



November 07, 2022

**Absaroka**

**Joel Mason**

**112 High St.**

**Buffalo**

**WY 82834**

**Project Name - D90-NP Remediation 2022**

**Project Number - [none]**

Attached are your analytical results for D90-NP Remediation 2022 received by Origins Laboratory, Inc. October 24, 2022. This project is associated with Origins project number Y210554-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.  
303.433.1322  
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SD_01@6"	Y210554-01	Soil	October 21, 2022 9:45	10/24/2022 11:05
SD_02@3"	Y210554-02	Soil	October 21, 2022 9:55	10/24/2022 11:05
SD_03@3"	Y210554-03	Soil	October 21, 2022 10:05	10/24/2022 11:05
SD_04@2"	Y210554-04	Soil	October 21, 2022 10:15	10/24/2022 11:05
SD_05@3"	Y210554-05	Soil	October 21, 2022 10:20	10/24/2022 11:05
SD_06@3"	Y210554-06	Soil	October 21, 2022 10:25	10/24/2022 11:05
SD_07@4"	Y210554-07	Soil	October 21, 2022 10:35	10/24/2022 11:05
SD_08@6"	Y210554-08	Soil	October 21, 2022 10:45	10/24/2022 11:05
SD_09@6"	Y210554-09	Soil	October 21, 2022 10:50	10/24/2022 11:05
SD_010@3"	Y210554-10	Soil	October 21, 2022 11:00	10/24/2022 11:05
SD_011@4"	Y210554-11	Soil	October 21, 2022 11:05	10/24/2022 11:05
SD_012@4"	Y210554-12	Soil	October 21, 2022 11:10	10/24/2022 11:05
SD_013@3"	Y210554-13	Soil	October 21, 2022 11:20	10/24/2022 11:05
SD_02@12"	Y210554-14	Soil	October 21, 2022 11:35	10/24/2022 11:05

Origins Laboratory, Inc.



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Buffalo WY 82834

Joel Mason  
Project Number: [none]  
Project: D90-NP Remediation 2022

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SD_07@12"	Y210554-15	Soil	October 21, 2022 11:40	10/24/2022 11:05

Origins Laboratory, Inc.



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 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022



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Y210554

page 1 of 2

Client: Absaroka  
 Address: 112 High St. Buffalo, WY 82834  
 Telephone Number: 307-262-8975  
 Email Address: joel.mason@originslaboratory.com

Project Manager: Joel Mason  
 Project Name: D90-NP Remediation 2022  
 Project Number: 050432 Surprise Diagnostic Rd  
 Samples Collected By: Jordan Fleming

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions	
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa #			Other
SD-01 @ 6"	10/21/22	9:45	2	X				X				X	
SD-02 @ 3"	10/21/22	9:55	2	X				X				X	
SD-03 @ 3"	10/21/22	10:05	2	X				X				X	
SD-04 @ 2"	10/21/22	10:15	2	X				X				X	
SD-05 @ 3"	10/21/22	10:20	2	X				X				X	
SD-06 @ 3"	10/21/22	10:25	2	X				X				X	
SD-07 @ 4"	10/21/22	10:35	2	X				X				X	
SD-08 @ 6"	10/21/22	10:45	2	X				X				X	
SD-09 @ 6"	10/21/22	10:50	2	X				X				X	
SD-10 @ 3"	10/21/22	11:00	2	X				X				X	
Relinquished by:	Date: 10/21/22	Time: 1000	Received by: JST	Date: 10/24/22	Time: 1105	Turnaround Time: Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input checked="" type="checkbox"/>							

Origins Laboratory, Inc.

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Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: [none]  
Project: D90-NP Remediation 2022

Origins Laboratory

F-012207-01-R1  
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: Y210554

Client: Absaroka

Client Project ID: D90-NP redemption 2022

Checklist Completed by: DE / D

Shipped Via: HD

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 10/24/2022

Airbill #: NA

Matrix(s) Received: (Check all that apply):  Soil/Solid

Water

Other:

Cooler Number/Temperature: 1 / 5.4 °c / °c / °c (Describe) °c

Thermometer ID: T004

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?	X			
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact <sup>(1)</sup> ?	X			
Was adequate sample volume provided <sup>(1)</sup> ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		X		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	X			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	X			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	X			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	X			
For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			X	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / ( pH > 10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)			X	
Additional Comments (if any):				

<sup>(1)</sup>if NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by: JMS (Project Manager)

Date/Time Reviewed: 10-26-22

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SD 01@6"**  
**10/21/2022 9:45:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-01 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	<b>3280</b>	25.0	mg/kg	1	B2J2626	ADM	10/26/2022	11/03/2022	
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U
<i>Surrogate: o-Terphenyl</i>	127 %	50-150			"	"	"	"	

**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B2J2522	JSM	10/25/2022	11/02/2022	U
Ethylbenzene	ND	0.00200	"	"	"	JSM	"	"	U
Toluene	ND	0.00200	"	"	"	JSM	"	"	U
Xylenes, total	<b>0.0202</b>	0.00200	"	"	"	JSM	"	"	
Gasoline Range Hydrocarbons	<b>79.8</b>	10.0	"	50	"	JMA	"	11/01/2022	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	107 %	70-130			"	"	"	11/02/2022	
<i>Surrogate: Toluene-d8</i>	96.0 %	70-130			"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	102 %	70-130			"	"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	<b>6.47</b>	0.499	meq/L	10	[CALC]	KAP	10/27/2022	10/28/2022	
Magnesium	<b>2.36</b>	0.823	"	"	"	KAP	"	"	
Sodium	<b>6.35</b>	0.435	"	"	"	KAP	"	"	

**pH in Soil by 9045D**

Origins Laboratory, Inc.



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 Buffalo WY 82834

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 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SD 01@6"**

**10/21/2022 9:45:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.  
 Y210554-01 (Soil)**

**pH in Soil by 9045D**

pH	7.94		pH Units	1	B2J2715	HJD	10/27/2022	10/28/2022	
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**SAR by 20B Saturated Paste**

SAR	3.02		SAR	1	B2J2707	KAP	10/27/2022	10/28/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	1.45	0.00500	mmhos/cm	1	B2J2715	HJD	10/27/2022	10/28/2022	
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Project Number: [none]  
Project: D90-NP Remediation 2022

**SD 02@3"**  
**10/21/2022 9:55:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-02 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	<b>20200</b>	250	mg/kg	10	B2J2626	ADM	10/26/2022	11/03/2022	
Residual Range Organics (C28-C40)	<b>357</b>	100	"	1	"	ADM	"	10/28/2022	

Surrogate: *o*-Terphenyl 631 % 50-150 " " 11/03/2022

**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B2J2522	JSM	10/25/2022	11/02/2022	U
Ethylbenzene	<b>0.0324</b>	0.00200	"	"	"	JSM	"	"	
Toluene	<b>0.0479</b>	0.00200	"	"	"	JSM	"	"	
Xylenes, total	<b>0.204</b>	0.00200	"	"	"	JSM	"	"	
Gasoline Range Hydrocarbons	<b>245</b>	10.0	"	50	"	JMA	"	11/01/2022	

Surrogate: 1,2-Dichloroethane-d4 112 % 70-130 " " 11/02/2022

Surrogate: Toluene-d8 96.6 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 108 % 70-130 " " "

**Metals by Saturated Paste by EPA 6010**

Calcium	<b>48.3</b>	0.499	meq/L	10	[CALC]	KAP	10/27/2022	10/28/2022	
Magnesium	<b>6.86</b>	0.823	"	"	"	KAP	"	"	
Sodium	<b>9.64</b>	0.435	"	"	"	KAP	"	"	

**pH in Soil by 9045D**

pH	<b>8.03</b>		pH Units	1	B2J2715	HJD	10/27/2022	10/28/2022	
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 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SD 02@3"**

**10/21/2022 9:55:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-02 (Soil)**

**SAR by 20B Saturated Paste**

SAR	1.84		SAR	1	B2J2707	KAP	10/27/2022	10/28/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	6.13	0.00500	mmhos/cm	1	B2J2715	HJD	10/27/2022	10/28/2022	
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Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: [none]  
Project: D90-NP Remediation 2022

**SD 03@3"**  
**10/21/2022 10:05:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-03 (Soil)**

**CA MG NA SAR H2O ext**

Calcium PPM	2400	100	mg/L	100	B2J2707	KAP	10/27/2022	11/01/2022	
Magnesium PPM	ND	100	"	"	"	KAP	"	"	U
Sodium PPM	626	100	"	"	"	KAP	"	"	

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	27300	250	mg/kg	10	B2J2626	ADM	10/26/2022	11/03/2022	
Residual Range Organics (C28-C40)	684	100	"	1	"	ADM	"	10/28/2022	

Surrogate: *o*-Terphenyl 884 % 50-150 " " 11/03/2022

**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B2J2522	JSM	10/25/2022	11/02/2022	U
Ethylbenzene	0.0489	0.00200	"	"	"	JSM	"	"	
Toluene	0.0529	0.00200	"	"	"	JSM	"	"	
Xylenes, total	0.308	0.00200	"	"	"	JSM	"	"	
Gasoline Range Hydrocarbons	459	10.0	"	50	"	JMA	"	11/01/2022	

Surrogate: 1,2-Dichloroethane-d4 111 % 70-130 " " 11/02/2022

Surrogate: Toluene-d8 95.5 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 103 % 70-130 " " "

**Metals by Saturated Paste by EPA 6010**

Calcium	120	4.99	meq/L	100	[CALC]	KAP	10/27/2022	11/01/2022	
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 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

SD 03@3"

10/21/2022 10:05:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
 Y210554-03 (Soil)

**Metals by Saturated Paste by EPA 6010**

Magnesium	ND	8.23	meq/L	100	[CALC]	KAP	10/27/2022	11/01/2022	
Sodium	27.2	4.35	"	"	"	KAP	"	"	

**pH in Soil by 9045D**

pH	9.08		pH Units	1	B2J2715	HJD	10/27/2022	10/28/2022	
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**SAR by 20B Saturated Paste**

SAR	3.52		SAR	1	B2J2707	ZZZ	10/27/2022	11/01/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	11.9	0.00500	mmhos/cm	1	B2J2715	HJD	10/27/2022	10/28/2022	
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112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: [none]  
Project: D90-NP Remediation 2022

**SD 04@2"**  
**10/21/2022 10:15:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-04 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	<b>38800</b>	250	mg/kg	10	B2J2626	ADM	10/26/2022	11/03/2022	
Residual Range Organics (C28-C40)	<b>561</b>	100	"	1	"	ADM	"	10/28/2022	

Surrogate: *o*-Terphenyl 1190 % 50-150 " " 11/03/2026

**GBTEX+TMBs by 8260D**

Benzene	<b>0.0393</b>	0.00200	mg/kg	1	B2J2522	JSM	10/25/2022	11/02/2022	
Ethylbenzene	<b>0.231</b>	0.00200	"	"	"	JSM	"	"	
Toluene	<b>0.349</b>	0.00200	"	"	"	JSM	"	"	
Xylenes, total	<b>10.9</b>	0.100	"	50	"	JMA	"	11/01/2022	
Gasoline Range Hydrocarbons	<b>679</b>	10.0	"	"	"	JMA	"	"	

Surrogate: 1,2-Dichloroethane-d4 109 % 70-130 " " 11/02/2022

Surrogate: Toluene-d8 100 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 104 % 70-130 " " "

**Metals by Saturated Paste by EPA 6010**

Calcium	<b>9.84</b>	0.499	meq/L	10	[CALC]	KAP	10/27/2022	10/28/2022	
Magnesium	<b>1.77</b>	0.823	"	"	"	KAP	"	"	
Sodium	<b>3.64</b>	0.435	"	"	"	KAP	"	"	

**pH in Soil by 9045D**

pH	<b>8.33</b>		pH Units	1	B2J2715	HJD	10/27/2022	10/28/2022	
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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SD 04@2"**  
**10/21/2022 10:15:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-04 (Soil)**

**SAR by 20B Saturated Paste**

SAR	1.51		SAR	1	B2J2707	KAP	10/27/2022	10/28/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	1.47	0.00500	mmhos/cm	1	B2J2715	HJD	10/27/2022	10/28/2022	
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Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: [none]  
Project: D90-NP Remediation 2022

**SD 05@3"**  
**10/21/2022 10:20:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-05 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	99100	2500	mg/kg	100	B2J2626	ADM	10/26/2022	11/03/2022	
Residual Range Organics (C28-C40)	270	100	"	1	"	ADM	"	10/28/2022	

Surrogate: *o*-Terphenyl 5420 % 50-150 " " 11/03/2022

**GBTEX+TMBs by 8260D**

Benzene	0.0843	0.00200	mg/kg	1	B2J2522	JSM	10/25/2022	11/02/2022	
Ethylbenzene	0.206	0.00200	"	"	"	JSM	"	"	
Toluene	0.315	0.00200	"	"	"	JSM	"	"	
Xylenes, total	1.09	0.00200	"	"	"	JSM	"	"	
Gasoline Range Hydrocarbons	16200	500	"	2500	"	JSM	"	11/02/2022	

Surrogate: 1,2-Dichloroethane-d4 114 % 70-130 " " 11/02/2022

Surrogate: Toluene-d8 100 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 114 % 70-130 " " "

**Metals by Saturated Paste by EPA 6010**

Calcium	76.2	0.499	meq/L	10	[CALC]	KAP	10/27/2022	10/28/2022	
Magnesium	6.66	0.823	"	"	"	KAP	"	"	
Sodium	20.2	0.435	"	"	"	KAP	"	"	

**pH in Soil by 9045D**

pH	7.83		pH Units	1	B2J2715	HJD	10/27/2022	10/28/2022	
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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

SD 05@3"

10/21/2022 10:20:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
 Y210554-05 (Soil)

**SAR by 20B Saturated Paste**

SAR	3.13		SAR	1	B2J2707	KAP	10/27/2022	10/28/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	8.65	0.00500	mmhos/cm	1	B2J2715	HJD	10/27/2022	10/28/2022	
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Origins Laboratory, Inc.



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Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: [none]  
Project: D90-NP Remediation 2022

**SD 06@3"**  
**10/21/2022 10:25:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-06 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	13800	2500	mg/kg	100	B2J2626	ADM	10/26/2022	11/03/2022	
Residual Range Organics (C28-C40)	ND	100	"	1	"	ADM	"	10/28/2022	U
<i>Surrogate: o-Terphenyl</i>	%	50-150			"	"	"	11/03/2022	U

**GBTEX+TMBs by 8260D**

Benzene	0.00422	0.00200	mg/kg	1	B2J2522	JSM	10/25/2022	11/02/2022	
Ethylbenzene	0.520	0.100	"	50	"	JMA	"	11/01/2022	
Toluene	0.334	0.00200	"	1	"	JSM	"	11/02/2022	
Xylenes, total	4.57	0.100	"	50	"	JMA	"	11/01/2022	
Gasoline Range Hydrocarbons	609	10.0	"	"	"	JMA	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	93.8 %	70-130			"	"	"	"	
<i>Surrogate: Toluene-d8</i>	97.9 %	70-130			"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	97.5 %	70-130			"	"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	1.97	0.499	meq/L	10	[CALC]	KAP	10/27/2022	10/28/2022	
Magnesium	1.00	0.823	"	"	"	KAP	"	"	
Sodium	1.52	0.435	"	"	"	KAP	"	"	

**pH in Soil by 9045D**

pH	7.95		pH Units	1	B2J2715	HJD	10/27/2022	10/28/2022	
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Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SD 06@3"**

**10/21/2022 10:25:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-06 (Soil)**

**SAR by 20B Saturated Paste**

SAR	1.25		SAR	1	B2J2707	KAP	10/27/2022	10/28/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.593	0.00500	mmhos/cm	1	B2J2715	HJD	10/27/2022	10/28/2022	
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Origins Laboratory, Inc.



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Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: [none]  
Project: D90-NP Remediation 2022

**SD 07@4"**  
**10/21/2022 10:35:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-07 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	14800	250	mg/kg	10	B2J2626	ADM	10/26/2022	11/03/2022	
Residual Range Organics (C28-C40)	ND	100	"	1	"	ADM	"	10/28/2022	U

Surrogate: *o*-Terphenyl 475 % 50-150 " " 11/03/2022

**GBTEX+TMBs by 8260D**

Benzene	0.00474	0.00200	mg/kg	1	B2J2522	JSM	10/25/2022	11/01/2022	
Ethylbenzene	0.0517	0.00200	"	"	"	JSM	"	"	
Toluene	0.0866	0.00200	"	"	"	JSM	"	"	
Xylenes, total	0.308	0.00200	"	"	"	JSM	"	"	
Gasoline Range Hydrocarbons	2380	100	"	500	"	JSM	"	11/02/2022	

Surrogate: 1,2-Dichloroethane-d4 109 % 70-130 " " 11/01/2022

Surrogate: Toluene-d8 96.8 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 97.9 % 70-130 " " "

**Metals by Saturated Paste by EPA 6010**

Calcium	26.0	0.499	meq/L	10	[CALC]	KAP	10/27/2022	10/28/2022	
Magnesium	3.26	0.823	"	"	"	KAP	"	"	
Sodium	6.01	0.435	"	"	"	KAP	"	"	

**pH in Soil by 9045D**

pH	7.58		pH Units	1	B2J2715	HJD	10/27/2022	10/28/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SD 07@4"**  
**10/21/2022 10:35:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-07 (Soil)**

**SAR by 20B Saturated Paste**

SAR	1.57		SAR	1	B2J2707	KAP	10/27/2022	10/28/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	3.69	0.00500	mmhos/cm	1	B2J2715	HJD	10/27/2022	10/28/2022	
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Origins Laboratory, Inc.



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Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: [none]  
Project: D90-NP Remediation 2022

**SD 08@6"**  
**10/21/2022 10:45:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-08 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	<b>23500</b>	250	mg/kg	10	B2J2626	ADM	10/26/2022	11/03/2022	
Residual Range Organics (C28-C40)	<b>494</b>	100	"	1	"	ADM	"	10/28/2022	

Surrogate: *o*-Terphenyl 729 % 50-150 " " 11/03/2022

**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B2J2522	JSM	10/25/2022	11/01/2022	U
Ethylbenzene	<b>0.102</b>	0.00200	"	"	"	JSM	"	"	
Toluene	<b>0.0750</b>	0.00200	"	"	"	JSM	"	"	
Xylenes, total	<b>0.860</b>	0.00200	"	"	"	JSM	"	"	
Gasoline Range Hydrocarbons	<b>2720</b>	100	"	500	"	JSM	"	11/03/2022	

Surrogate: 1,2-Dichloroethane-d4 109 % 70-130 " " 11/01/2022

Surrogate: Toluene-d8 98.5 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 123 % 70-130 " " "

**Metals by Saturated Paste by EPA 6010**

Calcium	<b>5.62</b>	0.499	meq/L	10	[CALC]	KAP	10/27/2022	10/28/2022	
Magnesium	<b>1.21</b>	0.823	"	"	"	KAP	"	"	
Sodium	<b>1.40</b>	0.435	"	"	"	KAP	"	"	

**pH in Soil by 9045D**

pH	<b>7.82</b>		pH Units	1	B2J2715	HJD	10/27/2022	10/28/2022	
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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SD 08@6"**  
**10/21/2022 10:45:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-08 (Soil)**

**SAR by 20B Saturated Paste**

SAR	0.758		SAR	1	B2J2707	KAP	10/27/2022	10/28/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.923	0.00500	mmhos/cm	1	B2J2715	HJD	10/27/2022	10/28/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SD 09@6"**  
**10/21/2022 10:50:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-09 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	14000	250	mg/kg	10	B2J2626	ADM	10/26/2022	11/03/2022	
Residual Range Organics (C28-C40)	196	100	"	1	"	ADM	"	10/28/2022	

Surrogate: *o*-Terphenyl 418 % 50-150 " " 11/03/2022

**GBTEX+TMBs by 8260D**

Benzene	0.0130	0.00200	mg/kg	1	B2J2522	JSM	10/25/2022	11/02/2022	
Ethylbenzene	0.159	0.00200	"	"	"	JSM	"	"	
Toluene	0.179	0.00200	"	"	"	JSM	"	"	
Xylenes, total	0.864	0.00200	"	"	"	JSM	"	"	
Gasoline Range Hydrocarbons	394	10.0	"	50	"	JMA	"	11/01/2022	

Surrogate: 1,2-Dichloroethane-d4 109 % 70-130 " " 11/02/2022

Surrogate: Toluene-d8 98.7 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 113 % 70-130 " " "

**Metals by Saturated Paste by EPA 6010**

Calcium	24.0	0.499	meq/L	10	[CALC]	KAP	10/27/2022	10/28/2022	
Magnesium	2.65	0.823	"	"	"	KAP	"	"	
Sodium	6.55	0.435	"	"	"	KAP	"	"	

**pH in Soil by 9045D**

pH	7.85		pH Units	1	B2J2715	HJD	10/27/2022	10/28/2022	
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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

SD 09@6"

10/21/2022 10:50:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
 Y210554-09 (Soil)

**SAR by 20B Saturated Paste**

SAR	1.79		SAR	1	B2J2707	KAP	10/27/2022	10/28/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	3.34	0.00500	mmhos/cm	1	B2J2715	HJD	10/27/2022	10/28/2022	
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Origins Laboratory, Inc.



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Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: [none]  
Project: D90-NP Remediation 2022

**SD 010@3"**  
**10/21/2022 11:00:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-10 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	<b>20700</b>	250	mg/kg	10	B2J2626	ADM	10/26/2022	11/03/2022	
Residual Range Organics (C28-C40)	<b>424</b>	100	"	1	"	ADM	"	10/28/2022	

Surrogate: *o*-Terphenyl 564 % 50-150 " " 11/03/2022

**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B2J2522	JSM	10/25/2022	11/02/2022	U
Ethylbenzene	<b>0.0705</b>	0.00200	"	"	"	JSM	"	"	
Toluene	<b>0.0578</b>	0.00200	"	"	"	JSM	"	"	
Xylenes, total	<b>0.483</b>	0.00200	"	"	"	JSM	"	"	
Gasoline Range Hydrocarbons	<b>403</b>	10.0	"	50	"	JMA	"	11/01/2022	

Surrogate: 1,2-Dichloroethane-d4 110 % 70-130 " " 11/02/2022

Surrogate: Toluene-d8 94.7 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 93.5 % 70-130 " " "

**Metals by Saturated Paste by EPA 6010**

Calcium	<b>3.06</b>	0.499	meq/L	10	[CALC]	KAP	10/27/2022	10/28/2022	
Magnesium	ND	0.823	"	"	"	KAP	"	"	
Sodium	<b>0.807</b>	0.435	"	"	"	KAP	"	"	

**pH in Soil by 9045D**

pH	<b>8.06</b>		pH Units	1	B2J2715	HJD	10/27/2022	10/28/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SD 010@3"**  
**10/21/2022 11:00:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-10 (Soil)**

**SAR by 20B Saturated Paste**

SAR	0.596		SAR	1	B2J2707	KAP	10/27/2022	10/28/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.497	0.00500	mmhos/cm	1	B2J2715	HJD	10/27/2022	10/28/2022	
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Origins Laboratory, Inc.



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: [none]  
Project: D90-NP Remediation 2022

**SD 011@4"**  
**10/21/2022 11:05:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-11 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	<b>17300</b>	250	mg/kg	10	B2J2626	ADM	10/26/2022	11/03/2022	
Residual Range Organics (C28-C40)	<b>8380</b>	1000	"	"	"	ADM	"	"	

Surrogate: *o*-Terphenyl 659 % 50-150 " " " S-06

**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B2J2522	JSM	10/25/2022	11/02/2022	U
Ethylbenzene	ND	0.100	"	50	"	JMA	"	11/02/2022	U
Toluene	ND	0.00200	"	1	"	JSM	"	11/02/2022	U
Xylenes, total	<b>0.0336</b>	0.00200	"	"	"	JSM	"	"	
Gasoline Range Hydrocarbons	<b>18.9</b>	0.200	"	"	"	JSM	"	"	

Surrogate: 1,2-Dichloroethane-d4 93.5 % 70-130 " " 11/02/2022

Surrogate: Toluene-d8 98.5 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 98.4 % 70-130 " " "

**Metals by Saturated Paste by EPA 6010**

Calcium	<b>20.1</b>	0.499	meq/L	10	[CALC]	KAP	10/28/2022	11/01/2022	
Magnesium	<b>1.90</b>	0.823	"	"	"	KAP	"	"	
Sodium	<b>5.57</b>	0.435	"	"	"	KAP	"	"	

**pH in Soil by 9045D**

pH	<b>7.88</b>		pH Units	1	B2J3106	HJD	10/31/2022	11/01/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SD 011@4"**  
**10/21/2022 11:05:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-11 (Soil)**

**SAR by 20B Saturated Paste**

SAR	1.68		SAR	1	B2J2803	KAP	10/28/2022	11/01/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	2.42	0.00500	mmhos/cm	1	B2J3106	HJD	10/31/2022	11/01/2022	
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Origins Laboratory, Inc.



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: [none]  
Project: D90-NP Remediation 2022

**SD 012@4"**  
**10/21/2022 11:10:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-12 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	10500	250	mg/kg	10	B2J2626	ADM	10/26/2022	11/03/2022	
Residual Range Organics (C28-C40)	3930	1000	"	"	"	ADM	"	"	

Surrogate: *o*-Terphenyl 1020 % 50-150 " " " S-06

**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B2J2522	JSM	10/25/2022	11/02/2022	U
Ethylbenzene	ND	0.00200	"	"	"	JSM	"	"	U
Toluene	ND	0.00200	"	"	"	JSM	"	"	U
Xylenes, total	0.00660	0.00200	"	"	"	JSM	"	"	
Gasoline Range Hydrocarbons	11.7	0.200	"	"	"	JSM	"	"	

Surrogate: 1,2-Dichloroethane-d4 111 % 70-130 " " "

Surrogate: Toluene-d8 96.3 % 70-130 " " "

Surrogate: 4-Bromofluorobenzene 100 % 70-130 " " "

**Metals by Saturated Paste by EPA 6010**

Calcium	45.2	0.499	meq/L	10	[CALC]	KAP	10/28/2022	11/01/2022	
Magnesium	9.44	0.823	"	"	"	KAP	"	"	
Sodium	13.4	0.435	"	"	"	KAP	"	"	

**pH in Soil by 9045D**

pH	7.38		pH Units	1	B2J3106	HJD	10/31/2022	11/01/2022	
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Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SD 012@4"**  
**10/21/2022 11:10:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-12 (Soil)**

**SAR by 20B Saturated Paste**

SAR	2.57		SAR	1	B2J2803	KAP	10/28/2022	11/01/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	6.34	0.00500	mmhos/cm	1	B2J3106	HJD	10/31/2022	11/01/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SD 013@3"**  
**10/21/2022 11:20:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-13 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	1710	25.0	mg/kg	1	B2J2626	ADM	10/26/2022	11/03/2022	
Residual Range Organics (C28-C40)	140	100	"	"	"	ADM	"	"	

Surrogate: *o*-Terphenyl 92.1 % 50-150 " " "

**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B2J2522	JSM	10/25/2022	11/02/2022	U
Ethylbenzene	ND	0.00200	"	"	"	JSM	"	"	U
Toluene	ND	0.00200	"	"	"	JSM	"	"	U
Xylenes, total	ND	0.00200	"	"	"	JSM	"	"	U
Gasoline Range Hydrocarbons	5.09	0.200	"	"	"	JSM	"	"	

Surrogate: 1,2-Dichloroethane-d4 110 % 70-130 " " "  
 Surrogate: Toluene-d8 99.3 % 70-130 " " "  
 Surrogate: 4-Bromofluorobenzene 96.6 % 70-130 " " "

**Metals by Saturated Paste by EPA 6010**

Calcium	9.20	0.499	meq/L	10	[CALC]	KAP	10/28/2022	11/01/2022	
Magnesium	3.15	0.823	"	"	"	KAP	"	"	
Sodium	5.76	0.435	"	"	"	KAP	"	"	

**pH in Soil by 9045D**

Origins Laboratory, Inc.



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 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SD 013@3"**  
**10/21/2022 11:20:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-13 (Soil)**

**pH in Soil by 9045D**

pH	8.27		pH Units	1	B2J3106	HJD	10/31/2022	11/01/2022	
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**SAR by 20B Saturated Paste**

SAR	2.32		SAR	1	B2J2803	KAP	10/28/2022	11/01/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	1.62	0.00500	mmhos/cm	1	B2J3106	HJD	10/31/2022	11/01/2022	
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Origins Laboratory, Inc.



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Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SD 02@12"**  
**10/21/2022 11:35:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-14 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	84.9	25.0	mg/kg	1	B2J2626	ADM	10/26/2022	10/31/2022	
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: *o*-Terphenyl 62.8 % 50-150 " " "

**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B2J2522	JSM	10/25/2022	11/02/2022	U
Ethylbenzene	ND	0.00200	"	"	"	JSM	"	"	U
Toluene	ND	0.00200	"	"	"	JSM	"	"	U
Xylenes, total	ND	0.00200	"	"	"	JSM	"	"	U
Gasoline Range Hydrocarbons	14.3	10.0	"	50	"	JMA	"	11/02/2022	

Surrogate: 1,2-Dichloroethane-d4 97.2 % 70-130 " " "  
 Surrogate: Toluene-d8 94.2 % 70-130 " " "  
 Surrogate: 4-Bromofluorobenzene 96.9 % 70-130 " " "

**Metals by Saturated Paste by EPA 6010**

Calcium	4.23	0.499	meq/L	10	[CALC]	KAP	10/28/2022	11/01/2022	
Magnesium	1.56	0.823	"	"	"	KAP	"	"	
Sodium	3.29	0.435	"	"	"	KAP	"	"	

**pH in Soil by 9045D**

Origins Laboratory, Inc.



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Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SD 02@12"**  
**10/21/2022 11:35:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-14 (Soil)**

**pH in Soil by 9045D**

pH	8.24		pH Units	1	B2J3106	HJD	10/31/2022	11/01/2022	
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**SAR by 20B Saturated Paste**

SAR	1.93		SAR	1	B2J2803	KAP	10/28/2022	11/01/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.801	0.00500	mmhos/cm	1	B2J3106	HJD	10/31/2022	11/01/2022	
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 Project: D90-NP Remediation 2022

**SD 07@12"**  
**10/21/2022 11:40:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-15 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B2J2626	ADM	10/26/2022	10/28/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: *o*-Terphenyl 84.7 % 50-150 " " "

**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B2J2522	JSM	10/25/2022	11/02/2022	U
Ethylbenzene	ND	0.00200	"	"	"	JSM	"	"	U
Toluene	ND	0.00200	"	"	"	JSM	"	"	U
Xylenes, total	ND	0.00200	"	"	"	JSM	"	"	U
Gasoline Range Hydrocarbons	<b>3.07</b>	0.200	"	"	"	JSM	"	"	

Surrogate: 1,2-Dichloroethane-d4 105 % 70-130 " " "  
 Surrogate: Toluene-d8 97.7 % 70-130 " " "  
 Surrogate: 4-Bromofluorobenzene 94.3 % 70-130 " " "

**Metals by Saturated Paste by EPA 6010**

Calcium	<b>2.07</b>	0.499	meq/L	10	[CALC]	KAP	10/28/2022	11/01/2022	
Magnesium	ND	0.823	"	"	"	KAP	"	"	
Sodium	<b>3.82</b>	0.435	"	"	"	KAP	"	"	

**pH in Soil by 9045D**

Origins Laboratory, Inc.



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Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SD 07@12"**  
**10/21/2022 11:40:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y210554-15 (Soil)**

**pH in Soil by 9045D**

pH	8.29		pH Units	1	B2J3106	HJD	10/31/2022	11/01/2022	
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**SAR by 20B Saturated Paste**

SAR	3.24		SAR	1	B2J2803	KAP	10/28/2022	11/01/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.681	0.00500	mmhos/cm	1	B2J3106	HJD	10/31/2022	11/01/2022	
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Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2J2522 - EPA 5030 (soil)**

**Blank (B2J2522-BLK1)**

Prepared: 10/25/2022 Analyzed: 11/01/2022

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Naphthalene	ND	0.00380	"							U
Toluene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125	102		70-130			
Surrogate: Toluene-d8	0.13		"	0.125	104		70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	94.4		70-130			

Origins Laboratory, Inc.



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 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B2J2522 - EPA 5030 (soil)

**LCS (B2J2522-BS1)**

Prepared: 10/25/2022 Analyzed: 11/01/2022

1,2,4-Trimethylbenzene	0.114	0.00200	mg/kg	0.100		114	70-130			
1,3,5-Trimethylbenzene	0.113	0.00200	"	0.100		113	70-130			
Benzene	0.115	0.00200	"	0.100		115	70-130			
Ethylbenzene	0.112	0.00200	"	0.100		112	70-130			
Naphthalene	0.111	0.00380	"	0.100		111	70-130			
Toluene	0.116	0.00200	"	0.100		116	70-130			
o-Xylene	0.113	0.00200	"	0.100		113	70-130			
m,p-Xylene	0.226	0.00400	"	0.200		113	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		97.2	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	70-130			

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Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B2J2522 - EPA 5030 (soil)

Matrix Spike (B2J2522-MS1)	Source: Y210543-01			Prepared: 10/25/2022 Analyzed: 11/01/2022						
1,2,4-Trimethylbenzene	0.0988	0.00200	mg/kg	0.100	ND	98.8	70-130			
1,3,5-Trimethylbenzene	0.0976	0.00200	"	0.100	ND	97.6	70-130			
Benzene	0.101	0.00200	"	0.100	ND	101	70-130			
Ethylbenzene	0.0995	0.00200	"	0.100	ND	99.5	70-130			
Naphthalene	0.0950	0.00380	"	0.100	ND	95.0	70-130			
Toluene	0.102	0.00200	"	0.100	ND	102	70-130			
o-Xylene	0.0988	0.00200	"	0.100	ND	98.8	70-130			
m,p-Xylene	0.201	0.00400	"	0.200	ND	101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		107	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		104	70-130			

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 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B2J2522 - EPA 5030 (soil)

Matrix Spike Dup (B2J2522-MSD1)	Source: Y210543-01			Prepared: 10/25/2022 Analyzed: 11/01/2022						
1,2,4-Trimethylbenzene	0.0852	0.00200	mg/kg	0.100	ND	85.2	70-130	14.8	20	
1,3,5-Trimethylbenzene	0.0848	0.00200	"	0.100	ND	84.8	70-130	14.1	20	
Benzene	0.0954	0.00200	"	0.100	ND	95.4	70-130	6.02	20	
Ethylbenzene	0.0847	0.00200	"	0.100	ND	84.7	70-130	16.0	20	
Naphthalene	0.0940	0.00380	"	0.100	ND	94.0	70-130	1.12	20	
Toluene	0.0908	0.00200	"	0.100	ND	90.8	70-130	11.5	20	
o-Xylene	0.0864	0.00200	"	0.100	ND	86.4	70-130	13.4	20	
m,p-Xylene	0.172	0.00400	"	0.200	ND	86.1	70-130	15.5	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		108	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	70-130			

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Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B2J2626 - EPA 3550B</b>										
<b>Blank (B2J2626-BLK1)</b>										
					Prepared: 10/26/2022 Analyzed: 10/28/2022					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	24		"	24.9		95.5	50-150			

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Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2J2626 - EPA 3550B**

**LCS (B2J2626-BS1)**

Prepared: 10/26/2022 Analyzed: 10/28/2022

Diesel (C10-C28)	928	50.0	mg/kg	1000		92.8	70-130			
Residual Range Organics (C28-C40)	772	200	"	1000		77.2	70-130			
Surrogate: o-Terphenyl	46		"	49.8		92.3	50-150			

Origins Laboratory, Inc.



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Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2J2626 - EPA 3550B**

<b>Matrix Spike (B2J2626-MS1)</b>	<b>Source: Y210554-01</b>			Prepared: 10/26/2022 Analyzed: 10/28/2022						
Diesel (C10-C28)	2770	50.0	mg/kg	1000	3280	NR	70-130			QM-07
Residual Range Organics (C28-C40)	699	200	"	1000	ND	69.9	70-130			QM-07
Surrogate: o-Terphenyl	74		"	49.8		148	50-150			

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Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2J2626 - EPA 3550B**

<b>Matrix Spike Dup (B2J2626-MSD1)</b>	<b>Source: Y210554-01</b>		<b>Prepared: 10/26/2022 Analyzed: 10/28/2022</b>							
Diesel (C10-C28)	2480	50.0	mg/kg	1000	3280	NR	70-130	11.4	35	QM-07
Residual Range Organics (C28-C40)	661	200	"	1000	ND	66.1	70-130	5.71	35	QM-07
Surrogate: o-Terphenyl	87		"	49.8		175	50-150			QM-07

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 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Classical Chemistry Parameters - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2J2707 - Saturated Paste**

**Blank (B2J2707-BLK1)**

Prepared: 10/27/2022 Analyzed: 10/28/2022

SAR	0.00		SAR							U
Calcium PPM	ND	10.0	mg/L							U
Magnesium PPM	ND	10.0	"							U
Sodium PPM	0.455	10.0	"							

**Duplicate (B2J2707-DUP1)**

**Source: Y210554-01**

Prepared: 10/27/2022 Analyzed: 10/28/2022

Calcium PPM	109	10.0	mg/L		130			17.3	50	
SAR	0.00		SAR		3.02			200	200	U
Magnesium PPM	24.1	10.0	mg/L		28.7			17.6	50	
Sodium PPM	133	10.0	"		146			9.68	50	

**Batch B2J2803 - Saturated Paste**

**Blank (B2J2803-BLK1)**

Prepared: 10/28/2022 Analyzed: 11/01/2022

SAR	0.00		SAR							U
Calcium PPM	ND	10.0	mg/L							U
Magnesium PPM	ND	10.0	"							U
Sodium PPM	ND	10.0	"							U

**Duplicate (B2J2803-DUP1)**

**Source: Y210554-11**

Prepared: 10/28/2022 Analyzed: 11/01/2022

Calcium PPM	468	10.0	mg/L		402			15.1	50	
SAR	0.00		SAR		1.68			200	200	U

Origins Laboratory, Inc.



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 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Classical Chemistry Parameters - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2J2803 - Saturated Paste**

Duplicate (B2J2803-DUP1)	Source: Y210554-11			Prepared: 10/28/2022 Analyzed: 11/01/2022						
Magnesium PPM	27.5	10.0	mg/L		23.0			17.8	50	
Sodium PPM	140	10.0	"		128			8.80	50	

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 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Saturated Paste - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2J2715 - NO PREP**

**Blank (B2J2715-BLK1)**

Prepared: 10/27/2022 Analyzed: 10/28/2022

Specific Conductance (EC)	0.00270	0.00500	mmhos/cm							
pH	0.00		pH Units							U

**Duplicate (B2J2715-DUP1)**

**Source: Y210554-01**

Prepared: 10/27/2022 Analyzed: 10/28/2022

Specific Conductance (EC)	1.24	0.00500	mmhos/cm		1.45			15.6	25	
pH	7.98		pH Units		7.94			0.503	25	

**Batch B2J3106 - NO PREP**

**Blank (B2J3106-BLK1)**

Prepared: 10/31/2022 Analyzed: 11/01/2022

pH	0.00		pH Units							U
Specific Conductance (EC)	0.00190	0.00500	mmhos/cm							

**Duplicate (B2J3106-DUP1)**

**Source: Y210554-11**

Prepared: 10/31/2022 Analyzed: 11/01/2022

Specific Conductance (EC)	1.52	0.00500	mmhos/cm		2.42			45.7	25	QR-DUP
pH	7.83		pH Units		7.88			0.637	25	

Origins Laboratory, Inc.



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Absaroka

112 High St.

Buffalo WY 82834

Joel Mason

Project Number: [none]

Project: D90-NP Remediation 2022

---

### Notes and Definitions

U Sample is Non-Detect.

S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.

QR-DUP RPD exceeds QC acceptance criteria, this indicates source sample is not homogenous.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



January 04, 2023

**Absaroka**

**Joel Mason**

**112 High St.**

**Buffalo**

**WY 82834**

**Project Name - D90-NP Remediation 2022**

**Project Number - [none]**

Attached are your analytical results for D90-NP Remediation 2022 received by Origins Laboratory, Inc. December 16, 2022. This project is associated with Origins project number Y212378-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.  
303.433.1322  
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: [none]  
Project: D90-NP Remediation 2022

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-Wellhead-@7'	Y212378-01	Soil	December 15, 2022 10:32	12/16/2022 07:42
SS-01@7'	Y212378-02	Soil	December 15, 2022 10:36	12/16/2022 07:42
SS-02@7'	Y212378-03	Soil	December 15, 2022 10:38	12/16/2022 07:42
SS-03@7'	Y212378-04	Soil	December 15, 2022 10:34	12/16/2022 07:42
SS-05@7'	Y212378-05	Soil	December 15, 2022 10:42	12/16/2022 07:42
SS-07@7'	Y212378-06	Soil	December 15, 2022 10:46	12/16/2022 07:42
SS-09@7'	Y212378-07	Soil	December 15, 2022 10:50	12/16/2022 07:42

Origins Laboratory, Inc.



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

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page 1 of 1

422378

**ORIGINS**  
LABORATORY, INC

Client: Absaroka Energy & Environmental Solutions  
 Address: 112 High St, Buffalo, WY 82834

Telephone Number: JM-307.262.8975/KR-970.222.7106  
 Email Address: joel.mason@absarokaenergy.com

Project Manager: Joel Mason

Project Name: D90-NP Remediation 2022

Project Number: 050432 Surprise Derivative Pad

Samples Collected By: Michael Henry

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis		Sample Instructions				
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa Canister #	Other	BTX		TVH	SAR	EC,PH	
SS-01 @ 7'	12/15/22	1032	2	X					X								
SS-02 @ 7'		1036	2														
SS-03 @ 7'		1038	2														
SS-04 @ 7'		1034	2														
SS-05 @ 7'		1042	2														
SS-06 @ 7'		1046	2														
SS-07 @ 7'		1036	2														
SS-08 @ 7'		1048	2										X				
SS-09 @ 7'		1044	2										X				
SS-10 @ 7'		1040	2										X				
Relinquished By: <i>Michael Henry</i>	Date: 12/16/22	Time: 8:00	Received By: <i>Ben Weger</i>	Date: 12/16/22	Time: 7:47	Turnaround Time: Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input checked="" type="checkbox"/> Standard											

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Date Results Needed: 5.2

Origins Laboratory, Inc.  
*J. Bynon*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: [none]  
Project: D90-NP Remediation 2022

Origins Laboratory

F-012207-01-R1  
Effective Date: 01/09/12

**Sample Receipt Checklist**

Origins Work Order: 4212378

Client: Absaroka

Client Project ID: D90-NP Remediation 22

Checklist Completed by: JSH/de

Shipped Via: TD

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 12/16/22

Airbill #: N/A

Matrix(s) Received: (Check all that apply):  Soil/Solid  Water  Other: \_\_\_\_\_

Cooler Number/Temperature: 1 / 52 °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C (Describe) \_\_\_\_\_ °C

Thermometer ID: T004

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)2</sup> ?	X			
Is there ice present (document if blue ice is used)?	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact <sup>(1)2</sup> ?	X			
Was adequate sample volume provided <sup>(1)2</sup> ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)2</sup> ?		X		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)2</sup> ?	X			
Does the COC agree with the number and type of sample bottles received <sup>(1)2</sup> ?	X			
Do the sample IDs on the bottle labels match the COC <sup>(1)2</sup> ?	X			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)2</sup> ?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			X	
Are samples preserved that require preservation and was it checked <sup>(1)2</sup> (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity) (pH <2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)?			X	
Additional Comments (if any):				

<sup>(1)2</sup>If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) [Signature]

Date/Time Reviewed 12/16/22

Origins Laboratory, Inc.

[Signature]

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Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: [none]  
Project: D90-NP Remediation 2022

**SS-Wellhead-@7'**  
**12/15/2022 10:32:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y212378-01 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	393	25.0	mg/kg	1	B2L1608	ADM	12/16/2022	12/17/2022	
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

Surrogate: *o*-Terphenyl 68.7 % 50-150 " " "

**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B2L1924	ZZZ	12/19/2022	12/28/2022	U
Ethylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	U
Toluene	ND	0.00200	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00200	"	"	"	ZZZ	"	"	U
Gasoline Range Hydrocarbons	6.53	5.00	"	25	"	ZZZ	"	12/27/2022	

Surrogate: *Toluene-d8* 96.2 % 70-130 " " 12/28/2022

Surrogate: *4-Bromofluorobenzene* 103 % 70-130 " " "

**Metals by Saturated Paste by EPA 6010**

Calcium	24.2	0.499	meq/L	10	[CALC]	CIH	12/19/2022	12/20/2022	
Magnesium	3.38	0.823	"	"	"	CIH	"	"	
Sodium	113	4.35	"	100	"	CIH	"	12/20/2022	

**pH in Soil by 9045D**

pH	8.01		pH Units	1	B2L1916	HJD	12/19/2022	12/20/2022	
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Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SS-Wellhead-@7'**  
**12/15/2022 10:32:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y212378-01 (Soil)**

**SAR by 20B Saturated Paste**

SAR	30.5		SAR	1	B2L1913	CIH	12/19/2022	12/20/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	16.9	0.00500	mmhos/cm	1	B2L1916	HJD	12/19/2022	12/20/2022	
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Origins Laboratory, Inc.



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SS-01@7'**  
**12/15/2022 10:36:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y212378-02 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	1160	25.0	mg/kg	1	B2L1608	ADM	12/16/2022	12/17/2022	
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U
<i>Surrogate: o-Terphenyl</i>	86.5 %	50-150			"	"	"	"	

**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B2L1924	ZZZ	12/19/2022	12/27/2022	U
Ethylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	U
Toluene	ND	0.00200	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00200	"	"	"	ZZZ	"	"	U
Gasoline Range Hydrocarbons	3.61	0.200	"	"	"	ZZZ	"	"	
<i>Surrogate: Toluene-d8</i>	91.0 %	70-130			"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	90.0 %	70-130			"	"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	3.61	0.499	meq/L	10	[CALC]	CIH	12/19/2022	12/20/2022	
Magnesium	1.10	0.823	"	"	"	CIH	"	"	
Sodium	64.7	0.435	"	"	"	CIH	"	"	

**pH in Soil by 9045D**

pH	7.99		pH Units	1	B2L1916	HJD	12/19/2022	12/20/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SS-01@7'**

**12/15/2022 10:36:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.  
 Y212378-02 (Soil)**

**SAR by 20B Saturated Paste**

SAR	42.1		SAR	1	B2L1913	CIH	12/19/2022	12/20/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	7.97	0.00500	mmhos/cm	1	B2L1916	HJD	12/19/2022	12/20/2022	
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Origins Laboratory, Inc.



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SS-02@7'**

**12/15/2022 10:38:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.  
 Y212378-03 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B2L1608	ADM	12/16/2022	12/17/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

*Surrogate: o-Terphenyl* 75.8 % 50-150 " " "

**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B2L1924	ZZZ	12/19/2022	12/27/2022	U
Ethylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	U
Toluene	ND	0.00200	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00200	"	"	"	ZZZ	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	ZZZ	"	"	U

*Surrogate: Toluene-d8* 90.0 % 70-130 " " "

*Surrogate: 4-Bromofluorobenzene* 87.5 % 70-130 " " "

**Metals by Saturated Paste by EPA 6010**

Calcium	0.601	0.499	meq/L	10	[CALC]	CIH	12/19/2022	12/20/2022	
Magnesium	1.12	0.823	"	"	"	CIH	"	"	
Sodium	3.42	0.435	"	"	"	CIH	"	"	

**pH in Soil by 9045D**

pH	8.20		pH Units	1	B2L1916	HJD	12/19/2022	12/20/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SS-02@7'**

**12/15/2022 10:38:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.  
 Y212378-03 (Soil)**

**SAR by 20B Saturated Paste**

SAR	3.69		SAR	1	B2L1913	CIH	12/19/2022	12/20/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.608	0.00500	mmhos/cm	1	B2L1916	HJD	12/19/2022	12/20/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SS-03@7'**

**12/15/2022 10:34:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.  
 Y212378-04 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B2L1608	ADM	12/16/2022	12/17/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

*Surrogate: o-Terphenyl* 66.4 % 50-150 " " "

**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B2L1924	ZZZ	12/19/2022	12/27/2022	U
Ethylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	U
Toluene	ND	0.00200	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00200	"	"	"	ZZZ	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	ZZZ	"	"	U

*Surrogate: Toluene-d8* 90.3 % 70-130 " " "

*Surrogate: 4-Bromofluorobenzene* 87.3 % 70-130 " " "

**Metals by Saturated Paste by EPA 6010**

Calcium	2.42	0.499	meq/L	10	[CALC]	CIH	12/19/2022	12/20/2022
Magnesium	2.13	0.823	"	"	"	CIH	"	"
Sodium	3.68	0.435	"	"	"	CIH	"	"

**pH in Soil by 9045D**

pH	8.03		pH Units	1	B2L1916	HJD	12/19/2022	12/20/2022
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SS-03@7'**

**12/15/2022 10:34:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.  
 Y212378-04 (Soil)**

**SAR by 20B Saturated Paste**

SAR	2.44		SAR	1	B2L1913	CIH	12/19/2022	12/20/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.923	0.00500	mmhos/cm	1	B2L1916	HJD	12/19/2022	12/20/2022	
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Origins Laboratory, Inc.



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SS-05@7'**

**12/15/2022 10:42:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.  
 Y212378-05 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B2L1608	ADM	12/16/2022	12/17/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

*Surrogate: o-Terphenyl* 66.6 % 50-150 " " "

**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B2L1924	ZZZ	12/19/2022	12/27/2022	U
Ethylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	U
Toluene	ND	0.00200	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00200	"	"	"	ZZZ	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	ZZZ	"	"	U

*Surrogate: Toluene-d8* 90.7 % 70-130 " " "

*Surrogate: 4-Bromofluorobenzene* 87.8 % 70-130 " " "

**Metals by Saturated Paste by EPA 6010**

Calcium	1.99	0.499	meq/L	10	[CALC]	CIH	12/19/2022	12/20/2022
Magnesium	3.24	0.823	"	"	"	CIH	"	"
Sodium	3.24	0.435	"	"	"	CIH	"	"

**pH in Soil by 9045D**

pH	8.35		pH Units	1	B2L1916	HJD	12/19/2022	12/20/2022
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Origins Laboratory, Inc.



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SS-05@7'**

**12/15/2022 10:42:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.  
 Y212378-05 (Soil)**

**SAR by 20B Saturated Paste**

SAR	2.01		SAR	1	B2L1913	CIH	12/19/2022	12/20/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.894	0.00500	mmhos/cm	1	B2L1916	HJD	12/19/2022	12/20/2022	
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Origins Laboratory, Inc.



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Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: [none]  
Project: D90-NP Remediation 2022

**SS-07@7'**

**12/15/2022 10:46:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.  
Y212378-06 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B2L1608	ADM	12/16/2022	12/17/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

*Surrogate: o-Terphenyl* 61.1 % 50-150 " " "

**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B2L1924	ZZZ	12/19/2022	12/27/2022	U
Ethylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	U
Toluene	ND	0.00200	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00200	"	"	"	ZZZ	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	ZZZ	"	"	U

*Surrogate: Toluene-d8* 90.9 % 70-130 " " "

*Surrogate: 4-Bromofluorobenzene* 89.1 % 70-130 " " "

**Metals by Saturated Paste by EPA 6010**

Calcium	1.49	0.499	meq/L	10	[CALC]	CIH	12/19/2022	12/20/2022	
Magnesium	1.62	0.823	"	"	"	CIH	"	"	
Sodium	9.05	0.435	"	"	"	CIH	"	"	

**pH in Soil by 9045D**

pH	8.28		pH Units	1	B2L1916	HJD	12/19/2022	12/20/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SS-07@7'**

**12/15/2022 10:46:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.  
 Y212378-06 (Soil)**

**SAR by 20B Saturated Paste**

SAR	7.26		SAR	1	B2L1913	CIH	12/19/2022	12/20/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	1.37	0.00500	mmhos/cm	1	B2L1916	HJD	12/19/2022	12/20/2022	
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Origins Laboratory, Inc.



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Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: [none]  
Project: D90-NP Remediation 2022

**SS-09@7'**

**12/15/2022 10:50:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.  
Y212378-07 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B2L1608	ADM	12/16/2022	12/17/2022	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	ADM	"	"	U

*Surrogate: o-Terphenyl* 66.7 % 50-150 " " "

**GBTEX+TMBs by 8260D**

Benzene	ND	0.00200	mg/kg	1	B2L1924	ZZZ	12/19/2022	12/27/2022	U
Ethylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	U
Toluene	ND	0.00200	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00200	"	"	"	ZZZ	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	ZZZ	"	"	U

*Surrogate: Toluene-d8* 91.1 % 70-130 " " "

*Surrogate: 4-Bromofluorobenzene* 88.8 % 70-130 " " "

**Metals by Saturated Paste by EPA 6010**

Calcium	19.3	0.499	meq/L	10	[CALC]	CIH	12/19/2022	12/20/2022	
Magnesium	10.8	0.823	"	"	"	CIH	"	"	
Sodium	4.29	0.435	"	"	"	CIH	"	"	

**pH in Soil by 9045D**

pH	7.99		pH Units	1	B2L1916	HJD	12/19/2022	12/20/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**SS-09@7'**

**12/15/2022 10:50:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.  
 Y212378-07 (Soil)**

**SAR by 20B Saturated Paste**

SAR	1.11		SAR	1	B2L1913	CIH	12/19/2022	12/20/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	2.77	0.00500	mmhos/cm	1	B2L1916	HJD	12/19/2022	12/20/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B2L1608 - EPA 3580</b>										
<b>Blank (B2L1608-BLK1)</b>										
					Prepared: 12/16/2022 Analyzed: 12/17/2022					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	19		"	24.9		76.9	50-150			

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2L1608 - EPA 3580**

**LCS (B2L1608-BS1)**

Prepared: 12/16/2022 Analyzed: 12/17/2022

Diesel (C10-C28)	1020	50.0	mg/kg	1000		102	70-130			
Residual Range Organics (C28-C40)	808	200	"	1000		80.8	70-130			
Surrogate: o-Terphenyl	37		"	49.8		74.6	50-150			

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2L1608 - EPA 3580**

<b>Matrix Spike (B2L1608-MS1)</b>	<b>Source: Y212362-01</b>			Prepared: 12/16/2022 Analyzed: 12/17/2022						
Diesel (C10-C28)	1100	50.0	mg/kg	1000	ND	110	70-130			
Residual Range Organics (C28-C40)	899	200	"	1000	ND	89.9	70-130			
Surrogate: o-Terphenyl	39		"	49.8		78.7	50-150			

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2L1608 - EPA 3580**

<b>Matrix Spike Dup (B2L1608-MSD1)</b>	<b>Source: Y212362-01</b>		<b>Prepared: 12/16/2022 Analyzed: 12/17/2022</b>							
Diesel (C10-C28)	1210	50.0	mg/kg	1000	ND	121	70-130	9.96	35	
Residual Range Organics (C28-C40)	995	200	"	1000	ND	99.5	70-130	10.2	35	
Surrogate: o-Terphenyl	52		"	49.8		104	50-150			

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2L1924 - EPA 5030 (soil)**

**Blank (B2L1924-BLK1)**

Prepared: 12/19/2022 Analyzed: 12/22/2022

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Naphthalene	ND	0.00380	"							U
Toluene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125	98.0		70-130			
Surrogate: Toluene-d8	0.11		"	0.125	87.8		70-130			
Surrogate: 4-Bromofluorobenzene	0.11		"	0.125	86.9		70-130			

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2L1924 - EPA 5030 (soil)**

**LCS (B2L1924-BS1)**

Prepared: 12/19/2022 Analyzed: 12/22/2022

1,2,4-Trimethylbenzene	0.108	0.00200	mg/kg	0.100		108	70-130			
1,3,5-Trimethylbenzene	0.106	0.00200	"	0.100		106	70-130			
Benzene	0.116	0.00200	"	0.100		116	70-130			
Ethylbenzene	0.102	0.00200	"	0.100		102	70-130			
Naphthalene	0.109	0.00380	"	0.100		109	70-130			
Toluene	0.104	0.00200	"	0.100		104	70-130			
o-Xylene	0.0992	0.00200	"	0.100		99.2	70-130			
m,p-Xylene	0.206	0.00400	"	0.200		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.7	70-130			
Surrogate: Toluene-d8	0.11		"	0.125		88.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.11		"	0.125		85.2	70-130			

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2L1924 - EPA 5030 (soil)**

<b>Matrix Spike (B2L1924-MS1)</b>	<b>Source: Y212378-01</b>			<b>Prepared: 12/19/2022 Analyzed: 12/22/2022</b>						
1,2,4-Trimethylbenzene	0.152	0.00200	mg/kg	0.100	0.0895	62.3	70-130			QM-07
1,3,5-Trimethylbenzene	0.119	0.00200	"	0.100	0.00558	113	70-130			QM-07
Benzene	0.116	0.00200	"	0.100	ND	116	70-130			
Ethylbenzene	0.112	0.00200	"	0.100	0.000580	111	70-130			QM-07
Naphthalene	0.0974	0.00380	"	0.100	0.0174	80.0	70-130			QM-07
Toluene	0.106	0.00200	"	0.100	ND	106	70-130			
o-Xylene	0.110	0.00200	"	0.100	0.000820	109	70-130			QM-07
m,p-Xylene	0.231	0.00400	"	0.200	0.000700	115	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		90.7	70-130			
Surrogate: Toluene-d8	0.11		"	0.125		90.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.11		"	0.125		89.2	70-130			

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2L1924 - EPA 5030 (soil)**

Matrix Spike Dup (B2L1924-MSD1)	Source: Y212378-01			Prepared: 12/19/2022 Analyzed: 12/22/2022						
1,2,4-Trimethylbenzene	0.122	0.00200	mg/kg	0.100	0.0895	32.5	70-130	21.8	20	QM-07
1,3,5-Trimethylbenzene	0.0893	0.00200	"	0.100	0.00558	83.7	70-130	28.2	20	QM-07
Benzene	0.113	0.00200	"	0.100	ND	113	70-130	2.67	20	
Ethylbenzene	0.0974	0.00200	"	0.100	0.000580	96.8	70-130	13.9	20	QM-07
Naphthalene	0.0895	0.00380	"	0.100	0.0174	72.1	70-130	8.52	20	QM-07
Toluene	0.0997	0.00200	"	0.100	ND	99.7	70-130	6.05	20	
o-Xylene	0.0967	0.00200	"	0.100	0.000820	95.9	70-130	12.9	20	QM-07
m,p-Xylene	0.193	0.00400	"	0.200	0.000700	96.2	70-130	17.9	20	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		93.6	70-130			
Surrogate: Toluene-d8	0.11		"	0.125		88.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.11		"	0.125		88.2	70-130			

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Classical Chemistry Parameters - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2L1913 - Saturated Paste Metals**

**Blank (B2L1913-BLK1)**

Prepared: 12/19/2022 Analyzed: 12/20/2022

Calcium PPM	ND	10.0	mg/L							
SAR	0.00		SAR							
Magnesium PPM	ND	10.0	mg/L							
Sodium PPM	ND	10.0	"							

**Duplicate (B2L1913-DUP1)**

**Source: Y212371-01**

Prepared: 12/19/2022 Analyzed: 12/20/2022

Calcium PPM	55.3	10.0	mg/L		66.1			17.7	50	
SAR	0.00		SAR		1.45			200	200	
Magnesium PPM	21.5	10.0	mg/L		26.3			20.2	50	
Sodium PPM	50.2	10.0	"		55.0			9.01	50	

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: [none]  
 Project: D90-NP Remediation 2022

**Saturated Paste - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2L1916 - Saturated Paste pH/EC**

**Blank (B2L1916-BLK1)**

Prepared: 12/19/2022 Analyzed: 12/20/2022

Specific Conductance (EC) ND 0.00500 mmhos/cm

**Duplicate (B2L1916-DUP1)**

**Source: Y212371-01**

Prepared: 12/19/2022 Analyzed: 12/20/2022

pH	7.95		pH Units	8.01			0.752	25	
Specific Conductance (EC)	0.772	0.00500	mmhos/cm	0.908			16.3	25	

Origins Laboratory, Inc.



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Absaroka

112 High St.

Buffalo WY 82834

Joel Mason

Project Number: [none]

Project: D90-NP Remediation 2022

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### Notes and Definitions

U Sample is Non-Detect.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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May 22, 2023

**Absaroka**

**Joel Mason**

**112 High St.**

**Buffalo**

**WY 82834**

**Project Name - FEO - Damfino Background**

**Project Number - FEO.CO.0701.33**

Attached are your analytical results for FEO - Damfino Background received by Origins Laboratory, Inc. May 01, 2023. This project is associated with Origins project number Y305019-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.  
303.433.1322  
o-squad@oelabinc.com



Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: FEO.CO.0701.33  
Project: FEO - Damfino Background

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BG_Damfino_02@5'	Y305019-01	Soil	April 27, 2023 8:15	05/01/2023 11:00
BG_Damfino_03@5'	Y305019-02	Soil	April 27, 2023 8:30	05/01/2023 11:00

Chain of Custody Modification Request

On 5/12/2023, Joel Mason from Absaroka Solutions contacted Jennifer Pellegrini via email regarding Y305019 requesting that arsenic be added to both samples.

Requested modifications to the chain of custody were made by Jennifer Pellegrini on 5/12/2023

Origins Laboratory, Inc.



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: FEO.CO.0701.33  
Project: FEO - Damfino Background

Origins Laboratory

F-012207-01-R1  
Effective Date: 01/09/12

**Sample Receipt Checklist**

Origins Work Order: UB05019

Client: Absaroka

Client Project ID: FEO Damfino Background

Checklist Completed by: JWH/EHS

Shipped Via: HD  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 4/5/23

Airbill #: na

Matrix(s) Received: (Check all that apply):  Soil/Solid  Water  Other: \_\_\_\_\_

Cooler Number/Temperature: 115 °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C (Describe) \_\_\_\_\_ °C

Thermometer ID: 7003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?	/			
Is there ice present (document if blue ice is used)	/			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		/		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		/		
Were all samples received intact <sup>(1)</sup> ?	/			
Was adequate sample volume provided <sup>(1)</sup> ?	/			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		/		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	/			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	/			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	/			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	/			
For volatiles in water – is there headspace (> ¼ inch bubble) present? <b>If yes, contact client and note in narrative.</b>			/	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)			/	
Additional Comments (if any):				

<sup>(1)</sup>If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) [Signature]

Date/Time Reviewed 5/2/23

Origins Laboratory, Inc.

[Signature]

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Background

**BG Damfino 02@5'**  
**4/27/2023 8:15:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y305019-01 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.136	0.101	mg/L	1	B3E0308	KAP	05/03/2023	05/04/2023
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**Metals by Saturated Paste by EPA 6010**

Calcium	ND	0.499	meq/L	10	[CALC]	KAP	05/02/2023	05/05/2023
Magnesium	ND	0.823	"	"	"	KAP	"	"
Sodium	3.90	0.435	"	"	"	KAP	"	"

**pH in Soil by 9045D**

pH	7.88		pH Units	1	B3E0220	HJD	05/02/2023	05/03/2023
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**SAR by 20B Saturated Paste**

SAR	2.15		SAR	1	B3E0216	KAP	05/02/2023	05/05/2023
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.194	0.00500	mmhos/cm	1	B3E0220	HJD	05/02/2023	05/03/2023
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**Table 915 metals by EPA 6020B**

Arsenic	4.09	0.0941	mg/kg	10	B3E1515	EDM	05/15/2023	05/16/2023
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Origins Laboratory, Inc.



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Background

**BG Damfino 03@5'**  
**4/27/2023 8:30:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y305019-02 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND	0.101	mg/L	1	B3E0308	KAP	05/03/2023	05/04/2023	
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**Metals by Saturated Paste by EPA 6010**

Calcium	ND	0.499	meq/L	10	[CALC]	KAP	05/02/2023	05/05/2023	
Magnesium	ND	0.823	"	"	"	KAP	"	"	
Sodium	<b>3.82</b>	0.435	"	"	"	KAP	"	"	

**pH in Soil by 9045D**

pH	<b>8.71</b>		pH Units	1	B3E0220	HJD	05/02/2023	05/03/2023	
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**SAR by 20B Saturated Paste**

SAR	<b>2.13</b>		SAR	1	B3E0216	KAP	05/02/2023	05/05/2023	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	<b>0.507</b>	0.00500	mmhos/cm	1	B3E0220	HJD	05/02/2023	05/03/2023	
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**Table 915 metals by EPA 6020B**

Arsenic	<b>0.686</b>	0.0928	mg/kg	10	B3E1515	EDM	05/15/2023	05/16/2023	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Background

**Metals by EPA 6000/7000 Series Methods - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B3E1515 - EPA 3050B</b>										
<b>Blank (B3E1515-BLK1)</b>					Prepared: 05/15/2023 Analyzed: 05/16/2023					
Arsenic	ND	0.000100	mg/kg							
<b>LCS (B3E1515-BS1)</b>					Prepared: 05/15/2023 Analyzed: 05/16/2023					
Arsenic	0.0437	0.000100	mg/kg	0.0500		87.5	80-120			
<b>Matrix Spike (B3E1515-MS1)</b>					Source: Y305346-01 Prepared: 05/15/2023 Analyzed: 05/16/2023					
Arsenic	7.56	0.0883	mg/kg	4.42	1.31	142	75-125			QM-07
<b>Matrix Spike Dup (B3E1515-MSD1)</b>					Source: Y305346-01 Prepared: 05/15/2023 Analyzed: 05/16/2023					
Arsenic	6.34	0.0925	mg/kg	4.63	1.31	109	75-125	17.6	20	

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Background

**Classical Chemistry Parameters - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0216 - Saturated Paste Metals**

**Blank (B3E0216-BLK1)**

Prepared: 05/02/2023 Analyzed: 05/03/2023

Calcium PPM	ND	10.0	mg/L							
SAR	0.00		SAR							
Magnesium PPM	ND	10.0	mg/L							
Sodium PPM	ND	10.0	"							

**Duplicate (B3E0216-DUP1)**

Source: Y305006-01

Prepared: 05/02/2023 Analyzed: 05/03/2023

SAR	0.00		SAR		0.0660			200	200	
Calcium PPM	54.5	10.0	mg/L		52.4			3.95	50	
Magnesium PPM	8.64	10.0	"		8.51			1.47	50	
Sodium PPM	2.09	10.0	"		1.96			6.87	50	

**Batch B3E0308 - DTPA Sorbitol Preparation**

**Blank (B3E0308-BLK1)**

Prepared: 05/03/2023 Analyzed: 05/04/2023

Boron	ND	0.100	mg/L							
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**Duplicate (B3E0308-DUP1)**

Source: Y305017-06

Prepared: 05/03/2023 Analyzed: 05/04/2023

Boron	0.119	0.101	mg/L		0.132			10.4	50	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Background

**Saturated Paste - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0220 - Saturated Paste pH/EC**

**Blank (B3E0220-BLK1)**

Prepared: 05/02/2023 Analyzed: 05/03/2023

Specific Conductance (EC) ND 0.00500 mmhos/cm

**Duplicate (B3E0220-DUP1)**

**Source: Y305006-01**

Prepared: 05/02/2023 Analyzed: 05/03/2023

Specific Conductance (EC)	0.479	0.00500	mmhos/cm	0.416	14.2	25
pH	8.33		pH Units	8.35	0.240	25

Origins Laboratory, Inc.



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Absaroka

112 High St.

Buffalo WY 82834

Joel Mason

Project Number: FEO.CO.0701.33

Project: FEO - Damfino Background

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### Notes and Definitions

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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May 12, 2023

**Absaroka**

**Joel Mason**

**112 High St.**

**Buffalo**

**WY**

**82834**

**Project Name - FEO - Damfino Delineation**

**Project Number - FEO.CO.0701.33**

Attached are your analytical results for FEO - Damfino Delineation received by Origins Laboratory, Inc. May 01, 2023. This project is associated with Origins project number Y305018-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.  
303.433.1322  
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: FEO.CO.0701.33  
Project: FEO - Damfino Delineation

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS_Damfino_7@7'	Y305018-01	Soil	April 27, 2023 9:00	05/01/2023 11:00
SS_Damfino_West@3'	Y305018-02	Soil	April 27, 2023 10:20	05/01/2023 11:00
SS_Damfino_East@3'	Y305018-03	Soil	April 27, 2023 10:30	05/01/2023 11:00

Origins Laboratory, Inc.



Jen Pellegrini For Noelle Doyle Mathis, President

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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Delineation



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4305018

page 1 of 1

Client: Absaroka Solutions  
 Address: 112 High St, Buffalo WY  
 Telephone Number: 307-262-8975  
 Email Address: joel.mason@absarokasolutions.com

Project Manager: Joel Mason  
 Project Name: FEO Damfino Delineation  
 Project Number: FEO.CO.0701.33  
 Samples Collected By: joel.mason@absarokasolutions.com

Fax: 303.265.9645 | Phone: 303.433.1322 | Denver, CO 80211

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative					Matrix			Analysis	Sample Instructions	
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air	Summ #			Other
SS_Damfino_7 @ 7'	4/27/2023	0900	2	0					X					
SS_Damfino_West @ 3'	4/27/2023	1020	4	0					X					
SS_Damfino_East @ 3'	4/27/2023	1030	4	0					X					
Requisitioned By: <i>Guthrie</i>	Date: 5/11/23	Time: 11:00		Received By: <i>WMA</i>	Date: 5/11/23	Time: 11:00		Turnaround Time: Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input checked="" type="checkbox"/> Standard						
Requisitioned By:	Date:	Time:		Received By:	Date:	Time:								

5 Date Results Needed

Origins Laboratory, Inc.

*Jefe Pellegrini*

Jen Pellegrini For Noelle Doyle Mathis, President

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: FEO.CO.0701.33  
Project: FEO - Damfino Delineation

Origins Laboratory

F-012207-01-R1  
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: 4305018

Client: Absaroka  
Client Project ID: FEO Damfino Delineation

Checklist Completed by: JHLENS  
Date/time completed: 4/5/12

Shipped Via: HD  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)  
Airbill #: na

Matrix(s) Received: (Check all that apply):  Soil/Solid  Water  Other: \_\_\_\_\_  
Cooler Number/Temperature: 115 °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C (Describe)  
Thermometer ID: 7003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?	/			
Is there ice present (document if blue ice is used)	/			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		/		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		/		
Were all samples received intact <sup>(1)</sup> ?	/			
Was adequate sample volume provided <sup>(1)</sup> ?	/			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		/		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	/			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	/			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	/			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	/			
For volatiles in water – is there headspace (> ¼ inch bubble) present? <b>if yes, contact client and note in narrative.</b>			/	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)		/		
Additional Comments (if any):				

<sup>(1)</sup>If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) [Signature] Date/Time Reviewed 5/2/12

Origins Laboratory, Inc.

*Jefe Pellegrini*

Jen Pellegrini For Noelle Doyle Mathis, President

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Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: FEO.CO.0701.33  
Project: FEO - Damfino Delineation

**SS Damfino 7@7'**  
**4/27/2023 9:00:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y305018-01 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND		0.0982	mg/L	1	B3E0308	05/03/2023	05/04/2023	U
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**CA MG NA SAR H2O ext**

Calcium PPM	42.0		10.0	"	10	B3E0216	05/02/2023	05/05/2023	
Magnesium PPM	10.2		10.0	"	"	"	"	"	
Sodium PPM	57.6		10.0	"	"	"	"	"	

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	539		25.0	mg/kg	1	B3E0128	05/01/2023	05/09/2023	
Residual Range Organics (C28-C40)	212		100	"	"	"	"	"	

Surrogate: o-Terphenyl	94.8 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B3E0223	05/02/2023	05/03/2023	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U

Origins Laboratory, Inc.



Jen Pellegrini For Noelle Doyle Mathis, President

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Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: FEO.CO.0701.33  
Project: FEO - Damfino Delineation

**SS Damfino 7@7'**  
**4/27/2023 9:00:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y305018-01 (Soil)**

**GBTEX+TMBs by 8260D**

Xylenes, total	ND		0.00200	mg/kg	1	B3E0223	05/02/2023	05/03/2023	U
Gasoline Range Hydrocarbons	<b>1.68</b>		0.200	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	97.9 %		70-130			"	"	"	
Surrogate: Toluene-d8	92.0 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	106 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	<b>2.10</b>		0.499	meq/L	10	[CALC]	05/02/2023	05/05/2023	
Magnesium	<b>0.843</b>		0.823	"	"	"	"	"	
Sodium	<b>2.50</b>		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	ND	0.00549	0.0101	mg/Kg	5	L679650	05/03/2023	05/04/2023	
2-Methylnaphthalene	ND	0.00972	0.0101	"	"	"	"	"	
Acenaphthene	<b>0.0122</b>	<b>0.00152</b>	0.00335	"	"	"	"	"	
Anthracene	<b>0.0138</b>	<b>0.00167</b>	0.00335	"	"	"	"	"	
Benzo(a)anthracene	ND	0.00247	0.00335	"	"	"	"	"	
Benzo(a)pyrene	ND	0.00234	0.00335	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.00293	0.00335	"	"	"	"	"	

Origins Laboratory, Inc.



Jen Pellegrini For Noelle Doyle Mathis, President

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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Delineation

**SS Damfino 7@7'**  
**4/27/2023 9:00:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, LLC.**  
**Y305018-01 (Soil)**

**PAH by 8270D SIM**

Benzo(k)fluoranthene	ND	0.00219	0.00335	mg/Kg	5	L679650	05/03/2023	05/04/2023	
Chrysene	<b>0.00566</b>	<b>0.00312</b>	0.00335	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.00307	0.00335	"	"	"	"	"	
Fluoranthene	<b>0.00225</b>	<b>0.00197</b>	0.00335	"	"	"	"	"	J
Fluorene	<b>0.0381</b>	<b>0.00143</b>	0.00335	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	0.00314	0.00335	"	"	"	"	"	
Naphthalene	ND	0.0073	0.0101	"	"	"	"	"	
Pyrene	<b>0.0617</b>	<b>0.00322</b>	0.00335	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	54.5 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	57.8 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	49.1 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	<b>8.57</b>			pH Units	1	B3E0220	05/02/2023	05/03/2023	
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**SAR by 20B Saturated Paste**

SAR	<b>0.653</b>			SAR	1	B3E0216	05/02/2023	05/05/2023	
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**Specific Conductance Mod. 9050A**

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President

Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Delineation

**SS Damfino 7@7'**  
**4/27/2023 9:00:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y305018-01 (Soil)**

**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	1.31		0.00500	mmhos/cm	1	B3E0220	05/02/2023	05/03/2023	
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**Table 915 metals by EPA 6020B**

Arsenic	1.36		0.0956	mg/kg	10	B3E0124	05/01/2023	05/04/2023	
Barium	104		9.56	"	"	"	"	"	
Cadmium	ND		0.0956	"	"	"	"	"	U
Copper	ND		9.56	"	"	"	"	"	U
Lead	ND		9.56	"	"	"	"	"	U
Nickel	10.5		9.56	"	"	"	"	"	
Selenium	ND		0.0956	"	"	"	"	"	U
Silver	ND		0.0956	"	"	"	"	"	U
Zinc	ND		95.6	"	"	"	"	"	U

**Total Metals by 7196A**

Chromium, Hexavalent	ND	0.248	0.51	mg/Kg	1	L679952	04/27/2023	05/04/2023	
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Origins Laboratory, Inc.



Jen Pellegrini For Noelle Doyle Mathis, President

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Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: FEO.CO.0701.33  
Project: FEO - Damfino Delineation

**SS Damfino West@3'**  
**4/27/2023 10:20:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y305018-02 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND		0.989	mg/L	10	B3E0308	05/03/2023	05/04/2023	U
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**CA MG NA SAR H2O ext**

Calcium PPM	32.8		10.0	"	"	B3E0216	05/02/2023	05/05/2023	
Magnesium PPM	ND		10.0	"	"	"	"	"	U
Sodium PPM	ND		10.0	"	"	"	"	"	U

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B3E0128	05/01/2023	05/04/2023	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl 78.6 % 50-150 " " "

**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B3E0223	05/02/2023	05/03/2023	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U

Origins Laboratory, Inc.



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112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: FEO.CO.0701.33  
Project: FEO - Damfino Delineation

**SS Damfino West@3'**  
**4/27/2023 10:20:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y305018-02 (Soil)**

**GBTEX+TMBs by 8260D**

Xylenes, total	ND		0.00200	mg/kg	1	B3E0223	05/02/2023	05/03/2023	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	102 %		70-130			"	"	"	
Surrogate: Toluene-d8	90.3 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	106 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	<b>1.64</b>		0.499	meq/L	10	[CALC]	05/02/2023	05/05/2023	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	ND	0.00109	0.00201	mg/Kg	1	L679650	05/03/2023	05/04/2023	
2-Methylnaphthalene	ND	0.00194	0.00201	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	

Origins Laboratory, Inc.



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Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: FEO.CO.0701.33  
Project: FEO - Damfino Delineation

**SS Damfino West@3'**  
**4/27/2023 10:20:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, LLC.**  
**Y305018-02 (Soil)**

**PAH by 8270D SIM**

Benzo(k)fluoranthene	ND	0.000437	0.00067	mg/Kg	1	L679650	05/03/2023	05/04/2023	
Chrysene	<b>0.000649</b>	<b>0.000624</b>	0.00067	"	"	"	"	"	J
Dibenz(a,h)anthracene	<b>0.000769</b>	<b>0.000614</b>	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	
Fluorene	ND	0.000286	0.00067	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	ND	0.00145	0.00201	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	62.2 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	69.2 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	59.7 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	<b>8.27</b>			pH Units	1	B3E0220	05/02/2023	05/03/2023	
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**SAR by 20B Saturated Paste**

SAR	<b>0.0573</b>			SAR	1	B3E0216	05/02/2023	05/05/2023	
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**Specific Conductance Mod. 9050A**

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President

Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Delineation

**SS Damfino West@3'**  
**4/27/2023 10:20:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y305018-02 (Soil)**

**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.560		0.00500	mmhos/cm	1	B3E0220	05/02/2023	05/03/2023	
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**Table 915 metals by EPA 6020B**

Arsenic	3.81		0.0908	mg/kg	10	B3E0124	05/01/2023	05/04/2023	
Barium	199		9.08	"	"	"	"	"	
Cadmium	0.248		0.0908	"	"	"	"	"	
Copper	19.0		9.08	"	"	"	"	"	
Lead	10.5		9.08	"	"	"	"	"	
Nickel	18.7		9.08	"	"	"	"	"	
Selenium	0.365		0.0908	"	"	"	"	"	
Silver	ND		0.0908	"	"	"	"	"	U
Zinc	ND		90.8	"	"	"	"	"	U

**Total Metals by 7196A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L679952	04/27/2023	05/04/2023	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Delineation

**SS Damfino East@3'**  
**4/27/2023 10:30:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y305018-03 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.127		0.101	mg/L	1	B3E0308	05/03/2023	05/04/2023	
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**CA MG NA SAR H2O ext**

Calcium PPM	16.9		10.0	"	10	B3E0216	05/02/2023	05/05/2023	
Magnesium PPM	ND		10.0	"	"	"	"	"	U
Sodium PPM	ND		10.0	"	"	"	"	"	U

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B3E0128	05/01/2023	05/04/2023	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	72.8 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B3E0223	05/02/2023	05/03/2023	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U

Origins Laboratory, Inc.



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Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: FEO.CO.0701.33  
Project: FEO - Damfino Delineation

**SS Damfino East@3'**  
**4/27/2023 10:30:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y305018-03 (Soil)**

**GBTEX+TMBs by 8260D**

Xylenes, total	ND		0.00200	mg/kg	1	B3E0223	05/02/2023	05/03/2023	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	100 %		70-130			"	"	"	
Surrogate: Toluene-d8	90.0 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	106 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	<b>0.842</b>		0.499	meq/L	10	[CALC]	05/02/2023	05/05/2023	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	ND	0.00109	0.00201	mg/Kg	1	L679650	05/03/2023	05/04/2023	
2-Methylnaphthalene	ND	0.00194	0.00201	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	

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Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: FEO.CO.0701.33  
Project: FEO - Damfino Delineation

**SS Damfino East@3'**  
**4/27/2023 10:30:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, LLC.**  
**Y305018-03 (Soil)**

**PAH by 8270D SIM**

Benzo(k)fluoranthene	ND	0.000437	0.00067	mg/Kg	1	L679650	05/03/2023	05/04/2023	
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	<b>0.000683</b>	<b>0.000614</b>	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	
Fluorene	ND	0.000286	0.00067	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	ND	0.00145	0.00201	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	50.6 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	51.8 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	47.3 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	7.94			pH Units	1	B3E0220	05/02/2023	05/03/2023	
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**SAR by 20B Saturated Paste**

SAR	0.0975			SAR	1	B3E0216	05/02/2023	05/05/2023	
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**Specific Conductance Mod. 9050A**

Origins Laboratory, Inc.



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 Buffalo WY 82834

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 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Delineation

**SS Damfino East@3'**  
**4/27/2023 10:30:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y305018-03 (Soil)**

**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.336		0.00500	mmhos/cm	1	B3E0220	05/02/2023	05/03/2023	
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**Table 915 metals by EPA 6020B**

Arsenic	3.56		0.0879	mg/kg	10	B3E0124	05/01/2023	05/04/2023	
Barium	223		8.79	"	"	"	"	"	
Cadmium	0.274		0.0879	"	"	"	"	"	
Copper	20.2		8.79	"	"	"	"	"	
Lead	10.3		8.79	"	"	"	"	"	
Nickel	17.7		8.79	"	"	"	"	"	
Selenium	0.312		0.0879	"	"	"	"	"	
Silver	ND		0.0879	"	"	"	"	"	U
Zinc	ND		87.9	"	"	"	"	"	U

**Total Metals by 7196A**

Chromium, Hexavalent	1.99	0.245	0.503	mg/Kg	1	L679952	04/27/2023	05/04/2023	
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Origins Laboratory, Inc.



Jen Pellegrini For Noelle Doyle Mathis, President

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 Project: FEO - Damfino Delineation

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B3E0128 - EPA 3550B</b>										
<b>Blank (B3E0128-BLK1)</b>										
					Prepared: 05/01/2023 Analyzed: 05/04/2023					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	26		"	24.9		104	50-150			

Origins Laboratory, Inc.



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 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Delineation

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0128 - EPA 3550B**

**LCS (B3E0128-BS1)**

Prepared: 05/01/2023 Analyzed: 05/04/2023

Diesel (C10-C28)	930	50.0	mg/kg	1000		93.0	70-130			
Residual Range Organics (C28-C40)	987	200	"	1000		98.7	70-130			
Surrogate: o-Terphenyl	48		"	49.8		97.0	50-150			

Origins Laboratory, Inc.



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 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Delineation

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0128 - EPA 3550B**

<b>Matrix Spike (B3E0128-MS1)</b>	<b>Source: Y305004-01</b>			Prepared: 05/01/2023 Analyzed: 05/04/2023						
Diesel (C10-C28)	913	50.0	mg/kg	1000	ND	91.3	70-130			
Residual Range Organics (C28-C40)	984	200	"	1000	ND	98.4	70-130			
Surrogate: o-Terphenyl	46		"	49.8		91.9	50-150			

Origins Laboratory, Inc.



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**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B3E0128 - EPA 3550B

Matrix Spike Dup (B3E0128-MSD1)	Source: Y305004-01			Prepared: 05/01/2023 Analyzed: 05/04/2023						
Diesel (C10-C28)	1090	50.0	mg/kg	1000	ND	109	70-130	18.1	35	
Residual Range Organics (C28-C40)	1170	200	"	1000	ND	117	70-130	17.3	35	
Surrogate: o-Terphenyl	51		"	49.8		103	50-150			

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Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Delineation

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0223 - EPA 5030 (soil)**

**Blank (B3E0223-BLK1)**

Prepared: 05/02/2023 Analyzed: 05/03/2023

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Naphthalene	ND	0.00380	"							U
Toluene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125	90.3		70-130			
Surrogate: Toluene-d8	0.12		"	0.125	92.8		70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125	105		70-130			

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Delineation

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0223 - EPA 5030 (soil)**

**LCS (B3E0223-BS1)**

Prepared: 05/02/2023 Analyzed: 05/03/2023

1,2,4-Trimethylbenzene	0.102	0.00200	mg/kg	0.100		102	70-130			
1,3,5-Trimethylbenzene	0.104	0.00200	"	0.100		104	70-130			
Benzene	0.0943	0.00200	"	0.100		94.3	70-130			
Ethylbenzene	0.101	0.00200	"	0.100		101	70-130			
Naphthalene	0.0982	0.00380	"	0.100		98.2	70-130			
Toluene	0.0842	0.00200	"	0.100		84.2	70-130			
o-Xylene	0.100	0.00200	"	0.100		100	70-130			
m,p-Xylene	0.203	0.00400	"	0.200		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.2	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		92.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	70-130			

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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Delineation

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B3E0223 - EPA 5030 (soil)

Matrix Spike (B3E0223-MS1)	Source: Y305018-01			Prepared: 05/02/2023 Analyzed: 05/03/2023						
1,2,4-Trimethylbenzene	0.0643	0.00200	mg/kg	0.100	ND	64.3	70-130			QM-07
1,3,5-Trimethylbenzene	0.0687	0.00200	"	0.100	ND	68.7	70-130			QM-07
Benzene	0.0749	0.00200	"	0.100	ND	74.9	70-130			
Ethylbenzene	0.0733	0.00200	"	0.100	ND	73.3	70-130			
Naphthalene	0.0686	0.00380	"	0.100	ND	68.6	70-130			QM-07
Toluene	0.0616	0.00200	"	0.100	ND	61.6	70-130			QM-07
o-Xylene	0.0726	0.00200	"	0.100	ND	72.6	70-130			
m,p-Xylene	0.145	0.00400	"	0.200	ND	72.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		100	70-130			
Surrogate: Toluene-d8	0.11		"	0.125		90.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		107	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B3E0223 - EPA 5030 (soil)

Matrix Spike Dup (B3E0223-MSD1)	Source: Y305018-01			Prepared: 05/02/2023 Analyzed: 05/03/2023						
1,2,4-Trimethylbenzene	0.0780	0.00200	mg/kg	0.100	ND	78.0	70-130	19.2	20	
1,3,5-Trimethylbenzene	0.0819	0.00200	"	0.100	ND	81.9	70-130	17.6	20	
Benzene	0.0820	0.00200	"	0.100	ND	82.0	70-130	9.03	20	
Ethylbenzene	0.0856	0.00200	"	0.100	ND	85.6	70-130	15.5	20	
Naphthalene	0.0819	0.00380	"	0.100	ND	81.9	70-130	17.8	20	
Toluene	0.0698	0.00200	"	0.100	ND	69.8	70-130	12.5	20	QM-07
o-Xylene	0.0851	0.00200	"	0.100	ND	85.1	70-130	15.9	20	
m,p-Xylene	0.171	0.00400	"	0.200	ND	85.5	70-130	16.2	20	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		98.6	70-130			
Surrogate: Toluene-d8	0.11		"	0.125		90.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		107	70-130			

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Project: FEO - Damfino Delineation

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Metals by EPA 6000/7000 Series Methods - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0124 - EPA 3050B**

**Blank (B3E0124-BLK1)**

Prepared: 05/01/2023 Analyzed: 05/04/2023

Arsenic	ND	0.000100	mg/kg							U
Barium	ND	0.0100	"							U
Cadmium	ND	0.000100	"							U
Copper	ND	0.0100	"							U
Lead	ND	0.0100	"							U
Nickel	ND	0.0100	"							U
Selenium	ND	0.000100	"							U
Silver	ND	0.000100	"							U
Zinc	ND	0.100	"							U

**LCS (B3E0124-BS1)**

Prepared: 05/01/2023 Analyzed: 05/04/2023

Arsenic	0.0487	0.000100	mg/kg	0.0500		97.4	80-120			
Barium	5.21	0.0100	"	5.00		104	80-120			
Cadmium	0.0521	0.000100	"	0.0500		104	80-120			
Copper	0.509	0.0100	"	0.500		102	80-120			
Lead	0.0507	0.0100	"	0.0500		101	80-120			
Nickel	0.0506	0.0100	"	0.0500		101	80-120			
Selenium	0.0521	0.000100	"	0.0500		104	80-120			
Silver	0.0496	0.000100	"	0.0500		99.3	80-120			
Zinc	0.485	0.100	"	0.500		97.0	80-120			

**Matrix Spike (B3E0124-MS1)**

**Source: Y305007-01**

Prepared: 05/01/2023 Analyzed: 05/04/2023

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 Project: FEO - Damfino Delineation

**Metals by EPA 6000/7000 Series Methods - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0124 - EPA 3050B**

<b>Matrix Spike (B3E0124-MS1)</b>		<b>Source: Y305007-01</b>			Prepared: 05/01/2023 Analyzed: 05/04/2023					
Arsenic	7.74	0.0926	mg/kg	4.63	4.04	80.0	75-125			
Barium	748	9.26	"	463	253	107	75-125			
Cadmium	4.77	0.0926	"	4.63	0.151	99.8	75-125			
Copper	53.3	9.26	"	46.3	11.5	90.3	75-125			
Lead	15.7	9.26	"	4.63	11.4	92.9	75-125			
Nickel	16.7	9.26	"	4.63	13.3	72.9	75-125			QM-07
Selenium	4.12	0.0926	"	4.63	0.197	84.8	75-125			
Silver	4.43	0.0926	"	4.63	0.0345	95.0	75-125			
Zinc	93.3	92.6	"	46.3	52.8	87.5	75-125			

<b>Matrix Spike Dup (B3E0124-MSD1)</b>		<b>Source: Y305007-01</b>			Prepared: 05/01/2023 Analyzed: 05/04/2023					
Arsenic	8.26	0.0975	mg/kg	4.87	4.04	86.5	75-125	6.44	20	
Barium	670	9.75	"	487	253	85.7	75-125	11.0	20	
Cadmium	5.04	0.0975	"	4.87	0.151	100	75-125	5.44	20	
Copper	55.6	9.75	"	48.7	11.5	90.5	75-125	4.26	20	
Lead	15.9	9.75	"	4.87	11.4	94.0	75-125	1.78	20	
Nickel	17.3	9.75	"	4.87	13.3	83.1	75-125	3.96	20	
Selenium	4.38	0.0975	"	4.87	0.197	85.9	75-125	6.08	20	
Silver	4.65	0.0975	"	4.87	0.0345	94.8	75-125	4.83	20	
Zinc	94.9	97.5	"	48.7	52.8	86.5	75-125	1.73	20	U

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Project: FEO - Damfino Delineation

**Classical Chemistry Parameters - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0216 - Saturated Paste Metals**

**Blank (B3E0216-BLK1)**

Prepared: 05/02/2023 Analyzed: 05/03/2023

SAR	0.00		SAR							U
Calcium PPM	ND	10.0	mg/L							U
Magnesium PPM	ND	10.0	"							U
Sodium PPM	ND	10.0	"							U

**Duplicate (B3E0216-DUP1)**

Source: Y305006-01

Prepared: 05/02/2023 Analyzed: 05/03/2023

SAR	0.00		SAR		0.0660			200	200	U
Calcium PPM	54.5	10.0	mg/L		52.4			3.95	50	
Magnesium PPM	8.64	10.0	"		8.51			1.47	50	U
Sodium PPM	2.09	10.0	"		1.96			6.87	50	U

**Batch B3E0308 - DTPA Sorbitol Preparation**

**Blank (B3E0308-BLK1)**

Prepared: 05/03/2023 Analyzed: 05/04/2023

Boron	ND	0.100	mg/L							U
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**Duplicate (B3E0308-DUP1)**

Source: Y305017-06

Prepared: 05/03/2023 Analyzed: 05/04/2023

Boron	0.119	0.101	mg/L		0.132			10.4	50	
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**Saturated Paste - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0220 - Saturated Paste pH/EC**

**Blank (B3E0220-BLK1)**

Prepared: 05/02/2023 Analyzed: 05/03/2023

Specific Conductance (EC)	ND	0.00500	mmhos/cm							U
pH	0.00		pH Units							U

**Duplicate (B3E0220-DUP1)**

**Source: Y305006-01**

Prepared: 05/02/2023 Analyzed: 05/03/2023

Specific Conductance (EC)	0.479	0.00500	mmhos/cm		0.416			14.2	25	
pH	8.33		pH Units		8.35			0.240	25	

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**PAH by 8270D SIM - Quality Control**  
**Waypoint Analytical, LLC.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L679650 - 3550B

MSD (L 85889-MSD-L679650)		Source: 85889			Prepared: 05/03/2023 Analyzed: 05/04/2023					
Benzo(a)pyrene	0.126	0.00067	mg/Kg	0.166	<0.000468	75.9	30-130	15.3	30	
Pyrene	0.118	0.00067	"	0.166	<0.000643	71	30-130	19.8	30	
Naphthalene	0.103	0.00201	"	0.166	<0.00145	62	30-130	20.2	30	
Indeno(1,2,3-cd)pyrene	0.139	0.00067	"	0.166	<0.000627	83.7	30-130	21.5	30	
Fluorene	0.125	0.00067	"	0.166	<0.000286	75.3	30-130	20.2	30	
Fluoranthene	0.123	0.00067	"	0.166	<0.000394	74	30-130	17.6	30	
Dibenz(a,h)anthracene	0.163	0.00067	"	0.166	0.000891	97.6	30-130	21	30	
Chrysene	0.131	0.00067	"	0.166	0.00125	78.1	30-130	23.9	30	
Benzo(b)fluoranthene	0.0761	0.00067	"	0.166	<0.000585	45.8	30-130	21.7	30	
Benzo(k)fluoranthene	0.0694	0.00067	"	0.166	<0.000437	41.8	30-130	22	30	
Anthracene	0.127	0.00067	"	0.166	<0.000334	76.5	30-130	19.9	30	
1-Methylnaphthalene	0.117	0.00201	"	0.166	<0.00109	70.4	30-130	18.8	30	
Acenaphthene	0.122	0.00067	"	0.166	<0.000304	73.4	30-130	18.8	30	
2-Methylnaphthalene	0.112	0.00201	"	0.166	<0.00194	67.4	30-130	20.1	30	
Benzo(a)anthracene	0.125	0.00067	"	0.166	<0.000493	75.3	30-130	10.9	30	
Surrogate: Nitrobenzene-d5	60.8		"	0.332	171	60.8	29-110			
Surrogate: 2-Fluorobiphenyl	65.3		"	0.332	189	65.3	33-115			
Surrogate: 4-Terphenyl-d14	65		"	0.332	196	65	33-122			

MS (L 85889-MS-L679650)		Source: 85889			Prepared: 05/03/2023 Analyzed: 05/04/2023					
Fluoranthene	0.103	0.00067	mg/Kg	0.166	<0.000394	62	30-130			
Naphthalene	0.0841	0.00201	"	0.166	<0.00145	50.6	30-130			
Dibenz(a,h)anthracene	0.132	0.00067	"	0.166	<0.000614	78.9	30-130			
Chrysene	0.103	0.00067	"	0.166	0.00125	61.2	30-130			
Benzo(k)fluoranthene	0.0556	0.00067	"	0.166	<0.000437	33.4	30-130			
Benzo(b)fluoranthene	0.0612	0.00067	"	0.166	<0.000585	36.8	30-130			
Benzo(a)pyrene	0.108	0.00067	"	0.166	<0.000468	65	30-130			

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**PAH by 8270D SIM - Quality Control**  
**Waypoint Analytical, LLC.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch L679650 - 3550B**

<b>MS (L 85889-MS-L679650)</b>		<b>Source: 85889</b>			Prepared: 05/03/2023 Analyzed: 05/04/2023					
1-Methylnaphthalene	0.0968	0.00201	mg/Kg	0.166	<0.00109	58.3	30-130			
Benzo(a)anthracene	0.112	0.00067	"	0.166	<0.000493	67.4	30-130			
Indeno(1,2,3-cd)pyrene	0.112	0.00067	"	0.166	<0.000627	67.4	30-130			
Anthracene	0.104	0.00067	"	0.166	<0.000334	62.6	30-130			
Fluorene	0.102	0.00067	"	0.166	<0.000286	61.4	30-130			
Acenaphthene	0.101	0.00067	"	0.166	0.0122	60.8	30-130			
2-Methylnaphthalene	0.0915	0.00201	"	0.166	<0.00194	55.1	30-130			
Pyrene	0.0967	0.00067	"	0.166	<0.000643	58.2	30-130			
Surrogate: Nitrobenzene-d5	52.5		"	0.331	171	52.5	29-110			
Surrogate: 4-Terphenyl-d14	54		"	0.331	196	54	33-122			
Surrogate: 2-Fluorobiphenyl	54.6		"	0.331	189	54.6	33-115			

<b>LCS (LCS-L679650)</b>		Prepared: 05/03/2023 Analyzed: 05/04/2023								
Benzo(k)fluoranthene	0.12	0.00067	mg/Kg	0.167		71.8	30-130			
Benzo(b)fluoranthene	0.082	0.00067	"	0.167		49.1	30-130			
2-Methylnaphthalene	0.105	0.00201	"	0.167		62.8	30-130			
1-Methylnaphthalene	0.113	0.00201	"	0.167		67.6	30-130			
Acenaphthene	0.12	0.00067	"	0.167		71.8	30-130			
Anthracene	0.132	0.00067	"	0.167		79	30-130			
Benzo(a)anthracene	0.126	0.00067	"	0.167		75.4	30-130			
Dibenz(a,h)anthracene	0.136	0.00067	"	0.167		81.4	30-130			
Benzo(a)pyrene	0.131	0.00067	"	0.167		78.4	30-130			
Chrysene	0.128	0.00067	"	0.167		76.6	30-130			
Fluoranthene	0.128	0.00067	"	0.167		76.6	30-130			
Fluorene	0.127	0.00067	"	0.167		76	30-130			
Indeno(1,2,3-cd)pyrene	0.114	0.00067	"	0.167		68.2	30-130			
Naphthalene	0.101	0.00201	"	0.167		60.4	30-130			

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**PAH by 8270D SIM - Quality Control**  
**Waypoint Analytical, LLC.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch L679650 - 3550B**

**LCS (LCS-L679650)**

Prepared: 05/03/2023 Analyzed: 05/04/2023

Pyrene	0.127	0.00067	mg/Kg	0.167		76	30-130			
Surrogate: 2-Fluorobiphenyl	66.3		"	0.333	66.3		33-115			
Surrogate: 4-Terphenyl-d14	74.7		"	0.333	74.7		33-122			
Surrogate: Nitrobenzene-d5	61.5		"	0.333	61.5		29-110			

**LRB (LRB-L679650)**

Prepared: 05/03/2023 Analyzed: 05/04/2023

1-Methylnaphthalene	ND	0.00201	mg/Kg				-			
Benzo(a)pyrene	ND	0.00067	"				-			
Pyrene	ND	0.00067	"				-			
Acenaphthene	ND	0.00067	"				-			
2-Methylnaphthalene	ND	0.00201	"				-			
Benzo(a)anthracene	ND	0.00067	"				-			
Benzo(b)fluoranthene	ND	0.00067	"				-			
Benzo(k)fluoranthene	ND	0.00067	"				-			
Chrysene	ND	0.00067	"				-			
Dibenz(a,h)anthracene	ND	0.00067	"				-			
Fluoranthene	ND	0.00067	"				-			
Fluorene	ND	0.00067	"				-			
Indeno(1,2,3-cd)pyrene	ND	0.00067	"				-			
Naphthalene	ND	0.00201	"				-			
Anthracene	ND	0.00067	"				-			
Surrogate: 2-Fluorobiphenyl	57.6		"	0.333	57.6		33-115			
Surrogate: 4-Terphenyl-d14	60.6		"	0.333	60.6		33-122			
Surrogate: Nitrobenzene-d5	54		"	0.333	54		29-110			

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**Total Metals by 7196A - Quality Control  
 Waypoint Analytical, LLC.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch L679952 -</b>										
<b>DUP (L 85891-DUP)</b>		<b>Source: 85891</b>			Prepared: Analyzed: 05/04/2023					
Chromium, Hexavalent	ND	0.502	mg/Kg		<0.502		-	0	20	
<b>MS (L 85891-MS)</b>		<b>Source: 85891</b>			Prepared: Analyzed: 05/04/2023					
Chromium, Hexavalent	30.7	2.5	mg/Kg	39.6	1.99	78	75-125			
<b>LCS (LCS)</b>		Prepared: Analyzed: 05/04/2023								
Chromium, Hexavalent	7.03	0.5	mg/Kg	8		88	75-125			
<b>LRB (LRB)</b>		Prepared: Analyzed: 05/04/2023								
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

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Jen Pellegrini For Noelle Doyle Mathis, President

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Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: FEO.CO.0701.33  
Project: FEO - Damfino Delineation

---

**Notes and Definitions**

U Sample is Non-Detect.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

J Estimated Value. Analyte below reported quantitation limit.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported on a wet weight basis.

Origins Laboratory, Inc.



Jen Pellegrini For Noelle Doyle Mathis, President

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May 10, 2023

**Absaroka**

**Joel Mason**

**112 High St.**

**Buffalo**

**WY 82834**

**Project Name - FEO - Damfino Waste  
Characterization**

**Project Number - FEO.CO.0701.33**

Attached are your analytical results for FEO - Damfino Waste Characterization received by Origins Laboratory, Inc. May 01, 2023. This project is associated with Origins project number Y305020-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.  
303.433.1322  
o-squad@oelabinc.com



Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: FEO.CO.0701.33  
Project: FEO - Damfino Waste Characterization

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS_Damfino_Stockpile	Y305020-01	Soil	April 27, 2023 10:45	05/01/2023 11:00

Origins Laboratory, Inc.



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Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: FEO.CO.0701.33  
Project: FEO - Damfino Waste Characterization

Origins Laboratory

F-012207-01-R1  
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: 465020

Client: Ansarka

Client Project ID: FEO Damfino Waste Characterization

Checklist Completed by: JWH LEAS

Shipped Via: HD  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/Time completed: 4/5/23

Airbill #: NA

Matrix(s) Received: (Check all that apply):  Soil/Solid  Water  Other: \_\_\_\_\_

Cooler Number/Temperature: 1/5 °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C (Describe) \_\_\_\_\_ °C

Thermometer ID: 7003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?	/			
Is there ice present (document if blue ice is used)	/			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		/		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		/		
Were all samples received intact <sup>(1)</sup> ?	/			
Was adequate sample volume provided <sup>(1)</sup> ?	/			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		/		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	/			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	/			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	/			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	/			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			/	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)			/	
Additional Comments (if any):				

<sup>(1)</sup>If NO, then contact the client before proceeding with analysis and note date, time and person contacted as well as the corrective action to in the additional comments, (above) and the case narrative.

Reviewed by (Project Manager) [Signature]

Date/Time Reviewed 5/2/23

Origins Laboratory, Inc.

[Signature]

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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Waste Characterization

**SS Damfino Stockpile**  
**4/27/2023 10:45:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Y305020-01 (Soil)**  
**Origins Laboratory, Inc.**

**GRO (TVPH)/DRO (TEPH) by EPA 8015D**

Gasoline (C6-C10)	ND	25.0	mg/kg	1	B3E0128	ZZZ	05/01/2023	05/09/2023	Ua
Diesel (C10-C28)	<b>1830</b>	25.0	"	"	"	ZZZ	"	"	
Surrogate: o-Terphenyl	95.0 %	50-150			"	"	"	"	

**Total Mercury by EPA 7471**

Mercury	<b>0.0161</b>	0.00935	mg/kg	1	B3E0427	CNG	05/04/2023	05/05/2023	
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**Total Metals by EPA 6020B**

Arsenic	<b>2.48</b>	0.0869	mg/kg	10	B3E0426	CNG	05/04/2023	05/04/2023	
Barium	<b>946</b>	43.4	"	"	"	CNG	"	"	
Cadmium	<b>0.184</b>	0.0869	"	"	"	CNG	"	"	
Chromium	<b>27.7</b>	8.69	"	"	"	CNG	"	"	
Lead	<b>10.2</b>	8.69	"	"	"	CNG	"	"	
Selenium	<b>0.303</b>	0.0869	"	"	"	CNG	"	"	
Silver	ND	0.869	"	"	"	CNG	"	"	

**VOC by EPA 8260D**

1,1,1,2-Tetrachloroethane	ND	0.00200	mg/kg	1	B3E0133	ZZZ	05/01/2023	05/01/2023	Ua
1,1,1-Trichloroethane	ND	0.00200	"	"	"	ZZZ	"	"	Ua
1,1,2,2-Tetrachloroethane	ND	0.00200	"	"	"	ZZZ	"	"	Ua

Origins Laboratory, Inc.



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 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Waste Characterization

**SS Damfino Stockpile**  
**4/27/2023 10:45:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Y305020-01 (Soil)**  
**Origins Laboratory, Inc.**

**VOC by EPA 8260D**

1,1,2-Trichloroethane	ND	0.00200	mg/kg	1	B3E0133	ZZZ	05/01/2023	05/01/2023	Ua
1,1-Dichloroethane	ND	0.00200	"	"	"	ZZZ	"	"	Ua
1,1-Dichloroethene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
1,1-Dichloropropene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
1,2,3-Trichlorobenzene	ND	0.00500	"	"	"	ZZZ	"	"	Ua
1,2,3-Trichloropropane	ND	0.00500	"	"	"	ZZZ	"	"	Ua
1,2,4-Trichlorobenzene	ND	0.00500	"	"	"	ZZZ	"	"	Ua
1,2,4-Trimethylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
1,2-Dibromo-3-chloropropane	ND	0.00500	"	"	"	ZZZ	"	"	Ua
1,2-Dibromoethane (EDB)	ND	0.00300	"	"	"	ZZZ	"	"	Ua
1,2-Dichlorobenzene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
1,2-Dichloroethane	ND	0.00200	"	"	"	ZZZ	"	"	Ua
1,2-Dichloropropane	ND	0.00200	"	"	"	ZZZ	"	"	Ua
1,3,5-Trimethylbenzene	<b>0.00242</b>	0.00200	"	"	"	ZZZ	"	"	
1,3-Dichlorobenzene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
1,3-Dichloropropane	ND	0.00200	"	"	"	ZZZ	"	"	Ua
1,4-Dichlorobenzene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
2,2-Dichloropropane	ND	0.00200	"	"	"	ZZZ	"	"	Ua
2-Butanone	ND	0.0100	"	"	"	ZZZ	"	"	Ua
2-Chlorotoluene	ND	0.00200	"	"	"	ZZZ	"	"	Ua

Origins Laboratory, Inc.



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 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Waste Characterization

**SS Damfino Stockpile**  
**4/27/2023 10:45:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Y305020-01 (Soil)**  
**Origins Laboratory, Inc.**

**VOC by EPA 8260D**

2-Hexanone	ND	0.0120	mg/kg	1	B3E0133	ZZZ	05/01/2023	05/01/2023	Ua
4-Chlorotoluene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
4-Isopropyltoluene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
4-Methyl-2-pentanone	ND	0.0100	"	"	"	ZZZ	"	"	Ua
Acetone	ND	0.0200	"	"	"	ZZZ	"	"	Ua
Benzene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
Bromobenzene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
Bromochloromethane	ND	0.00200	"	"	"	ZZZ	"	"	Ua
Bromodichloromethane	ND	0.00200	"	"	"	ZZZ	"	"	Ua
Bromoform	ND	0.00200	"	"	"	ZZZ	"	"	Ua
Bromomethane	ND	0.00200	"	"	"	ZZZ	"	"	Ua
Carbon disulfide	ND	0.00500	"	"	"	ZZZ	"	"	Ua
Carbon tetrachloride	ND	0.00200	"	"	"	ZZZ	"	"	Ua
Chlorobenzene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
Chloroethane	ND	0.00500	"	"	"	ZZZ	"	"	Ua
Chloroform	ND	0.00200	"	"	"	ZZZ	"	"	Ua
Chloromethane	ND	0.00200	"	"	"	ZZZ	"	"	Ua
cis-1,2-Dichloroethene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
cis-1,3-Dichloropropene	ND	0.00200	"	"	"	ZZZ	"	"	Ua

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 Project: FEO - Damfino Waste Characterization

**SS Damfino Stockpile**  
**4/27/2023 10:45:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Y305020-01 (Soil)**  
**Origins Laboratory, Inc.**

**VOC by EPA 8260D**

Dibromochloromethane	ND	0.00200	mg/kg	1	B3E0133	ZZZ	05/01/2023	05/01/2023	Ua
Dibromomethane	ND	0.00200	"	"	"	ZZZ	"	"	Ua
Ethylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
Hexachlorobutadiene	ND	0.00500	"	"	"	ZZZ	"	"	Ua
Iodomethane	ND	0.0150	"	"	"	ZZZ	"	"	Ua
Isopropylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
m,p-Xylene	ND	0.00400	"	"	"	ZZZ	"	"	Ua
Methyl tert-Butyl Ether	ND	0.00200	"	"	"	ZZZ	"	"	Ua
Methylene Chloride	ND	0.0200	"	"	"	ZZZ	"	"	Ua
Naphthalene	ND	0.0100	"	"	"	ZZZ	"	"	Ua
n-Butylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
n-Propylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
o-Xylene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
sec-Butylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
Styrene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
tert-Butylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
Tetrachloroethene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
Toluene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
trans-1,2-Dichloroethene	ND	0.00200	"	"	"	ZZZ	"	"	Ua

Origins Laboratory, Inc.



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112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: FEO.CO.0701.33  
Project: FEO - Damfino Waste Characterization

**SS Damfino Stockpile**  
**4/27/2023 10:45:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Y305020-01 (Soil)**  
**Origins Laboratory, Inc.**

**VOC by EPA 8260D**

trans-1,3-Dichloropropene	ND	0.00200	mg/kg	1	B3E0133	ZZZ	05/01/2023	05/01/2023	Ua
Trichloroethene	ND	0.00200	"	"	"	ZZZ	"	"	Ua
Trichlorofluoromethane	ND	0.00300	"	"	"	ZZZ	"	"	Ua
Vinyl chloride	ND	0.00200	"	"	"	ZZZ	"	"	Ua

Surrogate: 1,2-Dichloroethane-d4	128 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	91.4 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	91.5 %	70-130			"	"	"	"	

**GEL Laboratories, LLC**

**Flash Point by 1020 Setafash**

Setafash-200	>200	75.0	F	1	2424122	ES2	04/27/2023	05/05/2023	
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**Paint Filter Test by 9095B**

Paint Filter	PASS		text dry	1	2422952	HH2	"	05/02/2023	
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**pH by 9045D**

pH	9.29	0.100	SU	1	2422889	JW2	"	05/02/2023	H
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**Reactive Cyanide by Chpt. 7.3.3**

Origins Laboratory, Inc.



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Buffalo WY 82834

Joel Mason  
Project Number: FEO.CO.0701.33  
Project: FEO - Damfino Waste Characterization

**SS Damfino Stockpile**  
**4/27/2023 10:45:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Y305020-01 (Soil)**  
**GEL Laboratories, LLC**

**Reactive Cyanide by Chpt. 7.3.3**

Reactive Releasable Cyanide	<250	250	mg/kg dry	1	2423032	KLP1	05/04/2023	05/05/2023	
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**Reactive Sulfide by Chpt. 7.3.4**

Reactive Releasable Sulfide	<500	500	mg/kg dry	1	2422953	HH2	04/27/2023	05/04/2023	
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**SVOC by 8270E**

1,1'-Biphenyl	ND	0.370	mg/kg dry	1	2423285	BM1	05/04/2023	05/04/2023	U
1,2,4,5-Tetrachlorobenzene	ND	0.370	"	"	"	BM1	"	"	U
1,4-Dioxane	ND	0.370	"	"	"	BM1	"	"	U
2,3,4,6-Tetrachlorophenol	ND	0.370	"	"	"	BM1	"	"	U
2,4,5-Trichlorophenol	ND	0.370	"	"	"	BM1	"	"	U
2,4,6-Trichlorophenol	ND	0.370	"	"	"	BM1	"	"	U
2,4-Dichlorophenol	ND	0.370	"	"	"	BM1	"	"	U
2,4-Dimethylphenol	ND	0.370	"	"	"	BM1	"	"	U
2,4-Dinitrophenol	ND	0.739	"	"	"	BM1	"	"	U
2,4-Dinitrotoluene	ND	0.370	"	"	"	BM1	"	"	U
2,6-Dinitrotoluene	ND	0.370	"	"	"	BM1	"	"	U
2-Chloronaphthalene	ND	0.0370	"	"	"	BM1	"	"	U
2-Chlorophenol	ND	0.370	"	"	"	BM1	"	"	U

Origins Laboratory, Inc.



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 Project: FEO - Damfino Waste Characterization

**SS Damfino Stockpile**  
**4/27/2023 10:45:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Y305020-01 (Soil)**  
**GEL Laboratories, LLC**

**SVOC by 8270E**

2-Methyl-4,6-dinitrophenol	ND	0.370	mg/kg dry	1	2423285	BM1	05/04/2023	05/04/2023	U
2-Methylnaphthalene	ND	0.0370	"	"	"	BM1	"	"	U
2-Nitrophenol	ND	0.370	"	"	"	BM1	"	"	U
3,3'-Dichlorobenzidine	ND	0.370	"	"	"	BM1	"	"	U
4-Bromophenylphenylether	ND	0.370	"	"	"	BM1	"	"	U
4-Chloro-3-methylphenol	ND	0.370	"	"	"	BM1	"	"	U
4-Chloroaniline	ND	0.370	"	"	"	BM1	"	"	U
4-Chlorophenylphenylether	ND	0.370	"	"	"	BM1	"	"	U
4-Nitrophenol	ND	0.370	"	"	"	BM1	"	"	U
Acenaphthene	ND	0.0370	"	"	"	BM1	"	"	U
Acenaphthylene	ND	0.0370	"	"	"	BM1	"	"	U
Acetophenone	ND	0.370	"	"	"	BM1	"	"	U
Anthracene	ND	0.0370	"	"	"	BM1	"	"	U
Atrazine	ND	0.370	"	"	"	BM1	"	"	U
Benzaldehyde	ND	0.370	"	"	"	BM1	"	"	U
Benzo(a)anthracene	ND	0.0370	"	"	"	BM1	"	"	U
Benzo(a)pyrene	ND	0.0370	"	"	"	BM1	"	"	U
Benzo(b)fluoranthene	ND	0.0370	"	"	"	BM1	"	"	U
Benzo(ghi)perylene	ND	0.0370	"	"	"	BM1	"	"	U

Origins Laboratory, Inc.



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Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Waste Characterization

**SS Damfino Stockpile**  
**4/27/2023 10:45:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Y305020-01 (Soil)**  
**GEL Laboratories, LLC**

**SVOC by 8270E**

Benzo(k)fluoranthene	ND	0.0370	mg/kg dry	1	2423285	BM1	05/04/2023	05/04/2023	U
bis(2-Chloro-1-methylethyl)ether	ND	0.370	"	"	"	BM1	"	"	U
bis(2-Chloroethoxy)methane	ND	0.370	"	"	"	BM1	"	"	U
bis(2-Chloroethyl) ether	ND	0.370	"	"	"	BM1	"	"	U
bis(2-Ethylhexyl)phthalate	ND	0.0370	"	"	"	BM1	"	"	U
Butylbenzylphthalate	ND	0.0370	"	"	"	BM1	"	"	U
Caprolactam	ND	0.370	"	"	"	BM1	"	"	U
Carbazole	ND	0.0370	"	"	"	BM1	"	"	U
Chrysene	ND	0.0370	"	"	"	BM1	"	"	U
Dibenzo(a,h)anthracene	ND	0.0370	"	"	"	BM1	"	"	U
Dibenzofuran	ND	0.370	"	"	"	BM1	"	"	U
Diethylphthalate	ND	0.0370	"	"	"	BM1	"	"	U
Dimethylphthalate	ND	0.0370	"	"	"	BM1	"	"	U
Di-n-butylphthalate	ND	0.0370	"	"	"	BM1	"	"	U
Di-n-octylphthalate	ND	0.0370	"	"	"	BM1	"	"	U
Diphenylamine	ND	0.370	"	"	"	BM1	"	"	U
Fluoranthene	ND	0.0370	"	"	"	BM1	"	"	U
Fluorene	ND	0.0370	"	"	"	BM1	"	"	U
Hexachlorobenzene	ND	0.370	"	"	"	BM1	"	"	U

Origins Laboratory, Inc.



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Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Waste Characterization

**SS Damfino Stockpile**  
**4/27/2023 10:45:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Y305020-01 (Soil)**  
**GEL Laboratories, LLC**

**SVOC by 8270E**

Hexachlorobutadiene	ND	0.370	mg/kg dry	1	2423285	BM1	05/04/2023	05/04/2023	U
Hexachlorocyclopentadiene	ND	0.370	"	"	"	BM1	"	"	U
Hexachloroethane	ND	0.370	"	"	"	BM1	"	"	U
Indeno(1,2,3-cd)pyrene	ND	0.0370	"	"	"	BM1	"	"	U
Isophorone	ND	0.370	"	"	"	BM1	"	"	U
m,p-Cresols	ND	0.370	"	"	"	BM1	"	"	U
m-Nitroaniline	ND	0.370	"	"	"	BM1	"	"	U
Naphthalene	ND	0.0370	"	"	"	BM1	"	"	U
Nitrobenzene	ND	0.370	"	"	"	BM1	"	"	U
N-Nitrosodipropylamine	ND	0.370	"	"	"	BM1	"	"	U
o-Cresol	ND	0.370	"	"	"	BM1	"	"	U
o-Nitroaniline	ND	0.370	"	"	"	BM1	"	"	U
Pentachlorophenol	ND	0.370	"	"	"	BM1	"	"	U
Phenanthrene	<b>0.250</b>	0.0370	"	"	"	BM1	"	"	
Phenol	ND	0.370	"	"	"	BM1	"	"	U
p-Nitroaniline	ND	0.370	"	"	"	BM1	"	"	U
Pyrene	<b>0.182</b>	0.0370	"	"	"	BM1	"	"	

Surrogate: 2,4,6-Tribromophenol	65 %	26-128			"	"	"	"	
Surrogate: 2-Fluorobiphenyl	61 %	26-118			"	"	"	"	
Surrogate: 2-Fluorophenol	54 %	30-108			"	"	"	"	

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Absaroka  
112 High St.  
Buffalo WY 82834

Joel Mason  
Project Number: FEO.CO.0701.33  
Project: FEO - Damfino Waste Characterization

**SS Damfino Stockpile**  
**4/27/2023 10:45:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Y305020-01 (Soil)**  
**GEL Laboratories, LLC**

**SVOC by 8270E**

Surrogate: Nitrobenzene-d5	54 %	28-110			24232 85		05/04/2023	05/04/2023	
Surrogate: Phenol-d5	56 %	29-116			"	"	"	"	
Surrogate: p-Terphenyl-d14	63 %	26-130			"	"	"	"	

**TCLP Metals by 1311/6010D**

Arsenic	ND	0.300	mg/L	1	2423176	LS	05/03/2023	05/04/2023	U
Barium	<b>0.616</b>	0.0500	"	"	"	LS	"	"	J
Cadmium	ND	0.0500	"	"	"	LS	"	"	U
Chromium	ND	0.100	"	"	"	LS	"	"	U
Lead	<b>0.0354</b>	0.200	"	"	"	LS	"	"	J
Selenium	<b>0.101</b>	0.300	"	"	"	LS	"	"	J
Silver	ND	0.0500	"	"	"	LS	"	"	U

**TCLP Metals by 1311/7470A**

Mercury	ND	0.00200	mg/L	1	2423267	JP2	"	05/04/2023	U
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**TCLP SVOC by 1311/8270E**

1,4-Dichlorobenzene	ND	0.0500	mg/L	1	2423242	BM1	05/04/2023	05/05/2023	U
2,4,5-Trichlorophenol	ND	0.0500	"	"	"	BM1	"	"	U
2,4,6-Trichlorophenol	ND	0.0500	"	"	"	BM1	"	"	U

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**SS Damfino Stockpile**  
**4/27/2023 10:45:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Y305020-01 (Soil)**  
**GEL Laboratories, LLC**

**TCLP SVOC by 1311/8270E**

2,4-Dinitrotoluene	ND	0.0500	mg/L	1	2423242	BM1	05/04/2023	05/05/2023	U
Hexachlorobenzene	ND	0.0500	"	"	"	BM1	"	"	U
Hexachlorobutadiene	ND	0.0500	"	"	"	BM1	"	"	U
Hexachloroethane	ND	0.0500	"	"	"	BM1	"	"	U
m,p-Cresols	ND	0.0500	"	"	"	BM1	"	"	U
Nitrobenzene	ND	0.0500	"	"	"	BM1	"	"	U
o-Cresol	ND	0.0500	"	"	"	BM1	"	"	U
Pentachlorophenol	ND	0.0500	"	"	"	BM1	"	"	U
Pyridine	ND	0.0500	"	"	"	BM1	"	"	U

Surrogate: 2,4,6-Tribromophenol	95 %	37-132			"	"	"	"	
Surrogate: 2-Fluorobiphenyl	75 %	39-112			"	"	"	"	
Surrogate: 2-Fluorophenol	43 %	11-79			"	"	"	"	
Surrogate: Nitrobenzene-d5	72 %	39-112			"	"	"	"	
Surrogate: Phenol-d5	30 %	15-85			"	"	"	"	
Surrogate: p-Terphenyl-d14	64 %	24-129			"	"	"	"	

**TCLP VOC by 1311/8260D**

1,1-Dichloroethylene	ND	0.0100	mg/L	10	2423845	JM6	05/02/2023	05/04/2023	U
1,2-Dichloroethane	ND	0.0100	"	"	"	JM6	"	"	U
2-Butanone	ND	0.0500	"	"	"	JM6	"	"	U
Benzene	ND	0.0100	"	"	"	JM6	"	"	U

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**SS Damfino Stockpile**  
**4/27/2023 10:45:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Y305020-01 (Soil)**  
**GEL Laboratories, LLC**

**TCLP VOC by 1311/8260D**

Carbon tetrachloride	ND	0.0100	mg/L	10	2423845	JM6	05/02/2023	05/04/2023	U
Chlorobenzene	ND	0.0100	"	"	"	JM6	"	"	U
Chloroform	ND	0.0100	"	"	"	JM6	"	"	U
Tetrachloroethylene	ND	0.0100	"	"	"	JM6	"	"	U
Trichloroethylene	ND	0.0100	"	"	"	JM6	"	"	U
Vinyl chloride	ND	0.0100	"	"	"	JM6	"	"	U
Surrogate: 1,2-Dichloroethane-d4	109 %								
Surrogate: Bromofluorobenzene	111 %								
Surrogate: Toluene-d8	102 %								

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**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B3E0128 - EPA 3550B</b>										
<b>Blank (B3E0128-BLK1)</b>										
					Prepared: 05/01/2023 Analyzed: 05/04/2023					
Gasoline (C6-C10)	ND	25.0	mg/kg							Ua
Diesel (C10-C28)	ND	25.0	"							Ua
Surrogate: o-Terphenyl	26		"	24.9		104	50-150			

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 Project: FEO - Damfino Waste Characterization

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0128 - EPA 3550B**

**LCS (B3E0128-BS1)**

Prepared: 05/01/2023 Analyzed: 05/04/2023

Gasoline (C6-C10)	1090	50.0	mg/kg	1000		109	70-130			
Diesel (C10-C28)	930	50.0	"	1000		93.0	70-130			
Surrogate: o-Terphenyl	48		"	49.8		97.0	50-150			

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 Project: FEO - Damfino Waste Characterization

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0128 - EPA 3550B**

<b>Matrix Spike (B3E0128-MS1)</b>	<b>Source: Y305004-01</b>			<b>Prepared: 05/01/2023 Analyzed: 05/04/2023</b>						
Gasoline (C6-C10)	931	50.0	mg/kg	1000	ND	93.1	70-130			
Diesel (C10-C28)	913	50.0	"	1000	ND	91.3	70-130			
Surrogate: o-Terphenyl	46		"	49.8		91.9	50-150			

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 Project: FEO - Damfino Waste Characterization

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0128 - EPA 3550B**

<b>Matrix Spike Dup (B3E0128-MSD1)</b>	<b>Source: Y305004-01</b>			<b>Prepared: 05/01/2023 Analyzed: 05/04/2023</b>						
Gasoline (C6-C10)	1240	50.0	mg/kg	1000	ND	124	70-130	28.2	35	
Diesel (C10-C28)	1090	50.0	"	1000	ND	109	70-130	18.1	35	
Surrogate: o-Terphenyl	51		"	49.8		103	50-150			

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**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0133 - EPA 5030 (soil)**

**Blank (B3E0133-BLK1)**

Prepared: 05/01/2023 Analyzed: 05/01/2023

1,1,1,2-Tetrachloroethane	ND	0.00200	mg/kg							Ua
1,1,1-Trichloroethane	ND	0.00200	"							Ua
1,1,2,2-Tetrachloroethane	ND	0.00200	"							Ua
1,1,2-Trichloroethane	ND	0.00200	"							Ua
1,1-Dichloroethane	ND	0.00200	"							Ua
1,1-Dichloroethene	ND	0.00200	"							Ua
1,1-Dichloropropene	ND	0.00200	"							Ua
1,2,3-Trichlorobenzene	ND	0.00500	"							Ua
1,2,3-Trichloropropane	ND	0.00500	"							Ua
1,2,4-Trichlorobenzene	ND	0.00500	"							Ua
1,2,4-Trimethylbenzene	ND	0.00200	"							Ua
1,2-Dibromo-3-chloropropane	ND	0.00500	"							Ua
1,2-Dibromoethane (EDB)	ND	0.00300	"							Ua
1,2-Dichlorobenzene	ND	0.00200	"							Ua
1,2-Dichloroethane	ND	0.00200	"							Ua
1,2-Dichloropropane	ND	0.00200	"							Ua
1,3,5-Trimethylbenzene	ND	0.00200	"							Ua
1,3-Dichlorobenzene	ND	0.00200	"							Ua
1,3-Dichloropropane	ND	0.00200	"							Ua
1,4-Dichlorobenzene	ND	0.00200	"							Ua
2,2-Dichloropropane	ND	0.00200	"							Ua
2-Butanone	ND	0.0100	"							Ua
2-Chlorotoluene	ND	0.00200	"							Ua
2-Hexanone	ND	0.0120	"							Ua
4-Chlorotoluene	ND	0.00200	"							Ua
4-Isopropyltoluene	ND	0.00200	"							Ua

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 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Waste Characterization

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0133 - EPA 5030 (soil)**

**Blank (B3E0133-BLK1)**

Prepared: 05/01/2023 Analyzed: 05/01/2023

4-Methyl-2-pentanone	ND	0.0100	mg/kg							Ua
Acetone	ND	0.0200	"							Ua
Benzene	ND	0.00200	"							Ua
Bromobenzene	ND	0.00200	"							Ua
Bromochloromethane	ND	0.00200	"							Ua
Bromodichloromethane	ND	0.00200	"							Ua
Bromoform	ND	0.00200	"							Ua
Bromomethane	ND	0.00200	"							Ua
Carbon disulfide	ND	0.00500	"							Ua
Carbon tetrachloride	ND	0.00200	"							Ua
Chlorobenzene	ND	0.00200	"							Ua
Chloroethane	ND	0.00500	"							Ua
Chloroform	ND	0.00200	"							Ua
Chloromethane	ND	0.00200	"							Ua
cis-1,2-Dichloroethene	ND	0.00200	"							Ua
cis-1,3-Dichloropropene	ND	0.00200	"							Ua
Dibromochloromethane	ND	0.00200	"							Ua
Dibromomethane	ND	0.00200	"							Ua
Ethylbenzene	ND	0.00200	"							Ua
Hexachlorobutadiene	ND	0.00500	"							Ua
Iodomethane	ND	0.0150	"							Ua
Isopropylbenzene	ND	0.00200	"							Ua
m,p-Xylene	ND	0.00400	"							Ua
Methyl tert-Butyl Ether	ND	0.00200	"							Ua
Methylene Chloride	ND	0.0200	"							Ua
Naphthalene	ND	0.0100	"							Ua

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0133 - EPA 5030 (soil)**

**Blank (B3E0133-BLK1)**

Prepared: 05/01/2023 Analyzed: 05/01/2023

n-Butylbenzene	ND	0.00200	mg/kg							Ua
n-Propylbenzene	ND	0.00200	"							Ua
o-Xylene	ND	0.00200	"							Ua
sec-Butylbenzene	ND	0.00200	"							Ua
Styrene	ND	0.00200	"							Ua
tert-Butylbenzene	ND	0.00200	"							Ua
Tetrachloroethene	ND	0.00200	"							Ua
Toluene	ND	0.00200	"							Ua
trans-1,2-Dichloroethene	ND	0.00200	"							Ua
trans-1,3-Dichloropropene	ND	0.00200	"							Ua
Trichloroethene	ND	0.00200	"							Ua
Trichlorofluoromethane	ND	0.00300	"							Ua
Vinyl chloride	ND	0.00200	"							Ua
Surrogate: 1,2-Dichloroethane-d4	0.15		"	0.125	119		70-130			
Surrogate: Toluene-d8	0.12		"	0.125	96.1		70-130			
Surrogate: 4-Bromofluorobenzene	0.11		"	0.125	90.1		70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0133 - EPA 5030 (soil)**

**LCS (B3E0133-BS1)**

Prepared: 05/01/2023 Analyzed: 05/01/2023

1,1,1,2-Tetrachloroethane	0.114	0.00200	mg/kg	0.100		114	70-130			
1,1,1-Trichloroethane	0.117	0.00200	"	0.100		117	70-130			
1,1,2,2-Tetrachloroethane	0.0892	0.00200	"	0.100		89.2	70-130			
1,1,2-Trichloroethane	0.0993	0.00200	"	0.100		99.3	70-130			
1,1-Dichloroethane	0.0907	0.00200	"	0.100		90.7	70-130			
1,1-Dichloroethene	0.0720	0.00200	"	0.100		72.0	70-130			
1,1-Dichloropropene	0.0917	0.00200	"	0.100		91.7	70-130			
1,2,3-Trichlorobenzene	0.0876	0.00500	"	0.100		87.6	70-130			
1,2,3-Trichloropropane	0.0926	0.00500	"	0.100		92.6	70-130			
1,2,4-Trichlorobenzene	0.0975	0.00500	"	0.100		97.5	70-130			
1,2,4-Trimethylbenzene	0.102	0.00200	"	0.100		102	70-130			
1,2-Dibromo-3-chloropropane	0.0829	0.00500	"	0.100		82.9	70-130			
1,2-Dibromoethane (EDB)	0.0861	0.00300	"	0.100		86.1	70-130			
1,2-Dichlorobenzene	0.0915	0.00200	"	0.100		91.5	70-130			
1,2-Dichloroethane	0.110	0.00200	"	0.100		110	70-130			
1,2-Dichloropropane	0.0918	0.00200	"	0.100		91.8	70-130			
1,3,5-Trimethylbenzene	0.102	0.00200	"	0.100		102	70-130			
1,3-Dichlorobenzene	0.0896	0.00200	"	0.100		89.6	70-130			
1,3-Dichloropropane	0.0939	0.00200	"	0.100		93.9	70-130			
1,4-Dichlorobenzene	0.0899	0.00200	"	0.100		89.9	70-130			
2,2-Dichloropropane	0.105	0.00200	"	0.100		105	70-130			
2-Butanone	0.419	0.0100	"	0.500		83.9	70-130			
2-Chlorotoluene	0.0931	0.00200	"	0.100		93.1	70-130			
2-Hexanone	0.449	0.0120	"	0.500		89.7	70-130			
4-Chlorotoluene	0.0942	0.00200	"	0.100		94.2	70-130			
4-Isopropyltoluene	0.102	0.00200	"	0.100		102	70-130			

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Project Number: FEO.CO.0701.33  
Project: FEO - Damfino Waste Characterization

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0133 - EPA 5030 (soil)**

**LCS (B3E0133-BS1)**

Prepared: 05/01/2023 Analyzed: 05/01/2023

4-Methyl-2-pentanone	0.472	0.0100	mg/kg	0.500		94.3	70-130			
Acetone	0.546	0.0200	"	0.500		109	70-130			
Benzene	0.0801	0.00200	"	0.100		80.1	70-130			
Bromobenzene	0.0867	0.00200	"	0.100		86.7	70-130			
Bromochloromethane	0.0994	0.00200	"	0.100		99.4	70-130			
Bromodichloromethane	0.104	0.00200	"	0.100		104	70-130			
Bromoform	0.107	0.00200	"	0.100		107	70-130			
Bromomethane	0.108	0.00200	"	0.100		108	70-130			
Carbon disulfide	0.0984	0.00500	"	0.100		98.4	70-130			
Carbon tetrachloride	0.114	0.00200	"	0.100		114	70-130			
Chlorobenzene	0.0886	0.00200	"	0.100		88.6	70-130			
Chloroethane	0.114	0.00500	"	0.100		114	70-130			
Chloroform	0.0830	0.00200	"	0.100		83.0	70-130			
Chloromethane	0.112	0.00200	"	0.100		112	70-130			
cis-1,2-Dichloroethene	0.0966	0.00200	"	0.100		96.6	70-130			
cis-1,3-Dichloropropene	0.102	0.00200	"	0.100		102	70-130			
Dibromochloromethane	0.106	0.00200	"	0.100		106	70-130			
Dibromomethane	0.114	0.00200	"	0.100		114	70-130			
Ethylbenzene	0.0949	0.00200	"	0.100		94.9	70-130			
Hexachlorobutadiene	0.118	0.00500	"	0.100		118	70-130			
Iodomethane	0.0934	0.0150	"	0.100		93.4	70-130			
Isopropylbenzene	0.112	0.00200	"	0.100		112	70-130			
m,p-Xylene	0.194	0.00400	"	0.200		96.9	70-130			
Methyl tert-Butyl Ether	0.100	0.00200	"	0.100		100	70-130			
Methylene Chloride	0.0802	0.0200	"	0.100		80.2	70-130			
Naphthalene	0.0872	0.0100	"	0.100		87.2	70-130			

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 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Waste Characterization

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0133 - EPA 5030 (soil)**

**LCS (B3E0133-BS1)**

Prepared: 05/01/2023 Analyzed: 05/01/2023

n-Butylbenzene	0.0954	0.00200	mg/kg	0.100		95.4	70-130			
n-Propylbenzene	0.107	0.00200	"	0.100		107	70-130			
o-Xylene	0.107	0.00200	"	0.100		107	70-130			
sec-Butylbenzene	0.113	0.00200	"	0.100		113	70-130			
Styrene	0.0949	0.00200	"	0.100		94.9	70-130			
tert-Butylbenzene	0.121	0.00200	"	0.100		121	70-130			
Tetrachloroethene	0.106	0.00200	"	0.100		106	70-130			
Toluene	0.0911	0.00200	"	0.100		91.1	70-130			
trans-1,2-Dichloroethene	0.0871	0.00200	"	0.100		87.1	70-130			
trans-1,3-Dichloropropene	0.111	0.00200	"	0.100		111	70-130			
Trichloroethene	0.104	0.00200	"	0.100		104	70-130			
Trichlorofluoromethane	0.181	0.00300	"	0.100		181	70-130			QM-11
Vinyl chloride	0.0953	0.00200	"	0.100		95.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.15		"	0.125		123	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.3	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0133 - EPA 5030 (soil)**

<b>Matrix Spike (B3E0133-MS1)</b>	<b>Source: Y305020-01</b>			<b>Prepared: 05/01/2023 Analyzed: 05/01/2023</b>						
1,1,1,2-Tetrachloroethane	0.126	0.00200	mg/kg	0.100	ND	126	70-130			
1,1,1-Trichloroethane	0.152	0.00200	"	0.100	ND	152	70-130			QM-07
1,1,2,2-Tetrachloroethane	0.109	0.00200	"	0.100	ND	109	70-130			
1,1,2-Trichloroethane	0.114	0.00200	"	0.100	ND	114	70-130			
1,1-Dichloroethane	0.116	0.00200	"	0.100	ND	116	70-130			
1,1-Dichloroethene	0.118	0.00200	"	0.100	ND	118	70-130			
1,1-Dichloropropene	0.116	0.00200	"	0.100	ND	116	70-130			
1,2,3-Trichlorobenzene	0.0850	0.00500	"	0.100	ND	85.0	70-130			
1,2,3-Trichloropropane	0.104	0.00500	"	0.100	ND	104	70-130			
1,2,4-Trichlorobenzene	0.0984	0.00500	"	0.100	ND	98.4	70-130			
1,2,4-Trimethylbenzene	0.110	0.00200	"	0.100	ND	110	70-130			
1,2-Dibromo-3-chloropropane	0.113	0.00500	"	0.100	ND	113	70-130			
1,2-Dibromoethane (EDB)	0.111	0.00300	"	0.100	ND	111	70-130			
1,2-Dichlorobenzene	0.105	0.00200	"	0.100	ND	105	70-130			
1,2-Dichloroethane	0.138	0.00200	"	0.100	ND	138	70-130			QM-07
1,2-Dichloropropane	0.107	0.00200	"	0.100	ND	107	70-130			
1,3,5-Trimethylbenzene	0.115	0.00200	"	0.100	0.00242	112	70-130			
1,3-Dichlorobenzene	0.103	0.00200	"	0.100	ND	103	70-130			
1,3-Dichloropropane	0.104	0.00200	"	0.100	ND	104	70-130			
1,4-Dichlorobenzene	0.101	0.00200	"	0.100	ND	101	70-130			
2,2-Dichloropropane	0.142	0.00200	"	0.100	ND	142	70-130			QM-07
2-Butanone	0.551	0.0100	"	0.500	ND	110	70-130			
2-Chlorotoluene	0.104	0.00200	"	0.100	ND	104	70-130			
2-Hexanone	0.543	0.0120	"	0.500	ND	109	70-130			
4-Chlorotoluene	0.106	0.00200	"	0.100	ND	106	70-130			
4-Isopropyltoluene	0.112	0.00200	"	0.100	0.00190	110	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B3E0133 - EPA 5030 (soil)

Matrix Spike (B3E0133-MS1)	Source: Y305020-01			Prepared: 05/01/2023 Analyzed: 05/01/2023						
4-Methyl-2-pentanone	0.587	0.0100	mg/kg	0.500	ND	117	70-130			
Acetone	0.462	0.0200	"	0.500	ND	92.4	70-130			
Benzene	0.101	0.00200	"	0.100	ND	101	70-130			
Bromobenzene	0.0960	0.00200	"	0.100	ND	96.0	70-130			
Bromochloromethane	0.123	0.00200	"	0.100	ND	123	70-130			
Bromodichloromethane	0.119	0.00200	"	0.100	ND	119	70-130			
Bromoform	0.121	0.00200	"	0.100	ND	121	70-130			
Bromomethane	0.113	0.00200	"	0.100	ND	113	70-130			
Carbon disulfide	0.101	0.00500	"	0.100	ND	101	70-130			
Carbon tetrachloride	0.137	0.00200	"	0.100	ND	137	70-130			QM-07
Chlorobenzene	0.103	0.00200	"	0.100	ND	103	70-130			
Chloroethane	0.117	0.00500	"	0.100	ND	117	70-130			
Chloroform	0.0998	0.00200	"	0.100	0.00166	98.1	70-130			
Chloromethane	0.0562	0.00200	"	0.100	ND	56.2	70-130			QM-07
cis-1,2-Dichloroethene	0.121	0.00200	"	0.100	ND	121	70-130			
cis-1,3-Dichloropropene	0.120	0.00200	"	0.100	ND	120	70-130			
Dibromochloromethane	0.122	0.00200	"	0.100	ND	122	70-130			
Dibromomethane	0.138	0.00200	"	0.100	ND	138	70-130			QM-07
Ethylbenzene	0.101	0.00200	"	0.100	ND	101	70-130			
Hexachlorobutadiene	0.0921	0.00500	"	0.100	ND	92.1	70-130			
Iodomethane	0.171	0.0150	"	0.100	ND	171	70-130			QM-07
Isopropylbenzene	0.118	0.00200	"	0.100	ND	118	70-130			
m,p-Xylene	0.208	0.00400	"	0.200	ND	104	70-130			
Methyl tert-Butyl Ether	0.136	0.00200	"	0.100	ND	136	70-130			QM-07
Methylene Chloride	0.107	0.0200	"	0.100	ND	107	70-130			
Naphthalene	0.0975	0.0100	"	0.100	0.00332	94.2	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B3E0133 - EPA 5030 (soil)

Matrix Spike (B3E0133-MS1)	Source: Y305020-01			Prepared: 05/01/2023 Analyzed: 05/01/2023						
n-Butylbenzene	0.100	0.00200	mg/kg	0.100	0.00168	98.4	70-130			
n-Propylbenzene	0.110	0.00200	"	0.100	ND	110	70-130			
o-Xylene	0.115	0.00200	"	0.100	ND	115	70-130			
sec-Butylbenzene	0.114	0.00200	"	0.100	ND	114	70-130			
Styrene	0.103	0.00200	"	0.100	ND	103	70-130			
tert-Butylbenzene	0.127	0.00200	"	0.100	ND	127	70-130			
Tetrachloroethene	0.120	0.00200	"	0.100	ND	120	70-130			
Toluene	0.105	0.00200	"	0.100	ND	105	70-130			
trans-1,2-Dichloroethene	0.119	0.00200	"	0.100	ND	119	70-130			
trans-1,3-Dichloropropene	0.132	0.00200	"	0.100	ND	132	70-130			QM-07
Trichloroethene	0.116	0.00200	"	0.100	ND	116	70-130			
Trichlorofluoromethane	0.190	0.00300	"	0.100	ND	190	70-130			QM-07
Vinyl chloride	0.0997	0.00200	"	0.100	ND	99.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		115	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		96.8	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B3E0133 - EPA 5030 (soil)

Matrix Spike Dup (B3E0133-MSD1)	Source: Y305020-01			Prepared: 05/01/2023 Analyzed: 05/01/2023						
1,1,1,2-Tetrachloroethane	0.120	0.00200	mg/kg	0.100	ND	120	70-130	5.10	20	
1,1,1-Trichloroethane	0.139	0.00200	"	0.100	ND	139	70-130	8.87	20	QM-07
1,1,2,2-Tetrachloroethane	0.107	0.00200	"	0.100	ND	107	70-130	1.30	20	
1,1,2-Trichloroethane	0.112	0.00200	"	0.100	ND	112	70-130	1.66	20	
1,1-Dichloroethane	0.108	0.00200	"	0.100	ND	108	70-130	6.32	20	
1,1-Dichloroethene	0.108	0.00200	"	0.100	ND	108	70-130	8.65	20	
1,1-Dichloropropene	0.110	0.00200	"	0.100	ND	110	70-130	4.95	20	
1,2,3-Trichlorobenzene	0.0829	0.00500	"	0.100	ND	82.9	70-130	2.55	20	
1,2,3-Trichloropropane	0.102	0.00500	"	0.100	ND	102	70-130	1.97	20	
1,2,4-Trichlorobenzene	0.0942	0.00500	"	0.100	ND	94.2	70-130	4.40	20	
1,2,4-Trimethylbenzene	0.104	0.00200	"	0.100	ND	104	70-130	5.53	20	
1,2-Dibromo-3-chloropropane	0.106	0.00500	"	0.100	ND	106	70-130	5.85	20	
1,2-Dibromoethane (EDB)	0.109	0.00300	"	0.100	ND	109	70-130	2.31	20	
1,2-Dichlorobenzene	0.101	0.00200	"	0.100	ND	101	70-130	4.35	20	
1,2-Dichloroethane	0.136	0.00200	"	0.100	ND	136	70-130	1.73	20	QM-07
1,2-Dichloropropane	0.105	0.00200	"	0.100	ND	105	70-130	1.96	20	
1,3,5-Trimethylbenzene	0.109	0.00200	"	0.100	0.00242	106	70-130	5.32	20	
1,3-Dichlorobenzene	0.0992	0.00200	"	0.100	ND	99.2	70-130	4.01	20	
1,3-Dichloropropane	0.103	0.00200	"	0.100	ND	103	70-130	1.21	20	
1,4-Dichlorobenzene	0.0970	0.00200	"	0.100	ND	97.0	70-130	4.43	20	
2,2-Dichloropropane	0.128	0.00200	"	0.100	ND	128	70-130	10.2	20	
2-Butanone	0.531	0.0100	"	0.500	ND	106	70-130	3.62	20	
2-Chlorotoluene	0.0994	0.00200	"	0.100	ND	99.4	70-130	4.85	20	
2-Hexanone	0.526	0.0120	"	0.500	ND	105	70-130	3.18	20	
4-Chlorotoluene	0.100	0.00200	"	0.100	ND	100	70-130	4.99	20	
4-Isopropyltoluene	0.106	0.00200	"	0.100	0.00190	105	70-130	5.00	20	

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B3E0133 - EPA 5030 (soil)

Matrix Spike Dup (B3E0133-MSD1)	Source: Y305020-01			Prepared: 05/01/2023 Analyzed: 05/01/2023						
4-Methyl-2-pentanone	0.562	0.0100	mg/kg	0.500	ND	112	70-130	4.31	20	
Acetone	0.432	0.0200	"	0.500	ND	86.4	70-130	6.76	20	
Benzene	0.0967	0.00200	"	0.100	ND	96.7	70-130	4.27	20	
Bromobenzene	0.0930	0.00200	"	0.100	ND	93.0	70-130	3.20	20	
Bromochloromethane	0.117	0.00200	"	0.100	ND	117	70-130	5.58	20	
Bromodichloromethane	0.116	0.00200	"	0.100	ND	116	70-130	2.53	20	
Bromoform	0.117	0.00200	"	0.100	ND	117	70-130	3.61	20	
Bromomethane	0.102	0.00200	"	0.100	ND	102	70-130	11.0	20	
Carbon disulfide	0.0911	0.00500	"	0.100	ND	91.1	70-130	10.7	20	
Carbon tetrachloride	0.131	0.00200	"	0.100	ND	131	70-130	4.43	20	QM-07
Chlorobenzene	0.0989	0.00200	"	0.100	ND	98.9	70-130	4.25	20	
Chloroethane	0.106	0.00500	"	0.100	ND	106	70-130	9.99	20	
Chloroform	0.0943	0.00200	"	0.100	0.00166	92.6	70-130	5.67	20	
Chloromethane	0.0800	0.00200	"	0.100	ND	80.0	70-130	35.0	20	QM-07
cis-1,2-Dichloroethene	0.114	0.00200	"	0.100	ND	114	70-130	6.25	20	
cis-1,3-Dichloropropene	0.116	0.00200	"	0.100	ND	116	70-130	3.36	20	
Dibromochloromethane	0.118	0.00200	"	0.100	ND	118	70-130	3.69	20	
Dibromomethane	0.135	0.00200	"	0.100	ND	135	70-130	2.62	20	QM-07
Ethylbenzene	0.0978	0.00200	"	0.100	ND	97.8	70-130	3.65	20	
Hexachlorobutadiene	0.0908	0.00500	"	0.100	ND	90.8	70-130	1.42	20	
Iodomethane	0.157	0.0150	"	0.100	ND	157	70-130	8.59	20	QM-07
Isopropylbenzene	0.112	0.00200	"	0.100	ND	112	70-130	5.88	20	
m,p-Xylene	0.200	0.00400	"	0.200	ND	100	70-130	3.72	20	
Methyl tert-Butyl Ether	0.128	0.00200	"	0.100	ND	128	70-130	6.11	20	
Methylene Chloride	0.0989	0.0200	"	0.100	ND	98.9	70-130	8.16	20	
Naphthalene	0.0935	0.0100	"	0.100	0.00332	90.2	70-130	4.17	20	

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B3E0133 - EPA 5030 (soil)

Matrix Spike Dup (B3E0133-MSD1)	Source: Y305020-01			Prepared: 05/01/2023 Analyzed: 05/01/2023						
n-Butylbenzene	0.0942	0.00200	mg/kg	0.100	0.00168	92.5	70-130	6.10	20	
n-Propylbenzene	0.104	0.00200	"	0.100	ND	104	70-130	5.08	20	
o-Xylene	0.110	0.00200	"	0.100	ND	110	70-130	4.36	20	
sec-Butylbenzene	0.106	0.00200	"	0.100	ND	106	70-130	6.85	20	
Styrene	0.100	0.00200	"	0.100	ND	100	70-130	3.04	20	
tert-Butylbenzene	0.120	0.00200	"	0.100	ND	120	70-130	5.29	20	
Tetrachloroethene	0.115	0.00200	"	0.100	ND	115	70-130	4.16	20	
Toluene	0.0999	0.00200	"	0.100	ND	99.9	70-130	5.26	20	
trans-1,2-Dichloroethene	0.110	0.00200	"	0.100	ND	110	70-130	7.87	20	
trans-1,3-Dichloropropene	0.129	0.00200	"	0.100	ND	129	70-130	2.39	20	
Trichloroethene	0.113	0.00200	"	0.100	ND	113	70-130	2.99	20	
Trichlorofluoromethane	0.172	0.00300	"	0.100	ND	172	70-130	10.1	20	QM-07
Vinyl chloride	0.0867	0.00200	"	0.100	ND	86.7	70-130	14.0	20	
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		115	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.5	70-130			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**\*\*\* DEFAULT GENERAL METHOD \*\*\* - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0427 - EPA 7471A Prep**

**Blank (B3E0427-BLK1)**

Prepared: 05/04/2023 Analyzed: 05/05/2023

Mercury ND 0.000100 mg/kg

**LCS (B3E0427-BS1)**

Prepared: 05/04/2023 Analyzed: 05/05/2023

Mercury 0.152 0.00838 mg/kg 0.168 90.5 80-120

**Matrix Spike (B3E0427-MS1)**

**Source: Y305065-01**

Prepared: 05/04/2023 Analyzed: 05/05/2023

Mercury ND 0.00846 mg/kg 0.169 ND 80-120 QM-07

**Matrix Spike Dup (B3E0427-MSD1)**

**Source: Y305065-01**

Prepared: 05/04/2023 Analyzed: 05/05/2023

Mercury 0.00611 0.00962 mg/kg 0.192 ND 3.18 80-120 20 QM-07

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 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Waste Characterization

**Metals by SM 3500 Series Methods - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3E0426 - EPA 3050B**

**Blank (B3E0426-BLK1)**

Prepared: 05/04/2023 Analyzed: 05/04/2023

Arsenic	ND	0.000100	mg/kg							
Barium	ND	0.0500	"							
Cadmium	ND	0.000100	"							
Chromium	ND	0.0100	"							
Lead	ND	0.0100	"							
Selenium	ND	0.000100	"							
Silver	ND	0.00100	"							

**LCS (B3E0426-BS1)**

Prepared: 05/04/2023 Analyzed: 05/04/2023

Arsenic	0.0474	0.000100	mg/kg	0.0500		94.7	80-120			
Barium	5.09	0.0500	"	5.00		102	80-120			
Cadmium	0.0506	0.000100	"	0.0500		101	80-120			
Chromium	0.0471	0.0100	"	0.0500		94.1	80-120			
Lead	0.0500	0.0100	"	0.0500		99.9	80-120			
Selenium	0.0524	0.000100	"	0.0500		105	80-120			
Silver	0.0484	0.00100	"	0.0500		96.8	80-120			

**Matrix Spike (B3E0426-MS1)**

**Source: Y305020-01**

Prepared: 05/04/2023 Analyzed: 05/04/2023

Arsenic	6.42	0.0970	mg/kg	4.85	2.48	81.2	75-125			
Barium	1470	48.5	"	485	946	108	75-125			
Cadmium	4.88	0.0970	"	4.85	0.184	96.7	75-125			
Chromium	31.4	9.70	"	4.85	27.7	75.2	75-125			
Lead	14.8	9.70	"	4.85	10.2	95.4	75-125			
Selenium	4.31	0.0970	"	4.85	0.303	82.5	75-125			
Silver	4.56	0.970	"	4.85	ND	94.0	75-125			

**Matrix Spike Dup (B3E0426-MSD1)**

**Source: Y305020-01**

Prepared: 05/04/2023 Analyzed: 05/04/2023

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**Metals by SM 3500 Series Methods - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B3E0426 - EPA 3050B

Matrix Spike Dup (B3E0426-MSD1)	Source: Y305020-01			Prepared: 05/04/2023 Analyzed: 05/04/2023						
Arsenic	6.88	0.0974	mg/kg	4.87	2.48	90.3	75-125	6.95	20	
Barium	1510	48.7	"	487	946	117	75-125	3.05	20	
Cadmium	4.95	0.0974	"	4.87	0.184	97.8	75-125	1.46	20	
Chromium	33.5	9.74	"	4.87	27.7	119	75-125	6.59	20	
Lead	15.0	9.74	"	4.87	10.2	99.6	75-125	1.49	20	
Selenium	4.74	0.0974	"	4.87	0.303	91.2	75-125	9.69	20	
Silver	4.66	0.974	"	4.87	ND	95.6	75-125	2.10	20	

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**Flash Point by 1020 Setaflash - Quality Control  
 GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2424122 -</b>										
<b>LCS (1205395063-BKS)</b>					Prepared: Analyzed: 05/05/2023					
Setaflash-200	83.0	75.0	F	81.0		102	97-103			
<b>DUP (1205395848 D)</b>		<b>Source: 619042004</b>			Prepared: Analyzed: 05/05/2023					
Setaflash-200	>200	75.0	F		>200		0-9	0	9	

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**Paint Filter Test by 9095B - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2422952 -

**DUP (1205392856 D)**

**Source: Y305020-01**

Prepared: Analyzed: 05/02/2023

Paint Filter	PASS		text dry		PASS		0-10		10	
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**pH by 9045D - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2422889 -</b>										
<b>LCS (1205392770-BKS)</b>					Prepared: Analyzed: 05/02/2023					
pH	7.00	0.100	SU	7.00		100	99-101			
<b>DUP (1205392771 D)</b>		<b>Source: 620395001</b>			Prepared: Analyzed: 05/02/2023					
pH	8.79	0.100	SU		8.79		0-10	0	10	H

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 Project: FEO - Damfino Waste Characterization

**Reactive Cyanide by Chpt. 7.3.3 - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2423032 - SW846 7.3.3 Prep</b>										
<b>BLANK (1205392927-BLK)</b>					Prepared: 05/04/2023 Analyzed: 05/05/2023					
Reactive Releasable Cyanide	250	<250	mg/kg				-			
<b>LCS (1205392928-BKS)</b>					Prepared: 05/04/2023 Analyzed: 05/05/2023					
Reactive Releasable Cyanide	250	<250	mg/kg	1000		18	0-52			
<b>DUP (1205392930 D)</b>					Prepared: 05/04/2023 Analyzed: 05/05/2023					
		<b>Source: Y305020-01</b>								
Reactive Releasable Cyanide	250	<250	mg/kg dry		<250		0-30	4.97	30	

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**Reactive Sulfide by Chpt. 7.3.4 - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2422953 -</b>										
<b>BLANK (1205392857-BLK)</b>					Prepared: Analyzed: 05/04/2023					
Reactive Releasable Sulfide	500	<500	mg/kg				-			
<b>LCS (1205392858-BKS)</b>					Prepared: Analyzed: 05/04/2023					
Reactive Releasable Sulfide	500	<500	mg/kg	107		129	56.8-159.2			
<b>DUP (1205392859 D)</b>					Source: Y305020-01 Prepared: Analyzed: 05/04/2023					
Reactive Releasable Sulfide	500	<500	mg/kg dry		<500		0-86.4	5.61	86.4	

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**SVOC by 8270E - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2423285 - SW846 3541

**BLANK (1205393463-BLK)**

Prepared: 05/04/2023 Analyzed: 05/04/2023

1,2,4,5-Tetrachlorobenzene	ND	0.328	mg/kg				-			U
2,4-Dinitrotoluene	ND	0.328	"				-			U
2,4-Dimethylphenol	ND	0.328	"				-			U
2,4,6-Trichlorophenol	ND	0.328	"				-			U
2,4,5-Trichlorophenol	ND	0.328	"				-			U
1,1'-Biphenyl	ND	0.328	"				-			U
1,4-Dioxane	ND	0.328	"				-			U
2,6-Dinitrotoluene	ND	0.328	"				-			U
2,4-Dinitrophenol	ND	0.655	"				-			U
2,3,4,6-Tetrachlorophenol	ND	0.328	"				-			U
Di-n-octylphthalate	ND	0.0328	"				-			U
Hexachloroethane	ND	0.328	"				-			U
Hexachlorocyclopentadiene	ND	0.328	"				-			U
Hexachlorobutadiene	ND	0.328	"				-			U
Hexachlorobenzene	ND	0.328	"				-			U
Fluorene	ND	0.0328	"				-			U
Carbazole	ND	0.0328	"				-			U
Diphenylamine	ND	0.328	"				-			U
m,p-Cresols	ND	0.328	"				-			U
Di-n-butylphthalate	ND	0.0328	"				-			U
Dimethylphthalate	ND	0.0328	"				-			U
Diethylphthalate	ND	0.0328	"				-			U
Dibenzofuran	ND	0.328	"				-			U
Dibenzo(a,h)anthracene	ND	0.0328	"				-			U
Chrysene	ND	0.0328	"				-			U
Fluoranthene	ND	0.0328	"				-			U

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 Project: FEO - Damfino Waste Characterization

**SVOC by 8270E - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2423285 - SW846 3541

**BLANK (1205393463-BLK)**

Prepared: 05/04/2023 Analyzed: 05/04/2023

Pentachlorophenol	ND	0.328	mg/kg				-			U
2-Chloronaphthalene	ND	0.0328	"				-			U
2,4-Dichlorophenol	ND	0.328	"				-			U
Pyrene	ND	0.0328	"				-			U
p-Nitroaniline	ND	0.328	"				-			U
Indeno(1,2,3-cd)pyrene	ND	0.0328	"				-			U
Phenanthrene	ND	0.0328	"				-			U
Isophorone	ND	0.328	"				-			U
o-Nitroaniline	ND	0.328	"				-			U
o-Cresol	ND	0.328	"				-			U
Naphthalene	ND	0.0328	"				-			U
m-Nitroaniline	ND	0.328	"				-			U
Nitrobenzene	ND	0.328	"				-			U
Phenol	ND	0.328	"				-			U
4-Bromophenylphenylether	ND	0.328	"				-			U
2-Chlorophenol	ND	0.328	"				-			U
N-Nitrosodipropylamine	ND	0.328	"				-			U
Caprolactam	ND	0.328	"				-			U
2-Methyl-4,6-dinitrophenol	ND	0.328	"				-			U
2-Methylnaphthalene	ND	0.0328	"				-			U
3,3'-Dichlorobenzidine	ND	0.328	"				-			U
4-Chloro-3-methylphenol	ND	0.328	"				-			U
4-Chloroaniline	ND	0.328	"				-			U
4-Chlorophenylphenylether	ND	0.328	"				-			U
4-Nitrophenol	ND	0.328	"				-			U
Acenaphthene	ND	0.0328	"				-			U

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**SVOC by 8270E - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2423285 - SW846 3541**

**BLANK (1205393463-BLK)**

Prepared: 05/04/2023 Analyzed: 05/04/2023

Acenaphthylene	ND	0.0328	mg/kg				-			U
Benzo(b)fluoranthene	ND	0.0328	"				-			U
bis(2-Chloroethyl) ether	ND	0.328	"				-			U
2-Nitrophenol	ND	0.328	"				-			U
Acetophenone	ND	0.328	"				-			U
bis(2-Chloroethoxy)methane	ND	0.328	"				-			U
bis(2-Chloro-1-methylethyl)ether	ND	0.328	"				-			U
Benzo(k)fluoranthene	ND	0.0328	"				-			U
bis(2-Ethylhexyl)phthalate	ND	0.0328	"				-			U
Benzo(ghi)perylene	ND	0.0328	"				-			U
Benzo(a)pyrene	ND	0.0328	"				-			U
Butylbenzylphthalate	ND	0.0328	"				-			U
Anthracene	ND	0.0328	"				-			U
Atrazine	ND	0.328	"				-			U
Benzaldehyde	ND	0.328	"				-			U
Benzo(a)anthracene	ND	0.0328	"				-			U
Surrogate: 2,4,6-Tribromophenol	2.53		"	3.28		77	26-128			
Surrogate: p-Terphenyl-d14	1.38		"	1.64		84	26-130			
Surrogate: Phenol-d5	2.47		"	3.28		75	29-116			
Surrogate: Nitrobenzene-d5	1.17		"	1.64		72	28-110			
Surrogate: 2-Fluorobiphenyl	1.26		"	1.64		77	26-118			
Surrogate: 2-Fluorophenol	2.33		"	3.28		71	30-108			

**LCS (1205393464-BKS)**

Prepared: 05/04/2023 Analyzed: 05/04/2023

Diethylphthalate	1.18	0.0329	mg/kg	1.65		71	58-121			
Dimethylphthalate	1.18	0.0329	"	1.65		72	52-118			
Dibenzofuran	1.12	0.329	"	1.65		68	54-112			

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**SVOC by 8270E - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2423285 - SW846 3541

LCS (1205393464-BKS)

Prepared: 05/04/2023 Analyzed: 05/04/2023

Dibenzo(a,h)anthracene	1.18	0.0329	mg/kg	1.65		72	48-132			
Carbazole	1.20	0.0329	"	1.65		73	51-118			
Benzo(a)anthracene	1.20	0.0329	"	1.65		73	58-110			
Butylbenzylphthalate	1.20	0.0329	"	1.65		73	51-123			
bis(2-Ethylhexyl)phthalate	1.19	0.0329	"	1.65		72	44-127			
Chrysene	1.27	0.0329	"	1.65		77	59-112			
bis(2-Chloroethyl) ether	1.13	0.329	"	1.65		69	48-104			
Caprolactam	1.05	0.329	"	1.65		64	51-122			
bis(2-Chloroethoxy)methane	1.17	0.329	"	1.65		71	52-100			
bis(2-Chloro-1-methylethyl)ether	1.02	0.329	"	1.65		62	39-115			
Benzo(k)fluoranthene	1.23	0.0329	"	1.65		75	49-118			
Benzo(ghi)perylene	1.22	0.0329	"	1.65		74	42-122			
Benzo(a)pyrene	1.26	0.0329	"	1.65		76	50-114			
Di-n-butylphthalate	1.19	0.0329	"	1.65		73	55-122			
N-Nitrosodipropylamine	1.07	0.329	"	1.65		65	45-112			
Benzaldehyde	0.174	0.329	"	1.65		11	25-83			J
Atrazine	1.29	0.329	"	1.65		78	54-133			
Anthracene	1.16	0.0329	"	1.65		71	54-109			
Acetophenone	0.883	0.329	"	1.65		54	50-103			
Acenaphthylene	1.08	0.0329	"	1.65		66	55-104			
Benzo(b)fluoranthene	1.20	0.0329	"	1.65		73	51-111			
Naphthalene	1.04	0.0329	"	1.65		63	53-100			
p-Nitroaniline	1.13	0.329	"	1.65		69	38-141			
Diphenylamine	1.18	0.329	"	1.65		72	52-107			
Acenaphthene	1.10	0.0329	"	1.65		67	53-104			
Phenol	1.14	0.329	"	1.65		69	49-111			

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**SVOC by 8270E - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2423285 - SW846 3541

LCS (1205393464-BKS)

Prepared: 05/04/2023 Analyzed: 05/04/2023

Phenanthrene	1.15	0.0329	mg/kg	1.65		70	52-108			
Pentachlorophenol	0.734	0.329	"	1.65		45	35-118			
o-Nitroaniline	1.10	0.329	"	1.65		67	50-119			
Nitrobenzene	1.05	0.329	"	1.65		64	52-106			
Di-n-octylphthalate	1.18	0.0329	"	1.65		72	50-135			
m-Nitroaniline	1.06	0.329	"	1.65		64	40-113			
m,p-Cresols	1.10	0.329	"	1.65		67	50-118			
Isophorone	0.995	0.329	"	1.65		60	55-105			
Indeno(1,2,3-cd)pyrene	1.22	0.0329	"	1.65		74	47-128			
Hexachloroethane	0.913	0.329	"	1.65		55	46-94			
Hexachlorocyclopentadiene	0.482	0.329	"	1.65		29	24-85			
Hexachlorobutadiene	1.07	0.329	"	1.65		65	49-110			
Hexachlorobenzene	1.18	0.329	"	1.65		72	53-111			
Pyrene	1.26	0.0329	"	1.65		77	45-112			
Fluoranthene	1.25	0.0329	"	1.65		76	52-122			
o-Cresol	1.10	0.329	"	1.65		67	53-111			
2,4-Dinitrophenol	0.514	0.658	"	1.65		31	18-92			J
4-Bromophenylphenylether	1.30	0.329	"	1.65		79	56-113			
3,3'-Dichlorobenzidine	0.874	0.329	"	1.65		53	35-109			
2-Nitrophenol	1.12	0.329	"	1.65		68	53-113			
2-Methylnaphthalene	1.09	0.0329	"	1.65		66	47-99			
2-Methyl-4,6-dinitrophenol	0.683	0.329	"	1.65		42	23-110			
2-Chlorophenol	1.09	0.329	"	1.65		66	55-107			
2-Chloronaphthalene	1.09	0.0329	"	1.65		66	49-108			
4-Nitrophenol	1.09	0.329	"	1.65		66	39-130			
2,4-Dinitrotoluene	1.20	0.329	"	1.65		73	52-120			

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**SVOC by 8270E - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2423285 - SW846 3541**

**LCS (1205393464-BKS)**

Prepared: 05/04/2023 Analyzed: 05/04/2023

Fluorene	1.16	0.0329	mg/kg	1.65		71	52-110			
2,4-Dimethylphenol	0.874	0.329	"	1.65		53	47-96			
2,4-Dichlorophenol	1.13	0.329	"	1.65		69	52-116			
2,4,6-Trichlorophenol	1.13	0.329	"	1.65		69	52-119			
2,4,5-Trichlorophenol	1.16	0.329	"	1.65		70	58-120			
2,3,4,6-Tetrachlorophenol	1.05	0.329	"	1.65		64	52-120			
1,4-Dioxane	0.457	0.329	"	1.65		28	30-62			
1,2,4,5-Tetrachlorobenzene	0.978	0.329	"	1.65		59	51-110			
1,1'-Biphenyl	1.05	0.329	"	1.65		64	57-118			
2,6-Dinitrotoluene	1.17	0.329	"	1.65		71	58-112			
4-Chloro-3-methylphenol	1.12	0.329	"	1.65		68	54-119			
4-Chloroaniline	0.939	0.329	"	1.65		57	36-90			
4-Chlorophenylphenylether	1.31	0.329	"	1.65		80	53-117			
Surrogate: Phenol-d5	2.12		"	3.29		64	29-116			
Surrogate: p-Terphenyl-d14	1.16		"	1.65		71	26-130			
Surrogate: Nitrobenzene-d5	1.00		"	1.65		61	28-110			
Surrogate: 2-Fluorophenol	2.05		"	3.29		62	30-108			
Surrogate: 2-Fluorobiphenyl	1.03		"	1.65		63	26-118			
Surrogate: 2,4,6-Tribromophenol	2.34		"	3.29		71	26-128			

**MS (1205393465 S)**

**Source: 620395001**

Prepared: 05/04/2023 Analyzed: 05/04/2023

Nitrobenzene	0.705	0.391	mg/kg dry	1.96	<0.117	36	21-110			
Pentachlorophenol	0.238	0.391	"	1.96	<0.117	12	17-128			J
o-Nitroaniline	0.988	0.391	"	1.96	<0.129	51	26-120			
o-Cresol	0.882	0.391	"	1.96	<0.117	45	20-120			
Phenanthrene	1.17	0.0391	"	1.96	0.0485	57	20-117			
p-Nitroaniline	1.07	0.391	"	1.96	<0.117	54	14-133			

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Absaroka  
 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Waste Characterization

**SVOC by 8270E - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2423285 - SW846 3541

**MS (1205393465 S)**

**Source: 620395001**

Prepared: 05/04/2023 Analyzed: 05/04/2023

Naphthalene	0.680	0.0391	mg/kg dry	1.96	<0.0117	35	18-110			
m-Nitroaniline	0.953	0.391	"	1.96	<0.117	49	18-106			
m,p-Cresols	0.807	0.391	"	1.96	<0.117	41	24-120			
Isophorone	0.706	0.391	"	1.96	<0.117	36	17-110			
Indeno(1,2,3-cd)pyrene	1.25	0.0391	"	1.96	0.0403	62	14-122			
Hexachloroethane	0.415	0.391	"	1.96	<0.117	21	18-102			
Benzo(a)pyrene	1.32	0.0391	"	1.96	0.0582	65	23-120			
N-Nitrosodipropylamine	0.774	0.391	"	1.96	<0.117	40	18-120			
2-Methyl-4,6-dinitrophenol	0.918	0.391	"	1.96	<0.117	47	17-112			
2,4-Dinitrophenol	0.759	0.783	"	1.96	<0.117	39	28-120			J
2,4-Dinitrotoluene	1.08	0.391	"	1.96	<0.117	55	28-120			
2,6-Dinitrotoluene	0.988	0.391	"	1.96	<0.117	50	27-120			
2-Chloronaphthalene	0.840	0.0391	"	1.96	<0.0117	43	16-118			
2-Chlorophenol	0.708	0.391	"	1.96	<0.117	36	19-108			
Phenol	0.817	0.391	"	1.96	<0.117	42	18-119			
4-Bromophenylphenylether	1.13	0.391	"	1.96	<0.117	58	25-120			
2-Methylnaphthalene	0.784	0.0391	"	1.96	<0.0117	40	19-110			
2-Nitrophenol	0.739	0.391	"	1.96	<0.117	38	20-110			
Pyrene	1.36	0.0391	"	1.96	0.107	64	22-124			
4-Chloro-3-methylphenol	0.965	0.391	"	1.96	<0.157	49	27-122			
Dimethylphthalate	1.01	0.0391	"	1.96	<0.0117	51	28-120			
3,3'-Dichlorobenzidine	0.973	0.391	"	1.96	<0.117	50	12-110			
Butylbenzylphthalate	1.18	0.0391	"	1.96	<0.0117	60	21-133			
Caprolactam	0.855	0.391	"	1.96	<0.117	44	22-125			
Carbazole	1.18	0.0391	"	1.96	<0.0117	61	19-123			
Chrysene	1.32	0.0391	"	1.96	0.0618	64	23-120			

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**SVOC by 8270E - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2423285 - SW846 3541

**MS (1205393465 S)**

**Source: 620395001**

Prepared: 05/04/2023 Analyzed: 05/04/2023

Dibenzo(a,h)anthracene	1.13	0.0391	mg/kg dry	1.96	<0.0117	58	17-118			
bis(2-Chloroethyl) ether	0.694	0.391	"	1.96	<0.117	35	19-112			
Diethylphthalate	1.06	0.0391	"	1.96	<0.0117	54	29-120			
bis(2-Chloroethoxy)methane	0.844	0.391	"	1.96	<0.117	43	23-112			
Di-n-butylphthalate	1.11	0.0391	"	1.96	<0.0117	57	28-120			
Di-n-octylphthalate	1.17	0.0391	"	1.96	<0.0117	60	27-132			
Diphenylamine	1.02	0.391	"	1.96	<0.117	52	23-111			
Fluoranthene	1.47	0.0391	"	1.96	0.144	68	24-122			
Fluorene	1.01	0.0391	"	1.96	<0.0117	52	20-119			
Hexachlorobenzene	1.05	0.391	"	1.96	<0.117	54	27-113			
Dibenzofuran	0.949	0.391	"	1.96	<0.117	49	24-116			
Benzaldehyde	0.480	0.391	"	1.96	<0.117	25	10-97			
4-Chloroaniline	0.754	0.391	"	1.96	<0.117	39	26-88			
4-Chlorophenylphenylether	1.12	0.391	"	1.96	<0.117	57	25-124			
4-Nitrophenol	0.874	0.391	"	1.96	<0.117	45	16-132			
Acenaphthene	0.901	0.0391	"	1.96	<0.0117	46	17-113			
Acenaphthylene	0.886	0.0391	"	1.96	<0.0117	45	23-112			
Acetophenone	0.601	0.391	"	1.96	<0.117	31	19-118			
bis(2-Ethylhexyl)phthalate	1.16	0.0391	"	1.96	<0.0117	59	19-133			
Atrazine	1.21	0.391	"	1.96	<0.157	62	28-133			
Hexachlorobutadiene	0.593	0.391	"	1.96	<0.117	30	18-110			
2,4-Dimethylphenol	0.692	0.391	"	1.96	<0.117	35	20-105			
Hexachlorocyclopentadiene	0.297	0.391	"	1.96	<0.117	15	18-75			J
Benzo(a)anthracene	1.26	0.0391	"	1.96	0.0575	61	24-116			
Benzo(ghi)perylene	1.22	0.0391	"	1.96	<0.0117	63	15-120			
Benzo(k)fluoranthene	1.23	0.0391	"	1.96	0.0293	61	22-130			

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**SVOC by 8270E - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2423285 - SW846 3541

**MS (1205393465 S)**

Source: 620395001

Prepared: 05/04/2023 Analyzed: 05/04/2023

bis(2-Chloro-1-methylethyl)ether	0.583	0.391	mg/kg dry	1.96	<0.117	30	15-114			
Anthracene	1.09	0.0391	"	1.96	<0.0117	56	21-113			
1,1'-Biphenyl	0.804	0.391	"	1.96	<0.117	41	19-123			
Benzo(b)fluoranthene	1.31	0.0391	"	1.96	0.0790	63	22-122			
2,4-Dichlorophenol	0.815	0.391	"	1.96	<0.117	42	23-120			
1,2,4,5-Tetrachlorobenzene	0.738	0.391	"	1.96	<0.117	38	24-110			
1,4-Dioxane	0.254	0.391	"	1.96	<0.117	13	18-62			J
2,3,4,6-Tetrachlorophenol	0.521	0.391	"	1.96	<0.117	27	28-125			
2,4,5-Trichlorophenol	0.809	0.391	"	1.96	<0.117	41	29-120			
2,4,6-Trichlorophenol	0.778	0.391	"	1.96	<0.117	40	26-127			
Surrogate: Nitrobenzene-d5	0.617		"	1.96	0.681	32	28-110			
Surrogate: 2-Fluorophenol	1.30		"	3.91	1.47	33	30-108			
Surrogate: p-Terphenyl-d14	1.03		"	1.96	0.769	52	26-130			
Surrogate: Phenol-d5	1.49		"	3.91	1.44	38	29-116			
Surrogate: 2-Fluorobiphenyl	0.762		"	1.96	0.719	39	26-118			
Surrogate: 2,4,6-Tribromophenol	1.86		"	3.91	1.23	48	26-128			

**MSD (1205393466 SD)**

Source: 620395001

Prepared: 05/04/2023 Analyzed: 05/04/2023

Benzo(a)pyrene	1.02	0.0394	mg/kg dry	1.97	0.0582	49	23-120	26	30	
Acetophenone	0.738	0.394	"	1.97	<0.118	38	19-118	20	30	
Anthracene	0.922	0.0394	"	1.97	<0.0118	47	21-113	17	30	
Atrazine	1.08	0.394	"	1.97	<0.158	55	28-133	12	30	
Benzaldehyde	0.262	0.394	"	1.97	<0.118	13	10-97	59	30	J
Benzo(a)anthracene	0.970	0.0394	"	1.97	0.0575	46	24-116	26	30	
Acenaphthylene	0.862	0.0394	"	1.97	<0.0118	44	23-112	3	30	
Benzo(b)fluoranthene	0.973	0.0394	"	1.97	0.0790	45	22-122	29	30	
Benzo(ghi)perylene	0.955	0.0394	"	1.97	<0.0118	48	15-120	25	30	

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 Project: FEO - Damfino Waste Characterization

**SVOC by 8270E - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2423285 - SW846 3541

MSD (1205393466 SD)

Source: 620395001

Prepared: 05/04/2023 Analyzed: 05/04/2023

Benzo(k)fluoranthene	0.957	0.0394	mg/kg dry	1.97	0.0293	47	22-130	25	30	
Acenaphthene	0.870	0.0394	"	1.97	<0.0118	44	17-113	4	30	
bis(2-Chloroethoxy)methane	0.914	0.394	"	1.97	<0.118	46	23-112	8	30	
3,3'-Dichlorobenzidine	0.772	0.394	"	1.97	<0.118	39	12-110	23	30	
bis(2-Chloroethyl) ether	0.876	0.394	"	1.97	<0.118	44	19-112	23	30	
bis(2-Ethylhexyl)phthalate	0.922	0.0394	"	1.97	<0.0118	47	19-133	23	30	
bis(2-Chloro-1-methylethyl)ether	0.764	0.394	"	1.97	<0.118	39	15-114	27	30	
2-Methylnaphthalene	0.812	0.0394	"	1.97	<0.0118	41	19-110	4	30	
2,4-Dinitrotoluene	0.888	0.394	"	1.97	<0.118	45	28-120	20	30	
2,6-Dinitrotoluene	0.910	0.394	"	1.97	<0.118	46	27-120	8	30	
2-Chloronaphthalene	0.819	0.0394	"	1.97	<0.0118	42	16-118	2	30	
2-Chlorophenol	0.875	0.394	"	1.97	<0.118	44	19-108	21	30	
4-Chloro-3-methylphenol	0.890	0.394	"	1.97	<0.158	45	27-122	8	30	
2-Methyl-4,6-dinitrophenol	0.705	0.394	"	1.97	<0.118	36	17-112	26	30	
4-Nitrophenol	0.741	0.394	"	1.97	<0.118	38	16-132	16	30	
2-Nitrophenol	0.878	0.394	"	1.97	<0.118	45	20-110	17	30	
Dibenzofuran	0.878	0.394	"	1.97	<0.118	45	24-116	8	30	
4-Bromophenylphenylether	0.996	0.394	"	1.97	<0.118	51	25-120	12	30	
Butylbenzylphthalate	0.926	0.0394	"	1.97	<0.0118	47	21-133	24	30	
4-Chloroaniline	0.790	0.394	"	1.97	<0.118	40	26-88	5	30	
4-Chlorophenylphenylether	1.00	0.394	"	1.97	<0.118	51	25-124	11	30	
Pentachlorophenol	0.321	0.394	"	1.97	<0.118	16	17-128	30	30	J
Chrysene	1.03	0.0394	"	1.97	0.0618	49	23-120	25	30	
m-Nitroaniline	0.877	0.394	"	1.97	<0.118	45	18-106	8	30	
Naphthalene	0.784	0.0394	"	1.97	<0.0118	40	18-110	14	30	
Nitrobenzene	0.825	0.394	"	1.97	<0.118	42	21-110	16	30	

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 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Waste Characterization

**SVOC by 8270E - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2423285 - SW846 3541

MSD (1205393466 SD)

Source: 620395001

Prepared: 05/04/2023 Analyzed: 05/04/2023

N-Nitrosodipropylamine	0.874	0.394	mg/kg dry	1.97	<0.118	44	18-120	12	30	
Isophorone	0.770	0.394	"	1.97	<0.118	39	17-110	9	30	
o-Nitroaniline	0.883	0.394	"	1.97	<0.130	45	26-120	11	30	
Indeno(1,2,3-cd)pyrene	0.968	0.0394	"	1.97	0.0403	47	14-122	25	30	
Phenanthrene	0.950	0.0394	"	1.97	0.0485	46	20-117	20	30	
Phenol	0.896	0.394	"	1.97	<0.118	45	18-119	9	30	
p-Nitroaniline	0.885	0.394	"	1.97	<0.118	45	14-133	19	30	
Pyrene	1.05	0.0394	"	1.97	0.107	48	22-124	26	30	
o-Cresol	0.877	0.394	"	1.97	<0.118	45	20-120	1	30	
Diphenylamine	0.908	0.394	"	1.97	<0.118	46	23-111	12	30	
Carbazole	0.947	0.0394	"	1.97	<0.0118	48	19-123	22	30	
2,4-Dinitrophenol	0.493	0.788	"	1.97	<0.118	25	28-120	43	30	J
Dibenzo(a,h)anthracene	0.932	0.0394	"	1.97	<0.0118	47	17-118	19	30	
2,3,4,6-Tetrachlorophenol	0.586	0.394	"	1.97	<0.118	30	28-125	12	30	
Diethylphthalate	0.932	0.0394	"	1.97	<0.0118	47	29-120	13	30	
Dimethylphthalate	0.915	0.0394	"	1.97	<0.0118	46	28-120	10	30	
m,p-Cresols	0.883	0.394	"	1.97	<0.118	45	24-120	9	30	
Di-n-octylphthalate	0.949	0.0394	"	1.97	<0.0118	48	27-132	21	30	
Caprolactam	0.737	0.394	"	1.97	<0.118	37	22-125	15	30	
Fluoranthene	1.06	0.0394	"	1.97	0.144	47	24-122	32	30	
Fluorene	0.938	0.0394	"	1.97	<0.0118	48	20-119	7	30	
Hexachlorobenzene	0.886	0.394	"	1.97	<0.118	45	27-113	17	30	
Hexachlorobutadiene	0.709	0.394	"	1.97	<0.118	36	18-110	18	30	
Hexachlorocyclopentadiene	0.259	0.394	"	1.97	<0.118	13	18-75	14	30	J
Hexachloroethane	0.601	0.394	"	1.97	<0.118	31	18-102	37	30	
Di-n-butylphthalate	0.918	0.0394	"	1.97	<0.0118	47	28-120	19	30	

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**SVOC by 8270E - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2423285 - SW846 3541

MSD (1205393466 SD)	Source: 620395001	Prepared: 05/04/2023	Analyzed: 05/04/2023							
2,4-Dichlorophenol	0.853	0.394	mg/kg dry	1.97	<0.118	43	23-120	5	30	
2,4,6-Trichlorophenol	0.784	0.394	"	1.97	<0.118	40	26-127	1	30	
2,4,5-Trichlorophenol	0.851	0.394	"	1.97	<0.118	43	29-120	5	30	
1,4-Dioxane	0.358	0.394	"	1.97	<0.118	18	18-62	34	30	J
1,2,4,5-Tetrachlorobenzene	0.737	0.394	"	1.97	<0.118	37	24-110	0	30	
1,1'-Biphenyl	0.816	0.394	"	1.97	<0.118	41	19-123	2	30	
2,4-Dimethylphenol	0.689	0.394	"	1.97	<0.118	35	20-105	0	30	
Surrogate: 2-Fluorobiphenyl	0.751		"	1.97	0.719	38	26-118			
Surrogate: 2-Fluorophenol	1.60		"	3.94	1.47	41	30-108			
Surrogate: Nitrobenzene-d5	0.746		"	1.97	0.681	38	28-110			
Surrogate: Phenol-d5	1.69		"	3.94	1.44	43	29-116			
Surrogate: p-Terphenyl-d14	0.852		"	1.97	0.769	43	26-130			
Surrogate: 2,4,6-Tribromophenol	1.63		"	3.94	1.23	41	26-128			

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 Project: FEO - Damfino Waste Characterization

**TCLP Metals by 1311/6010D - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2423176 - SW846 3010A**

**TB (1205392610-BLK)**

Prepared: 05/03/2023 Analyzed: 05/04/2023

Barium	0.0342	0.0500	mg/L				-			J
Arsenic	ND	0.300	"				-			U
Cadmium	ND	0.0500	"				-			U
Chromium	ND	0.100	"				-			U
Lead	0.0417	0.200	"				-			J
Selenium	0.196	0.300	"				-			J
Silver	ND	0.0500	"				-			U

**MS (1205392611 S)**

Source: Y305020-01

Prepared: 05/03/2023 Analyzed: 05/04/2023

Arsenic	4.54	0.300	mg/L	5.00	<0.0500	90.8	75-125			
Cadmium	0.930	0.0500	"	1.00	<0.0100	93	75-125			
Chromium	4.84	0.100	"	5.00	<0.0100	96.8	75-125			
Lead	4.81	0.200	"	5.00	0.0354	95.6	75-125			
Selenium	1.02	0.300	"	1.00	0.101	91.9	75-125			
Silver	0.463	0.0500	"	0.500	<0.0100	92.6	75-125			
Barium	10.3	0.0500	"	10.0	0.616	96.5	75-125			

**BLANK (1205393294-BLK)**

Prepared: 05/03/2023 Analyzed: 05/04/2023

Lead	ND	0.200	mg/L				-			U
Arsenic	ND	0.300	"				-			U
Cadmium	ND	0.0500	"				-			U
Chromium	ND	0.100	"				-			U
Barium	ND	0.0500	"				-			U
Selenium	ND	0.300	"				-			U
Silver	ND	0.0500	"				-			U

**LCS (1205393295-BKS)**

Prepared: 05/03/2023 Analyzed: 05/04/2023

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 112 High St.  
 Buffalo WY 82834

Joel Mason  
 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Waste Characterization

**TCLP Metals by 1311/6010D - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2423176 - SW846 3010A

**LCS (1205393295-BKS)**

Prepared: 05/03/2023 Analyzed: 05/04/2023

Silver	1.03	0.0500	mg/L	1.00		103	80-120			
Barium	5.28	0.0500	"	5.00		106	80-120			
Cadmium	5.12	0.0500	"	5.00		102	80-120			
Chromium	5.39	0.100	"	5.00		108	80-120			
Lead	5.29	0.200	"	5.00		106	80-120			
Selenium	4.88	0.300	"	5.00		97.6	80-120			
Arsenic	4.97	0.300	"	5.00		99.3	80-120			

**DUP (1205393296 D)**

Source: Y305020-01

Prepared: 05/03/2023 Analyzed: 05/04/2023

Arsenic	ND	0.300	mg/L		<0.0500		0-20	2.52	20	U
Barium	0.618	0.0500	"		0.616		0-20	0.227	20	J
Chromium	ND	0.100	"		<0.0100		0-20	32	20	U
Lead	ND	0.200	"		0.0354		0-20	12.4	20	U
Selenium	0.0742	0.300	"		0.101		0-20	30.6	20	J
Silver	ND	0.0500	"		<0.0100		0-20	140	20	U
Cadmium	ND	0.0500	"		<0.0100		0-20	42.7	20	U

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 Project Number: FEO.CO.0701.33  
 Project: FEO - Damfino Waste Characterization

**TCLP Metals by 1311/7470A - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2423267 - SW846 7470A Prep</b>										
<b>TB (1205392610-BLK)</b>					Prepared: 05/03/2023 Analyzed: 05/04/2023					
Mercury	0.00136	0.00200	mg/L				-			J
<b>MS (1205392611 S)</b>					Source: Y305020-01 Prepared: 05/03/2023 Analyzed: 05/04/2023					
Mercury	0.0202	0.00200	mg/L	0.0200	<0.000670	101	75-125			
<b>BLANK (1205393429-BLK)</b>					Prepared: 05/03/2023 Analyzed: 05/04/2023					
Mercury	ND	0.00200	mg/L				-			U
<b>LCS (1205393430-BKS)</b>					Prepared: 05/03/2023 Analyzed: 05/04/2023					
Mercury	0.0205	0.00200	mg/L	0.0200		102	80-120			
<b>DUP (1205393431 D)</b>					Source: Y305020-01 Prepared: 05/03/2023 Analyzed: 05/04/2023					
Mercury	ND	0.00200	mg/L		<0.000670		0-20	5.13	20	U

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**TCLP SVOC by 1311/8270E - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2423242 - SW846 3510C**

**TB (1205392605-BLK)**

Prepared: 05/04/2023 Analyzed: 05/05/2023

m,p-Cresols	ND	0.0500	mg/L				-			U
Hexachloroethane	ND	0.0500	"				-			U
Pyridine	ND	0.0500	"				-			U
Pentachlorophenol	ND	0.0500	"				-			U
o-Cresol	ND	0.0500	"				-			U
Hexachlorobutadiene	ND	0.0500	"				-			U
Nitrobenzene	ND	0.0500	"				-			U
1,4-Dichlorobenzene	ND	0.0500	"				-			U
Hexachlorobenzene	ND	0.0500	"				-			U
2,4-Dinitrotoluene	ND	0.0500	"				-			U
2,4,6-Trichlorophenol	ND	0.0500	"				-			U
2,4,5-Trichlorophenol	ND	0.0500	"				-			U
Surrogate: p-Terphenyl-d14	0.209		"	0.250		84	24-129			
Surrogate: Phenol-d5	0.178		"	0.500		36	15-85			
Surrogate: 2-Fluorophenol	0.258		"	0.500		52	11-79			
Surrogate: 2-Fluorobiphenyl	0.226		"	0.250		91	39-112			
Surrogate: 2,4,6-Tribromophenol	0.502		"	0.500		100	37-132			
Surrogate: Nitrobenzene-d5	0.213		"	0.250		85	39-112			

**BLANK (1205393386-BLK)**

Prepared: 05/04/2023 Analyzed: 05/05/2023

2,4,5-Trichlorophenol	ND	0.0100	mg/L				-			U
Pyridine	ND	0.0100	"				-			U
o-Cresol	ND	0.0100	"				-			U
Nitrobenzene	ND	0.0100	"				-			U
m,p-Cresols	ND	0.0100	"				-			U
Hexachloroethane	ND	0.0100	"				-			U
Hexachlorobutadiene	ND	0.0100	"				-			U

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Project: FEO - Damfino Waste Characterization

**TCLP SVOC by 1311/8270E - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2423242 - SW846 3510C**

**BLANK (1205393386-BLK)**

Prepared: 05/04/2023 Analyzed: 05/05/2023

Hexachlorobenzene	ND	0.0100	mg/L				-			U
2,4-Dinitrotoluene	ND	0.0100	"				-			U
1,4-Dichlorobenzene	ND	0.0100	"				-			U
Pentachlorophenol	ND	0.0100	"				-			U
2,4,6-Trichlorophenol	ND	0.0100	"				-			U
Surrogate: p-Terphenyl-d14	0.0273		"	0.0500		55	24-129			
Surrogate: Phenol-d5	0.0229		"	0.100		23	15-85			
Surrogate: Nitrobenzene-d5	0.0277		"	0.0500		55	39-112			
Surrogate: 2-Fluorophenol	0.0322		"	0.100		32	11-79			
Surrogate: 2-Fluorobiphenyl	0.0297		"	0.0500		59	39-112			
Surrogate: 2,4,6-Tribromophenol	0.0590		"	0.100		59	37-132			

**LCS (1205393388-BKS)**

Prepared: 05/04/2023 Analyzed: 05/05/2023

Nitrobenzene	0.0433	0.0100	mg/L	0.0500		87	55-110			
Pyridine	0.0193	0.0100	"	0.0500		39	25-90			
Pentachlorophenol	0.0473	0.0100	"	0.0500		95	42-132			
2,4-Dinitrotoluene	0.0517	0.0100	"	0.0500		103	50-134			
m,p-Cresols	0.0340	0.0100	"	0.0500		68	39-95			
Hexachloroethane	0.0331	0.0100	"	0.0500		66	36-90			
Hexachlorobutadiene	0.0373	0.0100	"	0.0500		75	39-103			
Hexachlorobenzene	0.0529	0.0100	"	0.0500		106	51-118			
2,4,6-Trichlorophenol	0.0500	0.0100	"	0.0500		100	50-127			
o-Cresol	0.0354	0.0100	"	0.0500		71	39-102			
2,4,5-Trichlorophenol	0.0494	0.0100	"	0.0500		99	50-137			
1,4-Dichlorobenzene	0.0358	0.0100	"	0.0500		72	42-92			
Surrogate: 2-Fluorobiphenyl	0.0417		"	0.0500		83	39-112			
Surrogate: p-Terphenyl-d14	0.0377		"	0.0500		75	24-129			

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Project: FEO - Damfino Waste Characterization

**TCLP SVOC by 1311/8270E - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2423242 - SW846 3510C**

**LCS (1205393388-BKS)**

Prepared: 05/04/2023 Analyzed: 05/05/2023

Surrogate: Phenol-d5	0.0316		mg/L	0.100		32	15-85			
Surrogate: Nitrobenzene-d5	0.0389		"	0.0500		78	39-112			
Surrogate: 2,4,6-Tribromophenol	0.0971		"	0.100		97	37-132			
Surrogate: 2-Fluorophenol	0.0436		"	0.100		44	11-79			

**MS (1205393389 S)**

**Source: 619223003**

Prepared: 05/04/2023 Analyzed: 05/05/2023

2,4-Dinitrotoluene	0.199	0.0500	mg/L	0.250	<0.0150	80	49-136			
Hexachlorobenzene	0.183	0.0500	"	0.250	<0.0150	73	46-116			
Hexachlorobutadiene	0.146	0.0500	"	0.250	<0.0150	58	24-102			
Hexachloroethane	0.140	0.0500	"	0.250	<0.0150	56	27-95			
Nitrobenzene	0.177	0.0500	"	0.250	<0.0150	71	44-119			
2,4,5-Trichlorophenol	0.180	0.0500	"	0.250	<0.0150	72	49-125			
o-Cresol	0.128	0.0500	"	0.250	<0.0150	51	37-107			
Pentachlorophenol	0.179	0.0500	"	0.250	<0.0150	72	36-139			
Pyridine	0.0749	0.0500	"	0.250	<0.0150	30	22-103			
m,p-Cresols	0.118	0.0500	"	0.250	<0.0185	47	35-112			
1,4-Dichlorobenzene	0.153	0.0500	"	0.250	<0.0150	61	37-90			
2,4,6-Trichlorophenol	0.187	0.0500	"	0.250	<0.0150	75	47-130			

Surrogate: Nitrobenzene-d5	0.156		"	0.250	0.185	63	39-112			
Surrogate: 2-Fluorobiphenyl	0.162		"	0.250	0.197	65	39-112			
Surrogate: 2-Fluorophenol	0.163		"	0.500	0.204	33	11-79			
Surrogate: Phenol-d5	0.124		"	0.500	0.148	25	15-85			
Surrogate: p-Terphenyl-d14	0.109		"	0.250	0.131	44	24-129			
Surrogate: 2,4,6-Tribromophenol	0.368		"	0.500	0.444	74	37-132			

**MSD (1205393390 SD)**

**Source: 619223003**

Prepared: 05/04/2023 Analyzed: 05/05/2023

m,p-Cresols	0.171	0.0500	mg/L	0.250	<0.0185	68	35-112	36	38	
Pyridine	0.108	0.0500	"	0.250	<0.0150	43	22-103	36	70	

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**TCLP SVOC by 1311/8270E - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2423242 - SW846 3510C

MSD (1205393390 SD)	Source: 619223003			Prepared: 05/04/2023 Analyzed: 05/05/2023						
2,4,6-Trichlorophenol	0.253	0.0500	mg/L	0.250	<0.0150	101	47-130	30	79	
Hexachlorobenzene	0.253	0.0500	"	0.250	<0.0150	101	46-116	32	75	
Hexachloroethane	0.179	0.0500	"	0.250	<0.0150	71	27-95	24	104	
Nitrobenzene	0.224	0.0500	"	0.250	<0.0150	90	44-119	23	79	
o-Cresol	0.181	0.0500	"	0.250	<0.0150	72	37-107	34	42	
Pentachlorophenol	0.257	0.0500	"	0.250	<0.0150	103	36-139	36	82	
Hexachlorobutadiene	0.195	0.0500	"	0.250	<0.0150	78	24-102	29	47	
2,4,5-Trichlorophenol	0.251	0.0500	"	0.250	<0.0150	100	49-125	33	78	
1,4-Dichlorobenzene	0.199	0.0500	"	0.250	<0.0150	79	37-90	26	51	
2,4-Dinitrotoluene	0.268	0.0500	"	0.250	<0.0150	107	49-136	29	42	
Surrogate: 2-Fluorobiphenyl	0.212		"	0.250	0.197	85	39-112			
Surrogate: 2,4,6-Tribromophenol	0.498		"	0.500	0.444	100	37-132			
Surrogate: 2-Fluorophenol	0.217		"	0.500	0.204	43	11-79			
Surrogate: Nitrobenzene-d5	0.201		"	0.250	0.185	80	39-112			
Surrogate: Phenol-d5	0.158		"	0.500	0.148	32	15-85			
Surrogate: p-Terphenyl-d14	0.147		"	0.250	0.131	59	24-129			

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**TCLP VOC by 1311/8260D - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2423845 - SW846 1311

**TB (1205392600-BLK)**

Prepared: 05/02/2023 Analyzed: 05/04/2023

1,1-Dichloroethylene	ND	0.0100	mg/L				-			U
1,2-Dichloroethane	ND	0.0100	"				-			U
Benzene	ND	0.0100	"				-			U
Carbon tetrachloride	ND	0.0100	"				-			U
Chlorobenzene	ND	0.0100	"				-			U
Chloroform	ND	0.0100	"				-			U
Tetrachloroethylene	ND	0.0100	"				-			U
Trichloroethylene	ND	0.0100	"				-			U
Vinyl chloride	ND	0.0100	"				-			U
2-Butanone	ND	0.0500	"				-			U
Surrogate: Bromofluorobenzene	0.552		"	0.0500		110	72-125			
Surrogate: 1,2-Dichloroethane-d4	0.551		"	0.0500		110	73-129			
Surrogate: Toluene-d8	0.516		"	0.0500		103	75-123			

**LCS (1205394503-BKS)**

Prepared: Analyzed: 05/04/2023

1,2-Dichloroethane	0.0496	0.00100	mg/L	0.0500		99	68-124			
Chloroform	0.0424	0.00100	"	0.0500		85	77-126			
Vinyl chloride	0.0432	0.00100	"	0.0500		86	67-134			
Trichloroethylene	0.0485	0.00100	"	0.0500		97	76-124			
Tetrachloroethylene	0.0406	0.00100	"	0.0500		81	74-124			
Chlorobenzene	0.0440	0.00100	"	0.0500		88	76-120			
Carbon tetrachloride	0.0415	0.00100	"	0.0500		83	73-140			
Benzene	0.0470	0.00100	"	0.0500		94	74-118			
1,1-Dichloroethylene	0.0444	0.00100	"	0.0500		89	67-133			
2-Butanone	0.224	0.00500	"	0.250		90	58-138			
Surrogate: Toluene-d8	0.0500		"	0.0500		100	75-123			
Surrogate: Bromofluorobenzene	0.0515		"	0.0500		103	72-125			

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Project Number: FEO.CO.0701.33  
Project: FEO - Damfino Waste Characterization

**TCLP VOC by 1311/8260D - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2423845 - SW846 1311**

**LCS (1205394503-BKS)**

Prepared: Analyzed: 05/04/2023

Surrogate: 1,2-Dichloroethane-d4 0.0514 mg/L 0.0500 103 73-129

**BLANK (1205394504-BLK)**

Prepared: Analyzed: 05/04/2023

Vinyl chloride	ND	0.00100	mg/L				-			U
Trichloroethylene	ND	0.00100	"				-			U
Tetrachloroethylene	ND	0.00100	"				-			U
Chloroform	ND	0.00100	"				-			U
Benzene	ND	0.00100	"				-			U
2-Butanone	ND	0.00500	"				-			U
1,2-Dichloroethane	ND	0.00100	"				-			U
1,1-Dichloroethylene	ND	0.00100	"				-			U
Chlorobenzene	ND	0.00100	"				-			U
Carbon tetrachloride	ND	0.00100	"				-			U

Surrogate: Bromofluorobenzene 0.0550 " 0.0500 110 72-125  
Surrogate: Toluene-d8 0.0521 " 0.0500 104 75-123  
Surrogate: 1,2-Dichloroethane-d4 0.0552 " 0.0500 110 73-129

**PS (1205394505 S)**

**Source: 619647002**

Prepared: 05/01/2023 Analyzed: 05/04/2023

Tetrachloroethylene	0.378	0.0100	mg/L	0.0500	76	64-129
Vinyl chloride	0.371	0.0100	"	0.0500	74	58-139
Chloroform	0.410	0.0100	"	0.0500	82	69-133
Chlorobenzene	0.383	0.0100	"	0.0500	77	63-123
Benzene	0.445	0.0100	"	0.0500	89	65-122
2-Butanone	2.06	0.0500	"	0.250	82	38-137
1,2-Dichloroethane	0.450	0.0100	"	0.0500	90	64-129
1,1-Dichloroethylene	0.424	0.0100	"	0.0500	85	61-137
Carbon tetrachloride	0.393	0.0100	"	0.0500	79	63-144

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**TCLP VOC by 1311/8260D - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2423845 - SW846 1311**

<b>PS (1205394505 S)</b>		<b>Source: 619647002</b>			Prepared: 05/01/2023 Analyzed: 05/04/2023					
Trichloroethylene	0.453	0.0100	mg/L	0.0500	91	66-126				
Surrogate: Toluene-d8	0.508		"	0.0500	102	75-123				
Surrogate: Bromofluorobenzene	0.526		"	0.0500	105	72-125				
Surrogate: 1,2-Dichloroethane-d4	0.500		"	0.0500	100	73-129				
<b>PSD (1205394506 SD)</b>		<b>Source: 619647002</b>			Prepared: 05/01/2023 Analyzed: 05/04/2023					
Vinyl chloride	0.381	0.0100	mg/L	0.0500	76	58-139	3	20		
Trichloroethylene	0.441	0.0100	"	0.0500	88	66-126	3	20		
Tetrachloroethylene	0.371	0.0100	"	0.0500	74	64-129	2	20		
Chloroform	0.400	0.0100	"	0.0500	80	69-133	2	20		
Chlorobenzene	0.375	0.0100	"	0.0500	75	63-123	2	20		
Carbon tetrachloride	0.381	0.0100	"	0.0500	76	63-144	3	20		
2-Butanone	2.02	0.0500	"	0.250	81	38-137	2	20		
1,2-Dichloroethane	0.438	0.0100	"	0.0500	88	64-129	3	20		
1,1-Dichloroethylene	0.408	0.0100	"	0.0500	82	61-137	4	20		
Benzene	0.432	0.0100	"	0.0500	86	65-122	3	20		
Surrogate: 1,2-Dichloroethane-d4	0.495		"	0.0500	99	73-129				
Surrogate: Toluene-d8	0.508		"	0.0500	102	75-123				
Surrogate: Bromofluorobenzene	0.530		"	0.0500	106	72-125				

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**Notes and Definitions**

- Ua Sample is Non-Detect.
  - U Result not detected above the detection limit
  - QM-11 Spike recovery was outside acceptance limits for LCS, however samples are non-detect for this compound.
  - QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
  - PASS PASS
  - J Greater than the detection limit but less than the reporting limit
  - H Holding time exceeded
  - >200 >200
  - <500 <500
  - <250 <250
  - ND Analyte NOT DETECTED at or above the reporting limit
  - RPD Relative Percent Difference
- All soil results are reported at a wet weight basis.  
Calculated results may use J-flag data (instead of reported "ND") as part of calculation to provide a more accurate result.

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