CF |
| 3546 | Microwave Extraction | SW846 | EET CF |

Protocol References:

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

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

Login Sample Receipt Checklist

Client: GHD Services Inc.

Job Number: 310-276447-2

Login Number: 276447

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Bennett, Samantha

| Question | Answer | Comment |
|--|--------|---------|
| Radioactivity wasn't checked or is \leq background as measured by a survey meter. | N/A | |
| The cooler's custody seal, if present, is intact. | N/A | |
| Sample custody seals, if present, are intact. | N/A | |
| 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 | |
| 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 $<6\text{mm}$ (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

Attachment C

Data Verification – March 2024

Data Verification Report

March 27, 2024

| | | | |
|---------------------|---|--------------------|------------------------|
| To | Brian Broderick, GHD | Project No. | 11103217.035.02 |
| Copy To | Thao Larson, GHD | Email | grant.anderson@ghd.com |
| From | Grant Anderson/lg/22 | Contact No. | 612-524-6836 |
| Project Name | John Deere Des Moines Works | | |
| Subject | Analytical Results and Data Verification SWMU 25 North Area Waste Characterization Soil Sampling John Deere Des Moines Works Site Ankeny, Iowa March 2024 | | |

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

1. Introduction

This document details a data verification of analytical results for soil samples collected in support of SWMU 25 North Area Waste Characterization Soil Sampling at the John Deere Des Moines Works Site in March 2024. Samples were submitted to Eurofins – Cedar Falls located in Cedar Falls, Iowa. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Tables 2A and 2B. A summary of the analytical methodology is presented in Table 3.

Standard GHD report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, laboratory duplicates, recovery data from surrogate spikes, laboratory control samples (LCS), matrix spikes (MS) and field QA/QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

1. "National Functional Guidelines for Organic Superfund Methods Data Review", EPA 540-R-20-005, November 2020
2. "National Functional Guidelines for Inorganic Superfund Methods Data Review", EPA 542-R-20-006, November 2020

Items 1. and 2. will subsequently be referred to as the "Guidelines" in this report.

2. Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in Table 3. Sample chain of custody documents and the analytical report were used to determine sample holding times. With the exception of polynuclear aromatic hydrocarbon (PAH) analysis of sample HA-B-49-SL-0-2, all samples were prepared and analyzed within the required

holding times. Sample HA-B-49-SL-0-2 was re-extracted and re-analyzed due to the initial composite PAH analysis results were an order of magnitude higher than the individual sample results. Table 4 lists the holding time exceedance. Associated sample data are qualified as noted in the table. Both sets of results are included.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (0-6°C).

3. Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

Laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4. Surrogate Spike Recoveries - Organic Analyses

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for polynuclear aromatic hydrocarbons (PAH) analyses were spiked with the appropriate number of surrogate compounds prior to sample extraction or analysis.

Due to necessary sample dilutions of five times and greater for PAH analytes, some surrogate recoveries could not be assessed.

Each individual surrogate compound is expected to meet the laboratory control limits. For PAH analyses, it is generally acceptable for there to be one outlying surrogate in the base/neutral fraction provided that the recovery is at least 10 percent.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries met the above criteria.

5. Laboratory Control Sample Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

Organic Analyses

The LCS contained all compounds of interest. LCS recoveries were assessed per the "Guidelines" using the laboratory control limits. All LCS recoveries were within the laboratory control limits, demonstrating acceptable analytical accuracy.

Inorganic Analyses

The LCS contained all analytes of interest. LCS recoveries were assessed per the "Guidelines" using the laboratory control limits. All LCS recoveries were within the control limits, demonstrating acceptable analytical accuracy.

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the preparation process, measurement procedures, and accuracy of a particular analysis, samples are spiked with known concentrations of the analytes of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision.

MS/MSD analyses were performed as noted in Table 1.

If the original sample concentration is significantly greater than the spike concentration (> four times), the recovery is not assessed.

Due to necessary sample dilutions of five times and greater for PAH parameters, some MS/MSD recoveries could not be assessed.

Organic Analyses

The MS/MSD samples were spiked with all compounds of interest. All percent recoveries and RPD values were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

Inorganic Analyses

The MS/MSD samples were spiked with the analytes of interest, and the results were evaluated using the "Guidelines" using the laboratory control limits. All percent recoveries and RPD values were within the control limits, demonstrating acceptable analytical accuracy and precision.

7. Laboratory Duplicate Sample Analyses

Analytical precision is evaluated based on the analysis of laboratory duplicate samples. Laboratory duplicate samples were prepared and analyzed by the laboratory for free liquid analyses. The duplicate results were evaluated per the "Guidelines" using the laboratory control limits. All duplicate analyses performed met the above criteria demonstrating acceptable analytical precision.

8. Field QA/QC Samples

The field QA/QC consisted of two field duplicate sample sets.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, two field duplicate sample sets were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 100 percent. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criterion is two times the RL value.

Table 5 lists sample results with duplicate variability. Associated sample results are qualified as noted in the table. The remaining field duplicate results met the above criteria.

9. Analyte Reporting

The laboratory reported detected results down to the RL in Tables 2A and 2B. Non-detect results were presented as non-detect at the RL in Tables 2A and 2B.

10. Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Tables 2A and 2B are acceptable with the specific qualifications noted herein.

Regards,

A handwritten signature in black ink, appearing to read "Grant Anderson". The signature is fluid and cursive, with the first name "Grant" and last name "Anderson" clearly distinguishable.

Grant Anderson
Digital Intelligence - Data Management - Data Validator

Table 1

Sample Collection and Analysis Summary
SWMU 25 Waste Characterization Soil Sampling Analytical Results and Data Verification-March 2024
John Deere Des Moines Works
Ankeny, Iowa
March 2024

| Sample Identification | Location | Depth (ft. bgs) | Matrix | Collection Date (mm/dd/yyyy) | Collection Time (hr:min) | Analysis/Parameters | | | | Comments |
|-----------------------|----------|--------------------|--------|---------------------------------|-----------------------------|---------------------|--------|-------------|--------------|---------------------|
| | | | | | | PAH | Metals | TCLP Metals | Free Liquids | |
| HA-B-34-SL-1 | HA-B-34 | 1 | soil | 03/07/2024 | 08:30 | x | | | | |
| HA-B-35-SL-3 | HA-B-35 | 3 | soil | 03/07/2024 | 08:35 | x | | | | |
| HA-B-36-SL-4 | HA-B-36 | 4 | soil | 03/07/2024 | 08:40 | x | | | | |
| HA-B-37-SL-5 | HA-B-37 | 5 | soil | 03/07/2024 | 08:55 | x | | | | |
| HA-B-38-SL-1 | HA-B-38 | 1 | soil | 03/07/2024 | 09:25 | x | | | | |
| HA-B-39-SL-0-1 | HA-B-39 | 0-1 | soil | 03/07/2024 | 09:30 | x | x | x | x | |
| HA-B-40-SL-1 | HA-B-40 | 1 | soil | 03/07/2024 | 10:00 | x | | | | |
| HA-B-41-SL-0-1 | HA-B-41 | 0-1 | soil | 03/07/2024 | 10:05 | x | x | x | x | |
| HA-B-42-SL-1 | HA-B-42 | 1 | soil | 03/07/2024 | 10:30 | x | | | | |
| HA-B-43-SL-3 | HA-B-43 | 3 | soil | 03/07/2024 | 10:40 | x | | | | |
| HA-B-44-SL-4 | HA-B-44 | 4 | soil | 03/07/2024 | 10:45 | x | | | | |
| HA-B-45-SL-0-4 | HA-B-45 | 0-4 | soil | 03/07/2024 | 11:00 | x | x | x | x | |
| HA-B-46-SL-4 | HA-B-44 | 4 | soil | 03/07/2024 | 10:45 | x | | | | Duplicate (HA-B-44) |
| HA-B-47-SL-1 | HA-B-47 | 1 | soil | 03/07/2024 | 11:05 | x | | | | |
| HA-B-48-SL-2 | HA-B-48 | 2 | soil | 03/07/2024 | 11:10 | x | | | | |
| HA-B-49-SL-0-2 | HA-B-49 | 0-2 | soil | 03/07/2024 | 11:15 | x | x | x | x | |
| HA-B-50-SL-0-5 | HA-B-50 | 0-5 | soil | 03/07/2024 | 11:50 | x | x | x | x | |
| HA-B-51-SL-0-5 | HA-B-50 | 0-5 | soil | 03/07/2024 | 11:55 | x | x | | | Duplicate (HA-B-50) |

Notes:

PAH - Polynuclear Aromatic Hydrocarbons

TCLP - Toxicity Characteristic Leaching Procedure

Table 2A

Validated Analytical Results Summary – Soil
SWMU 25 Waste Characterization Soil Sampling
John Deere Des Moines Works
Ankeny, Iowa
March 2024

| Location ID: Sample Name: Sample Date: Depth: | | HA-B-34 HA-B-34-SL-1 03/07/2024 1 ft BGS | HA-B-35 HA-B-35-SL-3 03/07/2024 3 ft BGS | HA-B-36 HA-B-36-SL-4 03/07/2024 4 ft BGS | HA-B-37 HA-B-37-SL-5 03/07/2024 5 ft BGS | HA-B-38 HA-B-38-SL-1 03/07/2024 1 ft BGS | HA-B-39 HA-B-39-SL-0-1 03/07/2024 0-1 ft BGS | HA-B-40 HA-B-40-SL-1 03/07/2024 1 ft BGS | HA-B-41 HA-B-41-SL-0-1 03/07/2024 0-1 ft BGS | HA-B-42 HA-B-42-SL-1 03/07/2024 1 ft BGS | HA-B-43 HA-B-43-SL-3 03/07/2024 3 ft BGS | HA-B-44 HA-B-44-SL-4 03/07/2024 4 ft BGS |
|--|-------|---|---|---|---|---|---|---|---|---|---|---|
| Parameters | Unit | | | | | | | | | | | |
| Semivolatile Organic Compounds, SIM | | | | | | | | | | | | |
| 2-Methylnaphthalene | mg/kg | 3.39 | 0.179 | 0.996 | 0.544 | 0.0570 U | 0.306 | 11.2 U | 0.461 U | 0.403 U | 0.0580 U | 0.0115 U |
| Acenaphthene | mg/kg | 17.3 | 0.634 | 6.84 | 2.66 | 0.0936 | 0.867 | 11.2 U | 0.461 U | 0.506 | 0.0580 U | 0.0115 U |
| Acenaphthylene | mg/kg | 0.510 | 0.119 U | 0.235 U | 0.173 U | 0.0570 U | 0.172 U | 11.2 U | 0.461 U | 0.403 U | 0.0580 U | 0.0115 U |
| Anthracene | mg/kg | 90.3 | 1.72 | 45.4 | 9.15 | 0.222 | 1.90 | 9.50 | 1.37 | 1.26 | 0.0580 U | 0.0115 U |
| Benzo(a)anthracene | mg/kg | 181 | 4.40 | 99.3 | 30.4 | 0.535 | 5.50 | 29.9 | 5.11 | 4.46 | 0.0632 | 0.0292 |
| Benzo(a)pyrene | mg/kg | 166 | 3.89 | 98.1 | 27.3 | 0.506 | 4.63 | 28.5 | 5.26 | 4.61 | 0.0692 | 0.0340 |
| Benzo(b)fluoranthene | mg/kg | 204 | 5.15 | 127 | 34.8 | 0.737 | 6.33 | 37.8 | 6.84 | 6.26 | 0.0947 | 0.0496 |
| Benzo(g,h,i)perylene | mg/kg | 98.6 | 2.66 | 57.5 | 11.0 | 0.349 | 2.90 | 14.6 | 5.31 | 3.48 | 0.0714 | 0.0298 |
| Benzo(k)fluoranthene | mg/kg | 83.1 | 1.67 | 46.1 | 8.30 | 0.243 | 2.52 | 11.3 | 2.47 | 2.29 | 0.0580 U | 0.0202 |
| Chrysene | mg/kg | 180 | 5.09 | 103 | 31.1 | 0.697 | 6.69 | 30.2 | 6.02 | 5.59 | 0.0757 | 0.0381 |
| Dibenz(a,h)anthracene | mg/kg | 23.2 | 0.796 | 15.5 | 3.64 | 0.0893 | 0.928 | 4.82 | 1.27 | 0.875 | 0.0580 U | 0.0115 U |
| Fluoranthene | mg/kg | 450 | 17.4 | 254 | 76.0 | 1.41 | 22.6 | 73.1 | 11.0 | 14.7 | 0.168 | 0.0670 |
| Fluorene | mg/kg | 40.9 | 0.904 | 9.94 | 3.71 | 0.134 | 1.02 | 11.2 U | 0.482 | 0.692 | 0.0580 U | 0.0115 U |
| Indeno(1,2,3-cd)pyrene | mg/kg | 116 | 3.31 | 68.5 | 22.1 | 0.423 | 3.55 | 20.0 | 5.90 | 3.99 | 0.0736 | 0.0322 |
| Naphthalene | mg/kg | 8.10 | 0.390 | 2.29 | 1.36 | 0.0678 | 0.685 | 11.2 U | 0.461 U | 0.403 U | 0.0580 U | 0.0115 U |
| Phenanthrene | mg/kg | 373 | 14.3 | 183 | 56.4 | 1.53 | 20.8 | 63.6 | 7.10 | 7.95 | 0.111 | 0.0382 |
| Pyrene | mg/kg | 341 | 7.29 | 189 | 56.3 | 0.965 | 9.18 | 52.7 | 8.24 | 11.7 | 0.128 | 0.0505 |
| Metals | | | | | | | | | | | | |
| Arsenic | mg/kg | -- | -- | -- | -- | -- | 8.94 U | -- | 14.1 U | -- | -- | -- |
| Barium | mg/kg | -- | -- | -- | -- | -- | 91.9 | -- | 96.5 | -- | -- | -- |
| Cadmium | mg/kg | -- | -- | -- | -- | -- | 2.24 U | -- | 3.54 U | -- | -- | -- |
| Chromium | mg/kg | -- | -- | -- | -- | -- | 54.9 | -- | 33.9 | -- | -- | -- |
| Lead | mg/kg | -- | -- | -- | -- | -- | 123 | -- | 65.3 | -- | -- | -- |
| Mercury | mg/kg | -- | -- | -- | -- | -- | 0.0514 | -- | 0.0185 U | -- | -- | -- |
| Selenium | mg/kg | -- | -- | -- | -- | -- | 11.2 U | -- | 17.7 U | -- | -- | -- |
| Silver | mg/kg | -- | -- | -- | -- | -- | 2.24 U | -- | 3.54 U | -- | -- | -- |
| General Chemistry | | | | | | | | | | | | |
| Free liquid | none | -- | -- | -- | -- | -- | CNF | -- | CNF | -- | -- | -- |

Table 2A

Validated Analytical Results Summary – Soil
SWMU 25 Waste Characterization Soil Sampling
John Deere Des Moines Works
Ankeny, Iowa
March 2024

| Location ID: | | HA-B-44 | HA-B-45 | HA-B-47 | HA-B-48 | HA-B-49 | HA-B-49 | HA-B-50 | HA-B-50 |
|-------------------------------------|-------|--------------|----------------|--------------|--------------|----------------|----------------|----------------|----------------|
| Sample Name: | | HA-B-46-SL-4 | HA-B-45-SL-0-4 | HA-B-47-SL-1 | HA-B-48-SL-2 | HA-B-49-SL-0-2 | HA-B-49-SL-0-2 | HA-B-50-SL-0-5 | HA-B-51-SL-0-5 |
| Sample Date: | | 03/07/2024 | 03/07/2024 | 03/07/2024 | 03/07/2024 | 03/07/2024 | 03/07/2024 | 03/07/2024 | 03/07/2024 |
| Depth: | | 4 ft BGS | 0-4 ft BGS | 1 ft BGS | 2 ft BGS | 0-2 ft BGS | 0-2 ft BGS | 0-5 ft BGS | 0-5 ft BGS |
| | | Duplicate | | | | | R/R | | Duplicate |
| Parameters | Unit | | | | | | | | |
| Semivolatile Organic Compounds, SIM | | | | | | | | | |
| 2-Methylnaphthalene | mg/kg | 0.0112 U | 0.124 U | 0.627 U | 3.20 U | 49.8 U | 6.39 UJ | 12.1 U | 3.08 U |
| Acenaphthene | mg/kg | 0.0112 U | 0.253 | 0.864 | 3.71 | 93.1 | 9.12 J- | 12.1 U | 3.08 U |
| Acenaphthylene | mg/kg | 0.0112 U | 0.124 U | 0.0627 U | 3.20 U | 49.8 U | 6.39 UJ | 12.1 U | 3.08 U |
| Anthracene | mg/kg | 0.0112 U | 0.826 | 2.64 | 11.5 | 324 | 25.5 J- | 38.0 J | 7.52 J |
| Benzo(a)anthracene | mg/kg | 0.0127 | 3.41 | 6.68 | 37.8 | 525 | 54.1 J- | 101 J | 19.0 J |
| Benzo(a)pyrene | mg/kg | 0.0143 | 3.44 | 6.16 | 38.1 | 417 | 52.9 J- | 92.1 J | 18.6 J |
| Benzo(b)fluoranthene | mg/kg | 0.0212 | 4.37 | 7.86 | 48.8 | 521 | 71.1 J- | 122 J | 24.2 J |
| Benzo(g,h,i)perylene | mg/kg | 0.0139 | 3.35 | 3.71 | 27.1 | 266 | 29.0 J- | 68.7 J | 14.2 J |
| Benzo(k)fluoranthene | mg/kg | 0.0112 U | 1.69 | 2.15 | 18.2 | 195 | 28.4 J- | 47.8 J | 8.61 J |
| Chrysene | mg/kg | 0.0146 | 4.01 | 6.75 | 44.3 | 478 | 58.9 J- | 105 J | 22.9 J |
| Dibenz(a,h)anthracene | mg/kg | 0.0112 U | 0.708 | 1.09 | 7.04 | 84.8 | 7.86 J- | 18.9 J | 4.02 J |
| Fluoranthene | mg/kg | 0.0283 | 6.81 | 14.6 | 116 | 1480 | 127 J- | 310 J | 62.3 J |
| Fluorene | mg/kg | 0.0112 U | 0.333 | 1.35 | 4.88 | 212 | 11.2 J- | 14.1 | 3.53 |
| Indeno(1,2,3-cd)pyrene | mg/kg | 0.0132 | 3.82 | 5.42 | 32.4 | 319 | 33.2 J- | 81.5 J | 16.5 J |
| Naphthalene | mg/kg | 0.0112 U | 0.124 U | 0.790 | 3.20 U | 99.5 | 6.39 UJ | 12.1 U | 3.08 U |
| Phenanthrene | mg/kg | 0.0163 | 4.68 | 13.4 | 59.8 | 1370 | 121 J- | 204 J | 46.0 J |
| Pyrene | mg/kg | 0.0225 | 5.05 | 10.5 | 93.7 | 1080 | 91.4 J- | 228 J | 46.1 J |
| Metals | | | | | | | | | |
| Arsenic | mg/kg | -- | 8.37 U | -- | -- | 17.0 U | -- | 12.7 U | 14.6 U |
| Barium | mg/kg | -- | 71.9 | -- | -- | 39.8 | -- | 62.1 | 38.3 |
| Cadmium | mg/kg | -- | 2.09 U | -- | -- | 4.25 U | -- | 3.17 U | 3.66 U |
| Chromium | mg/kg | -- | 24.3 | -- | -- | 19.6 | -- | 32.8 | 46.0 |
| Lead | mg/kg | -- | 40.8 | -- | -- | 34.3 | -- | 54.2 | 129 |
| Mercury | mg/kg | -- | 0.0267 | -- | -- | 0.0227 U | -- | 0.0190 U | 0.0193 U |
| Selenium | mg/kg | -- | 10.5 U | -- | -- | 21.2 U | -- | 15.8 U | 18.3 U |
| Silver | mg/kg | -- | 2.09 U | -- | -- | 4.25 U | -- | 3.17 U | 3.66 U |
| General Chemistry | | | | | | | | | |
| Free liquid | none | -- | CNF | -- | -- | CNF | -- | CNF | -- |

Notes:

CNF - Contains no free liquid

SIM - Selective Ion Monitoring

U - Not detected at the associated reporting limit

J - Estimated concentration

J- - Estimated concentration; result may be biased low

R/R - Re-extraction/re-analysis

Table 2B

**Validated Analytical Results Summary--TCLP Soil
SWMU 25 Waste Characterization Soil Sampling
John Deere Des Moines Works
Ankeny, Iowa
March 2024**

| | | | | | |
|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Location ID: | HA-B-39 | HA-B-41 | HA-B-45 | HA-B-49 | HA-B-50 |
| Sample Name: | HA-B-39-SL-0-1 | HA-B-41-SL-0-1 | HA-B-45-SL-0-4 | HA-B-49-SL-0-2 | HA-B-50-SL-0-5 |
| Sample Date: | 03/07/2024 | 03/07/2024 | 03/07/2024 | 03/07/2024 | 03/07/2024 |
| Depth: | 0-1 ft BGS | 0-1 ft BGS | 0-4 ft BGS | 0-2 ft BGS | 0-5 ft BGS |

| Parameters | Unit | | | | | |
|---------------------|-------------|-----------|-----------|-----------|-----------|-----------|
| Metals, TCLP | | | | | | |
| Arsenic | mg/L | 0.100 U | 0.300 U | 0.100 U | 0.100 U | 0.100 U |
| Barium | mg/L | 0.751 | 0.631 | 0.637 | 0.369 | 0.388 |
| Cadmium | mg/L | 0.0200 U | 0.0600 U | 0.0200 U | 0.0200 U | 0.0200 U |
| Chromium | mg/L | 0.0200 U | 0.0600 U | 0.0200 U | 0.0200 U | 0.0200 U |
| Lead | mg/L | 0.100 U | 0.300 U | 0.100 U | 0.100 U | 0.100 U |
| Mercury | mg/L | 0.00200 U | 0.00200 U | 0.00200 U | 0.00200 U | 0.00200 U |
| Selenium | mg/L | 0.100 U | 0.300 U | 0.100 U | 0.100 U | 0.100 U |
| Silver | mg/L | 0.0500 U | 0.150 U | 0.0500 U | 0.0500 U | 0.0500 U |

Notes:

TCLP - Toxicity Characteristic Leaching Procedure

U - Not detected at the associated reporting limit

Table 3

**Analytical Methods and Holding Time Criteria
SWMU 25 Waste Characterization Soil Sampling
John Deere Des Moines Works
Ankeny, Iowa
March 2024**

| Parameter | Method | Matrix | Holding Time | |
|---|---------------|--------|---------------------------------------|---|
| | | | Collection to Extraction (Days) | Collection or Extraction to Analysis (Days) |
| Polynuclear Aromatic Hydrocarbons (PAH) | SW 8270E SIM | soil | 14 | 40 |
| Metals (except Mercury) | SW 6010D | soil | - | 180 |
| Mercury | SW 7471B | soil | - | 28 |
| TCLP Metals (except Mercury) | SW 1311/6010D | soil | 180 | 180 |
| TCLP Mercury | SW 1311/7470A | soil | 28 | 28 |
| Free Liquids | SW 9095B | soil | - | 14 |

Notes:

SIM - Selective Ion Monitoring

TCLP - Toxicity Characteristic Leaching Procedure

Method References:

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

Table 4

**Qualified Sample Results Due to Holding Time Exceedance
SWMU 25 Waste Characterization Soil Sampling
John Deere Des Moines Works
Ankeny, Iowa
March 2024**

| Parameter | Sample ID | Holding Time (days) | Holding Time Criteria (days) | Analyte | Qualified Sample Results | Units |
|-----------|----------------|---------------------|------------------------------|------------------------|--------------------------|-------|
| PAH | HA-B-49-SL-0-2 | 27 to extract | 14 to extract | 2-Methylnaphthalene | 6.39 UJ | mg/kg |
| | | | | Acenaphthene | 9.12 J- | mg/kg |
| | | | | Acenaphthylene | 6.39 UJ | mg/kg |
| | | | | Anthracene | 25.5 J- | mg/kg |
| | | | | Benzo(a)anthracene | 54.1 J- | mg/kg |
| | | | | Benzo(a)pyrene | 52.9 J- | mg/kg |
| | | | | Benzo(b)fluoranthene | 71.1 J- | mg/kg |
| | | | | Benzo(g,h,i)perylene | 29.0 J- | mg/kg |
| | | | | Benzo(k)fluoranthene | 28.4 J- | mg/kg |
| | | | | Chrysene | 58.9 J- | mg/kg |
| | | | | Dibenz(a,h)anthracene | 7.86 J- | mg/kg |
| | | | | Fluoranthene | 127 J- | mg/kg |
| | | | | Fluorene | 11.2 J- | mg/kg |
| | | | | Indeno(1,2,3-cd)pyrene | 33.2 J- | mg/kg |
| | | | | Naphthalene | 6.39 UJ | mg/kg |
| | | | | Phenanthrene | 121 J- | mg/kg |
| | | | | Pyrene | 91.4 J- | mg/kg |

Notes:

J- - Estimated concentration; result may be biased low

UJ - Not detected; associated reporting limit is estimated

PAH - Polynuclear Aromatic Hydrocarbons

Table 5

**Qualified Sample Data Due to Variability in Field Duplicate Results
SWMU 25 Waste Characterization Soil Sampling
John Deere Des Moines Works
Ankeny, Iowa
March 2024**

| Parameter | Analyte | RPD/Diff | Sample ID | Qualified Result | Field Duplicate Sample ID | Qualified Result | Units |
|-----------|------------------------|------------|----------------|------------------|---------------------------|------------------|-------|
| PAH | Anthracene | 30.48 Diff | HA-B-50-SL-0-5 | 38.0 J | HA-B-51-SL-0-5 | 7.52 J | mg/kg |
| | Benzo(a)anthracene | 137 RPD | | 101 J | | 19.0 J | mg/kg |
| | Benzo(a)pyrene | 133 RPD | | 92.1 J | | 18.6 J | mg/kg |
| | Benzo(b)fluoranthene | 134 RPD | | 122 J | | 24.2 J | mg/kg |
| | Benzo(g,h,i)perylene | 131 RPD | | 68.7 J | | 14.2 J | mg/kg |
| | Benzo(k)fluoranthene | 39.19 Diff | | 47.8 J | | 8.61 J | mg/kg |
| | Chrysene | 128 RPD | | 105 J | | 22.9 J | mg/kg |
| | Dibenz(a,h)anthracene | 14.88 Diff | | 18.9 J | | 4.02 J | mg/kg |
| | Fluoranthene | 133 RPD | | 310 J | | 62.3 J | mg/kg |
| | Indeno(1,2,3-cd)pyrene | 133 RPD | | 81.5 J | | 16.5 J | mg/kg |
| | Phenanthrene | 126 RPD | | 204 J | | 46.0 J | mg/kg |
| | Pyrene | 133 RPD | | 228 J | | 46.1 J | mg/kg |

Notes:

Diff - Difference (criteria <2x RL for results <5x RL)

PAH - Polynuclear Aromatic Hydrocarbons

RPD - Relative Percent Difference (criteria 100% for results >5x RL)

J - Estimated concentration



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7**

11201 Renner Boulevard
Lenexa, Kansas 66219

FINAL REMEDY DECISION AND RESPONSE TO COMMENTS

John Deere Des Moines Works

EPA ID #: IAD069624500

825 SW Irvinedale Drive

Ankeny, Iowa

INTRODUCTION

This Final Remedy Decision and Response to Comments (FRD-RTC) is issued by the U.S. Environmental Protection Agency Region 7 as part of its responsibilities under the Resource Conservation and Recovery Act (RCRA). This FRD-RTC describes the final remedy selected for the John Deere Des Moines Works (Facility) facility located at 825 SW Irvinedale Drive in Ankeny, Iowa. The proposed remedy decision was described in the Statement of Basis that was placed on public notice (i.e., made available and public comment requested).

SELECTED REMEDY

The final remedy selected to address contaminated soil and groundwater at the Facility consists of the following:

Soil:

- In the area of the Former Department of Defense Powerhouse (Other DOD Area PH), existing cover in the form of concrete/crushed rock will be maintained to mitigate for direct contact of subsurface soil and debris containing contaminant of concern (COC) concentrations greater than applicable media cleanup standards.

Groundwater:

- Implement monitored natural attenuation (MNA) to remediate groundwater (throughout the contaminant plumes) until concentrations of all groundwater COCs are below media cleanup standards for a period of at least three years at the co-located Area of Contamination (AOC) C/AOC B24/AOC B25/Other Unit 2/Other Unit 3;
- Implement a groundwater monitoring program to:
 - ensure that the migration of facility related COCs at concentrations greater than media cleanup standards do not occur beyond the boundaries of AOC C, and that the plume remains stable;

- monitor the effectiveness of natural attenuation of COCs in groundwater; and, enact contingency actions that may be required if MNA proves to be ineffective or COCs at concentrations greater than media cleanup standards appear to be migrating beyond AOC boundaries.

Drainage Ditch and Catch Basin at SWMU-25:

- Excavation and off-site disposal of soil/sediment at the Solid Waste Management Unit (SWMU) 25 North Area containing polynuclear aromatic hydrocarbons (PAHs) at concentrations that exceed applicable media cleanup standards;
- Implementation of phytoremediation at the SWMU 25 Central Area consisting of the targeted removal of undesirable plants and shrubs with low phytoremediation value, retainment and encouragement of dispersal of species with high phytoremediation value, and phytoremediation maintenance and monitoring; and,
- The Facility will utilize and maintain existing engineering controls in the form of a soil/vegetated cover to stabilize and to mitigate direct contact exposure with already excavated and consolidated PAH-containing soil located at the SWMU 25 South Area.

Institutional Controls:

- Institutional controls will be implemented throughout the facility by the use of an environmental covenant in accordance with the Uniform Environmental Covenants Act (Iowa Code Chapter 455I) to include the following:
 - restrict land use to non-residential industrial/commercial use only;
 - prohibit the use of groundwater as a source of potable water and prohibit the installation of groundwater drinking water wells on the property; and,
 - implement focused activity and land use limitations, and a Soil Management Plan, that direct the appropriate management of excavated soils or materials, direct maintenance and inspection of engineered barriers and cover, and EPA notification prior to excavations in known contaminated areas at the following three specific areas at the Facility:
 - the “Other DOD Area PH” (Former DOD Powerhouse);
 - SWMU No. 25 South Area; and,
 - “Co-Located AOCC/AOCB24/AOC B25/Other Unit 2/Other Unit 3” (AOC C area).
- To ensure the protectiveness of the remedy – maintain, inspect and repair engineering controls while soil and groundwater contamination remains above media cleanup standards at the Former DOD Powerhouse, SWMU No. 25 South Area and AOC C.

PUBLIC PARTICIPATION ACTIVITIES

A 30-day public comment period was held from June 13 through July 13, 2022. A public notice announcing the availability of the Statement of Basis and the associated Administrative Record documents were published in the Ankeny Press Citizen – Des Moines Register newspaper on June 13, 2022. Fact sheets were mailed to community and business members within the near vicinity of the facility and local, State and congressional contacts on June 3, 2022. The Statement of Basis and Administrative Record were available throughout the public comment period at the Ankeny Kirkendall Public Library, Ankeny, Iowa and at the EPA Region 7 Records Center, Lenexa, Kansas.

PUBLIC COMMENTS AND THE AGENCY'S RESPONSE

On July 12, 2022, comments were received from the Facility addressing the proposed remedial actions and concerns regarding groundwater cleanup action levels. Below is the agency's response to comments received during the public comment period. EPA carefully reviewed the comments in preparing this response to comments. EPA's review of the comments and other information received during the public comment period have led to certain changes that will be reflected in the final remedy decision. The EPA does not consider these changes to be a major modification and therefore, is not providing a second public notice or comment period. The discussion below identifies such changes.

Mr. Scott Hemesath, Environmental Engineering Manager with John Deere Des Moines Works, provided the following comments (italicized) with EPA's comment response following each comment:

- 1) *Page 2, "Groundwater," second bullet, first sub-bullet: This sub-bullet notes that a groundwater monitoring program will be implemented to "ensure that the migration of facility related COCs at concentrations greater than media cleanup standards do not occur beyond the boundaries of AOC C and AOC E, and that the plumes remain stable." The inclusion of AOC E in this sub-bullet is inconsistent with the media cleanup standards for groundwater in the Statement of Basis and the Remedy Evaluation Report (GHD, 2022). As stated in the "Corrective Action Objectives" section of the Statement of Basis (page 6, item vii), one Corrective Action Objective (CAO) is to "[p]revent human ingestion of groundwater containing contaminant concentrations above appropriate Maximum Contaminant Levels, or tap water Regional Screening Levels at a non-cancer hazard quotient of 0.1 or cancer risk of 1×10^{-5} , whichever is lower, if no MCLs exist for a particular constituent." As presented in the Remedy Evaluation Report (GHD, 2022), the remedy for AOC E, which has had source soil removal, is a site-wide institutional control for groundwater and land-use restrictions. Note that there are no COCs in groundwater that exceed a CAO at AOC E. Therefore, JDDMW requests that AOC E be removed from the groundwater monitoring program requirement on pg. 2, "Groundwater," second bullet, first sub-bullet.*

EPA's Response: The inclusion of AOC E in this sub-bullet is consistent with the corrective action objective provided on the corrective action objective worksheet for AOC-E on Page 12 of the Remedy Evaluation Report. The corrective action objective for naphthalene detected in groundwater at AOC-E above the Tapwater RSL of 0.61 ug/L for resource restoration is to "prevent migration of groundwater containing naphthalene in concentrations greater than the Tapwater RSL beyond the boundary of AOC E". However, based on EPA's response to Comment #7 below, the EPA agrees that concentrations of naphthalene in groundwater at AOC E no longer exceed the groundwater cleanup action level. Therefore, further remedial action for naphthalene in groundwater at AOC E has been removed from the final remedy as this corrective action objective no longer applies.

- 2) *Page 2, "Institutional Controls," first bullet, second sub-bullet: This sub-bullet notes that groundwater use will be prohibited as a source of potable water and the installation of groundwater drinking water wells will be prohibited on the property..." While JDDMW has agreed to implement side-wide [sic] groundwater use limitations, the company notes for the record that the only area of the site that does not meet the CAO for drinking water is a very limited area near AOC C.*

EPA Response: Comment noted.

- 3) Page 2, “Institutional Controls,” first bullet, third sub-bullet: *This sub-bullet summarizes the requirement for a Soil Management Plan as part of the Site’s institutional controls. Specifically, the requirement is described as: “implement a Soil Management Plan directing the appropriate management of excavated soils or materials, directing maintenance and inspection of engineered barriers and cover, and EPA notification prior to excavations in known contaminated areas.” JDDMW understands the Remedy Evaluation Report to require “Site-Wide” institutional controls for only groundwater use restrictions (see prior comment) and the land-use restrictions. Therefore, this sub-bullet should specifically reference those areas summarized in the Remedy Evaluation Report (GHD, 2022) that require a “focused environmental covenant” with a Soil Management Plan. As summarized in Section 7.11 of the Remedy Evaluation Report, there are three (3) areas of the Site with COCs in soils above CAOs that require a focused environmental covenant and a Soil Management Plan: a) the “Other DOD Area PH” (Former DOD Powerhouse); b) SWMU No. 25 South Area; and (c) “Co-Located AOCC/AOCB24/AOC B25/Other Unit 2/Other Unit 3” (AOC C area). These three (3) Site areas are the only locations that would require notification to EPA prior to excavation activities.*

EPA Response: The EPA agrees with this comment and has revised the remedy above to provide additional clarification regarding the three facility areas that will require more focuses activity and land use limitations and a Soil Management Plan.

- 4) Page 2, “Institutional Controls,” second bullet: *As part of the Site’s Institutional Controls, the Proposed Remedy notes that “[t]o ensure the protectiveness of the remedy – maintain, inspect and repair engineering controls, while soil and groundwater contamination remains above media cleanup standards.” For the sake of clarity, JDDMW requests that this requirement references the three (3) areas described above (Former DOD Powerhouse, SWMU No. 25 South Area and AOC C) as the locations where the obligations to “maintain, inspect and repair engineering controls” applies.*

EPA Response: The EPA agrees with this comment and has revised the remedy above accordingly.

- 5) Page 5, paragraph 1, sentence 3: *This sentence, and the following sentence, references that a human health risk assessment was completed at the Former DOD Powerhouse with an existing concrete surface barrier “to ensure that no additional soil removal was necessary to mitigate for this potential exposure pathway, and that existing soil contamination may remain in place.” Although JDDMW agreed to maintain a gravel or concrete cap in the Former DOD Powerhouse area, the Revised Human Health Risk Evaluation conservatively evaluated the human health risk with no surface cover present.*

EPA Response: Comment noted.

- 6) Page 6, item ix: *This CAO is to “[p]revent further migration of COCs in soil to groundwater and surface waters, and prevent further migration of COCs in groundwater beyond the boundary of AOC C and AOC E.” Similar to the above, the inclusion of AOC E in this CAO is inconsistent with the media cleanup standards for groundwater in the Statement of Basis and in the Remedy Evaluation Report (GHD, 2022). As identified in the “Corrective Action Objectives” section (page 6, item vii), one CAO is to “[p]revent human ingestion of groundwater containing contaminant concentrations above appropriate Maximum Contaminant Levels, or tap water RSLs with a non-cancer hazard quotient of 0.1 or cancer risk of 1×10^{-5} , whichever is lower, if no MCLs exist for a particular constituent.” As presented in the Remedy Evaluation Report (GHD,*

2022), the remedy for AOC E, which has had source soil removal, is a site-wide institutional control for groundwater and soil. AOC E does not exhibit COCs in groundwater that exceed a CAO. Therefore, JDDMW requests AOC E be removed from item ix. of the Corrective Action Objectives, pg. 6.

EPA Response: See response to Comment #1 above.

- 7) Page 8, Table 3 and Note*: The first asterisk under the note for Table 3 states that “MCLs are not available for these particular constituents, thus groundwater media cleanup standards are based on the current tap water RSLs, based on an excess cancer risk of 1E-06 and a non-cancer hazard quotient of 0.1, whichever is lower.” Constituent values listed in Table 3 reflect the 1E-06, however, as documented in the Remedy Evaluation Report (GHD, 2022) and as previously documented in the “Corrective Action Objectives” section of the Statement of Basis, the CAO for groundwater at the Site is based on an excess cancer risk of 1E-05 which is consistent with EPA’s Corrective Action Plan (OSWER Directive 9902.3-2A). Also as presented in the “Evaluation of the Proposed Remedy” section of the Statement of Basis (page 9, paragraph 5) EPA concludes that “[d]ue to the industrial nature of this facility, and the understanding that contaminants are not migrating off-facility, a target cancer risk of 1E-05 (1 in 100,000) and noncarcinogenic hazard quotient of 0.1 were selected by the EPA to compare against any estimated site-related cancer risks from exposures to soil and groundwater.” This conclusion, which is consistent with the other sections of the Statement of Basis and the EPA-approved Remedy Evaluation Report, is also consistent with OSWER Directive 9355.0-30.2 Therefore, JDDMW requests that the following constituent values in Table 3 (highlighted) be updated to reflect an excess cancer risk of 1E-05, as listed below, and the first asterisk in the Note under Table 3 be changed to “MCLs are not available for these particular constituents, thus groundwater media cleanup standards are based on the current tap water RSLs, based on an excess cancer risk of 1E-05 and a non-cancer hazard quotient of 0.1.”

Table 3.
Groundwater Cleanup Levels

| Analyte | Groundwater Cleanup Levels (ug/L) |
|-----------------------------------|-----------------------------------|
| Acetone | 1,800* |
| Arsenic | 10 |
| <i>Benz(a)anthracene</i> | 0.3* |
| Benzo(a)pyrene | 0.2 |
| <i>Benzo(b)fluoranthene</i> | 2.5* |
| Bis(2-ethylhexyl)phthalate (DEHP) | 6 |
| Chromium, Total** | 100 |
| <i>Dibenzo(a,h)anthracene</i> | 0.25* |
| <i>Indeno(1,2,3-cd)pyrene</i> | 2.5* |
| Lead, Total | 15 |
| <i>Naphthalene</i> | 0.61* |
| Methylphenol (cresol) | 150* |
| Propylene glycol | 40,000* |
| 1,1,2-Trichloroethane | 5 |
| 2-Hexanone | 3.8* |

Note: The EPA RSLs listed within this table are based on those provide in the November 17, 2021 update.

* MCLs are not available for these particular constituents, thus groundwater media cleanup standards are based on the current tap water RSLs, based on an excess cancer risk of 1E-05 and a non-cancer hazard quotient of 0.1.

** The EPA's federal drinking water standard regulation assumes that a measurement of total chromium is 100 percent hexavalent chromium, the more toxic form.

ug/L=micrograms per liter

EPA Response: To remain consistent with the "Evaluation of the Proposed Remedy" section of the Statement of Basis, the EPA hereby revises the footnotes at the bottom of Table 3, *Groundwater Cleanup Levels*, to define those concentrations denoted by a single asterisk, where MCLs are not available for these particular constituents, that the groundwater media cleanup standards are based on the current Tapwater RSLs, based on an excess cancer risk of 1E-05 and a non-cancer hazard quotient of 0.1. Therefore, groundwater cleanup action levels in Table 3 in italics above have been revised accordingly.

FUTURE ACTIONS

In summary, no comments were received from the public requiring modifications to the Statement of Basis, other than what is discussed above, and no significant changes to the Statements of Basis or the proposed remedy has been made. Therefore, the remedy provided in the Statement of Basis and this FRD-RTC is hereby formally selected as the remedy for the Facility.

DECLARATIONS

The EPA Region 7 has determined that the corrective actions being implemented at the John Deere Des Moines Works, Ankeny, Iowa Facility, as specified in the Statement of Basis and FRD-RTC, are appropriate and will be protective of human health and the environment.

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DeAndré Singletary, Director
Land, Chemical & Redevelopment Division

8-4-2022

Date