



Jolly, Becky <becky.jolly@dnr.iowa.gov>

2026 BUD - Progressive Foundry Lab Report

1 message

Matthew Morris <mmo@mwatoday.com>

Fri, Jul 31, 2026 at 3:36 PM

To: "Smith, Mike" <mike.smith@dnr.iowa.gov>, "Gross, William" <bill.gross@dnr.iowa.gov>

Cc: Andrew Phillips <aph@mwatoday.com>, "Jolly, Becky [DNR]" <becky.jolly@dnr.iowa.gov>

Dear Mr. Mike Smith and Mr. Bill Gross,

Attached, please find the 2026 analytical testing results for Progressive Foundry's Foundry Sand and the associated Beneficial Use Determination (BUD) form for Metro Park West (08-SDP-03-84), submitted as part of our annual reporting requirements.

While preparing this year's submittal and reviewing the IDNR Document Database records, we noticed that the 2025 analytical results do not appear to be included in the files currently maintained by the Department. We are unable to determine whether this was due to an oversight during the original submission process, a clerical issue, or another administrative matter. However, our records confirm that the required analytical testing was completed in 2025, and documentation demonstrating the material was non-hazardous was maintained on-site in accordance with applicable requirements.

To help ensure the Department's records are complete and to maintain compliance with the BUD requirements, we have included both the 2025 analytical results and BUD form, as well as the 2026 analytical results and BUD form, with this submission.

Please let me know if you have any questions or if any additional information is needed.

Thank you for your time and assistance.

Matthew Morris
Compliance Coordinator



Metro Waste Authority
300 E. Locust St. | Ste. 100 | Des Moines | Iowa | 50309
Office: 515.333.4450 | Fax: 515.967.7965
E-mail: mmo@mwatoday.com

4 attachments

2026 Progressive Foundry BUD.pdf
869K



2026 Beneficial Reuse Top Cover.pdf
1137K



2025 Beneficial Reuse Top Cover.pdf

814K



2025 Progressive Foundry BUD.pdf

863K



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11E2114

Progressive Foundry

Tucker Brown
1518 1st Ave
Perry, IA 50220

Project Name: TCLP

Project / PO Number: N/A
Received: 05/29/2025
Reported: 07/03/2025

Analytical Testing Parameters

Client Sample ID: Ben Reuse Top Cover
Sample Matrix: Bulk-Solid
Lab Sample ID: 11E2114-01

Collected By: Brown, Tucker
Collection Date: 05/27/2025 7:10

Determination of Conventional Chemistry Parameters	Result	RL	Units	Note	Prepared	Analyzed	Analyst
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EPA 9045D

pH, Soils	9.1	0.1	pH			06/04/25 1313	BSS
pH, Temperature	18.8	0.1	°C	H4		06/04/25 1313	BSS

Determination of Total Metals	Result	RL	Units	Note	Prepared	Analyzed	Analyst
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Calculation

Chromium, trivalent	<3.00	3.00	mg/kg		06/05/25 1629	06/09/25 0903	JAR
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EPA 3050B/EPA 6010B

Antimony, total	<5.0	5.0	mg/kg		06/05/25 1629	06/09/25 0903	JAR
Arsenic, total	<5.0	5.0	mg/kg		06/05/25 1629	06/09/25 0903	JAR
Barium, total	40.8	1.00	mg/kg		06/05/25 1629	06/09/25 0903	JAR
Beryllium, total	<1.0	1.0	mg/kg		06/05/25 1629	06/09/25 0903	JAR
Boron, total	<10.0	10.0	mg/kg		06/03/25 1525	06/05/25 0312	JAR
Cadmium, total	<1.0	1.0	mg/kg		06/05/25 1629	06/09/25 0903	JAR
Chromium, total	<3.0	3.0	mg/kg		06/05/25 1629	06/09/25 0903	JAR
Cobalt, total	<1.0	1.0	mg/kg		06/05/25 1629	06/09/25 0903	JAR
Copper, total	3.6	3.0	mg/kg		06/05/25 1629	06/09/25 0903	JAR
Lead, total	<5.00	5.00	mg/kg		06/05/25 1629	06/09/25 0903	JAR
Lithium, total	<5	5	mg/kg		06/05/25 1629	06/09/25 0903	JAR
Manganese, total	52.2	1.0	mg/kg	M2	06/03/25 1525	06/05/25 0312	JAR
Molybdenum, total	1.0	1.0	mg/kg		06/05/25 1629	06/09/25 0903	JAR
Nickel, total	<5.0	5.0	mg/kg		06/05/25 1629	06/09/25 0903	JAR
Selenium, total	<3.0	3.0	mg/kg		06/05/25 1629	06/09/25 0903	JAR
Silver, total	<1.0	1.0	mg/kg		06/03/25 1525	06/05/25 0312	JAR
Thallium, total	0.8	0.5	mg/kg		07/01/25 1612	07/03/25 0223	JAR
Vanadium, total	<5.00	5.00	mg/kg		06/03/25 1525	06/05/25 0312	JAR
Zinc, total	6.1	3.0	mg/kg		06/05/25 1629	06/09/25 0903	JAR

EPA 7196A

Chromium, hexavalent	<5.0	5.0	mg/kg			06/02/25 0937	KKJ
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EPA 7471A

Mercury, total	<0.05	0.05	mg/kg		06/10/25 0737	06/10/25 1509	JAR
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EPA 9056A

Fluoride	<10.0	10.0	mg/kg			06/10/25 2107	MID
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Determination of TCLP Metals	Result	RL	Units	Note	Prepared	Analyzed	Analyst
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EPA 3010A/EPA 6010B



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11E2114

Client Sample ID: Ben Reuse Top Cover
Sample Matrix: Bulk-Solid
Lab Sample ID: 11E2114-01

Collected By: Brown, Tucker
Collection Date: 05/27/2025 7:10

Determination of TCLP Metals	Result	RL	Units	Note	Prepared	Analyzed	Analyst
Arsenic (TCLP)	<0.030	0.030	mg/L		06/04/25 1700	06/07/25 0436	JAR
Barium (TCLP)	0.370	0.010	mg/L		06/04/25 1700	06/07/25 0436	JAR
Cadmium (TCLP)	<0.005	0.005	mg/L		06/04/25 1700	06/07/25 0436	JAR
Chromium (TCLP)	<0.010	0.010	mg/L		06/04/25 1700	06/07/25 0436	JAR
Lead (TCLP)	<0.020	0.020	mg/L		06/04/25 1700	06/07/25 0436	JAR
Selenium (TCLP)	<0.050	0.050	mg/L		06/04/25 1700	06/07/25 0436	JAR
Silver (TCLP)	<0.010	0.010	mg/L		06/04/25 1700	06/07/25 0436	JAR

EPA 7470A

Mercury (TCLP)	<0.00050	0.00050	mg/L	M2	06/10/25 1553	06/12/25 1343	JAR
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Determination of TCLP Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
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EPA 1311/EPA 5030B/EPA 8260D

Vinyl Chloride (TCLP)	<0.020	0.020	mg/L			06/10/25 1406	RAF
Vinyl Chloride (TCLP)	<0.020	0.020	mg/L		06/09/25 0000	06/10/25 1406	RAF
1,1-Dichloroethylene (TCLP)	<0.070	0.070	mg/L			06/10/25 1406	RAF
1,1-Dichloroethylene (TCLP)	<0.070	0.070	mg/L		06/09/25 0000	06/10/25 1406	RAF
2-Butanone (MEK) (TCLP)	<20.0	20.0	mg/L			06/10/25 1406	RAF
2-Butanone (MEK) (TCLP)	<20.0	20.0	mg/L		06/09/25 0000	06/10/25 1406	RAF
Chloroform (TCLP)	<0.600	0.600	mg/L			06/10/25 1406	RAF
Chloroform (TCLP)	<0.600	0.600	mg/L		06/09/25 0000	06/10/25 1406	RAF
Carbon Tetrachloride (TCLP)	<0.050	0.050	mg/L			06/10/25 1406	RAF
Carbon Tetrachloride (TCLP)	<0.050	0.050	mg/L		06/09/25 0000	06/10/25 1406	RAF
Benzene (TCLP)	<0.050	0.050	mg/L			06/10/25 1406	RAF
Benzene (TCLP)	<0.050	0.050	mg/L		06/09/25 0000	06/10/25 1406	RAF
1,2-Dichloroethane (TCLP)	<0.050	0.050	mg/L			06/10/25 1406	RAF
1,2-Dichloroethane (TCLP)	<0.050	0.050	mg/L		06/09/25 0000	06/10/25 1406	RAF
Trichloroethylene (TCLP)	<0.050	0.050	mg/L			06/10/25 1406	RAF
Trichloroethylene (TCLP)	<0.050	0.050	mg/L		06/09/25 0000	06/10/25 1406	RAF
Tetrachloroethylene (TCLP)	<0.070	0.070	mg/L			06/10/25 1406	RAF
Tetrachloroethylene (TCLP)	<0.070	0.070	mg/L		06/09/25 0000	06/10/25 1406	RAF
Chlorobenzene (TCLP)	<10.0	10.0	mg/L			06/10/25 1406	RAF
Chlorobenzene (TCLP)	<10.0	10.0	mg/L		06/09/25 0000	06/10/25 1406	RAF
Surrogate: Dibromofluoromethane	53.3	Limit: 67-129	% Rec	S2		06/10/25 1406	RAF
Surrogate: Dibromofluoromethane	53.3	Limit: 57-128	% Rec		06/09/25 0000	06/10/25 1406	RAF
Surrogate: 1,2-Dichloroethane-d4	47.5	Limit: 66-135	% Rec	S2		06/10/25 1406	RAF
Surrogate: 1,2-Dichloroethane-d4	47.5	Limit: 49-135	% Rec		06/09/25 0000	06/10/25 1406	RAF
Surrogate: Toluene-d8	106	Limit: 73-126	% Rec			06/10/25 1406	RAF
Surrogate: Toluene-d8	106	Limit: 82-116	% Rec		06/09/25 0000	06/10/25 1406	RAF
Surrogate: 4-Bromofluorobenzene	87.2	Limit: 71-127	% Rec			06/10/25 1406	RAF
Surrogate: 4-Bromofluorobenzene	87.2	Limit: 77-114	% Rec		06/09/25 0000	06/10/25 1406	RAF

Determination of TCLP Semi-Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
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600 East 17th Street South | Newton, IA 50208 | 641-792-8451 p | www.microbac.com



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11E2114

Client Sample ID: Ben Reuse Top Cover
Sample Matrix: Bulk-Solid
Lab Sample ID: 11E2114-01

Collected By: Brown, Tucker
Collection Date: 05/27/2025 7:10

Determination of TCLP Semi-Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
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EPA 3520C/EPA 8270C

Pyridine (TCLP)	<0.500	0.500	mg/L	Q3	06/05/25 1601	06/11/25 1252	PDS
1,4-Dichlorobenzene (TCLP)	<0.750	0.750	mg/L		06/05/25 1601	06/11/25 1252	PDS
o-Cresol (TCLP)	<20.0	20.0	mg/L		06/05/25 1601	06/11/25 1252	PDS
m+p-Cresol (TCLP)	<20.0	20.0	mg/L		06/05/25 1601	06/11/25 1252	PDS
Total Cresols (TCLP)	<20.0	20.0	mg/L		06/05/25 1601	06/11/25 1252	PDS
Hexachloroethane (TCLP)	<0.300	0.300	mg/L		06/05/25 1601	06/11/25 1252	PDS
Nitrobenzene (TCLP)	<0.200	0.200	mg/L		06/05/25 1601	06/11/25 1252	PDS
Hexachlorobutadiene (TCLP)	<0.050	0.050	mg/L		06/05/25 1601	06/11/25 1252	PDS
2,4,6-Trichlorophenol (TCLP)	<0.200	0.200	mg/L		06/05/25 1601	06/11/25 1252	PDS
2,4,5-Trichlorophenol (TCLP)	<40.0	40.0	mg/L		06/05/25 1601	06/11/25 1252	PDS
2,4-Dinitrotoluene (TCLP)	<0.013	0.013	mg/L		06/05/25 1601	06/11/25 1252	PDS
Hexachlorobenzene (TCLP)	<0.013	0.013	mg/L		06/05/25 1601	06/11/25 1252	PDS
Pentachlorophenol (TCLP)	<10.0	10.0	mg/L		06/05/25 1601	06/11/25 1252	PDS
Surrogate: 2-Fluorophenol	72.1	Limit: 10-159	% Rec		06/05/25 1601	06/11/25 1252	PDS
Surrogate: Phenol-d6	77.4	Limit: 10-162	% Rec		06/05/25 1601	06/11/25 1252	PDS
Surrogate: Nitrobenzene-d5	64.9	Limit: 17-154	% Rec		06/05/25 1601	06/11/25 1252	PDS
Surrogate: 2-Fluorobiphenyl	62.6	Limit: 15-150	% Rec		06/05/25 1601	06/11/25 1252	PDS
Surrogate: 2,4,6-Tribromophenol	68.0	Limit: 10-156	% Rec		06/05/25 1601	06/11/25 1252	PDS
Surrogate: Terphenyl-dl4	65.5	Limit: 10-179	% Rec		06/05/25 1601	06/11/25 1252	PDS

Determination of TCLP Organochlorine Insecticides	Result	RL	Units	Note	Prepared	Analyzed	Analyst
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EPA 3510C/EPA 8081

gamma-BHC (TCLP)	<0.0400	0.0400	mg/L		06/06/25 1221	06/11/25 1611	PDS
Heptachlor (TCLP)	<0.0008	0.0008	mg/L		06/06/25 1221	06/11/25 1611	PDS
Heptachlor Epoxide (TCLP)	<0.0008	0.0008	mg/L		06/06/25 1221	06/11/25 1611	PDS
Endrin (TCLP)	<0.0020	0.0020	mg/L		06/06/25 1221	06/11/25 1611	PDS
Methoxychlor (TCLP)	<1.00	1.00	mg/L		06/06/25 1221	06/11/25 1611	PDS
Chlordane (TCLP)	<0.0030	0.0030	mg/L		06/06/25 1221	06/11/25 1611	PDS
Toxaphene (TCLP)	<0.0500	0.0500	mg/L		06/06/25 1221	06/11/25 1611	PDS
Surrogate: Tetrachloro-m-xylene	70.4	Limit: 37-116	% Rec		06/06/25 1221	06/11/25 1611	PDS

Determination of TCLP Chlorinated Phenoxy Herbicides	Result	RL	Units	Note	Prepared	Analyzed	Analyst
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EPA 1311/EPA 8151A

2,4-D (TCLP)	<1.00	1.00	mg/L		06/09/25 1612	06/11/25 2258	PDS
Silvex (TCLP)	<0.100	0.100	mg/L		06/09/25 1612	06/11/25 2258	PDS
Surrogate: 2,5-Dichlorobenzoic Acid	102	Limit: 33-143	% Rec		06/09/25 1612	06/11/25 2258	PDS

TCLP Extraction	Result	RL	Units	Note	Prepared	Analyzed	Analyst
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EPA 1311/EPA 1311

TCLP pH, Initial	4.9		pH		06/02/25 1002	06/04/25 1122	JAR
TCLP pH, Initial	4.9		pH		06/02/25 1002	06/04/25 1122	JAR

Microbac Laboratories, Inc., Newton

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11E2114

Client Sample ID:	Ben Reuse Top Cover	Collected By:	Brown, Tucker
Sample Matrix:	Bulk-Solid	Collection Date:	05/27/2025 7:10
Lab Sample ID:	11E2114-01		

TCLP Extraction	Result	RL	Units	Note	Prepared	Analyzed	Analyst
TCLP pH, Final	5.0		pH		06/02/25 1002	06/04/25 1122	JAR
TCLP pH, Final	5.0		pH		06/02/25 1002	06/04/25 1122	JAR

Determination of SPLP Metals	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony (SPLP)	0.0022	0.0010	mg/L		06/19/25 1311	06/20/25 2214	RVV
Arsenic (SPLP)	<0.0020	0.0020	mg/L		06/19/25 1311	06/20/25 2214	RVV
Barium (SPLP)	0.130	0.0010	mg/L		06/19/25 1311	06/20/25 2214	RVV
Beryllium (SPLP)	0.0007	0.0005	mg/L		06/19/25 1311	06/20/25 2214	RVV
Cadmium (SPLP)	<0.0002	0.0002	mg/L		06/19/25 1311	06/20/25 2214	RVV
Chromium (SPLP)	0.0040	0.0010	mg/L		06/19/25 1311	06/20/25 2214	RVV
Copper (SPLP)	0.0144	0.0050	mg/L		06/19/25 1311	06/20/25 2214	RVV
Lead (SPLP)	0.0109	0.0010	mg/L		06/19/25 1311	06/20/25 2214	RVV
Selenium (SPLP)	<0.0020	0.0020	mg/L		06/19/25 1311	06/20/25 2214	RVV
Thallium (SPLP)	<0.0005	0.0005	mg/L		06/19/25 1311	06/20/25 2214	RVV
EPA 7470A							
Mercury (SPLP)	<0.00500	0.00500	mg/L		06/10/25 1554	06/12/25 1514	JAR
EPA 9056A							
Fluoride (SPLP)	0.6	0.1	mg/L		06/12/25 0000	06/13/25 1155	MID

SPLP Extraction	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 1312/EPA 1312							
SPLP pH, Initial	5.0		pH		06/10/25 0816	06/13/25 1520	JAR
SPLP pH, Final	8.9		pH		06/10/25 0816	06/13/25 1520	JAR

Definitions

H4:	The test was performed outside of the EPA recommended holding time of 15 minutes.
M2:	Matrix spike recovery is below acceptance limits.
MDL:	Minimum Detection Limit
Q3:	LCS recovery is below acceptance limits. The reported value is estimated.
RL:	Reporting Limit
S2:	Surrogate recovery is below acceptance limits.

Report Comments

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Reviewed and Approved By:

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
07/03/25 13:22



LABORATORIES
A Microbac Company

600 East 17th Street South
Newton, IA 50208
641-792-8451

CHAIN OF CUSTODY



1 I E 2 1 1 4

Progressive Foundry
PM: Heather Murphy

www.keystone labs.

SITE INFORMATION

Sampler: Tucker Brown
Project: Beneficial Reuse: Top Cover
TCLP

SPECIAL INSTRUCTIONS

None
☒ Turn Around Time
☐ Standard ☐ RUSH, need by ___/___/___

REPORT TO

Tucker Brown
Progressive Foundry
1518 1st Ave
Perry, IA 50220

INVOICE TO

Derek Yankirk
Progressive Foundry
1518 1st Ave
Perry, IA 50220

LAB USE ONLY

Work Order IE2114
Temperature 17.5
Turn-Cooler: Yes

☒ Custody Seal
☒ Containers Intact
☒ COC/Labels Agree
☒ Preservation Confirmed
☒ Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
-001	<u>Ben. Reuse Top Cover</u>	Bulk-Solid	GRAB	<u>5/27/25</u>	<u>7:10AM</u>	<u>3</u>	8260-205 beneficial-use-metals ph-9045 iclp-metals 8270-201 cr-profile-solid split-metals-icp-ms iclp-pes/Asrb	<u>01</u>

Relinquished By [Signature] Date/Time 7/29/25 7:25AM

Relinquished By Anna Koffi Date/Time 05-29-25 10:40

Remarks:

Received By _____ Date/Time _____

Received for Lab By _____ Date/Time _____

Original - Lab Copy Yellow - Sampler Copy



Beneficial Use Determination: Solid By-Product Management Plan Analytical Testing Report

Beneficial Use ID#: _____ -BUD- _____ - _____
DNR Certified Lab: Microbac Laboratories, Inc.
Lab Report Date: July 3rd, 2025
By-Product Generator: Progressive Foundry
City: Perry State: IA Zip: 50220
By-Product Name: Foundry Sand

Send completed report form(s), laboratory analytics, and supplemental Solid By-Product Management Plan (SBMP) documentation to:

Iowa Department of Natural Resources
Land Quality Bureau
Solid Waste & Contaminated Sites Section
6200 Park Ave Ste 200
Des Moines, IA 50321

For questions concerning this report form please contact the DNR at (515) 201-8272.

ANALYTICAL TESTING RESULTS

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods (SW-846).

Required		Synthetic Precipitation Leaching Procedure (EPA Test Method 1312)			Total Metals		
*	Contaminant	MCL	10 X MCL	Test Result	Regulatory Limit	Test Result	
☒	Antimony	0.006 mg/L	0.06 mg/L	0.0022 mg/L	31 mg/kg	<5	mg/kg
☒	Arsenic	0.010 mg/L	0.10 mg/L	<0.03 mg/L	17 mg/kg	<5	mg/kg
☒	Barium	2.0 mg/L	20.0 mg/L	0.130 mg/L	15,000 mg/kg	40.8	mg/kg
☒	Beryllium	0.004 mg/L	0.04 mg/L	0.0007 mg/L	110 mg/kg	<1	mg/kg
☒	Boron				16,000 mg/kg	<10	mg/kg
☒	Cadmium	0.005 mg/L	0.05 mg/L	<0.0002 mg/L	70 mg/kg	<1	mg/kg
☒	Chromium	0.1 mg/L	1.0 mg/L	0.0040 mg/L	** (Total)	<3	mg/kg
					(Hexavalent - VI) 210 mg/kg	<5	mg/kg
					(Trivalent - III) 97,000 mg/kg	<3	mg/kg
☒	Cobalt				23 mg/kg	<1	mg/kg
☒	Copper	1.3 mg/L	13.0 mg/L	0.0144 mg/L	15,000 mg/kg	3.6	mg/kg
☒	Fluoride	4.0 mg/L	40.0 mg/L	0.6 mg/L	4,700 mg/kg	<10	mg/kg
☒	Lead	0.015 mg/L	0.15 mg/L	0.0109 mg/L	400 mg/kg	<5	mg/kg
☒	Lithium				160 mg/kg	<5	mg/kg
☒	Manganese				10,000 mg/kg	52.2	mg/kg
☒	Mercury	0.002 mg/L	0.02 mg/L	<0.0050 mg/L	23 mg/kg	<0.05	mg/kg
☒	Molybdenum				390 mg/kg	1.0	mg/kg
☒	Nickel				1,500 mg/kg	<5	mg/kg
☒	Selenium	0.05 mg/L	0.5 mg/L	<0.020 mg/L	390 mg/kg	<3	mg/kg
☒	Silver				370 mg/kg	<1	mg/kg
☒	Thallium	0.002 mg/L	0.02 mg/L	<0.0005 mg/L	0.78 mg/kg	0.8	mg/kg
☒	Vanadium				350 mg/kg	<5	mg/kg
☒	Zinc				23,000 mg/kg	6.1	mg/kg

*Required contaminant

**If Total Chromium ≥ 210 mg/kg, further analysis shall be conducted to determine hexavalent and trivalent results.

Toxicity Characteristic Leaching Procedure (EPA Test Method 1311) - Regulatory Limits

Metals					Volatile Organic Compounds				
*	Contaminant	Regulatory Limit	Test Result		*	Contaminant	Regulatory Limit	Test Result	
☒	Arsenic	5.0 mg/L	<0.030	mg/L	☒	Benzene	0.5 mg/L	<0.050	mg/L
☒	Barium	100.0 mg/L	0.370	mg/L	☒	Carbon tetrachloride	0.5 mg/L	<0.050	mg/L
☒	Cadmium	1.0 mg/L	<0.005	mg/L	☒	Chlorobenzene	100.0 mg/L	<10.0	mg/L
☒	Chromium	5.0 mg/L	<0.010	mg/L	☒	Chloroform	6.0 mg/L	<0.600	mg/L
☒	Lead	5.0 mg/L	<0.020	mg/L	☒	1,2-Dichloroethane	0.5 mg/L	<0.050	mg/L
☒	Mercury	0.2 mg/L	<0.0005	mg/L	☒	1,1-Dichloroethylene	0.7 mg/L	<0.070	mg/L
☒	Selenium	1.0 mg/L	<0.050	mg/L	☒	Methyl ethyl ketone	200.0 mg/L	<20.0	mg/L
☒	Silver	5.0 mg/L	<0.010	mg/L	☒	Tetrachloroethylene	0.7 mg/L	<0.070	mg/L
					☒	Trichloroethylene	0.5 mg/L	<0.050	mg/L
					☒	Vinyl chloride	0.2 mg/L	<0.020	mg/L
Pesticides					Semi-Volatile Organic Compounds				
*	Contaminant	Regulatory Limit	Test Result		*	Contaminant	Regulatory Limit	Test Result	
☒	Chlordane	0.03 mg/L	<0.0030	mg/L	☒	o-Cresol	200.0 mg/L	<20.0	mg/L
☒	Endrin	0.02 mg/L	<0.0020	mg/L	☒	m-Cresol	200.0 mg/L	<20.0	mg/L
☒	Heptachlor (and its epoxide)	0.008 mg/L	<0.0008	mg/L	☒	p-Cresol	200.0 mg/L	<20.0	mg/L
☒	Lindane	0.4 mg/L	<0.0400	mg/L	☒	Cresol	200.0 mg/L	<20.0	mg/L
☒	Methoxychlor	10.0 mg/L	<1.00	mg/L	☒	1,4-Dichlorobenzene	7.5 mg/L	<0.750	mg/L
☒	Toxaphene	0.5 mg/L	<0.0500	mg/L	☒	2,4-Dinitrotoluene	0.13 mg/L	<0.013	mg/L
					☒	Hexachlorobenzene	0.13 mg/L	<0.013	mg/L
					☒	Hexachlorobutadiene	0.5 mg/L	<0.050	mg/L
					☒	Hexachloroethane	3.0 mg/L	<0.300	mg/L
					☒	Nitrobenzene	2.0 mg/L	<0.200	mg/L
Herbicides					☒	Pentachlorophenol	100.0 mg/L	<10.0	mg/L
*	Contaminant	Regulatory Limit	Test Result		☒	Pyridine	5.0 mg/L	<0.500	mg/L
☒	2,4-D	10.0 mg/L	<1.00	mg/L	☒	2,4,5-Trichlorophenol	400.0 mg/L	<40.0	mg/L
☒	2,4,5-TP (Silvex)	1.0 mg/L	<0.100	mg/L	☒	2,4,6-Trichlorophenol	2.0 mg/L	<0.200	mg/L

*Required contaminant

BY-PRODUCT GENERATOR CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Signature:  Date: July 7th, 2025
 Printed Name: Matthew J. Morris Title: Compliance Coordinator

ANALYTICAL REPORT

PREPARED FOR

Attn: Tucker Brown
Progressive Foundry Inc.
1518 First Street
Perry, Iowa 50220

Generated 6/14/2026 10:52:53 PM

JOB DESCRIPTION

Beneficial ReUse

JOB NUMBER

310-332888-1

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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Authorized for release by
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Case Narrative

Client: Progressive Foundry Inc.
Project: Beneficial ReUse

Job ID: 310-332888-1

Job ID: 310-332888-1

Eurofins Cedar Falls

Job Narrative 310-332888-1

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 5/27/2026 8:55 AM. 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 22.7°C.

Receipt Exceptions

The following sample was received at the laboratory outside the required temperature criteria: Rep 1-7 (310-332888-1). There was no cooling media present in the cooler.

GC/MS VOA

Method 8260D - TCLP: The continuing calibration verification (CCV) associated with batch 310-490465 recovered above the upper control limit for Dibromofluoromethane(21%D). The LCS associated with this CCV passes CCV criteria for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 310-490465/4).

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

GC/MS Semi VOA

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

HPLC/IC

Method 9056A - Soluble: The following sample was diluted due to the nature of the sample matrix: Rep 1-7 (310-332888-1). 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.

Herbicides

Method 8321B - TCLP: Leached in Cedar Falls and analyzed in Lancaster.

Rep 1-7 (310-332888-1)

Method 8321B - TCLP: The recovery for target analyte 2,4-D and Silvex (2,4,5-TP) in the laboratory control spike duplicate sample associated with the following samples Rep 1-7 (310-332888-1) is outside the QC acceptance limits. The acceptance limits should be considered advisory.

Method 8321B - TCLP: Internal standard responses were outside of acceptance limits for the following samples: Rep 1-7 (310-332888-1). The following action was taken: The samples were re-extracted outside the required holding time and the internal standard responses were within QC acceptance limits.

Method 8321B - TCLP: The recovery for analyte DICHLOROPHENYLACETICACID24- is outside the QC acceptance limits in the following samples Rep 1-7 (310-332888-1). The following action was taken. The samples were extracted outside the required holding time, and the recoveries were within QC acceptance limits.

Method 8321B - TCLP: The detections in the following sample: Rep 1-7 (310-332888-1) and the associated leachate blank for 2,4-D are not over the regulatory limit and therefore the data is reported.

Eurofins Cedar Falls

Case Narrative

Client: Progressive Foundry Inc.
Project: Beneficial ReUse

Job ID: 310-332888-1

Job ID: 310-332888-1 (Continued)

Eurofins Cedar Falls

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

Metals

Method 6010D - TCLP: The method blank for preparation batch 500-868999 and 500-869237 and analytical batch 500-869514 contained Arsenic, Barium and Chromium above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 6020B: The low level check standard recovery associated with batch 500-869125 is outside the acceptance criteria for the following analyte(s): Antimony. Associated samples were non-detect, therefore the data are reported.

Method 6020B - SPLP West: The Linear Range Check ((LRC 500-869611/16)) in analytical batch 869611 recovered outside of control limits for Beryllium. The affected analyte was not detected in the sample, therefore data has been qualified and reported.

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

General Chemistry

Method 7196A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 500-869088 and analytical batch 500-869298 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits. The Ins. MS/ Ins. MSD were within acceptance limits.

Method 7196A: The RPD between the Matrix Spike and Matrix Spike Duplicate is above the 30% acceptance threshold. The percent recovery is within acceptance criteria. Data has been reported as Primary.

(310-332888-A-1-J MSD)

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

Organic Prep

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: Progressive Foundry Inc.
Project/Site: Beneficial ReUse

Job ID: 310-332888-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
310-332888-1	Rep 1-7	Solid	05/26/26 00:00	05/27/26 08:55	Iowa

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

Client Sample Results

Client: Progressive Foundry Inc.
Project/Site: Beneficial ReUse

Job ID: 310-332888-1

Client Sample ID: Rep 1-7

Lab Sample ID: 310-332888-1

Date Collected: 05/26/26 00:00

Matrix: Solid

Date Received: 05/27/26 08:55

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	<0.00920		0.100	0.00920	mg/L			06/01/26 12:06	20
1,2-Dichloroethane	<0.0180		0.100	0.0180	mg/L			06/01/26 12:06	20
2-Butanone (MEK)	<0.230		2.00	0.230	mg/L			06/01/26 12:06	20
Benzene	<0.0180		0.100	0.0180	mg/L			06/01/26 12:06	20
Carbon tetrachloride	<0.0130		0.100	0.0130	mg/L			06/01/26 12:06	20
Chlorobenzene	<0.00700		0.100	0.00700	mg/L			06/01/26 12:06	20
Chloroform	<0.0260		0.100	0.0260	mg/L			06/01/26 12:06	20
Tetrachloroethene	<0.0400		0.200	0.0400	mg/L			06/01/26 12:06	20
Trichloroethene	<0.00700		0.100	0.00700	mg/L			06/01/26 12:06	20
Vinyl chloride	<0.00860		0.100	0.00860	mg/L			06/01/26 12:06	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	108		80 - 126					06/01/26 12:06	20
Toluene-d8 (Surr)	93		80 - 120					06/01/26 12:06	20
4-Bromofluorobenzene (Surr)	95		80 - 120					06/01/26 12:06	20

Method: SW846 8270E - Organochlorine Pesticides by GC-MS/MS - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	<0.00425		0.0110	0.00425	mg/L		06/01/26 08:08	06/02/26 21:16	1
Endrin	<0.000116		0.000662	0.000116	mg/L		06/01/26 08:08	06/02/26 21:16	1
gamma-BHC (Lindane)	<0.0000993		0.000662	0.0000993	mg/L		06/01/26 08:08	06/02/26 21:16	1
Heptachlor	<0.000105		0.000662	0.000105	mg/L		06/01/26 08:08	06/02/26 21:16	1
Heptachlor epoxide	<0.000210		0.000662	0.000210	mg/L		06/01/26 08:08	06/02/26 21:16	1
Methoxychlor	<0.000226		0.000662	0.000226	mg/L		06/01/26 08:08	06/02/26 21:16	1
Toxaphene	<0.00320		0.0276	0.00320	mg/L		06/01/26 08:08	06/02/26 21:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	104		22 - 150				06/01/26 08:08	06/02/26 21:16	1
2-Fluorobiphenyl (Surr)	84		13 - 150				06/01/26 08:08	06/02/26 21:16	1
Terphenyl-d14 (Surr)	82		10 - 150				06/01/26 08:08	06/02/26 21:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.00650		0.0500	0.00650	mg/L		06/01/26 09:03	06/02/26 16:27	1
2,4,5-Trichlorophenol	<0.00530		0.0500	0.00530	mg/L		06/01/26 09:03	06/02/26 16:27	1
2,4,6-Trichlorophenol	<0.00590		0.0500	0.00590	mg/L		06/01/26 09:03	06/02/26 16:27	1
2,4-Dinitrotoluene	<0.00540		0.0500	0.00540	mg/L		06/01/26 09:03	06/02/26 16:27	1
2-Methylphenol	0.0299	J	0.0500	0.00500	mg/L		06/01/26 09:03	06/02/26 16:27	1
4-Methylphenol (and/or 3-Methylphenol)	0.0195	J	0.0500	0.00380	mg/L		06/01/26 09:03	06/02/26 16:27	1
Hexachlorobenzene	<0.00690		0.0500	0.00690	mg/L		06/01/26 09:03	06/02/26 16:27	1
Hexachlorobutadiene	<0.00600		0.0500	0.00600	mg/L		06/01/26 09:03	06/02/26 16:27	1
Hexachloroethane	<0.00640		0.0500	0.00640	mg/L		06/01/26 09:03	06/02/26 16:27	1
Nitrobenzene	<0.00530		0.0500	0.00530	mg/L		06/01/26 09:03	06/02/26 16:27	1
Pentachlorophenol	<0.0150		0.0500	0.0150	mg/L		06/01/26 09:03	06/02/26 16:27	1
Pyridine	<0.00740		0.0500	0.00740	mg/L		06/01/26 09:03	06/02/26 16:27	1
Total Cresols	0.0494	J	0.0500	0.00500	mg/L		06/01/26 09:03	06/02/26 16:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	80		21 - 110				06/01/26 09:03	06/02/26 16:27	1
Phenol-d5 (Surr)	72		21 - 110				06/01/26 09:03	06/02/26 16:27	1

Eurofins Cedar Falls

Client Sample Results

Client: Progressive Foundry Inc.
Project/Site: Beneficial ReUse

Job ID: 310-332888-1

Client Sample ID: Rep 1-7

Lab Sample ID: 310-332888-1

Date Collected: 05/26/26 00:00

Matrix: Solid

Date Received: 05/27/26 08:55

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	98		39 - 140	06/01/26 09:03	06/02/26 16:27	1
2-Fluorobiphenyl (Surr)	92		33 - 126	06/01/26 09:03	06/02/26 16:27	1
2,4,6-Tribromophenol (Surr)	94		20 - 144	06/01/26 09:03	06/02/26 16:27	1
Terphenyl-d14 (Surr)	98		13 - 150	06/01/26 09:03	06/02/26 16:27	1

Method: SW846 9056A - Anions, Ion Chromatography - SPLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.451		0.200	0.0360	mg/L			06/02/26 12:53	1

Method: SW846 8321B - Herbicides (LC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.189	*+ B *3	0.100	0.0800	ug/L		06/01/26 09:57	06/02/26 11:10	1
Silvex (2,4,5-TP)	<0.0300	*+ *3	0.100	0.0300	ug/L		06/01/26 09:57	06/02/26 11:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DICHLOROPHENYLACETICACID24-	371	S1+ *3	70 - 130	06/01/26 09:57	06/02/26 11:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00489	J B	0.0100	0.00365	mg/L		06/03/26 14:56	06/05/26 02:05	1
Barium	0.308	B	0.0100	0.00123	mg/L		06/03/26 14:56	06/05/26 02:05	1
Cadmium	0.000442	J	0.00200	0.000433	mg/L		06/03/26 14:56	06/05/26 02:05	1
Chromium	0.00226	J B	0.0100	0.00169	mg/L		06/03/26 14:56	06/05/26 02:05	1
Lead	0.00503		0.00500	0.00270	mg/L		06/03/26 14:56	06/05/26 02:05	1
Selenium	0.00700	J	0.0100	0.00532	mg/L		06/03/26 14:56	06/05/26 02:05	1
Silver	<0.00148		0.00500	0.00148	mg/L		06/03/26 14:56	06/05/26 02:05	1

Method: SW846 6020B - Metals (ICP/MS) - SPLP West

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<6.00	F1	50.0	6.00	ug/L		06/04/26 15:04	06/05/26 16:07	1
Arsenic	6.79	J	50.0	2.00	ug/L		06/04/26 15:04	06/05/26 16:07	1
Barium	230	J	500	50.0	ug/L		06/04/26 15:04	06/05/26 16:07	1
Beryllium	<2.00	^5-	4.00	2.00	ug/L		06/04/26 15:04	06/05/26 16:07	1
Cadmium	<1.00		5.00	1.00	ug/L		06/04/26 15:04	06/05/26 16:07	1
Chromium	11.4	J	25.0	5.00	ug/L		06/04/26 15:04	06/05/26 16:07	1
Copper	10.9	J	25.0	5.00	ug/L		06/04/26 15:04	06/05/26 16:07	1
Lead	23.9	J	50.0	2.00	ug/L		06/04/26 15:04	06/05/26 16:07	1
Selenium	<10.0		50.0	10.0	ug/L		06/04/26 15:04	06/05/26 16:07	1
Thallium	<2.00		50.0	2.00	ug/L		06/04/26 15:04	06/05/26 16:07	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.200		0.200	0.200	ug/L		06/04/26 09:00	06/04/26 14:21	1

Method: SW846 7470A - Mercury (CVAA) - SPLP West

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.200		0.200	0.200	ug/L		06/05/26 09:15	06/05/26 14:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	0.9		0.1	0.1	%			05/27/26 11:14	1

Eurofins Cedar Falls

Client Sample Results

Client: Progressive Foundry Inc.
Project/Site: Beneficial ReUse

Job ID: 310-332888-1

Client Sample ID: Rep 1-7

Lab Sample ID: 310-332888-1

Date Collected: 05/26/26 00:00

Matrix: Solid

Date Received: 05/27/26 08:55

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (EPA Moisture)	99.1		0.1	0.1	%			05/27/26 11:14	1

Method: SW846 1311 - TCLP Extraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Leachate Generated	N/A				NONE			05/27/26 16:00	1

Client Sample ID: Rep 1-7

Lab Sample ID: 310-332888-1

Date Collected: 05/26/26 00:00

Matrix: Solid

Date Received: 05/27/26 08:55

Percent Solids: 99.1

Method: SW846 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<3.61		20.1	3.61	mg/Kg	✱		05/29/26 11:04	10

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.310	^1+ F1	1.69	0.310	mg/Kg	✱	06/02/26 10:10	06/02/26 17:42	2
Arsenic	1.05		0.846	0.249	mg/Kg	✱	06/02/26 10:10	06/02/26 17:42	2
Barium	32.9		0.846	0.147	mg/Kg	✱	06/02/26 10:10	06/02/26 17:42	2
Beryllium	0.166	J	0.338	0.131	mg/Kg	✱	06/02/26 10:10	06/03/26 12:09	2
Boron	6.71		4.23	3.64	mg/Kg	✱	06/02/26 10:10	06/03/26 12:09	2
Cadmium	<0.0276		0.169	0.0276	mg/Kg	✱	06/02/26 10:10	06/02/26 17:42	2
Chromium	5.02		1.69	1.63	mg/Kg	✱	06/02/26 10:10	06/02/26 17:42	2
Cobalt	0.702		0.423	0.0570	mg/Kg	✱	06/02/26 10:10	06/02/26 17:42	2
Copper	15.3		0.846	0.579	mg/Kg	✱	06/02/26 10:10	06/02/26 17:42	2
Lead	3.67		0.423	0.0657	mg/Kg	✱	06/02/26 10:10	06/02/26 17:42	2
Lithium	2.39	J	3.38	0.822	mg/Kg	✱	06/02/26 10:10	06/03/26 12:09	2
Manganese	94.6	F1 F2	0.846	0.196	mg/Kg	✱	06/02/26 10:10	06/02/26 17:42	2
Molybdenum	1.26		0.846	0.108	mg/Kg	✱	06/02/26 10:10	06/02/26 17:42	2
Nickel	3.57		1.69	0.939	mg/Kg	✱	06/02/26 10:10	06/02/26 17:42	2
Selenium	0.498	J	0.846	0.139	mg/Kg	✱	06/02/26 10:10	06/02/26 17:42	2
Silver	0.0271	J	0.169	0.0103	mg/Kg	✱	06/02/26 10:10	06/02/26 17:42	2
Thallium	<0.0667		0.846	0.0667	mg/Kg	✱	06/02/26 10:10	06/02/26 17:42	2
Vanadium	2.27		0.423	0.347	mg/Kg	✱	06/02/26 10:10	06/02/26 17:42	2
Zinc	33.7	B F1	1.69	0.987	mg/Kg	✱	06/02/26 10:10	06/02/26 17:42	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<6.57		15.9	6.57	ug/Kg	✱	06/02/26 16:35	06/03/26 14:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent (SW846 7196A)	<0.392	F2 F1	1.01	0.392	mg/Kg	✱	06/03/26 07:08	06/04/26 07:23	1
Chromium, trivalent (SW846 7196A)	5.02		0.101	0.101	mg/Kg	✱		06/03/26 09:13	1

Eurofins Cedar Falls

Lab Chronicle

Client: Progressive Foundry Inc.
Project/Site: Beneficial ReUse

Job ID: 310-332888-1

Client Sample ID: Rep 1-7

Lab Sample ID: 310-332888-1

Date Collected: 05/26/26 00:00

Matrix: Solid

Date Received: 05/27/26 08:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			490133	U8FK	EET CF	05/27/26 16:45 - 05/28/26 08:45 ¹
TCLP	Analysis	8260D		20	490465	MZR8	EET CF	06/01/26 12:06
TCLP	Leach	1311			490134	U8FK	EET CF	05/27/26 16:00 - 05/28/26 08:00 ¹
TCLP	Prep	3511			490452	V7YZ	EET CF	06/01/26 08:08
TCLP	Analysis	8270E		1	490610	P5ZC	EET CF	06/02/26 21:16
TCLP	Leach	1311			490134	U8FK	EET CF	05/27/26 16:00 - 05/28/26 08:00 ¹
TCLP	Prep	3510C			490458	J7XK	EET CF	06/01/26 09:03
TCLP	Analysis	8270E		1	490641	V7YZ	EET CF	06/02/26 16:27
SPLP	Leach	1312			490512	U8FK	EET CF	06/01/26 16:00 - 06/02/26 08:00 ¹
SPLP	Analysis	9056A		1	490768	HE7K	EET CF	06/02/26 12:53
TCLP	Leach	1311			826603	UNWS	ELLE	05/27/26 16:00 - 05/28/26 08:00 ¹
TCLP	Prep	8321B			827080	CL6F	ELLE	06/01/26 09:57
TCLP	Analysis	8321B		1	827535	F9DU	ELLE	06/02/26 11:10
TCLP	Leach	1311			868999	AC	EET CHI	06/02/26 16:43 - 06/03/26 10:43 ¹
TCLP	Prep	3010A			869237	MS	EET CHI	06/03/26 14:56 - 06/03/26 20:56 ¹
TCLP	Analysis	6010D		1	869514	SJ	EET CHI	06/05/26 02:05
SPLP West	Leach	1312			869212	MA	EET CHI	06/03/26 15:48 - 06/04/26 08:48 ¹
SPLP West	Prep	3010A			869425	MS	EET CHI	06/04/26 15:04 - 06/04/26 21:04 ¹
SPLP West	Analysis	6020B		1	869611	RN	EET CHI	06/05/26 16:07
SPLP West	Leach	1312			869212	MA	EET CHI	06/03/26 15:48 - 06/04/26 08:48 ¹
SPLP West	Prep	7470A			869535	MJG	EET CHI	06/05/26 09:15 - 06/05/26 11:15 ¹
SPLP West	Analysis	7470A		1	869597	MJG	EET CHI	06/05/26 14:29
TCLP	Leach	1311			868999	AC	EET CHI	06/02/26 16:43 - 06/03/26 10:43 ¹
TCLP	Prep	7470A			869340	MJG	EET CHI	06/04/26 09:00 - 06/04/26 11:00 ¹
TCLP	Analysis	7470A		1	869437	MJG	EET CHI	06/04/26 14:21
Total/NA	Analysis	Moisture		1	490072	W9YR	EET CF	05/27/26 11:14
Total/NA	Analysis	1311		1	490137	U8FK	EET CF	05/27/26 16:00 - 05/28/26 08:00 ¹

Client Sample ID: Rep 1-7

Lab Sample ID: 310-332888-1

Date Collected: 05/26/26 00:00

Matrix: Solid

Date Received: 05/27/26 08:55

Percent Solids: 99.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			490324	HE7K	EET CF	05/29/26 09:39
Soluble	Analysis	9056A		10	490419	ZRI4	EET CF	05/29/26 11:04
Total/NA	Prep	3050B			868981	BDE	EET CHI	06/02/26 10:10 - 06/02/26 16:10 ¹
Total/NA	Analysis	6020B		2	869257	RN	EET CHI	06/03/26 12:09
Total/NA	Prep	3050B			868981	BDE	EET CHI	06/02/26 10:10 - 06/02/26 16:10 ¹
Total/NA	Analysis	6020B		2	869125	S1Z	EET CHI	06/02/26 17:42
Total/NA	Prep	7471B			869021	MJG	EET CHI	06/02/26 16:35
Total/NA	Analysis	7471B		1	869218	MJG	EET CHI	06/03/26 14:14
Total/NA	Analysis	7196A		1	869143	RN	EET CHI	06/03/26 09:13
Total/NA	Prep	3060A			869088	AM	EET CHI	06/03/26 07:08 - 06/03/26 09:34 ¹
Total/NA	Analysis	7196A		1	869298	AM	EET CHI	06/04/26 07:23

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

Eurofins Cedar Falls

Client: Progressive Foundry Inc.
Project/Site: Beneficial ReUse

Job ID: 310-332888-1

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
- ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

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Definitions/Glossary

Client: Progressive Foundry Inc.
Project/Site: Beneficial ReUse

Job ID: 310-332888-1

Qualifiers

GC/MS Semi VOA

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

LCMS

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*3	ISTD response or retention time outside acceptable limits.
B	Compound was found in the blank and sample.
S1+	Surrogate recovery exceeds control limits, high biased.

Metals

Qualifier	Qualifier Description
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
^5-	Linear Range Check (LRC) is outside acceptance limits, low biased.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits

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)

Eurofins Cedar Falls

Definitions/Glossary

Client: Progressive Foundry Inc.
Project/Site: Beneficial ReUse

Job ID: 310-332888-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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: Progressive Foundry Inc.
Project/Site: Beneficial ReUse

Job ID: 310-332888-1

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 Iowa State 007. This list may include analytes for which the agency does not offer certification :			
Analysis Method	Prep Method	Matrix	Analyte
1311		Solid	Leachate Generated
8270E	3510C	Solid	Pyridine
8270E	3510C	Solid	Total Cresols
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Laboratory: Eurofins Chicago

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	082	05-01-28
The following analytes are included in this report, but the laboratory is not certified by Iowa State 082. This list may include analytes for which the agency does not offer certification :			
Analysis Method	Prep Method	Matrix	Analyte
6020B	3050B	Solid	Lithium
7196A		Solid	Chromium, trivalent

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-26
A2LA	Dept. of Energy	0001.01	11-30-26
A2LA	ISO/IEC 17025	0001.01	11-30-26
Alabama	State	43200	01-31-27
Alaska	State	PA00009	06-30-26
Alaska (UST)	State	17-027	12-30-26
Arizona	State	AZ0780	03-12-27
Arkansas DEQ	State	88-00660	08-09-26
California	State	2792	01-31-27
Colorado	State	PA00009	06-30-26
Connecticut	State	PH-0746	06-30-27
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-27
Delaware (DW)	State	N/A	01-31-27
Florida	NELAP	E87997	06-30-26
Georgia (DW)	State	C048	01-31-27
Illinois	NELAP	200027	01-31-27
Iowa	State	361	03-01-28
Kansas	NELAP	E-10151	10-31-26
Kentucky (DW)	State	KY90088	12-31-26
Kentucky (UST)	State	0001.01	11-30-26
Kentucky (WW)	State	KY90088	12-31-26
Louisiana (All)	NELAP	02055	06-30-26
Maine	State	2019012	03-12-27
Maryland	State	100	06-30-27

Eurofins Cedar Falls

Accreditation/Certification Summary

Client: Progressive Foundry Inc.
Project/Site: Beneficial ReUse

Job ID: 310-332888-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date
Massachusetts	State	M-PA009	06-30-26
Michigan	State	9930	01-31-27
Minnesota	NELAP	042-999-487	12-31-26
Mississippi	State	023	01-31-27
Missouri	State	450	01-31-28
Montana (DW)	State	0098	01-01-27
Nebraska	State	NE-OS-32-17	01-31-27
New Hampshire	NELAP	2730	01-10-27
New Jersey	NELAP	PA011	06-30-26
New York	NELAP	10670	04-01-27
North Carolina (DW)	State	42705	07-31-26
North Carolina (WW/SW)	State	521	01-03-27
North Dakota	State	R-205	01-31-24 *
Ohio	State	87787	01-31-27
Oklahoma	NELAP	9804	12-13-26
Oregon	NELAP	PA200001	09-11-26
Pennsylvania	NELAP	36-00037	06-07-26
Quebec Ministry of Environment and Fight against Climate Change	PALA	507	09-16-29
Rhode Island	State	LAO00338	12-31-26
South Carolina	State	89002	01-31-27
Tennessee	State	02838	01-31-27
Texas	NELAP	T104704194-23-46	08-31-26
USDA	US Federal Programs	525-22-298-19481	05-08-29
Vermont	State	VT - 36037	10-28-26
Virginia	NELAP	460182	06-14-26
Washington	State	C457	04-11-27
West Virginia (DW)	State	9906 C	01-31-27
West Virginia DEP	State	055	07-31-26
Wyoming	State	8TMS-L	01-31-27
Wyoming (UST)	A2LA	0001.01	11-30-26

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

Eurofins Cedar Falls

Method Summary

Client: Progressive Foundry Inc.
Project/Site: Beneficial ReUse

Job ID: 310-332888-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
8270E	Organochlorine Pesticides by GC-MS/MS	SW846	EET CF
8270E	Semivolatile Organic Compounds (GC/MS)	SW846	EET CF
9056A	Anions, Ion Chromatography	SW846	EET CF
8321B	Herbicides (LC/MS)	SW846	ELLE
6010D	Metals (ICP)	SW846	EET CHI
6020B	Metals (ICP/MS)	SW846	EET CHI
7470A	Mercury (CVAA)	SW846	EET CHI
7471B	Mercury (CVAA)	SW846	EET CHI
7196A	Chromium, Hexavalent	SW846	EET CHI
7196A	Chromium, Trivalent (Colorimetric)	SW846	EET CHI
Moisture	Percent Moisture	EPA	EET CF
1311	TCLP Extraction	SW846	EET CF
1311	TCLP Extraction	SW846	EET CF
1311	TCLP Zero Headspace Extraction	SW846	EET CF
1311	TCLP Extraction	SW846	EET CHI
1311	TCLP Extraction	SW846	ELLE
1312	SPLP Extraction	SW846	EET CF
1312	SPLP Extraction	SW846	EET CHI
3010A	Preparation, Total Metals	SW846	EET CHI
3050B	Preparation, Metals	SW846	EET CHI
3060A	Alkaline Digestion (Chromium, Hexavalent)	SW846	EET CHI
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CF
3511	Microextraction of Organic Compounds	SW846	EET CF
5030B	Purge and Trap	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CHI
7471B	Preparation, Mercury	SW846	EET CHI
8321B	Extraction of Chlorinated Phenoxyacid Herbicides	EPA	ELLE
DI Leach	Deionized Water Leaching Procedure	ASTM	EET CF

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

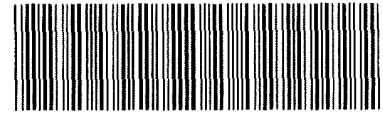
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

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

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

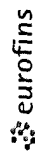


310-332888 Chain of Custody

Cooler/Sample Receipt and Temperature Log

Client Information			
Client: <u>Proxessive Food</u>			
City/State: <u>CT</u>	STATE	Project:	
Receipt Information			
Date/Time Received:	DATE <u>8/27/14</u>	TIME <u>0855</u>	Received By: <u>[Signature]</u>
Delivery Type: ☒ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		☒ Yes ☐ No	If yes: Cooler ID
Multiple Coolers?		☐ Yes ☒ No	If yes: Cooler # ____ of ____
Cooler Custody Seals Present?		☐ Yes ☒ No	If yes: Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present?		☐ Yes ☒ No	If yes: Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?		☐ Yes ☒ No	If yes: Which VOA samples are in cooler? ↓
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: ☒ NONE			
Thermometer ID: <u>BB</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):		Corrected Temp (°C):	
• Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
	<u>16 02 Jar</u>	<u>✓</u>	
Uncorrected Temp (°C):	<u>22.7</u>	<u>23.0</u>	
Corrected Temp (°C):	<u>22.7</u>	<u>23.0</u>	
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ 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?) ☐ Yes ☐ No			
NOTE If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			
<u>Unsure if Jar is Per no label on container</u>			

Chain of Custody Record



Environment Testing

Client Information		Sampler		Lab PM:		Carrier Tracking No(s).		COC No:									
Client Contact: Tucker Brown		Phone: (515) 465-5697		E-Mail: Brody Patterson@eurofins.com		State of Origin:		310-121838-31074 1									
Company: Progressive Foundry Inc.		PWSID:		Lab PM: Patterson, Brody		Carrier Tracking No(s).		COC No:									
Address: 1518 First Street		Due Date Requested:		E-Mail: Brody Patterson@eurofins.com		State of Origin:		310-121838-31074 1									
City: Perry		TAT Requested (days):		Lab PM: Patterson, Brody		State of Origin:		310-121838-31074 1									
State, Zip: IA, 50220		Compliance Project: ☐ Yes ☐ No		Lab PM: Patterson, Brody		State of Origin:		310-121838-31074 1									
Phone: 515-465-5697(Tel)		PO #:		Lab PM: Patterson, Brody		State of Origin:		310-121838-31074 1									
Email: TBrown@progressivefoundry.com		Pre-Payment by CC Required		Lab PM: Patterson, Brody		State of Origin:		310-121838-31074 1									
Project Name: Beneficial ReUse		WO #:		Lab PM: Patterson, Brody		State of Origin:		310-121838-31074 1									
Site:		Project #: 31020751		Lab PM: Patterson, Brody		State of Origin:		310-121838-31074 1									
		SSOW#:		Lab PM: Patterson, Brody		State of Origin:		310-121838-31074 1									
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=tissue, A=air, DW=drinking water)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9056A, ORGFM, 28D, Moisture	6020B, 7195A, 7471B	6010D, 7470A	6020B - IA BEN use SPLP 6020B	6081B, 8260D, 8270E, 9056A, ORGFM, 28D	8321B, Herb - TCLP	Total Number of Containers	Special Instructions/Note:		
Req 1	5/26/26		Comp	Comp	Solid										Sub 8oz and 16oz to Chicago		
Req 2	5/26/26		Comp	Comp	Solid												
Req 3	5/26/26		C	C	Solid												
Req 4	5/26/26		C	C	Solid												
Req 5	5/26/26		C	C	Solid												
Req 6	5/26/26		C	C	Solid												
Req 7	5/26/26		C	C	Solid												
	5/26/26		C	C	Solid												
Possible Hazard Identification		Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological ☐		Deliverable Requested I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months		Special Instructions/QC Requirements		Method of Shipment		Time.			
Empty Kit Relinquished by		Date		Time		Received by		Date/Time		Company		Received by		Date/Time		Company	
Relinquished by		Date		Time		Received by		Date/Time		Company		Received by		Date/Time		Company	
Relinquished by		Date		Time		Received by		Date/Time		Company		Received by		Date/Time		Company	
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No															

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Ver 03/20/2026
6/14/2026

Login Sample Receipt Checklist

Client: Progressive Foundry Inc.

Job Number: 310-332888-1

Login Number: 332888

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Hirsch, Preston

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 outside required temperature criteria.
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: Progressive Foundry Inc.

Job Number: 310-332888-1

Login Number: 332888

List Number: 2

Creator: Scott, Sherri L

List Source: Eurofins Chicago

List Creation: 05/28/26 10:24 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Login Sample Receipt Checklist

Client: Progressive Foundry Inc.

Job Number: 310-332888-1

Login Number: 332888

List Number: 3

Creator: Williams, Peter

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Creation: 05/29/26 12:53 PM

Question	Answer	Comment
The cooler's custody seal is 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 acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	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	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	False	Headspace greater than 6mm in diameter in all containers



Beneficial Use Determination: Solid By-Product Management Plan Analytical Testing Report

Beneficial Use ID#: _____ -BUD- _____ - _____
DNR Certified Lab: EuroFins Cedar Falls
Lab Report Date: June 14th, 2026
By-Product Generator: Progressive Foundry
City: Perry State: IA Zip: 50220
By-Product Name: Foundry Sand

Send completed report form(s), laboratory analytics, and supplemental Solid By-Product Management Plan (SBMP) documentation to:

Iowa Department of Natural Resources
Land Quality Bureau
Solid Waste & Contaminated Sites Section
6200 Park Ave Ste 200
Des Moines, IA 50321

For questions concerning this report form please contact the DNR at (515) 201-8272.

ANALYTICAL TESTING RESULTS

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods (SW-846).

Required		Synthetic Precipitation Leaching Procedure (EPA Test Method 1312)			Total Metals		
*	Contaminant	MCL	10 X MCL	Test Result	Regulatory Limit	Test Result	
☒	Antimony	0.006 mg/L	0.06 mg/L	mg/L	31 mg/kg	0.310	mg/kg
☒	Arsenic	0.010 mg/L	0.10 mg/L	0.0067 mg/L	17 mg/kg	1.05	mg/kg
☒	Barium	2.0 mg/L	20.0 mg/L	0.23 mg/L	15,000 mg/kg	32.9	mg/kg
☒	Beryllium	0.004 mg/L	0.04 mg/L	mg/L	110 mg/kg	0.166	mg/kg
☒	Boron				16,000 mg/kg	6.71	mg/kg
☒	Cadmium	0.005 mg/L	0.05 mg/L	mg/L	70 mg/kg	<0.0276	mg/kg
☒	Chromium	0.1 mg/L	1.0 mg/L	0.0114 mg/L	** (Total)	5.02	mg/kg
					(Hexavalent - VI) 210 mg/kg	<0.392	mg/kg
					(Trivalent - III) 97,000 mg/kg	5.02	mg/kg
☒	Cobalt				23 mg/kg	0.702	mg/kg
☒	Copper	1.3 mg/L	13.0 mg/L	0.0109 mg/L	15,000 mg/kg	15.3	mg/kg
☒	Fluoride	4.0 mg/L	40.0 mg/L	mg/L	4,700 mg/kg	<3.61	mg/kg
☒	Lead	0.015 mg/L	0.15 mg/L	0.0239 mg/L	400 mg/kg	3.67	mg/kg
☒	Lithium				160 mg/kg	2.39	mg/kg
☒	Manganese				10,000 mg/kg	94.6	mg/kg
☒	Mercury	0.002 mg/L	0.02 mg/L	<0.0002 mg/L	23 mg/kg	<6.57	mg/kg
☒	Molybdenum				390 mg/kg	1.26	mg/kg
☒	Nickel				1,500 mg/kg	3.57	mg/kg
☒	Selenium	0.05 mg/L	0.5 mg/L	<0.010 mg/L	390 mg/kg	0.498	mg/kg
☒	Silver				370 mg/kg	0.0271	mg/kg
☒	Thallium	0.002 mg/L	0.02 mg/L	<0.0002 mg/L	0.78 mg/kg	<0.0667	mg/kg
☒	Vanadium				350 mg/kg	2.27	mg/kg
☒	Zinc				23,000 mg/kg	33.7	mg/kg

*Required contaminant

**If Total Chromium $\geq$ 210 mg/kg, further analysis shall be conducted to determine hexavalent and trivalent results.

Toxicity Characteristic Leaching Procedure (EPA Test Method 1311) - [Regulatory Limits](#)

Metals					Volatile Organic Compounds				
*	Contaminant	Regulatory Limit	Test Result		*	Contaminant	Regulatory Limit	Test Result	
☒	Arsenic	5.0 mg/L	0.00489	mg/L	☒	Benzene	0.5 mg/L	<0.018	mg/L
☒	Barium	100.0 mg/L	0.308	mg/L	☒	Carbon tetrachloride	0.5 mg/L	<0.013	mg/L
☒	Cadmium	1.0 mg/L	0.00044	mg/L	☒	Chlorobenzene	100.0 mg/L	<0.0070	mg/L
☒	Chromium	5.0 mg/L	0.00226	mg/L	☒	Chloroform	6.0 mg/L	<0.0260	mg/L
☒	Lead	5.0 mg/L	0.00503	mg/L	☒	1,2-Dichloroethane	0.5 mg/L	<0.0092	mg/L
☒	Mercury	0.2 mg/L	<0.20	mg/L	☒	1,1-Dichloroethylene	0.7 mg/L	<0.0180	mg/L
☒	Selenium	1.0 mg/L	0.00700	mg/L	☒	Methyl ethyl ketone	200.0 mg/L	<0.230	mg/L
☒	Silver	5.0 mg/L	<0.0015	mg/L	☒	Tetrachloroethylene	0.7 mg/L	<0.040	mg/L
					☒	Trichloroethylene	0.5 mg/L	<0.0070	mg/L
					☒	Vinyl chloride	0.2 mg/L	<0.0086	mg/L
Pesticides					Semi-Volatile Organic Compounds				
*	Contaminant	Regulatory Limit	Test Result		*	Contaminant	Regulatory Limit	Test Result	
☒	Chlordane	0.03 mg/L	<0.0043	mg/L	☒	o-Cresol	200.0 mg/L	0.0299	mg/L
☒	Endrin	0.02 mg/L	<0.0002	mg/L	☒	m-Cresol	200.0 mg/L	0.0195	mg/L
☒	Heptachlor (and its epoxide)	0.008 mg/L	<0.0001	mg/L	☒	p-Cresol	200.0 mg/L	0.0195	mg/L
☒	Lindane	0.4 mg/L	<0.0001	mg/L	☒	Cresol	200.0 mg/L	0.0494	mg/L
☒	Methoxychlor	10.0 mg/L	<0.0002	mg/L	☒	1,4-Dichlorobenzene	7.5 mg/L	<0.0065	mg/L
☒	Toxaphene	0.5 mg/L	<0.0032	mg/L	☒	2,4-Dinitrotoluene	0.13 mg/L	<0.0054	mg/L
					☒	Hexachlorobenzene	0.13 mg/L	<0.0069	mg/L
					☒	Hexachlorobutadiene	0.5 mg/L	<0.0060	mg/L
					☒	Hexachloroethane	3.0 mg/L	<0.0064	mg/L
					☒	Nitrobenzene	2.0 mg/L	<0.0053	mg/L
Herbicides					☒	Pentachlorophenol	100.0 mg/L	<0.015	mg/L
*	Contaminant	Regulatory Limit	Test Result		☒	Pyridine	5.0 mg/L	<0.0074	mg/L
☒	2,4-D	10.0 mg/L	<0.189	mg/L	☒	2,4,5-Trichlorophenol	400.0 mg/L	<0.005	mg/L
☒	2,4,5-TP (Silvex)	1.0 mg/L	<0.030	mg/L	☒	2,4,6-Trichlorophenol	2.0 mg/L	<0.005	mg/L

*Required contaminant

BY-PRODUCT GENERATOR CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Signature: _____

Date: July 31st, 2026

Printed Name: Matthew J. Morris

Title: Compliance Coordinator