



IOWA DEPARTMENT OF NATURAL RESOURCES  
**REQUEST FOR SPECIAL WASTE  
 AUTHORIZATION**



Check one of the following:     New Application     Renewal, Existing SWA #: 07-SWA-56-08

The intent of a special waste authorization is to provide safe and proper management for disposal of wastes which present a threat to human health or the environment or a waste with inherent properties which make the disposal of the waste in a sanitary landfill difficult to manage. It is each landfill's responsibility to inform the waste generator if a waste should be handled as a special waste and to ensure that special wastes delivered to the landfill conform to the Special Waste Acceptance Criteria (SWAC) on file with the Department. It is the Department's responsibility to review each application for a special waste authorization to verify that the proposed waste can be landfilled under the current regulations in Iowa.

**READ THE FOLLOWING INSTRUCTIONS BEFORE COMPLETING THIS APPLICATION**

**Waste Generator:**

1. Complete Sections 1-3 of this application applicable to the waste characterization and disposal information.
2. Attach Toxicity Characteristic Leaching Procedure (TCLP) test results, material safety data sheet(s) (MSDS), or evidence of "processor knowledge" when appropriate that demonstrates the waste is not considered a characteristic hazardous waste exhibiting the properties of flammability, corrosivity, reactivity or toxicity or a listed hazardous waste as defined in 40 CFR Part 261, Subpart D.
3. Provide signature in Section 3 to verify that the information provided is true, accurate and complete.
4. Mail or deliver the completed application with attachments to the requested disposal destination (*must be a landfill that is authorized to accept waste from the service area of where the waste was generated*). Please contact Sue Johnson at (515) 217-0872 for a list of landfills authorized to accept waste from the service area in which your facility is located.

**Receiving Landfill:** Prior review of this application by the receiving landfill allows the department to more quickly process and evaluate the application.

1. Complete Section 5 of this application applicable to the landfill.
2. Indicate by signing the application that the landfill is willing to accept the waste if a Special Waste Authorization is issued by the department and if instructions for disposal of the waste, as contained in the landfill's SWAC, are followed by the generator.
3. Attach SWAC procedures for disposal of the waste.
4. Keep 1 copy for your records and submit the remaining one copy of the completed application with attachments (TCLP, MSDS, SWAC, etc.) to the department at the following address, or email to [Susan.Johnson@dnr.iowa.gov](mailto:Susan.Johnson@dnr.iowa.gov):

Iowa Department of Natural Resources  
 Land Quality Bureau- Attn: Susan Johnson  
 502 East 9<sup>th</sup> Street  
 Des Moines, IA 50319-0034

**Applications will be considered incomplete if not signed by both the waste generator and receiving landfill. The receiving landfill must attach a copy of the SWAC for the particular waste for which the application has been submitted.**

Written notification of approval or rejection will be mailed or emailed to the generator and landfill. If approved, a copy of the authorization must accompany the waste hauler to the landfill.

For questions concerning this application contact Sue Johnson at (515) 217-0872 or [Susan.Johnson@dnr.iowa.gov](mailto:Susan.Johnson@dnr.iowa.gov).

**SECTION 1: WASTE GENERATOR INFORMATION**

Name of Primary Contact\* Christina Konicek Title Environmental Engineer  
*\*SWA approvals will be sent to this person at the address provided below.*

Company Name John Deere Foundry

Mailing Address 2000 Westfield Ave

City Waterloo State IA Zip Code 50701

Telephone # (319)-292-6964 Email Address konicekchristina@johndeere.com

Address or location of the point of generation of the waste, if different from the company address:

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code name

**SECTION 2: WASTE CHARACTERIZATION**

Waste determined to be hazardous may not be landfilled in Iowa. Attach TCLP analysis that demonstrates the waste is not considered hazardous. For raw or virgin materials being disposed of, a MSDS that indicates the waste is not hazardous may be submitted in lieu of a TCLP analysis.

The generator may also apply knowledge of the hazardous characteristic(s) of the waste in light of the materials or the processes used ("knowledge of process"). In order to use knowledge to characterize the waste, the knowledge that is applied must be valid and verifiable and the generator must be able to demonstrate the basis for their claim by providing supporting information to justify that conclusion.

**Name and description of waste. Please address any RCRA listings derived from wastes etc., that may be applicable and why these listings would not pertain to the waste:**

Name: Industrial Air Filters

Description: Intake air filters used in a variety of foundry process equipment including office air-handling units, baghouse air intakes, electrical cabinets, and 'clean room' intakes. Also, filters placed at the (ambient air) intake and serve to minimize dust accumulation inside equipment and/or specific rooms/areas. Filters are changed-out as preventative maintenance on regular frequencies and as-needed. Process knowledge: no VOC's or Semi-VOC's, no free-liquid, non-ignitable.

**Has any pretreatment been utilized? If so, please describe the pretreatment process:**

No

**List the alternatives to disposal that were analyzed and reason not utilized (*attach extra sheets if necessary*):**

Filters are non-reusable (washable filters are used where possible) and the thin metal framing disqualifies for waste-to-energy, though not enough to warrant scrap metal recycling.

Physical state at room temperature?  Solid  Semi-Solid  Liquid  
Percent (%) Solid: 96.9% pH: 8.4 Flashpoint: >202 F

Does this waste pass the paint filter liquids test?  
Free liquids are prohibited from landfill disposal. Free liquids are defined as the liquid produced when a 100-millimeter or 100-gram representative sample is placed on a standard mesh number 60 (fine mesh size) conical paint filter for five minutes.  Yes  No

Is this waste a listed hazardous waste as identified in 40 CFR 261, Subpart D? Refer to the following web link to find listed hazardous wastes: <http://www.gpoaccess.gov/cfr/index.html>  Yes  No

Does this waste exhibit the property of *ignitability* as defined in 40 CFR 261, Subpart C?  Yes  No

Does this waste exhibit the property of *corrosivity* as defined in 40 CFR 261, Subpart C?  Yes  No

Does this waste exhibit the property of *reactivity* as defined in 40 CFR 261, Subpart C?  Yes  No

Does this waste exhibit the property of *toxicity* as defined in 40 CFR 261, Subpart C?  Yes  No

**SECTION 3: WASTE DISPOSAL INFORMATION**

Indicate the proposed disposal location and if this is a request for an ongoing disposal of a special waste or a one-time disposal. If on going, indicate the approximate amount in pounds to be disposed of quarterly.

Landfill Name\* Black Hawk County Landfill

*\*List only a landfill that is authorized to accept waste from the service area of where the waste was generated. Sue Johnson at (515) 217-0872 or [susan.johnson@dnr.iowa.gov](mailto:susan.johnson@dnr.iowa.gov) for a list of landfills authorized to accept waste from your facility.*


Ongoing (or intermittent) with an average disposal rate per quarter of 8000 pounds

Indicate the amount on hand to be disposed of immediately: 0 pounds

One time only, with an estimated quantity of \_\_\_\_\_ pounds

**SECTION 4: WASTE GENERATOR CERTIFICATION**

"I certify under penalty of law (§455B.417.1(c), Code of Iowa) that I have examined and am familiar with the information submitted in this document concerning hazardous waste, and all attachments, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete."

Applicant Signature:  Date: 4/20/26  
Printed Name: Casey Kann Title: Foundry Operations Manager

See Landfill Information on the following page.

**SECTION 5: LANDFILL INFORMATION**

The following section is to be completed by the receiving landfill. By signing below, the landfill verifies that the application has been examined and if approved by the department, is willing to accept the waste described within, provided that instructions for disposal of the waste, as contained in the landfill's Special Waste Acceptance Criteria, are followed by the generator.

Prior review of this application by the receiving landfill will allow the department to more quickly process and evaluate the application.

**Indicate the properties that lead you to believe this is a special waste:**

This industrial waste may contain RCRA-regulated hazardous materials and is potentially hazardous if TCLP limits are exceeded.

**Indicate any special handling procedures that the waste generator must follow prior to delivery at the landfill:**

The generator is required to separate the material from other waste. If mixed, the entire load will be considered as special waste. Waste must not contain any free liquids.

Arrangements must be made 24 hours before (319) 296-2524. Upon arrival, the driver shall identify the material by the SWA number to the scale house operator and provide a copy of the DNR SWA approval letter to the scale house operator while on the inbound scale.

The waste will be deposited in the designated area, worked into the active face, and covered as required. All efforts between the generator and landfill to minimize fugitive dust are encouraged.

The generator must test the waste material periodically and notify BHCSWMC of any process changes or deviations from the submitted sampled parameters. The generator must also notify the receiving landfill for re-evaluation.

**Name of Responsible Official\*:** John A. Foster

\*SWA approvals will be sent to this person at the address given below

**Solid Waste Agency Name:** Black Hawk County Solid Waste Management Commission

**Mailing Address** 229 E. Park Ave., P.O. Box 208

**City** Waterloo **State** IA **Zip Code** 50704

**Telephone #** 319-234-8115 **Fax #** jfoster@wastetrac.org

**Responsible Official Signature:**  **Date:** April 20, 2026

# ANALYTICAL REPORT

## PREPARED FOR

Attn: Christina Konicek  
John Deere & Co  
2000 Westfield Ave  
Waterloo, Iowa 50704

Generated 3/24/2026 3:32:53 PM

## JOB DESCRIPTION

JD Foundry - Waste Characterization

## JOB NUMBER

310-327549-1

# 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



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3/24/2026 3:32:53 PM

Authorized for release by  
Conner Calhoun, Client Service Manager  
[Conner.Calhoun@et.eurofinsus.com](mailto:Conner.Calhoun@et.eurofinsus.com)  
(319)277-2401

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# Case Narrative

Client: John Deere & Co  
Project: JD Foundry - Waste Characterization

Job ID: 310-327549-1

**Job ID: 310-327549-1**

**Eurofins Cedar Falls**

## Job Narrative 310-327549-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

### Receipt

The sample was received on 3/16/2026 3:43 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 13.3°C.

### Metals

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.



# Sample Summary

Client: John Deere & Co  
Project/Site: JD Foundry - Waste Characterization

Job ID: 310-327549-1

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| Lab Sample ID | Client Sample ID | Matrix | Collected      | Received       | Sample Origin |
|---------------|------------------|--------|----------------|----------------|---------------|
| 310-327549-1  | Air Filters      | Solid  | 03/13/26 12:00 | 03/16/26 15:43 | Iowa          |

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# Client Sample Results

Client: John Deere & Co  
 Project/Site: JD Foundry - Waste Characterization

Job ID: 310-327549-1

**Client Sample ID: Air Filters**

**Lab Sample ID: 310-327549-1**

Date Collected: 03/13/26 12:00

Matrix: Solid

Date Received: 03/16/26 15:43

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

| Analyte  | Result  | Qualifier | RL     | MDL | Unit | D | Prepared       | Analyzed       | Dil Fac |
|----------|---------|-----------|--------|-----|------|---|----------------|----------------|---------|
| Arsenic  | <0.100  |           | 0.100  |     | mg/L |   | 03/18/26 09:27 | 03/24/26 14:28 | 1       |
| Barium   | 0.237   |           | 0.200  |     | mg/L |   | 03/18/26 09:27 | 03/24/26 14:28 | 1       |
| Cadmium  | <0.0200 |           | 0.0200 |     | mg/L |   | 03/18/26 09:27 | 03/24/26 14:28 | 1       |
| Chromium | <0.0200 |           | 0.0200 |     | mg/L |   | 03/18/26 09:27 | 03/24/26 14:28 | 1       |
| Lead     | <0.100  |           | 0.100  |     | mg/L |   | 03/18/26 09:27 | 03/24/26 14:28 | 1       |
| Selenium | <0.100  |           | 0.100  |     | mg/L |   | 03/18/26 09:27 | 03/24/26 14:28 | 1       |
| Silver   | <0.0500 |           | 0.0500 |     | mg/L |   | 03/18/26 09:27 | 03/24/26 14:28 | 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 |   | 03/18/26 12:01 | 03/19/26 14:48 | 1       |

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

| Analyte | Result | Qualifier | RL   | MDL | Unit  | D | Prepared       | Analyzed       | Dil Fac |
|---------|--------|-----------|------|-----|-------|---|----------------|----------------|---------|
| Mercury | <14.4  |           | 14.4 |     | ug/Kg |   | 03/20/26 15:25 | 03/23/26 11:34 | 1       |

**General Chemistry**

| Analyte                         | Result | Qualifier | RL    | RL | Unit      | D | Prepared | Analyzed       | Dil Fac |
|---------------------------------|--------|-----------|-------|----|-----------|---|----------|----------------|---------|
| Free Liquid (SW846 9095B)       | CNF    |           | 0.100 |    | NONE      |   |          | 03/19/26 04:44 | 1       |
| Flashpoint (ASTM D92)           | >202   |           | 65.0  |    | Degrees F |   |          | 03/20/26 14:09 | 1       |
| Percent Moisture (EPA Moisture) | 3.1    |           | 0.1   |    | %         |   |          | 03/18/26 04:48 | 1       |
| Percent Solids (EPA Moisture)   | 96.9   |           | 0.1   |    | %         |   |          | 03/18/26 04:48 | 1       |

**General Chemistry - Soluble**

| Analyte          | Result | Qualifier | RL  | RL | Unit | D | Prepared | Analyzed       | Dil Fac |
|------------------|--------|-----------|-----|----|------|---|----------|----------------|---------|
| pH (SW846 9045D) | 8.4    | HF        | 1.0 |    | SU   |   |          | 03/19/26 18:02 | 1       |



# Client Sample Results

Client: John Deere & Co  
 Project/Site: JD Foundry - Waste Characterization

Job ID: 310-327549-1

**Client Sample ID: Air Filters**

**Lab Sample ID: 310-327549-1**

Date Collected: 03/13/26 12:00

Matrix: Solid

Date Received: 03/16/26 15:43

Percent Solids: 96.9

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

| Analyte   | Result | Qualifier | RL   | MDL | Unit  | D | Prepared       | Analyzed       | Dil Fac |
|-----------|--------|-----------|------|-----|-------|---|----------------|----------------|---------|
| Arsenic   | <4.18  |           | 4.18 |     | mg/Kg | ✱ | 03/20/26 07:54 | 03/23/26 14:59 | 1       |
| Barium    | 1.07   |           | 1.05 |     | mg/Kg | ✱ | 03/20/26 07:54 | 03/23/26 14:59 | 1       |
| Cadmium   | <1.05  |           | 1.05 |     | mg/Kg | ✱ | 03/20/26 07:54 | 03/23/26 14:59 | 1       |
| Chromium  | <1.05  |           | 1.05 |     | mg/Kg | ✱ | 03/20/26 07:54 | 03/23/26 14:59 | 1       |
| Copper    | 1.56   |           | 1.05 |     | mg/Kg | ✱ | 03/20/26 07:54 | 03/23/26 14:59 | 1       |
| Lead      | <5.23  |           | 5.23 |     | mg/Kg | ✱ | 03/20/26 07:54 | 03/23/26 14:59 | 1       |
| Manganese | 3.48   |           | 2.61 |     | mg/Kg | ✱ | 03/20/26 07:54 | 03/23/26 14:59 | 1       |
| Nickel    | <2.61  |           | 2.61 |     | mg/Kg | ✱ | 03/20/26 07:54 | 03/23/26 14:59 | 1       |
| Selenium  | <5.23  |           | 5.23 |     | mg/Kg | ✱ | 03/20/26 07:54 | 03/23/26 14:59 | 1       |
| Silver    | <1.05  |           | 1.05 |     | mg/Kg | ✱ | 03/20/26 07:54 | 03/23/26 14:59 | 1       |
| Zinc      | 56.5   |           | 5.23 |     | mg/Kg | ✱ | 03/20/26 07:54 | 03/23/26 14:59 | 1       |



## Action Limit Summary

Client: John Deere & Co  
 Project/Site: JD Foundry - Waste Characterization

Job ID: 310-327549-1

**Client Sample ID: Air Filters**

**Lab Sample ID: 310-327549-1**

### POTENTIAL STLC / TCLP / TTLC LIMITS EXCEEDANCE

STLC limits in boxes signify the result exceeds 10x STLC limit. TCLP limits in boxes signify the result exceeds 20x TCLP limit

| Analyte   | Result   | Qualifier | Unit  | Limit | Total Limit | RL      | Method | Prep Type |
|-----------|----------|-----------|-------|-------|-------------|---------|--------|-----------|
| Arsenic   | <4.18    |           | mg/Kg | 0.1   | 17          | 4.18    | 6010D  | Total/NA  |
| Barium    | 1.07     |           | mg/Kg | 20    | 15000       | 1.05    | 6010D  | Total/NA  |
| Cadmium   | <1.05    |           | mg/Kg | 0.05  | 70          | 1.05    | 6010D  | Total/NA  |
| Chromium  | <1.05    |           | mg/Kg | 1     | 210         | 1.05    | 6010D  | Total/NA  |
| Copper    | 1.56     |           | mg/Kg | 13    | 15000       | 1.05    | 6010D  | Total/NA  |
| Lead      | <5.23    |           | mg/Kg | 0.15  | 400         | 5.23    | 6010D  | Total/NA  |
| Manganese | 3.48     |           | mg/Kg |       | 10000       | 2.61    | 6010D  | Total/NA  |
| Nickel    | <2.61    |           | mg/Kg |       | 1500        | 2.61    | 6010D  | Total/NA  |
| Selenium  | <5.23    |           | mg/Kg | 0.5   | 390         | 5.23    | 6010D  | Total/NA  |
| Silver    | <1.05    |           | mg/Kg | 5     | 370         | 1.05    | 6010D  | Total/NA  |
| Zinc      | 56.5     |           | mg/Kg |       | 23000       | 5.23    | 6010D  | Total/NA  |
| Arsenic   | <0.100   |           | mg/L  | 0.1   | 17          | 0.100   | 6010D  | TCLP      |
| Barium    | 0.237    |           | mg/L  | 20    | 15000       | 0.200   | 6010D  | TCLP      |
| Cadmium   | <0.0200  |           | mg/L  | 0.05  | 70          | 0.0200  | 6010D  | TCLP      |
| Chromium  | <0.0200  |           | mg/L  | 1     | 210         | 0.0200  | 6010D  | TCLP      |
| Lead      | <0.100   |           | mg/L  | 0.15  | 400         | 0.100   | 6010D  | TCLP      |
| Selenium  | <0.100   |           | mg/L  | 0.5   | 390         | 0.100   | 6010D  | TCLP      |
| Silver    | <0.0500  |           | mg/L  | 5     | 370         | 0.0500  | 6010D  | TCLP      |
| Mercury   | <0.00200 |           | mg/L  | 0.02  | 23          | 0.00200 | 7470A  | TCLP      |
| Mercury   | <14.4    |           | ug/Kg | 20.00 | 23000       | 14.4    | 7471B  | Total/NA  |



## Lab Chronicle

Client: John Deere & Co  
 Project/Site: JD Foundry - Waste Characterization

Job ID: 310-327549-1

**Client Sample ID: Air Filters**

**Lab Sample ID: 310-327549-1**

Date Collected: 03/13/26 12:00

Matrix: Solid

Date Received: 03/16/26 15:43

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab     | Prepared or Analyzed                         |
|-----------|------------|--------------|-----|-----------------|--------------|---------|---------|--|
| TCLP      | Leach      | 1311         |     |                 | 483403       | U8FK    | EET CF  | 03/17/26 15:30 - 03/18/26 08:00 <sup>1</sup> |
| TCLP      | Prep       | 3005A        |     |                 | 483459       | F8JX    | EET CF  | 03/18/26 09:27                               |
| TCLP      | Analysis   | 6010D        |     | 1               | 483993       | ZRI4    | EET CF  | 03/24/26 14:28                               |
| TCLP      | Leach      | 1311         |     |                 | 483403       | U8FK    | EET CF  | 03/17/26 15:30 - 03/18/26 08:00 <sup>1</sup> |
| TCLP      | Prep       | 7470A        |     |                 | 483512       | ZRI4    | EET CF  | 03/18/26 12:01                               |
| TCLP      | Analysis   | 7470A        |     | 1               | 483658       | NFT2    | EET CF  | 03/19/26 14:48                               |
| Total/NA  | Prep       | 7471B        |     |                 | 858197       | MJG     | EET CHI | 03/20/26 15:25                               |
| Total/NA  | Analysis   | 7471B        |     | 1               | 858397       | MJG     | EET CHI | 03/23/26 11:34                               |
| Soluble   | Leach      | DI Leach     |     |                 | 483660       | T5AC    | EET CF  | 03/19/26 15:47                               |
| Soluble   | Analysis   | 9045D        |     | 1               | 483670       | T5AC    | EET CF  | 03/19/26 18:02                               |
| Total/NA  | Analysis   | 9095B        |     | 1               | 483554       | DGU1    | EET CF  | 03/19/26 04:44                               |
| Total/NA  | Analysis   | D92          |     | 1               | 483767       | ENB7    | EET CF  | 03/20/26 14:09                               |
| Total/NA  | Analysis   | Moisture     |     | 1               | 483419       | DGU1    | EET CF  | 03/18/26 04:48                               |

**Client Sample ID: Air Filters**

**Lab Sample ID: 310-327549-1**

Date Collected: 03/13/26 12:00

Matrix: Solid

Date Received: 03/16/26 15:43

Percent Solids: 96.9

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Analyst | Lab    | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------|--------|----------------------|
| Total/NA  | Prep       | 3050B        |     |                 | 483569       | F8JX    | EET CF | 03/20/26 07:54       |
| Total/NA  | Analysis   | 6010D        |     | 1               | 483900       | ZRI4    | EET CF | 03/23/26 14:59       |

<sup>1</sup>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

EET CHI = Eurofins Chicago, 18410 Crossing Drive, Suite E, Tinley Park, IL 60487, TEL (708)534-5200

## Definitions/Glossary

Client: John Deere & Co  
Project/Site: JD Foundry - Waste Characterization

Job ID: 310-327549-1

### Qualifiers

#### General Chemistry

| Qualifier | Qualifier Description  |
|-----------|--|
| HF        | Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time. |

### 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  |
| 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   |

## Accreditation/Certification Summary

Client: John Deere & Co  
 Project/Site: JD Foundry - Waste Characterization

Job ID: 310-327549-1

### 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                   | 12-01-27         |
| 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          |
| D92   |             | Solid                 | Flashpoint       |
| Moisture  |             | Solid                 | Percent Moisture |
| Moisture  |             | Solid                 | Percent Solids   |

### Laboratory: Eurofins Chicago

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority              | Program             | Identification Number | Expiration Date |
|------------------------|---------------------|-----------------------|-----------------|
| Georgia                | State               | N/A                   | 05-31-26        |
| Georgia (DW)           | State               | 939                   | 05-31-26        |
| Illinois               | NELAP               | 100201                | 05-31-26        |
| Indiana                | State               | C-IL-02               | 05-31-26        |
| Iowa                   | State               | 082                   | 05-01-26        |
| Kansas                 | NELAP               | E-10161               | 10-31-26        |
| Kentucky (UST)         | State               | 108083                | 05-31-26        |
| Kentucky (WW)          | State               | KY90023               | 12-31-26        |
| Louisiana (All)        | NELAP               | 02046                 | 06-30-26        |
| Mississippi            | State               | NA                    | 05-31-26        |
| North Carolina (WW/SW) | State               | 291                   | 12-31-26        |
| North Dakota           | State               | R-194                 | 04-29-24 *      |
| Oklahoma               | State               | 8908                  | 12-31-25 *      |
| South Carolina         | State               | 77001                 | 05-31-26        |
| USDA                   | US Federal Programs | 525-25-237-16455      | 08-25-28        |
| Wisconsin              | State               | 399172840             | 08-31-26        |
| Wyoming                | State               | 8TMS-Q                | 05-31-26        |

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.



# Method Summary

Client: John Deere & Co  
Project/Site: JD Foundry - Waste Characterization

Job ID: 310-327549-1

| Method   | Method Description                                 | Protocol | Laboratory |
|----------|--|----------|------------|
| 6010D    | Metals (ICP)                                       | SW846    | EET CF     |
| 7470A    | Mercury (CVAA)                                     | SW846    | EET CF     |
| 7471B    | Mercury (CVAA)                                     | SW846    | EET CHI    |
| 9045D    | pH   | SW846    | EET CF     |
| 9095B    | Paint Filter                                       | SW846    | EET CF     |
| D92      | Flashpoint   | ASTM     | EET CF     |
| Moisture | Percent Moisture                                   | EPA      | EET CF     |
| 1311     | TCLP Extraction                                    | SW846    | EET CF     |
| 3005A    | Preparation, Total Recoverable or Dissolved Metals | SW846    | EET CF     |
| 3050B    | Preparation, Metals                                | SW846    | EET CF     |
| 7470A    | Preparation, Mercury                               | SW846    | EET CF     |
| 7471B    | Preparation, Mercury                               | SW846    | EET CHI    |
| DI Leach | Deionized Water Leaching Procedure                 | ASTM     | EET CF     |

**Protocol References:**

ASTM = ASTM International

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

EET CHI = Eurofins Chicago, 18410 Crossing Drive, Suite E, Tinley Park, IL 60487, TEL (708)534-5200





Environment Testing  
America



310-327549 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

|   |                                |                                    |                        |
|---|--------------------------------|------------------------------------|------------------------|
| <b>Client Information</b>   |                                |                                    |                        |
| Client: <u>John Dea</u>   |                                |                                    |                        |
| City/State:   | CITY <u>CA 22100</u>           | STATE <u>IL</u>                    | Project: <u>CIF</u>    |
| <b>Receipt Information</b>  |                                |                                    |                        |
| Date/Time Received:   | DATE <u>3/8/26</u>             | TIME <u>1543</u>                   | Received By: <u>TD</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<br><input type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input checked="" type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____ |                                |                                    |                        |
| <b>Condition of Cooler/Containers</b>   |                                |                                    |                        |
| Sample(s) received in Cooler? <input type="checkbox"/> Yes <input checked="" 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? ↓  |                                |                                    |                        |
| <b>Temperature Record</b>   |                                |                                    |                        |
| Coolant: <input type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input checked="" type="checkbox"/> NONE   |                                |                                    |                        |
| Thermometer ID: <u>AA</u>   |                                | Correction Factor (°C): <u>0.0</u> |                        |
| • Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature  |                                |                                    |                        |
| Uncorrected Temp (°C):  |                                | Corrected Temp (°C):               |                        |
| • Sample Container Temperature  |                                |                                    |                        |
| Container(s) used:  | CONTAINER 1 <u>Plastic bag</u> | CONTAINER 2                        |                        |
| Uncorrected Temp (°C):  | <u>13.3</u>                    |                                    |                        |
| Corrected Temp (°C):  | <u>13.3</u>                    |                                    |                        |
| <b>Exceptions Noted</b>   |                                |                                    |                        |
| 1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>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   |                                |                                    |                        |
| <b>Additional Comments</b>  |                                |                                    |                        |
|   |                                |                                    |                        |
|   |                                |                                    |                        |



**Eurofins Cedar Falls**  
 3019 Venture Way  
 Cedar Falls, IA 50613  
 Phone (319) 277-2401 Phone (319) 277-2425

# Chain of Custody Record



Environment Testing

|  |  |  |  |                                 |  |  |  |
|--|--|--|--|---------------------------------|--|--|--|
| <b>Client Information</b>                |  | Lab PM   |  | Carrier Tracking No(s):         |  | COC No:  |  |
| Client Contact:<br>Christina Konicek     |  | Calhoun, Conner M  |  | 319-242-6984                    |  | 310-82053-22890 1  |  |
| Company:<br>John Deere                   |  | E-Mail:<br>Conner Calhoun@et.eurofins.com                                    |  | State of Origin:                |  | Page: 1 of 1   |  |
| Address:<br>2000 Westfield Ave           |  | FWSID:   |  | Job #:                          |  | Preservation Codes:<br>M - Hexane<br>N - None<br>O - AsNaO2<br>P - Na2O4S<br>Q - Na2SO3<br>R - Na2SO3<br>S - H2SO4<br>T - TSP Dodecahydrate<br>U - Acetone<br>V - MCAA<br>W - pH 4-5<br>Y - Trama<br>L - EDTA<br>Z - other (specify) |  |
| City:<br>Waterloo                        |  | Due Date Requested:  |  | Analysis Requested              |  | Other:   |  |
| State, Zip:<br>IA, 50704                 |  | TAT Requested (days):  |  | RCRA METALS TCLP                |  | Total Number of Containers   |  |
| Phone:<br>4514173494                     |  | Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No |  | pH/Flashpoint                   |  | Special Instructions/Note:   |  |
| Email:<br>KonicekChristina@JohnDeere.com |  | PO #:  |  | Paint Filter Test               |  |  |  |
| Project Name:<br>CIF Dust                |  | WO #:  |  | Total Metals                    |  |  |  |
| Site:<br>Foundry                         |  | Project #:   |  | Field Filled Sample (Yes or No) |  |  |  |
|  |  | SSOW#:   |  | Perform MS/MSD (Yes or No)      |  |  |  |
| <b>Sample Identification</b>             |  | Sample Date  |  | Sample Time                     |  | Sample Type  |  |
| Air Filters                              |  | 3/13/26  |  | 12:00 PM                        |  | G  |  |
|  |  |  |  |                                 |  | Matrix (W=Water, S=solid, D=dust, A=air)   |  |
|  |  |  |  |                                 |  | Preservation Codes:  |  |
|  |  |  |  |                                 |  | G S  |  |
|  |  |  |  |                                 |  | Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  |  |
|  |  |  |  |                                 |  | <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months  |  |
|  |  |  |  |                                 |  | Special Instructions/QC Requirements:  |  |
|  |  |  |  |                                 |  | Method of Shipment   |  |
|  |  |  |  |                                 |  | Received by  |  |
|  |  |  |  |                                 |  | Date/Time:   |  |
|  |  |  |  |                                 |  | Company  |  |
|  |  |  |  |                                 |  | Received by  |  |
|  |  |  |  |                                 |  | Date/Time:   |  |
|  |  |  |  |                                 |  | Company  |  |
|  |  |  |  |                                 |  | Received by  |  |
|  |  |  |  |                                 |  | Date/Time:   |  |
|  |  |  |  |                                 |  | Company  |  |
|  |  |  |  |                                 |  | Cooler Temperature(s) °C and Other Remarks:  |  |
|  |  |  |  |                                 |  |  |  |





## Login Sample Receipt Checklist



Client: John Deere & Co

Job Number: 310-327549-1

Login Number: 327549

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Schaufenbuel, Erin

| 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.   | False  |         |
| Cooler Temperature is acceptable.   | False  |         |
| 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    |         |

## Login Sample Receipt Checklist

Client: John Deere & Co

Job Number: 310-327549-1

Login Number: 327549

List Source: Eurofins Chicago

List Number: 2

List Creation: 03/19/26 10:55 AM

Creator: Hernandez, Stephanie

| Question  | Answer | Comment |
|---|--------|---------|
| Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.      | True   |         |
| The cooler's custody seal, if present, is intact.   | True   |         |
| Sample custody seals, if present, are intact.   | True   |         |
| The cooler or samples do not appear to have been compromised or tampered with.                      | True   |         |
| Samples were received on ice.   | True   |         |
| Cooler Temperature is acceptable.   | True   |         |
| Cooler Temperature is recorded.   | True   | 3.4     |
| COC is present.   | True   |         |
| COC is filled out in ink and legible.   | True   |         |
| COC is filled out with all pertinent information.   | True   |         |
| Is the Field Sampler's name present on COC?   | True   |         |
| There are no discrepancies between the containers received and the COC.                             | True   |         |
| Samples are received within Holding Time (excluding tests with immediate HTs)                       | True   |         |
| Sample containers have legible labels.  | True   |         |
| Containers are not broken or leaking.   | True   |         |
| Sample collection date/times are provided.  | True   |         |
| Appropriate sample containers are used.   | True   |         |
| Sample bottles are completely filled.   | True   |         |
| Sample Preservation Verified.   | True   |         |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs                    | True   |         |
| Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4"). | N/A    |         |
| Multiphasic samples are not present.  | True   |         |
| Samples do not require splitting or compositing.  | True   |         |
| Residual Chlorine Checked.  | N/A    |         |



