



FIGURES

Figure 1: Groundwater Analytical Map (11/07/24)

Figure 2: Groundwater Elevation Map (11/07/24)

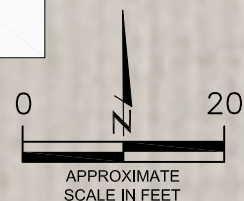
MW-02
11/07/24
B = <1.00
T = <1.00
E = <1.00
X = <1.00
N = <2.00
1,2,4-TMB = <2.00
1,3,5-TMB = <2.00
1-METHYLNAPHTHALENE = <0.02
C = 327
S = 608
T = 2080

MW-03
11/07/24
B = <1.00
T = <1.00
E = <1.00
X = <1.00
N = <2.00
1,2,4-TMB = <2.00
1,3,5-TMB = <2.00
1-METHYLNAPHTHALENE = <0.02
C = 269
S = 574
T = 1850

MW-05
11/07/24
B = <1.00
T = <1.00
E = <1.00
X = <1.00
N = <2.00
1,2,4-TMB = <2.00
1,3,5-TMB = <2.00
1-METHYLNAPHTHALENE = <0.02
C = 290
S = 565
T = 1910

MW-01
11/07/24
B = <1.00
T = <1.00
E = <1.00
X = <1.00
N = <2.00
1,2,4-TMB = <2.00
1,3,5-TMB = <2.00
1-METHYLNAPHTHALENE = <0.02
C = 266
S = 570
T = 1810

MW-04
11/07/24
B = <1.00
T = <1.00
E = <1.00
X = <1.00
N = <2.00
1,2,4-TMB = <2.00
1,3,5-TMB = <2.00
1-METHYLNAPHTHALENE = <0.02
C = 269
S = 573
T = 1850



LEGEND

--- INITIAL WELLHEAD ASSESSMENT BOUNDARIES

MONITORING WELL LOCATIONS

PARAMETERS

GROUNDWATER SAMPLE LOCATION

DATE

B = BENZENE (µg/L)

T = TOLUENE (µg/L)

E = ETHYLBENZENE (µg/L)

X = TOTAL XYLENES (µg/L)

N = NAPHTHALENE (µg/L)

1,2,4-TMB = 1,2,4-TRIMETHYLBENZENE (µg/L)

1,3,5-TMB = 1,3,5-TRIMETHYLBENZENE (µg/L)

1-METHYLNAPHTHALENE (µg/L)

C = CHLORIDE (mg/L)

S = SULFATE (mg/L)

TDS = TOTAL DISSOLVED SOLIDS (mg/L)

µg/L = MICROGRAMS PER LITER

mg/L = MILLIGRAMS PER LITER

NOTES:

VALUES PRESENTED WITH A LESS THAN SYMBOL (<) DID NOT CONTAIN CONCENTRATIONS AT OR ABOVE THE LABORATORY REPORTING LIMIT.

VALUES PRESENTED IN **BOLD** EXCEED THE ECMC TABLE 915-1 REGULATORY LIMITS AND/OR ECMC NARRATIVE GROUNDWATER QUALITY STANDARDS*.

*ECMC REGULATORY LIMITS IN GROUNDWATER HAVE NOT BEEN ESTABLISHED FOR 1-METHYLNAPHTHALENE. ECMC IMPLEMENTS A NARRATIVE GROUNDWATER QUALITY STANDARD TAKEN FROM THE ENVIRONMENTAL PROTECTION AGENCY (EPA) REGIONAL SCREENING LEVELS (RSLs) FOR TAPWATER, AS INCORPORATED BY REFERENCE IN RULE 901.B, TABLES FOR TARGET RISK ("TR")=1x10⁻⁶ AND TARGET HAZARD QUOTIENT ("THQ")=0.1. THE EPA RSL FOR TAPWATER, AND RESULTANT NARRATIVE GROUNDWATER QUALITY STANDARD IS 1.1 µg/L FOR 1-METHYLNAPHTHALENE.

ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

GROUNDWATER ANALYTICAL MAP

(11/07/24)

SANDAU #34-12F

HISTORICAL RELEASE

40.266780 / -104.770970

NW¼ SW¼ SEC.34 T4N R66W 6PM

WELD COUNTY, COLORADO

API # 05-123-15521

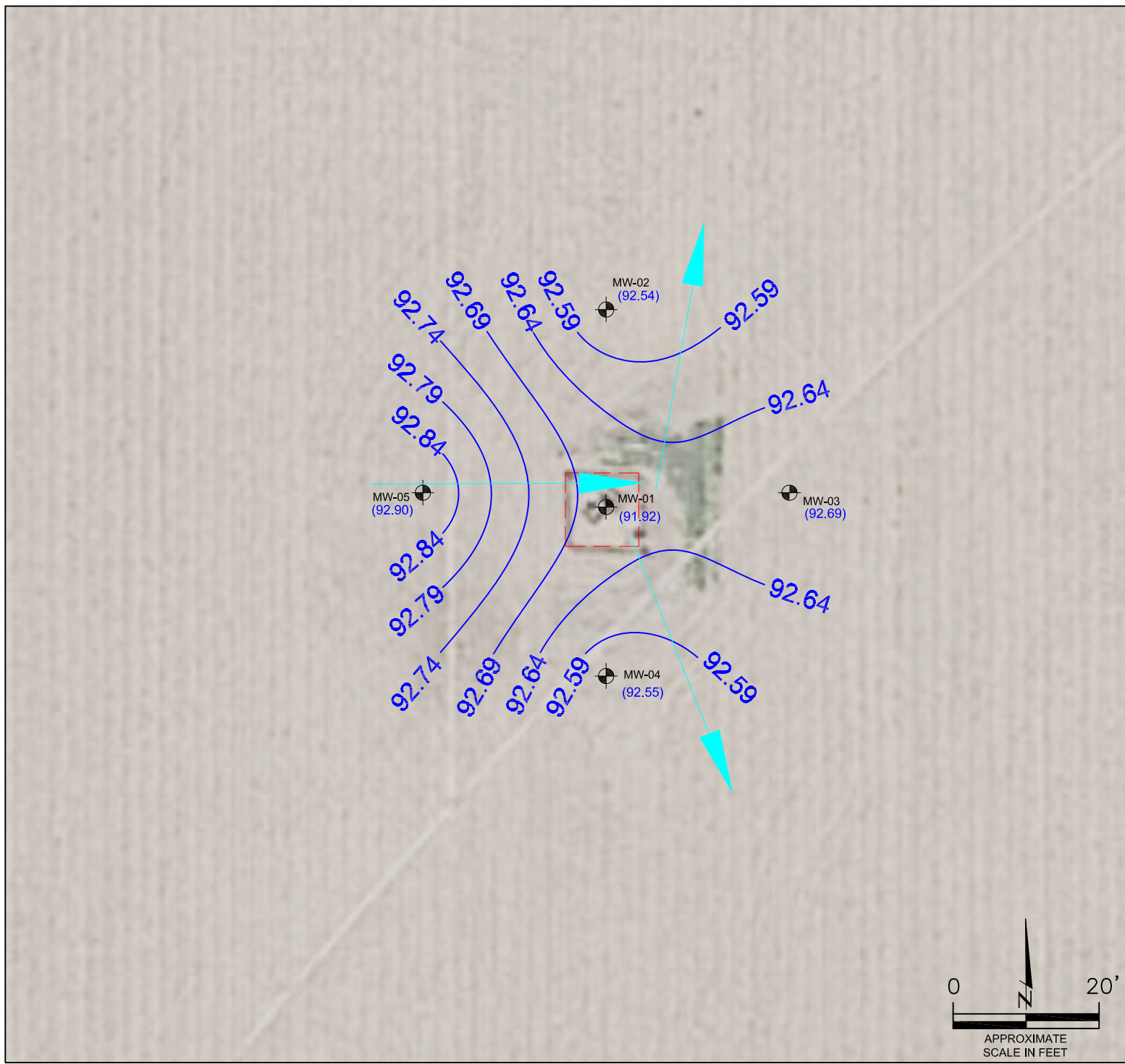
REMEDATION # 22548

FIGURE NO.
1

DRAWN BY:
RS



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LEGEND

--- INITIAL WELLHEAD ASSESSMENT BOUNDARIES

● MONITORING WELL LOCATIONS

(91.45) RELATIVE GROUNDWATER ELEVATION (FT.)

--- INFERRED GROUNDWATER ELEVATION CONTOUR (FT.)

→ APPROXIMATE GROUNDWATER FLOW DIRECTION

FT. = FEET

NOTES:
GROUNDWATER ELEVATION DATA WERE COLLECTED ON 11/07/24.

GROUNDWATER ELEVATION DATA COLLECTED FROM MONITORING WELL MW-01 WERE NOT USED IN THE CREATION OF INFERRED GROUNDWATER ELEVATION CONTOURS.

HYDRAULIC GRADIENT = 0.0099

**GROUNDWATER ELEVATION MAP
(11/07/24)**

SANDAU #34-12F
HISTORICAL RELEASE
40.266780 / -104.770970
NW¼ SW¼ SEC.34 T4N R66W 6PM
WELD COUNTY, COLORADO
API # 05-123-15521
REMEDATION # 22548

FIGURE NO.
2

DRAWN BY:
RS



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TABLES

Table 1: Summary of Organic Groundwater Chemistry and Elevation Data

Table 2: Summary of Inorganic Groundwater Chemistry Data

TABLE 1
SUMMARY OF ORGANIC GROUNDWATER CHEMISTRY AND ELEVATION DATA
NOBLE 100322
SANDAU #34-12F, WELD COUNTY, COLORADO
REM # 22548

Sample ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4- Trimethyl- Benzene (µg/L)	1,3,5- Trimethyl- Benzene (µg/L)	1-Methylnaphthalene (µg/L)	TOC Elevation (ft)	Depth to Groundwater Below TOC (ft)	Relative Groundwater Elevation (ft)	LNAPL Thickness (ft)
ECMC Table 915-1 Limits		5.0	560	700	1400	140	67	67					
ECMC Narrative Groundwater Quality Standards									1.1				
MW-01	02/07/24	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	<0.200	98.93	7.06	91.87	NP
	05/13/24	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	<0.200		6.78	92.15	NP
	08/06/24	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	<0.200		6.37	92.56	NP
	11/07/24	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	<0.02		7.01	91.92	NP
MW-02	02/07/24	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	<0.200	99.61	7.11	92.5	NP
	05/13/24	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	<0.200		6.81	92.8	NP
	08/06/24	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	<0.200		6.43	93.18	NP
	11/07/24	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	<0.02		7.07	92.54	NP
MW-03	02/07/24	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	<0.200	99.72	7.11	92.61	NP
	05/13/24	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	<0.200		6.77	92.95	NP
	08/06/24	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	<0.200		6.42	93.3	NP
	11/07/24	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	<0.02		7.03	92.69	NP
MW-04	02/07/24	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	<0.200	100	7.09	92.91	NP
	05/13/24	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	<0.200		6.78	93.22	NP
	08/06/24	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	<0.200		6.39	93.61	NP
	11/07/24	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	<0.02		7.45	92.55	NP
MW-05	02/07/24	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	<0.200	99.99	7.53	92.46	NP
	05/13/24	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	<0.200		7.3	92.69	NP
	08/06/24	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	<0.200		6.82	93.17	NP
	11/07/24	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	<0.02		7.09	92.90	NP

1. Bold values exceed the ECMC limit(s)

2. Red highlighted groundwater analytical values indicate a regulatory exceedance

NP - No measurable LNAPL, NA - Not Analyzed, INA - Inaccessible, IW - Insufficient Water, DES - Destroyed

TABLE 2
SUMMARY OF INORGANIC GROUNDWATER CHEMISTRY DATA
NOBLE 100322
SANDAU #34-12F, WELD COUNTY, COLORADO
REM # 22548

Sample ID	Sample Date	Chloride Ion (mg/L)	Sulfate Ion (mg/L)	Total Dissolved Solids (mg/L)
ECMC Table 915-1 Limits		<1.25 x local background	<1.25 x local background	<1.25 x local background
MW-01	02/07/24	243	552	1780
	05/13/24	288	530	1830
	08/06/24	266	543	1850
	11/07/24	266	570	1810
MW-02	02/07/24	252	513	1760
	05/13/24	302	516	1820
	08/06/24	279	535	1830
	11/07/24	327	608	2080
MW-03	02/07/24	262	525	1710
	05/13/24	309	516	1830
	08/06/24	308	536	1980
	11/07/24	269	574	1850
MW-04	02/07/24	244	522	1760
	05/13/24	280	521	1870
	08/06/24	272	541	1900
	11/07/24	269	573	1850
MW-05	02/07/24	248	542	1710
	05/13/24	307	528	1760
	08/06/24	279	527	1930
	11/07/24	290	565	1910
Local Regulatory Limits (1.25*local background)		386	718	2475

1. Bold values exceed the ECMC limit(s)
2. Blue highlighted groundwater analytical values indicate a regulatory exceedance
3. The Groundwater Inorganic Parameters in up-gradient monitoring well MW-04 and cross-gradient monitoring well MW-03 were used in the determination of the "Local Regulatory Limits" at the site.