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November 20, 2023

Rick Allison  
Colorado Oil and Gas Conservation Commission  
1120 Lincoln Street  
Suite 801  
Denver, CO 80203

Work Order: **HS23110221**

Laboratory Results for: **Prospect MSSU Inj Spill**

Dear Rick Allison,

ALS Environmental received 2 sample(s) on Nov 03, 2023 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: JUMOKE.LAWAL

Tyler Monroe

**Client:** Colorado Oil and Gas Conservation Commission  
**Project:** Prospect MSSU Inj Spill  
**Work Order:** HS23110221

**SAMPLE SUMMARY**

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS23110221-01	Upstream	Water		31-Oct-2023 16:12	03-Nov-2023 08:30	<input type="checkbox"/>
HS23110221-02	Outfall Basin	Water		31-Oct-2023 16:58	03-Nov-2023 08:30	<input type="checkbox"/>

**Client:** Colorado Oil and Gas Conservation Commission  
**Project:** Prospect MSSU Inj Spill  
**Work Order:** HS23110221

**CASE NARRATIVE**

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**GC Semivolatiles by Method SW8015M****Batch ID: 203162****Sample ID: Upstream (HS23110221-01)**

- One or more surrogate recoveries were above the upper control limits. No target analytes were detected in the sample. The high surrogate recoveries did not impact the non-detect results for target analytes.

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**GC Volatiles by Method SW8015****Batch ID: R451729**

- 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: R450924****Sample ID: VLCSW-231103**

- Surrogate failed outside control limits high. Associated samples are ND.

**Sample ID: VSTD050**

- Surrogate failed outside control limits high. Associated samples are ND.

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**Metals by Method E200.8****Batch ID: 203064****Sample ID: HS23101673-03MS**

- MS and MSD are for an unrelated sample (Calcium,Magnesium,Sodium)

**Sample ID: HS23101673-03MSD**

- MSD is for an unrelated sample
- MSD is for an unrelated sample (Selenium,Strontium)

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**WetChemistry by Method E365.3****Batch ID: R452135****Sample ID: Outfall Basin (HS23110221-02)**

- Sample holding time expired prior to sample receipt. It was analyzed at the request of the client. Results should be considered estimated.

**Sample ID: Upstream (HS23110221-01)**

- Sample holding time expired prior to sample receipt. It was analyzed at the request of the client. Results should be considered estimated.

**Client:** Colorado Oil and Gas Conservation Commission  
**Project:** Prospect MSSU Inj Spill  
**Work Order:** HS23110221

**CASE NARRATIVE**

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**WetChemistry by Method E300**

**Batch ID: R450934**

**Sample ID: Outfall Basin (HS23110221-02)**

- Sample holding time expired prior to sample receipt. It was analyzed at the request of the client. Results should be considered estimated.

**Sample ID: Upstream (HS23110221-01)**

- Sample holding time expired prior to sample receipt. It was analyzed at the request of the client. Results should be considered estimated.

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**WetChemistry by Method M2510 B**

**Batch ID: R451685**

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

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**WetChemistry by Method M2540C**

**Batch ID: R451063**

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

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**WetChemistry by Method SM4500H+ B**

**Batch ID: R450931**

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

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**WetChemistry by Method SM2320B**

**Batch ID: R450927**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.
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Client: Colorado Oil and Gas Conservation Commission  
 Project: Prospect MSSU Inj Spill  
 Sample ID: Upstream  
 Collection Date: 31-Oct-2023 16:12

**ANALYTICAL REPORT**

WorkOrder:HS23110221  
 Lab ID:HS23110221-01  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW LEVEL VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>		Analyst: FT			
1,2,4-Trimethylbenzene	U		0.30	1.0	ug/L	1	04-Nov-2023 04:58
1,3,5-Trimethylbenzene	U		0.30	1.0	ug/L	1	04-Nov-2023 04:58
Benzene	U		0.20	1.0	ug/L	1	04-Nov-2023 04:58
Ethylbenzene	U		0.30	1.0	ug/L	1	04-Nov-2023 04:58
Naphthalene	U		0.30	1.0	ug/L	1	04-Nov-2023 04:58
Toluene	U		0.20	1.0	ug/L	1	04-Nov-2023 04:58
Xylenes, Total	U		0.30	3.0	ug/L	1	04-Nov-2023 04:58
<i>Surr: 1,2-Dichloroethane-d4</i>	104			70-126	%REC	1	04-Nov-2023 04:58
<i>Surr: 4-Bromofluorobenzene</i>	107			77-113	%REC	1	04-Nov-2023 04:58
<i>Surr: Dibromofluoromethane</i>	102			77-123	%REC	1	04-Nov-2023 04:58
<i>Surr: Toluene-d8</i>	98.4			82-127	%REC	1	04-Nov-2023 04:58
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>		Analyst: TS			
Gasoline Range Organics	U		0.0100	0.0500	mg/L	1	13-Nov-2023 18:51
<i>Surr: 4-Bromofluorobenzene</i>	119			70-123	%REC	1	13-Nov-2023 18:51
<b>TPH DRO/ORO BY SW8015C</b>		<b>Method:SW8015M</b>		Prep:SW3511 / 07-Nov-2023		Analyst: SAM	
TPH (Diesel Range)	U		0.020	0.051	mg/L	1	11-Nov-2023 11:59
TPH (Oil Range)	U		0.020	0.10	mg/L	1	11-Nov-2023 11:59
<i>Surr: 2-Fluorobiphenyl</i>	173	S		60-135	%REC	1	11-Nov-2023 11:59
<b>DISSOLVED METALS BY E200.8, REV 5.4, 1994</b>		<b>Method:E200.8 (dissolved)</b>		Prep:E200.8 / 07-Nov-2023		Analyst: MSC	
Barium	23.8		0.0840	2.00	ug/L	1	08-Nov-2023 15:36
Boron	408		16.7	20.0	ug/L	1	08-Nov-2023 15:36
Calcium	239,000		1800	50000	ug/L	100	09-Nov-2023 14:19
Iron	U		50.0	200	ug/L	1	08-Nov-2023 15:36
Magnesium	199,000		780	50000	ug/L	100	09-Nov-2023 14:19
Manganese	13.9		0.0660	5.00	ug/L	1	08-Nov-2023 15:36
Potassium	4,880		33.0	500	ug/L	1	08-Nov-2023 15:36
Selenium	0.875	J	0.860	2.00	ug/L	1	08-Nov-2023 15:36
Sodium	170,000		21.0	200	ug/L	1	08-Nov-2023 15:36
Strontium	4,520		6.20	500	ug/L	100	09-Nov-2023 14:19
<b>ANIONS BY E300.0, REV 2.1, 1993</b>		<b>Method:E300</b>		Analyst: TH			
Bromide	U		0.0300	0.100	mg/L	1	04-Nov-2023 09:11
Chloride	22.7		0.200	0.500	mg/L	1	04-Nov-2023 09:11
Fluoride	1.12		0.0500	0.100	mg/L	1	04-Nov-2023 09:11
Nitrogen, Nitrate (As N)	U	H	0.0300	0.100	mg/L	1	04-Nov-2023 09:11
Nitrogen, Nitrite (As N)	U	H	0.0300	0.100	mg/L	1	04-Nov-2023 09:11
Sulfate	1,850		4.00	10.0	mg/L	20	04-Nov-2023 09:17
<b>ORTHO PHOSPHATE (PO4) AS P BY E365.3-1978</b>		<b>Method:E365.3</b>		Analyst: AB			
Phosphorus, Total Orthophosphate (As P)	0.0480	H	0.0100	0.0250	mg/L	1	17-Nov-2023 14:35

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

Client: Colorado Oil and Gas Conservation Commission  
 Project: Prospect MSSU Inj Spill  
 Sample ID: Upstream  
 Collection Date: 31-Oct-2023 16:12

**ANALYTICAL REPORT**

WorkOrder:HS23110221  
 Lab ID:HS23110221-01  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>SPECIFIC CONDUCTANCE BY SM 2510B-2011</b>		<b>Method:M2510 B</b>				Analyst: CD	
Specific Conductivity	2,780		5.00	5.00	umhos/cm @ 25.0 °C	1	13-Nov-2023 16:00
<b>TOTAL DISSOLVED SOLIDS BY SM2540C-2011</b>		<b>Method:M2540C</b>				Analyst: DC	
Total Dissolved Solids (Residue, Filterable)	1,990		5.00	10.0	mg/L	1	06-Nov-2023 12:30
<b>ALKALINITY BY -2011</b>		<b>Method:SM2320B</b>				Analyst: DW	
Alkalinity, Bicarbonate (As CaCO <sub>3</sub> )	U		3.50	5.00	mg/L	1	04-Nov-2023 20:25
Alkalinity, Carbonate (As CaCO <sub>3</sub> )	U		3.50	5.00	mg/L	1	04-Nov-2023 20:25
Alkalinity, Hydroxide (As CaCO <sub>3</sub> )	U		3.50	5.00	mg/L	1	04-Nov-2023 20:25
Alkalinity, Total (As CaCO <sub>3</sub> )	U		3.50	5.00	mg/L	1	04-Nov-2023 20:25
<b>PH BY SM4500H+ B-2011</b>		<b>Method:SM4500H+ B</b>				Analyst: DW	
pH	8.27	H	0.100	0.100	pH Units	1	04-Nov-2023 20:25
Temp Deg C @pH	23.6	H	0	0	°C	1	04-Nov-2023 20:25

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

Client: Colorado Oil and Gas Conservation Commission  
 Project: Prospect MSSU Inj Spill  
 Sample ID: Outfall Basin  
 Collection Date: 31-Oct-2023 16:58

**ANALYTICAL REPORT**

WorkOrder:HS23110221  
 Lab ID:HS23110221-02  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>LOW LEVEL VOLATILES BY SW8260C</b>		<b>Method:SW8260</b>				Analyst: FT	
1,2,4-Trimethylbenzene	U		0.30	1.0	ug/L	1	04-Nov-2023 05:18
1,3,5-Trimethylbenzene	U		0.30	1.0	ug/L	1	04-Nov-2023 05:18
<b>Benzene</b>	<b>2.6</b>		<b>0.20</b>	<b>1.0</b>	<b>ug/L</b>	1	04-Nov-2023 05:18
Ethylbenzene	U		0.30	1.0	ug/L	1	04-Nov-2023 05:18
Naphthalene	U		0.30	1.0	ug/L	1	04-Nov-2023 05:18
<b>Toluene</b>	<b>2.9</b>		<b>0.20</b>	<b>1.0</b>	<b>ug/L</b>	1	04-Nov-2023 05:18
Xylenes, Total	U		0.30	3.0	ug/L	1	04-Nov-2023 05:18
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>107</i>			<i>70-126</i>	<i>%REC</i>	<i>1</i>	<i>04-Nov-2023 05:18</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>109</i>			<i>77-113</i>	<i>%REC</i>	<i>1</i>	<i>04-Nov-2023 05:18</i>
<i>Surr: Dibromofluoromethane</i>	<i>104</i>			<i>77-123</i>	<i>%REC</i>	<i>1</i>	<i>04-Nov-2023 05:18</i>
<i>Surr: Toluene-d8</i>	<i>98.8</i>			<i>82-127</i>	<i>%REC</i>	<i>1</i>	<i>04-Nov-2023 05:18</i>
<b>GASOLINE RANGE ORGANICS BY SW8015C</b>		<b>Method:SW8015</b>				Analyst: TS	
Gasoline Range Organics	U		0.0100	0.0500	mg/L	1	13-Nov-2023 19:04
<i>Surr: 4-Bromofluorobenzene</i>	<i>119</i>			<i>70-123</i>	<i>%REC</i>	<i>1</i>	<i>13-Nov-2023 19:04</i>
<b>TPH DRO/ORO BY SW8015C</b>		<b>Method:SW8015M</b>				Prep:SW3511 / 07-Nov-2023	Analyst: SAM
TPH (Diesel Range)	U		0.020	0.050	mg/L	1	14-Nov-2023 12:21
<b>TPH (Oil Range)</b>	<b>0.10</b>		<b>0.020</b>	<b>0.10</b>	<b>mg/L</b>	1	14-Nov-2023 12:21
<i>Surr: 2-Fluorobiphenyl</i>	<i>126</i>			<i>60-135</i>	<i>%REC</i>	<i>1</i>	<i>14-Nov-2023 12:21</i>
<b>DISSOLVED METALS BY E200.8, REV 5.4, 1994</b>		<b>Method:E200.8 (dissolved)</b>				Prep:E200.8 / 07-Nov-2023	Analyst: MSC
<b>Barium</b>	<b>19.8</b>		<b>0.0840</b>	<b>2.00</b>	<b>ug/L</b>	1	08-Nov-2023 15:38
<b>Boron</b>	<b>468</b>		<b>16.7</b>	<b>20.0</b>	<b>ug/L</b>	1	08-Nov-2023 15:38
<b>Calcium</b>	<b>178,000</b>		<b>18.0</b>	<b>500</b>	<b>ug/L</b>	1	08-Nov-2023 15:38
<b>Iron</b>	<b>53.5</b>	J	<b>50.0</b>	<b>200</b>	<b>ug/L</b>	1	08-Nov-2023 15:38
<b>Magnesium</b>	<b>94,800</b>		<b>7.80</b>	<b>500</b>	<b>ug/L</b>	1	08-Nov-2023 15:38
<b>Manganese</b>	<b>15.4</b>		<b>0.0660</b>	<b>5.00</b>	<b>ug/L</b>	1	08-Nov-2023 15:38
<b>Potassium</b>	<b>2,830</b>		<b>33.0</b>	<b>500</b>	<b>ug/L</b>	1	08-Nov-2023 15:38
<b>Selenium</b>	<b>2.42</b>		<b>0.860</b>	<b>2.00</b>	<b>ug/L</b>	1	08-Nov-2023 15:38
<b>Sodium</b>	<b>175,000</b>		<b>21.0</b>	<b>200</b>	<b>ug/L</b>	1	08-Nov-2023 15:38
<b>Strontium</b>	<b>4,390</b>		<b>6.20</b>	<b>500</b>	<b>ug/L</b>	100	09-Nov-2023 14:21
<b>ANIONS BY E300.0, REV 2.1, 1993</b>		<b>Method:E300</b>				Analyst: TH	
Bromide	U		0.0300	0.100	mg/L	1	04-Nov-2023 09:23
<b>Chloride</b>	<b>56.3</b>		<b>0.200</b>	<b>0.500</b>	<b>mg/L</b>	1	04-Nov-2023 09:23
<b>Fluoride</b>	<b>2.01</b>		<b>0.0500</b>	<b>0.100</b>	<b>mg/L</b>	1	04-Nov-2023 09:23
<b>Nitrogen, Nitrate (As N)</b>	<b>0.366</b>	H	<b>0.0300</b>	<b>0.100</b>	<b>mg/L</b>	1	04-Nov-2023 09:23
Nitrogen, Nitrite (As N)	U	H	0.0300	0.100	mg/L	1	04-Nov-2023 09:23
<b>Sulfate</b>	<b>1,150</b>		<b>4.00</b>	<b>10.0</b>	<b>mg/L</b>	20	04-Nov-2023 09:29
<b>ORTHO PHOSPHATE (PO4) AS P BY E365.3-1978</b>		<b>Method:E365.3</b>				Analyst: AB	
<b>Phosphorus, Total Orthophosphate (As P)</b>	<b>0.0640</b>	H	<b>0.0100</b>	<b>0.0250</b>	<b>mg/L</b>	1	17-Nov-2023 14:35

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

Client: Colorado Oil and Gas Conservation Commission  
 Project: Prospect MSSU Inj Spill  
 Sample ID: Outfall Basin  
 Collection Date: 31-Oct-2023 16:58

**ANALYTICAL REPORT**

WorkOrder:HS23110221  
 Lab ID:HS23110221-02  
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
<b>SPECIFIC CONDUCTANCE BY SM 2510B-2011</b>		<b>Method:M2510 B</b>		Analyst: CD			
Specific Conductivity	2,160		5.00	5.00	umhos/cm @ 25.0 °C	1	13-Nov-2023 16:00
<b>TOTAL DISSOLVED SOLIDS BY SM2540C-2011</b>		<b>Method:M2540C</b>		Analyst: DC			
Total Dissolved Solids (Residue, Filterable)	1,620		5.00	10.0	mg/L	1	06-Nov-2023 12:30
<b>ALKALINITY BY -2011</b>		<b>Method:SM2320B</b>		Analyst: DW			
Alkalinity, Bicarbonate (As CaCO <sub>3</sub> )	U		3.50	5.00	mg/L	1	04-Nov-2023 20:28
Alkalinity, Carbonate (As CaCO <sub>3</sub> )	U		3.50	5.00	mg/L	1	04-Nov-2023 20:28
Alkalinity, Hydroxide (As CaCO <sub>3</sub> )	U		3.50	5.00	mg/L	1	04-Nov-2023 20:28
Alkalinity, Total (As CaCO <sub>3</sub> )	U		3.50	5.00	mg/L	1	04-Nov-2023 20:28
<b>PH BY SM4500H+ B-2011</b>		<b>Method:SM4500H+ B</b>		Analyst: DW			
pH	8.13	H	0.100	0.100	pH Units	1	04-Nov-2023 20:28
Temp Deg C @pH	23.7	H	0	0	°C	1	04-Nov-2023 20:28

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



Weight / Prep Log

**Client:** Colorado Oil and Gas Conservation Commission  
**Project:** Prospect MSSU Inj Spill  
**WorkOrder:** HS23110221

<b>Batch ID:</b> 203024	<b>Start Date:</b> 03 Nov 2023 15:00	<b>End Date:</b> 03 Nov 2023 15:00
<b>Method:</b> SAMPLE FILTRATION - 0.45 MICRON FILTER		<b>Prep Code:</b> FILTRATION

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23110221-01		100 (mL)	100 (mL)	1	120 mL Plastic Neat
HS23110221-02		100 (mL)	100 (mL)	1	120 mL Plastic Neat

<b>Batch ID:</b> 203064	<b>Start Date:</b> 07 Nov 2023 09:00	<b>End Date:</b> 07 Nov 2023 09:00
<b>Method:</b> DISSOLVED METALS DIGESTION BY E200.8,REV 5.4,1994		<b>Prep Code:</b> 200.8_DISSPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23110221-01		10 (mL)	10 (mL)	1	120 mL Plastic Neat
HS23110221-02		10 (mL)	10 (mL)	1	120 mL Plastic Neat

<b>Batch ID:</b> 203162	<b>Start Date:</b> 07 Nov 2023 15:00	<b>End Date:</b> 07 Nov 2023 15:00
<b>Method:</b> SW3511		<b>Prep Code:</b> 3511_DRO

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23110221-01		32.32 (mL)	2 (mL)	0.06188	40 mL Amber
HS23110221-02		32.72 (mL)	2 (mL)	0.06112	40 mL Amber

**Client:** Colorado Oil and Gas Conservation Commission  
**Project:** Prospect MSSU Inj Spill  
**WorkOrder:** HS23110221

**DATES REPORT**

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
<b>Batch ID:</b> 203064 ( 0 )		<b>Test Name :</b> DISSOLVED METALS BY E200.8, REV 5.4, 1994			<b>Matrix:</b> Water	
HS23110221-01	Upstream	31 Oct 2023 16:12		07 Nov 2023 09:00	09 Nov 2023 14:19	100
HS23110221-01	Upstream	31 Oct 2023 16:12		07 Nov 2023 09:00	08 Nov 2023 15:36	1
HS23110221-02	Outfall Basin	31 Oct 2023 16:58		07 Nov 2023 09:00	09 Nov 2023 14:21	100
HS23110221-02	Outfall Basin	31 Oct 2023 16:58		07 Nov 2023 09:00	08 Nov 2023 15:38	1
<b>Batch ID:</b> 203162 ( 0 )		<b>Test Name :</b> TPH DRO/ORO BY SW8015C			<b>Matrix:</b> Water	
HS23110221-01	Upstream	31 Oct 2023 16:12		07 Nov 2023 15:00	11 Nov 2023 11:59	1
HS23110221-02	Outfall Basin	31 Oct 2023 16:58		07 Nov 2023 15:00	14 Nov 2023 12:21	1
<b>Batch ID:</b> R450924 ( 0 )		<b>Test Name :</b> LOW LEVEL VOLATILES BY SW8260C			<b>Matrix:</b> Water	
HS23110221-01	Upstream	31 Oct 2023 16:12			04 Nov 2023 04:58	1
HS23110221-02	Outfall Basin	31 Oct 2023 16:58			04 Nov 2023 05:18	1
<b>Batch ID:</b> R450927 ( 0 )		<b>Test Name :</b> ALKALINITY BY -2011			<b>Matrix:</b> Water	
HS23110221-01	Upstream	31 Oct 2023 16:12			04 Nov 2023 20:25	1
HS23110221-02	Outfall Basin	31 Oct 2023 16:58			04 Nov 2023 20:28	1
<b>Batch ID:</b> R450931 ( 0 )		<b>Test Name :</b> PH BY SM4500H+ B-2011			<b>Matrix:</b> Water	
HS23110221-01	Upstream	31 Oct 2023 16:12			04 Nov 2023 20:25	1
HS23110221-02	Outfall Basin	31 Oct 2023 16:58			04 Nov 2023 20:28	1
<b>Batch ID:</b> R450934 ( 0 )		<b>Test Name :</b> ANIONS BY E300.0, REV 2.1, 1993			<b>Matrix:</b> Water	
HS23110221-01	Upstream	31 Oct 2023 16:12			04 Nov 2023 09:17	20
HS23110221-01	Upstream	31 Oct 2023 16:12			04 Nov 2023 09:11	1
HS23110221-02	Outfall Basin	31 Oct 2023 16:58			04 Nov 2023 09:29	20
HS23110221-02	Outfall Basin	31 Oct 2023 16:58			04 Nov 2023 09:23	1
<b>Batch ID:</b> R451063 ( 0 )		<b>Test Name :</b> TOTAL DISSOLVED SOLIDS BY SM2540C-2011			<b>Matrix:</b> Water	
HS23110221-01	Upstream	31 Oct 2023 16:12			06 Nov 2023 12:30	1
HS23110221-02	Outfall Basin	31 Oct 2023 16:58			06 Nov 2023 12:30	1
<b>Batch ID:</b> R451685 ( 0 )		<b>Test Name :</b> SPECIFIC CONDUCTANCE BY SM 2510B-2011			<b>Matrix:</b> Water	
HS23110221-01	Upstream	31 Oct 2023 16:12			13 Nov 2023 16:00	1
HS23110221-02	Outfall Basin	31 Oct 2023 16:58			13 Nov 2023 16:00	1
<b>Batch ID:</b> R451729 ( 0 )		<b>Test Name :</b> GASOLINE RANGE ORGANICS BY SW8015C			<b>Matrix:</b> Water	
HS23110221-01	Upstream	31 Oct 2023 16:12			13 Nov 2023 18:51	1
HS23110221-02	Outfall Basin	31 Oct 2023 16:58			13 Nov 2023 19:04	1
<b>Batch ID:</b> R452135 ( 0 )		<b>Test Name :</b> ORTHO PHOSPHATE (PO4) AS P BY E365.3-1978			<b>Matrix:</b> Water	
HS23110221-01	Upstream	31 Oct 2023 16:12			17 Nov 2023 14:35	1
HS23110221-02	Outfall Basin	31 Oct 2023 16:58			17 Nov 2023 14:35	1

Client: Colorado Oil and Gas Conservation Commission

Project: Prospect MSSU Inj Spill

WorkOrder: HS23110221

## QC BATCH REPORT

Batch ID: 203162 ( 0 )		Instrument: FID-16		Method: TPH DRO/ORO BY SW8015C					
<b>MBLK</b>	Sample ID: <b>MBLK-203162</b>	Units: <b>mg/L</b>		Analysis Date: <b>11-Nov-2023 10:01</b>					
Client ID:	Run ID: <b>FID-16_452211</b>		SeqNo: <b>7682384</b>		PrepDate: <b>07-Nov-2023</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)	U	0.050							
TPH (Oil Range)	U	0.10							
Surr: 2-Fluorobiphenyl	0.07235	0.0050	0.06	0	121	60 - 135			
<b>LCS</b>	Sample ID: <b>LCS-203162</b>	Units: <b>mg/L</b>		Analysis Date: <b>11-Nov-2023 10:30</b>					
Client ID:	Run ID: <b>FID-16_452211</b>		SeqNo: <b>7682385</b>		PrepDate: <b>07-Nov-2023</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)	0.5221	0.050	0.6	0	87.0	70 - 130			
TPH (Oil Range)	0.5901	0.10	0.6	0	98.3	70 - 130			
Surr: 2-Fluorobiphenyl	0.06358	0.0050	0.06	0	106	60 - 135			
<b>LCSD</b>	Sample ID: <b>LCSD-203162</b>	Units: <b>mg/L</b>		Analysis Date: <b>11-Nov-2023 11:00</b>					
Client ID:	Run ID: <b>FID-16_452211</b>		SeqNo: <b>7682386</b>		PrepDate: <b>07-Nov-2023</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)	0.5239	0.050	0.6	0	87.3	70 - 130	0.5221	0.337	20
TPH (Oil Range)	0.6022	0.10	0.6	0	100	70 - 130	0.5901	2.04	20
Surr: 2-Fluorobiphenyl	0.06358	0.0050	0.06	0	106	60 - 135	0.06358	0.00915	20
The following samples were analyzed in this batch:									
HS23110221-01 HS23110221-02									

Client: Colorado Oil and Gas Conservation Commission

Project: Prospect MSSU Inj Spill

WorkOrder: HS23110221

## QC BATCH REPORT

Batch ID: R451729 ( 0 )		Instrument: FID-20		Method: GASOLINE RANGE ORGANICS BY SW8015C						
<b>MBLK</b>	Sample ID: MBLK-231113	Units: mg/L		Analysis Date: 13-Nov-2023 18:37						
Client ID:	Run ID: FID-20_451729	SeqNo: 7672732		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	U	0.0500								
Surr: 4-Bromofluorobenzene	0.1192	0.00500	0.1	0	119	70 - 121				
<b>LCS</b>	Sample ID: LCS-231113	Units: mg/L		Analysis Date: 13-Nov-2023 18:10						
Client ID:	Run ID: FID-20_451729	SeqNo: 7672730		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.131	0.0500	1	0	113	76 - 124				
Surr: 4-Bromofluorobenzene	0.1021	0.00500	0.1	0	102	52 - 138				
<b>LCSD</b>	Sample ID: LCSD-231113	Units: mg/L		Analysis Date: 13-Nov-2023 18:23						
Client ID:	Run ID: FID-20_451729	SeqNo: 7672731		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.094	0.0500	1	0	109	76 - 124	1.131	3.38	20	
Surr: 4-Bromofluorobenzene	0.09187	0.00500	0.1	0	91.9	52 - 138	0.1021	10.6	20	
The following samples were analyzed in this batch:										
HS23110221-01 HS23110221-02										

**Client:** Colorado Oil and Gas Conservation Commission  
**Project:** Prospect MSSU Inj Spill  
**WorkOrder:** HS23110221

**QC BATCH REPORT**

Batch ID: 203064 ( 0 )		Instrument: ICPMS06		Method: DISSOLVED METALS BY E200.8, REV 5.4, 1994 (DISSOLVED)					
<b>MBLK</b>	Sample ID: <b>MBLKF2-203064</b>	Units: <b>ug/L</b>		Analysis Date: <b>08-Nov-2023 15:01</b>					
Client ID:	Run ID: <b>ICPMS06_451242</b>	SeqNo: <b>7661952</b>		PrepDate: <b>07-Nov-2023</b>		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Barium	0.181	2.00							J
Boron	U	20.0							
Calcium	U	500							
Iron	U	200							
Magnesium	17.73	500							J
Manganese	U	5.00							
Potassium	U	500							
Selenium	U	2.00							
Sodium	U	200							
Strontium	0.089	5.00							J

<b>MBLK</b>	Sample ID: <b>MBLKF4-203064</b>	Units: <b>ug/L</b>		Analysis Date: <b>08-Nov-2023 15:05</b>					
Client ID:	Run ID: <b>ICPMS06_451242</b>	SeqNo: <b>7661954</b>		PrepDate: <b>07-Nov-2023</b>		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Barium	0.129	2.00							J
Boron	U	20.0							
Calcium	19.05	500							J
Iron	57.04	200							J
Magnesium	19.1	500							J
Manganese	0.419	5.00							J
Potassium	U	500							
Selenium	U	2.00							
Sodium	U	200							
Strontium	0.109	5.00							J

**Client:** Colorado Oil and Gas Conservation Commission  
**Project:** Prospect MSSU Inj Spill  
**WorkOrder:** HS23110221

**QC BATCH REPORT**

Batch ID: 203064 ( 0 )		Instrument: ICPMS06		Method: DISSOLVED METALS BY E200.8, REV 5.4, 1994 (DISSOLVED)					
<b>MBLK</b>	Sample ID: <b>MBLKF3-203064</b>	Units: <b>ug/L</b>		Analysis Date: <b>08-Nov-2023 15:03</b>					
Client ID:	Run ID: <b>ICPMS06_451242</b>	SeqNo: <b>7661953</b>		PrepDate: <b>07-Nov-2023</b>		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Barium	0.092	2.00							J
Boron	U	20.0							
Calcium	U	500							
Iron	U	200							
Magnesium	U	500							
Manganese	0.148	5.00							J
Potassium	U	500							
Selenium	U	2.00							
Sodium	U	200							
Strontium	U	5.00							

<b>MBLK</b>	Sample ID: <b>MBLKF1-203064</b>	Units: <b>ug/L</b>		Analysis Date: <b>08-Nov-2023 14:59</b>					
Client ID:	Run ID: <b>ICPMS06_451242</b>	SeqNo: <b>7661951</b>		PrepDate: <b>07-Nov-2023</b>		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Barium	0.163	2.00							J
Boron	U	20.0							
Calcium	U	500							
Iron	U	200							
Magnesium	16.76	500							J
Manganese	0.175	5.00							J
Potassium	U	500							
Selenium	U	2.00							
Sodium	U	200							
Strontium	0.072	5.00							J

**Client:** Colorado Oil and Gas Conservation Commission  
**Project:** Prospect MSSU Inj Spill  
**WorkOrder:** HS23110221

**QC BATCH REPORT**

Batch ID: 203064 ( 0 )		Instrument: ICPMS06		Method: DISSOLVED METALS BY E200.8, REV 5.4, 1994 (DISSOLVED)					
<b>MBLK</b>	Sample ID: <b>MBLK-203064</b>	Units: <b>ug/L</b>		Analysis Date: <b>08-Nov-2023 14:23</b>					
Client ID:	Run ID: <b>ICPMS06_451242</b>	SeqNo: <b>7661653</b>		PrepDate: <b>07-Nov-2023</b>		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Barium	U	0.0200							
Boron	U	0.0500							
Calcium	U	0.500							
Iron	U	0.200							
Magnesium	0.01615	0.200							J
Manganese	U	0.00500							
Potassium	U	0.200							
Selenium	U	0.00500							
Sodium	U	0.200							
Strontium	U	0.00500							

<b>LCS</b>	Sample ID: <b>LCS-203064</b>	Units: <b>ug/L</b>		Analysis Date: <b>08-Nov-2023 15:07</b>					
Client ID:	Run ID: <b>ICPMS06_451242</b>	SeqNo: <b>7661955</b>		PrepDate: <b>07-Nov-2023</b>		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Barium	48.68	2.00	50	0	97.4	85 - 115			
Boron	462.2	20.0	500	0	92.4	85 - 115			
Calcium	5016	500	5000	0	100	85 - 115			
Iron	4970	200	5000	0	99.4	85 - 115			
Magnesium	4933	500	5000	0	98.7	85 - 115			
Manganese	47.67	5.00	50	0	95.3	85 - 115			
Potassium	4882	500	5000	0	97.6	85 - 115			
Selenium	48.17	2.00	50	0	96.3	85 - 115			
Sodium	4746	200	5000	0	94.9	85 - 115			
Strontium	87.41	5.00	100	0	87.4	85 - 115			

**Client:** Colorado Oil and Gas Conservation Commission  
**Project:** Prospect MSSU Inj Spill  
**WorkOrder:** HS23110221

**QC BATCH REPORT**

Batch ID: 203064 ( 0 )		Instrument: ICPMS06		Method: DISSOLVED METALS BY E200.8, REV 5.4, 1994 (DISSOLVED)						
<b>MS</b>		Sample ID: HS23101673-03MS		Units: ug/L		Analysis Date: 08-Nov-2023 15:11				
Client ID:		Run ID: ICPMS06_451242		SeqNo: 7661957		PrepDate: 07-Nov-2023		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	142.2	2.00	50	96.85	90.8	85 - 115				
Boron	774.4	20.0	500	233.7	108	85 - 115				
Calcium	215600	500	5000	208700	138	85 - 115				SEO
Iron	5055	200	5000	89.94	99.3	85 - 115				
Magnesium	187000	500	5000	179100	158	85 - 115				SEO
Manganese	61.68	5.00	50	11.06	101	85 - 115				
Potassium	10280	500	5000	5102	104	85 - 115				
Selenium	320.7	2.00	50	267.9	106	85 - 115				O
Sodium	409100	200	5000	396900	245	85 - 115				SEO
Strontium	3590	5.00	100	3498	91.3	85 - 115				EO
<b>MSD</b>		Sample ID: HS23101673-03MSD		Units: ug/L		Analysis Date: 08-Nov-2023 15:12				
Client ID:		Run ID: ICPMS06_451242		SeqNo: 7661958		PrepDate: 07-Nov-2023		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	136.6	2.00	50	96.85	79.4	85 - 115	142.2	4.08	20	S
Boron	793.3	20.0	500	233.7	112	85 - 115	774.4	2.41	20	
Calcium	207700	500	5000	208700	-18.7	85 - 115	215600	3.69	20	SEO
Iron	5031	200	5000	89.94	98.8	85 - 115	5055	0.469	20	
Magnesium	179000	500	5000	179100	-1.77	85 - 115	187000	4.37	20	SO
Manganese	58.25	5.00	50	11.06	94.4	85 - 115	61.68	5.72	20	
Potassium	9974	500	5000	5102	97.4	85 - 115	10280	3	20	
Selenium	307.1	2.00	50	267.9	78.3	85 - 115	320.7	4.36	20	SO
Sodium	389200	200	5000	396900	-153	85 - 115	409100	4.99	20	SEO
Strontium	3374	5.00	100	3498	-124	85 - 115	3590	6.18	20	SEO

The following samples were analyzed in this batch: HS23110221-01 HS23110221-02



**Client:** Colorado Oil and Gas Conservation Commission  
**Project:** Prospect MSSU Inj Spill  
**WorkOrder:** HS23110221

**QC BATCH REPORT**

Batch ID: R450924 ( 0 )		Instrument: VOA13		Method: LOW LEVEL VOLATILES BY SW8260C					
<b>MBLK</b>	Sample ID: VBLKW-231103	Units: ug/L		Analysis Date: 03-Nov-2023 21:49					
Client ID:	Run ID: VOA13_450924	SeqNo: 7652277		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
1,2,4-Trimethylbenzene	U	1.0							
1,3,5-Trimethylbenzene	U	1.0							
Benzene	U	1.0							
Ethylbenzene	U	1.0							
Naphthalene	U	1.0							
Toluene	U	1.0							
Xylenes, Total	U	3.0							
Surr: 1,2-Dichloroethane-d4	48.51	1.0	50	0	97.0	70 - 123			
Surr: 4-Bromofluorobenzene	54.4	1.0	50	0	109	77 - 113			
Surr: Dibromofluoromethane	48.41	1.0	50	0	96.8	73 - 126			
Surr: Toluene-d8	50.07	1.0	50	0	100	81 - 120			

<b>LCS</b>	Sample ID: VLCSW-231103	Units: ug/L		Analysis Date: 03-Nov-2023 21:09					
Client ID:	Run ID: VOA13_450924	SeqNo: 7652276		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
1,2,4-Trimethylbenzene	21.43	1.0	20	0	107	73 - 121			
1,3,5-Trimethylbenzene	19.43	1.0	20	0	97.2	75 - 118			
Benzene	19.35	1.0	20	0	96.8	74 - 120			
Ethylbenzene	20.47	1.0	20	0	102	77 - 117			
Naphthalene	18.97	1.0	20	0	94.8	70 - 130			
Toluene	20.14	1.0	20	0	101	77 - 118			
Xylenes, Total	64.76	3.0	60	0	108	75 - 122			
Surr: 1,2-Dichloroethane-d4	50.74	1.0	50	0	101	70 - 123			
Surr: 4-Bromofluorobenzene	56.69	1.0	50	0	113	77 - 113			S
Surr: Dibromofluoromethane	47.51	1.0	50	0	95.0	73 - 126			
Surr: Toluene-d8	51.09	1.0	50	0	102	81 - 120			

**Client:** Colorado Oil and Gas Conservation Commission  
**Project:** Prospect MSSU Inj Spill  
**WorkOrder:** HS23110221

**QC BATCH REPORT**

Batch ID: R450924 ( 0 )		Instrument: VOA13		Method: LOW LEVEL VOLATILES BY SW8260C					
<b>MS</b>		Sample ID: HS23110065-02MS		Units: ug/L		Analysis Date: 03-Nov-2023 23:11			
Client ID:		Run ID: VOA13_450924		SeqNo: 7652281		PrepDate:		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
1,2,4-Trimethylbenzene	1558	100	2000	0	77.9	70 - 125			
1,3,5-Trimethylbenzene	1493	100	2000	0	74.6	70 - 126			
Benzene	9093	100	2000	8053	52.0	70 - 127			SO
Ethylbenzene	2036	100	2000	470.2	78.3	70 - 124			
Naphthalene	1987	100	2000	0	99.3	70 - 130			
Toluene	1518	100	2000	0	75.9	70 - 123			
Xylenes, Total	4664	300	6000	0	77.7	70 - 130			
Surr: 1,2-Dichloroethane-d4	4991	100	5000	0	99.8	70 - 126			
Surr: 4-Bromofluorobenzene	5316	100	5000	0	106	77 - 113			
Surr: Dibromofluoromethane	4655	100	5000	0	93.1	77 - 123			
Surr: Toluene-d8	5094	100	5000	0	102	82 - 127			

<b>MSD</b>		Sample ID: HS23110065-02MSD		Units: ug/L		Analysis Date: 03-Nov-2023 23:31			
Client ID:		Run ID: VOA13_450924		SeqNo: 7652282		PrepDate:		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
1,2,4-Trimethylbenzene	1416	100	2000	0	70.8	70 - 125	1558	9.57	20
1,3,5-Trimethylbenzene	1389	100	2000	0	69.5	70 - 126	1493	7.19	20 S
Benzene	8802	100	2000	8053	37.5	70 - 127	9093	3.25	20 SO
Ethylbenzene	1854	100	2000	470.2	69.2	70 - 124	2036	9.35	20 S
Naphthalene	1783	100	2000	0	89.1	70 - 130	1987	10.8	20
Toluene	1403	100	2000	0	70.1	70 - 123	1518	7.88	20
Xylenes, Total	4430	300	6000	0	73.8	70 - 130	4664	5.16	20
Surr: 1,2-Dichloroethane-d4	4831	100	5000	0	96.6	70 - 126	4991	3.28	20
Surr: 4-Bromofluorobenzene	5467	100	5000	0	109	77 - 113	5316	2.8	20
Surr: Dibromofluoromethane	4535	100	5000	0	90.7	77 - 123	4655	2.61	20
Surr: Toluene-d8	4962	100	5000	0	99.2	82 - 127	5094	2.61	20

The following samples were analyzed in this batch: HS23110221-01 HS23110221-02

**Client:** Colorado Oil and Gas Conservation Commission  
**Project:** Prospect MSSU Inj Spill  
**WorkOrder:** HS23110221

**QC BATCH REPORT**

Batch ID: R450927 ( 0 )		Instrument: Skalar 03		Method: ALKALINITY BY -2011					
<b>MBLK</b>	Sample ID: MBLK-11.04.2023	Units: mg/L		Analysis Date: 04-Nov-2023 18:07					
Client ID:	Run ID: Skalar 03_450927	SeqNo: 7652308		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Alkalinity, Bicarbonate (As CaCO3)	U	5.00							
Alkalinity, Carbonate (As CaCO3)	U	5.00							
Alkalinity, Hydroxide (As CaCO3)	U	5.00							
Alkalinity, Total (As CaCO3)	U	5.00							

<b>LCS</b>	Sample ID: LCS-11.04.2023	Units: mg/L		Analysis Date: 04-Nov-2023 18:14					
Client ID:	Run ID: Skalar 03_450927	SeqNo: 7652309		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Alkalinity, Carbonate (As CaCO3)	876.6	5.00	1000	0	87.7	85 - 115			
Alkalinity, Total (As CaCO3)	945.5	5.00	1000	0	94.6	85 - 115			

<b>LCSD</b>	Sample ID: LCSD-11.04.2023	Units: mg/L		Analysis Date: 04-Nov-2023 18:20					
Client ID:	Run ID: Skalar 03_450927	SeqNo: 7652310		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Alkalinity, Carbonate (As CaCO3)	870	5.00	1000	0	87.0	85 - 115	876.6	0.756	20
Alkalinity, Total (As CaCO3)	946.4	5.00	1000	0	94.6	85 - 115	945.5	0.0951	20

<b>DUP</b>	Sample ID: HS23101893-07DUP	Units: mg/L		Analysis Date: 04-Nov-2023 18:31					
Client ID:	Run ID: Skalar 03_450927	SeqNo: 7652312		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Alkalinity, Bicarbonate (As CaCO3)	238.3	5.00					232.6	2.42	20
Alkalinity, Carbonate (As CaCO3)	U	5.00					0	0	20
Alkalinity, Hydroxide (As CaCO3)	U	5.00					0	0	20
Alkalinity, Total (As CaCO3)	238.3	5.00					232.6	2.42	20

The following samples were analyzed in this batch: HS23110221-01 HS23110221-02

**Client:** Colorado Oil and Gas Conservation Commission  
**Project:** Prospect MSSU Inj Spill  
**WorkOrder:** HS23110221

**QC BATCH REPORT**

Batch ID: R450931 ( 0 )		Instrument: Skalar 03		Method: PH BY SM4500H+ B-2011					
<b>DUP</b>	Sample ID: HS23101893-07DUP	Units: pH Units		Analysis Date: 04-Nov-2023 18:31					
Client ID:	Run ID: Skalar 03_450931		SeqNo: 7652414		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
pH	7.91	0.100					7.91	0	10
Temp Deg C @pH	23.4	0					23.8	1.69	10

The following samples were analyzed in this batch:

HS23110221-01 HS23110221-02

Client: Colorado Oil and Gas Conservation Commission

Project: Prospect MSSU Inj Spill

WorkOrder: HS23110221

## QC BATCH REPORT

Batch ID: R450934 ( 0 )		Instrument: ICS-Integrion		Method: ANIONS BY E300.0, REV 2.1, 1993					
<b>MBLK</b>	Sample ID: MBLK	Units: mg/L		Analysis Date: 04-Nov-2023 08:54					
Client ID:	Run ID: ICS-Integrion_450934		SeqNo: 7652501		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Bromide	U	0.100							
Chloride	U	0.500							
Fluoride	U	0.100							
Nitrogen, Nitrate (As N)	U	0.100							
Nitrogen, Nitrite (As N)	U	0.100							
Sulfate	U	0.500							

<b>LCS</b>	Sample ID: LCS	Units: mg/L		Analysis Date: 04-Nov-2023 08:59					
Client ID:	Run ID: ICS-Integrion_450934		SeqNo: 7652502		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Bromide	4.265	0.100	4	0	107	90 - 110			
Chloride	20.65	0.500	20	0	103	90 - 110			
Fluoride	4.394	0.100	4	0	110	90 - 110			
Nitrogen, Nitrate (As N)	4.201	0.100	4	0	105	90 - 110			
Nitrogen, Nitrite (As N)	4.256	0.100	4	0	106	90 - 110			
Sulfate	20.95	0.500	20	0	105	90 - 110			

<b>MS</b>	Sample ID: HS23102009-02MS	Units: mg/L		Analysis Date: 04-Nov-2023 10:38					
Client ID:	Run ID: ICS-Integrion_450934		SeqNo: 7652513		PrepDate:		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Bromide	50.54	0.500	10	39.48	111	80 - 120			
Chloride	179	2.50	50	124.3	109	80 - 120			
Fluoride	14.61	0.500	10	3.922	107	80 - 120			
Nitrogen, Nitrate (As N)	29.48	0.500	10	19.57	99.0	80 - 120			
Nitrogen, Nitrite (As N)	10.97	0.500	10	0.9275	100	80 - 120			
Sulfate	113.7	2.50	50	54.06	119	80 - 120			

**Client:** Colorado Oil and Gas Conservation Commission  
**Project:** Prospect MSSU Inj Spill  
**WorkOrder:** HS23110221

**QC BATCH REPORT**

Batch ID: R450934 ( 0 )		Instrument: ICS-Integrion		Method: ANIONS BY E300.0, REV 2.1, 1993					
<b>MS</b>		Sample ID: HS23102009-01MS		Units: mg/L		Analysis Date: 04-Nov-2023 09:40			
Client ID:		Run ID: ICS-Integrion_450934		SeqNo: 7652508		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Bromide	2.317	0.100	2	0	116	80 - 120			
Chloride	10.91	0.500	10	0.408	105	80 - 120			
Fluoride	2.322	0.100	2	0.1123	110	80 - 120			
Nitrogen, Nitrate (As N)	2.195	0.100	2	0	110	80 - 120			
Nitrogen, Nitrite (As N)	2.277	0.100	2	0.097	109	80 - 120			
Sulfate	10.91	0.500	10	0.8776	100	80 - 120			

<b>MSD</b>		Sample ID: HS23102009-02MSD		Units: mg/L		Analysis Date: 04-Nov-2023 10:44			
Client ID:		Run ID: ICS-Integrion_450934		SeqNo: 7652514		PrepDate:		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Bromide	50.94	0.500	10	39.48	115	80 - 120	50.54	0.784	20
Chloride	179.6	2.50	50	124.3	111	80 - 120	179	0.332	20
Fluoride	14.34	0.500	10	3.922	104	80 - 120	14.61	1.85	20
Nitrogen, Nitrate (As N)	29.55	0.500	10	19.57	99.8	80 - 120	29.48	0.251	20
Nitrogen, Nitrite (As N)	10.91	0.500	10	0.9275	99.8	80 - 120	10.97	0.603	20
Sulfate	115	2.50	50	54.06	122	80 - 120	113.7	1.16	20 S

<b>MSD</b>		Sample ID: HS23102009-01MSD		Units: mg/L		Analysis Date: 04-Nov-2023 09:46			
Client ID:		Run ID: ICS-Integrion_450934		SeqNo: 7652509		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Bromide	2.307	0.100	2	0	115	80 - 120	2.317	0.411	20
Chloride	10.85	0.500	10	0.408	104	80 - 120	10.91	0.607	20
Fluoride	2.334	0.100	2	0.1123	111	80 - 120	2.322	0.503	20
Nitrogen, Nitrate (As N)	2.197	0.100	2	0	110	80 - 120	2.195	0.0774	20
Nitrogen, Nitrite (As N)	2.266	0.100	2	0.097	108	80 - 120	2.277	0.489	20
Sulfate	11.17	0.500	10	0.8776	103	80 - 120	10.91	2.37	20

The following samples were analyzed in this batch: HS23110221-01 HS23110221-02

**Client:** Colorado Oil and Gas Conservation Commission  
**Project:** Prospect MSSU Inj Spill  
**WorkOrder:** HS23110221

**QC BATCH REPORT**

Batch ID: R451063 ( 0 )		Instrument: Balance1		Method: TOTAL DISSOLVED SOLIDS BY SM2540C-2011						
MBLK	Sample ID: WMBLK-11062023	Units: mg/L		Analysis Date: 06-Nov-2023 12:30						
Client ID:	Run ID: Balance1_451063	SeqNo: 7655822		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filterable)		U	10.0							

LCS	Sample ID: WLCS-11062023	Units: mg/L		Analysis Date: 06-Nov-2023 12:30						
Client ID:	Run ID: Balance1_451063	SeqNo: 7655821		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filterable)		1030	10.0	1000	0	103	85 - 115			

DUP	Sample ID: HS23110152-01DUP	Units: mg/L		Analysis Date: 06-Nov-2023 12:30						
Client ID:	Run ID: Balance1_451063	SeqNo: 7655818		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filterable)		1205	10.0				1204	0.0664	20	

DUP	Sample ID: HS23110117-10DUP	Units: mg/L		Analysis Date: 06-Nov-2023 12:30						
Client ID:	Run ID: Balance1_451063	SeqNo: 7655808		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filterable)		1144	10.0				1140	0.35	20	

The following samples were analyzed in this batch:		HS23110221-01	HS23110221-02
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Client: Colorado Oil and Gas Conservation Commission

Project: Prospect MSSU Inj Spill

WorkOrder: HS23110221

## QC BATCH REPORT

Batch ID: R451685 ( 0 )		Instrument: WetChem_HS		Method: SPECIFIC CONDUCTANCE BY SM 2510B-2011						
<b>MBLK</b>	Sample ID: MBLK-R451685	Units: umhos/cm @ 25.0 °C		Analysis Date: 13-Nov-2023 16:00						
Client ID:	Run ID: WetChem_HS_451685		SeqNo: 7671466		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	U	5.00								
<b>LCS</b>	Sample ID: LCS-R451685	Units: umhos/cm @ 25.0 °C		Analysis Date: 13-Nov-2023 16:00						
Client ID:	Run ID: WetChem_HS_451685		SeqNo: 7671465		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1289	5.00	1413	0	91.2	80 - 120				
<b>DUP</b>	Sample ID: HS23110659-01DUP	Units: umhos/cm @ 25.0 °C		Analysis Date: 13-Nov-2023 16:00						
Client ID:	Run ID: WetChem_HS_451685		SeqNo: 7671467		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	2395	5.00					2392	0.125	20	
The following samples were analyzed in this batch:										
HS23110221-01 HS23110221-02										



**Client:** Colorado Oil and Gas Conservation Commission  
**Project:** Prospect MSSU Inj Spill  
**WorkOrder:** HS23110221

**QC BATCH REPORT**

Batch ID: R452135 ( 0 )		Instrument: UV-2450		Method: ORTHO PHOSPHATE (PO4) AS P BY E365.3-1978					
<b>MBLK</b>	Sample ID: MBLK-R452135	Units: mg/L		Analysis Date: 17-Nov-2023 14:35					
Client ID:	Run ID: UV-2450_452135		SeqNo: 7680781		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Phosphorus, Total Orthophosphate (As P)	U	0.0250							
<b>LCS</b>	Sample ID: LCS-R452135	Units: mg/L		Analysis Date: 17-Nov-2023 14:35					
Client ID:	Run ID: UV-2450_452135		SeqNo: 7680780		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Phosphorus, Total Orthophosphate (As P)	0.256	0.0250	0.25	0	102	85 - 115			
<b>MS</b>	Sample ID: HS23110221-01MS	Units: mg/L		Analysis Date: 17-Nov-2023 14:35					
Client ID: Upstream	Run ID: UV-2450_452135		SeqNo: 7680783		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Phosphorus, Total Orthophosphate (As P)	0.27	0.0250	0.25	0.048	88.8	80 - 120			
<b>MSD</b>	Sample ID: HS23110221-01MSD	Units: mg/L		Analysis Date: 17-Nov-2023 14:35					
Client ID: Upstream	Run ID: UV-2450_452135		SeqNo: 7680782		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Phosphorus, Total Orthophosphate (As P)	0.271	0.0250	0.25	0.048	89.2	80 - 120	0.27	0.37	20
The following samples were analyzed in this batch: HS23110221-01 HS23110221-02									

**Client:** Colorado Oil and Gas Conservation Commission  
**Project:** Prospect MSSU Inj Spill  
**WorkOrder:** HS23110221

**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>
Date	

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**CERTIFICATIONS,ACCREDITATIONS & LICENSES**

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Agency	Number	Expire Date
Arkansas	88-00356	27-Mar-2024
California	2919; 2024	30-Apr-2024
Dept of Defense	L23-358	31-May-2025
Florida	E87611-38	30-Jun-2024
Illinois	2000322023-11	30-Jun-2024
Kansas	E-10352 2023-2024	31-Jul-2024
Louisiana	03087 2023-2024	30-Jun-2024
Maryland	343; 2023-2024	30-Jun-2024
North Carolina	624-2023	31-Dec-2023
North Dakota	R-193 2023-2024	30-Apr-2024
Oklahoma	2023-140	31-Aug-2024
Texas	T104704231-23-31	30-Apr-2024
Utah	TX026932023-14	31-Jul-2024

## Sample Receipt Checklist

Work Order ID: HS23110221

Date/Time Received: 03-Nov-2023 08:30

Client Name: COGCC

Received by: Paresh M. Giga

Completed By: /S/ Paresh M. Giga	03-Nov-2023 12:48	Reviewed by: /S/ Tyler Monroe	03-Nov-2023 13:08
eSignature	Date/Time	eSignature	Date/Time

Matrices: WaterCarrier name: FedEx Priority Overnight

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
VOA/TX1005/TX1006 Solids in hermetically sealed vials?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	1 Page(s)
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	COC IDs:none
Samplers name present on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	1.7C/1.6C U/C IR31		
Cooler(s)/Kit(s):	Blue		
Date/Time sample(s) sent to storage:	11/3/23 13:00		
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 type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
pH adjusted by:			

Login Notes: Logged in per instructions TM.  
NO3/NO2 & P-Ortho out of hold.  
Proceed per TM

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:



Environmental

# Chain of Custody Form

Page 1 of 1

HS23110221

Colorado Oil and Gas Conservation Commission  
Prospect MSSU Inj Spill



ALS Project Manager:

Customer Information				Project Information				Analysis Parameters												
PO Number	GAE PHAA 2021*056			Project Name	Prospect MSSU Inj Spill			A	pH, specific conductance, TDS, alkalinity (total, carb, bicarb)											
Work Order	NA			Project Number	NA			B	anions - Br, Cl, F, SO4, NO3, NO2, P											
Company Name	ECMC			Bill To Company	ECMC			C	cations/metals - Ca, Fe, Mg, Mn, K, Na, Ba, B, Se, Sr											
Send Report To	Rick Allison			Invoice Attn.	Rick Allison			D	BTEX, naphthalene, 1,2,3-trimethylbenzene, 1,2,4-trimethylbenzene											
Address	1120 Lincoln Street Suite 801			Address	1120 Lincoln Street Suite 801			E	TPH (C6-C36)											
City/State/Zip	Denver CO 80203			City/State/Zip	Denver CO 80203			F												
Phone	970-461-2970			Phone	970-461-2970			G												
Fax	NA			Fax	NA			H												
e-Mail Address				e-Mail Address				I												
								J												

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	UPSTREAM	10/31/23	1612	W	1.8	11	X	X	X	X	X						
2	OUTFALL BASIN	10/31/23	1658	W	1.8	11	X	X	X	X	X						
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign <i>Rick Allison</i>				Shipment Method: DET OFF LOVELAND		Required Turnaround Time: <input checked="" type="checkbox"/> STD 10 Wk Days <input type="checkbox"/> 5 Wk Days <input type="checkbox"/> 2 Wk Days <input type="checkbox"/> 24 Hour				Results Due Date:	
Relinquished by: <i>Rick Allison</i>		Date: 11/2/23	Time: 1145	Received by: <i>Karen Craven</i>		Notes: ANALYZE DISSOLVED METALS - LAB FILTER					
Relinquished by: <i>Karen Craven</i>		Date: 11-2-23	Time: 1600	Received by (Laboratory): <i>Blue</i>		Cooler Temp. 2.5		QC Package: (Check Box Below)			
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):		1.70		<input checked="" type="checkbox"/> Level II: Standard QC		TRRP-Checklist	
								<input type="checkbox"/> Level III: Std QC + Raw Data		TRRP Level IV	
								<input type="checkbox"/> Level IV: SW846 CLP-Like			
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035						431		Other:			

SHORT  
HOLDING  
TIME

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

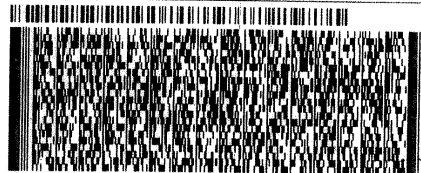
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ORIGIN ID:GXVA (281) 530-5656  
SAMPLE RECEIVING  
ALS  
10450 STANCLIFF RD  
SUITE 210  
HOUSTON, TX 77099  
UNITED STATES US

SHIP DATE: 02NOV23  
ACTWGT: 49.90 LB  
CAD: 0760439/CAFE3709  
DIMS: 24x14x13 IN  
BILL THIRD PARTY

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

(281) 630-5666  
PO: 967554812



**FedEx**  
Express



TRK# 7122 9261 4815  
0201

**FRI - 03 NOV 8:00A**  
**FIRST OVERNIGHT**

**X1 SGRA**

**77099**  
TX-US, IAH

Ref # 167077-434 MTW EXP 0923

