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June 28, 2024

Jessica Johannsen  
PDC Energy  
1775 Sherman Street  
Suite 3000  
Denver, CO 80203

Work Order: **HS24060954**

Laboratory Results for: **Fritzler 29-22**

Dear Jessica Johannsen,

ALS Environmental received 1 sample(s) on Jun 15, 2024 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: DAYNA.FISHER  
Tyler Monroe

**Client:** PDC Energy  
**Project:** Fritzler 29-22  
**Work Order:** HS24060954

**SAMPLE SUMMARY**

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Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS24060954-01	Fritzler 29-22	Water		14-Jun-2024 11:00	15-Jun-2024 09:00	<input type="checkbox"/>

**Client:** PDC Energy  
**Project:** Fritzler 29-22  
**Work Order:** HS24060954

**CASE NARRATIVE**

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**GC Semivolatiles by Method RSK-175**

**Batch ID: R470521**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

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**GC Semivolatiles by Method SW8015M**

**Batch ID: 213670**

**Sample ID: Fritzler 29-22 (HS24060954-01)**

- The surrogate recoveries could not be determined due to dilution below the calibration range.

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**GC Volatiles by Method SW8015**

**Batch ID: R470342**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

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**GCMS Volatiles by Method SW8260**

**Batch ID: R470314**

**Sample ID: VLCSW-240621**

- Insufficient sample received to perform MS/MSD. An LCS/LCSD was performed as batch quality control.

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**Metals by Method E200.8**

**Batch ID: 213919**

**Sample ID: HS24061250-01MS**

- MS and MSD are for an unrelated sample

**Sample ID: HS24061270-02MS**

- MS and MSD are for an unrelated sample

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**WetChemistry by Method SM2320B**

**Batch ID: R470778**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

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**WetChemistry by Method E300**

**Batch ID: R470551**

**Sample ID: HS24061564-02MS**

- MS and MSD are for an unrelated sample (Sulfate)

**Sample ID: HS24061564-04MS**

- MS and MSD are for an unrelated sample (Chloride,Sulfate)

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**Client:** PDC Energy  
**Project:** Fritzler 29-22  
**Work Order:** HS24060954

**CASE NARRATIVE**

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**WetChemistry by Method M2540C**

**Batch ID: R469874**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
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Client: PDC Energy  
 Project: Fritzler 29-22  
 Sample ID: Fritzler 29-22  
 Collection Date: 14-Jun-2024 11:00

**ANALYTICAL REPORT**  
 WorkOrder:HS24060954  
 Lab ID:HS24060954-01  
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW LEVEL VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: TS		
Benzene	2,600		500	ug/L	500	23-Jun-2024 21:13
Ethylbenzene	820		500	ug/L	500	23-Jun-2024 21:13
m,p-Xylene	13,000		1000	ug/L	500	23-Jun-2024 21:13
o-Xylene	3,700		500	ug/L	500	23-Jun-2024 21:13
Toluene	10,000		500	ug/L	500	23-Jun-2024 21:13
Xylenes, Total	17,000		1500	ug/L	500	23-Jun-2024 21:13
Surr: 1,2-Dichloroethane-d4	102		70-126	%REC	500	23-Jun-2024 21:13
Surr: 4-Bromofluorobenzene	102		77-113	%REC	500	23-Jun-2024 21:13
Surr: Dibromofluoromethane	108		77-123	%REC	500	23-Jun-2024 21:13
Surr: Toluene-d8	111		82-127	%REC	500	23-Jun-2024 21:13
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: TS		
Gasoline Range Organics	183		25.0	mg/L	500	24-Jun-2024 15:27
Surr: 4-Bromofluorobenzene	106		70-123	%REC	500	24-Jun-2024 15:27
<b>DISSOLVED GASES BY RSK-175</b>		<b>Method:RSK-175</b>		Analyst: RG		
Ethane	2,460		200	ug/L	200	26-Jun-2024 15:06
Methane	5,500		100	ug/L	200	26-Jun-2024 15:06
Propane	1,830		200	ug/L	200	26-Jun-2024 15:06
<b>TPH DRO/ORO BY SW8015C</b>		<b>Method:SW8015M</b>		Prep:SW3511 / 17-Jun-2024		Analyst: SAM
TPH (Diesel Range)	2,100		53	mg/L	1000	17-Jun-2024 17:16
Surr: 2-Fluorobiphenyl	0	JS	60-135	%REC	1000	17-Jun-2024 17:16
<b>TOTAL METALS BY E200.8, REV 5.4, 1994</b>		<b>Method:E200.8</b>		Prep:E200.8 / 24-Jun-2024		Analyst: JC
Calcium	162		2.50	mg/L	5	26-Jun-2024 23:04
Magnesium	6.96		2.50	mg/L	5	26-Jun-2024 23:04
Potassium	5.43		2.50	mg/L	5	26-Jun-2024 23:04
Sodium	583		1.00	mg/L	5	26-Jun-2024 23:04
<b>ANIONS BY E300.0, REV 2.1, 1993</b>		<b>Method:E300</b>		Analyst: TH		
Chloride	425		5.00	mg/L	10	27-Jun-2024 01:54
Sulfate	241		5.00	mg/L	10	27-Jun-2024 01:54
<b>TOTAL DISSOLVED SOLIDS BY SM2540C -2011</b>		<b>Method:M2540C</b>		Analyst: MH		
Total Dissolved Solids (Residue, Filterable)	3,250		10.0	mg/L	1	19-Jun-2024 09:30
<b>ALKALINITY BY -2011</b>		<b>Method:SM2320B</b>		Analyst: AR		
Alkalinity, Bicarbonate (As CaCO3)	33.4		5.00	mg/L	1	28-Jun-2024 10:24
Alkalinity, Carbonate (As CaCO3)	ND		5.00	mg/L	1	28-Jun-2024 10:24
Alkalinity, Total (As CaCO3)	33.4		5.00	mg/L	1	28-Jun-2024 10:24

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

**Client:** PDC Energy  
**Project:** Fritzler 29-22  
**WorkOrder:** HS24060954

<b>Batch ID:</b> 213670	<b>Start Date:</b> 17 Jun 2024 08:00	<b>End Date:</b> 17 Jun 2024 08:00
<b>Method:</b> SW3511	<b>Prep Code:</b> 3511_DRO	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24060954-01		30.96 (mL)	2 (mL)	0.0646	40 mL Amber

<b>Batch ID:</b> 213919	<b>Start Date:</b> 24 Jun 2024 10:00	<b>End Date:</b> 24 Jun 2024 10:00
<b>Method:</b> TOTAL METALS PREP BY E200.8, REV 5.4, 1994	<b>Prep Code:</b> 200.8PR	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24060954-01		10 (mL)	10 (mL)	1	250 mL plastic, HNO3 to pH <2

**Client:** PDC Energy  
**Project:** Fritzier 29-22  
**WorkOrder:** HS24060954

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
<b>Batch ID:</b> 213670 ( 0 )		<b>Test Name :</b> TPH DRO/ORO BY SW8015C			<b>Matrix:</b> Water	
HS24060954-01	Fritzier 29-22	14 Jun 2024 11:00		17 Jun 2024 08:00	17 Jun 2024 17:16	1000
<b>Batch ID:</b> 213919 ( 0 )		<b>Test Name :</b> TOTAL METALS BY E200.8, REV 5.4, 1994			<b>Matrix:</b> Water	
HS24060954-01	Fritzier 29-22	14 Jun 2024 11:00		24 Jun 2024 10:00	26 Jun 2024 23:04	5
<b>Batch ID:</b> R469874 ( 0 )		<b>Test Name :</b> TOTAL DISSOLVED SOLIDS BY SM2540C-2011			<b>Matrix:</b> Water	
HS24060954-01	Fritzier 29-22	14 Jun 2024 11:00			19 Jun 2024 09:30	1
<b>Batch ID:</b> R470314 ( 0 )		<b>Test Name :</b> LOW LEVEL VOLATILES BY SW8260C			<b>Matrix:</b> Water	
HS24060954-01	Fritzier 29-22	14 Jun 2024 11:00			23 Jun 2024 21:13	500
<b>Batch ID:</b> R470342 ( 0 )		<b>Test Name :</b> GASOLINE RANGE ORGANICS BY SW8015C			<b>Matrix:</b> Water	
HS24060954-01	Fritzier 29-22	14 Jun 2024 11:00			24 Jun 2024 15:27	500
<b>Batch ID:</b> R470521 ( 0 )		<b>Test Name :</b> DISSOLVED GASES BY RSK-175			<b>Matrix:</b> Water	
HS24060954-01	Fritzier 29-22	14 Jun 2024 11:00			26 Jun 2024 15:06	200
<b>Batch ID:</b> R470551 ( 0 )		<b>Test Name :</b> ANIONS BY E300.0, REV 2.1, 1993			<b>Matrix:</b> Water	
HS24060954-01	Fritzier 29-22	14 Jun 2024 11:00			27 Jun 2024 01:54	10
<b>Batch ID:</b> R470778 ( 0 )		<b>Test Name :</b> ALKALINITY BY -2011			<b>Matrix:</b> Water	
HS24060954-01	Fritzier 29-22	14 Jun 2024 11:00			28 Jun 2024 10:24	1

**Client:** PDC Energy  
**Project:** Fritzler 29-22  
**WorkOrder:** HS24060954

**QC BATCH REPORT**

<b>Batch ID:</b> 213670 ( 0 )	<b>Instrument:</b> FID-16	<b>Method:</b> TPH DRO/ORO BY SW8015C
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<b>MBLK</b>	Sample ID: <b>MBLK-213670</b>	Units: <b>mg/L</b>	Analysis Date: <b>17-Jun-2024 13:16</b>							
Client ID:	Run ID: <b>FID-16_469724</b>	SeqNo: <b>8082770</b>	PrepDate: <b>17-Jun-2024</b>	DF: <b>1</b>						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	ND	0.050								
<i>Surr: 2-Fluorobiphenyl</i>	<i>0.05759</i>	<i>0.0050</i>	<i>0.06</i>	<i>0</i>	<i>96.0</i>	<i>60 - 135</i>				

<b>LCS</b>	Sample ID: <b>LCS-213670</b>	Units: <b>mg/L</b>	Analysis Date: <b>17-Jun-2024 13:45</b>							
Client ID:	Run ID: <b>FID-16_469724</b>	SeqNo: <b>8082771</b>	PrepDate: <b>17-Jun-2024</b>	DF: <b>1</b>						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	0.589	0.050	0.6	0	98.2	70 - 130				
<i>Surr: 2-Fluorobiphenyl</i>	<i>0.05269</i>	<i>0.0050</i>	<i>0.06</i>	<i>0</i>	<i>87.8</i>	<i>60 - 135</i>				

<b>LCSD</b>	Sample ID: <b>LCSD-213670</b>	Units: <b>mg/L</b>	Analysis Date: <b>17-Jun-2024 14:15</b>							
Client ID:	Run ID: <b>FID-16_469724</b>	SeqNo: <b>8082772</b>	PrepDate: <b>17-Jun-2024</b>	DF: <b>1</b>						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	0.5586	0.050	0.6	0	93.1	70 - 130	0.589	5.29	20	
<i>Surr: 2-Fluorobiphenyl</i>	<i>0.05127</i>	<i>0.0050</i>	<i>0.06</i>	<i>0</i>	<i>85.5</i>	<i>60 - 135</i>	<i>0.05269</i>	<i>2.72</i>	<i>20</i>	

The following samples were analyzed in this batch: HS24060954-01

**Client:** PDC Energy  
**Project:** Fritzler 29-22  
**WorkOrder:** HS24060954

**QC BATCH REPORT**

**Batch ID:** R470521 ( 0 )      **Instrument:** FID-4      **Method:** DISSOLVED GASES BY RSK-175

<b>MBLK</b>		Sample ID: <b>MBLK-240626</b>		Units: <b>ug/L</b>		Analysis Date: <b>26-Jun-2024 09:30</b>			
Client ID:		Run ID: <b>FID-4_470521</b>		SeqNo: <b>8100766</b>		PrepDate:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Ethane	ND	1.00							
Methane	ND	0.500							
Propane	ND	1.50							

<b>LCS</b>		Sample ID: <b>LCS-240626</b>		Units: <b>ug/L</b>		Analysis Date: <b>26-Jun-2024 09:45</b>			
Client ID:		Run ID: <b>FID-4_470521</b>		SeqNo: <b>8100767</b>		PrepDate:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Ethane	16.81	1.00	18.04	0	93.2	75 - 125			
Methane	8.881	0.500	9.647	0	92.1	75 - 125			
Propane	21.92	1.50	26.46	0	82.8	75 - 125			

<b>LCSD</b>		Sample ID: <b>LCSD-240626</b>		Units: <b>ug/L</b>		Analysis Date: <b>26-Jun-2024 10:00</b>			
Client ID:		Run ID: <b>FID-4_470521</b>		SeqNo: <b>8100768</b>		PrepDate:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Ethane	16.7	1.00	18.04	0	92.6	75 - 125	16.81	0.689	30
Methane	8.79	0.500	9.647	0	91.1	75 - 125	8.881	1.04	30
Propane	21.65	1.50	26.46	0	81.8	75 - 125	21.92	1.23	30

The following samples were analyzed in this batch: HS24060954-01

**Client:** PDC Energy  
**Project:** Fritzier 29-22  
**WorkOrder:** HS24060954

**QC BATCH REPORT**

Batch ID: R470342 ( 0 )		Instrument: FID-20		Method: GASOLINE RANGE ORGANICS BY SW8015C						
<b>MBLK</b>	Sample ID: <b>MBLK-240624</b>	Units: <b>mg/L</b>			Analysis Date: <b>24-Jun-2024 11:55</b>					
Client ID:	Run ID: <b>FID-20_470342</b>	SeqNo: <b>8096325</b>		PrepDate:			DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	ND	0.0500								
<i>Surr: 4-Bromofluorobenzene</i>	<i>0.09303</i>	<i>0.00500</i>	<i>0.1</i>	<i>0</i>	<i>93.0</i>	<i>70 - 121</i>				
<b>LCS</b>	Sample ID: <b>LCS-240624</b>	Units: <b>mg/L</b>			Analysis Date: <b>24-Jun-2024 11:28</b>					
Client ID:	Run ID: <b>FID-20_470342</b>	SeqNo: <b>8096323</b>		PrepDate:			DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8648	0.0500	1	0	86.5	76 - 124				
<i>Surr: 4-Bromofluorobenzene</i>	<i>0.1107</i>	<i>0.00500</i>	<i>0.1</i>	<i>0</i>	<i>111</i>	<i>52 - 138</i>				
<b>LCSD</b>	Sample ID: <b>LCSD-240624</b>	Units: <b>mg/L</b>			Analysis Date: <b>24-Jun-2024 11:41</b>					
Client ID:	Run ID: <b>FID-20_470342</b>	SeqNo: <b>8096324</b>		PrepDate:			DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8373	0.0500	1	0	83.7	76 - 124	0.8648	3.23	20	
<i>Surr: 4-Bromofluorobenzene</i>	<i>0.08803</i>	<i>0.00500</i>	<i>0.1</i>	<i>0</i>	<i>88.0</i>	<i>52 - 138</i>	<i>0.1107</i>	<i>22.8</i>	<i>20</i>	<i>R</i>

The following samples were analyzed in this batch: HS24060954-01

**Client:** PDC Energy  
**Project:** Fritzler 29-22  
**WorkOrder:** HS24060954

**QC BATCH REPORT**

**Batch ID:** 213919 ( 0 )      **Instrument:** ICPMS07      **Method:** TOTAL METALS BY E200.8, REV 5.4, 1994

<b>MBLK</b>		Sample ID: <b>MBLK-213919</b>		Units: <b>ug/L</b>		Analysis Date: <b>27-Jun-2024 11:52</b>			
Client ID:		Run ID: <b>ICPMS07_470579</b>		SeqNo: <b>8102627</b>		PrepDate: <b>24-Jun-2024</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Calcium	ND	500							
Magnesium	ND	500							
Potassium	ND	500							
Sodium	ND	200							

<b>LCS</b>		Sample ID: <b>LCS-213919</b>		Units: <b>ug/L</b>		Analysis Date: <b>26-Jun-2024 22:30</b>			
Client ID:		Run ID: <b>ICPMS07_470483</b>		SeqNo: <b>8101399</b>		PrepDate: <b>24-Jun-2024</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Calcium	4804	500	5000	0	96.1	85 - 115			
Magnesium	4802	500	5000	0	96.0	85 - 115			
Potassium	4788	500	5000	0	95.8	85 - 115			
Sodium	4979	200	5000	0	99.6	85 - 115			

<b>MS</b>		Sample ID: <b>HS24061270-02MS</b>		Units: <b>ug/L</b>		Analysis Date: <b>26-Jun-2024 22:49</b>			
Client ID:		Run ID: <b>ICPMS07_470483</b>		SeqNo: <b>8101407</b>		PrepDate: <b>24-Jun-2024</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Calcium	265400	500	5000	247600	355	70 - 130			SEO
Magnesium	45360	500	5000	38780	132	70 - 130			SO
Potassium	45020	500	5000	38340	134	70 - 130			SO
Sodium	441600	200	5000	414500	541	70 - 130			SEO

<b>MS</b>		Sample ID: <b>HS24061250-01MS</b>		Units: <b>ug/L</b>		Analysis Date: <b>26-Jun-2024 22:35</b>			
Client ID:		Run ID: <b>ICPMS07_470483</b>		SeqNo: <b>8101401</b>		PrepDate: <b>24-Jun-2024</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Calcium	55780	500	5000	45400	208	70 - 130			SO
Magnesium	8283	500	5000	3334	99.0	70 - 130			
Potassium	9823	500	5000	4717	102	70 - 130			
Sodium	60440	200	5000	49810	213	70 - 130			SO

**Client:** PDC Energy  
**Project:** Fritzier 29-22  
**WorkOrder:** HS24060954

**QC BATCH REPORT**

**Batch ID:** 213919 ( 0 )      **Instrument:** ICPMS07      **Method:** TOTAL METALS BY E200.8, REV 5.4, 1994

<b>MSD</b>		Sample ID: <b>HS24061270-02MSD</b>			Units: <b>ug/L</b>		Analysis Date: <b>26-Jun-2024 22:52</b>			
Client ID:		Run ID: <b>ICPMS07_470483</b>			SeqNo: <b>8101408</b>		PrepDate: <b>24-Jun-2024</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	265600	500	5000	247600	360	70 - 130	265400	0.0857	20	SEO
Magnesium	45900	500	5000	38780	142	70 - 130	45360	1.18	20	SO
Potassium	45460	500	5000	38340	142	70 - 130	45020	0.967	20	SO
Sodium	445700	200	5000	414500	624	70 - 130	441600	0.93	20	SEO

<b>MSD</b>		Sample ID: <b>HS24061250-01MSD</b>			Units: <b>ug/L</b>		Analysis Date: <b>26-Jun-2024 22:37</b>			
Client ID:		Run ID: <b>ICPMS07_470483</b>			SeqNo: <b>8101402</b>		PrepDate: <b>24-Jun-2024</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	55120	500	5000	45400	194	70 - 130	55780	1.2	20	SO
Magnesium	8193	500	5000	3334	97.2	70 - 130	8283	1.09	20	
Potassium	9693	500	5000	4717	99.5	70 - 130	9823	1.33	20	
Sodium	59350	200	5000	49810	191	70 - 130	60440	1.83	20	SO

The following samples were analyzed in this batch: HS24060954-01

**Client:** PDC Energy  
**Project:** Fritzler 29-22  
**WorkOrder:** HS24060954

**QC BATCH REPORT**

<b>Batch ID:</b> R470314 ( 0 )		<b>Instrument:</b> VOA9		<b>Method:</b> LOW LEVEL VOLATILES BY SW8260C					
<b>MBLK</b>	Sample ID: <b>VBLKW-240621</b>	Units: <b>ug/L</b>			Analysis Date: <b>23-Jun-2024 14:48</b>				
Client ID:	Run ID: <b>VOA9_470314</b>	SeqNo: <b>8095404</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	ND	1.0							
Ethylbenzene	ND	1.0							
m,p-Xylene	ND	2.0							
o-Xylene	ND	1.0							
Toluene	ND	1.0							
Xylenes, Total	ND	3.0							
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>49.42</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>98.8</i>	<i>70 - 123</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>50.65</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>101</i>	<i>77 - 113</i>			
<i>Surr: Dibromofluoromethane</i>	<i>52.74</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>105</i>	<i>73 - 126</i>			
<i>Surr: Toluene-d8</i>	<i>55.58</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>111</i>	<i>81 - 120</i>			

<b>LCS</b>	Sample ID: <b>VLCSW-240621</b>	Units: <b>ug/L</b>			Analysis Date: <b>23-Jun-2024 13:44</b>				
Client ID:	Run ID: <b>VOA9_470314</b>	SeqNo: <b>8095402</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Benzene	17.4	1.0	20	0	87.0	74 - 120			
Ethylbenzene	18.5	1.0	20	0	92.5	77 - 117			
m,p-Xylene	38.92	2.0	40	0	97.3	77 - 122			
o-Xylene	19.84	1.0	20	0	99.2	75 - 119			
Toluene	18.4	1.0	20	0	92.0	77 - 118			
Xylenes, Total	58.76	3.0	60	0	97.9	75 - 122			
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>52.06</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>104</i>	<i>70 - 123</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>53.66</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>107</i>	<i>77 - 113</i>			
<i>Surr: Dibromofluoromethane</i>	<i>54.21</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>108</i>	<i>73 - 126</i>			
<i>Surr: Toluene-d8</i>	<i>57.35</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>115</i>	<i>81 - 120</i>			

**Client:** PDC Energy  
**Project:** Fritzler 29-22  
**WorkOrder:** HS24060954

**QC BATCH REPORT**

**Batch ID:** R470314 ( 0 )      **Instrument:** VOA9      **Method:** LOW LEVEL VOLATILES BY SW8260C

LCSD	Sample ID: <b>VLCS DW-240621</b>	Units: <b>ug/L</b>			Analysis Date: <b>23-Jun-2024 14:05</b>					
Client ID:	Run ID: <b>VOA9_470314</b>	SeqNo: <b>8095403</b>	PrepDate:	DF: <b>1</b>						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	17.27	1.0	20	0	86.4	74 - 120	17.4	0.732	20	
Ethylbenzene	18.3	1.0	20	0	91.5	77 - 117	18.5	1.08	20	
m,p-Xylene	37.89	2.0	40	0	94.7	77 - 122	38.92	2.69	20	
o-Xylene	19.5	1.0	20	0	97.5	75 - 119	19.84	1.71	20	
Toluene	18.24	1.0	20	0	91.2	77 - 118	18.4	0.881	20	
Xylenes, Total	57.39	3.0	60	0	95.7	75 - 122	58.76	2.36	20	
<i>Surr: 1,2-Dichloroethane-d4</i>	52.43	1.0	50	0	105	70 - 123	52.06	0.708	20	
<i>Surr: 4-Bromofluorobenzene</i>	53.84	1.0	50	0	108	77 - 113	53.66	0.347	20	
<i>Surr: Dibromofluoromethane</i>	56.06	1.0	50	0	112	73 - 126	54.21	3.35	20	
<i>Surr: Toluene-d8</i>	58.36	1.0	50	0	117	81 - 120	57.35	1.76	20	

The following samples were analyzed in this batch: HS24060954-01

**Client:** PDC Energy  
**Project:** Fritzler 29-22  
**WorkOrder:** HS24060954

**QC BATCH REPORT**

**Batch ID:** R469874 ( 0 )      **Instrument:** Balance1      **Method:** TOTAL DISSOLVED SOLIDS BY SM2540C-2011

<b>MBLK</b>	Sample ID: <b>WMBLK-06192024</b>	Units: <b>mg/L</b>			Analysis Date: <b>19-Jun-2024 09:30</b>				
Client ID:	Run ID: <b>Balance1_469874</b>	SeqNo: <b>8086157</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Total Dissolved Solids (Residue, Filterable)      ND      10.0

<b>LCS</b>	Sample ID: <b>WLCS-06192024</b>	Units: <b>mg/L</b>			Analysis Date: <b>19-Jun-2024 09:30</b>				
Client ID:	Run ID: <b>Balance1_469874</b>	SeqNo: <b>8086156</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Total Dissolved Solids (Residue, Filterable)      930      10.0      1000      0      93.0      85 - 115

<b>DUP</b>	Sample ID: <b>HS24061010-01 DUP</b>	Units: <b>mg/L</b>			Analysis Date: <b>19-Jun-2024 09:30</b>				
Client ID:	Run ID: <b>Balance1_469874</b>	SeqNo: <b>8086148</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Total Dissolved Solids (Residue, Filterable)      420      10.0                          422      0.475      20

<b>DUP</b>	Sample ID: <b>HS24060967-02 DUP</b>	Units: <b>mg/L</b>			Analysis Date: <b>19-Jun-2024 09:30</b>				
Client ID:	Run ID: <b>Balance1_469874</b>	SeqNo: <b>8086146</b>		PrepDate:		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Total Dissolved Solids (Residue, Filterable)      12240      10.0                          12260      0.163      20

The following samples were analyzed in this batch: HS24060954-01

**Client:** PDC Energy  
**Project:** Fritzler 29-22  
**WorkOrder:** HS24060954

**QC BATCH REPORT**

Batch ID: R470551 ( 0 )		Instrument: ICS-Integrion		Method: ANIONS BY E300.0, REV 2.1, 1993						
<b>MBLK</b>	Sample ID: <b>MBLK</b>	Units: <b>mg/L</b>			Analysis Date: <b>26-Jun-2024 21:28</b>					
Client ID:		Run ID: <b>ICS-Integrion_470551</b>		SeqNo: <b>8101791</b>		PrepDate:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.500								
Sulfate	ND	0.500								
<b>LCS</b>	Sample ID: <b>LCS</b>	Units: <b>mg/L</b>			Analysis Date: <b>26-Jun-2024 21:39</b>					
Client ID:		Run ID: <b>ICS-Integrion_470551</b>		SeqNo: <b>8101792</b>		PrepDate:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.71	0.500	20	0	104	90 - 110				
Sulfate	21.61	0.500	20	0	108	90 - 110				
<b>MS</b>	Sample ID: <b>HS24061564-04MS</b>	Units: <b>mg/L</b>			Analysis Date: <b>27-Jun-2024 00:37</b>					
Client ID:		Run ID: <b>ICS-Integrion_470551</b>		SeqNo: <b>8101816</b>		PrepDate:		DF: <b>10</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	468.6	5.00	100	405.2	63.4	80 - 120				SO
Sulfate	498.7	5.00	100	460.3	38.4	80 - 120				SO
<b>MS</b>	Sample ID: <b>HS24061564-02MS</b>	Units: <b>mg/L</b>			Analysis Date: <b>26-Jun-2024 23:26</b>					
Client ID:		Run ID: <b>ICS-Integrion_470551</b>		SeqNo: <b>8101806</b>		PrepDate:		DF: <b>10</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	260.3	5.00	100	166.4	94.0	80 - 120				
Sulfate	421.6	5.00	100	343.5	78.1	80 - 120				S
<b>MSD</b>	Sample ID: <b>HS24061564-04MSD</b>	Units: <b>mg/L</b>			Analysis Date: <b>27-Jun-2024 00:43</b>					
Client ID:		Run ID: <b>ICS-Integrion_470551</b>		SeqNo: <b>8101817</b>		PrepDate:		DF: <b>10</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	470.1	5.00	100	405.2	64.9	80 - 120	468.6	0.328	20	SO
Sulfate	505.6	5.00	100	460.3	45.3	80 - 120	498.7	1.37	20	SO

Client: PDC Energy  
 Project: Fritzler 29-22  
 WorkOrder: HS24060954

**QC BATCH REPORT**

Batch ID: R470551 ( 0 )      Instrument: ICS-Integrion      Method: ANIONS BY E300.0, REV 2.1, 1993

<b>MSD</b>	Sample ID: <b>HS24061564-02MSD</b>	Units: <b>mg/L</b>			Analysis Date: <b>26-Jun-2024 23:32</b>					
Client ID:	Run ID: <b>ICS-Integrion_470551</b>	SeqNo: <b>8101807</b>	PrepDate:	DF: <b>10</b>						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	259.7	5.00	100	166.4	93.3	80 - 120	260.3	0.254	20	
Sulfate	422.6	5.00	100	343.5	79.1	80 - 120	421.6	0.233	20	S

The following samples were analyzed in this batch: HS24060954-01

**Client:** PDC Energy  
**Project:** Fritzler 29-22  
**WorkOrder:** HS24060954

**QC BATCH REPORT**

<b>Batch ID:</b> R470778 ( 0 )	<b>Instrument:</b> Skalar 03	<b>Method:</b> ALKALINITY BY -2011
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<b>MBLK</b>	Sample ID: <b>MBLK-06282024</b>	Units: <b>mg/L</b>	Analysis Date: <b>28-Jun-2024 09:20</b>							
Client ID:	Run ID: <b>Skalar 03_470778</b>	SeqNo: <b>8107018</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.00								
Alkalinity, Carbonate (As CaCO3)	ND	5.00								
Alkalinity, Hydroxide (As CaCO3)	ND	5.00								
Alkalinity, Total (As CaCO3)	ND	5.00								

<b>LCS</b>	Sample ID: <b>LCS-06282024</b>	Units: <b>mg/L</b>	Analysis Date: <b>28-Jun-2024 10:09</b>							
Client ID:	Run ID: <b>Skalar 03_470778</b>	SeqNo: <b>8107012</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Carbonate (As CaCO3)	981.6	5.00	1000	0	98.2	85 - 115				
Alkalinity, Total (As CaCO3)	982	5.00	1000	0	98.2	85 - 115				

<b>LCSD</b>	Sample ID: <b>LCSD-06282024</b>	Units: <b>mg/L</b>	Analysis Date: <b>28-Jun-2024 10:15</b>							
Client ID:	Run ID: <b>Skalar 03_470778</b>	SeqNo: <b>8107013</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Carbonate (As CaCO3)	983.4	5.00	1000	0	98.3	85 - 115	981.6	0.183	20	
Alkalinity, Total (As CaCO3)	985.8	5.00	1000	0	98.6	85 - 115	982	0.386	20	

<b>DUP</b>	Sample ID: <b>HS24060949-01DUP</b>	Units: <b>mg/L</b>	Analysis Date: <b>28-Jun-2024 09:51</b>							
Client ID:	Run ID: <b>Skalar 03_470778</b>	SeqNo: <b>8107021</b>	PrepDate: DF: <b>1</b>							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	717.8	5.00					726.3	1.18	20	
Alkalinity, Carbonate (As CaCO3)	32.4	5.00					32	1.24	20	
Alkalinity, Hydroxide (As CaCO3)	ND	5.00					0	0	20	
Alkalinity, Total (As CaCO3)	750.2	5.00					758.3	1.07	20	

The following samples were analyzed in this batch: HS24060954-01

**Client:** PDC Energy  
**Project:** Fritzler 29-22  
**WorkOrder:** HS24060954

**QUALIFIERS,  
ACRONYMS, UNITS**

<b>Qualifier</b>	<b>Description</b>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

<b>Acronym</b>	<b>Description</b>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<b>Unit Reported</b>	<b>Description</b>
mg/L	Milligrams per Liter

**CERTIFICATIONS,ACCREDITATIONS & LICENSES**

<b>Agency</b>	<b>Number</b>	<b>Expire Date</b>
Arizona	AZ0793	27-May-2025
Arkansas	88-00356_2024	27-Mar-2025
California	2919; 2025	30-Apr-2025
Florida	E87611-38	30-Jun-2024
Illinois	2000322023-11	30-Jun-2024
Kansas	E-10352 2023-2024	31-Jul-2024
Kentucky	123043	30-Apr-2025
Louisiana	03087 2023-2024	30-Jun-2025
Maine	2024017	23-Jun-2026
Maryland	343; 2023-2024	30-Jun-2024
Michigan	9971	30-Apr-2025
North Carolina	624 - 2024	31-Dec-2024
Oklahoma	2023-140	31-Aug-2024
Tennessee	04016	30-Apr-2025
Texas	T104704231 TX-C24-00130	30-Apr-2025
Utah	TX026932023-14	31-Jul-2024

Sample Receipt Checklist

Work Order ID: HS24060954

Date/Time Received: 15-Jun-2024 09:00

Client Name: PDC Energy 80203

Received by: Ruben Estrada-Jr

Completed By: /S/ Hoa Tran	15-Jun-2024 10:43	Reviewed by: /S/ Tyler Monroe	17-Jun-2024 08:40
eSignature	Date/Time	eSignature	Date/Time

Matrices: w

Carrier name: FedEx

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present
- Custody seals intact on sample bottles? Yes  No  Not Present
- VOA/TX1005/TX1006 Solids in hermetically sealed vials? Yes  No  Not Present
- Chain of custody present? Yes  No  1 Page(s)
- Chain of custody signed when relinquished and received? Yes  No
- Samplers name present on COC? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Container/Temp Blank temperature in compliance? Yes  No

Temperature(s)/Thermometer(s):	0.1uc/0.2c	ir31
Cooler(s)/Kit(s):	52172	
Date/Time sample(s) sent to storage:	06/15/2024 1056	
Water - VOA vials have zero headspace?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted by:		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:



**ALS Environmental**  
 965 E 11th St  
 Loveland, CO 80537  
 PH: 970-305-1648

**Chain-of-Custody**

WORKORDER #  
 PAGE 1 of 1

<b>SAMPLER</b> Jeff Braden		<b>DATE</b> 6/14/24		<b>PAGE</b> 1 of 1	
<b>PROJECT NAME</b> Fritzler 29-22	<b>FACILITY ID</b> 123-25843	<b>TURNAROUND</b> Standard		<b>DISPOSAL</b> By Lab or Return to Client	
<b>PROJECT No.</b> 09F2073197	<b>EDD FORMAT</b> ECMC EDD, LTE				
<b>COMPANY NAME</b> PDC Energy	<b>PURCHASE ORDER</b> N/A				
<b>SEND REPORT TO</b> Jessiac Johannsen, Cassie Gonzalez, Raul Sanchez, Evan Varnas	<b>BILL TO COMPANY</b> PDC Energy				
<b>ADDRESS</b> 1775 Sherman ST, Suite 3000	<b>INVOICE ATTN TO</b> Christopher Schelich				
<b>CITY / STATE / ZIP</b> Denver, CO 80203	<b>ADDRESS</b> 1775 Sherman Street, Suite 3000				
<b>PHONE</b> 303-860-5815	<b>CITY / STATE / ZIP</b> Denver, Colorado				
<b>FAX</b>	<b>PHONE</b> 970-415-1881				
<b>E-MAIL</b> Jessica.Johannsen@chevron.com Cassie.Gonzales@chevron.com Raul.Sanchez@chevron.com Evan.Varnas@chevron.com	<b>FAX</b>				
	<b>E-MAIL</b> Christopher.Schelich@pdce.com				

Dissolved Methane, Ethane, Propane  
 BTEX & TPH GRO  
 TPH DRO  
 Alkalinity, Carbonate, Bicarbonate, Total  
 Total Cations - see comments  
 Total Anions - see comments  
 Total Dissolved Solids

**HS24060954**  
 PDC Energy  
 Fritzler 29-22



Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	RSK 175	SW8260_25	SW8015M	SM2320B	EPA200.7/208	EPA 300.0	SM2540C
	Fritzler 29-22	W	6/14/22	1100	11	1,2	II	X	X	X	X	X	X	X

\*Time Zone: MST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter  
 For metals or anions, please detail analytes below.

<b>Comments:</b>	<b>Cations/Anions:</b>	<b>QC PACKAGE (check below)</b>
Calcium, Chloride, Magnesium, Potassium, Sodium, Sulfate*		<input checked="" type="checkbox"/> LEVEL II (Standard QC)
Samples analyzed per ECMC Bradenhead Sampling Program		<input type="checkbox"/> LEVEL III (Std QC + forms)
If bubbles are present in voas, please proceed with analysis		<input type="checkbox"/> LEVEL IV (Std QC + forms + raw data)

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY	<i>[Signature]</i>	Jeff Braden	6/14/24	1500
RECEIVED BY	<i>[Signature]</i>	Tyler Monroe	6/14/24	1500
RELINQUISHED BY	<i>[Signature]</i>	Tyler Monroe	6/14/24	1600
RECEIVED BY	<i>[Signature]</i>	RUBEN ESTRADA	6/15/24	0900
RELINQUISHED BY				
RECEIVED BY				

**Preservative Key:** 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

1231 +0.1 1.3

ORIGIN ID:GXVA (970) 305-7648  
KAREN CRAVEN  
ALS  
965 E 11TH ST

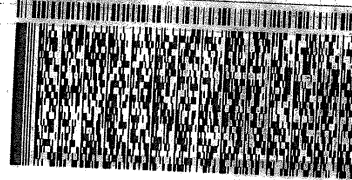
SHIP DATE: 14 JUN 24  
ACTWT: 56.20 LB  
CAD: 0760439, CAFE3709  
DIMS: 24X14X13 IN

LOVELAND, CO 80537  
UNITED STATES US

BILL THIRD PARTY

TO **SAMPLE RECEIVING**  
**ALS HOUSTON**  
**10450 STANCLIFF RD**  
**SUITE 210**  
**HOUSTON TX 77099**

(281) 530-6666  
PO: 967554812



TRK# 7122 9262 1493  
0201

**SATURDAY 12:00P**  
**PRIORITY OVERNIGHT**

**XO SGRA**

77099  
TX-US IAH

Per# 187077-434 MTW EXP 06/22



5835/421N/FE3

0201022110201