

FREMONT ENVIRONMENTAL INC.

March 22, 2021

Mr. Jacob Evans
Noble Energy Inc.
2115 117th Avenue
Greeley, CO 80634

Subject: **Groundwater Data Submittal**
CPC Hoshiko 35-1, Hoshiko B 35-14 (AST)
API # 05-123-12716
NESW Sec. 35, T5N, R64W
Weld County, Colorado
Fremont Project No. C020-049
Facility #323210, Remediation #15651

Dear Mr. Evans:

Enclosed please find a copy of the above referenced Groundwater Data Submittal for the CPC Hoshiko 35-1, Hoshiko B 35-14 (AST) site in Weld County, Colorado. The enclosed data describes the groundwater quality at the site during the recent quarterly sampling and monitoring event.

Please contact me at (303) 956-8714 if you require any additional information.

Fremont appreciates the opportunity to provide this service.

Sincerely,
FREMONT ENVIRONMENTAL INC.



Paul V. Henahan, P.E.
Senior Consultant

Enclosure

TABLE 1
SUMMARY OF GROUNDWATER ELEVATION AND ORGANIC CHEMISTRY DATA
NOBLE ENERGY INC.
CPC HOSHIKO 35-1, HOSHIKO B 35-14 (AST PIT), WELD COUNTY, COLORADO
FREMONT PROJECT C020-049

SAMPLE LOCATION	DATE	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL BENZENE (µg/L)	TOTAL XYLENES (µg/L)	1,2,4 TRIMETHYL-BENZENE (µg/L)	1,3,5 TRIMETHYL-BENZENE (µg/L)	NAPHTHALENE (µg/L)	TOC ELEVATION (feet)	DEPTH TO GROUND WATER (ft)	GROUND WATER ELEVATION (ft)	FREE PRODUCT THICKNESS (ft)
MW-1	08/31/20	<1.0	<1.0	2.0	40	NA	NA	NA	100.00	4.39	95.61	NP
	11/17/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA		4.20	95.80	NP
	02/22/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		5.50	94.50	NP
MW-2	08/31/20	1.2	<1.0	300	1800	NA	NA	NA	100.00	4.76	95.24	NP
	11/17/20	<1.0	<1.0	280	1100	NA	NA	NA		4.30	95.70	NP
	02/22/21	1.3	<1.0	400	1400	740	130	64		5.53	94.47	NP
MW-3	08/31/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	99.97	4.55	95.42	NP
	08/31/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA		4.48	95.49	NP
	02/22/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		5.45	94.52	NP
MW-4	08/31/20	<1.0	<1.0	<1.0	1100	NA	NA	NA	100.09	4.58	95.51	NP
	11/17/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA		4.83	95.26	NP
	02/22/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		5.56	94.53	NP
MW-5	08/31/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	100.50	4.87	95.63	NP
	11/17/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA		5.02	95.48	NP
	02/22/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		5.95	94.55	NP
MW-6	11/17/20	<1.0	<1.0	<1.0	2.2	NA	NA	NA	99.81	7.63	92.18	NP
	02/22/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		5.50	94.31	NP
MW-7	11/19/20	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	100.29	7.95	92.34	NP
	02/22/21	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		5.84	94.45	NP
Table 915-1 Limits		5	560	700	1,400	67	67	140				

Bold face values exceed the COGCC limits

NP - No Free Product

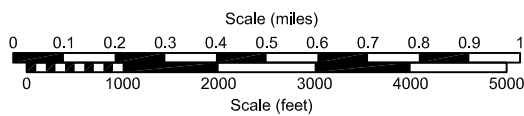
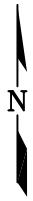
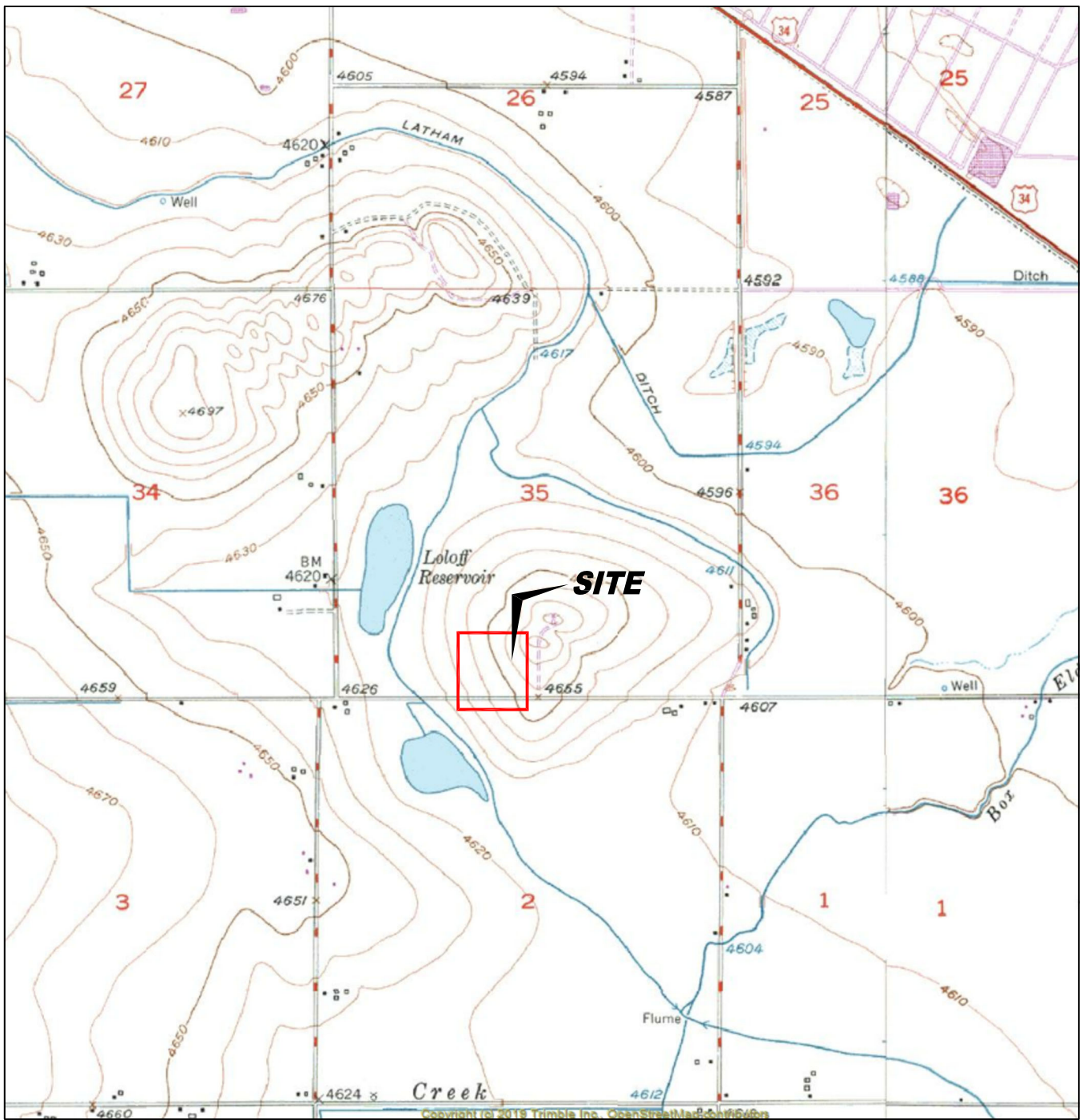
NS - No Sample

TABLE 2
SUMMARY OF INORGANIC GROUNDWATER CHEMISTRY DATA
NOBLE ENERGY INC.
CPC HOSHIKO 35-1, HOSHIKO B 35-14 (AST PIT), WELD COUNTY, COLORADO
FREMONT PROJECT C020-049

SAMPLE LOCATION	DATE	TOTAL DISSOLVED SOLIDS (mg/L)	CHLORIDE ION (mg/L)	SULFATE ION (mg/L)
MW-1	02/22/21	2310	1370	2660.0
MW-2	02/22/21	2020	1930	35.0
MW-3	02/22/21	3140	1110	2720
MW-4	02/22/21	2460	4840	7150
MW-5	02/22/21	3040	2300	5050
MW-6	02/22/21	2720	1820	4640
MW-7	02/22/21	2600	1970	5080
Table 915-1 Limits		<1.25 x local background	250	250

Bold face values exceed the COGCC limits

MW-2 Used as Local Background



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

NOBLE ENERGY, INC.
CPC HOSHIKO 35-1, HOSHIKO 35-14 (AST Pit)
 SESW Sec. 35 T5N, R64W, 40.348855°, -104.521793°
 Weld County, Colorado

Project No. C020-049	Prepared by	Drawn by TA
Date 3/11/21	Reviewed by EB	Filename 20049T





LEGEND

- ⊕ MONITORING WELL
- ABOVE GROUND STORAGE TANK
- FORMER FORMER FACILITY
- EXTENT OF EXCAVATION
- CONTAINMENT BERM

**Figure 2
SITE MAP**

NOBLE ENERGY, INC.
CPC HOSHIKO 35-1, HOSHIKO 35-14
 SESW Sec. 35 T5N, R64W, 40.348855°, -104.521793°
 Weld County, Colorado

Project No. C020-049	Prepared by TA	Drawn by TA
Date 3/11/21	Reviewed by EB	Filename 20049Q





LEGEND








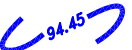
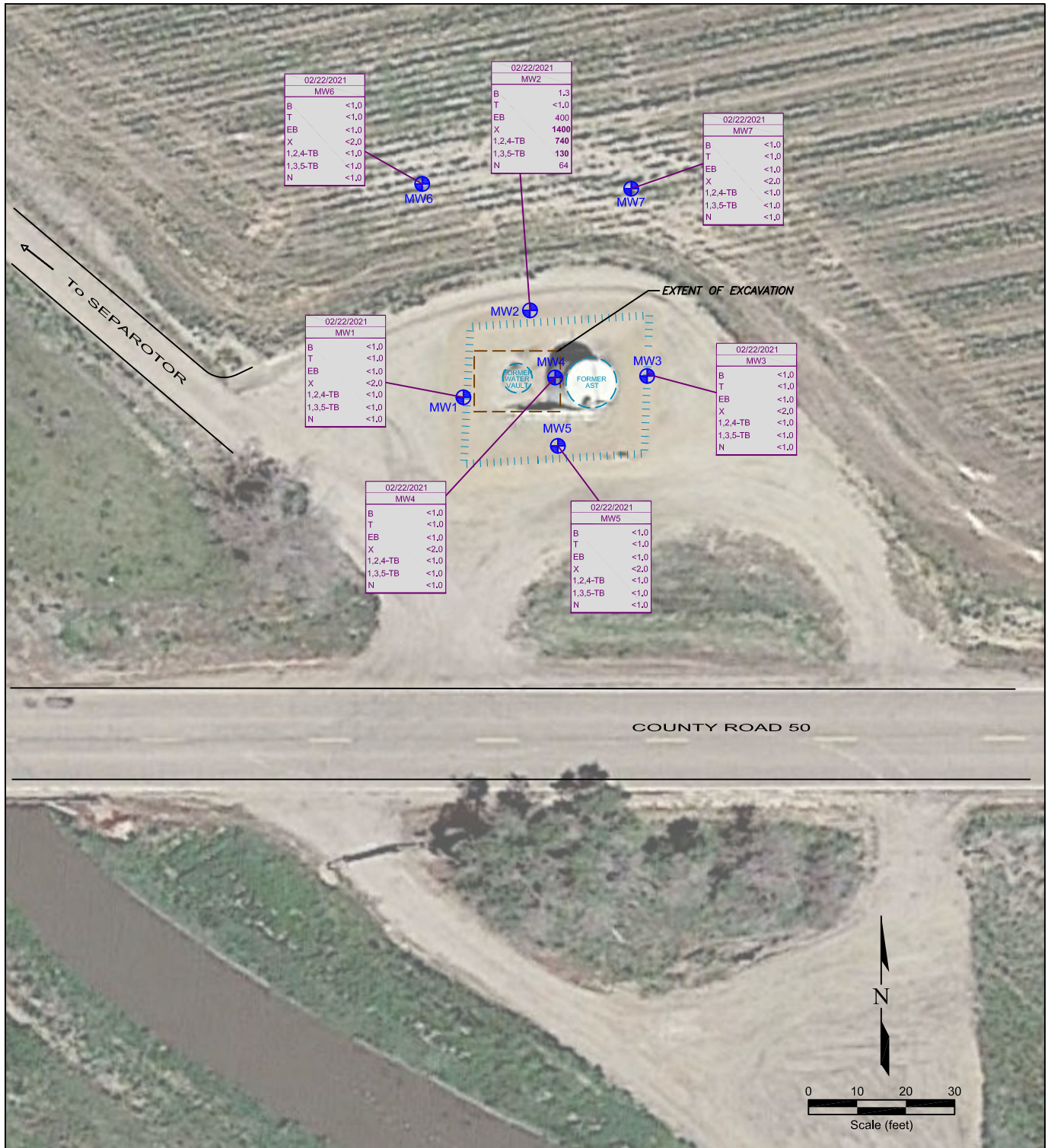
-  MONITORING WELL
-  ABOVE GROUND STORAGE TANK
-  FORMER FACILITY
-  EXTENT OF EXCAVATION
-  CONTAINMENT BERM
-  GROUND WATER ELEVATION (feet above mean sea level)
-  INFERRED GROUND WATER FLOW DIRECTION
-  WATER TABLE CONTOUR (feet above mean sea level)

Figure 3
INFERRED GROUNDWATER ELEVATION MAP
 February 22, 2021
NOBLE ENERGY, INC.
CPC HOSHIKO 35-1, HOSHIKO 35-14
 SESW Sec. 35 T5N, R64W, 40.348855°, -104.521793°
 Weld County, Colorado

Project No. C020-049	Prepared by	Drawn by TA
Date 3/16/21	Reviewed by EB	Filename 20049Q





LEGEND

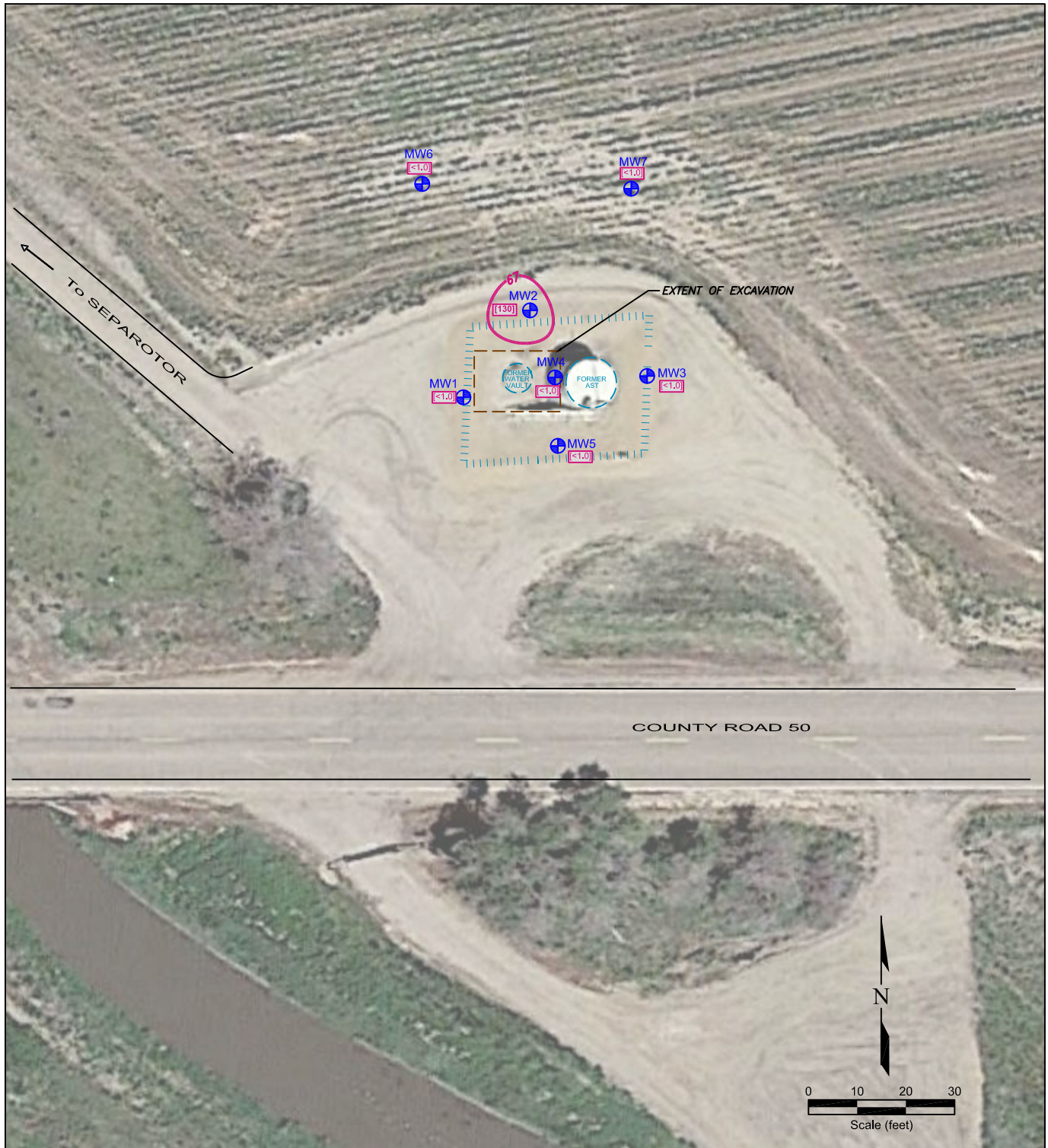
-  MONITORING WELL
-  ABOVE GROUND STORAGE TANK
-  FORMER FACILITY
-  EXTENT OF EXCAVATION
-  CONTAINMENT BERM

02/22/2021 MW1	DATE SAMPLED
B	BENZENE (ug/L)
T	TOLUENE (ug/L)
EB	ETHYLBENZENE (ug/L)
X	TOTAL XYLENES (ug/L)
1,2,4-TB	1,2,4-TRIMETHYLBENZENE (ug/L)
1,3,5-TB	1,3,5-TRIMETHYLBENZENE (ug/L)
N	NAPHTHALENE (ug/L)

Figure 4
ORGANIC GROUNDWATER CHEMISTRY MAP
 February 22, 2021
NOBLE ENERGY, INC.
CPC HOSHIKO 35-1, HOSHIKO 35-14
 SESW Sec. 35 T5N, R64W, 40.348855°, -104.521793°
 Weld County, Colorado


Project No. C020-049	Prepared by	Drawn by TA
Date 3/16/21	Reviewed by EB	Filename 20049Q





LEGEND

-  MONITORING WELL
-  ABOVE GROUND STORAGE TANK
-  FORMER FACILITY
-  EXTENT OF EXCAVATION
-  CONTAINMENT BERM

 1,2,4 TRIMETHYLBENZENE CONCENTRATION (ug/L)


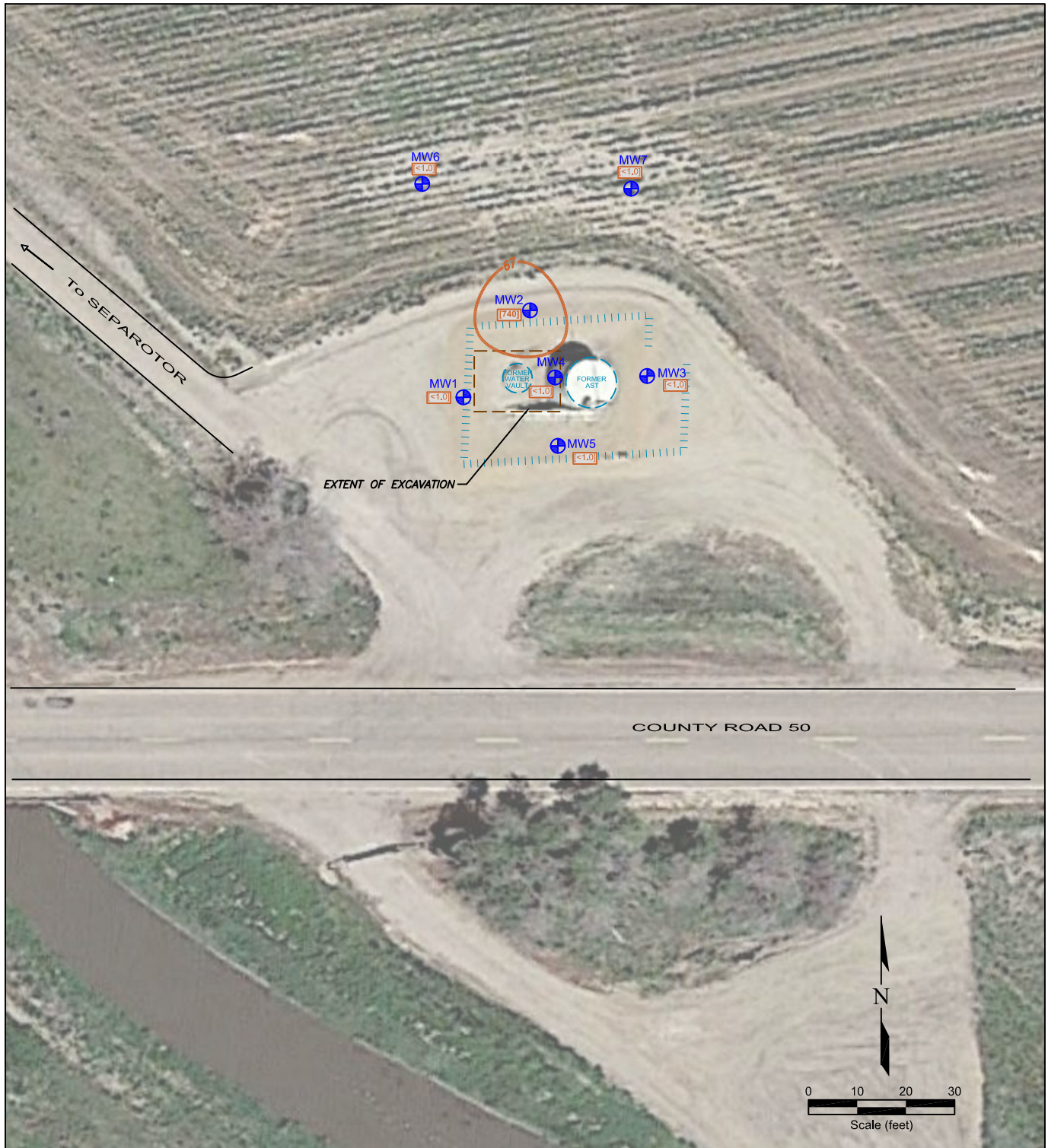
 1,2,4 TRIMETHYLBENZENE ISOCONCENTRATION (ug/L)

Figure 5
1,2,4 TRIMETHYLBENZENE ISO-CONCENTRATION MAP
 February 22, 2021

NOBLE ENERGY, INC.
CPC HOSHIKO 35-1, HOSHIKO 35-14
 SESW Sec. 35 T5N, R64W, 40.348855°, -104.521793°
 Weld County, Colorado

Project No. C020-049	Prepared by	Drawn by TA
Date 3/16/21	Reviewed by EB	Filename 20049Q





LEGEND








-  MONITORING WELL
-  ABOVE GROUND STORAGE TANK
-  FORMER FACILITY
-  EXTENT OF EXCAVATION
-  CONTAINMENT BERM
-  1,3,5 TRIMETHYLBENZENE CONCENTRATION (ug/L)
-  1,3,5 TRIMETHYLBENZENE CONCENTRATION (ug/L) (dashed where inferred)

Figure 6
1,3,5 TRIMETHYLBENZENE ISO-CONCENTRATION MAP
February 22, 2021

NOBLE ENERGY, INC.
CPC HOSHIKO 35-1, HOSHIKO 35-14
 SESW Sec. 35 T5N, R64W, 40.348855°, -104.521793°
 Weld County, Colorado

Project No. C020-049	Prepared by	Drawn by TA
Date 3/16/21	Reviewed by EB	Filename 20049Q





LEGEND








-  MONITORING WELL
-  ABOVE GROUND STORAGE TANK
-  FORMER FACILITY
-  EXTENT OF EXCAVATION
-  CONTAINMENT BERM
-  XYLENES CONCENTRATION (ug/L)
-  XYLENES ISO-CONCENTRATION (dashed where inferred)

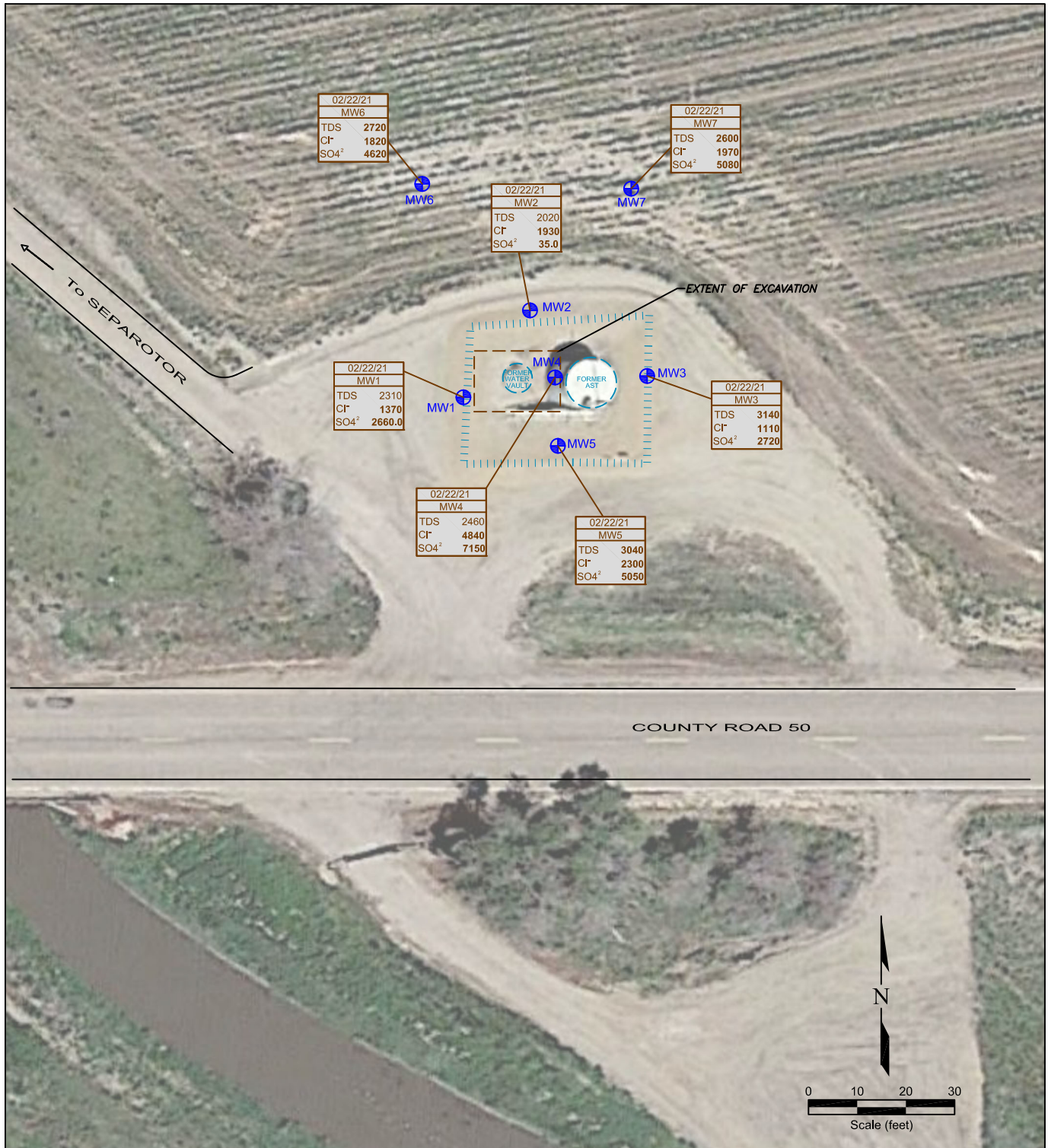
Figure 7

XYLENES ISO-CONCENTRATION MAP
February 22, 2021

NOBLE ENERGY, INC.
CPC HOSHIKO 35-1, HOSHIKO 35-14
SESW Sec. 35 T5N, R64W, 40.348855°, -104.521793°
Weld County, Colorado

Project No. C020-049	Prepared by TA	Drawn by TA
Date 3/16/21	Reviewed by EB	Filename 20049Q





LEGEND

- + MONITORING WELL
- ABOVE GROUND STORAGE TANK
- FORMER FORMER FACILITY
- EXTENT OF EXCAVATION
- CONTAINMENT BERM

02/22/21	DATE SAMPLED
MW1	SAMPLE ID
TDS 2310	TOTAL DISSOLVED SOLIDS (mg/L)
Cl ⁻ 1370	CHLORIDE ION (mg/L)
SO ₄ ²⁻ 2660.0	SULFATE ION (mg/L)

Figure 8

INORGANIC GROUNDWATER CHEMISTRY MAP

February 22, 2021

NOBLE ENERGY, INC.

CPC HOSHIKO 35-1, HOSHIKO 35-14

SESW Sec. 35 T5N, R64W, 40.348855°, -104.521793°

Weld County, Colorado

Project No. C020-049	Prepared by	Drawn by TA
Date 3/16/21	Reviewed by EB	Filename 20049Q



Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 01, 2021

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - CPC Hoshiko 35-1 (AST)

Work Order #2102282

Enclosed are the results of analyses for samples received by Summit Scientific on 02/22/21 15:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury

President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - CPC Hoshiko 35-1 (AST)

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/01/21 15:55

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	2102282-01	Water	02/22/21 00:00	02/22/21 15:00
MW-2	2102282-02	Water	02/22/21 00:00	02/22/21 15:00
MW-3	2102282-03	Water	02/22/21 00:00	02/22/21 15:00
MW-4	2102282-04	Water	02/22/21 00:00	02/22/21 15:00
MW-5	2102282-05	Water	02/22/21 00:00	02/22/21 15:00
MW-6	2102282-06	Water	02/22/21 00:00	02/22/21 15:00
MW-7	2102282-07	Water	02/22/21 00:00	02/22/21 15:00

Summit Scientific

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.

Summit Scientific

S₂

2102282

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310 ♦ 303-374-5933 (f)

Page 1 of 1

Client: Fremont Environmental

Project Manager: Paul Henehan

Address: P.O Box 1289

E-Mail: paulh@fremontenv.com, ethanb@fremontenv.com

City/State/Zip: Wellington, CO 80549

Bill to: Jacob

Phone: 303-956-8714

Project Name: Noble - CPC Hoshiko (AST)

Sampler Name: Black

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions			
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX	Naphthalene	GRO	DRO	SAR	EC	pH		Full 915 H ₂ O		
1	MW-1	2/22/21		1			X		X												X		
2	MW-2																						
3	MW-3																						
4	MW-4																						
5	MW-5																						
6	MW-6																						
7	MW-7																						
8																							
9																							
10																							

Relinquished by: <u>G. Henehan</u> Date/Time: <u>2/22/21 500</u>	Received by: <u>[Signature]</u> Date/Time: <u>02/22/2021 1500</u>	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: <u>43</u> Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Notes: Labeled 'H-A' on samples
Relinquished by:	Received by:		
Relinquished by:	Received by:		

2102282

Sample Receipt Checklist

S2 Work Order _____

Client: Fremont Environmental Client Project ID: Noble-CPC HOSHIKO (AST)

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other _____ Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____ (Describe)

Temp (°C)	4.3
-----------	-----

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input 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"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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 w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				
(1) If NO, then contact the client before proceeding with analysis and note in case narrative.				

[Signature]
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

02/22/20
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - CPC Hoshiko 35-1 (AST)

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/01/21 15:55

MW-1
2102282-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0377	02/24/21	02/26/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		106 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	1370	12.0		mg/L	200	BEB0410	02/26/21	02/26/21	EPA 300.0	
Sulfate	2660	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2310	10.0		mg/L	1	BEB0367	02/24/21	02/26/21	SM2540C	

Summit Scientific

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.



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - CPC Hoshiko 35-1 (AST)

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/01/21 15:55

MW-2
2102282-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	1.3	1.0	ug/l	1	BEB0377	02/24/21	02/26/21	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	400	100	"	100	"	"	"	"	
Xylenes (total)	1400	200	"	"	"	"	"	"	
Naphthalene	64	1.0	"	1	"	"	"	"	
1,2,4-Trimethylbenzene	740	100	"	100	"	"	"	"	
1,3,5-Trimethylbenzene	130	1.0	"	1	"	"	"	"	

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.9 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sulfate	35.0	6.00	mg/L	20	BEB0410	02/26/21	02/26/21	EPA 300.0	
Chloride	1930	12.0	"	200	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Dissolved Solids	2020	10.0	mg/L	1	BEB0367	02/24/21	02/26/21	SM2540C	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - CPC Hoshiko 35-1 (AST)

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/01/21 15:55

MW-3
2102282-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0377	02/24/21	02/26/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		105 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.2 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Sulfate	2720	60.0		mg/L	200	BEB0410	02/26/21	02/26/21	EPA 300.0	
Chloride	1110	12.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	3140	10.0		mg/L	1	BEB0367	02/24/21	02/26/21	SM2540C	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - CPC Hoshiko 35-1 (AST)

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/01/21 15:55

MW-4
2102282-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0377	02/24/21	02/26/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		105 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		110 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	4840	12.0		mg/L	200	BEB0410	02/26/21	02/26/21	EPA 300.0	
Sulfate	7150	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2460	10.0		mg/L	1	BEB0367	02/24/21	02/26/21	SM2540C	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - CPC Hoshiko 35-1 (AST)

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/01/21 15:55

MW-5
2102282-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0377	02/24/21	02/26/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		105 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.7 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Sulfate	5050	60.0		mg/L	200	BEB0410	02/26/21	02/26/21	EPA 300.0	
Chloride	2300	12.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	3040	10.0		mg/L	1	BEB0367	02/24/21	02/26/21	SM2540C	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - CPC Hoshiko 35-1 (AST)

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/01/21 15:55

MW-6
2102282-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0377	02/24/21	02/26/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		107 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.5 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Sulfate	4640	60.0		mg/L	200	BEB0410	02/26/21	02/26/21	EPA 300.0	
Chloride	1820	12.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2720	10.0		mg/L	1	BEB0367	02/24/21	02/26/21	SM2540C	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - CPC Hoshiko 35-1 (AST)

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/01/21 15:55

MW-7
2102282-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0377	02/24/21	02/26/21	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		102 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.8 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Sulfate	5080	60.0		mg/L	200	BEB0410	02/26/21	02/26/21	EPA 300.0	
Chloride	1970	12.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **02/22/21 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2600	10.0		mg/L	1	BEB0367	02/24/21	02/26/21	SM2540C	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - CPC Hoshiko 35-1 (AST)

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/01/21 15:55

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BEB0377 - EPA 5030 Water MS

Blank (BEB0377-BLK1)

Prepared: 02/24/21 Analyzed: 02/25/21

Benzene	ND	1.0	ug/l								
Toluene	ND	1.0	"								
Ethylbenzene	ND	1.0	"								
Xylenes (total)	ND	2.0	"								
Naphthalene	ND	1.0	"								
1,2,4-Trimethylbenzene	ND	1.0	"								
1,3,5-Trimethylbenzene	ND	1.0	"								
Surrogate: 1,2-Dichloroethane-d4	12.6		"	13.3		94.8		23-173			
Surrogate: Toluene-d8	13.2		"	13.3		98.6		20-170			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		99.5		21-167			

LCS (BEB0377-BS1)

Prepared: 02/24/21 Analyzed: 02/25/21

Benzene	34.7	1.0	ug/l	40.0		86.8		51-132			
Toluene	34.8	1.0	"	40.0		87.0		51-138			
Ethylbenzene	32.5	1.0	"	40.0		81.2		58-146			
m,p-Xylene	64.9	2.0	"	80.0		81.1		57-144			
o-Xylene	31.7	1.0	"	40.0		79.2		53-146			
Naphthalene	30.0	1.0	"	40.0		75.0		70-130			
1,2,4-Trimethylbenzene	33.7	1.0	"	40.0		84.2		70-130			
1,3,5-Trimethylbenzene	33.0	1.0	"	40.0		82.5		70-130			
Surrogate: 1,2-Dichloroethane-d4	8.19		"	13.3		61.4		23-173			
Surrogate: Toluene-d8	13.6		"	13.3		102		20-170			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.2		21-167			

Matrix Spike (BEB0377-MS1)

Source: 2102278-01

Prepared: 02/24/21 Analyzed: 02/25/21

Benzene	55.8	1.0	ug/l	40.0	1.17	137		34-141			
Toluene	55.6	1.0	"	40.0	ND	139		27-151			
Ethylbenzene	56.6	1.0	"	40.0	ND	142		29-160			
m,p-Xylene	113	2.0	"	80.0	1.12	140		20-166			
o-Xylene	55.5	1.0	"	40.0	ND	139		33-159			
Naphthalene	52.0	1.0	"	40.0	ND	130		70-130			
1,2,4-Trimethylbenzene	37.2	1.0	"	40.0	ND	93.1		70-130			
1,3,5-Trimethylbenzene	37.2	1.0	"	40.0	ND	93.0		70-130			
Surrogate: 1,2-Dichloroethane-d4	11.9		"	13.3		89.3		23-173			
Surrogate: Toluene-d8	13.6		"	13.3		102		20-170			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.4		21-167			

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - CPC Hoshiko 35-1 (AST)

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 03/01/21 15:55

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BEB0377 - EPA 5030 Water MS

Matrix Spike Dup (BEB0377-MSD1)	Source: 2102278-01			Prepared: 02/24/21 Analyzed: 02/25/21					
Benzene	48.1	1.0	ug/l	40.0	1.17	117	34-141	14.8	30
Toluene	57.0	1.0	"	40.0	ND	142	27-151	2.49	30
Ethylbenzene	58.1	1.0	"	40.0	ND	145	29-160	2.49	30
m,p-Xylene	116	2.0	"	80.0	1.12	144	20-166	2.51	30
o-Xylene	56.8	1.0	"	40.0	ND	142	33-159	2.32	30
Naphthalene	45.6	1.0	"	40.0	ND	114	70-130	13.1	30
1,2,4-Trimethylbenzene	39.9	1.0	"	40.0	ND	99.8	70-130	6.87	30
1,3,5-Trimethylbenzene	39.7	1.0	"	40.0	ND	99.2	70-130	6.37	30
Surrogate: 1,2-Dichloroethane-d4	12.4		"	13.3		93.0	23-173		
Surrogate: Toluene-d8	13.3		"	13.3		100	20-170		
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		95.9	21-167		

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - CPC Hoshiko 35-1 (AST)

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 03/01/21 15:55

Anions by EPA Method 300.0 - Quality Control
Summit Scientific

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

Batch BEB0410 - General Preparation

Blank (BEB0410-BLK1)

Prepared & Analyzed: 02/26/21

Chloride	ND	0.0600	mg/L						
Sulfate	ND	0.300	"						

LCS (BEB0410-BS1)

Prepared & Analyzed: 02/26/21

Sulfate	14.4	0.300	mg/L	15.0	96.2	90-110		
Chloride	2.82	0.0600	"	3.00	94.0	90-110		

Duplicate (BEB0410-DUP1)

Source: 2102282-01

Prepared & Analyzed: 02/26/21

Sulfate	2680	60.0	mg/L		2660		0.884	20
Chloride	1240	12.0	"		1370		9.95	20

Matrix Spike (BEB0410-MS1)

Source: 2102282-01

Prepared & Analyzed: 02/26/21

Chloride	2010	12.0	mg/L	600	1370	106	80-120	
Sulfate	5080	60.0	"	3000	2660	80.7	80-120	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - CPC Hoshiko 35-1 (AST)

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 03/01/21 15:55

Total Dissolved Solids by SM2540C - Quality Control

Summit Scientific

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

Batch BEB0367 - General Preparation

Blank (BEB0367-BLK1)

Prepared: 02/24/21 Analyzed: 02/26/21

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BEB0367-DUP1)

Source: 2102282-01

Prepared: 02/24/21 Analyzed: 02/26/21

Total Dissolved Solids 2310 10.0 mg/L 2310 0.260 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - CPC Hoshiko 35-1 (AST)

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/01/21 15:55

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference