

January 7, 2025

## Noble Energy, Inc – Lucci B01-23 (Facility)

---

### Site Investigation

NWSE Sec 1, T5N, R64W

40.423974, -104.491389

Weld County, Colorado

Fremont Project No. C023-269

Facility # 331894, Remediation # 30972

### Site Overview – Site History

The site consists of the former Lucci B01-23 (Facility). A historical release was identified at the aboveground storage tanks (AST) and separator during decommissioning activities on October 2, 2023. A comprehensive site investigation was undertaken to define the magnitude and extent of soil impacts. Soil impacts will be removed via excavation at and adjacent to the former AST and separator locations. The proposed dimensions of the PWV/AST and separator excavation extent are estimated to be 20'x20'x1'(AST) and 20'x20'x5'(Separator) deep. Groundwater was not encountered during the site investigation.

### Conceptual Site Model\*

\*Data presented represents the most recent sampling event

- **Land Use** – Rangeland
- **Lithology (USCS)** – SW
- **Potential Receptors within ¼ mile** – Facility within Aquatic Native Species Conservation Waters, emergent wetland 30ft NW well and flowline within wetland Riverine 0.09mi NW
- **Groundwater Encountered** – No
- **Estimated Depth to Groundwater** – >20'
- **Impacted Media and Excavation Extent** – Soil – 20'x20'x1'(AST) and 20'x20'x5'(Separator) deep
- **Volume of Impacts Removed** – Impacts remain in situ
- **Waste Type** – Non-hazardous

### Contaminants of Concern (COC)

The laboratory data indicate organic and inorganic soil constituents in three of the 30 samples, collected during the November 19, 2024 supplemental site investigation, exceed the ECMC Table 915-1 standards at and adjacent to the former AST/PWV and separator locations. Based on analytical data from the October 2, 2023 initial decommissioning site investigation and the November 19, 2024 site investigation COCs Table 915-1 VOCs, SVOCs, SSR constituents and Table 915-1 metals. The soil analytical data are summarized in Tables 2-5. A copy of the laboratory's report, quality control data, and chain-of-custody documentation is included as a separate report.

### Remedial Actions

The source will be excavated, and confirmation soil samples will be collected and analyzed for the full Table 915-1 suite. If groundwater is encountered during the excavation of impacted soil, a groundwater sample will be collected

for Table 915-1 organic and inorganic constituents in groundwater (BTEX, 1,2,4 trimethylbenzene, 1,3,5 trimethylbenzene, naphthalene, chloride, sulfate and TDS). Should no additional active remediation be required following source removal at the location, a no further action (NFA) determination will be requested within 90 days following laboratory confirmation of the removal of impacted soils with respect to the applicable Table 915-1 screening levels at the site.

If groundwater impacts are observed, an NFA will be requested once four consecutive quarters of groundwater sampling have been completed and reported at the location with concentrations of Table 915 constituents below regulatory limits. As needed, soil and/or groundwater remediation plans will be developed and submitted to ECMC in a supplemental Form 27.

## Remarks

The discussion and conclusions contained in this report represent our professional opinions. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

This report was prepared by **FREMONT ENVIRONMENTAL INC.**



1/7/2025

Date\_\_\_\_\_

\_\_\_\_\_  
Jordan Suttles

Geologist

Reviewed by:



1/7/2025

Date\_\_\_\_\_

\_\_\_\_\_  
Ethan D. Black, PG

Geologist

Attachments:

Tables  
Figures

**TABLE 1**  
**FIELD DATA SUMMARY TABLE**  
**NOBLE 100322**  
**LUCCI B01-23, WELD COUNTY, COLORADO**  
**REM # 30972**

Sample ID	Sample Date	Depth (ft)	GPS Data Latitude/Longitude		PDOP Value	VOC Concentration (ppm)
AST01@0.5'	10/02/2023	0.5	40.4239750	-104.4913867	-	28.0
AST02@0.5'	10/02/2023	0.5	40.42393190	-104.49141810	-	14.7
PWV01-B@5'	10/02/2023	5	40.42399360	-104.49135050	-	46.9
PWV01-S@4'	10/02/2023	4	40.42397370	-104.49135280	-	25.8
SEP01-DL@4'	10/02/2023	4	40.42416970	-104.49118670	-	384.0
AST01 Cen. 4.0ft	11/19/2024	4	40.4239720	-104.4913841	0.7	0.0
AST01 E 4.0ft	11/19/2024	4	40.42396980	-104.49134690	0.7	0.0
AST01 N 4.0ft	11/19/2024	4	40.42400310	-104.49138790	0.8	0.0
AST01 S 4.0ft	11/19/2024	4	40.4239440	-104.4913818	0.7	0.0
AST01 W 4.0ft	11/19/2024	4	40.4239748	-104.4914160	0.7	0.0
SEP DL Cen. 4.0ft	11/19/2024	4	40.4241680	-104.4911847	0.8	0.0
SEP DL Cen. 8.0ft	11/19/2024	8	40.4241680	-104.4911847	0.8	0.0
SEP DL E 4.0ft	11/19/2024	4	40.4241566	-104.4911446	0.7	0.0
SEP DL E 8.0ft	11/19/2024	8	40.4241566	-104.4911446	0.7	0.0
SEP DL N 4.0ft	11/19/2024	4	40.4241978	-104.4911810	0.8	0.0
SEP DL N 8.0ft	11/19/2024	8	40.4241978	-104.4911810	0.8	0.0
SEP DL S 4.0ft	11/19/2024	4	40.4241394	-104.4911908	0.8	0.0
SEP DL S 8.0ft	11/19/2024	8	40.4241394	-104.4911908	0.8	0.0
SEP DL W 4.0ft	11/19/2024	4	40.4241741	-104.4912286	0.7	0.0
SEP DL W 8.0ft	11/19/2024	8	40.4241741	-104.4912286	0.7	0.0
BKG01	10/02/2023	0.5, 4	40.4268424	-104.49092	-	0.2
BKG02	10/02/2023	0.5, 4	40.42496410	-104.49375540	-	0.4
BKG03	10/02/2023	0.5, 4	40.42476260	-104.49348180	-	0.3

**TABLE 1**  
**FIELD DATA SUMMARY TABLE**  
**NOBLE 100322**  
**LUCCI B01-23, WELD COUNTY, COLORADO**  
**REM # 30972**

Sample ID	Sample Date	Depth (ft)	GPS Data Latitude/Longitude		PDOP Value	VOC Concentration (ppm)
BKG04	10/02/2023	0.5, 4	40.4247002	-104.4923890	-	0.2
BKG05	10/02/2023	0.5, 4	40.4250024	-104.4905276	-	0.0
BKG 1 2ft	11/19/2024	2	40.42421800	-104.49083520	0.7	0.0
BKG 1 4ft	11/19/2024	4	40.42421800	-104.49083520	0.7	0.0
BKG 1 8.0ft	11/19/2024	8	40.42421800	-104.49083520	0.7	0.0
BKG 2 2ft	11/19/2024	2	40.42409110	-104.49077130	0.8	0.0
BKG 2 4ft	11/19/2024	4	40.42409110	-104.49077130	0.8	0.0
BKG 2 8.0ft	11/19/2024	8	40.42409110	-104.49077130	0.8	0.0
BKG 3 2ft	11/19/2024	2	40.42389780	-104.49077070	0.8	0.0
BKG 3 4ft	11/19/2024	4	40.42389780	-104.49077070	0.8	0.0
BKG 3 8.0ft	11/19/2024	8	40.42389780	-104.49077070	0.8	0.0
BKG 4 2ft	11/19/2024	2	40.42387470	-104.49101290	0.8	0.0
BKG 4 4ft	11/19/2024	4	40.42387470	-104.49101290	0.8	0.0
BKG 4 8.0ft	11/19/2024	8	40.42387470	-104.49101290	0.8	0.0
BKG 5 2ft	11/19/2024	2	40.42381850	-104.49125960	0.8	0.0
BKG 5 4ft	11/19/2024	4	40.42381850	-104.49125960	0.8	0.0
BKG 5 8.0ft	11/19/2024	8	40.42381850	-104.49125960	0.8	0.0

1. Global Positioning System (GPS) data is provided in decimal degrees using North American Datum (NAD) 83 UTMZone 13 North.

2. Volatile organic compound (VOC) concentrations are measured in the field using a photoionization detector (PID).

PDOP = Position Dilution of Precision

ppm = Parts per million

in. = Inches

ft. = Feet

bgs = Below ground surface

TABLE 2  
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA  
NOBLE 100322  
LUCCI B01-23, WELD COUNTY, COLORADO  
REM # 30972

Sample ID	Sample Date	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	1,2,4- Trimethyl- Benzene (mg/kg)	1,3,5- Trimethyl- Benzene (mg/kg)	Naphthalene (mg/kg)	TPH (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500	500**		
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500	500**		
AST01@0.5'	10/02/2023	0.5	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<0.50	<50
AST02@0.5'	10/02/2023	0.5	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<0.50	<50
PWV01-B@5'	10/02/2023	5	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<0.50	<50
PWV01-S@4'	10/02/2023	4	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<0.50	<50
SEP01-DL@4'	10/02/2023	4	<0.0020	<0.0050	<0.0050	0.039	0.01	0.018	<0.0038	<500	0.5	<50	<50
AST01 Cen. 4.0ft	11/19/2024	4	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
AST01 E 4.0ft	11/19/2024	4	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
AST01 N 4.0ft	11/19/2024	4	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
AST01 S 4.0ft	11/19/2024	4	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
AST01 W 4.0ft	11/19/2024	4	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SEP DL Cen. 4.0ft	11/19/2024	4	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SEP DL Cen. 8.0ft	11/19/2024	8	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SEP DL E 4.0ft	11/19/2024	4	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SEP DL E 8.0ft	11/19/2024	8	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SEP DL N 4.0ft	11/19/2024	4	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SEP DL N 8.0ft	11/19/2024	8	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SEP DL S 4.0ft	11/19/2024	4	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SEP DL S 8.0ft	11/19/2024	8	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SEP DL W 4.0ft	11/19/2024	4	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SEP DL W 8.0ft	11/19/2024	8	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50

1. Bold values exceed the ECMC Table 915-1 limit(s)

2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)

3. \* Indicates laboratory minimum detection limit in excess of SSL

4. \*\* Summation of GRO+DRO+ORO must be less than 500 mg/kg

(<) = Analytical result is less than the indicated laboratory reporting limit.

TPH-GRO = Total petroleum hydrocarbons - gasoline range organics

TPH-DRO = Total petroleum hydrocarbons - diesel range organics

TPH-ORO = Total petroleum hydrocarbons - oil range organics

mg/kg = Milligrams per kilogram

ft. = Feet

bgs = Below ground surface

NA - Not analyzed

TABLE 3  
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA  
NOBLE 100322  
LUCCI B01-23, WELD COUNTY, COLORADO  
REM # 30972

Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3- cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl- Naphthalene (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
AST01@0.5'	10/02/2023	0.5	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0103	0.0157
AST02@0.5'	10/02/2023	0.5	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
PWV01-B@5'	10/02/2023	5	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
PWV01-S@4'	10/02/2023	4	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP01-DL@4'	10/02/2023	4	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00923	<0.00500
AST01 Cen. 4.0ft	11/19/2024	4	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST01 E 4.0ft	11/19/2024	4	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST01 N 4.0ft	11/19/2024	4	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST01 S 4.0ft	11/19/2024	4	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST01 W 4.0ft	11/19/2024	4	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP DL Cen. 4.0ft	11/19/2024	4	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP DL Cen. 8.0ft	11/19/2024	8	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP DL E 4.0ft	11/19/2024	4	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP DL E 8.0ft	11/19/2024	8	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP DL N 4.0ft	11/19/2024	4	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP DL N 8.0ft	11/19/2024	8	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP DL S 4.0ft	11/19/2024	4	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP DL S 8.0ft	11/19/2024	8	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP DL W 4.0ft	11/19/2024	4	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP DL W 8.0ft	11/19/2024	8	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

1. Bold values exceed the ECMC Table 915-1 limit(s)

2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)

3. \* Indicates laboratory minimum detection limit in excess of SSL

4. \*\* Summation of GRO+DRO+ORO must be less than 500 mg/kg

(<) = Analytical result is less than the indicated laboratory reporting limit.

TPH-GRO = Total petroleum hydrocarbons - gasoline range organics

TPH-DRO = Total petroleum hydrocarbons - diesel range organics

TPH-ORO = Total petroleum hydrocarbons - oil range organics

mg/kg = Milligrams per kilogram

ft. = Feet

bgs = Below ground surface

NA - Not analyzed

TABLE 4  
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION  
NOBLE 100322  
LUCCI B01-23, WELD COUNTY, COLORADO  
REM # 30972

Sample ID	Sample Date	Depth (ft)	pH (Standard Units)	EC (mmhos/cm)	SAR (Standard Units)	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
AST01@0.5'	10/02/2023	0.5	6.7	5.97	0.195	<2.00
AST02@0.5'	10/02/2023	0.5	8.95	0.124	0.00891	<2.00
PWV01-B@5'	10/02/2023	5	8.75	0.1	0.00946	<2.00
PWV01-S@4'	10/02/2023	4	8.88	0.0817	0.0084	<2.00
SEP01-DL@4'	10/02/2023	4	6.85	1	0.848	<2.00
AST01 Cen. 4.0ft	11/19/2024	4	8.73	0.116	0.0052	<2.00
AST01 E 4.0ft	11/19/2024	4	8.63	0.145	0.00643	<2.00
AST01 N 4.0ft	11/19/2024	4	8.56	0.123	0.0134	<2.00
AST01 S 4.0ft	11/19/2024	4	8.67	0.125	0.00469	<2.00
AST01 W 4.0ft	11/19/2024	4	8.8	0.151	0.0287	<2.00
SEP DL Cen. 4.0ft	11/19/2024	4	6.58	0.162	0.00634	<2.00
SEP DL Cen. 8.0ft	11/19/2024	8	8.67	0.157	0.0641	<2.00
SEP DL E 4.0ft	11/19/2024	4	8.53	0.15	0.0147	<2.00
SEP DL E 8.0ft	11/19/2024	8	8.86	0.119	0.00133	<2.00
SEP DL N 4.0ft	11/19/2024	4	7.68	0.116	0.0113	<2.00
SEP DL N 8.0ft	11/19/2024	8	8.48	0.128	0.0662	<2.00
SEP DL S 4.0ft	11/19/2024	4	8.59	0.134	0.0025	<2.00
SEP DL S 8.0ft	11/19/2024	8	8.91	0.12	0.0152	<2.00
SEP DL W 4.0ft	11/19/2024	4	7.45	0.106	0.00524	<2.00
SEP DL W 8.0ft	11/19/2024	8	9	0.121	0.173	<2.00
BKG01@0.5'	10/02/2023	0.5	9.47	1.08	5.45	2.11
BKG01@4'	10/02/2023	4	9.03	2.66	17.1	<2.00
BKG02@0.5'	10/02/2023	0.5	6.25	0.117	0.115	<2.00
BKG02@4'	10/02/2023	4	6.32	0.0411	0.0427	<2.00
BKG03@0.5'	10/02/2023	0.5	6.43	0.387	0.0207	<2.00
BKG03@4'	10/02/2023	4	6.14	0.186	0.0324	<2.00
BKG04@0.5'	10/02/2023	0.5	7.45	0.244	0.0155	<2.00
BKG04@4'	10/02/2023	4	8.23	0.136	0.0255	<2.00
BKG05@0.5'	10/02/2023	0.5	6.18	0.108	0.0542	<2.00
BKG05@4'	10/02/2023	4	6.47	0.172	0.0492	<2.00
BKG 1 2ft	11/19/2024	2	7.73	0.123	0.015	<2.00

TABLE 4  
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION  
NOBLE 100322  
LUCCI B01-23, WELD COUNTY, COLORADO  
REM # 30972

Sample ID	Sample Date	Depth (ft)	pH (Standard Units)	EC (mmhos/cm)	SAR (Standard Units)	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
BKG 1 4ft	11/19/2024	4	8.42	0.153	0.0076	<2.00
BKG 1 8.0ft	11/19/2024	8	8.91	0.146	0.0763	<2.00
BKG 2 2ft	11/19/2024	2	6.83	0.17	0.0103	<2.00
BKG 2 4ft	11/19/2024	4	8.3	0.0743	0.129	<2.00
BKG 2 8.0ft	11/19/2024	8	8.45	0.182	0.0631	<2.00
BKG 3 2ft	11/19/2024	2	7.02	0.0544	0.0043	<2.00
BKG 3 4ft	11/19/2024	4	7.49	0.17	0.0026	<2.00
BKG 3 8.0ft	11/19/2024	8	8.95	0.176	0.00904	<2.00
BKG 4 2ft	11/19/2024	2	6.59	0.098	0.0228	<2.00
BKG 4 4ft	11/19/2024	4	7.07	0.148	0.00733	<2.00
BKG 4 8.0ft	11/19/2024	8	8.6	0.0835	0.0511	<2.00
BKG 5 2ft	11/19/2024	2	6.69	0.201	0.00436	<2.00
BKG 5 4ft	11/19/2024	4	8.28	0.135	0.0482	<2.00
BKG 5 8.0ft	11/19/2024	8	8.61	0.254	0.584	<2.00
Maximum Background Concentration			9.47	2.66	17.1	2.11

1. **Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within background concentrations.

2. **Bold** faced values exceed the ECMC Table 915-1 limit(s) and native background concentrations.

3. Brown highlighted soil analytical values indicate a regulatory exceedance.

NA - Not analyzed



TABLE 5  
SUMMARY OF METALS IN SOIL CHEMISTRY DATA  
NOBLE 100322  
LUCCI B01-23, WELD COUNTY, COLORADO  
REM # 30972

Sample ID	Sample Date	Depth (ft)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
AST01@0.5'	10/02/2023	0.5	0.739	40	<0.200	<0.30	1.44	2.86	1.46	<0.260	<0.0200	5.51
AST02@0.5'	10/02/2023	0.5	0.839	132	0.275	<0.30	1.91	7.82	1.91	<0.260	0.0376	6.35
PWV01-B@5'	10/02/2023	5	0.735	63.3	<0.200	<0.30	0.777	3.58	0.873	<0.260	<0.0200	3.12
PWV01-S@4'	10/02/2023	4	0.907	67.1	<0.200	<0.30	0.928	3.33	1.05	<0.260	<0.0200	3.68
SEP01-DL@4'	10/02/2023	4	0.796	41	0.279	<0.30	1.24	3.99	1.1	<0.260	<0.0200	4.49
AST01 Cen. 4.0ft	11/19/2024	4	0.761	148	<0.200	<0.30	0.821	6.12	0.704	<0.260	<0.0200	3.1
AST01 E 4.0ft	11/19/2024	4	2.59	180	<0.200	<0.30	3.94	5.92	3.67	<0.260	0.0211	13.2
AST01 N 4.0ft	11/19/2024	4	0.7	46.7	<0.200	<0.30	0.848	4.08	0.813	<0.260	<0.0200	3.51
AST01 S 4.0ft	11/19/2024	4	0.697	69.1	<0.200	<0.30	0.691	2.86	0.776	<0.260	<0.0200	3.04
AST01 W 4.0ft	11/19/2024	4	2.42	119	<0.200	<0.30	3.19	5.12	3.53	<0.260	<0.0200	12.4
SEP DL Cen. 4.0ft	11/19/2024	4	1.44	28.3	<0.200	<0.30	2.5	3.65	1.88	<0.260	<0.0200	9.91
SEP DL Cen. 8.0ft	11/19/2024	8	4.69	33.7	<0.200	<0.30	2.55	4.18	2.08	<0.260	<0.0200	7.86
SEP DL E 4.0ft	11/19/2024	4	1.59	29.3	<0.200	<0.30	1.9	3.36	1.81	<0.260	<0.0200	8.84
SEP DL E 8.0ft	11/19/2024	8	2.91	43.2	<0.200	<0.30	1.83	3.58	1.85	<0.260	<0.0200	6.94
SEP DL N 4.0ft	11/19/2024	4	1.4	29	<0.200	<0.30	2.12	4.29	1.81	<0.260	<0.0200	9.19
SEP DL N 8.0ft	11/19/2024	8	3.87	45.9	<0.200	<0.30	2.16	2.8	2.14	<0.260	<0.0200	6.77
SEP DL S 4.0ft	11/19/2024	4	1.86	32.5	<0.200	<0.30	2.42	4.8	2.15	<0.260	<0.0200	10.1
SEP DL S 8.0ft	11/19/2024	8	2.43	42.1	<0.200	<0.30	1.78	3.15	1.64	<0.260	<0.0200	6.76
SEP DL W 4.0ft	11/19/2024	4	1.48	30.3	<0.200	<0.30	2.34	3.48	1.94	<0.260	<0.0200	9.55
SEP DL W 8.0ft	11/19/2024	8	5.78	27.4	<0.200	<0.30	2.7	4.39	2.7	<0.260	<0.0200	8.33
BKG01@0.5'	10/02/2023	0.5 Ft	0.705	203	0.49	<0.30	2.09	11.3	2.03	0.797	0.0648	8.7
BKG01@4'	10/02/2023	4.0 Ft	1.48	62	<0.200	<0.30	1.89	6.5	1.66	0.69	0.0262	6.96
BKG02@0.5'	10/02/2023	0.5 Ft	0.68	35.7	<0.200	<0.30	1.05	4.01	0.999	<0.260	<0.0200	4.11
BKG02@4'	10/02/2023	4.0 Ft	0.663	37.3	<0.200	<0.30	0.873	3.74	1	<0.260	<0.0200	3.85
BKG03@0.5'	10/02/2023	0.5 Ft	0.817	40.2	<0.200	<0.30	1.01	4.04	1.01	<0.260	<0.0200	4.42
BKG03@4'	10/02/2023	4.0 Ft	0.797	41.4	<0.200	<0.30	1.01	4.78	0.996	<0.260	<0.0200	4.61
BKG04@0.5'	10/02/2023	0.5 Ft	0.729	46.6	<0.200	<0.30	1.09	4.73	1.06	<0.260	<0.0200	4.46
BKG04@4'	10/02/2023	4.0 Ft	0.725	102	<0.200	<0.30	0.831	3.56	1.06	<0.260	<0.0200	3.74
BKG05@0.5'	10/02/2023	0.5 Ft	0.783	61.7	<0.200	<0.30	1.03	4.76	1.12	<0.260	0.0217	4.24

TABLE 5  
SUMMARY OF METALS IN SOIL CHEMISTRY DATA  
NOBLE 100322  
LUCCI B01-23, WELD COUNTY, COLORADO  
REM # 30972

Sample ID	Sample Date	Depth (ft)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
BKG05@4'	10/02/2023	4.0 Ft	0.76	46.3	<0.200	<0.30	1.03	4.55	1.09	<0.260	<0.0200	3.98
BKG 1 2ft	11/19/2024	2	2.78	61.4	<0.200	<0.30	3.08	13.5	3.32	<0.260	0.021	12.1
BKG 1 4ft	11/19/2024	4	1.85	56.3	<0.200	<0.30	2.25	3.65	2.62	<0.260	<0.0200	9.71
BKG 1 8.0ft	11/19/2024	8	2.44	42.1	<0.200	<0.30	1.83	3.53	3.69	<0.260	<0.0200	8.98
BKG 2 2ft	11/19/2024	2	2.17	38.4	<0.200	<0.30	2.15	3.66	2.22	<0.260	<0.0200	9.62
BKG 2 4ft	11/19/2024	4	1.83	37.9	<0.200	<0.30	1.54	2.81	1.78	<0.260	<0.0200	7.39
BKG 2 8.0ft	11/19/2024	8	1.92	42.3	<0.200	<0.30	1.57	2.53	1.76	<0.260	<0.0200	7.9
BKG 3 2ft	11/19/2024	2	2.84	48.5	<0.200	<0.30	3.07	4.76	2.93	<0.260	<0.0200	12.4
BKG 3 4ft	11/19/2024	4	2.42	41.9	<0.200	<0.30	2.47	4.35	2.54	<0.260	<0.0200	11.1
BKG 3 8.0ft	11/19/2024	8	1.72	54.5	<0.200	<0.30	1.22	2.46	1.62	<0.260	<0.0200	6.73
BKG 4 2ft	11/19/2024	2	2.62	43.6	<0.200	<0.30	2.8	4.37	2.83	<0.260	<0.0200	11.9
BKG 4 4ft	11/19/2024	4	2.15	64.9	<0.200	<0.30	3.05	4.3	2.62	<0.260	<0.0200	10.5
BKG 4 8.0ft	11/19/2024	8	2.12	119	<0.200	<0.30	1.89	3.83	2.51	<0.260	<0.0200	9.45
BKG 5 2ft	11/19/2024	2	1.67	33.7	<0.200	<0.30	2.38	4.38	2.25	<0.260	<0.0200	9.91
BKG 5 4ft	11/19/2024	4	2.04	39.4	<0.200	<0.30	2.18	3.74	2.42	<0.260	<0.0200	10.1
BKG 5 8.0ft	11/19/2024	8	1.99	89.6	<0.200	<0.30	1.61	3.43	2.17	<0.260	<0.0200	8.51
1.25x Maximum Background Concentration			3.55	253.8	0.61	<0.30	3.85	16.88	4.61	0.996	0.081	15.5

1. **Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within 1.25x background concentrations.

2. **Red** faced values exceed the ECMC Table 915-1 limit(s) and native background concentrations.

3. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL).

4. Non-detect background results accounted for in the highest background concentration by using the reporting limit.

ECMC = Energy & Carbon Management Commission

(<) = Analytical result is less than the indicated laboratory reporting limit.

mg/kg = Milligrams per kilogram

ft. = Feet

bgs = Below ground surface

\* Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed



## Lucci B01-23 Facility

Sec: 1 Twp: 5N Range: 64W Meridian: 6  
Facility ID# 331894  
Remediation # 30972  
40.424910, -104.493610  
C023-256

### Legend

⊙ Impacted Soil Sample Location

SEP01-DL

AST01@0.5'

Google Earth

100 ft





# Lucci B01-23 Facility

Sec: 1 Twp: 5N Range: 64W Meridian: 6  
Facility ID# 331894  
Remediation # 30972  
40.424910, -104.493610  
C023-256

Imagery Date: 10/2022. All site equipment has been removed.

## Legend

⊙ Soil Sample Locations

