



Eagle Environmental Consulting, LLC

December 26, 2024

David Castro

8000 W 44th Ave

Wheat Ridge CO 80033

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 18, 2024. This project is associated with Origins project number E4K0507-01.

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





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
EX-FS-01@13'	E4K0507-01	Soil	November 18, 2024 12:35	11/18/2024 13:40

Origins Laboratory

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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

ORIGINS WORK ORDER #

EIK0507

Page 1 of 1

Client: Eagle Environmental Consulting
 Address: 8000 W 44th Ave
 Project Manager: David Castro
 Key: W=Water
 Telephone Number: 303-433-0479
 Project Name: Noble Pad PW Dumpline Release
 Project Number: _____
 Key: GIW=Groundwater
 Email Address: dcastro@eagle-environment.com
 Collected By: RS
 Key: SV=Surface Water
 Invoice/Billing Info: Bill to Prime Operator
 Key: WW=Waste Water
 S=Soil | SO=Solid | O=Oil | A=Air | G=Gas | UNP=Unpres | HCL=Hydrochloric | HNO3=Nitric | H2SO4=Sulfuric | NaOH=Sodium Hydroxide
 L=Liquid


#	Sample ID	Date Sampled	Time Sampled	# of Containers	Matrix Preservative	Analysis		Comments
1	EX-F5-01E13	11/18/24	1235	3	UNP	X		EX, SAR, pH Submerged Probe PNP
2								
3								
4								
5								WDLs needed
6								
7								
8								
9								
10								

Relinquished By: [Signature] Date: 11/18/24 Time: 1340
 Received By: [Signature] Date: 11/18/24 Time: 1340
 Relinquished By: _____ Date: _____ Time: _____
 Received By: _____ Date: _____ Time: _____

Temp Received - 1.8 Received On Ice? Yes No

Turnaround Time SAME DAY 24 Hr 48 Hr 72 Hr Standard

1725 Elk Place Denver, Co. 80211 | # 303.433.1322 | originslab.com | Temp Received - 1.8

Origins Laboratory


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Eagle Environmental Consulting, LLC
8000 W 44th Ave
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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: E4K0507

Client: Eagle

Client Project ID: Noble Pad PW Dumpline Release

Checklist Completed by: MN / WJ

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

Date/time completed: 11/18/24

Airbill #: N/A

Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____ (Describe)

Cooler Number/Temperature: 1 / 1.8 °C _____ / _____ °C _____ / _____ °C _____ / _____ °C

Thermometer ID: T007

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	/			
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 ⁽¹⁾ ?	/			
Was adequate sample volume provided ⁽¹⁾ ?	/			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		/		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	/			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	/			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	/			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	/			
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 ⁽¹⁾ ? (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)			/	
<u>Additional Comments (if any):</u>				

⁽¹⁾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.

[Signature]
Reviewed by (Project Manager)

11/18/24
Date/Time Reviewed

Origins Laboratory

[Signature]

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

EX-FS-01@13'

11/18/2024 12:35:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory
 E4K0507-01 (Soil)**

Boron (DTPA Sorbitol)

Boron	0.211		0.101	mg/L	1	B4K1908	11/19/2024	11/21/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4K1846	11/18/2024	11/18/2024	Ua
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	68.1 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4K1847	11/18/2024	11/18/2024	Ua
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Benzene	ND		0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Toluene	ND		0.00200	"	"	"	"	"	Ua
Xylenes, total	ND		0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	Ua

Surrogate: 1,2-Dichloroethane-d4	121 %		70-130			"	"	"	
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Origins Laboratory



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EX-FS-01@13'

11/18/2024 12:35:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4K0507-01 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	101 %		70-130			B4K18 47	11/18/2024	11/18/2024	
Surrogate: 4-Bromofluorobenzene	98.0 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	1.28		0.499	meq/L	10	[CALC]	11/19/2024	11/20/2024	
Magnesium	6.57		0.823	"	"	"	"	"	
Sodium	0.596		0.435	"	"	"	"	"	

PAH by 3541/8270

1-Methylnaphthalene	ND	0.00143	0.00435	mg/kg dry	1	2711484	11/26/2024	11/26/2024	U
2-Methylnaphthalene	ND	0.00143	0.00435	"	"	"	"	"	U
Acenaphthene	ND	0.00143	0.00435	"	"	"	"	"	U
Anthracene	ND	0.00143	0.00435	"	"	"	"	"	U
Benzo(a)anthracene	ND	0.00143	0.00435	"	"	"	"	"	U
Benzo(a)pyrene	ND	0.00143	0.00435	"	"	"	"	"	U
Benzo(b)fluoranthene	ND	0.00143	0.00435	"	"	"	"	"	U
Benzo(k)fluoranthene	ND	0.00143	0.00435	"	"	"	"	"	U
Chrysene	ND	0.00143	0.00435	"	"	"	"	"	U
Dibenzo(a,h)anthracene	ND	0.00143	0.00435	"	"	"	"	"	U
Fluoranthene	ND	0.00143	0.00435	"	"	"	"	"	U

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11/18/2024 12:35:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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GEL Laboratories, LLC

E4K0507-01 (Soil)

PAH by 3541/8270

Fluorene	ND	0.00143	0.00435	mg/kg dry	1	2711484	11/26/2024	11/26/2024	U
Indeno(1,2,3-cd)pyrene	ND	0.00143	0.00435	"	"	"	"	"	U
Naphthalene	ND	0.00143	0.00435	"	"	"	"	"	U
Pyrene	ND	0.00143	0.00435	"	"	"	"	"	U

Surrogate: 5-alpha-Androstane 65 % 22-135 " " "

pH in Soil by 9045D

pH 8.38 pH Units 1 B4K1912 11/19/2024 11/20/2024

SAR by 20B Saturated Paste

SAR 0.301 0.0100 SAR 1 B4K1903 11/19/2024 11/20/2024

Specific Conductance Mod. 9050A

Specific Conductance (EC) 0.991 0.00500 mmhos/cm 1 B4K1912 11/19/2024 11/20/2024

Table 915 metals by EPA 6020B

Arsenic 4.03 0.278 mg/kg 10 B4K1845 11/18/2024 11/19/2024
Barium 29.4 9.57 " " " " "

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11/18/2024 12:35:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
 E4K0507-01 (Soil)

Table 915 metals by EPA 6020B

Cadmium	ND		0.0957	mg/kg	10	B4K1845	11/18/2024	11/19/2024	
Copper	ND		9.57	"	"	"	"	"	
Lead	7.80		0.957	"	"	"	"	"	
Nickel	7.18		0.957	"	"	"	"	"	
Selenium	ND		0.249	"	"	"	"	"	
Silver	ND		0.0957	"	"	"	"	"	
Zinc	ND		35.4	"	"	"	"	"	

Total Metals 7196A

Hexavalent Chromium	ND	0.210	0.525	mg/kg dry	1	2718576	12/17/2024	12/17/2024	U
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 Project: Noble Pad PW Dumpline Release

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4K1846 - EPA 3550B										
Blank (B4K1846-BLK1)										
					Prepared: 11/18/2024 Analyzed: 11/18/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							Ua
Residual Range Organics (C28-C40)	ND	100	"							Ua
Surrogate: o-Terphenyl	20		"	24.9		80.7	50-150			

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Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4K1846 - EPA 3550B										
LCS (B4K1846-BS1)										
					Prepared: 11/18/2024 Analyzed: 11/18/2024					
Diesel (C10-C28)	924	50.0	mg/kg	1000		92.4	70-130			
Residual Range Organics (C28-C40)	985	200	"	1000		98.5	70-130			
Surrogate: o-Terphenyl	43		"	49.8		87.3	50-150			

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Jordan A. Bynon, Project Manager



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Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4K1846 - EPA 3550B

Matrix Spike (B4K1846-MS1)	Source: E4K0506-01			Prepared: 11/18/2024 Analyzed: 11/18/2024						
Diesel (C10-C28)	1070	50.0	mg/kg	1000	ND	107	70-130			
Residual Range Organics (C28-C40)	1160	200	"	1000	ND	116	70-130			
Surrogate: o-Terphenyl	51		"	49.8		103	50-150			

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Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4K1846 - EPA 3550B										
Matrix Spike Dup (B4K1846-MSD1)		Source: E4K0506-01			Prepared: 11/18/2024 Analyzed: 11/18/2024					
Diesel (C10-C28)	901	50.0	mg/kg	1000	ND	90.1	70-130	17.3	35	
Residual Range Organics (C28-C40)	981	200	"	1000	ND	98.1	70-130	16.7	35	
Surrogate: o-Terphenyl	39		"	49.8		79.1	50-150			

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Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4K1847 - EPA 5030 (soil)

Blank (B4K1847-BLK1)

Prepared: 11/18/2024 Analyzed: 11/18/2024

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							Ua
1,3,5-Trimethylbenzene	ND	0.00200	"							Ua
Benzene	ND	0.00200	"							Ua
Ethylbenzene	ND	0.00200	"							Ua
Naphthalene	ND	0.00380	"							Ua
Toluene	ND	0.00200	"							Ua
Xylenes, total	ND	0.00200	"							Ua
Gasoline Range Hydrocarbons	ND	0.200	"							Ua
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125	112		70-130			
Surrogate: Toluene-d8	0.13		"	0.125	102		70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	98.4		70-130			

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Jordan A. Bynon, Project Manager

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 Wheat Ridge CO 80033

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Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4K1847 - EPA 5030 (soil)

LCS (B4K1847-BS1)

Prepared: 11/18/2024 Analyzed: 11/18/2024

1,2,4-Trimethylbenzene	0.105	0.00200	mg/kg	0.100		105	70-130			
1,3,5-Trimethylbenzene	0.105	0.00200	"	0.100		105	70-130			
Benzene	0.0964	0.00200	"	0.100		96.4	70-130			
Ethylbenzene	0.103	0.00200	"	0.100		103	70-130			
Naphthalene	0.111	0.00380	"	0.100		111	70-130			
Toluene	0.0976	0.00200	"	0.100		97.6	70-130			
o-Xylene	0.102	0.00200	"	0.100		102	70-130			
m,p-Xylene	0.201	0.00400	"	0.200		100	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		109	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	70-130			

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 Project: Noble Pad PW Dumpline Release

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4K1847 - EPA 5030 (soil)

Matrix Spike (B4K1847-MS1)	Source: E4K0506-01			Prepared: 11/18/2024 Analyzed: 11/18/2024						
1,2,4-Trimethylbenzene	0.0955	0.00200	mg/kg	0.100	ND	95.5	70-130			
1,3,5-Trimethylbenzene	0.0952	0.00200	"	0.100	ND	95.2	70-130			
Benzene	0.0898	0.00200	"	0.100	ND	89.8	70-130			
Ethylbenzene	0.0941	0.00200	"	0.100	ND	94.1	70-130			
Naphthalene	0.108	0.00380	"	0.100	ND	108	70-130			
Toluene	0.0899	0.00200	"	0.100	ND	89.9	70-130			
o-Xylene	0.0934	0.00200	"	0.100	ND	93.4	70-130			
m,p-Xylene	0.184	0.00400	"	0.200	ND	92.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		116	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4K1847 - EPA 5030 (soil)

Matrix Spike Dup (B4K1847-MSD1)	Source: E4K0506-01				Prepared: 11/18/2024 Analyzed: 11/18/2024					
1,2,4-Trimethylbenzene	0.0937	0.00200	mg/kg	0.100	ND	93.7	70-130	1.92	20	
1,3,5-Trimethylbenzene	0.0925	0.00200	"	0.100	ND	92.5	70-130	2.92	20	
Benzene	0.0879	0.00200	"	0.100	ND	87.9	70-130	2.18	20	
Ethylbenzene	0.0920	0.00200	"	0.100	ND	92.0	70-130	2.30	20	
Naphthalene	0.104	0.00380	"	0.100	ND	104	70-130	3.37	20	
Toluene	0.0876	0.00200	"	0.100	ND	87.6	70-130	2.55	20	
o-Xylene	0.0915	0.00200	"	0.100	ND	91.5	70-130	2.08	20	
m,p-Xylene	0.180	0.00400	"	0.200	ND	89.9	70-130	2.49	20	
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		114	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		104	70-130			

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

Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control
Origins Laboratory

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4K1845 - EPA 3050B

Blank (B4K1845-BLK1)

Prepared: 11/18/2024 Analyzed: 11/19/2024

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 (B4K1845-BS1)

Prepared: 11/18/2024 Analyzed: 11/19/2024

Arsenic	5.04	0.290	mg/kg	5.00		101	80-120			
Barium	524	10.0	"	500		105	80-120			
Cadmium	5.16	0.100	"	5.00		103	80-120			
Copper	54.2	10.0	"	50.0		108	80-120			
Lead	5.19	1.00	"	5.00		104	80-120			
Nickel	5.38	1.00	"	5.00		108	80-120			
Selenium	5.29	0.260	"	5.00		106	80-120			
Silver	5.67	0.100	"	5.00		113	80-120			
Zinc	49.9	37.0	"	50.0		99.8	80-120			

Matrix Spike (B4K1845-MS1)

Source: E4K0506-03

Prepared: 11/18/2024 Analyzed: 11/19/2024

Origins Laboratory

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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
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Batch B4K1845 - EPA 3050B

Matrix Spike (B4K1845-MS1)		Source: E4K0506-03			Prepared: 11/18/2024 Analyzed: 11/19/2024					
Arsenic	7.28	0.276	mg/kg	4.76	2.29	105	75-125			
Barium	599	9.52	"	476	60.1	113	75-125			
Cadmium	5.22	0.0952	"	4.76	0.0708	108	75-125			
Copper	60.2	9.52	"	47.6	6.75	112	75-125			
Lead	10.7	0.952	"	4.76	6.16	94.5	75-125			
Nickel	12.4	0.952	"	4.76	7.80	95.9	75-125			
Selenium	5.32	0.247	"	4.76	0.0851	110	75-125			
Silver	5.76	0.0952	"	4.76	0.0251	121	75-125			
Zinc	73.1	35.2	"	47.6	29.3	92.0	75-125			

Matrix Spike Dup (B4K1845-MSD1)		Source: E4K0506-03			Prepared: 11/18/2024 Analyzed: 11/19/2024					
Arsenic	6.84	0.244	mg/kg	4.21	2.29	108	75-125	6.24	20	
Barium	539	8.42	"	421	60.1	114	75-125	10.5	20	
Cadmium	4.70	0.0842	"	4.21	0.0708	110	75-125	10.5	20	
Copper	55.2	8.42	"	42.1	6.75	115	75-125	8.66	20	
Lead	10.5	0.842	"	4.21	6.16	102	75-125	1.84	20	
Nickel	12.4	0.842	"	4.21	7.80	110	75-125	0.653	20	
Selenium	4.57	0.219	"	4.21	0.0851	106	75-125	15.3	20	
Silver	5.14	0.0842	"	4.21	0.0251	121	75-125	11.5	20	
Zinc	72.1	31.2	"	42.1	29.3	102	75-125	1.32	20	

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8000 W 44th Ave
Wheat Ridge CO 80033

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

Classical Chemistry Parameters - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4K1903 - Saturated Paste Metals

Blank (B4K1903-BLK1)

Prepared: 11/19/2024 Analyzed: 11/20/2024

Calcium PPM	ND	10.0	mg/L							
SAR	ND	0.0100	SAR							
Magnesium PPM	ND	10.0	mg/L							
Sodium PPM	ND	10.0	"							

Duplicate (B4K1903-DUP1)

Source: E4K0505-01

Prepared: 11/19/2024 Analyzed: 11/20/2024

Calcium PPM	44.2	10.0	mg/L		36.6			18.7	50	
SAR	ND	0.0100	SAR		0.192				200	
Magnesium PPM	6.32	10.0	mg/L		5.59			12.3	50	
Sodium PPM	4.42	10.0	"		4.72			6.56	50	

Batch B4K1908 - DTPA Sorbitol Preparation

Blank (B4K1908-BLK1)

Prepared: 11/19/2024 Analyzed: 11/21/2024

Boron	ND	0.100	mg/L							
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Duplicate (B4K1908-DUP1)

Source: E4K0505-01

Prepared: 11/19/2024 Analyzed: 11/21/2024

Boron	0.0562	0.0985	mg/L		0.0685			19.8	50	
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David Castro
 Project Number: [none]
 Project: Noble Pad PW Dumpline Release

Saturated Paste - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4K1912 - Saturated Paste pH/EC

Blank (B4K1912-BLK1)

Prepared: 11/19/2024 Analyzed: 11/20/2024

Specific Conductance (EC) ND 0.00500 mmhos/cm

Duplicate (B4K1912-DUP1)

Source: E4K0505-01

Prepared: 11/19/2024 Analyzed: 11/20/2024

pH	8.26		pH Units		8.30		0.483	25		
Specific Conductance (EC)	0.356	0.00500	mmhos/cm		0.303		16.1	25		

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David Castro
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 Project: Noble Pad PW Dumpline Release

PAH by 3541/8270 - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2711484 - SW846 3541

BLANK (1205930980-BLK)

Prepared: 11/26/2024 Analyzed: 11/26/2024

Naphthalene	ND	0.00330	mg/kg				-			U
Benzo(k)fluoranthene	ND	0.00330	"				-			U
Pyrene	ND	0.00330	"				-			U
Indeno(1,2,3-cd)pyrene	ND	0.00330	"				-			U
Fluorene	ND	0.00330	"				-			U
Fluoranthene	ND	0.00330	"				-			U
Dibenzo(a,h)anthracene	ND	0.00330	"				-			U
Chrysene	ND	0.00330	"				-			U
2-Methylnaphthalene	ND	0.00330	"				-			U
Benzo(b)fluoranthene	ND	0.00330	"				-			U
1-Methylnaphthalene	ND	0.00330	"				-			U
Acenaphthene	ND	0.00330	"				-			U
Anthracene	ND	0.00330	"				-			U
Benzo(a)anthracene	ND	0.00330	"				-			U
Benzo(a)pyrene	ND	0.00330	"				-			U

Surrogate: 5-alpha-Androstane

0.147

"

0.165

89

22-135

LCS (1205930981-BKS)

Prepared: 11/26/2024 Analyzed: 11/26/2024

Pyrene	0.259	0.00333	mg/kg	0.333		78	38-117			
Benzo(b)fluoranthene	0.267	0.00333	"	0.333		80	39-123			
Indeno(1,2,3-cd)pyrene	0.252	0.00333	"	0.333		76	38-133			
Fluorene	0.246	0.00333	"	0.333		74	37-115			
Fluoranthene	0.264	0.00333	"	0.333		79	39-119			
Dibenzo(a,h)anthracene	0.253	0.00333	"	0.333		76	38-132			
1-Methylnaphthalene	0.254	0.00333	"	0.333		76	39-109			
Naphthalene	0.231	0.00333	"	0.333		69	38-109			
Benzo(a)pyrene	0.264	0.00333	"	0.333		79	39-127			

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Eagle Environmental Consulting, LLC
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 Wheat Ridge CO 80033

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

PAH by 3541/8270 - 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 2711484 - SW846 3541

LCS (1205930981-BKS)

Prepared: 11/26/2024 Analyzed: 11/26/2024

Benzo(a)anthracene	0.263	0.00333	mg/kg	0.333		79	42-120			
Anthracene	0.261	0.00333	"	0.333		78	41-117			
Acenaphthene	0.239	0.00333	"	0.333		72	41-112			
2-Methylnaphthalene	0.263	0.00333	"	0.333		79	39-110			
Benzo(k)fluoranthene	0.248	0.00333	"	0.333		75	40-122			
Chrysene	0.244	0.00333	"	0.333		73	42-117			

Surrogate: 5-alpha-Androstane 0.0996 " 0.167 60 22-135

LCSD (1205930982-BKSD)

Prepared: 11/26/2024 Analyzed: 11/26/2024

Benzo(a)pyrene	0.333	0.00329	mg/kg	0.329		101	39-127	23	30	
Pyrene	0.319	0.00329	"	0.329		97	38-117	21	30	
Chrysene	0.301	0.00329	"	0.329		91	42-117	21	30	
Dibenzo(a,h)anthracene	0.330	0.00329	"	0.329		100	38-132	26	30	
Fluoranthene	0.324	0.00329	"	0.329		98	39-119	20	30	
Fluorene	0.311	0.00329	"	0.329		94	37-115	23	30	
Naphthalene	0.299	0.00329	"	0.329		91	38-109	25	30	
Indeno(1,2,3-cd)pyrene	0.328	0.00329	"	0.329		100	38-133	26	30	
Benzo(k)fluoranthene	0.313	0.00329	"	0.329		95	40-122	23	30	
Benzo(b)fluoranthene	0.329	0.00329	"	0.329		100	39-123	21	30	
1-Methylnaphthalene	0.307	0.00329	"	0.329		93	39-109	19	30	
2-Methylnaphthalene	0.315	0.00329	"	0.329		96	39-110	18	30	
Acenaphthene	0.300	0.00329	"	0.329		91	41-112	22	30	
Anthracene	0.318	0.00329	"	0.329		97	41-117	20	30	
Benzo(a)anthracene	0.328	0.00329	"	0.329		100	42-120	22	30	

Surrogate: 5-alpha-Androstane 0.118 " 0.165 72 22-135

MS (1205930983 S)

Source: 696620001

Prepared: 11/26/2024 Analyzed: 11/26/2024

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

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2711484 - SW846 3541

MS (1205930983 S)	Source: 696620001			Prepared: 11/26/2024 Analyzed: 11/26/2024						
Naphthalene	0.115	0.00415	mg/kg dry	0.415	<0.00137	28	16-126			
Benzo(k)fluoranthene	0.161	0.00415	"	0.415	<0.00137	39	18-138			
Indeno(1,2,3-cd)pyrene	0.177	0.00415	"	0.415	<0.00137	43	13-134			
Fluorene	0.146	0.00415	"	0.415	<0.00137	35	16-134			
Fluoranthene	0.162	0.00415	"	0.415	<0.00137	39	14-136			
Dibenzo(a,h)anthracene	0.179	0.00415	"	0.415	<0.00137	43	11-134			
Chrysene	0.149	0.00415	"	0.415	<0.00137	36	19-129			
Pyrene	0.159	0.00415	"	0.415	<0.00137	38	12-139			
1-Methylnaphthalene	0.131	0.00415	"	0.415	<0.00137	32	15-129			
Benzo(a)pyrene	0.168	0.00415	"	0.415	<0.00137	41	16-133			
Benzo(a)anthracene	0.173	0.00415	"	0.415	<0.00137	42	20-132			
Anthracene	0.159	0.00415	"	0.415	<0.00137	38	18-136			
Acenaphthene	0.134	0.00415	"	0.415	<0.00137	32	17-129			
2-Methylnaphthalene	0.133	0.00415	"	0.415	<0.00137	32	15-132			
Benzo(b)fluoranthene	0.159	0.00415	"	0.415	<0.00137	38	14-136			

Surrogate: 5-alpha-Androstane 0.0607 " 0.208 0.145 29 22-135

MSD (1205930984 SD)	Source: 696620001			Prepared: 11/26/2024 Analyzed: 11/26/2024						
Dibenzo(a,h)anthracene	0.262	0.00416	mg/kg dry	0.416	<0.00137	63	11-134	38	30	
Fluoranthene	0.260	0.00416	"	0.416	<0.00137	63	14-136	47	30	
Fluorene	0.245	0.00416	"	0.416	<0.00137	59	16-134	50	30	
Indeno(1,2,3-cd)pyrene	0.258	0.00416	"	0.416	<0.00137	62	13-134	37	30	
Chrysene	0.244	0.00416	"	0.416	<0.00137	59	19-129	48	30	
Pyrene	0.258	0.00416	"	0.416	<0.00137	62	12-139	48	30	
Benzo(a)pyrene	0.269	0.00416	"	0.416	<0.00137	65	16-133	46	30	
Naphthalene	0.221	0.00416	"	0.416	<0.00137	53	16-126	63	30	
1-Methylnaphthalene	0.234	0.00416	"	0.416	<0.00137	56	15-129	56	30	

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

PAH by 3541/8270 - 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 2711484 - SW846 3541

MSD (1205930984 SD)	Source: 696620001			Prepared: 11/26/2024 Analyzed: 11/26/2024						
Benzo(b)fluoranthene	0.263	0.00416	mg/kg dry	0.416	<0.00137	63	14-136	49	30	
Benzo(a)anthracene	0.268	0.00416	"	0.416	<0.00137	64	20-132	43	30	
Anthracene	0.255	0.00416	"	0.416	<0.00137	61	18-136	47	30	
Acenaphthene	0.233	0.00416	"	0.416	<0.00137	56	17-129	54	30	
2-Methylnaphthalene	0.238	0.00416	"	0.416	<0.00137	57	15-132	57	30	
Benzo(k)fluoranthene	0.251	0.00416	"	0.416	<0.00137	60	18-138	44	30	
Surrogate: 5-alpha-Androstane	0.101		"	0.208	0.145	49	22-135			

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

Total Metals 7196A - Quality Control
GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2718576 - SW846 3060A										
BLANK (1205944943-BLK)					Prepared: 12/17/2024 Analyzed: 12/17/2024					
Hexavalent Chromium	ND	0.377	mg/kg				-			U
LCS (1205944944-BKS)					Prepared: 12/17/2024 Analyzed: 12/17/2024					
Hexavalent Chromium	3.90	0.392	mg/kg	3.92		99.5	80-120			
DUP (1205944945 D)					Source: 696656001 Prepared: 12/17/2024 Analyzed: 12/17/2024					
Hexavalent Chromium	ND	0.515	mg/kg dry		<0.206		0-50	N/A	50	U
MS (1205944946 S)					Source: 696656001 Prepared: 12/17/2024 Analyzed: 12/17/2024					
Hexavalent Chromium	4.32	0.515	mg/kg dry	5.15	<0.206	82.3	75-125			
DUP (1205944947 D)					Source: 696656002 Prepared: 12/17/2024 Analyzed: 12/17/2024					
Hexavalent Chromium	ND	0.484	mg/kg dry		<0.194		0-50	N/A	50	U
MS (1205944948 S)					Source: 696656002 Prepared: 12/17/2024 Analyzed: 12/17/2024					
Hexavalent Chromium	4.26	0.448	mg/kg dry	4.48	<0.179	93.5	75-125			
ILCS (1205944949-ILCS)					Prepared: 12/17/2024 Analyzed: 12/17/2024					
Hexavalent Chromium	8.11	0.385	mg/kg	7.87		103	80-120			

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8000 W 44th Ave
Wheat Ridge CO 80033

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

Notes and Definitions

Ua Sample is Non-Detect.

U Result not detected above the detection 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.

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Jordan A. Bynon, Project Manager