

June 19, 2024

Red Hawk Petroleum

Charles Hinjosa

575 S. Dairy Ashford Rd. Suite 20

Houston TX 77079

Project Name - Staudinger Treater

Project Number - 403696967

Attached are your analytical results for Staudinger Treater received by Origins Laboratory, Inc. June 05, 2024. This project is associated with Origins project number Y406142-01.

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



Red Hawk Petroleum
575 S. Dairy Ashford Rd. Suite 20
Houston TX 77079

Charles Hinjosa
Project Number: 403696967
Project: Staudinger Treater

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
ST1	Y406142-01	Soil	June 5, 2024 10:00	06/05/2024 15:30
ST2	Y406142-02	Soil	June 5, 2024 10:00	06/05/2024 15:30
ST3	Y406142-03	Soil	June 5, 2024 10:00	06/05/2024 15:30
ST4	Y406142-04	Soil	June 5, 2024 10:00	06/05/2024 15:30
ST5	Y406142-05	Soil	June 5, 2024 10:00	06/05/2024 15:30
ST6	Y406142-06	Soil	June 5, 2024 10:00	06/05/2024 15:30
ST7	Y406142-07	Soil	June 5, 2024 10:00	06/05/2024 15:30

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.

Red Hawk Petroleum
 575 S. Dairy Ashford Rd. Suite 20
 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ORIGINS
 LABORATORY LLC

ORIGINAL WORK ORDER #
 440014

Page ___ of ___

Client: Red Hawk Petroleum
 Address: 575 N Dairy Ashford Rd, EIT Suite 210
Houston, TX 77079
 Telephone Number: Charles Hinjosa @ Petroleum
 Email Address: 713.574.7913

Project Manager: Charles Hinjosa
 Project Name: Staudinger Treater
 Project Number: 403696967
 Collected By: Luke Crawley
 Invoice/Billing Info:

Key:
 W= Water
 GW=Groundwater
 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
1	ST1	6-5-24	10:00AM	3		95		
2	ST2			3				
3	ST3			3				
4	ST4			3				
5	ST5			3				
6	ST6			3				
7	ST7			3				
8								
9								
10								

Relinquished By: e96y Date: 6-5-24 Time: 3:30
 Received By: [Signature] Date: 6-5-24 Time: 1:30

Turnaround Time: SAME DAY 24 Hr 48 Hr 72 Hr
 Standard

Received On Ice? Yes No

Temp Received- 2

For Lab Sample Receiving Only:
 1725 Elk Place Denver, Co. 80211 | # 303.433.1322 | originslab.com

Origins Laboratory, Inc.

J. Bynon

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Red Hawk Petroleum
 575 S. Dairy Ashford Rd. Suite 20
 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 4406142

Client: Red Hawk

Client Project ID: Staudinger Treater

Checklist Completed by: EHO

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

Date/time completed: 6/5/12

Airbill #: N/A

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

Cooler Number/Temperature: 112 °C / _____ °C / _____ °C (Describe) _____ °C

Thermometer ID: 1005

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<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 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	no matrix
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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 HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any): <u>No project on samples</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.

EHO
 Reviewed by (Project Manager)

6/5/12
 Date/Time Reviewed

Origins Laboratory, Inc.



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Red Hawk Petroleum
 575 S. Dairy Ashford Rd. Suite 20
 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST1
6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-01 (Soil)

Boron (DTPA Sorbitol)

Boron	1.12		0.100	mg/L	1	B4F0707	06/07/2024	06/10/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	290		25.0	mg/kg	1	B4F0632	06/06/2024	06/11/2024	
Residual Range Organics (C28-C40)	579		100	"	"	"	"	"	

Surrogate: o-Terphenyl	87.5 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4F0655	06/06/2024	06/07/2024	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	104 %		70-130			"	"	"	
Surrogate: Toluene-d8	98.2 %		70-130			"	"	"	

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ST1
6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-01 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 4-Bromofluorobenzene 110 % 70-130 B4F06 55 06/06/2024 06/07/2024

Metals by Saturated Paste by EPA 6010

Calcium	0.840	0.499	meq/L	10	[CALC]	06/07/2024	06/11/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	4.10	0.435	"	"	"	"	"

PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4F0723	06/07/2024	06/16/2024	Ua
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	Ua
Acenaphthene	ND	0.020	"	"	"	"	"	Ua
Anthracene	ND	0.020	"	"	"	"	"	Ua
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	Ua
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	Ua
Chrysene	0.044	0.020	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	Ua
Fluoranthene	ND	0.020	"	"	"	"	"	Ua
Fluorene	ND	0.020	"	"	"	"	"	Ua

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Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST1

6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-01 (Soil)

PAH by EPA 8270E

Indeno (1,2,3-cd) pyrene	ND		0.020	mg/kg	1	B4F0723	06/07/2024	06/16/2024	Ua
Naphthalene	ND		0.002	"	"	"	"	"	Ua
Pyrene	ND		0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	115 %		60-130			"	"	"	
Surrogate: Anthracene-d10	105 %		60-130			"	"	"	
Surrogate: Pyrene-d10	92.4 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	121 %		60-130			"	"	"	

pH in Soil by 9045D

pH	8.58			pH Units	1	B4F0720	06/07/2024	06/11/2024	
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SAR by 20B Saturated Paste

SAR	5.36		0.0100	SAR	1	B4F0714	06/07/2024	06/11/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.556		0.00500	mmhos/cm	1	B4F0720	06/07/2024	06/11/2024	
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Table 915 metals by EPA 6020B

Arsenic	4.77		0.277	mg/kg	10	B4F0627	06/06/2024	06/07/2024	
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Charles Hinjosa
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Project: Staudinger Treater

ST1

6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-01 (Soil)

Table 915 metals by EPA 6020B

Barium	262		9.54	mg/kg	10	B4F0627	06/06/2024	06/07/2024	
Cadmium	0.302		0.0954	"	"	"	"	"	
Copper	11.2		9.54	"	"	"	"	"	
Lead	8.33		0.954	"	"	"	"	"	
Nickel	8.27		0.954	"	"	"	"	"	
Selenium	0.283		0.248	"	"	"	"	"	
Silver	0.161		0.0954	"	"	"	"	"	
Zinc	ND		35.3	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.136	0.341	mg/kg dry	1	2626875	06/14/2024	06/17/2024	U
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Origins Laboratory, Inc.



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Red Hawk Petroleum
 575 S. Dairy Ashford Rd. Suite 20
 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST2
6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-02 (Soil)

Boron (DTPA Sorbitol)

Boron	0.751		0.101	mg/L	1	B4F0707	06/07/2024	06/10/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	331		25.0	mg/kg	1	B4F0632	06/06/2024	06/11/2024	
Residual Range Organics (C28-C40)	472		100	"	"	"	"	"	

Surrogate: o-Terphenyl	78.4 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4F0655	06/06/2024	06/07/2024	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	103 %		70-130			"	"	"	
Surrogate: Toluene-d8	99.0 %		70-130			"	"	"	

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Charles Hinjosa
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 Project: Staudinger Treater

ST2

6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-02 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 4-Bromofluorobenzene	104 %	70-130				B4F06 55	06/06/2024	06/07/2024	
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Metals by Saturated Paste by EPA 6010

Calcium	ND	0.499	meq/L	10	[CALC]		06/07/2024	06/11/2024	
Magnesium	ND	0.823	"	"	"	"	"	"	
Sodium	2.40	0.435	"	"	"	"	"	"	

PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4F0723		06/07/2024	06/16/2024	Ua
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	"	Ua
Acenaphthene	ND	0.020	"	"	"	"	"	"	Ua
Anthracene	ND	0.020	"	"	"	"	"	"	Ua
Benzo (a) anthracene	0.005	0.005	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	"	Ua
Chrysene	0.070	0.020	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	"	Ua
Fluoranthene	ND	0.020	"	"	"	"	"	"	Ua
Fluorene	ND	0.020	"	"	"	"	"	"	Ua

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 Project: Staudinger Treater

ST2

6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-02 (Soil)

PAH by EPA 8270E

Indeno (1,2,3-cd) pyrene	ND		0.020	mg/kg	1	B4F0723	06/07/2024	06/16/2024	Ua
Naphthalene	ND		0.002	"	"	"	"	"	Ua
Pyrene	ND		0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	112 %		60-130			"	"	"	
Surrogate: Anthracene-d10	105 %		60-130			"	"	"	
Surrogate: Pyrene-d10	89.3 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	114 %		60-130			"	"	"	

pH in Soil by 9045D

pH	8.54			pH Units	1	B4F0720	06/07/2024	06/11/2024	
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SAR by 20B Saturated Paste

SAR	4.25		0.0100	SAR	1	B4F0714	06/07/2024	06/11/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.340		0.00500	mmhos/cm	1	B4F0720	06/07/2024	06/11/2024	
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Table 915 metals by EPA 6020B

Arsenic	4.80		0.285	mg/kg	10	B4F0627	06/06/2024	06/07/2024	
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 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST2
6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-02 (Soil)

Table 915 metals by EPA 6020B

Barium	196		9.83	mg/kg	10	B4F0627	06/06/2024	06/07/2024	
Cadmium	0.180		0.0983	"	"	"	"	"	
Copper	10.2		9.83	"	"	"	"	"	
Lead	6.99		0.983	"	"	"	"	"	
Nickel	8.18		0.983	"	"	"	"	"	
Selenium	ND		0.256	"	"	"	"	"	
Silver	ND		0.0983	"	"	"	"	"	
Zinc	ND		36.4	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.118	0.295	mg/kg dry	1	2626875	06/14/2024	06/17/2024	U
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 575 S. Dairy Ashford Rd. Suite 20
 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST3
6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-03 (Soil)

Boron (DTPA Sorbitol)

Boron	0.403		0.100	mg/L	1	B4F0707	06/07/2024	06/10/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4F0632	06/06/2024	06/12/2024	Ua
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	78.4 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4F0655	06/06/2024	06/07/2024	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	110 %		70-130			"	"	"	
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 575 S. Dairy Ashford Rd. Suite 20
 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST3

6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-03 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	98.9 %		70-130			B4F06 55	06/06/2024	06/07/2024	
Surrogate: 4-Bromofluorobenzene	109 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	4.05	0.499	meq/L	10	[CALC]		06/07/2024	06/11/2024	
Magnesium	2.56	0.823	"	"	"	"	"	"	
Sodium	3.04	0.435	"	"	"	"	"	"	

PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4F0723		06/07/2024	06/16/2024	Ua
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	"	Ua
Acenaphthene	ND	0.020	"	"	"	"	"	"	Ua
Anthracene	ND	0.020	"	"	"	"	"	"	Ua
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	"	Ua
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	"	Ua
Chrysene	ND	0.020	"	"	"	"	"	"	Ua
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	"	Ua
Fluoranthene	ND	0.020	"	"	"	"	"	"	Ua

Origins Laboratory, Inc.



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Red Hawk Petroleum
 575 S. Dairy Ashford Rd. Suite 20
 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST3
6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-03 (Soil)

PAH by EPA 8270E

Fluorene	ND		0.020	mg/kg	1	B4F0723	06/07/2024	06/16/2024	Ua
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	Ua
Naphthalene	ND		0.002	"	"	"	"	"	Ua
Pyrene	ND		0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	103 %		60-130			"	"	"	
Surrogate: Anthracene-d10	101 %		60-130			"	"	"	
Surrogate: Pyrene-d10	108 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	113 %		60-130			"	"	"	

pH in Soil by 9045D

pH	8.18			pH Units	1	B4F0720	06/07/2024	06/11/2024	
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SAR by 20B Saturated Paste

SAR	1.67		0.0100	SAR	1	B4F0714	06/07/2024	06/11/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.05		0.00500	mmhos/cm	1	B4F0720	06/07/2024	06/11/2024	
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Table 915 metals by EPA 6020B

Origins Laboratory, Inc.



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Red Hawk Petroleum
 575 S. Dairy Ashford Rd. Suite 20
 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST3

6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-03 (Soil)

Table 915 metals by EPA 6020B

Arsenic	3.53		0.270	mg/kg	10	B4F0627	06/06/2024	06/07/2024	
Barium	43.7		9.30	"	"	"	"	"	
Cadmium	ND		0.0930	"	"	"	"	"	
Copper	ND		9.30	"	"	"	"	"	
Lead	4.08		0.930	"	"	"	"	"	
Nickel	5.13		0.930	"	"	"	"	"	
Selenium	ND		0.242	"	"	"	"	"	
Silver	ND		0.0930	"	"	"	"	"	
Zinc	ND		34.4	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.126	0.314	mg/kg dry	1	2626875	06/14/2024	06/17/2024	U
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Origins Laboratory, Inc.



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Red Hawk Petroleum
 575 S. Dairy Ashford Rd. Suite 20
 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST4
6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-04 (Soil)

Boron (DTPA Sorbitol)

Boron	0.262		0.0998	mg/L	1	B4F0707	06/07/2024	06/10/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4F0632	06/06/2024	06/11/2024	Ua
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	82.5 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4F0655	06/06/2024	06/07/2024	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	101 %		70-130			"	"	"	
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Origins Laboratory, Inc.



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Red Hawk Petroleum
 575 S. Dairy Ashford Rd. Suite 20
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Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST4

6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-04 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	98.6 %		70-130			B4F06 55	06/06/2024	06/07/2024	
Surrogate: 4-Bromofluorobenzene	108 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	0.907		0.499	meq/L	10	[CALC]	06/07/2024	06/11/2024	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

PAH by EPA 8270E

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4F0723	06/07/2024	06/16/2024	Ua
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	Ua
Acenaphthene	ND		0.020	"	"	"	"	"	Ua
Anthracene	ND		0.020	"	"	"	"	"	Ua
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	Ua
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	Ua
Chrysene	ND		0.020	"	"	"	"	"	Ua
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	Ua
Fluoranthene	ND		0.020	"	"	"	"	"	Ua

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Red Hawk Petroleum
 575 S. Dairy Ashford Rd. Suite 20
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Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST4
6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-04 (Soil)

PAH by EPA 8270E

Fluorene	ND		0.020	mg/kg	1	B4F0723	06/07/2024	06/16/2024	Ua
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	Ua
Naphthalene	ND		0.002	"	"	"	"	"	Ua
Pyrene	ND		0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	103 %		60-130			"	"	"	
Surrogate: Anthracene-d10	99.0 %		60-130			"	"	"	
Surrogate: Pyrene-d10	107 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	108 %		60-130			"	"	"	

pH in Soil by 9045D

pH	8.40			pH Units	1	B4F0720	06/07/2024	06/11/2024	
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SAR by 20B Saturated Paste

SAR	0.267		0.0100	SAR	1	B4F0714	06/07/2024	06/11/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.174		0.00500	mmhos/cm	1	B4F0720	06/07/2024	06/11/2024	
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Table 915 metals by EPA 6020B

Origins Laboratory, Inc.



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Red Hawk Petroleum
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 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST4
6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-04 (Soil)

Table 915 metals by EPA 6020B

Arsenic	2.87		0.273	mg/kg	10	B4F0627	06/06/2024	06/07/2024	
Barium	48.9		9.42	"	"	"	"	"	
Cadmium	ND		0.0942	"	"	"	"	"	
Copper	ND		9.42	"	"	"	"	"	
Lead	4.72		0.942	"	"	"	"	"	
Nickel	5.93		0.942	"	"	"	"	"	
Selenium	ND		0.245	"	"	"	"	"	
Silver	ND		0.0942	"	"	"	"	"	
Zinc	ND		34.8	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.0909	0.227	mg/kg dry	1	2626875	06/14/2024	06/17/2024	U
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Origins Laboratory, Inc.



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Red Hawk Petroleum
 575 S. Dairy Ashford Rd. Suite 20
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Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST5
6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-05 (Soil)

Boron (DTPA Sorbitol)

Boron	0.216		0.0997	mg/L	1	B4F0707	06/07/2024	06/10/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4F0632	06/06/2024	06/12/2024	Ua
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	37.6 %		50-150			"	"	"	S-DUP
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4F0655	06/06/2024	06/10/2024	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	97.9 %		70-130			"	"	"	
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Origins Laboratory, Inc.



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Red Hawk Petroleum
 575 S. Dairy Ashford Rd. Suite 20
 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST5
6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-05 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	98.3 %		70-130			B4F06 55	06/06/2024	06/10/2024	
Surrogate: 4-Bromofluorobenzene	107 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	0.768		0.499	meq/L	10	[CALC]	06/07/2024	06/11/2024	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

PAH by EPA 8270E

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4F0723	06/07/2024	06/16/2024	Ua
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	Ua
Acenaphthene	ND		0.020	"	"	"	"	"	Ua
Anthracene	ND		0.020	"	"	"	"	"	Ua
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	Ua
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	Ua
Chrysene	ND		0.020	"	"	"	"	"	Ua
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	Ua
Fluoranthene	ND		0.020	"	"	"	"	"	Ua

Origins Laboratory, Inc.



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Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST5
6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-05 (Soil)

PAH by EPA 8270E

Fluorene	ND		0.020	mg/kg	1	B4F0723	06/07/2024	06/16/2024	Ua
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	Ua
Naphthalene	ND		0.002	"	"	"	"	"	Ua
Pyrene	ND		0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	102 %		60-130			"	"	"	
Surrogate: Anthracene-d10	101 %		60-130			"	"	"	
Surrogate: Pyrene-d10	106 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	107 %		60-130			"	"	"	

pH in Soil by 9045D

pH	8.35			pH Units	1	B4F0720	06/07/2024	06/11/2024	
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SAR by 20B Saturated Paste

SAR	0.238		0.0100	SAR	1	B4F0714	06/07/2024	06/11/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.153		0.00500	mmhos/cm	1	B4F0720	06/07/2024	06/11/2024	
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Table 915 metals by EPA 6020B

Origins Laboratory, Inc.



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Red Hawk Petroleum
 575 S. Dairy Ashford Rd. Suite 20
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Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST5

6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-05 (Soil)

Table 915 metals by EPA 6020B

Arsenic	3.19		0.255	mg/kg	10	B4F0627	06/06/2024	06/07/2024	
Barium	51.1		8.81	"	"	"	"	"	
Cadmium	ND		0.0881	"	"	"	"	"	
Copper	ND		8.81	"	"	"	"	"	
Lead	7.15		0.881	"	"	"	"	"	
Nickel	6.23		0.881	"	"	"	"	"	
Selenium	ND		0.229	"	"	"	"	"	
Silver	ND		0.0881	"	"	"	"	"	
Zinc	32.9		32.6	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.111	0.277	mg/kg dry	1	2626875	06/14/2024	06/17/2024	U
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Origins Laboratory, Inc.



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Red Hawk Petroleum
 575 S. Dairy Ashford Rd. Suite 20
 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST6
6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-06 (Soil)

Boron (DTPA Sorbitol)

Boron	0.195		0.100	mg/L	1	B4F0707	06/07/2024	06/10/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4F0632	06/06/2024	06/11/2024	Ua
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	80.7 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	0.00206		0.00200	mg/kg	1	B4F0655	06/06/2024	06/08/2024	
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	0.445		0.200	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	99.0 %		70-130			"	"	"	
Surrogate: Toluene-d8	99.4 %		70-130			"	"	"	

Origins Laboratory, Inc.



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Red Hawk Petroleum
 575 S. Dairy Ashford Rd. Suite 20
 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST6

6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-06 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 4-Bromofluorobenzene	107 %		70-130			B4F06 55	06/06/2024	06/08/2024	
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Metals by Saturated Paste by EPA 6010

Calcium	1.19		0.499	meq/L	10	[CALC]	06/07/2024	06/11/2024	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	3.23		0.435	"	"	"	"	"	

PAH by EPA 8270E

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4F0723	06/07/2024	06/16/2024	Ua
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	Ua
Acenaphthene	ND		0.020	"	"	"	"	"	Ua
Anthracene	ND		0.020	"	"	"	"	"	Ua
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	Ua
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	Ua
Chrysene	ND		0.020	"	"	"	"	"	Ua
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	Ua
Fluoranthene	ND		0.020	"	"	"	"	"	Ua
Fluorene	ND		0.020	"	"	"	"	"	Ua

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Red Hawk Petroleum
 575 S. Dairy Ashford Rd. Suite 20
 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST6
6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-06 (Soil)

PAH by EPA 8270E

Indeno (1,2,3-cd) pyrene	ND		0.020	mg/kg	1	B4F0723	06/07/2024	06/16/2024	Ua
Naphthalene	ND		0.002	"	"	"	"	"	Ua
Pyrene	ND		0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	103 %		60-130			"	"	"	
Surrogate: Anthracene-d10	99.9 %		60-130			"	"	"	
Surrogate: Pyrene-d10	105 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	104 %		60-130			"	"	"	

pH in Soil by 9045D

pH	8.41			pH Units	1	B4F0720	06/07/2024	06/11/2024	
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SAR by 20B Saturated Paste

SAR	3.66		0.0100	SAR	1	B4F0714	06/07/2024	06/11/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.622		0.00500	mmhos/cm	1	B4F0720	06/07/2024	06/11/2024	
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Table 915 metals by EPA 6020B

Arsenic	1.58		0.258	mg/kg	10	B4F0627	06/06/2024	06/07/2024	
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Origins Laboratory, Inc.



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Red Hawk Petroleum
 575 S. Dairy Ashford Rd. Suite 20
 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST6
6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-06 (Soil)

Table 915 metals by EPA 6020B

Barium	126		8.91	mg/kg	10	B4F0627	06/06/2024	06/07/2024	
Cadmium	ND		0.0891	"	"	"	"	"	
Copper	ND		8.91	"	"	"	"	"	
Lead	4.36		0.891	"	"	"	"	"	
Nickel	3.35		0.891	"	"	"	"	"	
Selenium	ND		0.232	"	"	"	"	"	
Silver	ND		0.0891	"	"	"	"	"	
Zinc	ND		33.0	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.104	0.260	mg/kg dry	1	2626875	06/14/2024	06/17/2024	U
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Origins Laboratory, Inc.



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Red Hawk Petroleum
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 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST7

6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-07 (Soil)

Boron (DTPA Sorbitol)

Boron	0.179		0.100	mg/L	1	B4F0707	06/07/2024	06/10/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4F0632	06/06/2024	06/11/2024	Ua
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	71.6 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4F0655	06/06/2024	06/08/2024	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	97.9 %		70-130			"	"	"	
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Red Hawk Petroleum
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 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST7

6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-07 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	100 %		70-130			B4F06 55	06/06/2024	06/08/2024	
Surrogate: 4-Bromofluorobenzene	107 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	1.14		0.499	meq/L	10	[CALC]	06/07/2024	06/11/2024	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	1.82		0.435	"	"	"	"	"	

PAH by EPA 8270E

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4F0723	06/07/2024	06/16/2024	Ua
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	Ua
Acenaphthene	ND		0.020	"	"	"	"	"	Ua
Anthracene	ND		0.020	"	"	"	"	"	Ua
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	Ua
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	Ua
Chrysene	ND		0.020	"	"	"	"	"	Ua
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	Ua
Fluoranthene	ND		0.020	"	"	"	"	"	Ua

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Red Hawk Petroleum
 575 S. Dairy Ashford Rd. Suite 20
 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST7
6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-07 (Soil)

PAH by EPA 8270E

Fluorene	ND		0.020	mg/kg	1	B4F0723	06/07/2024	06/16/2024	Ua
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	Ua
Naphthalene	ND		0.002	"	"	"	"	"	Ua
Pyrene	ND		0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	102 %		60-130			"	"	"	
Surrogate: Anthracene-d10	101 %		60-130			"	"	"	
Surrogate: Pyrene-d10	104 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	95.8 %		60-130			"	"	"	

pH in Soil by 9045D

pH	8.36			pH Units	1	B4F0720	06/07/2024	06/11/2024	
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SAR by 20B Saturated Paste

SAR	2.12		0.0100	SAR	1	B4F0714	06/07/2024	06/11/2024	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.430		0.00500	mmhos/cm	1	B4F0720	06/07/2024	06/11/2024	
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Table 915 metals by EPA 6020B

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Red Hawk Petroleum
 575 S. Dairy Ashford Rd. Suite 20
 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

ST7

6/5/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y406142-07 (Soil)

Table 915 metals by EPA 6020B

Arsenic	1.99		0.249	mg/kg	10	B4F0627	06/06/2024	06/07/2024	
Barium	141		8.58	"	"	"	"	"	
Cadmium	0.105		0.0858	"	"	"	"	"	
Copper	ND		8.58	"	"	"	"	"	
Lead	5.05		0.858	"	"	"	"	"	
Nickel	3.92		0.858	"	"	"	"	"	
Selenium	ND		0.223	"	"	"	"	"	
Silver	ND		0.0858	"	"	"	"	"	
Zinc	ND		31.8	"	"	"	"	"	

Total Metals by 7196A

Hexavalent Chromium	ND	0.0957	0.239	mg/kg dry	1	2626875	06/14/2024	06/17/2024	U
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Red Hawk Petroleum
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Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

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
Batch B4F0632 - EPA 3550B										
Blank (B4F0632-BLK1)										
					Prepared: 06/06/2024 Analyzed: 06/11/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							Ua
Residual Range Organics (C28-C40)	ND	100	"							Ua
Surrogate: o-Terphenyl	19		"	24.9		77.3	50-150			

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Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

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 B4F0632 - EPA 3550B

LCS (B4F0632-BS1)

Prepared: 06/06/2024 Analyzed: 06/11/2024

Diesel (C10-C28)	778	50.0	mg/kg	1000		77.8	70-130			
Residual Range Organics (C28-C40)	877	200	"	1000		87.7	70-130			
Surrogate: o-Terphenyl	39		"	49.8		78.1	50-150			

Origins Laboratory, Inc.



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Red Hawk Petroleum
 575 S. Dairy Ashford Rd. Suite 20
 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

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 B4F0632 - EPA 3550B

Matrix Spike (B4F0632-MS1)	Source: Y406141-01			Prepared: 06/06/2024 Analyzed: 06/11/2024						
Diesel (C10-C28)	716	50.0	mg/kg	1000	ND	71.6	70-130			
Residual Range Organics (C28-C40)	841	200	"	1000	ND	84.1	70-130			
Surrogate: o-Terphenyl	42		"	49.8		85.3	50-150			

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 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

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
Batch B4F0632 - EPA 3550B										
Matrix Spike Dup (B4F0632-MSD1)					Source: Y406141-01					Prepared: 06/06/2024 Analyzed: 06/11/2024
Diesel (C10-C28)	744	50.0	mg/kg	1000	ND	74.4	70-130	3.85	35	
Residual Range Organics (C28-C40)	838	200	"	1000	ND	83.8	70-130	0.399	35	
Surrogate: o-Terphenyl	45		"	49.8		89.6	50-150			

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 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

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 B4F0655 - EPA 5030 (soil)

Blank (B4F0655-BLK1)

Prepared: 06/06/2024 Analyzed: 06/07/2024

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	0.12		"	0.125		98.5	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		107	70-130			

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Red Hawk Petroleum
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 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

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 B4F0655 - EPA 5030 (soil)

LCS (B4F0655-BS1)

Prepared: 06/06/2024 Analyzed: 06/07/2024

1,2,4-Trimethylbenzene	0.0971	0.00200	mg/kg	0.100		97.1	70-130			
1,3,5-Trimethylbenzene	0.0961	0.00200	"	0.100		96.1	70-130			
Benzene	0.0882	0.00200	"	0.100		88.2	70-130			
Ethylbenzene	0.0872	0.00200	"	0.100		87.2	70-130			
Naphthalene	0.104	0.00380	"	0.100		104	70-130			
Toluene	0.0871	0.00200	"	0.100		87.1	70-130			
o-Xylene	0.0933	0.00200	"	0.100		93.3	70-130			
m,p-Xylene	0.184	0.00400	"	0.200		91.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		97.2	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		100	70-130			

Origins Laboratory, Inc.



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 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

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 B4F0655 - EPA 5030 (soil)

Matrix Spike (B4F0655-MS1)	Source: Y406140-01			Prepared: 06/06/2024 Analyzed: 06/07/2024						
1,2,4-Trimethylbenzene	0.103	0.00200	mg/kg	0.100	0.000880	102	70-130			
1,3,5-Trimethylbenzene	0.103	0.00200	"	0.100	0.000580	102	70-130			
Benzene	0.0959	0.00200	"	0.100	ND	95.9	70-130			
Ethylbenzene	0.0934	0.00200	"	0.100	0.00112	92.2	70-130			
Naphthalene	0.112	0.00380	"	0.100	0.00100	111	70-130			
Toluene	0.0951	0.00200	"	0.100	0.00338	91.7	70-130			
o-Xylene	0.101	0.00200	"	0.100	0.00128	99.5	70-130			
m,p-Xylene	0.196	0.00400	"	0.200	0.00332	96.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		100	70-130			

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Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

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 B4F0655 - EPA 5030 (soil)

Matrix Spike Dup (B4F0655-MSD1)	Source: Y406140-01			Prepared: 06/06/2024 Analyzed: 06/07/2024						
1,2,4-Trimethylbenzene	0.0962	0.00200	mg/kg	0.100	0.000880	95.3	70-130	6.83	20	
1,3,5-Trimethylbenzene	0.0951	0.00200	"	0.100	0.000580	94.5	70-130	7.69	20	
Benzene	0.0907	0.00200	"	0.100	ND	90.7	70-130	5.66	20	
Ethylbenzene	0.0875	0.00200	"	0.100	0.00112	86.4	70-130	6.50	20	
Naphthalene	0.107	0.00380	"	0.100	0.00100	106	70-130	4.76	20	
Toluene	0.0900	0.00200	"	0.100	0.00338	86.6	70-130	5.49	20	
o-Xylene	0.0948	0.00200	"	0.100	0.00128	93.5	70-130	6.12	20	
m,p-Xylene	0.185	0.00400	"	0.200	0.00332	91.1	70-130	5.62	20	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.8	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		100	70-130			

Origins Laboratory, Inc.



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 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

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 B4F0627 - EPA 3050B

Blank (B4F0627-BLK1)

Prepared: 06/06/2024 Analyzed: 06/07/2024

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 (B4F0627-BS1)

Prepared: 06/06/2024 Analyzed: 06/07/2024

Arsenic	5.88	0.290	mg/kg	5.00		118	80-120			
Barium	577	10.0	"	500		115	80-120			
Cadmium	5.91	0.100	"	5.00		118	80-120			
Copper	59.6	10.0	"	50.0		119	80-120			
Lead	5.78	1.00	"	5.00		116	80-120			
Nickel	5.92	1.00	"	5.00		118	80-120			
Selenium	11.0	0.260	"	9.50		116	80-120			
Silver	5.89	0.100	"	5.00		118	80-120			
Zinc	57.0	37.0	"	50.0		114	80-120			

Matrix Spike (B4F0627-MS1)

Source: Y406143-01

Prepared: 06/06/2024 Analyzed: 06/07/2024

Origins Laboratory, Inc.



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Red Hawk Petroleum
 575 S. Dairy Ashford Rd. Suite 20
 Houston TX 77079

Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

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 B4F0627 - EPA 3050B

Matrix Spike (B4F0627-MS1)		Source: Y406143-01			Prepared: 06/06/2024 Analyzed: 06/07/2024					
Arsenic	10.1	0.268	mg/kg	4.62	3.02	154	75-125			QM-07
Barium	612	9.23	"	462	73.7	117	75-125			
Cadmium	5.41	0.0923	"	4.62	0.0920	115	75-125			
Copper	60.8	9.23	"	46.2	5.84	119	75-125			
Lead	11.8	0.923	"	4.62	4.99	148	75-125			QM-07
Nickel	12.2	0.923	"	4.62	5.94	135	75-125			QM-07
Selenium	9.98	0.240	"	8.77	0.0785	113	75-125			
Silver	5.28	0.0923	"	4.62	ND	114	75-125			
Zinc	74.7	34.2	"	46.2	21.7	115	75-125			

Matrix Spike Dup (B4F0627-MSD1)		Source: Y406143-01			Prepared: 06/06/2024 Analyzed: 06/07/2024					
Arsenic	9.49	0.255	mg/kg	4.39	3.02	147	75-125	6.46	20	QM-07
Barium	617	8.78	"	439	73.7	124	75-125	0.731	20	
Cadmium	5.51	0.0878	"	4.39	0.0920	123	75-125	1.85	20	
Copper	61.1	8.78	"	43.9	5.84	126	75-125	0.548	20	QM-07
Lead	11.4	0.878	"	4.39	4.99	145	75-125	3.83	20	QM-07
Nickel	12.2	0.878	"	4.39	5.94	142	75-125	0.0500	20	QM-07
Selenium	10.3	0.228	"	8.34	0.0785	122	75-125	2.75	20	
Silver	5.41	0.0878	"	4.39	ND	123	75-125	2.42	20	
Zinc	76.4	32.5	"	43.9	21.7	124	75-125	2.13	20	

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Red Hawk Petroleum
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Charles Hinjosa
 Project Number: 403696967
 Project: Staudinger Treater

EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B4F0723 - EPA 3580

Blank (B4F0723-BLK1)

Prepared: 06/07/2024 Analyzed: 06/15/2024

1-Methylnaphthalene	ND	0.002	mg/kg							Ua
2-Methylnaphthalene	ND	0.002	"							Ua
Acenaphthene	ND	0.020	"							Ua
Anthracene	ND	0.020	"							Ua
Benzo (a) anthracene	ND	0.005	"							Ua
Benzo (a) pyrene	ND	0.020	"							Ua
Benzo (b) fluoranthene	ND	0.020	"							Ua
Benzo (g,h,i) perylene	ND	0.020	"							Ua
Benzo (k) fluoranthene	ND	0.020	"							Ua
Chrysene	ND	0.020	"							Ua
Dibenz (a,h) anthracene	ND	0.020	"							Ua
Fluoranthene	ND	0.020	"							Ua
Fluorene	ND	0.020	"							Ua
Indeno (1,2,3-cd) pyrene	ND	0.020	"							Ua
Naphthalene	ND	0.002	"							Ua
Phenanthrene	ND	0.020	"							Ua
Pyrene	ND	0.020	"							Ua
Surrogate: Fluorene-d10	210		ug/kg	200		104	60-130			
Surrogate: Anthracene-d10	200		"	200		101	60-130			
Surrogate: Pyrene-d10	200		"	200		102	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		104	60-130			

LCS (B4F0723-BS1)

Prepared: 06/07/2024 Analyzed: 06/15/2024

1-Methylnaphthalene	0.186	0.002	mg/kg	0.200		92.9	70-130			
2-Methylnaphthalene	0.185	0.002	"	0.200		92.4	70-130			
Acenaphthene	0.188	0.020	"	0.200		93.8	70-130			
Anthracene	0.194	0.020	"	0.200		97.1	70-130			

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EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B4F0723 - EPA 3580

LCS (B4F0723-BS1)

Prepared: 06/07/2024 Analyzed: 06/15/2024

Benzo (a) anthracene	0.219	0.005	mg/kg	0.200		110	70-130			
Benzo (a) pyrene	0.199	0.020	"	0.200		99.4	70-130			
Benzo (b) fluoranthene	0.184	0.020	"	0.200		91.8	70-130			
Benzo (g,h,i) perylene	0.177	0.020	"	0.200		88.6	70-130			
Benzo (k) fluoranthene	0.194	0.020	"	0.200		97.0	70-130			
Chrysene	0.209	0.020	"	0.200		104	70-130			
Dibenz (a,h) anthracene	0.196	0.020	"	0.200		98.1	70-130			
Fluoranthene	0.202	0.020	"	0.200		101	70-130			
Fluorene	0.192	0.020	"	0.200		96.1	70-130			
Indeno (1,2,3-cd) pyrene	0.226	0.020	"	0.200		113	70-130			
Naphthalene	0.186	0.002	"	0.200		93.2	70-130			
Phenanthrene	0.184	0.020	"	0.200		92.2	70-130			
Pyrene	0.192	0.020	"	0.200		95.9	70-130			

Surrogate: Fluorene-d10	210		ug/kg	200		104	60-130			
Surrogate: Anthracene-d10	200		"	200		101	60-130			
Surrogate: Pyrene-d10	200		"	200		102	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		104	60-130			

Matrix Spike (B4F0723-MS1)

Source: Y406141-02

Prepared: 06/07/2024 Analyzed: 06/18/2024

1-Methylnaphthalene	0.192	0.002	mg/kg	0.200	ND	96.1	70-130			
2-Methylnaphthalene	0.193	0.002	"	0.200	ND	96.3	70-130			
Acenaphthene	0.200	0.020	"	0.200	ND	99.8	70-130			
Anthracene	0.208	0.020	"	0.200	ND	104	70-130			
Benzo (a) anthracene	0.249	0.005	"	0.200	ND	124	70-130			
Benzo (a) pyrene	0.208	0.020	"	0.200	ND	104	70-130			
Benzo (b) fluoranthene	0.179	0.020	"	0.200	ND	89.4	70-130			
Benzo (g,h,i) perylene	0.195	0.020	"	0.200	ND	97.3	70-130			

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 Project: Staudinger Treater

EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B4F0723 - EPA 3580

Matrix Spike (B4F0723-MS1)		Source: Y406141-02			Prepared: 06/07/2024 Analyzed: 06/18/2024					
Benzo (k) fluoranthene	0.190	0.020	mg/kg	0.200	ND	94.8	70-130			
Chrysene	0.211	0.020	"	0.200	ND	105	70-130			
Dibenz (a,h) anthracene	0.210	0.020	"	0.200	ND	105	70-130			
Fluoranthene	0.229	0.020	"	0.200	ND	114	70-130			
Fluorene	0.205	0.020	"	0.200	ND	103	70-130			
Indeno (1,2,3-cd) pyrene	0.224	0.020	"	0.200	ND	112	70-130			
Naphthalene	0.195	0.002	"	0.200	ND	97.4	70-130			
Phenanthrene	0.197	0.020	"	0.200	ND	98.5	70-130			
Pyrene	0.205	0.020	"	0.200	ND	103	70-130			
Surrogate: Fluorene-d10	210		ug/kg	200		104	60-130			
Surrogate: Anthracene-d10	210		"	200		105	60-130			
Surrogate: Pyrene-d10	200		"	200		99.6	60-130			
Surrogate: Benzo (a) pyrene-d12	190		"	200		96.8	60-130			

Matrix Spike Dup (B4F0723-MSD1)		Source: Y406141-02			Prepared: 06/07/2024 Analyzed: 06/18/2024					
1-Methylnaphthalene	0.202	0.002	mg/kg	0.200	ND	101	70-130	4.96	20	
2-Methylnaphthalene	0.202	0.002	"	0.200	ND	101	70-130	4.59	20	
Acenaphthene	0.206	0.020	"	0.200	ND	103	70-130	3.27	20	
Anthracene	0.211	0.020	"	0.200	ND	106	70-130	1.57	20	
Benzo (a) anthracene	0.243	0.005	"	0.200	ND	121	70-130	2.43	20	
Benzo (a) pyrene	0.215	0.020	"	0.200	ND	108	70-130	3.64	20	
Benzo (b) fluoranthene	0.183	0.020	"	0.200	ND	91.5	70-130	2.39	20	
Benzo (g,h,i) perylene	0.197	0.020	"	0.200	ND	98.4	70-130	1.21	20	
Benzo (k) fluoranthene	0.195	0.020	"	0.200	ND	97.4	70-130	2.72	20	
Chrysene	0.217	0.020	"	0.200	ND	108	70-130	2.98	20	
Dibenz (a,h) anthracene	0.208	0.020	"	0.200	ND	104	70-130	1.01	20	
Fluoranthene	0.227	0.020	"	0.200	ND	114	70-130	0.512	20	

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EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B4F0723 - EPA 3580

Matrix Spike Dup (B4F0723-MSD1)		Source: Y406141-02			Prepared: 06/07/2024 Analyzed: 06/18/2024					
Fluorene	0.206	0.020	mg/kg	0.200	ND	103	70-130	0.107	20	
Indeno (1,2,3-cd) pyrene	0.222	0.020	"	0.200	ND	111	70-130	1.11	20	
Naphthalene	0.203	0.002	"	0.200	ND	102	70-130	4.20	20	
Phenanthrene	0.203	0.020	"	0.200	ND	102	70-130	3.10	20	
Pyrene	0.213	0.020	"	0.200	ND	107	70-130	3.85	20	
Surrogate: Fluorene-d10	200		ug/kg	200		99.7	60-130			
Surrogate: Anthracene-d10	210		"	200		105	60-130			
Surrogate: Pyrene-d10	210		"	200		103	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		103	60-130			

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 Project: Staudinger Treater

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 B4F0707 - DTPA Sorbitol Preparation

Blank (B4F0707-BLK1)

Prepared: 06/07/2024 Analyzed: 06/10/2024

Boron ND 0.100 mg/L

Duplicate (B4F0707-DUP1)

Source: Y406140-01

Prepared: 06/07/2024 Analyzed: 06/10/2024

Boron 0.307 0.101 mg/L 0.294 4.34 50

Batch B4F0714 - Saturated Paste Metals

Blank (B4F0714-BLK1)

Prepared: 06/07/2024 Analyzed: 06/11/2024

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 (B4F0714-DUP1)

Source: Y406140-01

Prepared: 06/07/2024 Analyzed: 06/11/2024

SAR ND 0.0100 SAR 1.34 200

Calcium PPM 24.9 10.0 mg/L 30.6 20.4 50

Magnesium PPM 29.5 10.0 " 36.2 20.3 50

Sodium PPM 43.4 10.0 " 46.1 6.06 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
Batch B4F0720 - Saturated Paste pH/EC										
Blank (B4F0720-BLK1)					Prepared: 06/07/2024 Analyzed: 06/11/2024					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
Duplicate (B4F0720-DUP1)					Source: Y406140-01 Prepared: 06/07/2024 Analyzed: 06/11/2024					
pH	8.45		pH Units		8.45			0.00	25	
Specific Conductance (EC)	0.597	0.00500	mmhos/cm		0.683			13.3	25	

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 Project: Staudinger Treater

Total Metals by 7196A - Quality Control
GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2626875 - SW846 3060A										
BLANK (1205762043-BLK)					Prepared: 06/14/2024 Analyzed: 06/17/2024					
Hexavalent Chromium	ND	0.225	mg/kg				-			U
LCS (1205762044-BKS)					Prepared: 06/14/2024 Analyzed: 06/17/2024					
Hexavalent Chromium	3.44	0.347	mg/kg	3.47		99.3	80-120			
DUP (1205762045 D)					Source: 670683015 Prepared: 06/14/2024 Analyzed: 06/17/2024					
Hexavalent Chromium	ND	0.294	mg/kg dry		<0.117		0-50	N/A	50	U
MS (1205762046 S)					Source: 670683015 Prepared: 06/14/2024 Analyzed: 06/17/2024					
Hexavalent Chromium	2.01	0.294	mg/kg dry	2.94	<0.117	66.1	75-125			
DUP (1205762047 D)					Source: Y406142-07 Prepared: 06/14/2024 Analyzed: 06/17/2024					
Hexavalent Chromium	ND	0.240	mg/kg dry		<0.0959		0-50	N/A	50	U
MS (1205762048 S)					Source: Y406142-07 Prepared: 06/14/2024 Analyzed: 06/17/2024					
Hexavalent Chromium	1.91	0.240	mg/kg dry	2.40	<0.0959	78.2	75-125			
ILCS (1205762049-ILCS)					Prepared: 06/14/2024 Analyzed: 06/17/2024					
Hexavalent Chromium	5.19	0.256	mg/kg	5.22		99.5	80-120			

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Charles Hinjosa
Project Number: 403696967
Project: Staudinger Treater

Notes and Definitions

Ua Sample is Non-Detect.

U Result not detected above the detection limit

S-DUP Duplicate analysis confirmed surrogate failure due to matrix effects.

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 on 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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