



Eagle Environmental Consulting, LLC

David Castro

8000 W 44th Ave

Wheat Ridge CO 80033

November 12, 2024

**Project Name - Noble Pad PW Dumpline Release    Project Number - [none]**

Attached are your analytical results for Noble Pad PW Dumpline Release received by Origins Laboratory November 11, 2024. This project is associated with Origins project number E4K0267-01.

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  
303.433.1322  
projectmanager@originslab.com



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



Eagle Environmental Consulting, LLC  
8000 W 44th Ave  
Wheat Ridge CO 80033

David Castro  
Project Number: [none]  
Project: Noble Pad PW Dumpline Release

### CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Background-01@0.5'	E4K0267-01	Soil	November 11, 2024 11:00	11/11/2024 13:26
Background-02@0.5'	E4K0267-02	Soil	November 11, 2024 11:10	11/11/2024 13:26
Background-03@0.5'	E4K0267-03	Soil	November 11, 2024 11:20	11/11/2024 13:26
Background-04@0.5'	E4K0267-04	Soil	November 11, 2024 11:30	11/11/2024 13:26

Origins Laboratory

*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.*

Jordan A. Bynon, Project Manager

Eagle Environmental Consulting, LLC  
8000 W 44th Ave  
Wheat Ridge CO 80033

David Castro  
Project Number: [none]  
Project: Noble Pad PW Dumpline Release

# ORIGINS

LABORATORY INC

ORIGINS WORK ORDER #

6460267

Page 1 of 1

Client:

Eagle Environmental Consulting

Project Manager:

Dave Castro

Key:

W=Water

Project Name:

Noble Pad PW Dumpline Release

GW=Groundwater

Address:

8000 W 44th Ave

Project Number:

433-2479

Telephone Number:

303-433-2479

Collected By:

IM

Email Address:

dcastro@eagle-env.com

Invoice/Billing Info:

Prairie Operating

SW=Surface Water

WW=Waste Water

L=Liquid

S=Soil | SO=Solid | O=Oil | A=Air | G=Gas | UNP=Unpres | HCL=Hydrochloric | HNO3=Nitric | H2SO4=Sulfuric | NaOH=Sodium Hydroxide

#	Sample ID	Date Sampled	Time Sampled	# of Containers	Matrix	Preservative	Analysis					Comments
							Boron	EC	PH	SAR	915-1 Metals	
1	Preliminary-01-05'	11/11/14	1100	2	S	UNP	X	X	X	X	EC/SAR/PH =	
2	Preliminary-02-05'		1110								sketchy post pop	
3	Preliminary-03-05'		1120									
4	Preliminary-04-05'		1130									
5											At H2O2 needed	
6												
7												
8												
9												
10												

Reinquished By: <i>[Signature]</i>	Date: 11/11/14	Time: 1306	Received By: <i>[Signature]</i>	Date: 11/11/14	Time: 1326
Reinquished By:	Date:	Time:	Received By:	Date:	Time:

☐ 48 Hr ☐ 72 Hr

☒ SAME DAY ☐ 24 Hr

Turnaround Time

Relinquished By: [Signature] Date: 11/11/14 Time: 1320 Received By: [Signature] Date: 11/11/14 Time: 1320

For Lab Sample Receiving Only:

Temp Received- 4.3 Received On Ice?

☒ Yes ☐ No

Standard

48 Hr

72 Hr

SAME DAY

24 Hr

Turnaround Time

Origins Laboratory

[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.

Jordan A. Bynon, Project Manager

Eagle Environmental Consulting, LLC  
8000 W 44th Ave  
Wheat Ridge CO 80033

David Castro  
Project Number: [none]  
Project: Noble Pad PW Dumpline Release

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: E460267

Client: Eagle  
Client Project ID: Noble Pad

Checklist Completed by: SHD  
Date/time completed: 11/11/12

Shipped Via: HO  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)  
Airbill #: N/A

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other: ☐  
Cooler Number/Temperature: 143 °C ☐ °C ☐ °C ☐ °C  
Thermometer ID: 1007

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> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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) SHD

Date/Time Reviewed 11/11/12

Origins Laboratory

*Byron*

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.



Eagle Environmental Consulting, LLC  
8000 W 44th Ave  
Wheat Ridge CO 80033

David Castro  
Project Number: [none]  
Project: Noble Pad PW Dumpline Release

Background-01@0.5'  
11/11/2024 11:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	---------------------	-----------------	-------	----------	-------	----------	----------	-------

Origins Laboratory  
E4K0267-01 (Soil)

Table 915 metals by EPA 6020B

Arsenic	6.40	0.274	mg/kg	10	B4K1133	11/11/2024	11/12/2024
Barium	151	9.45	"	"	"	"	"
Cadmium	0.243	0.0945	"	"	"	"	"
Copper	13.9	9.45	"	"	"	"	"
Lead	14.9	0.945	"	"	"	"	"
Nickel	16.0	0.945	"	"	"	"	"
Selenium	0.409	0.246	"	"	"	"	"
Silver	ND	0.0945	"	"	"	"	"
Zinc	62.7	35.0	"	"	"	"	"

Origins Laboratory

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.

Jordan A. Bynon, Project Manager



Eagle Environmental Consulting, LLC  
8000 W 44th Ave  
Wheat Ridge CO 80033

David Castro  
Project Number: [none]  
Project: Noble Pad PW Dumpline Release

Background-02@0.5'

11/11/2024 11:10:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	------------------------	--------------------	-------	----------	-------	----------	----------	-------

Origins Laboratory  
E4K0267-02 (Soil)

Table 915 metals by EPA 6020B

Arsenic	6.86	0.245	mg/kg	10	B4K1133	11/11/2024	11/12/2024
Barium	161	8.44	"	"	"	"	"
Cadmium	0.252	0.0844	"	"	"	"	"
Copper	15.2	8.44	"	"	"	"	"
Lead	14.3	0.844	"	"	"	"	"
Nickel	17.8	0.844	"	"	"	"	"
Selenium	0.403	0.219	"	"	"	"	"
Silver	ND	0.0844	"	"	"	"	"
Zinc	68.8	31.2	"	"	"	"	"

Origins Laboratory

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.

Jordan A. Bynon, Project Manager



Eagle Environmental Consulting, LLC  
8000 W 44th Ave  
Wheat Ridge CO 80033

David Castro  
Project Number: [none]  
Project: Noble Pad PW Dumpline Release

Background-03@0.5'

11/11/2024 11:20:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	------------------------	--------------------	-------	----------	-------	----------	----------	-------

Origins Laboratory  
E4K0267-03 (Soil)

Table 915 metals by EPA 6020B

Arsenic	7.07	0.256	mg/kg	10	B4K1133	11/11/2024	11/12/2024
Barium	169	8.82	"	"	"	"	"
Cadmium	0.265	0.0882	"	"	"	"	"
Copper	14.9	8.82	"	"	"	"	"
Lead	14.1	0.882	"	"	"	"	"
Nickel	17.7	0.882	"	"	"	"	"
Selenium	0.392	0.229	"	"	"	"	"
Silver	ND	0.0882	"	"	"	"	"
Zinc	65.5	32.6	"	"	"	"	"

Origins Laboratory

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.

Jordan A. Bynon, Project Manager



Eagle Environmental Consulting, LLC  
8000 W 44th Ave  
Wheat Ridge CO 80033

David Castro  
Project Number: [none]  
Project: Noble Pad PW Dumpline Release

Background-04@0.5'

11/11/2024 11:30:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	------------------------	--------------------	-------	----------	-------	----------	----------	-------

Origins Laboratory  
E4K0267-04 (Soil)

Table 915 metals by EPA 6020B

Arsenic	6.75	0.288	mg/kg	10	B4K1133	11/11/2024	11/12/2024
Barium	165	9.92	"	"	"	"	"
Cadmium	0.259	0.0992	"	"	"	"	"
Copper	14.3	9.92	"	"	"	"	"
Lead	14.4	0.992	"	"	"	"	"
Nickel	17.2	0.992	"	"	"	"	"
Selenium	0.442	0.258	"	"	"	"	"
Silver	ND	0.0992	"	"	"	"	"
Zinc	67.0	36.7	"	"	"	"	"

Origins Laboratory

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.

Jordan A. Bynon, Project Manager





Eagle Environmental Consulting, LLC  
8000 W 44th Ave  
Wheat Ridge CO 80033

David Castro  
Project Number: [none]  
Project: Noble Pad PW Dumpline Release

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B4K1133 - EPA 3050B**

**Blank (B4K1133-BLK1)**

Prepared: 11/11/2024 Analyzed: 11/12/2024

Arsenic	ND	0.290	mg/kg
Barium	ND	10.0	"
Cadmium	ND	0.100	"
Copper	ND	10.0	"
Lead	ND	1.00	"
Nickel	ND	1.00	"
Selenium	ND	0.260	"
Silver	ND	0.100	"
Zinc	ND	37.0	"

**LCS (B4K1133-BS1)**

Prepared: 11/11/2024 Analyzed: 11/12/2024

Arsenic	5.20	0.290	mg/kg	5.00	104	80-120
Barium	525	10.0	"	500	105	80-120
Cadmium	5.09	0.100	"	5.00	102	80-120
Copper	55.1	10.0	"	50.0	110	80-120
Lead	5.17	1.00	"	5.00	103	80-120
Nickel	5.42	1.00	"	5.00	108	80-120
Selenium	5.44	0.260	"	5.00	109	80-120
Silver	5.62	0.100	"	5.00	112	80-120
Zinc	52.0	37.0	"	50.0	104	80-120

**Matrix Spike (B4K1133-MS1)**

**Source: E4K0266-01**

Prepared: 11/11/2024 Analyzed: 11/12/2024

Arsenic	9.89	0.262	mg/kg	4.53	5.20	103	75-125
Barium	701	9.05	"	453	160	119	75-125
Cadmium	4.96	0.0905	"	4.53	0.165	106	75-125
Copper	58.8	9.05	"	45.3	11.0	106	75-125
Lead	15.6	0.905	"	4.53	10.7	109	75-125

Origins Laboratory

*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.*

Jordan A. Bynon, Project Manager



Eagle Environmental Consulting, LLC  
8000 W 44th Ave  
Wheat Ridge CO 80033

David Castro  
Project Number: [none]  
Project: Noble Pad PW Dumpline Release

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B4K1133 - EPA 3050B**

<b>Matrix Spike (B4K1133-MS1)</b>		<b>Source: E4K0266-01</b>			Prepared: 11/11/2024 Analyzed: 11/12/2024					
Nickel	18.6	0.905	mg/kg	4.53	13.4	116	75-125			
Selenium	5.25	0.235	"	4.53	0.279	110	75-125			
Silver	5.27	0.0905	"	4.53	0.0415	115	75-125			
Zinc	92.2	33.5	"	45.3	46.3	101	75-125			
<b>Matrix Spike Dup (B4K1133-MSD1)</b>		<b>Source: E4K0266-01</b>			Prepared: 11/11/2024 Analyzed: 11/12/2024					
Arsenic	9.81	0.244	mg/kg	4.20	5.20	110	75-125	0.763	20	
Barium	580	8.41	"	420	160	99.9	75-125	18.8	20	
Cadmium	4.53	0.0841	"	4.20	0.165	104	75-125	9.01	20	
Copper	55.2	8.41	"	42.0	11.0	105	75-125	6.40	20	
Lead	15.8	0.841	"	4.20	10.7	121	75-125	0.846	20	
Nickel	18.3	0.841	"	4.20	13.4	116	75-125	2.00	20	
Selenium	4.77	0.219	"	4.20	0.279	107	75-125	9.58	20	
Silver	4.80	0.0841	"	4.20	0.0415	113	75-125	9.25	20	
Zinc	90.5	31.1	"	42.0	46.3	105	75-125	1.84	20	

Origins Laboratory

*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.*

Jordan A. Bynon, Project Manager



Eagle Environmental Consulting, LLC  
8000 W 44th Ave  
Wheat Ridge CO 80033

David Castro  
Project Number: [none]  
Project: Noble Pad PW Dumpline Release

---

### Notes and Definitions

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

A handwritten signature in black ink, appearing to read "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.*

---

Jordan A. Bynon, Project Manager