DEFERRED AREA SOIL INVESTIGATION REPORT OF FINDINGS

Loveland Products, Inc. Facility
1525 Lockwood Road
Billings, Montana

December 9, 2022

Submitted To:
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1.0 INTRODUCTION

On behalf of Nutrien Ag Solutions, Inc. (Nutrien), Rubik prepared this Deferred Area Soil Investigation Report of Findings for the Loveland Products, Inc. (LPI) facility located at 1525 Lockwood Road in Billings, Montana (the facility). The deferred areas consist of former Solid Waste Management Units (SWMUs) 8, 13, 15, and 16 and Area of Concern (AOC) 4, located under concrete within or adjacent to buildings and were identified as being inaccessible due to facility operations in the Montana Department of Environmental Quality's (DEQ) 2015 Corrective Action Order on Consent (CAO) No. MHWCAO-15-01 (DEQ, 2015a) and the May 2012 Statement of Basis (DEQ 2015b).

LPI operated an herbicide manufacturing and formulation plant at the property between 1975 and 2020. The herbicides manufactured consisted primarily of 2,4-D, MCPA, MCPP, dicamba, glyphosate, and fluroxypyr. The manufacturing activities were suspended in October 2020 and since that time the facility has been operated as a storage and distribution center of prepackaged and bulk agricultural products for LPI and Nutrien. The deferred areas are still within buildings and/or beneath concrete, but the change in operations allowed for access to underlying soil during periods of lower site operations and activities. A site location map and an aerial photograph of the site are presented as **Figures 1** and **2**. A site map identifying the deferred areas, which are also referred to as deferred units in some historical regulatory documents, is presented as **Figure 3**.

1.1 Objective

The objectives of the investigation were to:

- Determine if the soil beneath deferred areas has been impacted by chemicals of potential concern (COPCs);
- Evaluate potential risks to human health and the environment based on the direct exposure pathway; and
- Determine if any further action is warranted at the deferred areas.

2.0 ENVIRONMENTAL BACKGROUND

In 1996, a Phase I RCRA facility investigation (RFI) identified chemical releases to soil and groundwater at several SWMUs and AOCs that required further investigation. In 1999 and 2002, Phase II RFIs were completed to further evaluate the lateral and vertical extent of COPCs associated with select SWMUs and AOCs, with the exception of the deferred areas.

In 2008 a Soil Corrective Measures Study (CMS) and Groundwater Treatability Work Plan was developed to evaluate soil remedial alternatives, where necessary. Historical soil analytical results were compared to EPA Regional Screening Levels (RSLs) for direct contact by industrial receptors and a risk assessment was conducted to establish site-specific Risk Based Action Levels (RBALs) for COPCs exceeding the RSLs. A leaching evaluation was also conducted to evaluate the potential for COPCs in soil to impact groundwater. The Soil CMS concluded that soil from one location north of the former wastewater tank containment exceeded RBALs, and an excavation was conducted in this area to remove the impacted soil.

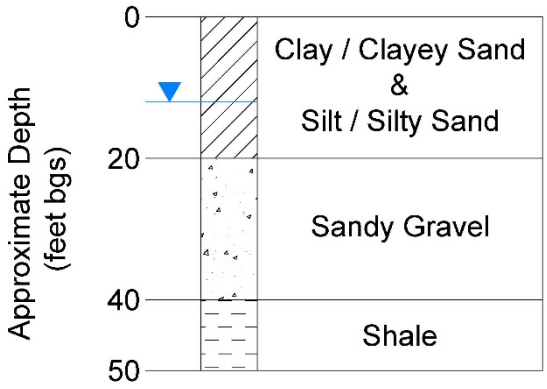
The concentrations of COPCs remaining in the soil in SWMU-6 following soil excavation were also evaluated during a 2013 risk assessment. The residual COPC concentrations in the soil were less than the RSLs and site-specific screening levels (SSLs) for direct contract by industrial receptors. The Soil CMS and SWMU-6 Risk Assessment also concluded that the soil to groundwater migration pathway at the site is incomplete based on leaching modeling and historical soil and groundwater data (AECOM, 2008; Rubik 2013).

Based on these findings, all the SWMUs and AOCs for soil have been closed except for the deferred areas (AECOM, 2008; DEQ 2015a). Groundwater monitoring and sampling for select COPCs continues to be conducted semi-annually in accordance with the 2017 LPI Final Groundwater Corrective Measures Implementation Work Plan (CMIWP). The land use at the site is restricted to Industrial use only by an Environmental Control Easement declared by DEQ on March 25, 2019.

3.0 GEOLOGY AND HYDROGEOLOGY

3.1 Geology

The geology beneath the site is summarized below (Rubik, 2017):



A map showing the paths of geologic cross sections that depict subsurface conditions in the vicinity of the investigation is presented as **Figure 4**, and the cross sections are presented in **Figures 5** and **6**.

3.2 Hydrogeology

Groundwater beneath the facility occurs within the semi-confined sandy gravel unit between approximately 20 and 40 feet below the ground surface (bgs). This unit varies in thickness from approximately 15 to 20 feet in the southern and northern portions of the facility to approximately 5 feet thick near the center of the facility. The site monitoring well network is screened within this sandy gravel unit. Monitoring well construction details are presented in **Table 1** and the well locations are shown on **Figure 2**.

In May 2022, depth to water in facility monitoring wells ranged from 10 to 19 feet bgs, as reported in the 2022 1st Semi-annual Groundwater Monitoring and Sampling Report. Groundwater generally flows to the north at an average gradient of 0.007 ft/ft.

4.0 2022 DEFERRED AREA INVESTIGATION

The scope of work (SOW) for the investigation consisted of collecting soil samples from 17 borings (SR-1 through SR-17) for analysis of the COPCs. The SOW was presented in an August 1, 2022 Deferred Area Soil Investigation Work Plan, which was approved by DEQ in an August 9, 2022 letter to Nutrien. During the investigation, some of the boring locations were modified slightly from the work plan due to inaccessibility from obstructions. DEQ was notified of these modifications during the investigation. The final soil boring locations are depicted on **Figure 7**.

4.1 Chemicals of Potential Concern

Based on historical facility activities and the COPCs from previous investigations, soil samples from all of the deferred areas were analyzed by the following methods (UniField, 1994; AECOM, 2008):

- Chlorinated Herbicides by United Stated Environmental Protection Agency (EPA) Method 8150/8151,
- Volatile Organic Compounds (VOCs) by EPA Method 8260B, and
- Semi-volatile Organic Compounds (SVOCs) by EPA Method 8270C.

Based on the historical use of the areas, soil samples from former SWMUs -8, -13 and -16 and AOC-4 were also analyzed for cyanide by EPA Method 335.3 and chromium, cobalt, and nickel by EPA Method 200.7. Soil samples collected from former SWMU-15 were also analyzed for total glycols by ASTM Method D2982. The soil sampling and analysis plan is presented in **Table 2**.

A summary of historical activities and materials used and /or stored at each deferred area is presented in **Table 3**.

4.2 Health and Safety

A site-specific Health and Safety Plan (HASP) was prepared and all field personnel, including subcontractors, reviewed and signed the document prior to work initiation. The HASP identified potential health and safety hazards for each phase of the work and included requirements and procedures for protection. The plan remained on-site during all field work. Daily safety meetings and safety observations were also conducted.

4.3 Utility Locating and Permitting

The Montana 811 service was notified in advance of the subsurface field activities and known utilities in the area were identified and marked. A private utility locating service conducted a ground penetrating radar (GPR) scan of each deferred area to identify utilities or subsurface anomalies

within the investigation area. Permitting for the borings was not required by the MDEQ or local regulatory agencies.

4.4 Soil Borings

The soil borings were advanced using a track-mounted 7822DT Geoprobe® direct push drill rig. A concrete coring attachment mounted to the rig was used to core the concrete flooring at each location. Once the concrete was removed, a Geoprobe® MC-5 sampling system was mounted on the rig to continuously collect 2 ¼ -inch diameter soil cores in 5-foot acetate sample sleeves. The soil cores were collected to a maximum depth between 10 and 15 feet below the bottom of overlying concrete. Groundwater was not encountered during the investigation.

Soil types within the acetate liners logged according to the Unified Soil Classification System. System. The boring logs are included as **Appendix A**.

4.5 Soil Sampling

Soil samples were collected for laboratory analysis at 5, 7.5, and 10 feet bgs in each boring. Samples were not collected from the 2.5-foot bgs interval due to no recovery from the dry sandy grave base located beneath the concrete throughout the investigation area.

The samples were placed in laboratory supplied containers, labeled, and placed in a sealable bag, logged onto a chain of custody document, and stored in a cooler maintained at approximately 4 degrees Celsius (°C). Samples were transported to Energy Laboratories in Billings, MT for analyses by the methods identified in **Section 4.1** and in **Table 2**.

4.6 Quality Assurance and Quality Control

Analytical results were compared to an Analytical Data Validation Checklist to verify that the data are of sufficient quality for the purposes of the project. A copy of the Analytical Data Validation Report is included as **Appendix B**.

4.7 Decontamination and Waste Management

Down-hole drilling equipment was decontaminated prior to and after drilling using high-pressure cleaning equipment. The decontamination rinsate, excess soil cuttings generated during drilling, and concrete cores were placed in separate 55-gallon drums according to waste stream. The contents were characterized through laboratory analysis and the drums disposed of at a permitted off-site facility.

5.0 INVESTIGATION RESULTS

Concentrations of the COPCs detected by the laboratory were compared to EPA Industrial RSLs for direct, when available. None of the COPC concentrations detected exceeded the RSLs.

The COPCs detected that do not have an industrial RSL consist of:

- Clopyralid

- Dichlorprop
- Chromium
- Butyl-benzlphthalate
- 4-chloro-2-methylphenol
- 4-Chlorophenol

The detected COPC analytical results are included in **Table 4**. The laboratory analytical reports, including results of compounds not detected during analysis, are included as **Appendix C**.

6.0 CONCLUSIONS

The COPC concentrations in soil from beneath the deferred areas (AOC-4, SWMU-8, SWMU-13, SWMU-15, and SWMU-16) were less than the industrial EPA RSLs, where established. In accordance with the Work Plan, a risk assessment will be completed to evaluate the COPCs that were detected in the soil but don't have an industrial RSL, and COPCs that were not detected but had a reporting limit that exceeded the RSLs, if sufficient toxicity data is available for these chemicals.

7.0 REFERENCES

AECOM. 2008. Soil Corrective Measures Study Report and Groundwater Treatability Work Plan, Transbas Inc. 1525 Lockwood Road Billings, Montana. February.

Montana Department of Environmental Quality (DEQ)/ 2015a. Corrective Action Order on Consent HHWCAO-15-01. 2015.

DEQ. 2015b. Statement of Basis - Proposed Groundwater Remedy Selection for Groundwater. May.

Rubik. 2013. SWMU-6 Risk Assessment, Loveland Products, Inc. Billings, Montana. August 8.

Rubik. 2017. Final Groundwater Corrective Measures Implementation Work Plan, Loveland Products, Inc. Billings, Montana. January 12.

UniField. 1994. RFI Work Plan, Transbas Inc. 1525 Lockwood Road Billings, Montana. April 29. Revised September 1994.

FIGURES

DEFERRED AREA SOIL INVESTIGATION REPORT OF FINDINGS

LPI Billings Facility
Billings, Montana

December 2022

320 Flint Street
Reno, Nevada 89501
(775) 622-0857

VICINITY MAP

LPI Billings
1525 Lockwood Road
Billings, Yellowstone County, Montana

DESIGNED BY:	DETAILED BY:	CHECKED BY:
SPF	SPF	TLL
DATE: 6/27/2022	ACAD FILE: 20221117 RBK Billings MT Fig 1 VICMAP.dwg	
PROJECT NO.: 03005-2022	PLOT SCALE: Approx. 1" = 1,200'	

FIGURE 1

L:\Rubrik Environmental\Projects\Active\Billings, MT\2022 Site Investigation\Figures\20221117 RBK Billings MT Fig 1 VICMAP.dwg

320 Flint Street
Reno, Nevada 89501
(775) 622-0857

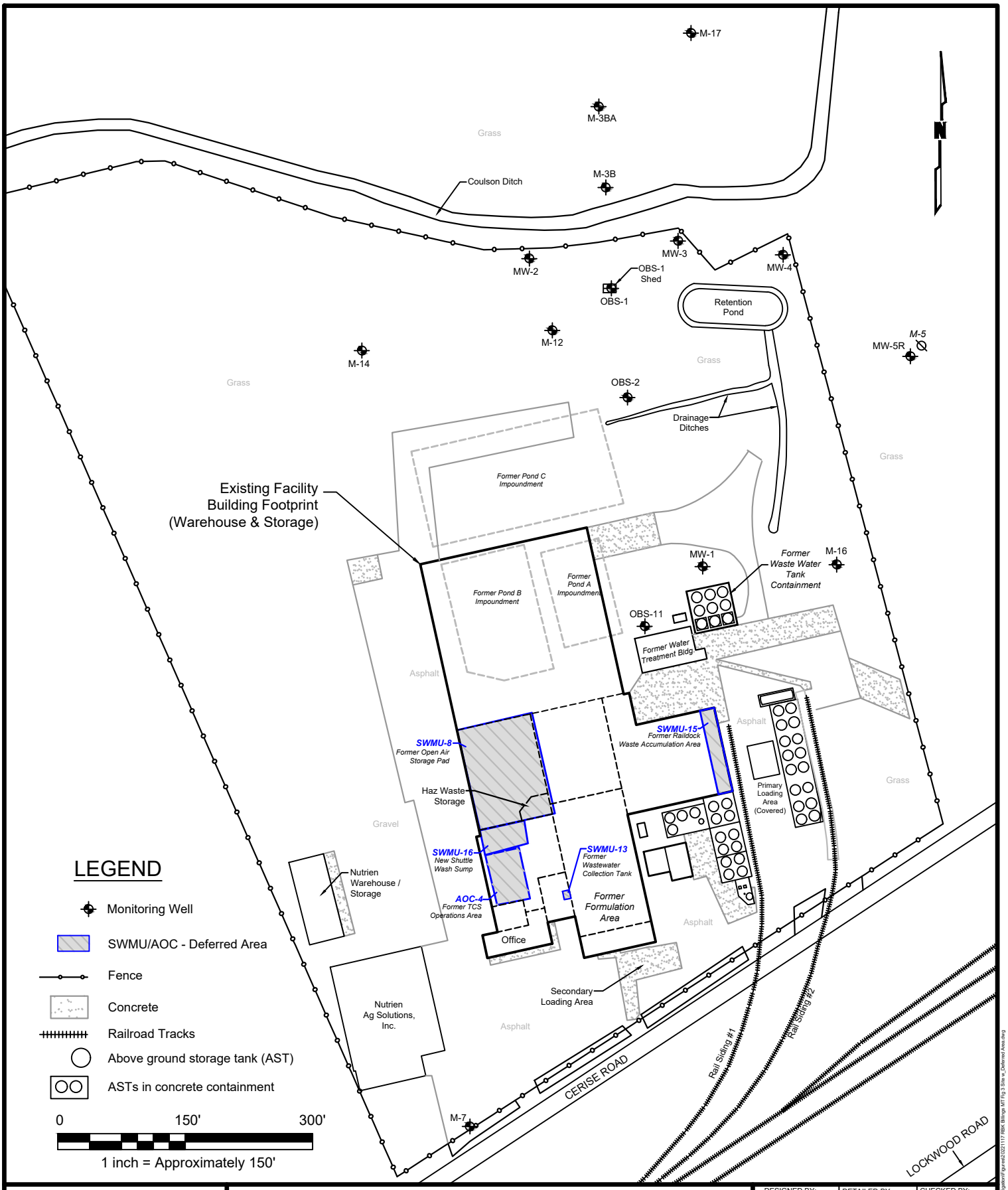
SITE PLAN

LPI Billings
1525 Lockwood Road
Billings, Montana

DESIGNED BY:	DETAILED BY:	CHECKED BY:
SPF	SPF	TLL

DATE:	ACAD FILE:
6/27/2022	20221117 RBK Billings MT Fig 2 Site Aerial.dwg
PROJECT NO.:	PLOT SCALE:
03005-2022	APPROX. 1" = 150'

FIGURE 2



320 Flint Street
Reno, Nevada 89501
(775) 622-0857

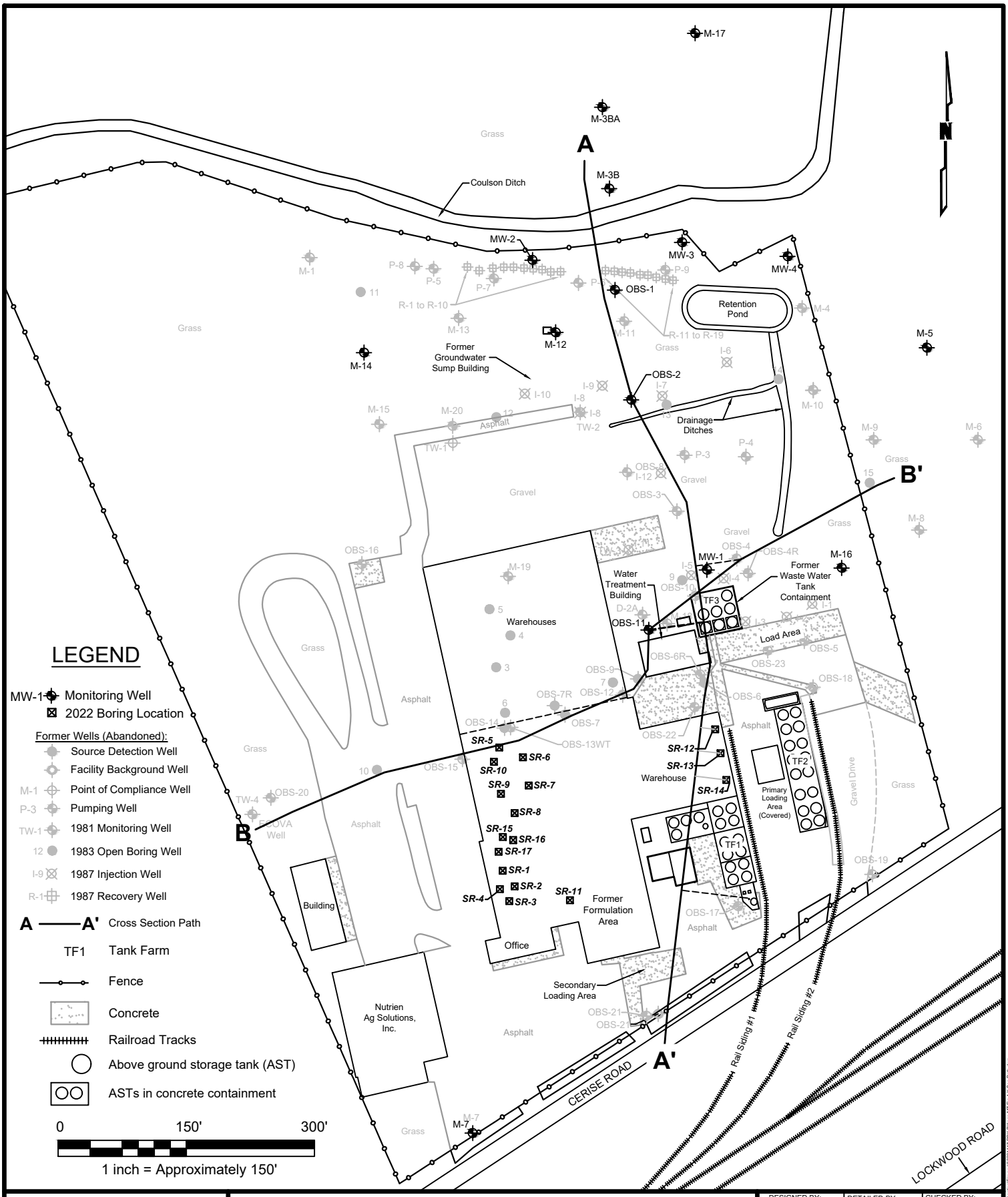
DEFERRED AREA LOCATIONS

LPI Billings
1525 Lockwood Road
Billings, Montana

DESIGNED BY:	DETAILED BY:	CHECKED BY:
SPF	SPF	TLL

DATE:	ACAD FILE:
6/28/2022	20221117 RBK Billings MT Fig 3 Site w_Deferred Area.dwg
PROJECT NO.:	PLOT SCALE:
03005-2022	APPROX. 1" = 150'

FIGURE 3



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Reno, Nevada 89501
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CROSS SECTION PATHS

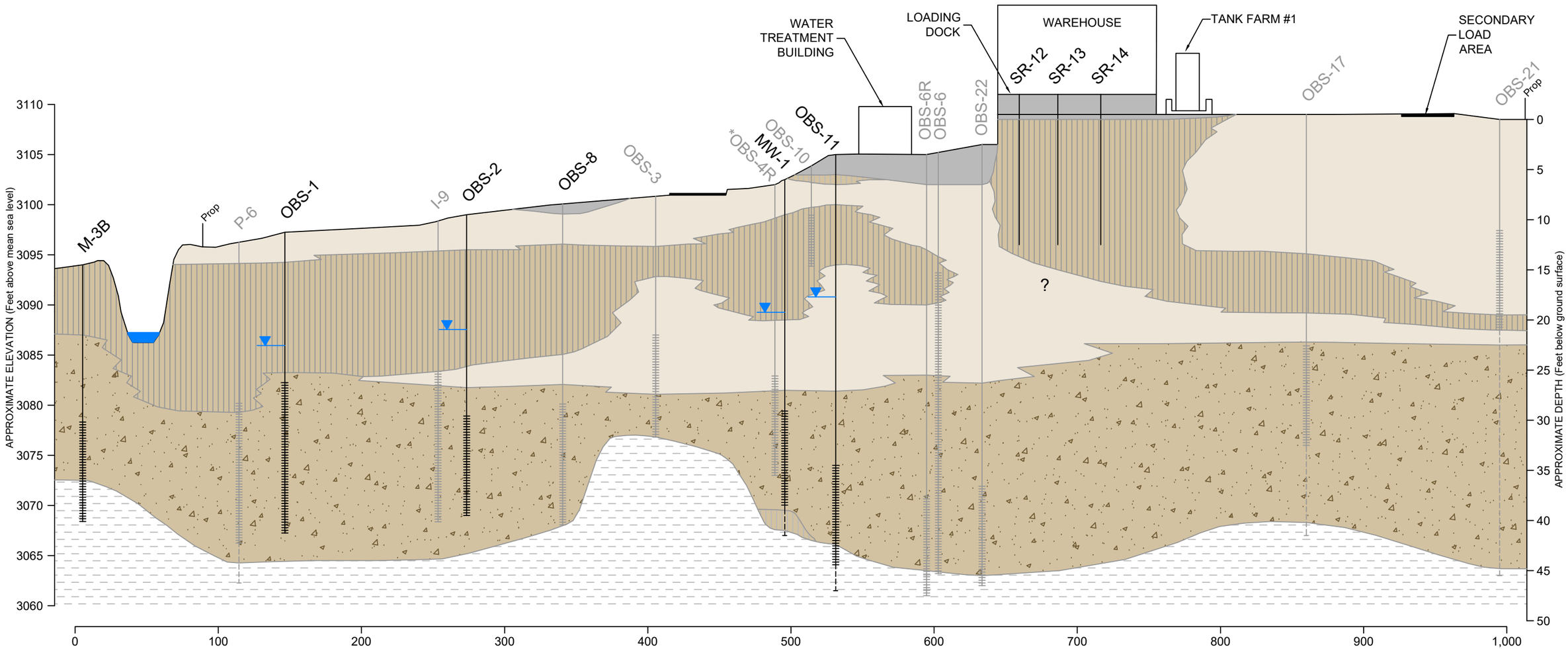
LPI Billings
1525 Lockwood Road
Billings, Montana

DESIGNED BY:	DETAILED BY:	CHECKED BY:
SPF	SPF	TLL
DATE: 9/04/2019	ACAD FILE: 20221117 RBK Billings MT Fig 4 X-Sec Path.dwg	
PROJECT NO.: 03005-2019	PLOT SCALE: APPROX. 1" = 150'	

FIGURE 4

A
NORTH

A'
SOUTH



10'
0
0
70'
Vertical Exaggeration = 7x

Approximate Static Groundwater Elevation (May 2022)

Prop.
Approximate Site Property Boundary

ABANDONED WELL
WELL
SOIL BORING
CASING
SCREEN
BOTTOM OF WELL BORING

FILL
CLAY / CLAYEY SAND
SILT / SILTY SAND
SANDY GRAVEL
SHALE BEDROCK

? = Unknown or assumed extent
*Lithology from this well not used in interpretation.

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GEOLOGIC CROSS SECTION A-A'

LPI Billings
1525 Lockwood Road
Billings, Montana

DESIGNED BY:	DETAILED BY:	CHECKED BY:
SPF	SPF	TLL

DATE: 11/18/2022
ACAD FILE: 20221118 RBK Billings MT Fig 5 X-Sec A-A'_BSF.dwg
PROJECT NO.: 03005-2022
HORIZONTAL PLOT SCALE: APPROX. 1" = 70'

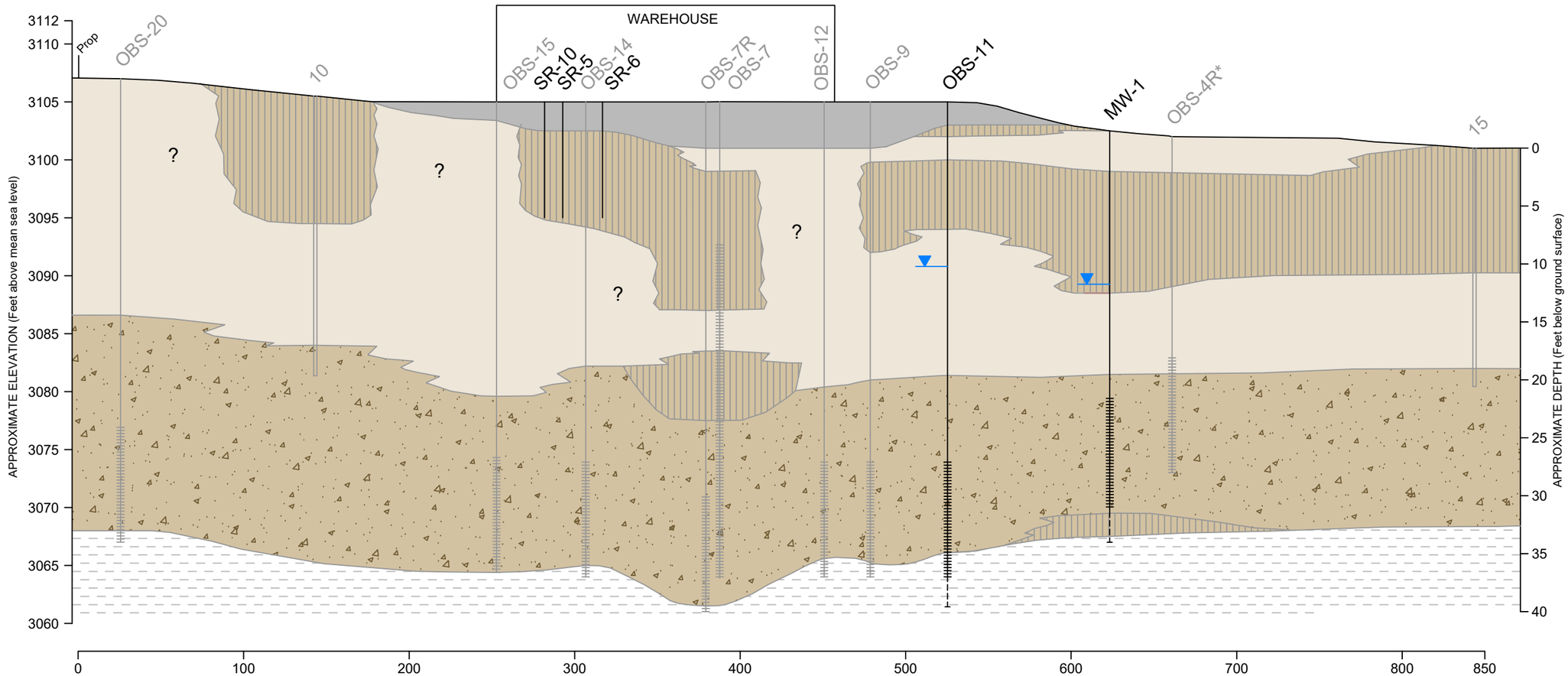
FIGURE 5

B

WEST

B'

EAST



Approximate Static Groundwater Elevation (May 2022)

Prop.

Approximate Site Property Boundary

ABANDONED OPEN HOLE WELL

ABANDONED WELL

WELL

CASING

SCREEN

SOIL BORING

FILL

CLAY / CLAYEY SAND

SILT / SILTY SAND

SANDY GRAVEL

SHALE BEDROCK

? = Unknown or assumed extent

*Lithology from this well not used in interpretation.

10'
0
0
70'
Vertical Exaggeration = 7x

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GEOLOGIC CROSS SECTION B-B'

LPI Billings
1525 Lockwood Road
Billings, Montana

DESIGNED BY:	DETAILED BY:	CHECKED BY:
SPF	SPF	TLL

DATE:	ACAD FILE:
11/18/2022	20221118 RBK Billings MT Fig 5 X-Sec A-A'_BB'.dwg

PROJECT NO.:	HORIZONTAL PLOT SCALE:
03005-2022	APPROX. 1" = 70'

FIGURE 6

Former Pond B Impoundment

OBS-11

Former Water Treatment Bldg.

SWMU-8
Former Open Air Storage Pad

SR-5
SR-6
SR-10
SR-7
SR-9
SR-8
SR-15
SR-16
SR-17

SWMU-16
New Shuttle Wash Sump

SR-1
SR-2
SR-4
SR-3

AOC-4
Former TCS Operations Area

Office

SWMU-13
Former Wastewater Collection Tank

SR-11

Former Formulation Area

SR-12

SWMU-15
Former Raildock Waste Accumulation Area

SR-13
SR-14

Asphalt

Asphalt

Asphalt

Secondary Loading Area

CERISE ROAD

Rail Siding #1

LEGEND

- Monitoring Well
- 2022 Boring Location
- SWMU/AOC - Deferred Area
- Fence
- Concrete
- Railroad Tracks
- Above ground storage tank (AST)
- ASTs in concrete containment

0 40' 100'

1 inch = Approximately 40'

N

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Reno, Nevada 89501
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2022 BORING LOCATIONS

LPI Billings
1525 Lockwood Road
Billings, Montana

DESIGNED BY:	DETAILED BY:	CHECKED BY:
SPF	SPF	TLL

DATE: 6/27/2022

PROJECT NO.: 03005-2022

PLOT SCALE: APPROX. 1" = 40'

FIGURE 7

L:\Rubik Environmental\Projects\Nuvera\Billings, MT\2022 Site Investigation\Figures\20221118 RBK Billings MT Fig 7 Boring Locs.dwg

TABLES

DEFERRED AREA SOIL INVESTIGATION REPORT OF FINDINGS

LPI Billings Facility
Billings, Montana

December 2022

TABLE 1
WELL CONSTRUCTION DETAILS
Loveland Products, Inc. Billings Facility
Billings, Montana

Well ID	Installation Date	Well Diameter (inches)	Top of Casing Elevation (ft amsl)	Ground Surface Elevation (ft amsl)	Borehole Depth (ft bgs)	Well Depth (ft bgs)	Screen Interval (ft bgs)	
							Top	Bottom
MW-1	02/29/16	2	3,107.00	3,103.75	35.5	33	22.5	32.5
MW-2	03/02/16	2	3,102.90	3,099.86	35.5	35	24.5	34.5
MW-3	03/03/16	2	3,101.60	3,098.31	36.5	31.5	21	31
MW-4	03/01/16	2	3,100.97	3,098.00	33.0	31.5	21	31
MW-5R	08/03/20	2	3,102.84	3,099.74	34.0	34	19	33.5
M-5	*--*	*4*	*3,099.97*	*3,099.62*	*--*	*29*	*--*	*--*
M-7	--	4	3,112.02	3,112.46	--	34	--	--
M-12	1983	4	3,099.22	3,098.98	--	31.5	--	--
M-14	1983	4	3,101.56	3,100.05	--	31.5	--	--
M-16	1983	4	3,104.51	3,103.48	--	34.7	--	--
OBS-1	02/02/88	2	3,098.90	3,099.65	--	30	15	30
OBS-2	02/02/88	2	3,102.69	3,100.32	--	30	20	30
OBS-11	05/05/95	2	3,107.38	3,105.08	--	43.5	31	41
Offsite Wells: Exxon Mobil Property								
M-17	--	4	3092.07	3,089.72	--	21.2	--	--
M-3B	08/20/85	4	3,097.94	3,096.55	--	25.6	12.1	22.1
M-3BA	--	4	3,092.40	3,090.52	--	26	12	26

Notes:
ft amsl = Feet above mean sea level
ft bgs = Feet below the ground surface
-- = Information not available
M-5= Well destroyed August 2020 and replaced with MW-5R due to accumulated silt and age.

Construction details for wells installed prior to 2016 were taken from well logs (where available), historical report tables, cross sections, and/or gauging information.

Wells surveyed 3/17/2016 by a Montana Licensed PLS. NAD83 (2011) used for Latitude and Longitude; NAVD88 used for elevations. MW-1 and OBS-2 re-surveyed on 6/27/2019 following well head repairs. Well MW-5R surveyed 8/11/2020.

TABLE 2
DEFERRED AREA SOIL SAMPLING AND ANALYSIS PLAN
Loveland Products, Inc. Billings Facility
Billings, Montana

Boring IDs	Sample Depths	Analytical Methods
AOC-4		
SR-1	0-2.5' 2.5'-5' 5'-7.5' 7.5'-10'	EPA 8151A (Herbicides) EPA 8260B (VOCs) EPA 8270C (SVOCs) EPA 335.3 (cyanide) EPA 200.7 (chromium, cobalt, nickel)
SR-2		
SR-3		
SR-4		
SWMU-8		
SR-5	0-2.5' 2.5'-5' 5'-7.5' 7.5'-10'	EPA 8151A (Herbicides) EPA 8260B (VOCs) EPA 8270C (SVOCs) EPA 335.3 (cyanide) EPA 200.7 (chromium, cobalt, nickel)
SR-6		
SR-7		
SR-8		
SR-9		
SR-10		
SWMU-13		
SR-11	0-2.5' 2.5'-5' 5'-7.5' 7.5'-10'	EPA 8151A (Herbicides) EPA 8260B (VOCs) EPA 8270C (SVOCs) EPA 335.3 (cyanide) EPA 200.7 (chromium, cobalt, nickel)

TABLE 2
DEFERRED AREA SOIL SAMPLING AND ANALYSIS PLAN
Loveland Products, Inc. Billings Facility
Billings, Montana

Boring IDs	Sample Depths	Analytical Methods
SWMU-15		
SR-12	0-2.5' 2.5'-5' 5'-7.5' 7.5'-10'	EPA 8151A (Herbicides) EPA 8260B (VOCs) EPA 8270C (SVOCs) ASTM D2982 (total glycols)
SR-13		
SR-14		
SWMU-16		
SR-15	0-2.5' 2.5'-5' 5'-7.5' 7.5'-10'	EPA 8151A (Herbicides) EPA 8260B (VOCs) EPA 8270C (SVOCs) EPA 335.3 (cyanide) EPA 200.7 (chromium, cobalt, nickel)
SR-16		
SR-17		

Notes:
AOC = Area of concern
SWMU = Solid Waste Management Unit
EPA = US Environmental Protection Agency
VOCs = Volatile organic compounds
SVOCs = Semi-volatile organic compounds

TABLE 3
DEFERRED AOC & SWMU INFORMATION
Loveland Products, Inc. Billings Facility
Billings, Montana

AREA	AREA NAME	HISTORICAL ACTIVITIES AND MATERIALS[1]
AOC 4	Special Process Area	Transbas Chemical Specialties (TCS) operated from late 1988 to mid 1991 in an area in the west-central portion of the process facility, south of the acid pad. TCS was involved in development of several proprietary chemical products, including potassium ferrate, pheromones, and 2,2-Dibromoheptane nitrile. Chemicals used by TCS included: liquid bromine, xylene, ethylbenzene, n-butyl alcohol, methanol, cyclohexane, sodium cyanide, Raney catalyst (nickel, aluminum, chromium, manganese), nitrobenzene, chlorine, hydroquinone (in very small quantities, if at all), carbon tetrachloride, and hydrochloric acid.
SWMU 8	Open Air Storage	A centered-sloped concrete pad (93 ft x 124 ft) with a capacity of 2,500 gallons was installed in 1983. The pad was enclosed with a roof and north and west side walls in 1992. Prior to pad construction, the area was used for product and waste storage. The pad has been used to store raw material and a temporary waste accumulation and handling area. Raw materials were 2,4-D based and stored in solid or semi-solid form. Rain water collected on the pad was in direct contact with 2,4-D based material with pad runoff and soil erosion observed in 1991. Water samples from the pad water contained 2,4-D and phenol compounds. The pad water results were reflective of the chemicals detected in groundwater in down gradient wells OBS-7 (installed June 1990) and M-19. A shuttle wash (SWMU-16) constructed in August 1992 upgradient of SWMU-8 had reported sump leakage in November 1992 and identified as a potential upgradient source. The shuttle wash was repaired in late 1992 and subsequent groundwater results in well OBS-7 improved.
SWMU 13	Warehouse 2 Wastewater Collection Tank	The waste water collection tank located in the Warehouse 2 was constructed in 1990 and originally did not contain secondary containment. A tank sample collected in 1992 contained concentrations of 2,4-D, Dicamba, Dichloroprop, MCPA and MCPP. In 1992, tank (3 ft wide, 6 ft long, and 4 ft deep totaling 466 gallons) was relocated in its present location and secondary containment was constructed (area was the former shuttle wash area). The tank is used to collect process area wastewaters pending shipment to a TSDF underground injection disposal area. The area immediately adjacent to the north is operated as a pump parts washer facility and generates low volumes of wastewater that enter the tank. Releases from this area are not known to have occurred, but undetected releases from the old shuttle wash sump, similar to those experienced in 1992 at the new shuttle wash area, are possible. Therefore, some investigation of this area is justified.
SWMU 15	Rail-dock Accumulation Area	A previous management practice included the solidification and repackaging of 2,4-D impacted material into fiber packs. Some materials were generated by cleanup of spills of raw materials or products within the formulation process facility. The fiber packs were transferred to the rail-dock along the east side of warehouse #4, prior to shipment to an off-site TSDF. Activities and potential impacts, if any, may be indistinguishable from those of Rail Siding #1 (SWMU-10). SWMU-10a & 10b (rail sidings) - No risk based SL exceedances - NFA
SWMU 16	New Shuttle Wash Sump	Relocation area for the shuttle wash sump (previously in warehouse #2) constructed in 1992 south of the acid pad was identified as a potential source of upgradient releases in late November, 1992. Shuttle wash sump leakage was confirmed in early December 1992. Wastewater leakage from the sump was estimated to be 20 to 40 gallons per day. The sump was removed from service and reconstructed with secondary containment and placed in operation on December 18, 1992. There are no documented reports of liquid or solid material releases within or around the Transbas Chemical Specialties (TCS) area; however, TCS drums were among the drums listed in MDHES and EPA citations of storage/handling violations in 1990.

Notes:
[1] - From 1994 RFI Current Conditions Report
NFA - No further action

TABLE 4
2022 SOIL SAMPLING DETECTED COMPOUND SUMMARY - DEFERRED AREAS
Loveland Products, Inc. Billings Facility
Billings, Montana

Sample Location	Sample Date	Sample Depth[1] (feet)	Chlorinated Herbicides						Cyanide (total) (mg/kg)	Ethylene Glycol (mg/kg)	Metals			VOCs		SVOCs					
			2,4,5-T (mg/kg)	2,4-D (mg/kg)	Clopyralid (mg/kg)	Dicamba (mg/kg)	Dichlorprop (mg/kg)	Picloram (mg/kg)			Chromium (total) (mg/kg)	Cobalt (mg/kg)	Nickel (total) (mg/kg)	1,2,4-T (mg/kg)	1,3,5-T (mg/kg)	Butyl-benzlphthalate (mg/kg)	Triallate (mg/kg)	o-Cresol (mg/kg)	4-chloro-2-methylphenol (mg/kg)	4-Chlorophenol (mg/kg)	Phenol (mg/kg)
RSL - Direct Contact (Industrial) - HQ=1.0			**8,200**	**7,700**	NE	**25,000**	NE	**57,000**	**150 - 120,000**	**660,000**	NE	**350**	**8,100 - 22,000**	**1,800**	**1,500**	NE	**46**	**41,000**	NE	NE	**250,000**
AOC - 4																					
SR-1	8/12/2022	5	<0.0043	**3.4**	**0.079**	**1.2**	<0.022	<0.011	**0.6**	--	**22**	**6**	**15**	<0.20	<0.22	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
		7.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		10	<0.0045	**0.30**	**0.20**	**0.056**	<0.023	<0.011	<0.3	--	**11**	**5**	**10**	<0.20	<0.23	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SR-2	8/12/2022	5	<0.0043	<0.022	<0.0054	<0.0054	<0.022	<0.011	<0.3	--	15	**5**	**13**	<0.20	<0.22	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
		7.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		10	<0.0045	0.15	<0.0056	<0.0056	<0.022	<0.011	<0.3	--	**15**	5	**12**	<0.20	<0.22	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SR-3	8/12/2022	5	<0.0042	**11**	**0.043**	**0.50**	<0.021	<0.011	**0.6**	--	**15**	**5**	**10**	<0.20	<0.21	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
		7.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		10	<0.0045	**1.3**	**0.018**	**0.050**	<0.022	<0.011	<0.3	--	**12**	**5**	**11**	<0.20	<0.22	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SR-4	8/12/2022	5	<0.0041	**1.3**	**0.022**	**0.055**	<0.021	<0.010	<0.2	--	**13**	**5**	**11**	<0.20	<0.21	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
		7.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		10	<0.0046	**0.40**	<0.0057	**0.0092**	<0.023	<0.011	<0.3	--	**13**	**6**	**12**	<0.20	<0.23	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SWMU - 8																					
SR-5	8/11/2022	5	<0.0047	**0.42**	**1.4**	**0.013**	<0.024	<0.012	**0.8**	--	**17**	**6**	**16**	<0.20	<0.24	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
		7.5	<0.0049	<0.024	**0.13**	**0.0082**	<0.024	<0.012	<0.3	--	**20**	**6**	**20**	<0.20	<0.24	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
		10	<0.0044	<0.022	**0.0068**	**0.014**	<0.022	<0.011	**2.1**	--	**15**	**5**	**13**	<0.20	<0.22	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SR-6	8/11/2022	5	<0.0042	**2.5**	**0.037**	**0.084**	**0.16**	<0.010	**0.4**	--	**17**	**5**	**13**	<0.20	<0.21	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
		7.5	<0.0046	<0.023	<0.0058	<0.0058	<0.023	<0.012	**4.9**	--	**19**	**7**	**20**	<0.20	<0.23	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
		10	<0.0045	<0.022	<0.0056	<0.0056	<0.022	<0.011	**2.0**	--	**18**	**6**	**15**	<0.20	<0.22	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SR-7	8/11/2022	5	<0.0043	**12**	<0.0054	**2.0**	<0.022	<0.011	<0.3	--	**17**	**3**	**9**	<0.20	<0.22	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
		7.5	<0.0043	<0.021	<0.0054	**0.0077**	<0.021	<0.011	**1.5**	--	**19**	**6**	**16**	<0.20	<0.21	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
		10	<0.0045	<0.022	<0.0056	<0.0056	<0.022	<0.011	**1.0**	--	**16**	**5**	**14**	<0.20	<0.22	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SR-8	8/11/2022	5	<0.0045	<0.023	<0.0057	<0.0057	<0.023	<0.011	**1.3**	--	**19**	**6**	**17**	<0.20	<0.23	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
		7.5	<0.0046	**3.5**	**0.012**	**0.16**	<0.023	<0.012	**0.7**	--	**19**	**6**	**16**	<0.20	<0.23	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
		10	<0.0049	<0.024	<0.0061	<0.0061	<0.024	<0.012	**1.1**	--	**18**	**6**	**15**	<0.20	<0.24	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SR-9	8/11/2022	5	<0.0052	**0.38**	<0.0065	**0.022**	<0.026	<0.013	**0.4**	--	**12**	**3**	**8**	<0.20	<0.26	<0.64	<0.64	<0.64	<0.64	<0.64	<0.64
		7.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SR-10	8/11/2022	5	<0.0042	**0.77**	**0.016**	**0.026**	**0.031**	<0.011	**0.6**	--	**17**	**6**	**12**	<0.20	<0.21	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
		7.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		10	<0.0052	<0.026	<0.0065	**0.010**	<0.026	<0.013	**5.0**	--	**19**	**7**	**15**	<0.20	<0.26	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SWMU - 13																					
SR-11	8/12/2022	5	<0.0044	**0.78**	<0.0055	<0.0055	<0.022	<0.011	<0.3	--	**12**	**6**	**12**	<0.20	<0.22	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
		7.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		10	**0.0092**	**4.2**	<0.0053	**0.026**	<0.021	<0.011	<0.3	--	**11**	**5**	**10**	<0.20	<0.21	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SWMU - 15																					
SR-12	8/12/2022	5	**0.012**	**4.9**	<0.0054	**0.027**	<0.022	<0.011	--	<5.4	--	--	--	<0.20	<0.22	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
		7.5	--	--	--	--	--	--	--	<5.7	--	--	--	--	--	--	--	--	--	--	--
		10	<0.0046	<0.023	<0.0058	<0.0058	<0.023	<0.012	--	<5.6	--	--	--	<0.20	<0.23	<0.98	<0.98	<0.98	<0.98	<0.98	<0.98
		15	<0.0045	**0.64**	**0.017**	**0.17**	<0.022	<0.011	--	--	--	--	--	**0.30**	**0.26**	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SR-13	8/12/2022	5	**0.029**	**19**	**0.084**	**2.3**	**2.8**	**0.016**	--	**12**	--	--	--	<0.20	<0.22	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
		7.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		10	**0.079**	**154**	**0.17**	**8.6**	**8.1**	**0.037**	--	**49**	--	--	--	<0.20	<0.21	<0.33	**0.70**	<0.33	<0.33	<0.33	<0.33
		15	**0.17**	**327**	**0.37**	**8.3**	**9.4**	**0.060**	--	**36**	--	--	--	<0.20	<0.21	<0.33	**0.40**	<0.33	<0.33	<0.33	<0.33
SR-14	8/12/2022	5	**0.022**	**11**	**0.040**	**0.82**	**1.5**	**0.014**	--	**6.1**	--	--	--	<0.20	<0.21	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
		7.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		10	<0.0045	**0.085**	**0.025**	<0.0057	<0.023	<0.011	--	<5.6	--	--	--	<0.20	<0.23	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
		15	<0.0046	**1.0**	**0.16**	**0.28**	**0.071**	<0.011	--	<5.7	--	--	--	**1.1**	**0.40**	<0.58	<0.58	**0.44**	**3.1**	**5.0**	**1.3**

TABLE 4
2022 SOIL SAMPLING DETECTED COMPOUND SUMMARY - DEFERRED AREAS
Loveland Products, Inc. Billings Facility
Billings, Montana

Sample Location	Sample Date	Sample Depth[1] (feet)	Chlorinated Herbicides						Cyanide (total) (mg/kg)	Ethylene Glycol (mg/kg)	Metals			VOCs		SVOCs					
			2,4,5-T (mg/kg)	2,4-D (mg/kg)	Clopyralid (mg/kg)	Dicamba (mg/kg)	Dichlorprop (mg/kg)	Picloram (mg/kg)			Chromium (total) (mg/kg)	Cobalt (mg/kg)	Nickel (total) (mg/kg)	1,2,4-T (mg/kg)	1,3,5-T (mg/kg)	Butyl-benzlphthalate (mg/kg)	Triallate (mg/kg)	o-Cresol (mg/kg)	4-chloro-2-methylphenol (mg/kg)	4-Chlorophenol (mg/kg)	Phenol (mg/kg)
RSL - Direct Contact (Industrial) - HQ=1.0			**8,200**	**7,700**	NE	**25,000**	NE	**57,000**	**150 - 120,000**	**660,000**	NE	**350**	**8,100 - 22,000**	**1,800**	**1,500**	NE	**46**	**41,000**	NE	NE	**250,000**
SWMU - 16																					
SR-15	8/11/2022	5	<0.0046	**0.92** H	**0.12**	**0.045**	<0.023	**0.042**	**0.4**	**--**	**15**	**6**	**14**	<0.20	<0.23	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
		7.5	--	--	--	--	--	--	--	--	**--**	**--**	**--**	--	--	--	--	--	--	--	--
		10	<0.0050	**0.12**	<0.0063	**0.012**	<0.025	<0.013	<0.3	--	**19**	**7**	**21**	<0.20	<0.25	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SR-16	8/11/2022	5	<0.0046	**0.54**	**0.020**	**0.0067**	<0.023	**0.058**	<0.3	--	**16**	**6**	**15**	<0.20	<0.23	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
		7.5	--	--	--	--	--	--	--	--	**--**	**--**	**--**	--	--	--	--	--	--	--	--
		10	<0.0048	**1.7**	<0.0060	**0.012**	<0.024	<0.012	<0.3	--	**12**	**5**	**11**	<0.20	<0.24	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33
SR-17	8/11/2022	5	<0.0047	**3.4**	**0.46**	**0.39**	<0.023	**0.13**	<0.3	--	**16**	**6**	**15**	<0.20	<0.23	**11**	<0.33	**0.27**	<0.33	<0.33	<0.33
		7.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		10	<0.0048	**1.9**	**0.28**	**0.31**	<0.024	**0.014**	<0.3	--	**13**	**5**	**12**	<0.20	<0.20	**35**	<0.33	<0.33	<0.33	<0.33	<0.33

Notes:

Data qualifiers are noted in the Table of Qualified Results within the Data Validation Report (Appx. B)

mg/kg - milligrams per kilogram
µg/kg - micrograms per kilogram
NE - Not established
-- - Sample not collected due to no recovery
<0.3 - Less than the indicated laboratory method reporting limit
2,4,5-T - Trichlorophenoxyacetic acid
2,4-D - 2,4-Dichlorophenoxyacetic acid
1,2,4-T - 1,2,4-Trimethylbenzene
1,3,5-T - 1,3,5-Trimethylbenzene
RSL - US EPA Regional Screening Levels
Bold - Detected concentration
[1] - Below the bottom of overlying concrete. Borings for sample collection at SWMU-15 were advanced from the top of the rail loading dock, approximately 5 feet above the surrounding ground surface.

Analytical Methods:

Chlorinated Herbicides - EPA SW8151A
VOCs - EPA SW8260B
SVOCs - EPA SW8270C
metals - EPA SW846
cyanide - EPA SW9012B
Ethylene glycol - EPA 8015C

APPENDIX A

BORING LOGS

DEFERRED AREA SOIL INVESTIGATION REPORT OF FINDINGS

LPI Billings Facility
Billings, Montana

December 2022

Rubik Environmental
320 Flint Street
Reno, NV 89501
Telephone: 775-622-0457

BORING: SR-1

CLIENT Nutrien Ag Solutions, Inc.
PROJECT NAME LPI Billings
PROJECT NUMBER 03005-2020
PROJECT LOCATION 1525 Lockwood Road Billings, MT
DATE STARTED 8/12/22 **COMPLETED** 8/12/22
GROUND ELEVATION
DRILLING CONTRACTOR Olympus Tech
TOP OF CASING ELEVATION
DRILLING METHOD Direct Push **BORING DIAMETER** 2 inches
LOCATION
APPROVED BY S. Fitch **LOGGED BY** C. Barkley
GROUND WATER LEVELS:
NOTES Groundwater not encountered.
INITIAL **STATIC**

DEPTH (ft bgs)	SAMPLE	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0		GM		SILTY GRAVEL, (GM) gray, dry, loose, (no recovery). Warehouse base fill.
2.5		SM		SILTY SAND WITH GRAVEL, (SM) gray to brown, moist, loose, gravel to 1.5"
5.0				No recovery (5' - 7.5')
7.5		SM		SILTY SAND, (SM) gray to brown, moist, loose
10.0				Bottom of borehole at 10.0 feet.

Rubik Environmental
320 Flint Street
Reno, NV 89501
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BORING: SR-2

CLIENT Nutrien Ag Solutions, Inc.
PROJECT NAME LPI Billings
PROJECT NUMBER 03005-2020
PROJECT LOCATION 1525 Lockwood Road Billings, MT
DATE STARTED 8/12/22 **COMPLETED** 8/12/22
GROUND ELEVATION
DRILLING CONTRACTOR Olympus Tech
TOP OF CASING ELEVATION
DRILLING METHOD Direct Push **BORING DIAMETER** 2 inches
LOCATION
APPROVED BY S. Fitch **LOGGED BY** C. Barkley
GROUND WATER LEVELS:
NOTES Groundwater not encountered.
INITIAL **STATIC**

DEPTH (ft bgs)	SAMPLE	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0		GM		SILTY GRAVEL, (GM) gray, dry, loose, (no recovery). Warehouse base fill.
2.5		SM		SILTY SAND WITH GRAVEL, (SM) gray to brown, moist, firm, gravel to 1.25"
5.0				No recovery (5' - 7.5')
7.5		SM		SILTY SAND WITH GRAVEL, (SM) gray to brown, moist, loose, gravel to 1"
10.0				Bottom of borehole at 10.0 feet.

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BORING: SR-3

CLIENT Nutrien Ag Solutions, Inc.
PROJECT NAME LPI Billings
PROJECT NUMBER 03005-2020
PROJECT LOCATION 1525 Lockwood Road Billings, MT
DATE STARTED 8/12/22 **COMPLETED** 8/12/22
GROUND ELEVATION
DRILLING CONTRACTOR Olympus Tech
TOP OF CASING ELEVATION
DRILLING METHOD Direct Push **BORING DIAMETER** 2 inches
LOCATION
APPROVED BY S. Fitch **LOGGED BY** C. Barkley
GROUND WATER LEVELS:
NOTES Groundwater not encountered.
INITIAL **STATIC**

DEPTH (ft bgs)	SAMPLE	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0		GM		SILTY GRAVEL, (GM) gray, dry, loose, (no recovery). Warehouse base fill.
2.5		SM		SILTY SAND WITH GRAVEL, (SM) gray to brown, moist, loose to firm, gravel to 1"
5.0				No recovery (5' - 7.5')
7.5		SM		SILTY SAND, (SM) brown, moist, loose
10.0				

Bottom of borehole at 10.0 feet.

Rubik Environmental
320 Flint Street
Reno, NV 89501
Telephone: 775-622-0457

BORING: SR-4

CLIENT Nutrien Ag Solutions, Inc.
PROJECT NAME LPI Billings
PROJECT NUMBER 03005-2020
PROJECT LOCATION 1525 Lockwood Road Billings, MT
DATE STARTED 8/12/22 **COMPLETED** 8/12/22
GROUND ELEVATION
DRILLING CONTRACTOR Olympus Tech
TOP OF CASING ELEVATION
DRILLING METHOD Direct Push **BORING DIAMETER** 2 inches
LOCATION
APPROVED BY S. Fitch **LOGGED BY** C. Barkley
GROUND WATER LEVELS:
NOTES Groundwater not encountered.
INITIAL **STATIC**

DEPTH (ft bgs)	SAMPLE	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0		GM		SILTY GRAVEL, (GM) gray, dry, loose, (no recovery). Warehouse base fill.
2.5		SM		SILTY SAND WITH GRAVEL, (SM) gray to brown, moist, loose, gravel to 1.25"
5.0				No recovery (5' - 7.5')
7.5		SM		SILTY SAND, (SM) brown, moist, loose
10.0				Bottom of borehole at 10.0 feet.

Rubik Environmental
320 Flint Street
Reno, NV 89501
Telephone: 775-622-0457

BORING: SR-5

CLIENT Nutrien Ag Solutions, Inc.
PROJECT NAME LPI Billings
PROJECT NUMBER 03005-2020
PROJECT LOCATION 1525 Lockwood Road Billings, MT
DATE STARTED 8/11/22 **COMPLETED** 8/11/22
GROUND ELEVATION
DRILLING CONTRACTOR Olympus Tech
TOP OF CASING ELEVATION
DRILLING METHOD Direct Push **BORING DIAMETER** 2 inches
LOCATION
APPROVED BY S. Fitch **LOGGED BY** C. Barkley
GROUND WATER LEVELS:
NOTES 12" of concrete. Groundwater not encountered.
INITIAL **STATIC**

DEPTH (ft bgs)	SAMPLE	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0		GM		SILTY GRAVEL, (GM) gray, dry, loose, (no recovery). Warehouse base fill.
2.5		SM		SILTY SAND WITH GRAVEL, (SM) gray, moist, loose, gravel to 1.5"
5.0		SM		SILTY SAND, (SM) gray to brown, moist
7.5		SM		SILTY SAND, (SM) brown, moist, loose
10.0				Bottom of borehole at 10.0 feet.

Rubik Environmental
320 Flint Street
Reno, NV 89501
Telephone: 775-622-0457

BORING: SR-6

CLIENT Nutrien Ag Solutions, Inc.
PROJECT NAME LPI Billings
PROJECT NUMBER 03005-2020
PROJECT LOCATION 1525 Lockwood Road Billings, MT
DATE STARTED 8/11/22 **COMPLETED** 8/11/22
GROUND ELEVATION
DRILLING CONTRACTOR Olympus Tech
TOP OF CASING ELEVATION
DRILLING METHOD Direct Push **BORING DIAMETER** 2 inches
LOCATION
APPROVED BY S. Fitch **LOGGED BY** C. Barkley
GROUND WATER LEVELS:
NOTES Groundwater not encountered.
INITIAL **STATIC**

DEPTH (ft bgs)	SAMPLE	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0		GM		SILTY GRAVEL, (GM) gray, dry, loose, (no recovery). Warehouse base fill.
2.5		SM		SILTY SAND, (SM) gray, moist, loose, trace gravel
5.0		SM		SILTY SAND, (SM) gray to brown, moist, loose to firm
7.5		SM		SILTY SAND, (SM) brown, moist, loose
10.0				Bottom of borehole at 10.0 feet.

Rubik Environmental
320 Flint Street
Reno, NV 89501
Telephone: 775-622-0457

BORING: SR-7

CLIENT Nutrien Ag Solutions, Inc.
PROJECT NAME LPI Billings
PROJECT NUMBER 03005-2020
PROJECT LOCATION 1525 Lockwood Road Billings, MT
DATE STARTED 8/11/22 **COMPLETED** 8/11/22
GROUND ELEVATION
DRILLING CONTRACTOR Olympus Tech
TOP OF CASING ELEVATION
DRILLING METHOD Direct Push **BORING DIAMETER** 2 inches
LOCATION
APPROVED BY S. Fitch **LOGGED BY** C. Barkley
GROUND WATER LEVELS:
NOTES 4" of concrete. Groundwater not encountered.
INITIAL **STATIC**

DEPTH (ft bgs)	SAMPLE	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				
		GM		SILTY GRAVEL, (GM) gray, dry, loose, (no recovery). Warehouse base fill.
2.5				
		SM		SILTY SAND, (SM) gray to brown, moist, loose, trace gravel
5.0				
7.5				
		CL		SANDY LEAN CLAY, (CL) brown, moist, firm
10.0				

Bottom of borehole at 10.0 feet.

Rubik Environmental
320 Flint Street
Reno, NV 89501
Telephone: 775-622-0457

BORING: SR-8

CLIENT Nutrien Ag Solutions, Inc.
PROJECT NAME LPI Billings
PROJECT NUMBER 03005-2020
PROJECT LOCATION 1525 Lockwood Road Billings, MT
DATE STARTED 8/11/22 **COMPLETED** 8/11/22
GROUND ELEVATION
DRILLING CONTRACTOR Olympus Tech
TOP OF CASING ELEVATION
DRILLING METHOD Direct Push **BORING DIAMETER** 2 inches
LOCATION
APPROVED BY S. Fitch **LOGGED BY** C. Barkley
GROUND WATER LEVELS:
NOTES 4" of concrete. Groundwater not encountered.
INITIAL **STATIC**

DEPTH (ft bgs)	SAMPLE	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0		GM		SILTY GRAVEL, (GM) gray, dry, loose, (no recovery). Warehouse base fill.
2.5		SM		SILTY SAND WITH GRAVEL, (SM) brown to gray, moist, loose
5.0		SM		SILTY SAND, (SM) gray, moist, loose
7.5		SM		SILTY SAND, (SM) brown, wet, loose
10.0				Bottom of borehole at 10.0 feet.

Rubik Environmental
320 Flint Street
Reno, NV 89501
Telephone: 775-622-0457

BORING: SR-9

CLIENT Nutrien Ag Solutions, Inc.
PROJECT NAME LPI Billings
PROJECT NUMBER 03005-2020
PROJECT LOCATION 1525 Lockwood Road Billings, MT
DATE STARTED 8/11/22 **COMPLETED** 8/11/22
GROUND ELEVATION
DRILLING CONTRACTOR Olympus Tech
TOP OF CASING ELEVATION
DRILLING METHOD Direct Push **BORING DIAMETER** 2 inches
LOCATION
APPROVED BY S. Fitch **LOGGED BY** C. Barkley
GROUND WATER LEVELS:
NOTES 4" of concrete. Groundwater not encountered.
INITIAL **STATIC**

DEPTH (ft bgs)	SAMPLE	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0		GM		SILTY GRAVEL, (GM) gray, dry, loose, (no recovery). Warehouse base fill.
2.5		SM		SILTY SAND WITH GRAVEL, (SM) brown, moist, loose
5.0				No recovery (5' - 7.5')
7.5				No recovery (7.5' - 10')
10.0				

Bottom of borehole at 10.0 feet.

Rubik Environmental
320 Flint Street
Reno, NV 89501
Telephone: 775-622-0457

BORING: SR-10

CLIENT Nutrien Ag Solutions, Inc.
PROJECT NAME LPI Billings
PROJECT NUMBER 03005-2020
PROJECT LOCATION 1525 Lockwood Road Billings, MT
DATE STARTED 8/11/22 **COMPLETED** 8/11/22
GROUND ELEVATION
DRILLING CONTRACTOR Olympus Tech
TOP OF CASING ELEVATION
DRILLING METHOD Direct Push **BORING DIAMETER** 2 inches
LOCATION
APPROVED BY S. Fitch **LOGGED BY** C. Barkley
GROUND WATER LEVELS:
NOTES 4" of concrete. Groundwater not encountered.
INITIAL **STATIC**

DEPTH (ft bgs)	SAMPLE	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				
		GM		SILTY GRAVEL, (GM) gray, dry, loose, (no recovery). Warehouse base fill.
2.5				
		SM		SILTY SAND WITH GRAVEL, (SM) brown and gray, moist, loose, gravel to 1.5"
5.0				No recovery (5' - 7.5')
7.5				SILTY SAND, (SM) brown, moist, firm
		SM		
10.0				

Bottom of borehole at 10.0 feet.

Rubik Environmental
320 Flint Street
Reno, NV 89501
Telephone: 775-622-0457

BORING: SR-11

CLIENT Nutrien Ag Solutions, Inc.
PROJECT NAME LPI Billings
PROJECT NUMBER 03005-2020
PROJECT LOCATION 1525 Lockwood Road Billings, MT
DATE STARTED 8/11/22 **COMPLETED** 8/11/22
GROUND ELEVATION
DRILLING CONTRACTOR Olympus Tech
TOP OF CASING ELEVATION
DRILLING METHOD Direct Push **BORING DIAMETER** 2 inches
LOCATION
APPROVED BY S. Fitch **LOGGED BY** C. Barkley
GROUND WATER LEVELS:
NOTES Groundwater not encountered.
INITIAL **STATIC**

DEPTH (ft bgs)	SAMPLE	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				
		GM		SILTY GRAVEL, (GM) gray, dry, loose, (no recovery). Warehouse base fill.
2.5				
		SM		SILTY SAND WITH GRAVEL, (SM) brown, moist, firm
5.0				
				No recovery (5' - 7.5')
7.5				
		SM		SILTY SAND, (SM) brown, moist, loose
10.0				

Bottom of borehole at 10.0 feet.

Rubik Environmental
320 Flint Street
Reno, NV 89501
Telephone: 775-622-0457

BORING: SR-12

CLIENT Nutrien Ag Solutions, Inc. **PROJECT NAME** LPI Billings

PROJECT NUMBER 03005-2020 **PROJECT LOCATION** 1525 Lockwood Road Billings, MT

DATE STARTED 8/12/22 **COMPLETED** 8/12/22 **GROUND ELEVATION**

DRILLING CONTRACTOR Olympus Tech **TOP OF CASING ELEVATION**

DRILLING METHOD Direct Push **BORING DIAMETER** 2 inches **LOCATION**

APPROVED BY S. Fitch **LOGGED BY** C. Barkley **GROUND WATER LEVELS:**

NOTES Boring completed on loading dock, approx. 5 feet above ground. **INITIAL** **STATIC**

DEPTH (ft bgs)	SAMPLE	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				
		GM		SILTY GRAVEL, (GM) gray, dry, loose, (no recovery). Warehouse base fill.
2.5				
		SM		SILTY SAND WITH GRAVEL, (SM) gray to brown, moist, loose, gravel to 1"
5.0				No recovery (5' - 7.5')
7.5				SILTY SAND, (SM) brown, moist, loose to hard
		SM		
10.0				No recovery (5' - 7.5')
12.5				SILTY SAND WITH GRAVEL, (SM) gray and brown, loose, gravel to 1.25", trace clay
		SM		
15.0				

Bottom of borehole at 15.0 feet.

Rubik Environmental
320 Flint Street
Reno, NV 89501
Telephone: 775-622-0457

BORING: SR-13

CLIENT Nutrien Ag Solutions, Inc. **PROJECT NAME** LPI Billings

PROJECT NUMBER 03005-2020 **PROJECT LOCATION** 1525 Lockwood Road Billings, MT

DATE STARTED 8/12/22 **COMPLETED** 8/12/22 **GROUND ELEVATION**

DRILLING CONTRACTOR Olympus Tech **TOP OF CASING ELEVATION**

DRILLING METHOD Direct Push **BORING DIAMETER** 2 inches **LOCATION**

APPROVED BY S. Fitch **LOGGED BY** C. Barkley **GROUND WATER LEVELS:**

NOTES Boring completed on loading dock, approx. 5 feet above ground. **INITIAL** **STATIC**

DEPTH (ft bgs)	SAMPLE	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				
		GM		SILTY GRAVEL, (GM) gray, dry, loose, (no recovery). Warehouse base fill.
2.5				
		SM		SILTY SAND WITH GRAVEL, (SM) gray to brown, moist, loose, gravel to 1.25"
5.0				No recovery (5' - 7.5')
7.5				SILTY SAND, (SM) brown, moist, loose
		SM		
10.0				No recovery (5' - 7.5')
12.5				SILTY SAND WITH GRAVEL, (SM) gray to brown, moist, loose, gravel to 1.25"
		SM		
15.0				

Bottom of borehole at 15.0 feet.

Rubik Environmental
320 Flint Street
Reno, NV 89501
Telephone: 775-622-0457

BORING: SR-14

CLIENT Nutrien Ag Solutions, Inc. **PROJECT NAME** LPI Billings

PROJECT NUMBER 03005-2020 **PROJECT LOCATION** 1525 Lockwood Road Billings, MT

DATE STARTED 8/12/22 **COMPLETED** 8/12/22 **GROUND ELEVATION**

DRILLING CONTRACTOR Olympus Tech **TOP OF CASING ELEVATION**

DRILLING METHOD Direct Push **BORING DIAMETER** 2 inches **LOCATION**

APPROVED BY S. Fitch **LOGGED BY** C. Barkley **GROUND WATER LEVELS:**

NOTES Boring completed on loading dock, approx. 5 feet above ground. **INITIAL** **STATIC**

DEPTH (ft bgs)	SAMPLE	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				
		GM		SILTY GRAVEL, (GM) gray, dry, loose, (no recovery). Warehouse base fill.
2.5				
		SM		SILTY SAND WITH GRAVEL, (SM) gray and brown, moist, loose, gravel to 1.25"
5.0				No recovery (5' - 7.5')
7.5				SILTY SAND WITH GRAVEL, (SM) gray to dark brown, moist, loose to firm, gravel to 1"
10.0				No recovery (5' - 7.5')
12.5				SILTY SAND WITH GRAVEL, (SM) brown, moist, loose, gravel to 1.25", trace clay
15.0				

Bottom of borehole at 15.0 feet.

Rubik Environmental
320 Flint Street
Reno, NV 89501
Telephone: 775-622-0457

BORING: SR-15

CLIENT Nutrien Ag Solutions, Inc.
PROJECT NAME LPI Billings
PROJECT NUMBER 03005-2020
PROJECT LOCATION 1525 Lockwood Road Billings, MT
DATE STARTED 8/11/22 **COMPLETED** 8/11/22
GROUND ELEVATION
DRILLING CONTRACTOR Olympus Tech
TOP OF CASING ELEVATION
DRILLING METHOD Direct Push **BORING DIAMETER** 2 inches
LOCATION
APPROVED BY S. Fitch **LOGGED BY** C. Barkley
GROUND WATER LEVELS:
NOTES 4" of concrete. Groundwater not encountered.
INITIAL **STATIC**

DEPTH (ft bgs)	SAMPLE	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				
		GM		SILTY GRAVEL, (GM) gray, dry, loose, (no recovery). Warehouse base fill.
2.5				
		SC		CLAYEY SAND, (SC) gray to brown, moist, loose to firm
5.0				
				No recovery (5' - 7.5')
7.5				
		SM		SILTY SAND, (SM) brown, wet, loose
10.0				

Bottom of borehole at 10.0 feet.

Rubik Environmental
320 Flint Street
Reno, NV 89501
Telephone: 775-622-0457

BORING: SR-16

CLIENT Nutrien Ag Solutions, Inc.
PROJECT NAME LPI Billings
PROJECT NUMBER 03005-2020
PROJECT LOCATION 1525 Lockwood Road Billings, MT
DATE STARTED 8/11/22 **COMPLETED** 8/11/22
GROUND ELEVATION
DRILLING CONTRACTOR Olympus Tech
TOP OF CASING ELEVATION
DRILLING METHOD Direct Push **BORING DIAMETER** 2 inches
LOCATION
APPROVED BY S. Fitch **LOGGED BY** C. Barkley
GROUND WATER LEVELS:
NOTES 4" of concrete. Groundwater not encountered.
INITIAL **STATIC**

DEPTH (ft bgs)	SAMPLE	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0				
		GM		SILTY GRAVEL, (GM) gray, dry, loose, (no recovery). Warehouse base fill.
2.5				
		SM		SILTY SAND, (SM) brown and gray, moist, loose
5.0				
				No recovery (5' - 7.5')
7.5				
		SM		SILTY SAND, (SM) brown, moist, loose
10.0				

Bottom of borehole at 10.0 feet.

Rubik Environmental
320 Flint Street
Reno, NV 89501
Telephone: 775-622-0457

BORING: SR-17

CLIENT Nutrien Ag Solutions, Inc.
PROJECT NAME LPI Billings
PROJECT NUMBER 03005-2020
PROJECT LOCATION 1525 Lockwood Road Billings, MT
DATE STARTED 8/11/22 **COMPLETED** 8/11/22
GROUND ELEVATION
DRILLING CONTRACTOR Olympus Tech
TOP OF CASING ELEVATION
DRILLING METHOD Direct Push **BORING DIAMETER** 2 inches
LOCATION
APPROVED BY S. Fitch **LOGGED BY** C. Barkley
GROUND WATER LEVELS:
NOTES 4" of concrete. Groundwater not encountered.
INITIAL **STATIC**

DEPTH (ft bgs)	SAMPLE	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0		GM		SILTY GRAVEL, (GM) gray, dry, loose, (no recovery). Warehouse base fill.
2.5		SC		CLAYEY SAND, (SC) brown, moist, firm
5.0				No recovery (5' - 7.5')
7.5		SM		SILTY SAND, (SM) brown, moist, loose
10.0				

Bottom of borehole at 10.0 feet.

APPENDIX B

ANALYTICAL DATA VALIDATION REPORT

DEFERRED AREA SOIL INVESTIGATION REPORT OF FINDINGS

LPI Billings Facility
Billings, Montana

December 2022

ANALYTICAL DATA VALIDATION CHECKLIST

Project Name:
LPI Billings Deferred Area Soil Investigation

Laboratory: Energy Laboratories of Billings, MT

Project Reference: November 2022 data review
RUBIK Project No.: 03005-2022-DASI

Sample Matrix: Soil
Sample Start Date: 8/11/2022

Verified By/Date Verified: Shane Fitch, 11/15/22

Sample End Date: 8/12/2022

Samples Analyzed: Energy Laboratories of Billings, MT

Matrix	Sample ID	Sample Date	Sample Time	LAB WO No.	Lab ID
Soil	SR-5-5	8/11/2022	2:30:00 PM	B22081361	B22081361-001
Soil	SR-5-7.5	8/11/2022	2:35:00 PM		B22081361-002
Soil	SR-5-10	8/11/2022	2:40:00 PM		B22081361-003
Soil	SR-6-5	8/11/2022	11:35:00 AM		B22081361-004
Soil	SR-6-7.5	8/11/2022	11:40:00 AM		B22081361-005
Soil	SR-6-10	8/11/2022	11:50:00 AM		B22081361-006
Soil	SR-7-5	8/11/2022	11:15:00 AM		B22081361-007
Soil	SR-7-7.5	8/11/2022	11:20:00 AM		B22081361-008
Soil	SR-7-10	8/11/2022	11:25:00 AM		B22081361-009
Soil	SR-8-5	8/11/2022	12:15:00 PM		B22081361-010
Soil	SR-8-7.5	8/11/2022	12:20:00 PM		B22081361-011
Soil	SR-8-10	8/11/2022	12:25:00 PM		B22081361-012
Soil	SR-9-5	8/11/2022	4:00:00 PM		B22081361-013
Soil	SR-10-5	8/11/2022	3:05:00 PM		B22081361-014
Soil	SR-10-10	8/11/2022	3:25:00 PM		B22081361-015
Soil	SR-15-5	8/11/2022	2:10:00 PM		B22081361-016
Soil	SR-15-10	8/11/2022	2:15:00 PM		B22081361-017
Soil	SR-16-5	8/11/2022	2:00:00 PM		B22081361-018
Soil	SR-16-10	8/11/2022	2:05:00 PM		B22081361-019
Soil	SR-17-5	8/11/2022	12:50:00 PM		B22081361-020
Soil	SR-17-10	8/11/2022	1:00:00 PM		B22081361-021
Soil	SR-1-5	8/12/2022	7:35:00 AM	B22081406	B22081406-001
Soil	SR-1-10	8/12/2022	7:40:00 AM		B22081406-002
Soil	SR-2-5	8/12/2022	7:50:00 AM		B22081406-003
Soil	SR-4-5	8/12/2022	8:10:00 AM		B22081406-004
Soil	SR-4-10	8/12/2022	8:15:00 AM		B22081406-005
Soil	SR-3-5	8/12/2022	8:25:00 AM		B22081406-006
Soil	SR-3-10	8/12/2022	8:30:00 AM		B22081406-007
Soil	SR-2-10	8/12/2022	7:55:00 AM		B22081406-008
Soil	SR-11-5	8/12/2022	9:10:00 AM		B22081406-009
Soil	SR-11-10	8/12/2022	9:15:00 AM		B22081406-010
Soil	SR-12-5	8/12/2022	9:35:00 AM		B22081406-011
Soil	SR-12-10	8/12/2022	9:45:00 AM		B22081406-012
Soil	SR-12-15	8/12/2022	11:30:00 AM		B22081406-013
Soil	SR-13-5	8/12/2022	10:05:00 AM		B22081406-014
Soil	SR-13-10	8/12/2022	10:10:00 AM		B22081406-015
Soil	SR-13-15	8/12/2022	11:20:00 AM		B22081406-016
Soil	SR-14-5	8/12/2022	10:15:00 AM		B22081406-017
Soil	SR-14-10	8/12/2022	10:20:00 AM		B22081406-018
Soil	SR-14-15	8/12/2022	11:10:00 AM		B22081406-019

Parameters Verified: Total cyanide by SW9012B, total metals by EPA SW846, chlorinated herbicides by EPA 8151A, volatile organic compounds (VOCs) by EPA 8260B, semi-volatile organic compounds (SVOCs) by EPA 8270C, ethylene glycol by EPA 8015C.

PRECISION, ACCURACY, METHOD COMPLIANCE, AND COMPLETENESS ASSESSMENT

ANALYTICAL DATA VALIDATION CHECKLIST
August 11 and 12, 2022 Deferred Area Soil Investigation

Precision:	N/A	Acceptable	N/A	Unacceptable	Initials	SF

Comments: Field duplicates were not collected because the relative percent difference (RPD) of the sample and the field duplicate are very dependent on how they are collected and homogenized in the field, potentially resulting in high RPDs that do not reflect analytical issues.

Method Compliance:	x	Acceptable	Unacceptable	Initials	SF

Comments: For this data set, method compliance was determined by evaluating sample integrity, reporting limits, holding time, and laboratory blanks against method specified requirements. Method compliance measurements are reviewed in items 4, 6, 8, 11, 13, 18, 19, 20, and 22.

Completeness:	x	Acceptable	Unacceptable	Initials	SF

Comments: Completeness is the overall ratio of the number of samples planned versus the number of samples with valid analyses. Completeness goals are set at 90-100%. Determination of completeness included a review of chain of custody records, laboratory analytical methods and detection limits, and project requirements. Completeness also included 100% review of the laboratory sample data results, QC summary reports, and electronic data deliverables (EDDs).

VALIDATION CRITERIA CHECK

Data validation qualifiers used in this review:
D - Reporting Limit (RL) increased due to sample matrix, S - Spike recovery outside of advisory limits, J - Estimated value - analyte present but less than the RL, E - Estimated value - result exceeds the instrument upper quantitation limit, H - Analysis performed past the method holding time

Refer to the Table of Qualified Analytical Results for a listing of the samples, analytes, and concentrations qualified (attached at the end of this Checklist).

1.) Did the Laboratory identify any non-conformances related to the analytical results?	X	Yes		No	SF	Initials
Comments: Lab WO No. B22081361: Several samples for EPA Method 8151A analysis required a dilution to bring the 2,4-D into calibration range. The dilution was done past the recommended holding time so both the over-range value an the H qualified dilution are reported. The two values agree and indicate that there was no loss or degradation of the compound due to the holding time exceedance. Lab WO No. B22081406: Sample SR-13-15, (B22081406-016) for EPA Method 8151A analysis required a dilution to bring 2,4-D and Dichlorprop into calibration range. The dilution was done past the recommended holding time so both the over-range value and the H qualified dilution are reported. The two values agree and indicate that there was no loss or degradation of the compound due to the holding time exceedance. Warranted data qualification related to comments and/or the assigned laboratory flags are discussed in the following sections.						
2.) Were the Chain-of-Custody forms complete?	X	Yes		No	SF	Initials
Comments:						
3.) Were all the analyses requested for the samples on the COCs completed by the laboratory?	X	Yes		No	SF	Initials
Comments:						
4.) Were samples received in good condition and at the appropriate temperature?		Yes	X	No	SF	Initials
Comments: Samples collected on 8/12/22 (Lab WO No. B22081406) contained in shipping container (cooler) 1 was 7.7 °C and shipping container 3 was 8.0°C. Maximum target temperature for sample transport was 6.0°C.						
5.) Were the requested analytical methods in compliance with WP/OAPP, permit, or COC?	X	Yes		No	SF	Initials
Comments:						
6.) Were detection limits in accordance with WP/OAPP, permit, or method?	X	Yes		No	SF	Initials
Comments:						
7.) Do the laboratory reports include only those constituents requested to be reported for a specific analytical method?	X	Yes		No	SF	Initials
Comments:						
8.) Were sample holding times met?		Yes	X	No	SF	Initials
Comments: Sample SR-13-15, (B22081406-016) for EPA Method 8151A analysis required a dilution to bring 2,4-D and Dichlorprop into calibration range. The dilution was done past the recommended holding time so both the over-range value and the H qualified dilution are reported. The two values agree and indicate that there was no loss or degradation of the compound due to the holding time exceedance.						
Refer to the Table of Qualified Analytical Results for a listing of the samples, analytes, and concentrations qualified (attached at the end of this Checklist).						

9.) Were correct concentration units reported?	X	Yes		No	SF	Initials
Comments:						
10.) Were the reporting requirements for flagged data met?	X	Yes		No	SF	Initials
Comments:						
11.) Were laboratory blank (method) samples free of target analyte contamination?		Yes	X	No	SF	Initials
Comments: Lab WO No. B22081361: Method blanks for SW9012B (total cyanide) in QC batch 169515 contained a concentration of 0.1 mg/kg. Lab WO No. B22081406: Method blanks for SW9012B (total cyanide) contained a concentration of 0.1 mg/kg in all QC batches. Refer to the Table of Qualified Analytical Results for a listing of the samples, analytes, and concentrations qualified (attached at the end of this Checklist).						
12.) Were trip blank, field blank, and/or equipment rinse blank samples free of target analyte contamination?	N/A	Yes	N/A	No	SF	Initials
Comments: Not applicable						
13.) Were instrument calibrations within method or data validation control limits?	X	Yes		No	SF	Initials
Comments:						
14.) Were the surrogate recoveries within control limits?	X	Yes		No	SF	Initials
Comments:						
15.) Were laboratory control sample recoveries within control limits?	X	Yes		No	SF	Initials
Comments:						
16.) Were matrix spike recoveries within control limits?		Yes	X	No	SF	Initials
Comments: Spike recovery was outside advisory limits for the following samples/methods. All included analyses were ND, and method reporting limits were met, therefore data quality was not impacted. Method 8260B: SR-5-7.5, SR-9-5, SR-10-5, SR-13-10, SR-13-15. Method 8270C: SR-5-7.5, SR-6-5, SR-6-7.5, SR-7-5, SR-9-5, SR-10-5, SR-1-5, SR-4-5, SR-3-5, SR-2-10, SR-11-5, SR-11-10, SR-12-15, SR-13-5, SR-13-10, SR-13-15, SR-14-5. Refer to the Table of Qualified Analytical Results for a listing of the samples, analytes, and concentrations qualified (attached at the end of this Checklist).						
17.) Were duplicate RPDs and/or serial dilution %Ds within control limits?	X	Yes		No	SF	Initials
Comments:						
18.) Were organic system performance criteria met?	N/A	Yes	N/A	No	SF	Initials
Comments:						
19.) Were internal standards within method criteria for GC/MS sample analysis?	N/A	Yes	N/A	No	SF	Initials
Comments:						
20.) Were inorganic system performance criteria met?	N/A	Yes	N/A	No	SF	Initials
Comments:						

21.) Were blind field duplicates collected? If so, discuss the precision (RPD) of the results.		Yes	X	No	SF	Initials
Comments:						
22.) Were qualitative/quantitative criteria for organic target analyte identification met?	N/A	Yes	N/A	No	SF	Initials
Comments:						
23.) Were 100% of the EDD concentrations and reporting limits compared to the hardcopy data reports?	N/A	Yes	N/A	No	SF	Initials
Comments: Refer to the Table of Qualified Analytical Results for a listing of the samples, analytes, and concentrations qualified (attached at the end of this Checklist).						

Table of Qualified Analytical Results
Loveland Products, Inc. - Soil Sampling
Soil Samples
Energy Laboratories of Billings, MT Report Numbers B22081361 & B22081406
August 11 and 12, 2022 Deferred Area Soil Investigation

Sample ID	Lab ID	Method	QC Batch	Analyte	Concentration	Units	Qualifier	Bias
SR-8-7.5	B22081361-011	8151	169433	2,4-D	3.5	mg/kg	E	L
SR-8-7.5	B22081361-011	8151	169433	2,4-D	3.5	mg/kg	H	L
SR-9-5	B22081361-013	8151	169433	2,4-D	0.33	mg/kg	E	L
SR-9-5	B22081361-013	8151	169433	2,4-D	0.38	mg/kg	H	L
SR-10-5	B22081361-014	8151	169433	2,4-D	0.75	mg/kg	E	L
SR-10-5	B22081361-014	8151	169433	2,4-D	0.77	mg/kg	H	L
SR-15-5	B22081361-016	8151	169433	2,4-D	0.84	mg/kg	E	L
SR-15-5	B22081361-016	8151	169433	2,4-D	0.92	mg/kg	H	L
SR-16-5	B22081361-018	8151	169433	2,4-D	0.49	mg/kg	E	L
SR-16-5	B22081361-018	8151	169433	2,4-D	0.54	mg/kg	H	L
SR-16-10	B22081361-019	8151	169433	2,4-D	1.5	mg/kg	E	L
SR-16-10	B22081361-019	8151	169433	2,4-D	1.7	mg/kg	H	L
SR-17-5	B22081361-020	8151	169433	2,4-D	3.4	mg/kg	E	L
SR-17-5	B22081361-020	8151	169433	2,4-D	3.2	mg/kg	H	L
SR-17-5	B22081361-020	8151	169433	Clopyralid	0.46	mg/kg	H	L
SR-17-5	B22081361-020	8151	169433	Dicamba	0.39	mg/kg	H	L
SR-13-15	B22081406-016	8151	169588	2,4-D	300	mg/kg	E	L
SR-13-15	B22081406-016	8151	169588	2,4-D	327	mg/kg	H	L
SR-13-15	B22081406-016	8151	169588	Dichlorprop	9.4	mg/kg	J	L
SR-13-15	B22081406-016	8151	169588	Dichlorprop	7.8	mg/kg	H	L
SR-1-5	B22081406-001	9012B	169515	Cyanide	0.6	mg/kg	Blank	H
SR-1-10	B22081406-002	9012B	169515	Cyanide	ND	mg/kg	Blank	H
SR-2-5	B22081406-003	9012B	169515	Cyanide	ND	mg/kg	Blank	H
SR-2-10	B22081406-008	9012B	169532	Cyanide	ND	mg/kg	Blank	H
SR-3-5	B22081406-006	9012B	169515	Cyanide	0.6	mg/kg	Blank	H
SR-3-10	B22081406-007	9012B	169515	Cyanide	ND	mg/kg	Blank	H
SR-4-5	B22081406-004	9012B	169515	Cyanide	ND	mg/kg	Blank	H
SR-4-10	B22081406-005	9012B	169515	Cyanide	ND	mg/kg	Blank	H
SR-11-5	B22081406-009	9012B	169532	Cyanide	ND	mg/kg	Blank	H
SR-11-10	B22081406-010	9012B	169532	Cyanide	ND	mg/kg	Blank	H
SR-15-5	B22081361-016	9012B	169532	Cyanide	0.4	mg/kg	Blank	H
SR-15-10	B22081361-017	9012B	169515	Cyanide	ND	mg/kg	Blank	H
SR-16-5	B22081361-018	9012B	169515	Cyanide	ND	mg/kg	Blank	H
SR-16-10	B22081361-019	9012B	169515	Cyanide	ND	mg/kg	Blank	H
SR-17-5	B22081361-020	9012B	169515	Cyanide	ND	mg/kg	Blank	H
SR-17-10	B22081361-021	9012B	169515	Cyanide	ND	mg/kg	Blank	H

Notes:

E - Estimated value - result exceeds the instrument upper quantitation limit
H - Analysis performed past the method holding time
J - Estimated value - analyte was present but less than the Reporting Limit (RL)
Blank - Target analyte detected in method blank
L - Reported concentration may be biased low based on data qualifier
H - Reported concentration may be biased high based on data qualifier
ND - Not detected above RL

APPENDIX C

LABORATORY ANALYTICAL REPORTS

DEFERRED AREA SOIL INVESTIGATION REPORT OF FINDINGS

LPI Billings Facility
Billings, Montana

December 2022

ANALYTICAL SUMMARY REPORT

September 23, 2022

Rubik Environmental
320 Flint St
Reno, NV 89501-2006

Work Order: B22081361 Quote ID: B15448

Project Name: Nutrien/LPI Billings

Energy Laboratories Inc Billings MT received the following 21 samples for Rubik Environmental on 8/12/2022 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B22081361-001	SR-5-5	08/11/22 14:30	08/12/22	Soil	Metals by ICP/ICPMS, Total or Soluble Total Cyanide Cyanide Distillation SW9010 8151-Herbicides, Chlorinated Moisture Moisture Prep SW3550C Percent Moisture Total Metals Digestion by SW3050B Sonication Extraction SW3550C Soil Sonication SW3550C Extraction Semi-Volatile Organic Compounds Volatile Organics, Methanol Extraction SW5035 8260-Volatile Organic Compounds - Short List
B22081361-002	SR-5-7.5	08/11/22 14:35	08/12/22	Soil	Same As Above
B22081361-003	SR-5-10	08/11/22 14:40	08/12/22	Soil	Same As Above
B22081361-004	SR-6-5	08/11/22 11:35	08/12/22	Soil	Same As Above
B22081361-005	SR-6-7.5	08/11/22 11:40	08/12/22	Soil	Same As Above
B22081361-006	SR-6-10	08/11/22 11:50	08/12/22	Soil	Same As Above
B22081361-007	SR-7-5	08/11/22 11:15	08/12/22	Soil	Same As Above
B22081361-008	SR-7-7.5	08/11/22 11:20	08/12/22	Soil	Same As Above
B22081361-009	SR-7-10	08/11/22 11:25	08/12/22	Soil	Same As Above
B22081361-010	SR-8-5	08/11/22 12:15	08/12/22	Soil	Same As Above
B22081361-011	SR-8-7.5	08/11/22 12:20	08/12/22	Soil	Same As Above
B22081361-012	SR-8-10	08/11/22 12:25	08/12/22	Soil	Same As Above
B22081361-013	SR-9-5	08/11/22 16:00	08/12/22	Soil	Same As Above
B22081361-014	SR-10-5	08/11/22 15:05	08/12/22	Soil	Same As Above
B22081361-015	SR-10-10	08/11/22 15:25	08/12/22	Soil	Same As Above
B22081361-016	SR-15-5	08/11/22 14:10	08/12/22	Soil	Same As Above
B22081361-017	SR-15-10	08/11/22 14:15	08/12/22	Soil	Same As Above
B22081361-018	SR-16-5	08/11/22 14:00	08/12/22	Soil	Same As Above
B22081361-019	SR-16-10	08/11/22 14:05	08/12/22	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

B22081361-020	SR-17-5	08/11/22 12:50	08/12/22	Soil	Same As Above
B22081361-021	SR-17-10	08/11/22 13:00	08/12/22	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager.

Report Approved By:

CLIENT: Rubik Environmental
Project: Nutrien/LPI Billings
Work Order: B22081361

Report Date: 09/23/22

CASE NARRATIVE

Several samples for EPA Method 8151A analysis required a dilution to bring the 2,4-D into calibration range. The dilution was done past the recommended holding time so both the over-range value an the H qualified dilution are reported. The two values agree and indicate that there was no loss or degradation of the compound due to the holding time exceedance.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-001
Client Sample ID: SR-5-5

Report Date: 09/23/22
Collection Date: 08/11/22 14:30
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	15	wt%		0.2		SW3550C	08/16/22 10:47 / amn
CYANIDE							
Cyanide, Total	0.8	mg/kg-dry		0.3		SW9012B	08/19/22 09:56 / mas
METALS, TOTAL - EPA SW846							
Chromium	17	mg/kg-dry	D	6		SW6020	08/27/22 09:16 / srh
Cobalt	6	mg/kg-dry		1		SW6020	08/27/22 09:16 / srh
Nickel	16	mg/kg-dry	D	6		SW6020	08/27/22 09:16 / srh
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-001
Client Sample ID: SR-5-5

Report Date: 09/23/22
Collection Date: 08/11/22 14:30
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/17/22 14:51 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.24		SW8260B	08/17/22 14:51 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:51 / jdb
Surr: p-Bromofluorobenzene	94.0	%REC		78-160		SW8260B	08/17/22 14:51 / jdb
Surr: Dibromofluoromethane	70.0	%REC		70-132		SW8260B	08/17/22 14:51 / jdb
Surr: 1,2-Dichloroethane-d4	101	%REC		60-136		SW8260B	08/17/22 14:51 / jdb
Surr: Toluene-d8	105	%REC		75-138		SW8260B	08/17/22 14:51 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 07:42 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-001
Client Sample ID: SR-5-5

Report Date: 09/23/22
Collection Date: 08/11/22 14:30
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.39		SW8270C	08/21/22 07:42 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 07:42 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 07:42 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Benzidine	ND	mg/kg-dry		0.39		SW8270C	08/21/22 07:42 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.39		SW8270C	08/21/22 07:42 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-001
Client Sample ID: SR-5-5

Report Date: 09/23/22
Collection Date: 08/11/22 14:30
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 07:42 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 07:42 / jph
Diallate	ND	mg/kg-dry		0.33		SW8270C	08/19/22 10:46 / jph
Surr: 2,4,6-Tribromophenol	86.0	%REC		53-141		SW8270C	08/21/22 07:42 / jph
Surr: 2-Fluorobiphenyl	79.0	%REC		63-98		SW8270C	08/21/22 07:42 / jph
Surr: 2-Fluorophenol	74.0	%REC		53-101		SW8270C	08/21/22 07:42 / jph
Surr: Nitrobenzene-d5	70.0	%REC		53-101		SW8270C	08/21/22 07:42 / jph
Surr: Phenol-d5	77.0	%REC		55-100		SW8270C	08/21/22 07:42 / jph
Surr: Terphenyl-d14	103	%REC		71-118		SW8270C	08/21/22 07:42 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0047		SW8151A	08/22/22 15:52 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0047		SW8151A	08/22/22 15:52 / jmh
2,4-D	0.42	mg/kg-dry		0.12		SW8151A	08/28/22 05:50 / jmh
2,4-DB	ND	mg/kg-dry		0.059		SW8151A	08/22/22 15:52 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.012		SW8151A	08/22/22 15:52 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.012		SW8151A	08/22/22 15:52 / jmh
Acifluorfen	ND	mg/kg-dry		0.012		SW8151A	08/22/22 15:52 / jmh
Bentazon	ND	mg/kg-dry		0.059		SW8151A	08/22/22 15:16 / jmh
Clopyralid	1.4	mg/kg-dry		0.029		SW8151A	08/28/22 05:50 / jmh
Dacthal	ND	mg/kg-dry		0.024		SW8151A	08/22/22 15:52 / jmh
Dalapon	ND	mg/kg-dry		0.059		SW8151A	08/22/22 15:52 / jmh
Dicamba	0.013	mg/kg-dry		0.0059		SW8151A	08/22/22 15:52 / jmh
Dichlorprop	ND	mg/kg-dry		0.024		SW8151A	08/22/22 15:52 / jmh
Dinoseb	ND	mg/kg-dry		0.024		SW8151A	08/22/22 15:52 / jmh
MCPA	ND	mg/kg-dry		4.7		SW8151A	08/22/22 15:52 / jmh
MCPP	ND	mg/kg-dry		4.7		SW8151A	08/22/22 15:52 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0024		SW8151A	08/22/22 15:52 / jmh
Picloram	ND	mg/kg-dry		0.012		SW8151A	08/22/22 15:16 / jmh
Surr: DCAA	76.0	%REC		45-117		SW8151A	08/22/22 15:52 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-002
Client Sample ID: SR-5-7.5

Report Date: 09/23/22
Collection Date: 08/11/22 14:35
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	18	wt%		0.2		SW3550C	08/16/22 10:53 / amn
CYANIDE							
Cyanide, Total	ND	mg/kg-dry		0.3		SW9012B	08/19/22 09:58 / mas
METALS, TOTAL - EPA SW846							
Chromium	20	mg/kg-dry	D	6		SW6020	08/27/22 10:00 / srh
Cobalt	6	mg/kg-dry		1		SW6020	08/27/22 10:00 / srh
Nickel	20	mg/kg-dry	D	6		SW6020	08/27/22 10:00 / srh
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-002
Client Sample ID: SR-5-7.5

Report Date: 09/23/22
Collection Date: 08/11/22 14:35
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/19/22 04:34 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.24		SW8260B	08/19/22 04:34 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:34 / jdb
Surr: p-Bromofluorobenzene	104	%REC		78-160		SW8260B	08/19/22 04:34 / jdb
Surr: Dibromofluoromethane	133	%REC	S	70-132		SW8260B	08/19/22 04:34 / jdb
Surr: 1,2-Dichloroethane-d4	117	%REC		60-136		SW8260B	08/19/22 04:34 / jdb
Surr: Toluene-d8	122	%REC		75-138		SW8260B	08/19/22 04:34 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
1-Methylnaphthalene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		2.0		SW8270C	08/21/22 08:13 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
2-Chloronaphthalene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
2-Chlorophenol	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
2-Methylnaphthalene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
2-Nitrophenol	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
S - Spike recovery outside of advisory limits
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-002
Client Sample ID: SR-5-7.5

Report Date: 09/23/22
Collection Date: 08/11/22 14:35
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		2.0		SW8270C	08/21/22 08:13 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		2.0		SW8270C	08/21/22 08:13 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
4-Chloroaniline	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
4-Chlorophenol	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
4-Nitrophenol	ND	mg/kg-dry		2.0		SW8270C	08/21/22 08:13 / jph
Acenaphthene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Acenaphthylene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Anthracene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Azobenzene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Benzidine	ND	mg/kg-dry		2.0		SW8270C	08/21/22 08:13 / jph
Benzo(a)anthracene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Benzo(a)pyrene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Butylbenzylphthalate	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Chrysene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Diethyl phthalate	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Dimethyl phthalate	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Fluoranthene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Fluorene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Hexachlorobenzene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Hexachlorobutadiene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		2.0		SW8270C	08/21/22 08:13 / jph
Hexachloroethane	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Isophorone	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
m+p-Cresols	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Naphthalene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Nitrobenzene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-002
Client Sample ID: SR-5-7.5

Report Date: 09/23/22
Collection Date: 08/11/22 14:35
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
o-Cresol	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Pentachlorophenol	ND	mg/kg-dry		2.0		SW8270C	08/21/22 08:13 / jph
Phenanthrene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Phenol	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Pyrene	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Pyridine	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Triallate	ND	mg/kg-dry		1.0		SW8270C	08/21/22 08:13 / jph
Diallate	ND	mg/kg-dry		1.0		SW8270C	08/19/22 11:17 / jph
Surr: 2,4,6-Tribromophenol	72.0	%REC		53-141		SW8270C	08/21/22 08:13 / jph
Surr: 2-Fluorobiphenyl	67.0	%REC		63-98		SW8270C	08/21/22 08:13 / jph
Surr: 2-Fluorophenol	55.0	%REC		53-101		SW8270C	08/21/22 08:13 / jph
Surr: Nitrobenzene-d5	51.0	%REC	S	53-101		SW8270C	08/21/22 08:13 / jph
Surr: Phenol-d5	62.0	%REC		55-100		SW8270C	08/21/22 08:13 / jph
Surr: Terphenyl-d14	89.0	%REC		71-118		SW8270C	08/21/22 08:13 / jph
- The sample extract was diluted 5 times at analysis due to non-target compound sample matrix interference. The Reporting Limit reflects this dilution.							
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0049		SW8151A	08/22/22 19:27 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0049		SW8151A	08/22/22 19:27 / jmh
2,4-D	ND	mg/kg-dry		0.024		SW8151A	08/22/22 19:27 / jmh
2,4-DB	ND	mg/kg-dry		0.061		SW8151A	08/22/22 19:27 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.012		SW8151A	08/22/22 19:27 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.012		SW8151A	08/22/22 19:27 / jmh
Acifluorfen	ND	mg/kg-dry		0.012		SW8151A	08/22/22 19:27 / jmh
Bentazon	ND	mg/kg-dry		0.061		SW8151A	08/22/22 18:51 / jmh
Clopyralid	0.13	mg/kg-dry		0.0061		SW8151A	08/22/22 18:51 / jmh
Dacthal	ND	mg/kg-dry		0.024		SW8151A	08/22/22 19:27 / jmh
Dalapon	ND	mg/kg-dry		0.061		SW8151A	08/22/22 19:27 / jmh
Dicamba	0.0082	mg/kg-dry		0.0061		SW8151A	08/22/22 19:27 / jmh
Dichlorprop	ND	mg/kg-dry		0.024		SW8151A	08/22/22 19:27 / jmh
Dinoseb	ND	mg/kg-dry		0.024		SW8151A	08/22/22 19:27 / jmh
MCPA	ND	mg/kg-dry		4.9		SW8151A	08/22/22 19:27 / jmh
MCPP	ND	mg/kg-dry		4.9		SW8151A	08/22/22 19:27 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0024		SW8151A	08/22/22 19:27 / jmh
Picloram	ND	mg/kg-dry		0.012		SW8151A	08/22/22 18:51 / jmh
Surr: DCAA	80.0	%REC		45-117		SW8151A	08/22/22 19:27 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
S - Spike recovery outside of advisory limits
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-003
Client Sample ID: SR-5-10

Report Date: 09/23/22
Collection Date: 08/11/22 14:40
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	9.9	wt%		0.2		SW3550C	08/16/22 11:06 / amn
CYANIDE							
Cyanide, Total	2.1	mg/kg-dry		0.3		SW9012B	08/19/22 10:00 / mas
METALS, TOTAL - EPA SW846							
Chromium	15	mg/kg-dry	D	5		SW6020	08/27/22 10:06 / srh
Cobalt	5	mg/kg-dry		1		SW6020	08/27/22 10:06 / srh
Nickel	13	mg/kg-dry	D	5		SW6020	08/27/22 10:06 / srh
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-003
Client Sample ID: SR-5-10

Report Date: 09/23/22
Collection Date: 08/11/22 14:40
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/17/22 14:25 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.22		SW8260B	08/17/22 14:25 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/17/22 14:25 / jdb
Surr: p-Bromofluorobenzene	94.0	%REC		78-160		SW8260B	08/17/22 14:25 / jdb
Surr: Dibromofluoromethane	105	%REC		70-132		SW8260B	08/17/22 14:25 / jdb
Surr: 1,2-Dichloroethane-d4	96.0	%REC		60-136		SW8260B	08/17/22 14:25 / jdb
Surr: Toluene-d8	98.0	%REC		75-138		SW8260B	08/17/22 14:25 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 08:43 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-003
Client Sample ID: SR-5-10

Report Date: 09/23/22
Collection Date: 08/11/22 14:40
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.37		SW8270C	08/21/22 08:43 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 08:43 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 08:43 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Benzidine	ND	mg/kg-dry		0.37		SW8270C	08/21/22 08:43 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.37		SW8270C	08/21/22 08:43 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-003
Client Sample ID: SR-5-10

Report Date: 09/23/22
Collection Date: 08/11/22 14:40
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 08:43 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 08:43 / jph
Diallate	ND	mg/kg-dry		0.33		SW8270C	08/19/22 11:47 / jph
Surr: 2,4,6-Tribromophenol	78.0	%REC		53-141		SW8270C	08/21/22 08:43 / jph
Surr: 2-Fluorobiphenyl	74.0	%REC		63-98		SW8270C	08/21/22 08:43 / jph
Surr: 2-Fluorophenol	71.0	%REC		53-101		SW8270C	08/21/22 08:43 / jph
Surr: Nitrobenzene-d5	73.0	%REC		53-101		SW8270C	08/21/22 08:43 / jph
Surr: Phenol-d5	71.0	%REC		55-100		SW8270C	08/21/22 08:43 / jph
Surr: Terphenyl-d14	97.0	%REC		71-118		SW8270C	08/21/22 08:43 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0044		SW8151A	08/22/22 20:03 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0044		SW8151A	08/22/22 20:03 / jmh
2,4-D	ND	mg/kg-dry		0.022		SW8151A	08/22/22 20:03 / jmh
2,4-DB	ND	mg/kg-dry		0.055		SW8151A	08/22/22 20:03 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/22/22 20:03 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/22/22 20:03 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/22/22 20:03 / jmh
Bentazon	ND	mg/kg-dry		0.055		SW8151A	08/22/22 19:27 / jmh
Clopyralid	0.0068	mg/kg-dry		0.0055		SW8151A	08/22/22 19:27 / jmh
Dacthal	ND	mg/kg-dry		0.022		SW8151A	08/22/22 20:03 / jmh
Dalapon	ND	mg/kg-dry		0.055		SW8151A	08/22/22 20:03 / jmh
Dicamba	0.014	mg/kg-dry		0.0055		SW8151A	08/22/22 20:03 / jmh
Dichlorprop	ND	mg/kg-dry		0.022		SW8151A	08/22/22 20:03 / jmh
Dinoseb	ND	mg/kg-dry		0.022		SW8151A	08/22/22 20:03 / jmh
MCPA	ND	mg/kg-dry		4.4		SW8151A	08/22/22 20:03 / jmh
MCPP	ND	mg/kg-dry		4.4		SW8151A	08/22/22 20:03 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0022		SW8151A	08/22/22 20:03 / jmh
Picloram	ND	mg/kg-dry		0.011		SW8151A	08/22/22 19:27 / jmh
Surr: DCAA	94.0	%REC		45-117		SW8151A	08/22/22 20:03 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-004
Client Sample ID: SR-6-5

Report Date: 09/23/22
Collection Date: 08/11/22 11:35
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	4.6	wt%		0.2		SW3550C	08/16/22 11:14 / amn
CYANIDE							
Cyanide, Total	0.4	mg/kg-dry		0.3		SW9012B	08/19/22 10:02 / mas
METALS, TOTAL - EPA SW846							
Chromium	17	mg/kg-dry	D	5		SW6020	08/27/22 10:13 / srh
Cobalt	5	mg/kg-dry		1		SW6020	08/27/22 10:13 / srh
Nickel	13	mg/kg-dry	D	5		SW6020	08/27/22 10:13 / srh
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-004
Client Sample ID: SR-6-5

Report Date: 09/23/22
Collection Date: 08/11/22 11:35
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/17/22 15:41 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.21		SW8260B	08/17/22 15:41 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/17/22 15:41 / jdb
Surr: p-Bromofluorobenzene	105	%REC		78-160		SW8260B	08/17/22 15:41 / jdb
Surr: Dibromofluoromethane	126	%REC		70-132		SW8260B	08/17/22 15:41 / jdb
Surr: 1,2-Dichloroethane-d4	114	%REC		60-136		SW8260B	08/17/22 15:41 / jdb
Surr: Toluene-d8	117	%REC		75-138		SW8260B	08/17/22 15:41 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 09:13 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-004
Client Sample ID: SR-6-5

Report Date: 09/23/22
Collection Date: 08/11/22 11:35
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.35		SW8270C	08/21/22 09:13 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 09:13 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 09:13 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Benzidine	ND	mg/kg-dry		0.35		SW8270C	08/21/22 09:13 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.35		SW8270C	08/21/22 09:13 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-004
Client Sample ID: SR-6-5

Report Date: 09/23/22
Collection Date: 08/11/22 11:35
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 09:13 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:13 / jph
Diallate	ND	mg/kg-dry		0.33		SW8270C	08/19/22 12:17 / jph
Surr: 2,4,6-Tribromophenol	0	%REC	S	53-141		SW8270C	08/21/22 09:13 / jph
Surr: 2-Fluorobiphenyl	68.0	%REC		63-98		SW8270C	08/21/22 09:13 / jph
Surr: 2-Fluorophenol	17.0	%REC	S	53-101		SW8270C	08/21/22 09:13 / jph
Surr: Nitrobenzene-d5	71.0	%REC		53-101		SW8270C	08/21/22 09:13 / jph
Surr: Phenol-d5	56.0	%REC		55-100		SW8270C	08/21/22 09:13 / jph
Surr: Terphenyl-d14	98.0	%REC		71-118		SW8270C	08/21/22 09:13 / jph
- Surrogates outside of the normal QC limits due to non-target interferences.							
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0042		SW8151A	08/22/22 20:39 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0042		SW8151A	08/22/22 20:39 / jmh
2,4-D	2.5	mg/kg-dry		0.42		SW8151A	08/28/22 05:14 / jmh
2,4-DB	ND	mg/kg-dry		0.052		SW8151A	08/22/22 20:39 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.010		SW8151A	08/22/22 20:39 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.010		SW8151A	08/22/22 20:39 / jmh
Acifluorfen	ND	mg/kg-dry		0.010		SW8151A	08/22/22 20:39 / jmh
Bentazon	ND	mg/kg-dry		0.052		SW8151A	08/22/22 20:03 / jmh
Clopyralid	0.037	mg/kg-dry		0.0052		SW8151A	08/22/22 20:03 / jmh
Dacthal	ND	mg/kg-dry		0.021		SW8151A	08/22/22 20:39 / jmh
Dalapon	ND	mg/kg-dry		0.052		SW8151A	08/22/22 20:39 / jmh
Dicamba	0.084	mg/kg-dry		0.0052		SW8151A	08/22/22 20:39 / jmh
Dichlorprop	0.16	mg/kg-dry		0.021		SW8151A	08/22/22 20:39 / jmh
Dinoseb	ND	mg/kg-dry		0.021		SW8151A	08/22/22 20:39 / jmh
MCPA	ND	mg/kg-dry		4.2		SW8151A	08/22/22 20:39 / jmh
MCPP	ND	mg/kg-dry		4.2		SW8151A	08/22/22 20:39 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0021		SW8151A	08/22/22 20:39 / jmh
Picloram	ND	mg/kg-dry		0.010		SW8151A	08/22/22 20:03 / jmh
Surr: DCAA	65.0	%REC		45-117		SW8151A	08/22/22 20:39 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
S - Spike recovery outside of advisory limits
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-005
Client Sample ID: SR-6-7.5

Report Date: 09/23/22
Collection Date: 08/11/22 11:40
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	14	wt%		0.2		SW3550C	08/16/22 11:41 / amn
CYANIDE							
Cyanide, Total	4.9	mg/kg-dry		0.3		SW9012B	08/19/22 10:24 / mas
METALS, TOTAL - EPA SW846							
Chromium	19	mg/kg-dry	D	5		SW6020	08/27/22 10:19 / srh
Cobalt	7	mg/kg-dry		1		SW6020	08/27/22 10:19 / srh
Nickel	20	mg/kg-dry	D	5		SW6020	08/27/22 10:19 / srh
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-005
Client Sample ID: SR-6-7.5

Report Date: 09/23/22
Collection Date: 08/11/22 11:40
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/17/22 17:47 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.23		SW8260B	08/17/22 17:47 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/17/22 17:47 / jdb
Surr: p-Bromofluorobenzene	107	%REC		78-160		SW8260B	08/17/22 17:47 / jdb
Surr: Dibromofluoromethane	126	%REC		70-132		SW8260B	08/17/22 17:47 / jdb
Surr: 1,2-Dichloroethane-d4	114	%REC		60-136		SW8260B	08/17/22 17:47 / jdb
Surr: Toluene-d8	117	%REC		75-138		SW8260B	08/17/22 17:47 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 09:44 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-005
Client Sample ID: SR-6-7.5

Report Date: 09/23/22
Collection Date: 08/11/22 11:40
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.39		SW8270C	08/21/22 09:44 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 09:44 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 09:44 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Benzidine	ND	mg/kg-dry		0.39		SW8270C	08/21/22 09:44 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.39		SW8270C	08/21/22 09:44 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-005
Client Sample ID: SR-6-7.5

Report Date: 09/23/22
Collection Date: 08/11/22 11:40
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 09:44 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 09:44 / jph
Diallate	ND	mg/kg-dry		0.19		SW8270C	08/19/22 14:39 / jph
Surr: 2,4,6-Tribromophenol	78.0	%REC		53-141		SW8270C	08/21/22 09:44 / jph
Surr: 2-Fluorobiphenyl	60.0	%REC	S	63-98		SW8270C	08/21/22 09:44 / jph
Surr: 2-Fluorophenol	57.0	%REC		53-101		SW8270C	08/21/22 09:44 / jph
Surr: Nitrobenzene-d5	52.0	%REC	S	53-101		SW8270C	08/21/22 09:44 / jph
Surr: Phenol-d5	59.0	%REC		55-100		SW8270C	08/21/22 09:44 / jph
Surr: Terphenyl-d14	91.0	%REC		71-118		SW8270C	08/21/22 09:44 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0046		SW8151A	08/22/22 21:15 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0046		SW8151A	08/22/22 21:15 / jmh
2,4-D	ND	mg/kg-dry		0.023		SW8151A	08/22/22 21:15 / jmh
2,4-DB	ND	mg/kg-dry		0.058		SW8151A	08/22/22 21:15 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.012		SW8151A	08/22/22 21:15 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.012		SW8151A	08/22/22 21:15 / jmh
Acifluorfen	ND	mg/kg-dry		0.012		SW8151A	08/22/22 21:15 / jmh
Bentazon	ND	mg/kg-dry		0.058		SW8151A	08/22/22 20:39 / jmh
Clopyralid	ND	mg/kg-dry		0.0058		SW8151A	08/22/22 20:39 / jmh
Dacthal	ND	mg/kg-dry		0.023		SW8151A	08/22/22 21:15 / jmh
Dalapon	ND	mg/kg-dry		0.058		SW8151A	08/22/22 21:15 / jmh
Dicamba	ND	mg/kg-dry		0.0058		SW8151A	08/22/22 21:15 / jmh
Dichlorprop	ND	mg/kg-dry		0.023		SW8151A	08/22/22 21:15 / jmh
Dinoseb	ND	mg/kg-dry		0.023		SW8151A	08/22/22 21:15 / jmh
MCPA	ND	mg/kg-dry		4.6		SW8151A	08/22/22 21:15 / jmh
MCPP	ND	mg/kg-dry		4.6		SW8151A	08/22/22 21:15 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0023		SW8151A	08/22/22 21:15 / jmh
Picloram	ND	mg/kg-dry		0.012		SW8151A	08/22/22 20:39 / jmh
Surr: DCAA	81.0	%REC		45-117		SW8151A	08/22/22 21:15 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
S - Spike recovery outside of advisory limits
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-006
Client Sample ID: SR-6-10

Report Date: 09/23/22
Collection Date: 08/11/22 11:50
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	11	wt%		0.2		SW3550C	08/16/22 11:52 / amn
CYANIDE							
Cyanide, Total	2.0	mg/kg-dry		0.3		SW9012B	08/19/22 10:29 / mas
METALS, TOTAL - EPA SW846							
Chromium	18	mg/kg-dry	D	6		SW6020	08/27/22 10:25 / srh
Cobalt	6	mg/kg-dry		1		SW6020	08/27/22 10:25 / srh
Nickel	15	mg/kg-dry	D	6		SW6020	08/27/22 10:25 / srh
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-006
Client Sample ID: SR-6-10

Report Date: 09/23/22
Collection Date: 08/11/22 11:50
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/19/22 04:59 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.22		SW8260B	08/19/22 04:59 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/19/22 04:59 / jdb
Surr: p-Bromofluorobenzene	96.0	%REC		78-160		SW8260B	08/19/22 04:59 / jdb
Surr: Dibromofluoromethane	102	%REC		70-132		SW8260B	08/19/22 04:59 / jdb
Surr: 1,2-Dichloroethane-d4	92.0	%REC		60-136		SW8260B	08/19/22 04:59 / jdb
Surr: Toluene-d8	96.0	%REC		75-138		SW8260B	08/19/22 04:59 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 10:14 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-006
Client Sample ID: SR-6-10

Report Date: 09/23/22
Collection Date: 08/11/22 11:50
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.37		SW8270C	08/21/22 10:14 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 10:14 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 10:14 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Benzidine	ND	mg/kg-dry		0.37		SW8270C	08/21/22 10:14 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.37		SW8270C	08/21/22 10:14 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-006
Client Sample ID: SR-6-10

Report Date: 09/23/22
Collection Date: 08/11/22 11:50
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 10:14 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:14 / jph
Diallate	ND	mg/kg-dry		0.33		SW8270C	08/19/22 15:10 / jph
Surr: 2,4,6-Tribromophenol	84.0	%REC		53-141		SW8270C	08/21/22 10:14 / jph
Surr: 2-Fluorobiphenyl	68.0	%REC		63-98		SW8270C	08/21/22 10:14 / jph
Surr: 2-Fluorophenol	69.0	%REC		53-101		SW8270C	08/21/22 10:14 / jph
Surr: Nitrobenzene-d5	83.0	%REC		53-101		SW8270C	08/21/22 10:14 / jph
Surr: Phenol-d5	68.0	%REC		55-100		SW8270C	08/21/22 10:14 / jph
Surr: Terphenyl-d14	97.0	%REC		71-118		SW8270C	08/21/22 10:14 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0045		SW8151A	08/22/22 21:51 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0045		SW8151A	08/22/22 21:51 / jmh
2,4-D	ND	mg/kg-dry		0.022		SW8151A	08/22/22 21:51 / jmh
2,4-DB	ND	mg/kg-dry		0.056		SW8151A	08/22/22 21:51 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/22/22 21:51 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/22/22 21:51 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/22/22 21:51 / jmh
Bentazon	ND	mg/kg-dry		0.056		SW8151A	08/22/22 21:15 / jmh
Clopyralid	ND	mg/kg-dry		0.0056		SW8151A	08/22/22 21:15 / jmh
Dacthal	ND	mg/kg-dry		0.022		SW8151A	08/22/22 21:51 / jmh
Dalapon	ND	mg/kg-dry		0.056		SW8151A	08/22/22 21:51 / jmh
Dicamba	ND	mg/kg-dry		0.0056		SW8151A	08/22/22 21:51 / jmh
Dichlorprop	ND	mg/kg-dry		0.022		SW8151A	08/22/22 21:51 / jmh
Dinoseb	ND	mg/kg-dry		0.022		SW8151A	08/22/22 21:51 / jmh
MCPA	ND	mg/kg-dry		4.5		SW8151A	08/22/22 21:51 / jmh
MCPP	ND	mg/kg-dry		4.5		SW8151A	08/22/22 21:51 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0022		SW8151A	08/22/22 21:51 / jmh
Picloram	ND	mg/kg-dry		0.011		SW8151A	08/22/22 21:15 / jmh
Surr: DCAA	108	%REC		45-117		SW8151A	08/22/22 21:51 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-007
Client Sample ID: SR-7-5

Report Date: 09/23/22
Collection Date: 08/11/22 11:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	7.9	wt%		0.2		SW3550C	08/16/22 12:00 / amn
CYANIDE							
Cyanide, Total	ND	mg/kg-dry		0.3		SW9012B	08/19/22 10:32 / mas
METALS, TOTAL - EPA SW846							
Chromium	17	mg/kg-dry	D	5		SW6020	08/27/22 10:37 / srh
Cobalt	3	mg/kg-dry		1		SW6020	08/27/22 10:37 / srh
Nickel	9	mg/kg-dry	D	5		SW6020	08/27/22 10:37 / srh
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-007
Client Sample ID: SR-7-5

Report Date: 09/23/22
Collection Date: 08/11/22 11:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/17/22 18:37 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.22		SW8260B	08/17/22 18:37 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/17/22 18:37 / jdb
Surr: p-Bromofluorobenzene	96.0	%REC		78-160		SW8260B	08/17/22 18:37 / jdb
Surr: Dibromofluoromethane	119	%REC		70-132		SW8260B	08/17/22 18:37 / jdb
Surr: 1,2-Dichloroethane-d4	110	%REC		60-136		SW8260B	08/17/22 18:37 / jdb
Surr: Toluene-d8	108	%REC		75-138		SW8260B	08/17/22 18:37 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 10:44 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-007
Client Sample ID: SR-7-5

Report Date: 09/23/22
Collection Date: 08/11/22 11:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.36		SW8270C	08/21/22 10:44 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 10:44 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 10:44 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Benzidine	ND	mg/kg-dry		0.36		SW8270C	08/21/22 10:44 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.36		SW8270C	08/21/22 10:44 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-007
Client Sample ID: SR-7-5

Report Date: 09/23/22
Collection Date: 08/11/22 11:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 10:44 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 10:44 / jph
Diallate	ND	mg/kg-dry		0.33		SW8270C	08/19/22 15:40 / jph
Surr: 2,4,6-Tribromophenol	0	%REC	S	53-141		SW8270C	08/21/22 10:44 / jph
Surr: 2-Fluorobiphenyl	71.0	%REC		63-98		SW8270C	08/21/22 10:44 / jph
Surr: 2-Fluorophenol	4.00	%REC	JS	53-101		SW8270C	08/21/22 10:44 / jph
Surr: Nitrobenzene-d5	91.0	%REC		53-101		SW8270C	08/21/22 10:44 / jph
Surr: Phenol-d5	35.0	%REC	S	55-100		SW8270C	08/21/22 10:44 / jph
Surr: Terphenyl-d14	91.0	%REC		71-118		SW8270C	08/21/22 10:44 / jph
- Surrogates outside of the normal QC limits due to non-target interferences.							
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0043		SW8151A	08/22/22 18:16 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0043		SW8151A	08/22/22 18:16 / jmh
2,4-D	12	mg/kg-dry		4.3		SW8151A	08/28/22 04:02 / jmh
2,4-DB	ND	mg/kg-dry		0.054		SW8151A	08/22/22 18:16 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/22/22 18:16 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/22/22 18:16 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/22/22 18:16 / jmh
Bentazon	ND	mg/kg-dry		0.054		SW8151A	08/22/22 17:40 / jmh
Clopyralid	ND	mg/kg-dry		0.0054		SW8151A	08/22/22 17:40 / jmh
Dacthal	ND	mg/kg-dry		0.022		SW8151A	08/22/22 18:16 / jmh
Dalapon	ND	mg/kg-dry		0.054		SW8151A	08/22/22 18:16 / jmh
Dicamba	2.0	mg/kg-dry		0.11		SW8151A	08/28/22 04:38 / jmh
Dichlorprop	ND	mg/kg-dry		0.022		SW8151A	08/22/22 18:16 / jmh
Dinoseb	ND	mg/kg-dry		0.022		SW8151A	08/22/22 18:16 / jmh
MCPA	ND	mg/kg-dry		4.3		SW8151A	08/22/22 18:16 / jmh
MCPP	ND	mg/kg-dry		4.3		SW8151A	08/22/22 18:16 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0022		SW8151A	08/22/22 18:16 / jmh
Picloram	ND	mg/kg-dry		0.011		SW8151A	08/22/22 17:40 / jmh
Surr: DCAA	69.0	%REC		45-117		SW8151A	08/22/22 18:16 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
S - Spike recovery outside of advisory limits

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-008
Client Sample ID: SR-7-7.5

Report Date: 09/23/22
Collection Date: 08/11/22 11:20
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	6.9	wt%		0.2		SW3550C	08/16/22 12:07 / amn
CYANIDE							
Cyanide, Total	1.5	mg/kg-dry		0.3		SW9012B	08/19/22 10:34 / mas
METALS, TOTAL - EPA SW846							
Chromium	19	mg/kg-dry	D	5		SW6020	08/27/22 10:55 / srh
Cobalt	6	mg/kg-dry		1		SW6020	08/27/22 10:55 / srh
Nickel	16	mg/kg-dry	D	5		SW6020	08/27/22 10:55 / srh
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-008
Client Sample ID: SR-7-7.5

Report Date: 09/23/22
Collection Date: 08/11/22 11:20
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/17/22 19:02 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.21		SW8260B	08/17/22 19:02 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:02 / jdb
Surr: p-Bromofluorobenzene	105	%REC		78-160		SW8260B	08/17/22 19:02 / jdb
Surr: Dibromofluoromethane	107	%REC		70-132		SW8260B	08/17/22 19:02 / jdb
Surr: 1,2-Dichloroethane-d4	115	%REC		60-136		SW8260B	08/17/22 19:02 / jdb
Surr: Toluene-d8	114	%REC		75-138		SW8260B	08/17/22 19:02 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 11:15 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-008
Client Sample ID: SR-7-7.5

Report Date: 09/23/22
Collection Date: 08/11/22 11:20
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.36		SW8270C	08/21/22 11:15 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 11:15 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 11:15 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Benzidine	ND	mg/kg-dry		0.36		SW8270C	08/21/22 11:15 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.36		SW8270C	08/21/22 11:15 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-008
Client Sample ID: SR-7-7.5

Report Date: 09/23/22
Collection Date: 08/11/22 11:20
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 11:15 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:15 / jph
Diallate	ND	mg/kg-dry		0.33		SW8270C	08/19/22 16:11 / jph
Surr: 2,4,6-Tribromophenol	81.0	%REC		53-141		SW8270C	08/21/22 11:15 / jph
Surr: 2-Fluorobiphenyl	67.0	%REC		63-98		SW8270C	08/21/22 11:15 / jph
Surr: 2-Fluorophenol	67.0	%REC		53-101		SW8270C	08/21/22 11:15 / jph
Surr: Nitrobenzene-d5	77.0	%REC		53-101		SW8270C	08/21/22 11:15 / jph
Surr: Phenol-d5	69.0	%REC		55-100		SW8270C	08/21/22 11:15 / jph
Surr: Terphenyl-d14	94.0	%REC		71-118		SW8270C	08/21/22 11:15 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0043		SW8151A	08/22/22 18:51 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0043		SW8151A	08/22/22 18:51 / jmh
2,4-D	ND	mg/kg-dry		0.021		SW8151A	08/22/22 18:51 / jmh
2,4-DB	ND	mg/kg-dry		0.054		SW8151A	08/22/22 18:51 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/22/22 18:51 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/22/22 18:51 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/22/22 18:51 / jmh
Bentazon	ND	mg/kg-dry		0.054		SW8151A	08/22/22 18:16 / jmh
Clopyralid	ND	mg/kg-dry		0.0054		SW8151A	08/22/22 18:16 / jmh
Dacthal	ND	mg/kg-dry		0.021		SW8151A	08/22/22 18:51 / jmh
Dalapon	ND	mg/kg-dry		0.054		SW8151A	08/22/22 18:51 / jmh
Dicamba	0.0077	mg/kg-dry		0.0054		SW8151A	08/22/22 18:51 / jmh
Dichlorprop	ND	mg/kg-dry		0.021		SW8151A	08/22/22 18:51 / jmh
Dinoseb	ND	mg/kg-dry		0.021		SW8151A	08/22/22 18:51 / jmh
MCPA	ND	mg/kg-dry		4.3		SW8151A	08/22/22 18:51 / jmh
MCPP	ND	mg/kg-dry		4.3		SW8151A	08/22/22 18:51 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0021		SW8151A	08/22/22 18:51 / jmh
Picloram	ND	mg/kg-dry		0.011		SW8151A	08/22/22 18:16 / jmh
Surr: DCAA	97.0	%REC		45-117		SW8151A	08/22/22 18:51 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-009
Client Sample ID: SR-7-10

Report Date: 09/23/22
Collection Date: 08/11/22 11:25
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	10	wt%		0.2		SW3550C	08/16/22 12:14 / amn
CYANIDE							
Cyanide, Total	1.0	mg/kg-dry		0.3		SW9012B	08/19/22 10:36 / mas
METALS, TOTAL - EPA SW846							
Chromium	16	mg/kg-dry	D	5		SW6020	08/27/22 11:01 / srh
Cobalt	5	mg/kg-dry		1		SW6020	08/27/22 11:01 / srh
Nickel	14	mg/kg-dry	D	5		SW6020	08/27/22 11:01 / srh
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-009
Client Sample ID: SR-7-10

Report Date: 09/23/22
Collection Date: 08/11/22 11:25
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/19/22 05:24 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.22		SW8260B	08/19/22 05:24 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/19/22 05:24 / jdb
Surr: p-Bromofluorobenzene	100	%REC		78-160		SW8260B	08/19/22 05:24 / jdb
Surr: Dibromofluoromethane	112	%REC		70-132		SW8260B	08/19/22 05:24 / jdb
Surr: 1,2-Dichloroethane-d4	100	%REC		60-136		SW8260B	08/19/22 05:24 / jdb
Surr: Toluene-d8	105	%REC		75-138		SW8260B	08/19/22 05:24 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 11:45 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-009
Client Sample ID: SR-7-10

Report Date: 09/23/22
Collection Date: 08/11/22 11:25
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.37		SW8270C	08/21/22 11:45 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 11:45 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 11:45 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Benzidine	ND	mg/kg-dry		0.37		SW8270C	08/21/22 11:45 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.37		SW8270C	08/21/22 11:45 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-009
Client Sample ID: SR-7-10

Report Date: 09/23/22
Collection Date: 08/11/22 11:25
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 11:45 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 11:45 / jph
Diallate	ND	mg/kg-dry		0.33		SW8270C	08/19/22 16:41 / jph
Surr: 2,4,6-Tribromophenol	77.0	%REC		53-141		SW8270C	08/21/22 11:45 / jph
Surr: 2-Fluorobiphenyl	67.0	%REC		63-98		SW8270C	08/21/22 11:45 / jph
Surr: 2-Fluorophenol	69.0	%REC		53-101		SW8270C	08/21/22 11:45 / jph
Surr: Nitrobenzene-d5	74.0	%REC		53-101		SW8270C	08/21/22 11:45 / jph
Surr: Phenol-d5	70.0	%REC		55-100		SW8270C	08/21/22 11:45 / jph
Surr: Terphenyl-d14	93.0	%REC		71-118		SW8270C	08/21/22 11:45 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0045		SW8151A	08/22/22 22:26 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0045		SW8151A	08/22/22 22:26 / jmh
2,4-D	ND	mg/kg-dry		0.022		SW8151A	08/22/22 22:26 / jmh
2,4-DB	ND	mg/kg-dry		0.056		SW8151A	08/22/22 22:26 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/22/22 22:26 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/22/22 22:26 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/22/22 22:26 / jmh
Bentazon	ND	mg/kg-dry		0.056		SW8151A	08/22/22 21:51 / jmh
Clopyralid	ND	mg/kg-dry		0.0056		SW8151A	08/22/22 21:51 / jmh
Dacthal	ND	mg/kg-dry		0.022		SW8151A	08/22/22 22:26 / jmh
Dalapon	ND	mg/kg-dry		0.056		SW8151A	08/22/22 22:26 / jmh
Dicamba	ND	mg/kg-dry		0.0056		SW8151A	08/22/22 22:26 / jmh
Dichlorprop	ND	mg/kg-dry		0.022		SW8151A	08/22/22 22:26 / jmh
Dinoseb	ND	mg/kg-dry		0.022		SW8151A	08/22/22 22:26 / jmh
MCPA	ND	mg/kg-dry		4.5		SW8151A	08/22/22 22:26 / jmh
MCPP	ND	mg/kg-dry		4.5		SW8151A	08/22/22 22:26 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0022		SW8151A	08/22/22 22:26 / jmh
Picloram	ND	mg/kg-dry		0.011		SW8151A	08/22/22 21:51 / jmh
Surr: DCAA	82.0	%REC		45-117		SW8151A	08/22/22 22:26 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-010
Client Sample ID: SR-8-5

Report Date: 09/23/22
Collection Date: 08/11/22 12:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	12	wt%		0.2		SW3550C	08/16/22 12:23 / amn
CYANIDE							
Cyanide, Total	1.3	mg/kg-dry		0.3		SW9012B	08/19/22 10:38 / mas
METALS, TOTAL - EPA SW846							
Chromium	19	mg/kg-dry	D	6		SW6020	08/27/22 11:07 / srh
Cobalt	6	mg/kg-dry		1		SW6020	08/27/22 11:07 / srh
Nickel	17	mg/kg-dry	D	6		SW6020	08/27/22 11:07 / srh
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-010
Client Sample ID: SR-8-5

Report Date: 09/23/22
Collection Date: 08/11/22 12:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/17/22 19:53 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.23		SW8260B	08/17/22 19:53 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/17/22 19:53 / jdb
Surr: p-Bromofluorobenzene	97.0	%REC		78-160		SW8260B	08/17/22 19:53 / jdb
Surr: Dibromofluoromethane	118	%REC		70-132		SW8260B	08/17/22 19:53 / jdb
Surr: 1,2-Dichloroethane-d4	109	%REC		60-136		SW8260B	08/17/22 19:53 / jdb
Surr: Toluene-d8	104	%REC		75-138		SW8260B	08/17/22 19:53 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 12:16 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-010
Client Sample ID: SR-8-5

Report Date: 09/23/22
Collection Date: 08/11/22 12:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.38		SW8270C	08/21/22 12:16 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 12:16 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 12:16 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Benzidine	ND	mg/kg-dry		0.38		SW8270C	08/21/22 12:16 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.38		SW8270C	08/21/22 12:16 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-010
Client Sample ID: SR-8-5

Report Date: 09/23/22
Collection Date: 08/11/22 12:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 12:16 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:16 / jph
Diallate	ND	mg/kg-dry		0.33		SW8270C	08/19/22 17:12 / jph
Surr: 2,4,6-Tribromophenol	81.0	%REC		53-141		SW8270C	08/21/22 12:16 / jph
Surr: 2-Fluorobiphenyl	67.0	%REC		63-98		SW8270C	08/21/22 12:16 / jph
Surr: 2-Fluorophenol	62.0	%REC		53-101		SW8270C	08/21/22 12:16 / jph
Surr: Nitrobenzene-d5	69.0	%REC		53-101		SW8270C	08/21/22 12:16 / jph
Surr: Phenol-d5	66.0	%REC		55-100		SW8270C	08/21/22 12:16 / jph
Surr: Terphenyl-d14	94.0	%REC		71-118		SW8270C	08/21/22 12:16 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0045		SW8151A	08/23/22 00:49 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0045		SW8151A	08/23/22 00:49 / jmh
2,4-D	ND	mg/kg-dry		0.023		SW8151A	08/23/22 00:49 / jmh
2,4-DB	ND	mg/kg-dry		0.057		SW8151A	08/23/22 00:49 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/23/22 00:49 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/23/22 00:49 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/23/22 00:49 / jmh
Bentazon	ND	mg/kg-dry		0.057		SW8151A	08/23/22 00:13 / jmh
Clopyralid	ND	mg/kg-dry		0.0057		SW8151A	08/23/22 00:13 / jmh
Dacthal	ND	mg/kg-dry		0.023		SW8151A	08/23/22 00:49 / jmh
Dalapon	ND	mg/kg-dry		0.057		SW8151A	08/23/22 00:49 / jmh
Dicamba	ND	mg/kg-dry		0.0057		SW8151A	08/23/22 00:49 / jmh
Dichlorprop	ND	mg/kg-dry		0.023		SW8151A	08/23/22 00:49 / jmh
Dinoseb	ND	mg/kg-dry		0.023		SW8151A	08/23/22 00:49 / jmh
MCPA	ND	mg/kg-dry		4.5		SW8151A	08/23/22 00:49 / jmh
MCPP	ND	mg/kg-dry		4.5		SW8151A	08/23/22 00:49 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0023		SW8151A	08/23/22 00:49 / jmh
Picloram	ND	mg/kg-dry		0.011		SW8151A	08/23/22 00:13 / jmh
Surr: DCAA	103	%REC		45-117		SW8151A	08/23/22 00:49 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-011
Client Sample ID: SR-8-7.5

Report Date: 09/23/22
Collection Date: 08/11/22 12:20
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	13	wt%		0.2		SW3550C	08/16/22 12:33 / amn
CYANIDE							
Cyanide, Total	0.7	mg/kg-dry		0.3		SW9012B	08/19/22 10:39 / mas
METALS, TOTAL - EPA SW846							
Chromium	19	mg/kg-dry	D	6		SW6020	08/27/22 11:19 / srh
Cobalt	6	mg/kg-dry		1		SW6020	08/27/22 11:19 / srh
Nickel	16	mg/kg-dry	D	6		SW6020	08/27/22 11:19 / srh
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-011
Client Sample ID: SR-8-7.5

Report Date: 09/23/22
Collection Date: 08/11/22 12:20
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/17/22 20:18 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.23		SW8260B	08/17/22 20:18 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:18 / jdb
Surr: p-Bromofluorobenzene	97.0	%REC		78-160		SW8260B	08/17/22 20:18 / jdb
Surr: Dibromofluoromethane	114	%REC		70-132		SW8260B	08/17/22 20:18 / jdb
Surr: 1,2-Dichloroethane-d4	104	%REC		60-136		SW8260B	08/17/22 20:18 / jdb
Surr: Toluene-d8	104	%REC		75-138		SW8260B	08/17/22 20:18 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 12:46 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-011
Client Sample ID: SR-8-7.5

Report Date: 09/23/22
Collection Date: 08/11/22 12:20
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.38		SW8270C	08/21/22 12:46 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 12:46 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 12:46 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Benzidine	ND	mg/kg-dry		0.38		SW8270C	08/21/22 12:46 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.38		SW8270C	08/21/22 12:46 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-011
Client Sample ID: SR-8-7.5

Report Date: 09/23/22
Collection Date: 08/11/22 12:20
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 12:46 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 12:46 / jph
Diallate	ND	mg/kg-dry		0.33		SW8270C	08/19/22 17:42 / jph
Surr: 2,4,6-Tribromophenol	66.0	%REC		53-141		SW8270C	08/21/22 12:46 / jph
Surr: 2-Fluorobiphenyl	65.0	%REC		63-98		SW8270C	08/21/22 12:46 / jph
Surr: 2-Fluorophenol	63.0	%REC		53-101		SW8270C	08/21/22 12:46 / jph
Surr: Nitrobenzene-d5	69.0	%REC		53-101		SW8270C	08/21/22 12:46 / jph
Surr: Phenol-d5	65.0	%REC		55-100		SW8270C	08/21/22 12:46 / jph
Surr: Terphenyl-d14	92.0	%REC		71-118		SW8270C	08/21/22 12:46 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0046		SW8151A	08/23/22 01:25 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0046		SW8151A	08/23/22 01:25 / jmh
2,4-D	3.5	mg/kg-dry	E	0.023		SW8151A	08/23/22 01:25 / jmh
2,4-D	3.5	mg/kg-dry	H	1.2		SW8151A	09/15/22 10:54 / jmh
2,4-DB	ND	mg/kg-dry		0.058		SW8151A	08/23/22 01:25 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.012		SW8151A	08/23/22 01:25 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.012		SW8151A	08/23/22 01:25 / jmh
Acifluorfen	ND	mg/kg-dry		0.012		SW8151A	08/23/22 01:25 / jmh
Bentazon	ND	mg/kg-dry		0.058		SW8151A	08/23/22 00:49 / jmh
Clopyralid	0.012	mg/kg-dry		0.0058		SW8151A	08/23/22 00:49 / jmh
Dacthal	ND	mg/kg-dry		0.023		SW8151A	08/23/22 01:25 / jmh
Dalapon	ND	mg/kg-dry		0.058		SW8151A	08/23/22 01:25 / jmh
Dicamba	0.16	mg/kg-dry		0.0058		SW8151A	08/23/22 01:25 / jmh
Dichlorprop	ND	mg/kg-dry		0.023		SW8151A	08/23/22 01:25 / jmh
Dinoseb	ND	mg/kg-dry		0.023		SW8151A	08/23/22 01:25 / jmh
MCPA	ND	mg/kg-dry		4.6		SW8151A	08/23/22 01:25 / jmh
MCPP	ND	mg/kg-dry		4.6		SW8151A	08/23/22 01:25 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0023		SW8151A	08/23/22 01:25 / jmh
Picloram	ND	mg/kg-dry		0.012		SW8151A	08/23/22 00:49 / jmh
Surr: DCAA	84.0	%REC		45-117		SW8151A	08/23/22 01:25 / jmh

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
QCL - Quality Control Limit
ND - Not detected at the Reporting Limit (RL)
E - Estimated value - result exceeds the instrument upper quantitation limit
H - Analysis performed past the method holding time

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-012
Client Sample ID: SR-8-10

Report Date: 09/23/22
Collection Date: 08/11/22 12:25
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	18	wt%		0.2		SW3550C	08/16/22 12:45 / amn
CYANIDE							
Cyanide, Total	1.1	mg/kg-dry		0.3		SW9012B	08/19/22 10:42 / mas
METALS, TOTAL - EPA SW846							
Chromium	18	mg/kg-dry	D	6		SW6020	08/27/22 11:25 / srh
Cobalt	6	mg/kg-dry		1		SW6020	08/27/22 11:25 / srh
Nickel	15	mg/kg-dry	D	6		SW6020	08/27/22 11:25 / srh
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-012
Client Sample ID: SR-8-10

Report Date: 09/23/22
Collection Date: 08/11/22 12:25
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/17/22 20:43 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.24		SW8260B	08/17/22 20:43 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/17/22 20:43 / jdb
Surr: p-Bromofluorobenzene	103	%REC		78-160		SW8260B	08/17/22 20:43 / jdb
Surr: Dibromofluoromethane	127	%REC		70-132		SW8260B	08/17/22 20:43 / jdb
Surr: 1,2-Dichloroethane-d4	118	%REC		60-136		SW8260B	08/17/22 20:43 / jdb
Surr: Toluene-d8	117	%REC		75-138		SW8260B	08/17/22 20:43 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 13:16 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-012
Client Sample ID: SR-8-10

Report Date: 09/23/22
Collection Date: 08/11/22 12:25
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.40		SW8270C	08/21/22 13:16 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 13:16 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 13:16 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Benzidine	ND	mg/kg-dry		0.40		SW8270C	08/21/22 13:16 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.40		SW8270C	08/21/22 13:16 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-012
Client Sample ID: SR-8-10

Report Date: 09/23/22
Collection Date: 08/11/22 12:25
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/21/22 13:16 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/21/22 13:16 / jph
Diallate	ND	mg/kg-dry		0.20		SW8270C	08/19/22 18:12 / jph
Surr: 2,4,6-Tribromophenol	81.0	%REC		53-141		SW8270C	08/21/22 13:16 / jph
Surr: 2-Fluorobiphenyl	67.0	%REC		63-98		SW8270C	08/21/22 13:16 / jph
Surr: 2-Fluorophenol	57.0	%REC		53-101		SW8270C	08/21/22 13:16 / jph
Surr: Nitrobenzene-d5	65.0	%REC		53-101		SW8270C	08/21/22 13:16 / jph
Surr: Phenol-d5	65.0	%REC		55-100		SW8270C	08/21/22 13:16 / jph
Surr: Terphenyl-d14	95.0	%REC		71-118		SW8270C	08/21/22 13:16 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0049		SW8151A	08/23/22 02:01 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0049		SW8151A	08/23/22 02:01 / jmh
2,4-D	ND	mg/kg-dry		0.024		SW8151A	08/23/22 02:01 / jmh
2,4-DB	ND	mg/kg-dry		0.061		SW8151A	08/23/22 02:01 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.012		SW8151A	08/23/22 02:01 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.012		SW8151A	08/23/22 02:01 / jmh
Acifluorfen	ND	mg/kg-dry		0.012		SW8151A	08/23/22 02:01 / jmh
Bentazon	ND	mg/kg-dry		0.061		SW8151A	08/23/22 01:25 / jmh
Clopyralid	ND	mg/kg-dry		0.0061		SW8151A	08/23/22 01:25 / jmh
Dacthal	ND	mg/kg-dry		0.024		SW8151A	08/23/22 02:01 / jmh
Dalapon	ND	mg/kg-dry		0.061		SW8151A	08/23/22 02:01 / jmh
Dicamba	ND	mg/kg-dry		0.0061		SW8151A	08/23/22 02:01 / jmh
Dichlorprop	ND	mg/kg-dry		0.024		SW8151A	08/23/22 02:01 / jmh
Dinoseb	ND	mg/kg-dry		0.024		SW8151A	08/23/22 02:01 / jmh
MCPA	ND	mg/kg-dry		4.9		SW8151A	08/23/22 02:01 / jmh
MCPP	ND	mg/kg-dry		4.9		SW8151A	08/23/22 02:01 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0024		SW8151A	08/23/22 02:01 / jmh
Picloram	ND	mg/kg-dry		0.012		SW8151A	08/23/22 01:25 / jmh
Surr: DCAA	92.0	%REC		45-117		SW8151A	08/23/22 02:01 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-013
Client Sample ID: SR-9-5

Report Date: 09/23/22
Collection Date: 08/11/22 16:00
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	24	wt%		0.2		SW3550C	08/16/22 13:08 / amn
CYANIDE							
Cyanide, Total	0.4	mg/kg-dry		0.3		SW9012B	08/19/22 10:44 / mas
METALS, TOTAL - EPA SW846							
Chromium	12	mg/kg-dry	D	6		SW6020	08/27/22 11:32 / srh
Cobalt	3	mg/kg-dry		1		SW6020	08/27/22 11:32 / srh
Nickel	8	mg/kg-dry	D	6		SW6020	08/27/22 11:32 / srh
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-013
Client Sample ID: SR-9-5

Report Date: 09/23/22
Collection Date: 08/11/22 16:00
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/17/22 21:08 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.26		SW8260B	08/17/22 21:08 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:08 / jdb
Surr: p-Bromofluorobenzene	79.0	%REC		78-160		SW8260B	08/17/22 21:08 / jdb
Surr: Dibromofluoromethane	36.0	%REC	S	70-132		SW8260B	08/17/22 21:08 / jdb
Surr: 1,2-Dichloroethane-d4	98.0	%REC		60-136		SW8260B	08/17/22 21:08 / jdb
Surr: Toluene-d8	93.0	%REC		75-138		SW8260B	08/17/22 21:08 / jdb
- Surrogate recoveries are outside of normal limits and appear to be due to sample matrix interference. Re-analysis of the sample produced similar results.							
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		1.3		SW8270C	08/21/22 13:47 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
2-Chlorophenol	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
S - Spike recovery outside of advisory limits
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-013
Client Sample ID: SR-9-5

Report Date: 09/23/22
Collection Date: 08/11/22 16:00
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
2-Nitrophenol	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
3,3´-Dichlorobenzidine	ND	mg/kg-dry		1.3		SW8270C	08/21/22 13:47 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		1.3		SW8270C	08/21/22 13:47 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
4-Chloroaniline	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
4-Chlorophenol	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
4-Nitrophenol	ND	mg/kg-dry		1.3		SW8270C	08/21/22 13:47 / jph
Acenaphthene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Acenaphthylene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Anthracene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Azobenzene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Benzidine	ND	mg/kg-dry		1.3		SW8270C	08/21/22 13:47 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Chrysene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Diethyl phthalate	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Fluoranthene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Fluorene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		1.3		SW8270C	08/21/22 13:47 / jph
Hexachloroethane	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Isophorone	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
m+p-Cresols	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Naphthalene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Nitrobenzene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-013
Client Sample ID: SR-9-5

Report Date: 09/23/22
Collection Date: 08/11/22 16:00
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
o-Cresol	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Pentachlorophenol	ND	mg/kg-dry		1.3		SW8270C	08/21/22 13:47 / jph
Phenanthrene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Phenol	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Pyrene	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Pyridine	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Triallate	ND	mg/kg-dry		0.64		SW8270C	08/21/22 13:47 / jph
Diallate	ND	mg/kg-dry		0.64		SW8270C	08/19/22 18:43 / jph
Surr: 2,4,6-Tribromophenol	79.0	%REC		53-141		SW8270C	08/21/22 13:47 / jph
Surr: 2-Fluorobiphenyl	59.0	%REC	S	63-98		SW8270C	08/21/22 13:47 / jph
Surr: 2-Fluorophenol	52.0	%REC	S	53-101		SW8270C	08/21/22 13:47 / jph
Surr: Nitrobenzene-d5	55.0	%REC		53-101		SW8270C	08/21/22 13:47 / jph
Surr: Phenol-d5	56.0	%REC		55-100		SW8270C	08/21/22 13:47 / jph
Surr: Terphenyl-d14	100	%REC		71-118		SW8270C	08/21/22 13:47 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0052		SW8151A	08/22/22 17:40 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0052		SW8151A	08/22/22 17:40 / jmh
2,4-D	0.33	mg/kg-dry	E	0.026		SW8151A	08/22/22 17:40 / jmh
2,4-D	0.38	mg/kg-dry	H	0.079		SW8151A	09/15/22 06:44 / jmh
2,4-DB	ND	mg/kg-dry		0.065		SW8151A	08/22/22 17:40 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.013		SW8151A	08/22/22 17:40 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.013		SW8151A	08/22/22 17:40 / jmh
Acifluorfen	ND	mg/kg-dry		0.013		SW8151A	08/22/22 17:40 / jmh
Bentazon	ND	mg/kg-dry		0.065		SW8151A	08/22/22 17:04 / jmh
Clopyralid	ND	mg/kg-dry		0.0065		SW8151A	08/22/22 17:04 / jmh
Dacthal	ND	mg/kg-dry		0.026		SW8151A	08/22/22 17:40 / jmh
Dalapon	ND	mg/kg-dry		0.065		SW8151A	08/22/22 17:40 / jmh
Dicamba	0.022	mg/kg-dry		0.0065		SW8151A	08/22/22 17:40 / jmh
Dichlorprop	ND	mg/kg-dry		0.026		SW8151A	08/22/22 17:40 / jmh
Dinoseb	ND	mg/kg-dry		0.026		SW8151A	08/22/22 17:40 / jmh
MCPA	ND	mg/kg-dry		5.2		SW8151A	08/22/22 17:40 / jmh
MCPP	ND	mg/kg-dry		5.2		SW8151A	08/22/22 17:40 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0026		SW8151A	08/22/22 17:40 / jmh
Picloram	ND	mg/kg-dry		0.013		SW8151A	08/22/22 17:04 / jmh
Surr: DCAA	94.0	%REC		45-117		SW8151A	08/22/22 17:40 / jmh

Report Definitions:

RL - Analyte Reporting Limit
QCL - Quality Control Limit
E - Estimated value - result exceeds the instrument upper quantitation limit
S - Spike recovery outside of advisory limits
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-014
Client Sample ID: SR-10-5

Report Date: 09/23/22
Collection Date: 08/11/22 15:05
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	5.5	wt%		0.2		SW3550C	08/16/22 13:24 / amn
CYANIDE							
Cyanide, Total	0.6	mg/kg-dry		0.3		SW9012B	08/19/22 10:46 / mas
METALS, TOTAL - EPA SW846							
Chromium	17	mg/kg-dry	D	5		SW6020	08/27/22 11:38 / srh
Cobalt	6	mg/kg-dry		1		SW6020	08/27/22 11:38 / srh
Nickel	12	mg/kg-dry	D	5		SW6020	08/27/22 11:38 / srh
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-014
Client Sample ID: SR-10-5

Report Date: 09/23/22
Collection Date: 08/11/22 15:05
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/17/22 21:33 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.21		SW8260B	08/17/22 21:33 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/17/22 21:33 / jdb
Surr: p-Bromofluorobenzene	80.0	%REC		78-160		SW8260B	08/17/22 21:33 / jdb
Surr: Dibromofluoromethane	37.0	%REC	S	70-132		SW8260B	08/17/22 21:33 / jdb
Surr: 1,2-Dichloroethane-d4	89.0	%REC		60-136		SW8260B	08/17/22 21:33 / jdb
Surr: Toluene-d8	86.0	%REC		75-138		SW8260B	08/17/22 21:33 / jdb
- Surrogate recoveries are outside of normal limits and appear to be due to sample matrix interference. Re-analysis of the sample produced similar results.							
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 02:23 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
S - Spike recovery outside of advisory limits
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-014
Client Sample ID: SR-10-5

Report Date: 09/23/22
Collection Date: 08/11/22 15:05
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.35		SW8270C	08/23/22 02:23 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 02:23 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 02:23 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Benzidine	ND	mg/kg-dry		0.35		SW8270C	08/23/22 02:23 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.35		SW8270C	08/23/22 02:23 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-014
Client Sample ID: SR-10-5

Report Date: 09/23/22
Collection Date: 08/11/22 15:05
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 02:23 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:23 / jph
Diallate	ND	mg/kg-dry		0.33		SW8270C	08/19/22 19:14 / jph
Surr: 2,4,6-Tribromophenol	8.00	%REC	S	53-141		SW8270C	08/23/22 02:23 / jph
Surr: 2-Fluorobiphenyl	66.0	%REC		63-98		SW8270C	08/23/22 02:23 / jph
Surr: 2-Fluorophenol	49.0	%REC	S	53-101		SW8270C	08/23/22 02:23 / jph
Surr: Nitrobenzene-d5	68.0	%REC		53-101		SW8270C	08/23/22 02:23 / jph
Surr: Phenol-d5	62.0	%REC		55-100		SW8270C	08/23/22 02:23 / jph
Surr: Terphenyl-d14	95.0	%REC		71-118		SW8270C	08/23/22 02:23 / jph
- Surrogates outside of the normal QC limits due to non-target interferences.							
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0042		SW8151A	08/23/22 02:36 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0042		SW8151A	08/23/22 02:36 / jmh
2,4-D	0.75	mg/kg-dry	E	0.021		SW8151A	08/23/22 02:36 / jmh
2,4-D	0.77	mg/kg-dry	H	0.21		SW8151A	09/15/22 07:55 / jmh
2,4-DB	ND	mg/kg-dry		0.053		SW8151A	08/23/22 02:36 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/23/22 02:36 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/23/22 02:36 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/23/22 02:36 / jmh
Bentazon	ND	mg/kg-dry		0.053		SW8151A	08/23/22 02:01 / jmh
Clopyralid	0.016	mg/kg-dry		0.0053		SW8151A	08/23/22 02:01 / jmh
Dacthal	ND	mg/kg-dry		0.021		SW8151A	08/23/22 02:36 / jmh
Dalapon	ND	mg/kg-dry		0.053		SW8151A	08/23/22 02:36 / jmh
Dicamba	0.026	mg/kg-dry		0.0053		SW8151A	08/23/22 02:36 / jmh
Dichlorprop	0.031	mg/kg-dry		0.021		SW8151A	08/23/22 02:36 / jmh
Dinoseb	ND	mg/kg-dry		0.021		SW8151A	08/23/22 02:36 / jmh
MCPA	ND	mg/kg-dry		4.2		SW8151A	08/23/22 02:36 / jmh
MCPP	ND	mg/kg-dry		4.2		SW8151A	08/23/22 02:36 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0021		SW8151A	08/23/22 02:36 / jmh
Picloram	ND	mg/kg-dry		0.011		SW8151A	08/23/22 02:01 / jmh
Surr: DCAA	72.0	%REC		45-117		SW8151A	08/23/22 02:36 / jmh

Report Definitions:

RL - Analyte Reporting Limit
QCL - Quality Control Limit
E - Estimated value - result exceeds the instrument upper quantitation limit
S - Spike recovery outside of advisory limits
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-015
Client Sample ID: SR-10-10

Report Date: 09/23/22
Collection Date: 08/11/22 15:25
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	23	wt%		0.2		SW3550C	08/16/22 13:33 / amn
CYANIDE							
Cyanide, Total	5.0	mg/kg-dry		0.3		SW9012B	08/19/22 10:58 / mas
METALS, TOTAL - EPA SW846							
Chromium	19	mg/kg-dry	D	6		SW6020	08/27/22 11:44 / srh
Cobalt	7	mg/kg-dry		1		SW6020	08/27/22 11:44 / srh
Nickel	15	mg/kg-dry	D	6		SW6020	08/27/22 11:44 / srh
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-015
Client Sample ID: SR-10-10

Report Date: 09/23/22
Collection Date: 08/11/22 15:25
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/18/22 02:35 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.26		SW8260B	08/18/22 02:35 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/18/22 02:35 / jdb
Surr: p-Bromofluorobenzene	104	%REC		78-160		SW8260B	08/18/22 02:35 / jdb
Surr: Dibromofluoromethane	120	%REC		70-132		SW8260B	08/18/22 02:35 / jdb
Surr: 1,2-Dichloroethane-d4	111	%REC		60-136		SW8260B	08/18/22 02:35 / jdb
Surr: Toluene-d8	110	%REC		75-138		SW8260B	08/18/22 02:35 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 02:54 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-015
Client Sample ID: SR-10-10

Report Date: 09/23/22
Collection Date: 08/11/22 15:25
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.44		SW8270C	08/23/22 02:54 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 02:54 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 02:54 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Benzidine	ND	mg/kg-dry		0.44		SW8270C	08/23/22 02:54 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.44		SW8270C	08/23/22 02:54 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-015
Client Sample ID: SR-10-10

Report Date: 09/23/22
Collection Date: 08/11/22 15:25
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 02:54 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 02:54 / jph
Diallate	ND	mg/kg-dry		0.33		SW8270C	08/19/22 19:45 / jph
Surr: 2,4,6-Tribromophenol	74.0	%REC		53-141		SW8270C	08/23/22 02:54 / jph
Surr: 2-Fluorobiphenyl	66.0	%REC		63-98		SW8270C	08/23/22 02:54 / jph
Surr: 2-Fluorophenol	67.0	%REC		53-101		SW8270C	08/23/22 02:54 / jph
Surr: Nitrobenzene-d5	58.0	%REC		53-101		SW8270C	08/23/22 02:54 / jph
Surr: Phenol-d5	62.0	%REC		55-100		SW8270C	08/23/22 02:54 / jph
Surr: Terphenyl-d14	93.0	%REC		71-118		SW8270C	08/23/22 02:54 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0052		SW8151A	08/23/22 03:12 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0052		SW8151A	08/23/22 03:12 / jmh
2,4-D	ND	mg/kg-dry		0.026		SW8151A	08/23/22 03:12 / jmh
2,4-DB	ND	mg/kg-dry		0.065		SW8151A	08/23/22 03:12 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.013		SW8151A	08/23/22 03:12 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.013		SW8151A	08/23/22 03:12 / jmh
Acifluorfen	ND	mg/kg-dry		0.013		SW8151A	08/23/22 03:12 / jmh
Bentazon	ND	mg/kg-dry		0.065		SW8151A	08/23/22 02:36 / jmh
Clopyralid	ND	mg/kg-dry		0.0065		SW8151A	08/23/22 02:36 / jmh
Dacthal	ND	mg/kg-dry		0.026		SW8151A	08/23/22 03:12 / jmh
Dalapon	ND	mg/kg-dry		0.065		SW8151A	08/23/22 03:12 / jmh
Dicamba	0.010	mg/kg-dry		0.0065		SW8151A	08/23/22 03:12 / jmh
Dichlorprop	ND	mg/kg-dry		0.026		SW8151A	08/23/22 03:12 / jmh
Dinoseb	ND	mg/kg-dry		0.026		SW8151A	08/23/22 03:12 / jmh
MCPA	ND	mg/kg-dry		5.2		SW8151A	08/23/22 03:12 / jmh
MCPP	ND	mg/kg-dry		5.2		SW8151A	08/23/22 03:12 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0026		SW8151A	08/23/22 03:12 / jmh
Picloram	ND	mg/kg-dry		0.013		SW8151A	08/23/22 02:36 / jmh
Surr: DCAA	88.0	%REC		45-117		SW8151A	08/23/22 03:12 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-016
Client Sample ID: SR-15-5

Report Date: 09/23/22
Collection Date: 08/11/22 14:10
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	13	wt%		0.2		SW3550C	08/16/22 13:42 / amn
CYANIDE							
Cyanide, Total	0.4	mg/kg-dry		0.3		SW9012B	08/19/22 11:00 / mas
METALS, TOTAL - EPA SW846							
Chromium	15	mg/kg-dry	D	5		SW6020	08/27/22 11:56 / srh
Cobalt	6	mg/kg-dry		1		SW6020	08/27/22 11:56 / srh
Nickel	14	mg/kg-dry	D	5		SW6020	08/27/22 11:56 / srh
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-016
Client Sample ID: SR-15-5

Report Date: 09/23/22
Collection Date: 08/11/22 14:10
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/18/22 03:00 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.23		SW8260B	08/18/22 03:00 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:00 / jdb
Surr: p-Bromofluorobenzene	99.0	%REC		78-160		SW8260B	08/18/22 03:00 / jdb
Surr: Dibromofluoromethane	115	%REC		70-132		SW8260B	08/18/22 03:00 / jdb
Surr: 1,2-Dichloroethane-d4	106	%REC		60-136		SW8260B	08/18/22 03:00 / jdb
Surr: Toluene-d8	105	%REC		75-138		SW8260B	08/18/22 03:00 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 06:45 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-016
Client Sample ID: SR-15-5

Report Date: 09/23/22
Collection Date: 08/11/22 14:10
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.38		SW8270C	08/23/22 06:45 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 06:45 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 06:45 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Benzidine	ND	mg/kg-dry		0.38		SW8270C	08/23/22 06:45 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.38		SW8270C	08/23/22 06:45 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-016
Client Sample ID: SR-15-5

Report Date: 09/23/22
Collection Date: 08/11/22 14:10
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 06:45 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 06:45 / jph
Diallate	ND	mg/kg-dry		0.33		SW8270C	08/19/22 20:16 / jph
Surr: 2,4,6-Tribromophenol	79.0	%REC		53-141		SW8270C	08/23/22 06:45 / jph
Surr: 2-Fluorobiphenyl	66.0	%REC		63-98		SW8270C	08/23/22 06:45 / jph
Surr: 2-Fluorophenol	67.0	%REC		53-101		SW8270C	08/23/22 06:45 / jph
Surr: Nitrobenzene-d5	76.0	%REC		53-101		SW8270C	08/23/22 06:45 / jph
Surr: Phenol-d5	63.0	%REC		55-100		SW8270C	08/23/22 06:45 / jph
Surr: Terphenyl-d14	95.0	%REC		71-118		SW8270C	08/23/22 06:45 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0046		SW8151A	08/23/22 03:48 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0046		SW8151A	08/23/22 03:48 / jmh
2,4-D	0.84	mg/kg-dry	E	0.023		SW8151A	08/23/22 03:48 / jmh
2,4-D	0.92	mg/kg-dry	H	0.23		SW8151A	09/15/22 08:30 / jmh
2,4-DB	ND	mg/kg-dry		0.057		SW8151A	08/23/22 03:48 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/23/22 03:48 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/23/22 03:48 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/23/22 03:48 / jmh
Bentazon	ND	mg/kg-dry		0.057		SW8151A	08/23/22 03:12 / jmh
Clopyralid	0.12	mg/kg-dry		0.0057		SW8151A	08/23/22 03:12 / jmh
Dacthal	ND	mg/kg-dry		0.023		SW8151A	08/23/22 03:48 / jmh
Dalapon	ND	mg/kg-dry		0.057		SW8151A	08/23/22 03:48 / jmh
Dicamba	0.045	mg/kg-dry		0.0057		SW8151A	08/23/22 03:48 / jmh
Dichlorprop	ND	mg/kg-dry		0.023		SW8151A	08/23/22 03:48 / jmh
Dinoseb	ND	mg/kg-dry		0.023		SW8151A	08/23/22 03:48 / jmh
MCPA	ND	mg/kg-dry		4.6		SW8151A	08/23/22 03:48 / jmh
MCPP	ND	mg/kg-dry		4.6		SW8151A	08/23/22 03:48 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0023		SW8151A	08/23/22 03:48 / jmh
Picloram	0.042	mg/kg-dry		0.011		SW8151A	08/23/22 03:12 / jmh
Surr: DCAA	96.0	%REC		45-117		SW8151A	08/23/22 03:48 / jmh

Report Definitions:

RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
QCL - Quality Control Limit
ND - Not detected at the Reporting Limit (RL)
E - Estimated value - result exceeds the instrument upper quantitation limit
H - Analysis performed past the method holding time

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-017
Client Sample ID: SR-15-10

Report Date: 09/23/22
Collection Date: 08/11/22 14:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	20	wt%		0.2		SW3550C	08/16/22 13:50 / amn
CYANIDE							
Cyanide, Total	ND	mg/kg-dry		0.3		SW9012B	08/19/22 11:12 / mas
METALS, TOTAL - EPA SW846							
Chromium	19	mg/kg-dry	D	6		SW6020	08/27/22 12:02 / srh
Cobalt	7	mg/kg-dry		1		SW6020	08/27/22 12:02 / srh
Nickel	21	mg/kg-dry	D	6		SW6020	08/27/22 12:02 / srh
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-017
Client Sample ID: SR-15-10

Report Date: 09/23/22
Collection Date: 08/11/22 14:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/18/22 03:25 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.25		SW8260B	08/18/22 03:25 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/18/22 03:25 / jdb
Surr: p-Bromofluorobenzene	85.0	%REC		78-160		SW8260B	08/18/22 03:25 / jdb
Surr: Dibromofluoromethane	94.0	%REC		70-132		SW8260B	08/18/22 03:25 / jdb
Surr: 1,2-Dichloroethane-d4	95.0	%REC		60-136		SW8260B	08/18/22 03:25 / jdb
Surr: Toluene-d8	91.0	%REC		75-138		SW8260B	08/18/22 03:25 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 07:16 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-017
Client Sample ID: SR-15-10

Report Date: 09/23/22
Collection Date: 08/11/22 14:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.42		SW8270C	08/23/22 07:16 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 07:16 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 07:16 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Benzidine	ND	mg/kg-dry		0.42		SW8270C	08/23/22 07:16 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.42		SW8270C	08/23/22 07:16 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-017
Client Sample ID: SR-15-10

Report Date: 09/23/22
Collection Date: 08/11/22 14:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 07:16 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:16 / jph
Diallate	ND	mg/kg-dry		0.33		SW8270C	08/19/22 20:46 / jph
Surr: 2,4,6-Tribromophenol	76.0	%REC		53-141		SW8270C	08/23/22 07:16 / jph
Surr: 2-Fluorobiphenyl	64.0	%REC		63-98		SW8270C	08/23/22 07:16 / jph
Surr: 2-Fluorophenol	67.0	%REC		53-101		SW8270C	08/23/22 07:16 / jph
Surr: Nitrobenzene-d5	67.0	%REC		53-101		SW8270C	08/23/22 07:16 / jph
Surr: Phenol-d5	60.0	%REC		55-100		SW8270C	08/23/22 07:16 / jph
Surr: Terphenyl-d14	92.0	%REC		71-118		SW8270C	08/23/22 07:16 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0050		SW8151A	08/23/22 04:23 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0050		SW8151A	08/23/22 04:23 / jmh
2,4-D	0.12	mg/kg-dry		0.025		SW8151A	08/23/22 04:23 / jmh
2,4-DB	ND	mg/kg-dry		0.063		SW8151A	08/23/22 04:23 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.013		SW8151A	08/23/22 04:23 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.013		SW8151A	08/23/22 04:23 / jmh
Acifluorfen	ND	mg/kg-dry		0.013		SW8151A	08/23/22 04:23 / jmh
Bentazon	ND	mg/kg-dry		0.063		SW8151A	08/23/22 03:48 / jmh
Clopyralid	ND	mg/kg-dry		0.0063		SW8151A	08/23/22 03:48 / jmh
Dacthal	ND	mg/kg-dry		0.025		SW8151A	08/23/22 04:23 / jmh
Dalapon	ND	mg/kg-dry		0.063		SW8151A	08/23/22 04:23 / jmh
Dicamba	0.012	mg/kg-dry		0.0063		SW8151A	08/23/22 04:23 / jmh
Dichlorprop	ND	mg/kg-dry		0.025		SW8151A	08/23/22 04:23 / jmh
Dinoseb	ND	mg/kg-dry		0.025		SW8151A	08/23/22 04:23 / jmh
MCPA	ND	mg/kg-dry		5.0		SW8151A	08/23/22 04:23 / jmh
MCPP	ND	mg/kg-dry		5.0		SW8151A	08/23/22 04:23 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0025		SW8151A	08/23/22 04:23 / jmh
Picloram	ND	mg/kg-dry		0.013		SW8151A	08/23/22 03:48 / jmh
Surr: DCAA	81.0	%REC		45-117		SW8151A	08/23/22 04:23 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-018
Client Sample ID: SR-16-5

Report Date: 09/23/22
Collection Date: 08/11/22 14:00
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	12	wt%		0.2		SW3550C	08/16/22 13:57 / amn
CYANIDE							
Cyanide, Total	ND	mg/kg-dry		0.3		SW9012B	08/19/22 11:17 / mas
METALS, TOTAL - EPA SW846							
Chromium	16	mg/kg-dry	D	5		SW6020	08/27/22 12:20 / srh
Cobalt	6	mg/kg-dry		1		SW6020	08/27/22 12:20 / srh
Nickel	15	mg/kg-dry	D	5		SW6020	08/27/22 12:20 / srh
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-018
Client Sample ID: SR-16-5

Report Date: 09/23/22
Collection Date: 08/11/22 14:00
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/19/22 06:39 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.23		SW8260B	08/19/22 06:39 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/19/22 06:39 / jdb
Surr: p-Bromofluorobenzene	95.0	%REC		78-160		SW8260B	08/19/22 06:39 / jdb
Surr: Dibromofluoromethane	104	%REC		70-132		SW8260B	08/19/22 06:39 / jdb
Surr: 1,2-Dichloroethane-d4	94.0	%REC		60-136		SW8260B	08/19/22 06:39 / jdb
Surr: Toluene-d8	98.0	%REC		75-138		SW8260B	08/19/22 06:39 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 07:46 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-018
Client Sample ID: SR-16-5

Report Date: 09/23/22
Collection Date: 08/11/22 14:00
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.38		SW8270C	08/23/22 07:46 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 07:46 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 07:46 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Benzidine	ND	mg/kg-dry		0.38		SW8270C	08/23/22 07:46 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.38		SW8270C	08/23/22 07:46 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-018
Client Sample ID: SR-16-5

Report Date: 09/23/22
Collection Date: 08/11/22 14:00
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 07:46 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 07:46 / jph
Diallate	ND	mg/kg-dry		0.19		SW8270C	08/23/22 07:46 / jph
Surr: 2,4,6-Tribromophenol	77.0	%REC		53-141		SW8270C	08/23/22 07:46 / jph
Surr: 2-Fluorobiphenyl	69.0	%REC		63-98		SW8270C	08/23/22 07:46 / jph
Surr: 2-Fluorophenol	77.0	%REC		53-101		SW8270C	08/23/22 07:46 / jph
Surr: Nitrobenzene-d5	75.0	%REC		53-101		SW8270C	08/23/22 07:46 / jph
Surr: Phenol-d5	69.0	%REC		55-100		SW8270C	08/23/22 07:46 / jph
Surr: Terphenyl-d14	92.0	%REC		71-118		SW8270C	08/23/22 07:46 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0046		SW8151A	08/23/22 04:59 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0046		SW8151A	08/23/22 04:59 / jmh
2,4-D	0.49	mg/kg-dry	E	0.023		SW8151A	08/23/22 04:59 / jmh
2,4-D	0.54	mg/kg-dry	H	0.23		SW8151A	09/15/22 09:06 / jmh
2,4-DB	ND	mg/kg-dry		0.057		SW8151A	08/23/22 04:59 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/23/22 04:59 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/23/22 04:59 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/23/22 04:59 / jmh
Bentazon	ND	mg/kg-dry		0.057		SW8151A	08/23/22 04:23 / jmh
Clopyralid	0.020	mg/kg-dry		0.0057		SW8151A	08/23/22 04:23 / jmh
Dacthal	ND	mg/kg-dry		0.023		SW8151A	08/23/22 04:59 / jmh
Dalapon	ND	mg/kg-dry		0.057		SW8151A	08/23/22 04:59 / jmh
Dicamba	0.0067	mg/kg-dry		0.0057		SW8151A	08/23/22 04:59 / jmh
Dichlorprop	ND	mg/kg-dry		0.023		SW8151A	08/23/22 04:59 / jmh
Dinoseb	ND	mg/kg-dry		0.023		SW8151A	08/23/22 04:59 / jmh
MCPA	ND	mg/kg-dry		4.6		SW8151A	08/23/22 04:59 / jmh
MCPP	ND	mg/kg-dry		4.6		SW8151A	08/23/22 04:59 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0023		SW8151A	08/23/22 04:59 / jmh
Picloram	0.058	mg/kg-dry		0.011		SW8151A	08/23/22 04:23 / jmh
Surr: DCAA	95.0	%REC		45-117		SW8151A	08/23/22 04:59 / jmh

Report Definitions:

RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
QCL - Quality Control Limit
ND - Not detected at the Reporting Limit (RL)
E - Estimated value - result exceeds the instrument upper quantitation limit
H - Analysis performed past the method holding time

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-019
Client Sample ID: SR-16-10

Report Date: 09/23/22
Collection Date: 08/11/22 14:05
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	17	wt%		0.2		SW3550C	08/16/22 14:03 / amn
CYANIDE							
Cyanide, Total	ND	mg/kg-dry		0.3		SW9012B	08/19/22 11:19 / mas
METALS, TOTAL - EPA SW846							
Chromium	12	mg/kg-dry	D	6		SW6020	08/27/22 12:26 / srh
Cobalt	5	mg/kg-dry		1		SW6020	08/27/22 12:26 / srh
Nickel	11	mg/kg-dry	D	6		SW6020	08/27/22 12:26 / srh
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-019
Client Sample ID: SR-16-10

Report Date: 09/23/22
Collection Date: 08/11/22 14:05
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/19/22 07:04 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.24		SW8260B	08/19/22 07:04 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/19/22 07:04 / jdb
Surr: p-Bromofluorobenzene	106	%REC		78-160		SW8260B	08/19/22 07:04 / jdb
Surr: Dibromofluoromethane	131	%REC		70-132		SW8260B	08/19/22 07:04 / jdb
Surr: 1,2-Dichloroethane-d4	119	%REC		60-136		SW8260B	08/19/22 07:04 / jdb
Surr: Toluene-d8	118	%REC		75-138		SW8260B	08/19/22 07:04 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 08:16 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-019
Client Sample ID: SR-16-10

Report Date: 09/23/22
Collection Date: 08/11/22 14:05
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.41		SW8270C	08/23/22 08:16 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 08:16 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 08:16 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Benzidine	ND	mg/kg-dry		0.41		SW8270C	08/23/22 08:16 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.41		SW8270C	08/23/22 08:16 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-019
Client Sample ID: SR-16-10

Report Date: 09/23/22
Collection Date: 08/11/22 14:05
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 08:16 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:16 / jph
Diallate	ND	mg/kg-dry		0.20		SW8270C	08/23/22 08:16 / jph
Surr: 2,4,6-Tribromophenol	73.0	%REC		53-141		SW8270C	08/23/22 08:16 / jph
Surr: 2-Fluorobiphenyl	69.0	%REC		63-98		SW8270C	08/23/22 08:16 / jph
Surr: 2-Fluorophenol	75.0	%REC		53-101		SW8270C	08/23/22 08:16 / jph
Surr: Nitrobenzene-d5	71.0	%REC		53-101		SW8270C	08/23/22 08:16 / jph
Surr: Phenol-d5	66.0	%REC		55-100		SW8270C	08/23/22 08:16 / jph
Surr: Terphenyl-d14	95.0	%REC		71-118		SW8270C	08/23/22 08:16 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0048		SW8151A	08/23/22 05:35 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0048		SW8151A	08/23/22 05:35 / jmh
2,4-D	1.5	mg/kg-dry	E	0.024		SW8151A	08/23/22 05:35 / jmh
2,4-D	1.7	mg/kg-dry	H	0.48		SW8151A	09/15/22 10:18 / jmh
2,4-DB	ND	mg/kg-dry		0.060		SW8151A	08/23/22 05:35 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.012		SW8151A	08/23/22 05:35 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.012		SW8151A	08/23/22 05:35 / jmh
Acifluorfen	ND	mg/kg-dry		0.012		SW8151A	08/23/22 05:35 / jmh
Bentazon	ND	mg/kg-dry		0.060		SW8151A	08/23/22 04:59 / jmh
Clopyralid	ND	mg/kg-dry		0.0060		SW8151A	08/23/22 04:59 / jmh
Dacthal	ND	mg/kg-dry		0.024		SW8151A	08/23/22 05:35 / jmh
Dalapon	ND	mg/kg-dry		0.060		SW8151A	08/23/22 05:35 / jmh
Dicamba	0.012	mg/kg-dry		0.0060		SW8151A	08/23/22 05:35 / jmh
Dichlorprop	ND	mg/kg-dry		0.024		SW8151A	08/23/22 05:35 / jmh
Dinoseb	ND	mg/kg-dry		0.024		SW8151A	08/23/22 05:35 / jmh
MCPA	ND	mg/kg-dry		4.8		SW8151A	08/23/22 05:35 / jmh
MCPP	ND	mg/kg-dry		4.8		SW8151A	08/23/22 05:35 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0024		SW8151A	08/23/22 05:35 / jmh
Picloram	ND	mg/kg-dry		0.012		SW8151A	08/23/22 04:59 / jmh
Surr: DCAA	86.0	%REC		45-117		SW8151A	08/23/22 05:35 / jmh

Report Definitions:
RL - Analyte Reporting Limit
MCL - Maximum Contaminant Level
QCL - Quality Control Limit
ND - Not detected at the Reporting Limit (RL)
E - Estimated value - result exceeds the instrument upper quantitation limit
H - Analysis performed past the method holding time

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-020
Client Sample ID: SR-17-5

Report Date: 09/23/22
Collection Date: 08/11/22 12:50
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	15	wt%		0.2		SW3550C	08/16/22 14:11 / amn
CYANIDE							
Cyanide, Total	ND	mg/kg-dry		0.3		SW9012B	08/19/22 11:21 / mas
METALS, TOTAL - EPA SW846							
Chromium	16	mg/kg-dry	D	6		SW6020	08/27/22 12:32 / srh
Cobalt	6	mg/kg-dry		1		SW6020	08/27/22 12:32 / srh
Nickel	15	mg/kg-dry	D	6		SW6020	08/27/22 12:32 / srh
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-020
Client Sample ID: SR-17-5

Report Date: 09/23/22
Collection Date: 08/11/22 12:50
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/18/22 04:41 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.23		SW8260B	08/18/22 04:41 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/18/22 04:41 / jdb
Surr: p-Bromofluorobenzene	94.0	%REC		78-160		SW8260B	08/18/22 04:41 / jdb
Surr: Dibromofluoromethane	117	%REC		70-132		SW8260B	08/18/22 04:41 / jdb
Surr: 1,2-Dichloroethane-d4	105	%REC		60-136		SW8260B	08/18/22 04:41 / jdb
Surr: Toluene-d8	104	%REC		75-138		SW8260B	08/18/22 04:41 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 08:47 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-020
Client Sample ID: SR-17-5

Report Date: 09/23/22
Collection Date: 08/11/22 12:50
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.39		SW8270C	08/23/22 08:47 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 08:47 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 08:47 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Benzidine	ND	mg/kg-dry		0.39		SW8270C	08/23/22 08:47 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Butylbenzylphthalate	11	mg/kg-dry		0.98		SW8270C	08/23/22 13:50 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.39		SW8270C	08/23/22 08:47 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-020
Client Sample ID: SR-17-5

Report Date: 09/23/22
Collection Date: 08/11/22 12:50
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
o-Cresol	0.27	mg/kg-dry	J	0.33		SW8270C	08/23/22 08:47 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 08:47 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 08:47 / jph
Diallate	ND	mg/kg-dry		0.20		SW8270C	08/23/22 08:47 / jph
Surr: 2,4,6-Tribromophenol	76.0	%REC		53-141		SW8270C	08/23/22 08:47 / jph
Surr: 2-Fluorobiphenyl	72.0	%REC		63-98		SW8270C	08/23/22 08:47 / jph
Surr: 2-Fluorophenol	71.0	%REC		53-101		SW8270C	08/23/22 08:47 / jph
Surr: Nitrobenzene-d5	64.0	%REC		53-101		SW8270C	08/23/22 08:47 / jph
Surr: Phenol-d5	68.0	%REC		55-100		SW8270C	08/23/22 08:47 / jph
Surr: Terphenyl-d14	96.0	%REC		71-118		SW8270C	08/23/22 08:47 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0047		SW8151A	08/23/22 06:10 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0047		SW8151A	08/23/22 06:10 / jmh
2,4-D	3.4	mg/kg-dry	E	0.023		SW8151A	08/23/22 06:10 / jmh
2,4-D	3.2	mg/kg-dry	H	1.2		SW8151A	09/15/22 11:29 / jmh
2,4-DB	ND	mg/kg-dry		0.059		SW8151A	08/23/22 06:10 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.012		SW8151A	08/23/22 06:10 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.012		SW8151A	08/23/22 06:10 / jmh
Acifluorfen	ND	mg/kg-dry		0.012		SW8151A	08/23/22 06:10 / jmh
Bentazon	ND	mg/kg-dry		0.059		SW8151A	08/23/22 05:35 / jmh
Clopyralid	0.46	mg/kg-dry	H	0.012		SW8151A	09/15/22 06:44 / jmh
Dacthal	ND	mg/kg-dry		0.023		SW8151A	08/23/22 06:10 / jmh
Dalapon	ND	mg/kg-dry		0.059		SW8151A	08/23/22 06:10 / jmh
Dicamba	0.39	mg/kg-dry	H	0.012		SW8151A	09/15/22 07:19 / jmh
Dichlorprop	ND	mg/kg-dry		0.023		SW8151A	08/23/22 06:10 / jmh
Dinoseb	ND	mg/kg-dry		0.023		SW8151A	08/23/22 06:10 / jmh
MCPA	ND	mg/kg-dry		4.7		SW8151A	08/23/22 06:10 / jmh
MCPP	ND	mg/kg-dry		4.7		SW8151A	08/23/22 06:10 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0023		SW8151A	08/23/22 06:10 / jmh
Picloram	0.13	mg/kg-dry		0.012		SW8151A	08/23/22 05:35 / jmh
Surr: DCAA	110	%REC		45-117		SW8151A	08/23/22 06:10 / jmh

Report Definitions:

RL - Analyte Reporting Limit
QCL - Quality Control Limit
E - Estimated value - result exceeds the instrument upper quantitation limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-021
Client Sample ID: SR-17-10

Report Date: 09/23/22
Collection Date: 08/11/22 13:00
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	16	wt%		0.2		SW3550C	08/19/22 09:33 / amn
CYANIDE							
Cyanide, Total	ND	mg/kg-dry		0.3		SW9012B	08/19/22 11:23 / mas
METALS, TOTAL - EPA SW846							
Chromium	13	mg/kg-dry	D	3		SW6020	08/23/22 21:43 / aem
Cobalt	5	mg/kg-dry		1		SW6020	08/23/22 21:43 / aem
Nickel	12	mg/kg-dry	D	3		SW6020	08/23/22 21:43 / aem
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Bromobenzene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Bromochloromethane	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Bromodichloromethane	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Bromoform	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Bromomethane	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Carbon tetrachloride	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Chlorobenzene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Chloroethane	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Chloroform	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Chloromethane	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
2-Chlorotoluene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
4-Chlorotoluene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Chlorodibromomethane	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
1,2-Dibromoethane	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Dibromomethane	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
1,2-Dichlorobenzene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
1,3-Dichlorobenzene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
1,4-Dichlorobenzene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Dichlorodifluoromethane	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
1,1-Dichloroethane	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
1,2-Dichloroethane	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
cis-1,2-Dichloroethene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
1,1-Dichloroethene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
trans-1,2-Dichloroethene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
1,2-Dichloropropane	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
1,3-Dichloropropane	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
2,2-Dichloropropane	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
1,1-Dichloropropene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
cis-1,3-Dichloropropene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
trans-1,3-Dichloropropene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Ethylbenzene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-021
Client Sample ID: SR-17-10

Report Date: 09/23/22
Collection Date: 08/11/22 13:00
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Methylene chloride	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Methyl ethyl ketone	ND	mg/kg		4.0		SW8260B	08/18/22 23:08 / jdb
n-Propylbenzene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Styrene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Tetrachloroethene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Toluene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
1,1,1-Trichloroethane	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
1,1,2-Trichloroethane	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Trichloroethene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Trichlorofluoromethane	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
1,2,3-Trichloropropane	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Vinyl chloride	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
m+p-Xylenes	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
o-Xylene	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Xylenes, Total	ND	mg/kg		0.20		SW8260B	08/18/22 23:08 / jdb
Surr: p-Bromofluorobenzene	86.0	%REC		78-160		SW8260B	08/18/22 23:08 / jdb
Surr: Dibromofluoromethane	97.0	%REC		70-132		SW8260B	08/18/22 23:08 / jdb
Surr: 1,2-Dichloroethane-d4	86.0	%REC		60-136		SW8260B	08/18/22 23:08 / jdb
Surr: Toluene-d8	90.0	%REC		75-138		SW8260B	08/18/22 23:08 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 09:17 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-021
Client Sample ID: SR-17-10

Report Date: 09/23/22
Collection Date: 08/11/22 13:00
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.40		SW8270C	08/23/22 09:17 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 09:17 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 09:17 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Benzidine	ND	mg/kg-dry		0.40		SW8270C	08/23/22 09:17 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Butylbenzylphthalate	35	mg/kg-dry		2.0		SW8270C	08/23/22 14:21 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.40		SW8270C	08/23/22 09:17 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph

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Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081361-021
Client Sample ID: SR-17-10

Report Date: 09/23/22
Collection Date: 08/11/22 13:00
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 09:17 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:17 / jph
Diallate	ND	mg/kg-dry		0.20		SW8270C	08/23/22 09:17 / jph
Surr: 2,4,6-Tribromophenol	76.0	%REC		53-141		SW8270C	08/23/22 09:17 / jph
Surr: 2-Fluorobiphenyl	70.0	%REC		63-98		SW8270C	08/23/22 09:17 / jph
Surr: 2-Fluorophenol	71.0	%REC		53-101		SW8270C	08/23/22 09:17 / jph
Surr: Nitrobenzene-d5	69.0	%REC		53-101		SW8270C	08/23/22 09:17 / jph
Surr: Phenol-d5	70.0	%REC		55-100		SW8270C	08/23/22 09:17 / jph
Surr: Terphenyl-d14	96.0	%REC		71-118		SW8270C	08/23/22 09:17 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0048		SW8151A	08/23/22 16:55 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0048		SW8151A	08/23/22 16:55 / jmh
2,4-D	1.9	mg/kg-dry		1.2		SW8151A	09/15/22 12:05 / jmh
2,4-DB	ND	mg/kg-dry		0.059		SW8151A	08/23/22 16:55 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.012		SW8151A	08/23/22 16:55 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.012		SW8151A	08/23/22 16:55 / jmh
Acifluorfen	ND	mg/kg-dry		0.012		SW8151A	08/23/22 16:55 / jmh
Bentazon	ND	mg/kg-dry		0.059		SW8151A	08/23/22 16:19 / jmh
Clopyralid	0.28	mg/kg-dry		0.0059		SW8151A	08/23/22 16:19 / jmh
Dacthal	ND	mg/kg-dry		0.024		SW8151A	08/23/22 16:55 / jmh
Dalapon	ND	mg/kg-dry		0.059		SW8151A	08/23/22 16:55 / jmh
Dicamba	0.31	mg/kg-dry		0.030		SW8151A	09/13/22 03:57 / jmh
Dichlorprop	ND	mg/kg-dry		0.024		SW8151A	08/23/22 16:55 / jmh
Dinoseb	ND	mg/kg-dry		0.024		SW8151A	08/23/22 16:55 / jmh
MCPA	ND	mg/kg-dry		4.8		SW8151A	08/23/22 16:55 / jmh
MCPP	ND	mg/kg-dry		4.8		SW8151A	08/23/22 16:55 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0024		SW8151A	08/23/22 16:55 / jmh
Picloram	0.014	mg/kg-dry		0.012		SW8151A	08/23/22 16:19 / jmh
Surr: DCAA	89.0	%REC		45-117		SW8151A	08/23/22 16:55 / jmh

Report Definitions:
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ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 08/29/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020									Analytical Run: ICPMS207-B_220822A	
Lab ID: QCS	3	Initial Calibration Verification Standard							08/22/22 11:58	
Chromium		0.0507	mg/L	0.0010	101	90	110			
Cobalt		0.0493	mg/L	0.0010	99	90	110			
Nickel		0.0528	mg/L	0.0010	106	90	110			
Lab ID: ICSA	3	Interference Check Sample A							08/23/22 11:41	
Chromium		0.00187	mg/L	0.0010						
Cobalt		0.000185	mg/L	0.0010						
Nickel		0.000164	mg/L	0.0010						
Lab ID: ICSAB	3	Interference Check Sample AB							08/23/22 11:47	
Chromium		0.0223	mg/L	0.0010	111	80	120			
Cobalt		0.0189	mg/L	0.0010	95	80	120			
Nickel		0.0213	mg/L	0.0010	106	80	120			
Method: SW6020									Batch: 169620	
Lab ID: MB-169620	3	Method Blank				Run: ICPMS207-B_220822A			08/23/22 21:25	
Chromium		ND	mg/kg	0.1						
Cobalt		ND	mg/kg	0.01						
Nickel		ND	mg/kg	0.2						
Lab ID: LCS3-169620	3	Laboratory Control Sample				Run: ICPMS207-B_220822A			08/23/22 21:31	
Chromium		53.2	mg/kg	10	106	80	120			
Cobalt		51.3	mg/kg	1.0	103	80	120			
Nickel		55.7	mg/kg	10	111	80	120			
Lab ID: B22081450-003ADIL	3	Serial Dilution				Run: ICPMS207-B_220822A			08/23/22 22:55	
Chromium		133	mg/kg	12				2.0	10	
Cobalt		10.6	mg/kg	1.2				6.6	10	
Nickel		72.1	mg/kg	12				5.8	10	
Lab ID: B22081450-003APDS1	3	Post Digestion/Distillation Spike				Run: ICPMS207-B_220822A			08/23/22 23:01	
Chromium		141	mg/kg	2.4		75	125			A
Cobalt		18.9	mg/kg	1.0	76	75	125			
Nickel		79.1	mg/kg	2.4		75	125			A
Lab ID: B22081450-003AMS3	3	Sample Matrix Spike				Run: ICPMS207-B_220822A			08/23/22 23:08	
Chromium		188	mg/kg	9.8	118	75	125			
Cobalt		58.7	mg/kg	1.0	100	75	125			
Nickel		129	mg/kg	9.8	124	75	125			
Lab ID: B22081450-003AMSD	3	Sample Matrix Spike Duplicate				Run: ICPMS207-B_220822A			08/23/22 23:14	
Chromium		217	mg/kg	9.5	181	75	125	14	20	S
Cobalt		59.8	mg/kg	1.0	105	75	125	1.8	20	
Nickel		136	mg/kg	9.5	143	75	125	5.6	20	S

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

A - Analyte level was greater than four times the spike level - in accordance with the method, percent recovery is not calculated

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 08/29/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020									Analytical Run: ICPMS207-B_220826A	
Lab ID: ICSA	3	Interference Check Sample A							08/27/22 04:55	
Chromium		0.00189	mg/L	0.0010						
Cobalt		0.000194	mg/L	0.0010						
Nickel		0.0000892	mg/L	0.0010						
Lab ID: ICSAB	3	Interference Check Sample AB							08/27/22 05:01	
Chromium		0.0211	mg/L	0.0010	106	80	120			
Cobalt		0.0179	mg/L	0.0010	90	80	120			
Nickel		0.0192	mg/L	0.0010	96	80	120			
Lab ID: QCS	3	Initial Calibration Verification Standard							08/27/22 04:49	
Chromium		0.0503	mg/L	0.0010	101	90	110			
Cobalt		0.0448	mg/L	0.0010	90	90	110			
Nickel		0.0506	mg/L	0.0010	101	90	110			
Method: SW6020									Batch: 169582	
Lab ID: MB-169582	3	Method Blank				Run: ICPMS207-B_220826A			08/27/22 08:58	
Chromium		ND	mg/kg	0.1						
Cobalt		ND	mg/kg	0.01						
Nickel		ND	mg/kg	0.2						
Lab ID: LCS3-169582	3	Laboratory Control Sample				Run: ICPMS207-B_220826A			08/27/22 09:04	
Chromium		51.0	mg/kg	10	102	80	120			
Cobalt		46.7	mg/kg	1.0	93	80	120			
Nickel		52.5	mg/kg	10	105	80	120			
Lab ID: B22081361-001ADIL	3	Serial Dilution				Run: ICPMS207-B_220826A			08/27/22 09:30	
Chromium		ND	mg/kg-dry	29					10	
Cobalt		6.23	mg/kg-dry	2.9					10	N
Nickel		ND	mg/kg-dry	29					10	
Lab ID: B22081361-001APDS1	3	Post Digestion/Distillation Spike				Run: ICPMS207-B_220826A			08/27/22 09:36	
Chromium		44.3	mg/kg-dry	5.9	93	75	125			
Cobalt		31.3	mg/kg-dry	1.0	86	75	125			
Nickel		43.0	mg/kg-dry	5.9	91	75	125			
Lab ID: B22081361-001AMS3	3	Sample Matrix Spike				Run: ICPMS207-B_220826A			08/27/22 09:42	
Chromium		84.1	mg/kg-dry	11	124	75	125			
Cobalt		54.9	mg/kg-dry	1.1	90	75	125			
Nickel		75.7	mg/kg-dry	11	109	75	125			
Lab ID: B22081361-001AMSD	3	Sample Matrix Spike Duplicate				Run: ICPMS207-B_220826A			08/27/22 09:48	
Chromium		86.4	mg/kg-dry	12	118	75	125	2.7	20	
Cobalt		60.7	mg/kg-dry	1.2	93	75	125	9.9	20	
Nickel		79.8	mg/kg-dry	12	108	75	125	5.3	20	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

N - Analyte concentration was not sufficiently high to calculate a Relative Percent Difference (RPD) for the serial dilution test

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 08/29/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW9012B										Batch: 169484
Lab ID: MB-169484	Method Blank					Run: SFA-201-B_220819A				08/19/22 09:52
Cyanide, Total		ND	mg/kg	0.09						
Lab ID: LCS-169484	Laboratory Control Sample					Run: SFA-201-B_220819A				08/19/22 09:54
Cyanide, Total		5.64	mg/kg	0.25	118	60	140			
Lab ID: B22081361-004AMS	Sample Matrix Spike					Run: SFA-201-B_220819A				08/19/22 10:04
Cyanide, Total		6.01	mg/kg-dry	0.25	112	50	150			
Lab ID: B22081361-004AMSD	Sample Matrix Spike Duplicate					Run: SFA-201-B_220819A				08/19/22 10:06
Cyanide, Total		6.67	mg/kg-dry	0.25	128	50	150	10	30	
Method: SW9012B										Batch: 169504
Lab ID: MB-169504	Method Blank					Run: SFA-201-B_220819A				08/19/22 10:10
Cyanide, Total		ND	mg/kg	0.1						
Lab ID: LCS-169504	Laboratory Control Sample					Run: SFA-201-B_220819A				08/19/22 10:12
Cyanide, Total		5.34	mg/kg	0.25	107	60	140			
Lab ID: B22081361-016AMS	Sample Matrix Spike					Run: SFA-201-B_220819A				08/19/22 11:02
Cyanide, Total		6.23	mg/kg-dry	0.28	103	50	150			
Lab ID: B22081361-016AMSD	Sample Matrix Spike Duplicate					Run: SFA-201-B_220819A				08/19/22 11:04
Cyanide, Total		5.68	mg/kg-dry	0.28	94	50	150	9.1	30	
Method: SW9012B										Batch: 169515
Lab ID: MB-169515	Method Blank					Run: SFA-201-B_220819A				08/19/22 11:08
Cyanide, Total		0.1	mg/kg	0.1						
Lab ID: LCS-169515	Laboratory Control Sample					Run: SFA-201-B_220819A				08/19/22 11:10
Cyanide, Total		5.48	mg/kg	0.25	112	60	140			
Lab ID: B22081361-017AMS	Sample Matrix Spike					Run: SFA-201-B_220819A				08/19/22 11:13
Cyanide, Total		5.81	mg/kg-dry	0.28	100	50	150			
Lab ID: B22081361-017AMSD	Sample Matrix Spike Duplicate					Run: SFA-201-B_220819A				08/19/22 11:16
Cyanide, Total		6.01	mg/kg-dry	0.28	103	50	150	3.4	30	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8151A										Batch: 169433
Lab ID: LCS-169433	3	Laboratory Control Sample				Run: CECD.I_220822A				08/22/22 14:04
Bentazon		0.0603	mg/kg	0.050	60	34	115			
Clopyralid		0.104	mg/kg	0.0050	104	70	130			
Picloram		0.0798	mg/kg	0.010	80	50	112			
Lab ID: MB-169433	3	Method Blank				Run: CECD.I_220822A				08/22/22 14:40
Bentazon		ND	mg/kg	0.050						
Clopyralid		ND	mg/kg	0.0050						
Picloram		ND	mg/kg	0.010						
Lab ID: B22081361-001AMS	2	Sample Matrix Spike				Run: CECD.I_220822A				08/22/22 15:52
Bentazon		0.0630	mg/kg-dry	0.059	53	34	115			
Picloram		0.0775	mg/kg-dry	0.012	66	50	112			
Lab ID: B22081361-001AMSD	2	Sample Matrix Spike Duplicate				Run: CECD.I_220822A				08/22/22 16:28
Bentazon		0.0681	mg/kg-dry	0.059	58	34	115	7.9	40	
Picloram		0.0809	mg/kg-dry	0.012	69	50	112	4.2	40	
Lab ID: LCS-169433	16	Laboratory Control Sample				Run: DECD.I_220822B				08/22/22 14:40
2,4,5-T		0.0721	mg/kg	0.0040	72	56	119			
2,4,5-TP (Silvex)		0.0725	mg/kg	0.0040	73	45	116			
2,4-D		0.0758	mg/kg	0.020	76	48	121			
2,4-DB		0.0874	mg/kg	0.050	87	28	125			
3,5-Dichlorobenzoic Acid		0.0746	mg/kg	0.010	75	59	115			
4-Nitrophenol		0.0660	mg/kg	0.010	66	19	114			
Acifluorfen		0.0812	mg/kg	0.010	81	46	123			
Dacthal		0.0819	mg/kg	0.020	82	40	120			
Dalapon		0.0387	mg/kg	0.050	39	30	100			
Dicamba		0.0710	mg/kg	0.0050	71	50	119			
Dichlorprop		0.0595	mg/kg	0.020	59	50	120			
Dinoseb		0.0125	mg/kg	0.020	12	7	100			
MCPA		5.99	mg/kg	4.0	60	26	117			
MCPP		5.61	mg/kg	4.0	56	30	119			
Pentachlorophenol		0.0652	mg/kg	0.0020	65	35	103			
Surr: DCAA				0.0020	85	45	117			
Lab ID: MB-169433	16	Method Blank				Run: DECD.I_220822B				08/22/22 15:16
2,4,5-T		ND	mg/kg	0.0040						
2,4,5-TP (Silvex)		ND	mg/kg	0.0040						
2,4-D		ND	mg/kg	0.020						
2,4-DB		ND	mg/kg	0.050						
3,5-Dichlorobenzoic Acid		ND	mg/kg	0.010						
4-Nitrophenol		ND	mg/kg	0.010						
Acifluorfen		ND	mg/kg	0.010						
Dacthal		ND	mg/kg	0.020						
Dalapon		ND	mg/kg	0.050						
Dicamba		ND	mg/kg	0.0050						
Dichlorprop		ND	mg/kg	0.020						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8151A										Batch: 169433
Lab ID: MB-169433	16	Method Blank				Run: DECD.I_220822B			08/22/22 15:16	
Dinoseb		ND	mg/kg	0.020						
MCPA		ND	mg/kg	4.0						
MCPP		ND	mg/kg	4.0						
Pentachlorophenol		ND	mg/kg	0.0020						
Surr: DCAA				0.0020	84	45	117			
Lab ID: B22081361-001AMS	15	Sample Matrix Spike				Run: DECD.I_220822B			08/22/22 16:28	
2,4,5-T		0.0711	mg/kg-dry	0.0047	60	56	119			
2,4,5-TP (Silvex)		0.0720	mg/kg-dry	0.0047	61	45	116			
2,4-DB		0.0719	mg/kg-dry	0.059	61	28	125			
3,5-Dichlorobenzoic Acid		0.0688	mg/kg-dry	0.012	58	59	115			S
4-Nitrophenol		0.0667	mg/kg-dry	0.012	57	19	114			
Acifluorfen		0.0734	mg/kg-dry	0.012	62	46	123			
Dacthal		0.0843	mg/kg-dry	0.024	72	40	120			
Dalapon		0.0486	mg/kg-dry	0.059	41	30	100			
Dicamba		0.0873	mg/kg-dry	0.0059	63	50	119			
Dichlorprop		0.0588	mg/kg-dry	0.024	50	50	120			
Dinoseb		0.0190	mg/kg-dry	0.024	16	7	100			
MCPA		5.32	mg/kg-dry	4.7	45	26	117			
MCPP		4.41	mg/kg-dry	4.7	37	30	119			
Pentachlorophenol		0.0430	mg/kg-dry	0.0024	36	35	103			
Surr: DCAA				0.0024	74	45	117			
Lab ID: B22081361-001AMSD	15	Sample Matrix Spike Duplicate				Run: DECD.I_220822B			08/22/22 17:04	
2,4,5-T		0.0694	mg/kg-dry	0.0047	59	56	119	2.4	40	
2,4,5-TP (Silvex)		0.0687	mg/kg-dry	0.0047	58	45	116	4.6	40	
2,4-DB		0.0654	mg/kg-dry	0.059	56	28	125	9.5	40	
3,5-Dichlorobenzoic Acid		0.0691	mg/kg-dry	0.012	59	59	115	0.4	40	
4-Nitrophenol		0.0727	mg/kg-dry	0.012	62	19	114	8.5	40	
Acifluorfen		0.0758	mg/kg-dry	0.012	64	46	123	3.2	40	
Dacthal		0.0777	mg/kg-dry	0.024	66	40	120	8.2	40	
Dalapon		0.0496	mg/kg-dry	0.059	42	30	100		40	
Dicamba		0.0860	mg/kg-dry	0.0059	62	50	119	1.4	40	
Dichlorprop		0.0554	mg/kg-dry	0.024	47	50	120	5.9	40	S
Dinoseb		0.0219	mg/kg-dry	0.024	19	7	100		40	
MCPA		4.73	mg/kg-dry	4.7	40	26	117	12	40	
MCPP		3.96	mg/kg-dry	4.7	34	30	119		40	
Pentachlorophenol		0.0470	mg/kg-dry	0.0024	40	35	103	8.8	40	
Surr: DCAA				0.0024	71	45	117			
Lab ID: B22081361-001AMS		Sample Duplicate				Run: DECD.I_220822B			08/28/22 06:26	
Clopyralid		1.33	mg/kg-dry	0.029				14	40	
Lab ID: B22081361-001AMSD		Sample Duplicate				Run: DECD.I_220822B			08/28/22 07:01	
Clopyralid		1.75	mg/kg-dry	0.029				13	40	

- Because the sample amount was significantly higher than the spike amount, the Matrix Spike and Matrix Spike Duplicate samples are calculated as Duplicate samples based on the spike amount added plus the original sample concentration for Clopyralid.

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW8151A**										Batch: 169433
Lab ID: **B22081361-001AMS**	Sample Matrix Spike					Run: DECD.I_220822B				08/28/22 06:26
2,4-D		0.163	mg/kg-dry	0.12	-220	48	121			S
Lab ID: **B22081361-001AMSD**	Sample Matrix Spike Duplicate					Run: DECD.I_220822B				08/28/22 07:01
2,4-D		0.155	mg/kg-dry	0.12	-227	48	121	4.7	40	S

-The high Relative Percent Difference (RPD) is attributed to a non-homogenous sample matrix.

Qualifiers:

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8151A										Batch: 169588
Lab ID: LCS-169588	3	Laboratory Control Sample				Run: CECD.I_220822A				08/23/22 13:19
Bentazon		0.0613	mg/kg	0.050	61	34	115			
Clopyralid		0.0986	mg/kg	0.0050	99	70	130			
Picloram		0.0850	mg/kg	0.010	85	50	112			
Lab ID: MB-169588	3	Method Blank				Run: CECD.I_220822A				08/23/22 13:55
Bentazon		ND	mg/kg	0.050						
Clopyralid		ND	mg/kg	0.0050						
Picloram		ND	mg/kg	0.010						
Lab ID: B22081406-002AMS	3	Sample Matrix Spike				Run: CECD.I_220822A				08/23/22 15:07
Bentazon		0.0564	mg/kg-dry	0.056	50	34	115			
Clopyralid		0.314	mg/kg-dry	0.0056	104	70	130			
Picloram		0.0707	mg/kg-dry	0.011	63	50	112			
Lab ID: B22081406-002AMSD	3	Sample Matrix Spike Duplicate				Run: CECD.I_220822A				08/23/22 15:43
Bentazon		0.0488	mg/kg-dry	0.056	43	34	115		40	
Clopyralid		0.339	mg/kg-dry	0.0056	126	70	130	7.5	40	
Picloram		0.0678	mg/kg-dry	0.011	60	50	112	4.2	40	
Lab ID: LCS-169588	16	Laboratory Control Sample				Run: DECD.I_220822B				08/23/22 13:55
2,4,5-T		0.0827	mg/kg	0.0040	83	56	119			
2,4,5-TP (Silvex)		0.0770	mg/kg	0.0040	77	45	116			
2,4-D		0.0878	mg/kg	0.020	88	48	121			
2,4-DB		0.0820	mg/kg	0.050	82	28	125			
3,5-Dichlorobenzoic Acid		0.0808	mg/kg	0.010	81	59	115			
4-Nitrophenol		0.0801	mg/kg	0.010	80	19	114			
Acifluorfen		0.0849	mg/kg	0.010	85	46	123			
Dacthal		0.0867	mg/kg	0.020	87	40	120			
Dalapon		0.0499	mg/kg	0.050	50	30	100			
Dicamba		0.0763	mg/kg	0.0050	76	50	119			
Dichlorprop		0.0779	mg/kg	0.020	78	50	120			
Dinoseb		0.0514	mg/kg	0.020	51	7	100			
MCPA		4.92	mg/kg	4.0	49	26	117			
MCPP		5.08	mg/kg	4.0	51	30	119			
Pentachlorophenol		0.0661	mg/kg	0.0020	66	35	103			
Surr: DCAA				0.0020	82	45	117			
Lab ID: MB-169588	16	Method Blank				Run: DECD.I_220822B				08/23/22 14:31
2,4,5-T		ND	mg/kg	0.0040						
2,4,5-TP (Silvex)		ND	mg/kg	0.0040						
2,4-D		ND	mg/kg	0.020						
2,4-DB		ND	mg/kg	0.050						
3,5-Dichlorobenzoic Acid		ND	mg/kg	0.010						
4-Nitrophenol		ND	mg/kg	0.010						
Acifluorfen		ND	mg/kg	0.010						
Dacthal		ND	mg/kg	0.020						
Dalapon		ND	mg/kg	0.050						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8151A										Batch: 169588
Lab ID: MB-169588	16	Method Blank				Run: DECD.I_220822B				08/23/22 14:31
Dicamba		ND	mg/kg	0.0050						
Dichlorprop		ND	mg/kg	0.020						
Dinoseb		ND	mg/kg	0.020						
MCPA		ND	mg/kg	4.0						
MCPP		ND	mg/kg	4.0						
Pentachlorophenol		ND	mg/kg	0.0020						
Surr: DCAA				0.0020	78	45	117			
Lab ID: B22081406-002AMS	15	Sample Matrix Spike				Run: DECD.I_220822B				08/23/22 15:43
2,4,5-T		0.0730	mg/kg-dry	0.0045	65	56	119			
2,4,5-TP (Silvex)		0.0740	mg/kg-dry	0.0045	66	45	116			
2,4-DB		0.0917	mg/kg-dry	0.056	81	28	125			
3,5-Dichlorobenzoic Acid		0.0844	mg/kg-dry	0.011	75	59	115			
4-Nitrophenol		0.0950	mg/kg-dry	0.011	84	19	114			
Acifluorfen		0.0894	mg/kg-dry	0.011	79	46	123			
Dacthal		0.0972	mg/kg-dry	0.023	86	40	120			
Dalapon		0.0544	mg/kg-dry	0.056	48	30	100			
Dicamba		0.151	mg/kg-dry	0.0056	84	50	119			
Dichlorprop		0.0731	mg/kg-dry	0.023	65	50	120			
Dinoseb		0.0600	mg/kg-dry	0.023	53	7	100			
MCPA		3.92	mg/kg-dry	4.5	35	26	117			
MCPP		3.73	mg/kg-dry	4.5	33	30	119			
Pentachlorophenol		0.0604	mg/kg-dry	0.0023	54	35	103			
Surr: DCAA				0.0023	78	45	117			
Lab ID: B22081406-002AMSD	15	Sample Matrix Spike Duplicate				Run: DECD.I_220822B				08/23/22 16:19
2,4,5-T		0.0669	mg/kg-dry	0.0045	60	56	119	8.8	40	
2,4,5-TP (Silvex)		0.0683	mg/kg-dry	0.0045	61	45	116	8.0	40	
2,4-DB		0.103	mg/kg-dry	0.056	91	28	125	11	40	
3,5-Dichlorobenzoic Acid		0.0817	mg/kg-dry	0.011	73	59	115	3.2	40	
4-Nitrophenol		0.0945	mg/kg-dry	0.011	84	19	114	0.5	40	
Acifluorfen		0.0660	mg/kg-dry	0.011	59	46	123	30	40	
Dacthal		0.0836	mg/kg-dry	0.023	74	40	120	15	40	
Dalapon		0.0605	mg/kg-dry	0.056	54	30	100		40	
Dicamba		0.141	mg/kg-dry	0.0056	76	50	119	6.8	40	
Dichlorprop		0.0768	mg/kg-dry	0.023	68	50	120	5.0	40	
Dinoseb		0.0478	mg/kg-dry	0.023	42	7	100	23	40	
MCPA		3.36	mg/kg-dry	4.5	30	26	117		40	
MCPP		3.31	mg/kg-dry	4.5	29	30	119		40	S
Pentachlorophenol		0.0494	mg/kg-dry	0.0023	44	35	103	20	40	
Surr: DCAA				0.0023	73	45	117			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8260B										Batch: 169458
Lab ID: LCS-169458	58	Laboratory Control Sample				Run: VOA5977B_220817A				08/17/22 12:59
Benzene		0.892	mg/kg	0.10	89	70	127			
Bromobenzene		0.851	mg/kg	0.10	85	70	135			
Bromochloromethane		0.981	mg/kg	0.10	98	60	130			
Bromodichloromethane		0.902	mg/kg	0.10	90	56	136			
Bromoform		0.857	mg/kg	0.10	86	59	132			
Bromomethane		0.658	mg/kg	0.10	66	18	134			
Carbon tetrachloride		0.977	mg/kg	0.10	98	60	140			
Chlorobenzene		0.970	mg/kg	0.10	97	75	132			
Chlorodibromomethane		0.940	mg/kg	0.10	94	62	133			
Chloroethane		0.902	mg/kg	0.10	90	12	80			S
Chloroform		0.908	mg/kg	0.10	91	62	132			
Chloromethane		0.860	mg/kg	0.10	86	41	138			
2-Chloroethyl vinyl ether		0.832	mg/kg	0.10	83	41	149			
1,2-Dibromoethane		0.945	mg/kg	0.10	95	60	135			
2-Chlorotoluene		0.848	mg/kg	0.10	85	74	135			
Dibromomethane		0.952	mg/kg	0.10	95	60	135			
1,2-Dichlorobenzene		0.882	mg/kg	0.10	88	70	130			
4-Chlorotoluene		0.846	mg/kg	0.10	85	75	136			
1,3-Dichlorobenzene		0.898	mg/kg	0.10	90	71	132			
1,4-Dichlorobenzene		0.898	mg/kg	0.10	90	71	131			
Dichlorodifluoromethane		0.808	mg/kg	0.10	81	31	123			
1,1-Dichloroethane		0.902	mg/kg	0.10	90	66	130			
1,2-Dichloroethane		0.949	mg/kg	0.10	95	51	140			
1,1-Dichloroethene		0.920	mg/kg	0.10	92	64	133			
cis-1,2-Dichloroethene		0.916	mg/kg	0.10	92	63	131			
trans-1,2-Dichloroethene		0.930	mg/kg	0.10	93	66	133			
1,2-Dichloropropane		0.850	mg/kg	0.10	85	60	130			
1,3-Dichloropropane		0.862	mg/kg	0.10	86	59	135			
2,2-Dichloropropane		0.915	mg/kg	0.10	92	39	157			
1,1-Dichloropropene		0.900	mg/kg	0.10	90	65	132			
cis-1,3-Dichloropropene		0.820	mg/kg	0.10	82	55	134			
trans-1,3-Dichloropropene		0.887	mg/kg	0.10	89	58	146			
Ethylbenzene		0.949	mg/kg	0.10	95	74	136			
Isopropylbenzene		0.818	mg/kg	0.10	82	70	133			
Methyl tert-butyl ether (MTBE)		0.862	mg/kg	0.10	86	43	152			
Methyl ethyl ketone		9.02	mg/kg	2.0	90	43	148			
Methylene chloride		0.862	mg/kg	0.10	86	51	134			
n-Propylbenzene		0.840	mg/kg	0.10	84	72	134			
Styrene		0.955	mg/kg	0.10	96	70	135			
1,1,1,2-Tetrachloroethane		0.961	mg/kg	0.10	96	35	156			
1,1,2,2-Tetrachloroethane		0.762	mg/kg	0.10	76	59	135			
Tetrachloroethene		1.06	mg/kg	0.10	106	64	139			
Toluene		0.943	mg/kg	0.10	95	73	137			
1,1,1-Trichloroethane		0.954	mg/kg	0.10	96	63	134			
1,1,2-Trichloroethane		0.907	mg/kg	0.10	91	56	136			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8260B										Batch: 169458
Lab ID: LCS-169458	58	Laboratory Control Sample				Run: VOA5977B_220817A				08/17/22 12:59
Trichloroethene		0.921	mg/kg	0.10	92	65	134			
Trichlorofluoromethane		0.886	mg/kg	0.10	89	48	140			
1,2,3-Trichloropropane		0.838	mg/kg	0.10	84	56	142			
1,2,4-Trimethylbenzene		0.826	mg/kg	0.10	83	67	125			
1,3,5-Trimethylbenzene		0.832	mg/kg	0.10	83	71	131			
Vinyl chloride		0.822	mg/kg	0.10	82	32	136			
m+p-Xylenes		1.93	mg/kg	0.20	97	75	136			
o-Xylene		0.953	mg/kg	0.10	96	72	134			
Xylenes, Total		2.89	mg/kg	0.10	96	72	136			
Surr: 1,2-Dichloroethane-d4				0.10	91	60	136			
Surr: Dibromofluoromethane				0.10	99	70	132			
Surr: p-Bromofluorobenzene				0.10	88	78	160			
Surr: Toluene-d8				0.10	95	75	138			
Lab ID: MB-169458	58	Method Blank				Run: VOA5977B_220817A				08/17/22 13:49
Benzene		ND	mg/kg	0.10						
Bromobenzene		ND	mg/kg	0.10						
Bromochloromethane		ND	mg/kg	0.10						
Bromodichloromethane		ND	mg/kg	0.10						
Bromoform		ND	mg/kg	0.10						
Bromomethane		ND	mg/kg	0.10						
Carbon tetrachloride		ND	mg/kg	0.10						
Chlorobenzene		ND	mg/kg	0.10						
Chlorodibromomethane		ND	mg/kg	0.10						
Chloroethane		ND	mg/kg	0.10						
Chloroform		ND	mg/kg	0.10						
Chloromethane		ND	mg/kg	0.10						
2-Chloroethyl vinyl ether		ND	mg/kg	0.10						
1,2-Dibromoethane		ND	mg/kg	0.10						
2-Chlorotoluene		ND	mg/kg	0.10						
Dibromomethane		ND	mg/kg	0.10						
1,2-Dichlorobenzene		ND	mg/kg	0.10						
4-Chlorotoluene		ND	mg/kg	0.10						
1,3-Dichlorobenzene		ND	mg/kg	0.10						
1,4-Dichlorobenzene		ND	mg/kg	0.10						
Dichlorodifluoromethane		ND	mg/kg	0.10						
1,1-Dichloroethane		ND	mg/kg	0.10						
1,2-Dichloroethane		ND	mg/kg	0.10						
1,1-Dichloroethene		ND	mg/kg	0.10						
cis-1,2-Dichloroethene		ND	mg/kg	0.10						
trans-1,2-Dichloroethene		ND	mg/kg	0.10						
1,2-Dichloropropane		ND	mg/kg	0.10						
1,3-Dichloropropane		ND	mg/kg	0.10						
2,2-Dichloropropane		ND	mg/kg	0.10						
1,1-Dichloropropene		ND	mg/kg	0.10						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8260B										Batch: 169458
Lab ID: MB-169458	58	Method Blank				Run: VOA5977B_220817A				08/17/22 13:49
cis-1,3-Dichloropropene		ND	mg/kg	0.10						
trans-1,3-Dichloropropene		ND	mg/kg	0.10						
Ethylbenzene		ND	mg/kg	0.10						
Isopropylbenzene		ND	mg/kg	0.10						
Methyl tert-butyl ether (MTBE)		ND	mg/kg	0.10						
Methyl ethyl ketone		ND	mg/kg	2.0						
Methylene chloride		ND	mg/kg	0.10						
n-Propylbenzene		ND	mg/kg	0.10						
Styrene		ND	mg/kg	0.10						
1,1,1,2-Tetrachloroethane		ND	mg/kg	0.10						
1,1,2,2-Tetrachloroethane		ND	mg/kg	0.10						
Tetrachloroethene		ND	mg/kg	0.10						
Toluene		ND	mg/kg	0.10						
1,1,1-Trichloroethane		ND	mg/kg	0.10						
1,1,2-Trichloroethane		ND	mg/kg	0.10						
Trichloroethene		ND	mg/kg	0.10						
Trichlorofluoromethane		ND	mg/kg	0.10						
1,2,3-Trichloropropane		ND	mg/kg	0.10						
1,2,4-Trimethylbenzene		ND	mg/kg	0.10						
1,3,5-Trimethylbenzene		ND	mg/kg	0.10						
Vinyl chloride		ND	mg/kg	0.10						
m+p-Xylenes		ND	mg/kg	0.20						
o-Xylene		ND	mg/kg	0.10						
Xylenes, Total		ND	mg/kg	0.10						
Surr: 1,2-Dichloroethane-d4				0.10	102	60	136			
Surr: Dibromofluoromethane				0.10	113	70	132			
Surr: p-Bromofluorobenzene				0.10	102	78	160			
Surr: Toluene-d8				0.10	106	75	138			
Lab ID: B22081361-003AMS	58	Sample Matrix Spike				Run: VOA5977B_220818B				08/19/22 07:55
Benzene		1.17	mg/kg-dry	0.11	105	70	127			
Bromobenzene		1.07	mg/kg-dry	0.11	97	70	135			
Bromochloromethane		1.26	mg/kg-dry	0.11	113	60	130			
Bromodichloromethane		1.22	mg/kg-dry	0.11	110	56	136			
Bromoform		1.08	mg/kg-dry	0.11	98	59	132			
Bromomethane		0.915	mg/kg-dry	0.11	83	18	134			
Carbon tetrachloride		1.32	mg/kg-dry	0.11	119	60	140			
Chlorobenzene		1.26	mg/kg-dry	0.11	114	75	132			
Chlorodibromomethane		1.27	mg/kg-dry	0.11	114	62	133			
Chloroethane		1.11	mg/kg-dry	0.11	100	12	80			S
Chloroform		1.21	mg/kg-dry	0.11	109	62	132			
Chloromethane		0.954	mg/kg-dry	0.11	86	41	138			
2-Chloroethyl vinyl ether		1.06	mg/kg-dry	0.11	95	41	149			
1,2-Dibromoethane		1.26	mg/kg-dry	0.11	113	60	135			
2-Chlorotoluene		1.05	mg/kg-dry	0.11	95	74	135			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW8260B**										Batch: 169458
Lab ID: **B22081361-003AMS**	58	Sample Matrix Spike				Run: VOA5977B_220818B				08/19/22 07:55
Dibromomethane		1.17	mg/kg-dry	0.11	106	60	135			
1,2-Dichlorobenzene		1.09	mg/kg-dry	0.11	98	70	130			
4-Chlorotoluene		1.04	mg/kg-dry	0.11	94	75	136			
1,3-Dichlorobenzene		1.11	mg/kg-dry	0.11	100	71	132			
1,4-Dichlorobenzene		1.10	mg/kg-dry	0.11	99	71	131			
Dichlorodifluoromethane		0.757	mg/kg-dry	0.11	68	31	123			
1,1-Dichloroethane		1.21	mg/kg-dry	0.11	109	66	130			
1,2-Dichloroethane		1.22	mg/kg-dry	0.11	110	51	140			
1,1-Dichloroethene		1.12	mg/kg-dry	0.11	101	64	133			
cis-1,2-Dichloroethene		1.19	mg/kg-dry	0.11	107	63	131			
trans-1,2-Dichloroethene		1.18	mg/kg-dry	0.11	107	66	133			
1,2-Dichloropropane		1.11	mg/kg-dry	0.11	100	60	130			
1,3-Dichloropropane		1.12	mg/kg-dry	0.11	101	59	135			
2,2-Dichloropropane		0.876	mg/kg-dry	0.11	79	39	157			
1,1-Dichloropropene		1.14	mg/kg-dry	0.11	103	65	132			
cis-1,3-Dichloropropene		1.00	mg/kg-dry	0.11	91	55	134			
trans-1,3-Dichloropropene		1.10	mg/kg-dry	0.11	99	58	146			
Ethylbenzene		1.23	mg/kg-dry	0.11	111	74	136			
Isopropylbenzene		1.04	mg/kg-dry	0.11	93	70	133			
Methyl tert-butyl ether (MTBE)		1.15	mg/kg-dry	0.11	104	43	152			
Methyl ethyl ketone		12.4	mg/kg-dry	2.2	112	43	148			
Methylene chloride		1.13	mg/kg-dry	0.11	102	51	134			
n-Propylbenzene		1.04	mg/kg-dry	0.11	94	72	134			
Styrene		1.26	mg/kg-dry	0.11	113	70	135			
1,1,1,2-Tetrachloroethane		1.28	mg/kg-dry	0.11	115	35	156			
1,1,2,2-Tetrachloroethane		1.00	mg/kg-dry	0.11	91	59	135			
Tetrachloroethene		1.35	mg/kg-dry	0.11	122	64	139			
Toluene		1.30	mg/kg-dry	0.11	117	73	137			
1,1,1-Trichloroethane		1.24	mg/kg-dry	0.11	112	63	134			
1,1,2-Trichloroethane		1.20	mg/kg-dry	0.11	108	56	136			
Trichloroethene		1.20	mg/kg-dry	0.11	108	65	134			
Trichlorofluoromethane		1.11	mg/kg-dry	0.11	100	48	140			
1,2,3-Trichloropropane		1.01	mg/kg-dry	0.11	91	56	142			
1,2,4-Trimethylbenzene		1.03	mg/kg-dry	0.11	93	67	125			
1,3,5-Trimethylbenzene		1.03	mg/kg-dry	0.11	93	71	130			
Vinyl chloride		0.978	mg/kg-dry	0.11	88	32	136			
m+p-Xylenes		2.54	mg/kg-dry	0.22	115	75	136			
o-Xylene		1.27	mg/kg-dry	0.11	115	72	134			
Xylenes, Total		3.81	mg/kg-dry	0.11	115	72	136			
Surr: 1,2-Dichloroethane-d4				0.11	102	60	136			
Surr: Dibromofluoromethane				0.11	115	70	132			
Surr: p-Bromofluorobenzene				0.11	92	78	160			
Surr: Toluene-d8				0.11	105	75	138			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW8260B**									Batch: 169458	
Lab ID: **B22081361-003AMSD**	58	Sample Matrix Spike Duplicate				Run: VOA5977B_220818B			08/19/22 08:20	
Benzene		1.10	mg/kg-dry	0.11	99	70	127	6.1	20	
Bromobenzene		1.11	mg/kg-dry	0.11	100	70	135	3.9	20	
Bromochloromethane		1.20	mg/kg-dry	0.11	108	60	130	4.6	20	
Bromodichloromethane		1.14	mg/kg-dry	0.11	103	56	136	6.4	20	
Bromoform		1.11	mg/kg-dry	0.11	100	59	132	2.8	20	
Bromomethane		0.862	mg/kg-dry	0.11	78	18	134	5.9	20	
Carbon tetrachloride		1.22	mg/kg-dry	0.11	110	60	140	7.6	20	
Chlorobenzene		1.20	mg/kg-dry	0.11	108	75	132	4.6	20	
Chlorodibromomethane		1.20	mg/kg-dry	0.11	108	62	133	5.9	20	
Chloroethane		1.01	mg/kg-dry	0.11	91	12	80	9.2	20	S
Chloroform		1.14	mg/kg-dry	0.11	103	62	132	6.2	20	
Chloromethane		0.926	mg/kg-dry	0.11	83	41	138	3.0	20	
2-Chloroethyl vinyl ether		1.00	mg/kg-dry	0.11	90	41	149	5.3	20	
1,2-Dibromoethane		1.17	mg/kg-dry	0.11	106	60	135	7.0	20	
2-Chlorotoluene		1.10	mg/kg-dry	0.11	99	74	135	4.3	20	
Dibromomethane		1.15	mg/kg-dry	0.11	103	60	135	2.3	20	
1,2-Dichlorobenzene		1.13	mg/kg-dry	0.11	102	70	130	3.7	20	
4-Chlorotoluene		1.07	mg/kg-dry	0.11	97	75	136	2.8	20	
1,3-Dichlorobenzene		1.14	mg/kg-dry	0.11	103	71	132	3.0	20	
1,4-Dichlorobenzene		1.14	mg/kg-dry	0.11	102	71	131	3.6	20	
Dichlorodifluoromethane		0.786	mg/kg-dry	0.11	71	31	123	3.7	20	
1,1-Dichloroethane		1.11	mg/kg-dry	0.11	100	66	130	8.8	20	
1,2-Dichloroethane		1.12	mg/kg-dry	0.11	101	51	140	8.4	20	
1,1-Dichloroethene		1.07	mg/kg-dry	0.11	97	64	133	4.6	20	
cis-1,2-Dichloroethene		1.10	mg/kg-dry	0.11	100	63	131	7.1	20	
trans-1,2-Dichloroethene		1.11	mg/kg-dry	0.11	100	66	133	6.4	20	
1,2-Dichloropropane		1.06	mg/kg-dry	0.11	95	60	130	4.7	20	
1,3-Dichloropropane		1.06	mg/kg-dry	0.11	96	59	135	5.3	20	
2,2-Dichloropropane		0.798	mg/kg-dry	0.11	72	39	157	9.3	20	
1,1-Dichloropropene		1.08	mg/kg-dry	0.11	97	65	132	5.9	20	
cis-1,3-Dichloropropene		0.950	mg/kg-dry	0.11	86	55	134	5.4	20	
trans-1,3-Dichloropropene		1.04	mg/kg-dry	0.11	94	58	146	5.3	20	
Ethylbenzene		1.19	mg/kg-dry	0.11	107	74	136	3.7	20	
Isopropylbenzene		1.07	mg/kg-dry	0.11	96	70	133	3.1	20	
Methyl tert-butyl ether (MTBE)		1.03	mg/kg-dry	0.11	93	43	152	11	20	
Methyl ethyl ketone		11.3	mg/kg-dry	2.2	102	43	148	9.0	20	
Methylene chloride		1.05	mg/kg-dry	0.11	95	51	134	7.5	20	
n-Propylbenzene		1.07	mg/kg-dry	0.11	96	72	134	2.4	20	
Styrene		1.18	mg/kg-dry	0.11	106	70	135	6.4	20	
1,1,1,2-Tetrachloroethane		1.22	mg/kg-dry	0.11	110	35	156	4.8	20	
1,1,2,2-Tetrachloroethane		1.02	mg/kg-dry	0.11	92	59	135	1.5	20	
Tetrachloroethene		1.28	mg/kg-dry	0.11	116	64	139	5.3	20	
Toluene		1.25	mg/kg-dry	0.11	113	73	137	4.1	20	
1,1,1-Trichloroethane		1.19	mg/kg-dry	0.11	107	63	134	4.7	20	
1,1,2-Trichloroethane		1.13	mg/kg-dry	0.11	102	56	136	6.0	20	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8260B										Batch: 169458
Lab ID: B22081361-003AMSD	58	Sample Matrix Spike Duplicate				Run: VOA5977B_220818B				08/19/22 08:20
Trichloroethene		1.14	mg/kg-dry	0.11	103	65	134	5.1	20	
Trichlorofluoromethane		1.02	mg/kg-dry	0.11	92	48	140	8.2	20	
1,2,3-Trichloropropane		1.03	mg/kg-dry	0.11	93	56	142	2.7	20	
1,2,4-Trimethylbenzene		1.06	mg/kg-dry	0.11	96	67	125	3.3	20	
1,3,5-Trimethylbenzene		1.07	mg/kg-dry	0.11	96	71	130	3.4	20	
Vinyl chloride		0.931	mg/kg-dry	0.11	84	32	136	5.0	20	
m+p-Xylenes		2.41	mg/kg-dry	0.22	109	75	136	5.3	20	
o-Xylene		1.22	mg/kg-dry	0.11	110	72	134	4.6	20	
Xylenes, Total		3.63	mg/kg-dry	0.11	109	72	136	5.1	20	
Surr: 1,2-Dichloroethane-d4				0.11	92	60	136			
Surr: Dibromofluoromethane				0.11	104	70	132			
Surr: p-Bromofluorobenzene				0.11	93	78	160			
Surr: Toluene-d8				0.11	98	75	138			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW8260B**										Batch: 169488
Lab ID: **LCS-169488**	58	Laboratory Control Sample				Run: VOA5977B_220818A				08/18/22 13:45
Benzene		1.13	mg/kg	0.10	113	70	127			
Bromobenzene		0.994	mg/kg	0.10	100	70	135			
Bromochloromethane		1.23	mg/kg	0.10	123	60	130			
Bromodichloromethane		1.14	mg/kg	0.10	114	56	136			
Bromoform		1.04	mg/kg	0.10	104	59	132			
Bromomethane		0.804	mg/kg	0.10	81	18	134			
Carbon tetrachloride		1.28	mg/kg	0.10	128	60	140			
Chlorobenzene		1.20	mg/kg	0.10	121	75	132			
Chlorodibromomethane		1.19	mg/kg	0.10	119	62	133			
Chloroethane		1.14	mg/kg	0.10	115	12	80			S
Chloroform		1.17	mg/kg	0.10	117	62	132			
Chloromethane		1.06	mg/kg	0.10	106	41	138			
2-Chloroethyl vinyl ether		0.949	mg/kg	0.10	95	41	149			
1,2-Dibromoethane		1.18	mg/kg	0.10	119	60	135			
2-Chlorotoluene		0.998	mg/kg	0.10	100	74	135			
Dibromomethane		1.14	mg/kg	0.10	114	60	135			
1,2-Dichlorobenzene		1.03	mg/kg	0.10	104	70	130			
4-Chlorotoluene		0.979	mg/kg	0.10	98	75	136			
1,3-Dichlorobenzene		1.06	mg/kg	0.10	106	71	132			
1,4-Dichlorobenzene		1.04	mg/kg	0.10	105	71	131			
Dichlorodifluoromethane		1.04	mg/kg	0.10	105	31	123			
1,1-Dichloroethane		1.14	mg/kg	0.10	114	66	130			
1,2-Dichloroethane		1.19	mg/kg	0.10	119	51	140			
1,1-Dichloroethene		1.14	mg/kg	0.10	114	64	133			
cis-1,2-Dichloroethene		1.18	mg/kg	0.10	118	63	131			
trans-1,2-Dichloroethene		1.19	mg/kg	0.10	119	66	133			
1,2-Dichloropropane		1.06	mg/kg	0.10	106	60	130			
1,3-Dichloropropane		1.06	mg/kg	0.10	106	59	135			
2,2-Dichloropropane		1.17	mg/kg	0.10	117	39	157			
1,1-Dichloropropene		1.14	mg/kg	0.10	114	65	132			
cis-1,3-Dichloropropene		1.01	mg/kg	0.10	101	55	134			
trans-1,3-Dichloropropene		1.12	mg/kg	0.10	112	58	146			
Ethylbenzene		1.17	mg/kg	0.10	118	74	136			
Isopropylbenzene		0.965	mg/kg	0.10	97	70	133			
Methyl tert-butyl ether (MTBE)		1.09	mg/kg	0.10	109	43	152			
Methyl ethyl ketone		11.6	mg/kg	2.0	116	43	148			
Methylene chloride		1.09	mg/kg	0.10	109	51	134			
n-Propylbenzene		0.976	mg/kg	0.10	98	72	134			
Styrene		1.19	mg/kg	0.10	119	70	135			
1,1,1,2-Tetrachloroethane		1.22	mg/kg	0.10	122	35	156			
1,1,2,2-Tetrachloroethane		0.907	mg/kg	0.10	91	59	135			
Tetrachloroethene		1.31	mg/kg	0.10	132	64	139			
Toluene		1.16	mg/kg	0.10	116	73	137			
1,1,1-Trichloroethane		1.20	mg/kg	0.10	121	63	134			
1,1,2-Trichloroethane		1.12	mg/kg	0.10	113	56	136			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8260B										Batch: 169488
Lab ID: LCS-169488	58	Laboratory Control Sample				Run: VOA5977B_220818A				08/18/22 13:45
Trichloroethene		1.14	mg/kg	0.10	114	65	134			
Trichlorofluoromethane		1.18	mg/kg	0.10	118	48	140			
1,2,3-Trichloropropane		0.914	mg/kg	0.10	92	56	142			
1,2,4-Trimethylbenzene		0.964	mg/kg	0.10	97	67	125			
1,3,5-Trimethylbenzene		0.964	mg/kg	0.10	97	71	131			
Vinyl chloride		1.05	mg/kg	0.10	105	32	136			
m+p-Xylenes		2.37	mg/kg	0.20	119	75	136			
o-Xylene		1.19	mg/kg	0.10	119	72	134			
Xylenes, Total		3.57	mg/kg	0.10	119	72	136			
Surr: 1,2-Dichloroethane-d4				0.10	117	60	136			
Surr: Dibromofluoromethane				0.10	130	70	132			
Surr: p-Bromofluorobenzene				0.10	106	78	160			
Surr: Toluene-d8				0.10	119	75	138			
Lab ID: MB-169488	58	Method Blank				Run: VOA5977B_220818A				08/18/22 14:35
Benzene		ND	mg/kg	0.10						
Bromobenzene		ND	mg/kg	0.10						
Bromochloromethane		ND	mg/kg	0.10						
Bromodichloromethane		ND	mg/kg	0.10						
Bromoform		ND	mg/kg	0.10						
Bromomethane		ND	mg/kg	0.10						
Carbon tetrachloride		ND	mg/kg	0.10						
Chlorobenzene		ND	mg/kg	0.10						
Chlorodibromomethane		ND	mg/kg	0.10						
Chloroethane		ND	mg/kg	0.10						
Chloroform		ND	mg/kg	0.10						
Chloromethane		ND	mg/kg	0.10						
2-Chloroethyl vinyl ether		ND	mg/kg	0.10						
1,2-Dibromoethane		ND	mg/kg	0.10						
2-Chlorotoluene		ND	mg/kg	0.10						
Dibromomethane		ND	mg/kg	0.10						
1,2-Dichlorobenzene		ND	mg/kg	0.10						
4-Chlorotoluene		ND	mg/kg	0.10						
1,3-Dichlorobenzene		ND	mg/kg	0.10						
1,4-Dichlorobenzene		ND	mg/kg	0.10						
Dichlorodifluoromethane		ND	mg/kg	0.10						
1,1-Dichloroethane		ND	mg/kg	0.10						
1,2-Dichloroethane		ND	mg/kg	0.10						
1,1-Dichloroethene		ND	mg/kg	0.10						
cis-1,2-Dichloroethene		ND	mg/kg	0.10						
trans-1,2-Dichloroethene		ND	mg/kg	0.10						
1,2-Dichloropropane		ND	mg/kg	0.10						
1,3-Dichloropropane		ND	mg/kg	0.10						
2,2-Dichloropropane		ND	mg/kg	0.10						
1,1-Dichloropropene		ND	mg/kg	0.10						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8260B										Batch: 169488
Lab ID: MB-169488	58	Method Blank				Run: VOA5977B_220818A				08/18/22 14:35
cis-1,3-Dichloropropene		ND	mg/kg	0.10						
trans-1,3-Dichloropropene		ND	mg/kg	0.10						
Ethylbenzene		ND	mg/kg	0.10						
Isopropylbenzene		ND	mg/kg	0.10						
Methyl tert-butyl ether (MTBE)		ND	mg/kg	0.10						
Methyl ethyl ketone		ND	mg/kg	2.0						
Methylene chloride		ND	mg/kg	0.10						
n-Propylbenzene		ND	mg/kg	0.10						
Styrene		ND	mg/kg	0.10						
1,1,1,2-Tetrachloroethane		ND	mg/kg	0.10						
1,1,2,2-Tetrachloroethane		ND	mg/kg	0.10						
Tetrachloroethene		ND	mg/kg	0.10						
Toluene		ND	mg/kg	0.10						
1,1,1-Trichloroethane		ND	mg/kg	0.10						
1,1,2-Trichloroethane		ND	mg/kg	0.10						
Trichloroethene		ND	mg/kg	0.10						
Trichlorofluoromethane		ND	mg/kg	0.10						
1,2,3-Trichloropropane		ND	mg/kg	0.10						
1,2,4-Trimethylbenzene		ND	mg/kg	0.10						
1,3,5-Trimethylbenzene		ND	mg/kg	0.10						
Vinyl chloride		ND	mg/kg	0.10						
m+p-Xylenes		ND	mg/kg	0.20						
o-Xylene		ND	mg/kg	0.10						
Xylenes, Total		ND	mg/kg	0.10						
Surr: 1,2-Dichloroethane-d4				0.10	120	60	136			
Surr: Dibromofluoromethane				0.10	130	70	132			
Surr: p-Bromofluorobenzene				0.10	106	78	160			
Surr: Toluene-d8				0.10	117	75	138			
Lab ID: B22081361-021AMS	58	Sample Matrix Spike				Run: VOA5977B_220820A				08/20/22 11:51
Benzene		0.893	mg/kg	0.10	90	70	127			
Bromobenzene		0.893	mg/kg	0.10	89	70	135			
Bromochloromethane		0.938	mg/kg	0.10	94	60	130			
Bromodichloromethane		0.952	mg/kg	0.10	95	56	136			
Bromoform		0.931	mg/kg	0.10	93	59	132			
Bromomethane		0.700	mg/kg	0.10	70	18	134			
Carbon tetrachloride		1.01	mg/kg	0.10	101	60	140			
Chlorobenzene		0.981	mg/kg	0.10	98	75	132			
Chlorodibromomethane		0.989	mg/kg	0.10	99	62	133			
Chloroethane		0.826	mg/kg	0.10	83	12	80			S
Chloroform		0.927	mg/kg	0.10	93	62	132			
Chloromethane		0.743	mg/kg	0.10	74	41	138			
2-Chloroethyl vinyl ether		0.792	mg/kg	0.10	79	41	149			
1,2-Dibromoethane		0.956	mg/kg	0.10	96	60	135			
2-Chlorotoluene		0.904	mg/kg	0.10	91	74	135			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8260B										Batch: 169488
Lab ID: B22081361-021AMS	58	Sample Matrix Spike				Run: VOA5977B_220820A				08/20/22 11:51
Dibromomethane		0.928	mg/kg	0.10	93	60	135			
1,2-Dichlorobenzene		0.936	mg/kg	0.10	94	70	130			
4-Chlorotoluene		0.894	mg/kg	0.10	90	75	136			
1,3-Dichlorobenzene		0.967	mg/kg	0.10	97	71	132			
1,4-Dichlorobenzene		0.955	mg/kg	0.10	96	71	131			
Dichlorodifluoromethane		0.574	mg/kg	0.10	57	31	123			
1,1-Dichloroethane		0.895	mg/kg	0.10	90	66	130			
1,2-Dichloroethane		0.921	mg/kg	0.10	92	51	140			
1,1-Dichloroethene		0.858	mg/kg	0.10	86	64	133			
cis-1,2-Dichloroethene		0.893	mg/kg	0.10	89	63	131			
trans-1,2-Dichloroethene		0.879	mg/kg	0.10	88	66	133			
1,2-Dichloropropane		0.874	mg/kg	0.10	88	60	130			
1,3-Dichloropropane		0.877	mg/kg	0.10	88	59	135			
2,2-Dichloropropane		0.941	mg/kg	0.10	94	39	157			
1,1-Dichloropropene		0.881	mg/kg	0.10	88	65	132			
cis-1,3-Dichloropropene		0.824	mg/kg	0.10	83	55	134			
trans-1,3-Dichloropropene		0.897	mg/kg	0.10	90	58	146			
Ethylbenzene		0.977	mg/kg	0.10	98	74	136			
Isopropylbenzene		0.879	mg/kg	0.10	88	70	133			
Methyl tert-butyl ether (MTBE)		0.832	mg/kg	0.10	83	43	152			
Methyl ethyl ketone		8.99	mg/kg	2.0	90	43	148			
Methylene chloride		0.857	mg/kg	0.10	86	51	134			
n-Propylbenzene		0.899	mg/kg	0.10	90	72	134			
Styrene		0.980	mg/kg	0.10	98	70	135			
1,1,1,2-Tetrachloroethane		1.03	mg/kg	0.10	104	35	156			
1,1,2,2-Tetrachloroethane		0.824	mg/kg	0.10	83	59	135			
Tetrachloroethene		1.09	mg/kg	0.10	109	64	139			
Toluene		1.01	mg/kg	0.10	101	73	137			
1,1,1-Trichloroethane		0.960	mg/kg	0.10	96	63	134			
1,1,2-Trichloroethane		0.936	mg/kg	0.10	94	56	136			
Trichloroethene		0.931	mg/kg	0.10	93	65	134			
Trichlorofluoromethane		0.833	mg/kg	0.10	83	48	140			
1,2,3-Trichloropropane		0.863	mg/kg	0.10	86	56	142			
1,2,4-Trimethylbenzene		0.898	mg/kg	0.10	90	67	125			
1,3,5-Trimethylbenzene		0.900	mg/kg	0.10	90	71	130			
Vinyl chloride		0.750	mg/kg	0.10	75	32	136			
m+p-Xylenes		1.99	mg/kg	0.20	100	75	136			
o-Xylene		0.982	mg/kg	0.10	98	72	134			
Xylenes, Total		2.98	mg/kg	0.10	99	72	136			
Surr: 1,2-Dichloroethane-d4				0.10	83	60	136			
Surr: Dibromofluoromethane				0.10	93	70	132			
Surr: p-Bromofluorobenzene				0.10	83	78	160			
Surr: Toluene-d8				0.10	88	75	138			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW8260B**									Batch: 169488	
Lab ID: **B22081361-021AMSD**	58	Sample Matrix Spike Duplicate				Run: VOA5977B_220820A			08/20/22 12:16	
Benzene		0.910	mg/kg	0.10	91	70	127	1.9	20	
Bromobenzene		0.898	mg/kg	0.10	90	70	135	0.6	20	
Bromochloromethane		0.987	mg/kg	0.10	99	60	130	5.1	20	
Bromodichloromethane		0.965	mg/kg	0.10	97	56	136	1.3	20	
Bromoform		0.930	mg/kg	0.10	93	59	132	0.1	20	
Bromomethane		0.716	mg/kg	0.10	72	18	134	2.4	20	
Carbon tetrachloride		0.998	mg/kg	0.10	100	60	140	0.9	20	
Chlorobenzene		1.00	mg/kg	0.10	100	75	132	1.9	20	
Chlorodibromomethane		0.988	mg/kg	0.10	99	62	133	0.1	20	
Chloroethane		0.827	mg/kg	0.10	83	12	80	0.1	20	S
Chloroform		0.961	mg/kg	0.10	96	62	132	3.7	20	
Chloromethane		0.737	mg/kg	0.10	74	41	138	0.8	20	
2-Chloroethyl vinyl ether		0.835	mg/kg	0.10	84	41	149	5.2	20	
1,2-Dibromoethane		0.985	mg/kg	0.10	99	60	135	3.1	20	
2-Chlorotoluene		0.909	mg/kg	0.10	91	74	135	0.6	20	
Dibromomethane		0.941	mg/kg	0.10	94	60	135	1.4	20	
1,2-Dichlorobenzene		0.947	mg/kg	0.10	95	70	130	1.1	20	
4-Chlorotoluene		0.901	mg/kg	0.10	90	75	136	0.7	20	
1,3-Dichlorobenzene		0.962	mg/kg	0.10	96	71	132	0.5	20	
1,4-Dichlorobenzene		0.958	mg/kg	0.10	96	71	131	0.4	20	
Dichlorodifluoromethane		0.568	mg/kg	0.10	57	31	123	1.0	20	
1,1-Dichloroethane		0.926	mg/kg	0.10	93	66	130	3.4	20	
1,2-Dichloroethane		0.942	mg/kg	0.10	94	51	140	2.3	20	
1,1-Dichloroethene		0.873	mg/kg	0.10	87	64	133	1.7	20	
cis-1,2-Dichloroethene		0.911	mg/kg	0.10	91	63	131	1.9	20	
trans-1,2-Dichloroethene		0.914	mg/kg	0.10	92	66	133	3.8	20	
1,2-Dichloropropane		0.891	mg/kg	0.10	89	60	130	2.0	20	
1,3-Dichloropropane		0.899	mg/kg	0.10	90	59	135	2.4	20	
2,2-Dichloropropane		0.932	mg/kg	0.10	93	39	157	1.0	20	
1,1-Dichloropropene		0.891	mg/kg	0.10	89	65	132	1.1	20	
cis-1,3-Dichloropropene		0.834	mg/kg	0.10	84	55	134	1.2	20	
trans-1,3-Dichloropropene		0.921	mg/kg	0.10	92	58	146	2.7	20	
Ethylbenzene		0.984	mg/kg	0.10	99	74	136	0.7	20	
Isopropylbenzene		0.882	mg/kg	0.10	88	70	133	0.3	20	
Methyl tert-butyl ether (MTBE)		0.865	mg/kg	0.10	87	43	152	3.9	20	
Methyl ethyl ketone		9.29	mg/kg	2.0	93	43	148	3.2	20	
Methylene chloride		0.882	mg/kg	0.10	88	51	134	2.8	20	
n-Propylbenzene		0.901	mg/kg	0.10	90	72	134	0.2	20	
Styrene		0.994	mg/kg	0.10	100	70	135	1.4	20	
1,1,1,2-Tetrachloroethane		1.03	mg/kg	0.10	103	35	156	0.3	20	
1,1,2,2-Tetrachloroethane		0.844	mg/kg	0.10	85	59	135	2.3	20	
Tetrachloroethene		1.08	mg/kg	0.10	108	64	139	0.9	20	
Toluene		1.02	mg/kg	0.10	102	73	137	1.0	20	
1,1,1-Trichloroethane		0.982	mg/kg	0.10	98	63	134	2.2	20	
1,1,2-Trichloroethane		0.962	mg/kg	0.10	96	56	136	2.7	20	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8260B										Batch: 169488
Lab ID: B22081361-021AMSD	58	Sample Matrix Spike Duplicate				Run: VOA5977B_220820A				08/20/22 12:16
Trichloroethene		0.937	mg/kg	0.10	94	65	134	0.7	20	
Trichlorofluoromethane		0.820	mg/kg	0.10	82	48	140	1.5	20	
1,2,3-Trichloropropane		0.886	mg/kg	0.10	89	56	142	2.6	20	
1,2,4-Trimethylbenzene		0.907	mg/kg	0.10	91	67	125	1.1	20	
1,3,5-Trimethylbenzene		0.905	mg/kg	0.10	91	71	130	0.6	20	
Vinyl chloride		0.746	mg/kg	0.10	75	32	136	0.5	20	
m+p-Xylenes		2.03	mg/kg	0.20	102	75	136	1.6	20	
o-Xylene		0.987	mg/kg	0.10	99	72	134	0.4	20	
Xylenes, Total		3.01	mg/kg	0.10	101	72	136	1.2	20	
Surr: 1,2-Dichloroethane-d4				0.10	85	60	136			
Surr: Dibromofluoromethane				0.10	94	70	132			
Surr: p-Bromofluorobenzene				0.10	84	78	160			
Surr: Toluene-d8				0.10	89	75	138			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169492
Lab ID: MB-169492	72	Method Blank				Run: SV5973N2.I_220820B				08/20/22 16:43
1,2,4-Trichlorobenzene		ND	mg/kg	0.33						
1,2-Dichlorobenzene		ND	mg/kg	0.33						
1,3-Dichlorobenzene		ND	mg/kg	0.33						
1,4-Dichlorobenzene		ND	mg/kg	0.33						
1-Methylnaphthalene		ND	mg/kg	0.33						
2,4,5-Trichlorophenol		ND	mg/kg	0.33						
2,4,6-Trichlorophenol		ND	mg/kg	0.33						
2,4-Dichlorophenol		ND	mg/kg	0.33						
2,4-Dimethylphenol		ND	mg/kg	0.33						
2,4-Dinitrophenol		ND	mg/kg	0.67						
2,4-Dinitrotoluene		ND	mg/kg	0.33						
2,6-Dinitrotoluene		ND	mg/kg	0.33						
2-Chloronaphthalene		ND	mg/kg	0.33						
2-Chlorophenol		ND	mg/kg	0.33						
2-Methylnaphthalene		ND	mg/kg	0.33						
2-Nitrophenol		ND	mg/kg	0.33						
3,3´-Dichlorobenzidine		ND	mg/kg	0.67						
4,6-Dinitro-2-methylphenol		ND	mg/kg	0.67						
4-Bromophenyl phenyl ether		ND	mg/kg	0.33						
4-Chloro-2-methylphenol		ND	mg/kg	0.33						
4-Chloro-3-methylphenol		ND	mg/kg	0.33						
4-Chlorophenol		ND	mg/kg	0.33						
4-Chlorophenyl phenyl ether		ND	mg/kg	0.33						
4-Nitrophenol		ND	mg/kg	0.67						
Acenaphthene		ND	mg/kg	0.33						
Acenaphthylene		ND	mg/kg	0.33						
Anthracene		ND	mg/kg	0.33						
Azobenzene		ND	mg/kg	0.33						
Benzidine		ND	mg/kg	0.33						
Benzo(a)anthracene		ND	mg/kg	0.33						
Benzo(a)pyrene		ND	mg/kg	0.33						
Benzo(b)fluoranthene		ND	mg/kg	0.33						
Benzo(g,h,i)perylene		ND	mg/kg	0.33						
Benzo(k)fluoranthene		ND	mg/kg	0.33						
bis(-2-chloroethoxy)Methane		ND	mg/kg	0.33						
bis(-2-chloroethyl)Ether		ND	mg/kg	0.33						
bis(2-chloroisopropyl)Ether		ND	mg/kg	0.33						
bis(2-ethylhexyl)Phthalate		ND	mg/kg	0.33						
Butylbenzylphthalate		ND	mg/kg	0.33						
Chrysene		ND	mg/kg	0.33						
Dibenzo(a,h)anthracene		ND	mg/kg	0.33						
Diethyl phthalate		ND	mg/kg	0.33						
Dimethyl phthalate		ND	mg/kg	0.33						
Di-n-butyl phthalate		ND	mg/kg	0.33						
Di-n-octyl phthalate		ND	mg/kg	0.33						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169492
Lab ID: MB-169492	72	Method Blank				Run: SV5973N2.I_220820B				08/20/22 16:43
Fluoranthene		ND	mg/kg	0.33						
Fluorene		ND	mg/kg	0.33						
Hexachlorobenzene		ND	mg/kg	0.33						
Hexachlorobutadiene		ND	mg/kg	0.33						
Hexachlorocyclopentadiene		ND	mg/kg	0.33						
Hexachloroethane		ND	mg/kg	0.33						
Indeno(1,2,3-cd)pyrene		ND	mg/kg	0.33						
Isophorone		ND	mg/kg	0.33						
m+p-Cresols		ND	mg/kg	0.33						
Naphthalene		ND	mg/kg	0.33						
Nitrobenzene		ND	mg/kg	0.33						
n-Nitrosodimethylamine		ND	mg/kg	0.33						
n-Nitroso-di-n-propylamine		ND	mg/kg	0.33						
n-Nitrosodiphenylamine		ND	mg/kg	0.33						
o-Cresol		ND	mg/kg	0.33						
Pentachlorophenol		ND	mg/kg	0.67						
Phenanthrene		ND	mg/kg	0.33						
Phenol		ND	mg/kg	0.33						
Pyrene		ND	mg/kg	0.33						
Pyridine		ND	mg/kg	0.33						
Triallate		ND	mg/kg	0.33						
Surr: 2,4,6-Tribromophenol				0.33	71	53	141			
Surr: 2-Fluorobiphenyl				0.33	74	63	98			
Surr: 2-Fluorophenol				0.33	73	53	101			
Surr: Nitrobenzene-d5				0.33	64	53	101			
Surr: Phenol-d5				0.33	70	55	100			
Surr: Terphenyl-d14				0.33	97	71	118			
Lab ID: LCS-169492	72	Laboratory Control Sample				Run: SV5973N2.I_220820B				08/20/22 17:13
1,2,4-Trichlorobenzene		2.28	mg/kg	0.33	68	39	100			
1,2-Dichlorobenzene		2.11	mg/kg	0.33	63	22	104			
1,3-Dichlorobenzene		2.05	mg/kg	0.33	62	19	103			
1,4-Dichlorobenzene		2.07	mg/kg	0.33	62	17	106			
1-Methylnaphthalene		2.31	mg/kg	0.33	69	63	97			
2,4,5-Trichlorophenol		2.80	mg/kg	0.33	84	68	120			
2,4,6-Trichlorophenol		2.47	mg/kg	0.33	74	65	117			
2,4-Dichlorophenol		2.10	mg/kg	0.33	63	61	110			
2,4-Dimethylphenol		2.08	mg/kg	0.33	63	62	100			
2,4-Dinitrophenol		2.08	mg/kg	0.67	62	47	115			
2,4-Dinitrotoluene		2.86	mg/kg	0.33	86	72	122			
2,6-Dinitrotoluene		3.05	mg/kg	0.33	92	60	126			
2-Chloronaphthalene		2.70	mg/kg	0.33	81	63	106			
2-Chlorophenol		2.05	mg/kg	0.33	62	61	103			
2-Methylnaphthalene		2.50	mg/kg	0.33	75	68	103			
2-Nitrophenol		2.03	mg/kg	0.33	61	58	102			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169492
Lab ID: LCS-169492	72	Laboratory Control Sample				Run: SV5973N2.I_220820B				08/20/22 17:13
3,3´-Dichlorobenzidine		2.24	mg/kg	0.67	67	35	117			
4,6-Dinitro-2-methylphenol		2.23	mg/kg	0.67	67	55	121			
4-Bromophenyl phenyl ether		3.13	mg/kg	0.33	94	72	113			
4-Chloro-2-methylphenol		2.59	mg/kg	0.33	78	63	106			
4-Chloro-3-methylphenol		2.42	mg/kg	0.33	73	68	107			
4-Chlorophenol		2.69	mg/kg	0.33	81	61	109			
4-Chlorophenyl phenyl ether		2.92	mg/kg	0.33	88	71	110			
4-Nitrophenol		2.35	mg/kg	0.67	70	62	118			
Acenaphthene		2.75	mg/kg	0.33	83	73	104			
Acenaphthylene		2.57	mg/kg	0.33	77	64	101			
Anthracene		3.00	mg/kg	0.33	90	72	110			
Azobenzene		2.78	mg/kg	0.33	83	68	108			
Benzidine		0.182	mg/kg	0.33	5	10	80			S
Benzo(a)anthracene		3.12	mg/kg	0.33	94	75	112			
Benzo(a)pyrene		3.19	mg/kg	0.33	96	71	106			
Benzo(b)fluoranthene		3.31	mg/kg	0.33	99	65	121			
Benzo(g,h,i)perylene		3.07	mg/kg	0.33	92	79	117			
Benzo(k)fluoranthene		3.22	mg/kg	0.33	97	64	118			
bis(-2-chloroethoxy)Methane		2.63	mg/kg	0.33	79	63	104			
bis(-2-chloroethyl)Ether		2.43	mg/kg	0.33	73	20	130			
bis(2-chloroisopropyl)Ether		2.08	mg/kg	0.33	63	28	93			
bis(2-ethylhexyl)Phthalate		3.23	mg/kg	0.33	97	65	132			
Butylbenzylphthalate		3.16	mg/kg	0.33	95	68	131			
Chrysene		3.05	mg/kg	0.33	92	76	109			
Dibenzo(a,h)anthracene		3.10	mg/kg	0.33	93	75	111			
Diethyl phthalate		3.05	mg/kg	0.33	92	70	119			
Dimethyl phthalate		3.05	mg/kg	0.33	91	70	118			
Di-n-butyl phthalate		3.10	mg/kg	0.33	93	72	126			
Di-n-octyl phthalate		3.31	mg/kg	0.33	99	68	127			
Fluoranthene		3.00	mg/kg	0.33	90	76	109			
Fluorene		2.79	mg/kg	0.33	84	67	108			
Hexachlorobenzene		3.03	mg/kg	0.33	91	71	107			
Hexachlorobutadiene		2.29	mg/kg	0.33	69	31	103			
Hexachlorocyclopentadiene		2.63	mg/kg	0.33	79	56	108			
Hexachloroethane		2.02	mg/kg	0.33	61	10	127			
Indeno(1,2,3-cd)pyrene		3.30	mg/kg	0.33	99	63	112			
Isophorone		2.33	mg/kg	0.33	70	63	95			
m+p-Cresols		2.64	mg/kg	0.33	79	64	109			
Naphthalene		2.49	mg/kg	0.33	75	60	99			
Nitrobenzene		2.42	mg/kg	0.33	73	57	110			
n-Nitrosodimethylamine		2.16	mg/kg	0.33	65	43	106			
n-Nitroso-di-n-propylamine		2.82	mg/kg	0.33	85	61	107			
n-Nitrosodiphenylamine		3.08	mg/kg	0.33	92	71	119			
o-Cresol		2.70	mg/kg	0.33	81	65	111			
Pentachlorophenol		2.42	mg/kg	0.67	73	60	121			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169492
Lab ID: LCS-169492	72	Laboratory Control Sample				Run: SV5973N2.I_220820B				08/20/22 17:13
Phenanthrene		2.81	mg/kg	0.33	84	73	104			
Phenol		2.07	mg/kg	0.33	62	42	124			
Pyrene		2.83	mg/kg	0.33	85	77	111			
Pyridine		1.33	mg/kg	0.33	40	10	74			
Triallate		2.92	mg/kg	0.33	88	65	117			
Surr: 2,4,6-Tribromophenol				0.33	86	53	141			
Surr: 2-Fluorobiphenyl				0.33	73	63	98			
Surr: 2-Fluorophenol				0.33	77	53	101			
Surr: Nitrobenzene-d5				0.33	74	53	101			
Surr: Phenol-d5				0.33	79	55	100			
Surr: Terphenyl-d14				0.33	92	71	118			
Lab ID: B22081133-001AMS	67	Sample Matrix Spike				Run: SV5973N2.I_220820B				08/20/22 18:14
1,2,4-Trichlorobenzene		1.76	mg/kg	0.33	53	39	100			
1,2-Dichlorobenzene		2.09	mg/kg	0.33	63	22	104			
1,3-Dichlorobenzene		2.03	mg/kg	0.33	61	19	103			
1,4-Dichlorobenzene		2.04	mg/kg	0.33	61	17	106			
2,4,5-Trichlorophenol		2.62	mg/kg	0.33	79	68	120			
2,4,6-Trichlorophenol		2.14	mg/kg	0.33	64	65	117			S
2,4-Dichlorophenol		3.73	mg/kg	0.33	112	61	110			S
2,4-Dimethylphenol		4.31	mg/kg	0.33	91	62	100			
2,4-Dinitrophenol		ND	mg/kg	0.67	0	47	115			S
2,4-Dinitrotoluene		4.93	mg/kg	0.33	148	72	122			S
2,6-Dinitrotoluene		3.02	mg/kg	0.33	91	60	126			
2-Chloronaphthalene		2.30	mg/kg	0.33	69	63	106			
2-Chlorophenol		1.98	mg/kg	0.33	60	61	103			S
2-Nitrophenol		ND	mg/kg	0.33	0	58	102			S
3,3´-Dichlorobenzidine		0.920	mg/kg	1.3	28	35	117			S
4,6-Dinitro-2-methylphenol		1.47	mg/kg	0.67	44	55	121			S
4-Bromophenyl phenyl ether		2.86	mg/kg	0.33	86	72	113			
4-Chloro-2-methylphenol		3.24	mg/kg	0.33	97	63	106			
4-Chloro-3-methylphenol		3.33	mg/kg	0.33	100	68	107			
4-Chlorophenol		ND	mg/kg	0.33	0	61	109			S
4-Chlorophenyl phenyl ether		2.83	mg/kg	0.33	85	71	110			
4-Nitrophenol		2.05	mg/kg	0.67	61	62	118			S
Acenaphthene		3.10	mg/kg	0.33	77	73	104			
Acenaphthylene		2.21	mg/kg	0.33	66	64	101			
Anthracene		3.07	mg/kg	0.33	92	72	110			
Azobenzene		2.66	mg/kg	0.33	80	68	108			
Benzidine		ND	mg/kg	0.67	0	10	80			S
Benzo(a)anthracene		3.26	mg/kg	0.33	98	75	112			
Benzo(a)pyrene		2.61	mg/kg	0.33	78	71	106			
Benzo(b)fluoranthene		3.30	mg/kg	0.33	99	65	121			
Benzo(g,h,i)perylene		2.48	mg/kg	0.33	75	79	117			S
Benzo(k)fluoranthene		2.51	mg/kg	0.33	75	64	118			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169492
Lab ID: B22081133-001AMS	67	Sample Matrix Spike				Run: SV5973N2.I_220820B				08/20/22 18:14
bis(-2-chloroethoxy)Methane		2.64	mg/kg	0.33	79	63	104			
bis(-2-chloroethyl)Ether		2.43	mg/kg	0.33	73	20	130			
bis(2-chloroisopropyl)Ether		2.26	mg/kg	0.33	68	28	93			
bis(2-ethylhexyl)Phthalate		3.12	mg/kg	0.33	94	65	132			
Butylbenzylphthalate		3.20	mg/kg	0.67	96	68	131			
Chrysene		2.97	mg/kg	0.33	89	76	109			
Dibenzo(a,h)anthracene		2.68	mg/kg	0.33	81	75	111			
Diethyl phthalate		2.88	mg/kg	0.33	86	70	119			
Dimethyl phthalate		2.68	mg/kg	0.33	80	70	118			
Di-n-butyl phthalate		3.13	mg/kg	0.33	94	72	126			
Di-n-octyl phthalate		3.20	mg/kg	0.33	96	68	127			
Fluoranthene		2.89	mg/kg	0.33	87	76	109			
Fluorene		6.07	mg/kg	0.33	81	67	108			
Hexachlorobenzene		2.76	mg/kg	0.33	83	71	107			
Hexachlorobutadiene		3.92	mg/kg	0.33	118	31	103			S
Hexachlorocyclopentadiene		1.98	mg/kg	0.67	60	56	108			
Hexachloroethane		2.96	mg/kg	0.33	89	10	127			
Indeno(1,2,3-cd)pyrene		2.74	mg/kg	0.33	82	63	112			
Isophorone		4.14	mg/kg	0.33	125	63	95			S
m+p-Cresols		7.08	mg/kg	0.33	78	64	109			
Nitrobenzene		3.01	mg/kg	0.33	91	57	110			
n-Nitrosodimethylamine		2.05	mg/kg	0.33	61	43	106			
n-Nitroso-di-n-propylamine		1.13	mg/kg	0.33	34	61	107			S
n-Nitrosodiphenylamine		3.01	mg/kg	0.33	90	71	119			
o-Cresol		8.13	mg/kg	0.33	79	65	111			
Pentachlorophenol		1.80	mg/kg	0.67	54	60	121			S
Pyrene		3.06	mg/kg	0.33	92	77	111			
Pyridine		ND	mg/kg	0.33	0	10	74			S
Triallate		3.26	mg/kg	0.33	98	65	117			
Surr: 2,4,6-Tribromophenol				0.33	86	53	141			
Surr: 2-Fluorobiphenyl				0.33	73	63	98			
Surr: 2-Fluorophenol				0.33	64	53	101			
Surr: Nitrobenzene-d5				0.33	99	53	101			
Surr: Phenol-d5				0.33	77	55	100			
Surr: Terphenyl-d14				0.33	90	71	118			
Lab ID: B22081133-001AMSD	67	Sample Matrix Spike Duplicate				Run: SV5973N2.I_220820B				08/20/22 18:44
1,2,4-Trichlorobenzene		1.83	mg/kg	0.34	55	39	100	3.8	40	
1,2-Dichlorobenzene		2.04	mg/kg	0.34	61	22	104	2.5	40	
1,3-Dichlorobenzene		1.98	mg/kg	0.34	59	19	103	2.6	40	
1,4-Dichlorobenzene		2.00	mg/kg	0.34	60	17	106	2.0	40	
2,4,5-Trichlorophenol		2.63	mg/kg	0.34	79	68	120	0.4	40	
2,4,6-Trichlorophenol		2.11	mg/kg	0.34	63	65	117	1.5	40	S
2,4-Dichlorophenol		3.95	mg/kg	0.34	118	61	110	5.8	40	S
2,4-Dimethylphenol		4.45	mg/kg	0.34	94	62	100	3.1	40	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW8270C**										Batch: 169492
Lab ID: **B22081133-001AMSD**	67	Sample Matrix Spike Duplicate				Run: SV5973N2.I_220820B			08/20/22 18:44	
2,4-Dinitrophenol		ND	mg/kg	0.67	0	47	115		40	S
2,4-Dinitrotoluene		5.26	mg/kg	0.34	157	72	122	6.4	40	S
2,6-Dinitrotoluene		3.05	mg/kg	0.34	91	60	126	1.2	40	
2-Chloronaphthalene		2.38	mg/kg	0.34	71	63	106	3.2	40	
2-Chlorophenol		1.97	mg/kg	0.34	59	61	103	0.4	40	S
2-Nitrophenol		ND	mg/kg	0.34	0	58	102		40	S
3,3´-Dichlorobenzidine		1.06	mg/kg	1.3	32	35	117		40	S
4,6-Dinitro-2-methylphenol		1.33	mg/kg	0.67	40	55	121	10	40	S
4-Bromophenyl phenyl ether		2.83	mg/kg	0.34	85	72	113	1.1	40	
4-Chloro-2-methylphenol		3.39	mg/kg	0.34	101	63	106	4.3	40	
4-Chloro-3-methylphenol		3.31	mg/kg	0.34	99	68	107	0.6	40	
4-Chlorophenol		ND	mg/kg	0.34	0	61	109		40	S
4-Chlorophenyl phenyl ether		2.81	mg/kg	0.34	84	71	110	0.7	40	
4-Nitrophenol		1.99	mg/kg	0.67	60	62	118	2.6	40	S
Acenaphthene		3.11	mg/kg	0.34	77	73	104	0.3	40	
Acenaphthylene		3.25	mg/kg	0.34	97	64	101	38	40	
Anthracene		2.98	mg/kg	0.34	89	72	110	2.9	40	
Azobenzene		2.56	mg/kg	0.34	76	68	108	3.9	40	
Benzidine		ND	mg/kg	0.67	0	10	80		40	S
Benzo(a)anthracene		3.43	mg/kg	0.34	103	75	112	5.2	40	
Benzo(a)pyrene		2.68	mg/kg	0.34	80	71	106	2.9	40	
Benzo(b)fluoranthene		3.25	mg/kg	0.34	97	65	121	1.4	40	
Benzo(g,h,i)perylene		2.53	mg/kg	0.34	76	79	117	1.8	40	S
Benzo(k)fluoranthene		2.61	mg/kg	0.34	78	64	118	4.0	40	
bis(-2-chloroethoxy)Methane		2.65	mg/kg	0.34	79	63	104	0.5	40	
bis(-2-chloroethyl)Ether		2.40	mg/kg	0.34	72	20	130	1.4	40	
bis(2-chloroisopropyl)Ether		1.28	mg/kg	0.34	38	28	93	55	40	R
bis(2-ethylhexyl)Phthalate		3.68	mg/kg	0.34	110	65	132	16	40	
Butylbenzylphthalate		3.54	mg/kg	0.67	106	68	131	10	40	
Chrysene		4.44	mg/kg	0.34	133	76	109	40	40	S
Dibenzo(a,h)anthracene		2.77	mg/kg	0.34	83	75	111	3.1	40	
Diethyl phthalate		3.00	mg/kg	0.34	90	70	119	4.1	40	
Dimethyl phthalate		2.61	mg/kg	0.34	78	70	118	2.4	40	
Di-n-butyl phthalate		3.27	mg/kg	0.34	98	72	126	4.5	40	
Di-n-octyl phthalate		3.43	mg/kg	0.34	103	68	127	7.2	40	
Fluoranthene		3.00	mg/kg	0.34	90	76	109	3.9	40	
Fluorene		6.12	mg/kg	0.34	82	67	108	0.8	40	
Hexachlorobenzene		2.91	mg/kg	0.34	87	71	107	5.0	40	
Hexachlorobutadiene		4.00	mg/kg	0.34	120	31	103	2.0	40	S
Hexachlorocyclopentadiene		1.81	mg/kg	0.67	54	56	108	8.9	40	S
Hexachloroethane		2.83	mg/kg	0.34	85	10	127	4.6	40	
Indeno(1,2,3-cd)pyrene		2.89	mg/kg	0.34	86	63	112	5.4	40	
Isophorone		4.29	mg/kg	0.34	128	63	95	3.4	40	S
m+p-Cresols		6.95	mg/kg	0.34	74	64	109	1.8	40	
Nitrobenzene		3.56	mg/kg	0.34	106	57	110	17	40	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

R - Relative Percent Difference (RPD) exceeds advisory limit

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C									Batch: 169492	
Lab ID: B22081133-001AMSD	67	Sample Matrix Spike Duplicate				Run: SV5973N2.I_220820B			08/20/22 18:44	
n-Nitrosodimethylamine		2.12	mg/kg	0.34	64	43	106	3.7	40	
n-Nitroso-di-n-propylamine		1.25	mg/kg	0.34	37	61	107	10	40	S
n-Nitrosodiphenylamine		3.07	mg/kg	0.34	92	71	119	2.0	40	
o-Cresol		7.96	mg/kg	0.34	73	65	111	2.1	40	
Pentachlorophenol		1.80	mg/kg	0.67	54	60	121	0	40	S
Pyrene		3.10	mg/kg	0.34	93	77	111	1.3	40	
Pyridine		ND	mg/kg	0.34	0	10	74		40	S
Triallate		3.28	mg/kg	0.34	98	65	117	0.6	40	
Surr: 2,4,6-Tribromophenol				0.34	91	53	141			
Surr: 2-Fluorobiphenyl				0.34	76	63	98			
Surr: 2-Fluorophenol				0.34	62	53	101			
Surr: Nitrobenzene-d5				0.34	101	53	101			
Surr: Phenol-d5				0.34	75	55	100			
Surr: Terphenyl-d14				0.34	92	71	118			
Lab ID: B22081133-001AMS	2	Sample Matrix Spike				Run: SV5973N2.I_220822A			08/22/22 18:45	
Phenanthrene		15.0	mg/kg	33	116	73	104			S
Phenol		ND	mg/kg	33		42	124			O
Lab ID: B22081133-001AMSD	2	Sample Matrix Spike Duplicate				Run: SV5973N2.I_220822A			08/22/22 19:16	
Phenanthrene		16.3	mg/kg	34	155	73	104		40	S
Phenol		ND	mg/kg	34		42	124		40	O
Lab ID: B22081133-001AMS	3	Sample Duplicate				Run: SV5973N2.I_220822A			08/22/22 18:45	
1-Methylnaphthalene		158	mg/kg	33				3.8	40	
2-Methylnaphthalene		364	mg/kg	33				1.4	40	
Naphthalene		877	mg/kg	33				1.3	40	
Lab ID: B22081133-001AMSD	3	Sample Duplicate				Run: SV5973N2.I_220822A			08/22/22 19:16	
1-Methylnaphthalene		168	mg/kg	34				2.0	40	
2-Methylnaphthalene		366	mg/kg	34				1.7	40	
Naphthalene		886	mg/kg	34				2.3	40	
- Because the sample amount was significantly higher than the spike amount for these analytes, the MS and MSD spike samples for these analytes are calculated as Duplicate samples based on the spike amount added plus the original sample concentration.										
Lab ID: APP2A-169492	7	Laboratory Control Sample				Run: SV5973N2.I_220818B			08/19/22 09:46	
Diallate		3.05	mg/kg	0.17	92	24	141			
Surr: 2,4,6-Tribromophenol				0.33	108	64	125			
Surr: 2-Fluorobiphenyl				0.33	76	68	96			
Surr: 2-Fluorophenol				0.33	85	59	102			
Surr: Nitrobenzene-d5				0.33	126	65	92			S
Surr: Phenol-d5				0.33	77	67	96			
Surr: Terphenyl-d14				0.33	99	46	147			
Lab ID: APP2AD-169492	7	Laboratory Control Sample				Run: SV5973N2.I_220818B			08/19/22 10:16	
Diallate		3.32	mg/kg	0.17	100	24	141	8.4	40	
Surr: 2,4,6-Tribromophenol				0.33	114	64	125			
Surr: 2-Fluorobiphenyl				0.33	80	68	96			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

O - Diluted out

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169492
Lab ID: APP2AD-169492	7	Laboratory Control Sample				Run: SV5973N2.I_220818B				08/19/22 10:16
Surr: 2-Fluorophenol				0.33	86	59	102			
Surr: Nitrobenzene-d5				0.33	148	65	92			S
Surr: Phenol-d5				0.33	81	67	96			
Surr: Terphenyl-d14				0.33	100	46	147			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169606
Lab ID: MB-169606	72	Method Blank				Run: SV5973N2.I_220822A				08/22/22 20:19
1,2,4-Trichlorobenzene		ND	mg/kg	0.33						
1,2-Dichlorobenzene		ND	mg/kg	0.33						
1,3-Dichlorobenzene		ND	mg/kg	0.33						
1,4-Dichlorobenzene		ND	mg/kg	0.33						
1-Methylnaphthalene		ND	mg/kg	0.33						
2,4,5-Trichlorophenol		ND	mg/kg	0.33						
2,4,6-Trichlorophenol		ND	mg/kg	0.33						
2,4-Dichlorophenol		ND	mg/kg	0.33						
2,4-Dimethylphenol		ND	mg/kg	0.33						
2,4-Dinitrophenol		ND	mg/kg	0.67						
2,4-Dinitrotoluene		ND	mg/kg	0.33						
2,6-Dinitrotoluene		ND	mg/kg	0.33						
2-Chloronaphthalene		ND	mg/kg	0.33						
2-Chlorophenol		ND	mg/kg	0.33						
2-Methylnaphthalene		ND	mg/kg	0.33						
2-Nitrophenol		ND	mg/kg	0.33						
3,3´-Dichlorobenzidine		ND	mg/kg	0.67						
4,6-Dinitro-2-methylphenol		ND	mg/kg	0.67						
4-Bromophenyl phenyl ether		ND	mg/kg	0.33						
4-Chloro-2-methylphenol		ND	mg/kg	0.33						
4-Chloro-3-methylphenol		ND	mg/kg	0.33						
4-Chlorophenol		ND	mg/kg	0.33						
4-Chlorophenyl phenyl ether		ND	mg/kg	0.33						
4-Nitrophenol		ND	mg/kg	0.67						
Acenaphthene		ND	mg/kg	0.33						
Acenaphthylene		ND	mg/kg	0.33						
Anthracene		ND	mg/kg	0.33						
Azobenzene		ND	mg/kg	0.33						
Benzidine		ND	mg/kg	0.33						
Benzo(a)anthracene		ND	mg/kg	0.33						
Benzo(a)pyrene		ND	mg/kg	0.33						
Benzo(b)fluoranthene		ND	mg/kg	0.33						
Benzo(g,h,i)perylene		ND	mg/kg	0.33						
Benzo(k)fluoranthene		ND	mg/kg	0.33						
bis(-2-chloroethoxy)Methane		ND	mg/kg	0.33						
bis(-2-chloroethyl)Ether		ND	mg/kg	0.33						
bis(2-chloroisopropyl)Ether		ND	mg/kg	0.33						
bis(2-ethylhexyl)Phthalate		ND	mg/kg	0.33						
Butylbenzylphthalate		ND	mg/kg	0.33						
Chrysene		ND	mg/kg	0.33						
Dibenzo(a,h)anthracene		ND	mg/kg	0.33						
Diethyl phthalate		ND	mg/kg	0.33						
Dimethyl phthalate		ND	mg/kg	0.33						
Di-n-butyl phthalate		ND	mg/kg	0.33						
Di-n-octyl phthalate		ND	mg/kg	0.33						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169606
Lab ID: MB-169606	72	Method Blank				Run: SV5973N2.I_220822A				08/22/22 20:19
Fluoranthene		ND	mg/kg	0.33						
Fluorene		ND	mg/kg	0.33						
Hexachlorobenzene		ND	mg/kg	0.33						
Hexachlorobutadiene		ND	mg/kg	0.33						
Hexachlorocyclopentadiene		ND	mg/kg	0.33						
Hexachloroethane		ND	mg/kg	0.33						
Indeno(1,2,3-cd)pyrene		ND	mg/kg	0.33						
Isophorone		ND	mg/kg	0.33						
m+p-Cresols		ND	mg/kg	0.33						
Naphthalene		ND	mg/kg	0.33						
Nitrobenzene		ND	mg/kg	0.33						
n-Nitrosodimethylamine		ND	mg/kg	0.33						
n-Nitroso-di-n-propylamine		ND	mg/kg	0.33						
n-Nitrosodiphenylamine		ND	mg/kg	0.33						
o-Cresol		ND	mg/kg	0.33						
Pentachlorophenol		ND	mg/kg	0.67						
Phenanthrene		ND	mg/kg	0.33						
Phenol		ND	mg/kg	0.33						
Pyrene		ND	mg/kg	0.33						
Pyridine		ND	mg/kg	0.33						
Triallate		ND	mg/kg	0.33						
Surr: 2,4,6-Tribromophenol				0.33	74	53	141			
Surr: 2-Fluorobiphenyl				0.33	69	63	98			
Surr: 2-Fluorophenol				0.33	76	53	101			
Surr: Nitrobenzene-d5				0.33	71	53	101			
Surr: Phenol-d5				0.33	72	55	100			
Surr: Terphenyl-d14				0.33	97	71	118			
Lab ID: LCS-169606	72	Laboratory Control Sample				Run: SV5973N2.I_220822A				08/22/22 20:49
1,2,4-Trichlorobenzene		2.27	mg/kg	0.33	68	39	100			
1,2-Dichlorobenzene		2.13	mg/kg	0.33	64	22	104			
1,3-Dichlorobenzene		2.02	mg/kg	0.33	61	19	103			
1,4-Dichlorobenzene		2.13	mg/kg	0.33	64	17	106			
1-Methylnaphthalene		2.36	mg/kg	0.33	71	63	97			
2,4,5-Trichlorophenol		2.78	mg/kg	0.33	84	68	120			
2,4,6-Trichlorophenol		2.29	mg/kg	0.33	69	65	117			
2,4-Dichlorophenol		2.20	mg/kg	0.33	66	61	110			
2,4-Dimethylphenol		2.11	mg/kg	0.33	63	62	100			
2,4-Dinitrophenol		2.25	mg/kg	0.67	68	47	115			
2,4-Dinitrotoluene		2.48	mg/kg	0.33	75	72	122			
2,6-Dinitrotoluene		2.96	mg/kg	0.33	89	60	126			
2-Chloronaphthalene		2.73	mg/kg	0.33	82	63	106			
2-Chlorophenol		2.04	mg/kg	0.33	61	61	103			
2-Methylnaphthalene		2.42	mg/kg	0.33	73	68	103			
2-Nitrophenol		2.13	mg/kg	0.33	64	58	102			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169606
Lab ID: LCS-169606	72	Laboratory Control Sample				Run: SV5973N2.I_220822A				08/22/22 20:49
3,3´-Dichlorobenzidine		2.47	mg/kg	0.67	74	35	117			
4,6-Dinitro-2-methylphenol		2.26	mg/kg	0.67	68	55	121			
4-Bromophenyl phenyl ether		3.10	mg/kg	0.33	93	72	113			
4-Chloro-2-methylphenol		2.58	mg/kg	0.33	78	63	106			
4-Chloro-3-methylphenol		2.35	mg/kg	0.33	71	68	107			
4-Chlorophenol		2.80	mg/kg	0.33	84	61	109			
4-Chlorophenyl phenyl ether		3.03	mg/kg	0.33	91	71	110			
4-Nitrophenol		2.30	mg/kg	0.67	69	62	118			
Acenaphthene		2.74	mg/kg	0.33	82	73	104			
Acenaphthylene		2.63	mg/kg	0.33	79	64	101			
Anthracene		2.86	mg/kg	0.33	86	72	110			
Azobenzene		2.60	mg/kg	0.33	78	68	108			
Benzidine		0.198	mg/kg	0.33	6	10	80			S
Benzo(a)anthracene		3.21	mg/kg	0.33	96	75	112			
Benzo(a)pyrene		3.01	mg/kg	0.33	90	71	106			
Benzo(b)fluoranthene		3.30	mg/kg	0.33	99	65	121			
Benzo(g,h,i)perylene		2.90	mg/kg	0.33	87	79	117			
Benzo(k)fluoranthene		3.05	mg/kg	0.33	92	64	118			
bis(-2-chloroethoxy)Methane		2.58	mg/kg	0.33	77	63	104			
bis(-2-chloroethyl)Ether		2.46	mg/kg	0.33	74	20	130			
bis(2-chloroisopropyl)Ether		2.15	mg/kg	0.33	65	28	93			
bis(2-ethylhexyl)Phthalate		3.28	mg/kg	0.33	99	65	132			
Butylbenzylphthalate		3.32	mg/kg	0.33	100	68	131			
Chrysene		3.02	mg/kg	0.33	91	76	109			
Dibenzo(a,h)anthracene		3.01	mg/kg	0.33	91	75	111			
Diethyl phthalate		2.98	mg/kg	0.33	90	70	119			
Dimethyl phthalate		2.94	mg/kg	0.33	88	70	118			
Di-n-butyl phthalate		3.15	mg/kg	0.33	95	72	126			
Di-n-octyl phthalate		3.18	mg/kg	0.33	95	68	127			
Fluoranthene		2.94	mg/kg	0.33	88	76	109			
Fluorene		2.96	mg/kg	0.33	89	67	108			
Hexachlorobenzene		2.83	mg/kg	0.33	85	71	107			
Hexachlorobutadiene		2.27	mg/kg	0.33	68	31	103			
Hexachlorocyclopentadiene		2.43	mg/kg	0.33	73	56	108			
Hexachloroethane		2.11	mg/kg	0.33	63	10	127			
Indeno(1,2,3-cd)pyrene		3.18	mg/kg	0.33	95	63	112			
Isophorone		2.35	mg/kg	0.33	71	63	95			
m+p-Cresols		2.77	mg/kg	0.33	83	64	109			
Naphthalene		2.57	mg/kg	0.33	77	60	99			
Nitrobenzene		2.27	mg/kg	0.33	68	57	110			
n-Nitrosodimethylamine		2.25	mg/kg	0.33	67	43	106			
n-Nitroso-di-n-propylamine		2.81	mg/kg	0.33	84	61	107			
n-Nitrosodiphenylamine		2.97	mg/kg	0.33	89	71	119			
o-Cresol		2.56	mg/kg	0.33	77	65	111			
Pentachlorophenol		2.54	mg/kg	0.67	76	60	121			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169606
Lab ID: LCS-169606	72	Laboratory Control Sample				Run: SV5973N2.I_220822A				08/22/22 20:49
Phenanthrene		2.89	mg/kg	0.33	87	73	104			
Phenol		2.06	mg/kg	0.33	62	42	124			
Pyrene		2.85	mg/kg	0.33	86	77	111			
Pyridine		1.30	mg/kg	0.33	39	10	74			
Triallate		2.72	mg/kg	0.33	82	65	117			
Surr: 2,4,6-Tribromophenol				0.33	90	53	141			
Surr: 2-Fluorobiphenyl				0.33	74	63	98			
Surr: 2-Fluorophenol				0.33	78	53	101			
Surr: Nitrobenzene-d5				0.33	74	53	101			
Surr: Phenol-d5				0.33	78	55	100			
Surr: Terphenyl-d14				0.33	91	71	118			
Lab ID: B22081676-001AMS	72	Sample Matrix Spike				Run: SV5973N2.I_220822A				08/22/22 21:50
1,2,4-Trichlorobenzene		34.9	mg/kg	2.5	71	39	100			
1,2-Dichlorobenzene		29.8	mg/kg	2.5	61	22	104			
1,3-Dichlorobenzene		28.4	mg/kg	2.5	58	19	103			
1,4-Dichlorobenzene		29.4	mg/kg	2.5	60	17	106			
1-Methylnaphthalene		35.3	mg/kg	2.5	72	63	97			
2,4,5-Trichlorophenol		47.9	mg/kg	2.5	98	68	120			
2,4,6-Trichlorophenol		34.9	mg/kg	2.5	71	65	117			
2,4-Dichlorophenol		34.8	mg/kg	2.5	71	61	110			
2,4-Dimethylphenol		33.3	mg/kg	2.5	68	62	100			
2,4-Dinitrophenol		30.6	mg/kg	4.9	63	47	115			
2,4-Dinitrotoluene		39.5	mg/kg	2.5	81	72	122			
2,6-Dinitrotoluene		40.6	mg/kg	2.5	83	60	126			
2-Chloronaphthalene		42.1	mg/kg	2.5	86	63	106			
2-Chlorophenol		28.8	mg/kg	2.5	59	61	103			S
2-Methylnaphthalene		37.9	mg/kg	2.5	77	68	103			
2-Nitrophenol		31.3	mg/kg	2.5	64	58	102			
3,3´-Dichlorobenzidine		37.7	mg/kg	9.8	77	35	117			
4,6-Dinitro-2-methylphenol		31.1	mg/kg	4.9	63	55	121			
4-Bromophenyl phenyl ether		45.9	mg/kg	2.5	94	72	113			
4-Chloro-2-methylphenol		39.6	mg/kg	2.5	81	63	106			
4-Chloro-3-methylphenol		36.6	mg/kg	2.5	75	68	107			
4-Chlorophenol		43.7	mg/kg	2.5	89	61	109			
4-Chlorophenyl phenyl ether		48.6	mg/kg	2.5	99	71	110			
4-Nitrophenol		36.6	mg/kg	4.9	75	62	118			
Acenaphthene		42.7	mg/kg	2.5	87	73	104			
Acenaphthylene		40.0	mg/kg	2.5	82	64	101			
Anthracene		44.8	mg/kg	2.5	92	72	110			
Azobenzene		41.8	mg/kg	2.5	85	68	108			
Benzidine		7.43	mg/kg	4.9	15	10	80			
Benzo(a)anthracene		49.5	mg/kg	2.5	101	75	112			
Benzo(a)pyrene		47.4	mg/kg	2.5	97	71	106			
Benzo(b)fluoranthene		51.1	mg/kg	2.5	104	65	121			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169606
Lab ID: B22081676-001AMS	72	Sample Matrix Spike				Run: SV5973N2.I_220822A				08/22/22 21:50
Benzo(g,h,i)perylene		44.8	mg/kg	2.5	91	79	117			
Benzo(k)fluoranthene		47.5	mg/kg	2.5	97	64	118			
bis(-2-chloroethoxy)Methane		40.5	mg/kg	2.5	83	63	104			
bis(-2-chloroethyl)Ether		34.6	mg/kg	2.5	71	20	130			
bis(2-chloroisopropyl)Ether		29.7	mg/kg	2.5	61	28	93			
bis(2-ethylhexyl)Phthalate		53.6	mg/kg	2.5	109	65	132			
Butylbenzylphthalate		54.1	mg/kg	4.9	110	68	131			
Chrysene		46.6	mg/kg	2.5	95	76	109			
Dibenzo(a,h)anthracene		47.4	mg/kg	2.5	97	75	111			
Diethyl phthalate		46.5	mg/kg	2.5	95	70	119			
Dimethyl phthalate		45.8	mg/kg	2.5	93	70	118			
Di-n-butyl phthalate		49.9	mg/kg	2.5	102	72	126			
Di-n-octyl phthalate		53.9	mg/kg	2.5	110	68	127			
Fluoranthene		46.1	mg/kg	2.5	94	76	109			
Fluorene		45.2	mg/kg	2.5	92	67	108			
Hexachlorobenzene		44.3	mg/kg	2.5	90	71	107			
Hexachlorobutadiene		33.8	mg/kg	2.5	69	31	103			
Hexachlorocyclopentadiene		26.3	mg/kg	4.9	54	56	108			S
Hexachloroethane		29.1	mg/kg	2.5	59	10	127			
Indeno(1,2,3-cd)pyrene		50.0	mg/kg	2.5	102	63	112			
Isophorone		37.6	mg/kg	2.5	77	63	95			
m+p-Cresols		41.4	mg/kg	2.5	84	64	109			
Naphthalene		38.5	mg/kg	2.5	79	60	99			
Nitrobenzene		32.8	mg/kg	2.5	67	57	110			
n-Nitrosodimethylamine		31.4	mg/kg	2.5	64	43	106			
n-Nitroso-di-n-propylamine		42.6	mg/kg	2.5	87	61	107			
n-Nitrosodiphenylamine		46.5	mg/kg	2.5	95	71	119			
o-Cresol		40.6	mg/kg	2.5	83	65	111			
Pentachlorophenol		35.9	mg/kg	4.9	73	60	121			
Phenanthrene		45.4	mg/kg	2.5	93	73	104			
Phenol		30.0	mg/kg	2.5	61	42	124			
Pyrene		44.9	mg/kg	2.5	92	77	111			
Pyridine		16.7	mg/kg	2.5	34	10	74			
Triallate		43.9	mg/kg	2.5	90	65	117			
Surr: 2,4,6-Tribromophenol				2.5	91	53	141			
Surr: 2-Fluorobiphenyl				2.5	76	63	98			
Surr: 2-Fluorophenol				2.5	72	53	101			
Surr: Nitrobenzene-d5				2.5	70	53	101			
Surr: Phenol-d5				2.5	77	55	100			
Surr: Terphenyl-d14				2.5	95	71	118			
Lab ID: B22081676-001AMSD	72	Sample Matrix Spike Duplicate				Run: SV5973N2.I_220822A				08/22/22 22:21
1,2,4-Trichlorobenzene		33.2	mg/kg	2.4	68	39	100	5.0	40	
1,2-Dichlorobenzene		29.5	mg/kg	2.4	61	22	104	1.0	40	
1,3-Dichlorobenzene		27.5	mg/kg	2.4	57	19	103	3.2	40	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW8270C**										Batch: 169606
Lab ID: **B22081676-001AMSD**	72	Sample Matrix Spike Duplicate				Run: SV5973N2.I_220822A				08/22/22 22:21
1,4-Dichlorobenzene		28.6	mg/kg	2.4	59	17	106	2.8	40	
1-Methylnaphthalene		35.6	mg/kg	2.4	73	63	97	0.9	40	
2,4,5-Trichlorophenol		43.2	mg/kg	2.4	89	68	120	10	40	
2,4,6-Trichlorophenol		33.8	mg/kg	2.4	70	65	117	3.2	40	
2,4-Dichlorophenol		33.2	mg/kg	2.4	68	61	110	4.8	40	
2,4-Dimethylphenol		32.0	mg/kg	2.4	66	62	100	3.9	40	
2,4-Dinitrophenol		30.2	mg/kg	4.8	62	47	115	1.3	40	
2,4-Dinitrotoluene		38.4	mg/kg	2.4	79	72	122	2.8	40	
2,6-Dinitrotoluene		45.1	mg/kg	2.4	93	60	126	11	40	
2-Chloronaphthalene		40.0	mg/kg	2.4	83	63	106	5.0	40	
2-Chlorophenol		28.4	mg/kg	2.4	59	61	103	1.5	40	S
2-Methylnaphthalene		36.4	mg/kg	2.4	75	68	103	3.9	40	
2-Nitrophenol		30.5	mg/kg	2.4	63	58	102	2.5	40	
3,3´-Dichlorobenzidine		34.7	mg/kg	9.7	72	35	117	8.1	40	
4,6-Dinitro-2-methylphenol		28.3	mg/kg	4.8	58	55	121	9.4	40	
4-Bromophenyl phenyl ether		42.9	mg/kg	2.4	89	72	113	6.7	40	
4-Chloro-2-methylphenol		39.0	mg/kg	2.4	80	63	106	1.6	40	
4-Chloro-3-methylphenol		36.0	mg/kg	2.4	74	68	107	1.7	40	
4-Chlorophenol		42.2	mg/kg	2.4	87	61	109	3.4	40	
4-Chlorophenyl phenyl ether		44.2	mg/kg	2.4	91	71	110	9.5	40	
4-Nitrophenol		34.6	mg/kg	4.8	71	62	118	5.6	40	
Acenaphthene		40.3	mg/kg	2.4	83	73	104	5.8	40	
Acenaphthylene		38.7	mg/kg	2.4	80	64	101	3.2	40	
Anthracene		41.1	mg/kg	2.4	85	72	110	8.8	40	
Azobenzene		38.3	mg/kg	2.4	79	68	108	8.6	40	
Benzidine		7.31	mg/kg	4.8	15	10	80	1.6	40	
Benzo(a)anthracene		46.1	mg/kg	2.4	95	75	112	7.0	40	
Benzo(a)pyrene		44.5	mg/kg	2.4	92	71	106	6.2	40	
Benzo(b)fluoranthene		48.5	mg/kg	2.4	100	65	121	5.4	40	
Benzo(g,h,i)perylene		42.9	mg/kg	2.4	88	79	117	4.2	40	
Benzo(k)fluoranthene		45.1	mg/kg	2.4	93	64	118	5.1	40	
bis(-2-chloroethoxy)Methane		37.8	mg/kg	2.4	78	63	104	6.9	40	
bis(-2-chloroethyl)Ether		34.1	mg/kg	2.4	70	20	130	1.5	40	
bis(2-chloroisopropyl)Ether		28.7	mg/kg	2.4	59	28	93	3.3	40	
bis(2-ethylhexyl)Phthalate		48.9	mg/kg	2.4	101	65	132	9.1	40	
Butylbenzylphthalate		50.3	mg/kg	4.8	104	68	131	7.3	40	
Chrysene		44.3	mg/kg	2.4	91	76	109	5.0	40	
Dibenzo(a,h)anthracene		45.8	mg/kg	2.4	94	75	111	3.4	40	
Diethyl phthalate		45.4	mg/kg	2.4	94	70	119	2.3	40	
Dimethyl phthalate		43.8	mg/kg	2.4	90	70	118	4.3	40	
Di-n-butyl phthalate		46.6	mg/kg	2.4	96	72	126	6.9	40	
Di-n-octyl phthalate		49.7	mg/kg	2.4	102	68	127	8.1	40	
Fluoranthene		42.7	mg/kg	2.4	88	76	109	7.6	40	
Fluorene		42.5	mg/kg	2.4	88	67	108	6.2	40	
Hexachlorobenzene		42.8	mg/kg	2.4	88	71	107	3.4	40	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081361 **Report Date:** 09/23/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169606
Lab ID: B22081676-001AMSD	72	Sample Matrix Spike Duplicate				Run: SV5973N2.I_220822A				08/22/22 22:21
Hexachlorobutadiene		31.9	mg/kg	2.4	66	31	103	5.8	40	
Hexachlorocyclopentadiene		27.6	mg/kg	4.8	57	56	108	4.8	40	
Hexachloroethane		28.9	mg/kg	2.4	60	10	127	0.5	40	
Indeno(1,2,3-cd)pyrene		47.5	mg/kg	2.4	98	63	112	5.0	40	
Isophorone		36.3	mg/kg	2.4	75	63	95	3.5	40	
m+p-Cresols		41.1	mg/kg	2.4	85	64	109	0.6	40	
Naphthalene		36.7	mg/kg	2.4	76	60	99	4.9	40	
Nitrobenzene		31.7	mg/kg	2.4	65	57	110	3.6	40	
n-Nitrosodimethylamine		32.3	mg/kg	2.4	67	43	106	2.9	40	
n-Nitroso-di-n-propylamine		40.8	mg/kg	2.4	84	61	107	4.2	40	
n-Nitrosodiphenylamine		44.3	mg/kg	2.4	91	71	119	5.0	40	
o-Cresol		40.9	mg/kg	2.4	84	65	111	0.8	40	
Pentachlorophenol		34.0	mg/kg	4.8	70	60	121	5.6	40	
Phenanthrene		41.8	mg/kg	2.4	86	73	104	8.4	40	
Phenol		28.6	mg/kg	2.4	59	42	124	4.5	40	
Pyrene		41.8	mg/kg	2.4	86	77	111	7.2	40	
Pyridine		16.1	mg/kg	2.4	33	10	74	3.3	40	
Triallate		41.5	mg/kg	2.4	86	65	117	5.5	40	
Surr: 2,4,6-Tribromophenol				2.4	87	53	141			
Surr: 2-Fluorobiphenyl				2.4	74	63	98			
Surr: 2-Fluorophenol				2.4	76	53	101			
Surr: Nitrobenzene-d5				2.4	76	53	101			
Surr: Phenol-d5				2.4	79	55	100			
Surr: Terphenyl-d14				2.4	90	71	118			
Lab ID: APP2A-169606	7	Laboratory Control Sample				Run: SV5973N2.I_220822B				08/23/22 05:45
Diallate		3.38	mg/kg	0.17	102	24	141			
Surr: 2,4,6-Tribromophenol				0.33	92	64	125			
Surr: 2-Fluorobiphenyl				0.33	74	68	96			
Surr: 2-Fluorophenol				0.33	73	59	102			
Surr: Nitrobenzene-d5				0.33	76	65	92			
Surr: Phenol-d5				0.33	75	67	96			
Surr: Terphenyl-d14				0.33	103	46	147			
Lab ID: APP2AD-169606	7	Laboratory Control Sample				Run: SV5973N2.I_220822B				08/23/22 06:15
Diallate		3.22	mg/kg	0.17	97	24	141	4.8	40	
Surr: 2,4,6-Tribromophenol				0.33	85	64	125			
Surr: 2-Fluorobiphenyl				0.33	69	68	96			
Surr: 2-Fluorophenol				0.33	68	59	102			
Surr: Nitrobenzene-d5				0.33	80	65	92			
Surr: Phenol-d5				0.33	70	67	96			
Surr: Terphenyl-d14				0.33	96	46	147			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

Work Order Receipt Checklist

Rubik Environmental

B22081361

Login completed by: Lyndsi E. LeProwse
Date Received: 8/12/2022
Reviewed by: darcy
Received by: tkj
Reviewed Date: 8/22/2022
Carrier name: Hand Deliver

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	°C On Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

Contact and Corrective Action Comments:

The Temperature Blank temperature for shipping container 1 was 0.6°C, shipping container 2 was 1.0°C, and shipping container 3 was 1.0°C.

Chain of Custody & Analytical Request Record

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Account Information (Billing information)

Company/Name	Rubih
Contact	Shane Fitch
Phone	(775) 250-8288
Mailing Address	320 Flint street
City, State, Zip	Reno, NV 89501
Email	SFitch@rubihenv.com
Receive Invoice ☐Hard Copy ☐Email	Receive Report ☐Hard Copy ☐Email
Purchase Order / Quote	Bottle Order 165979

Report Information (if different than Account Information)

Company/Name	
Contact	
Phone	
Mailing Address	
City, State, Zip	
Email	
Receive Report ☐Hard Copy ☐Email	
Special Report/Formats: ☐ LEVEL IV ☐NELAC ☐ EDD/EDT (contact laboratory) ☐ Other______	

Comments

Project Information

Project Name, PWSID, Permit, etc.	Nutrien Billings LPI
Sampler Name	Colin Barkley
Sampler Phone	(209)210-8391
Sample Origin State	Montana
EPA/State Compliance	☐ Yes ☐ No

URANIUM MINING CLIENTS MUST indicate sample type
- ☐ Unprocessed Ore
- ☐ Processed Ore (Ground or Refined) **CALL BEFORE SENDING
- ☐ 11(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)

Matrix Codes
- A - Air
- W - Water
- S - Soils/Solids
- V - Vegetation
- B - Bioassay
- O - Oil
- DW - Drinking Water

All turnaround times are standard unless marked as RUSH.

Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling – See Instructions Page

Analysis Requested

#	Sample Identification (Name, Location, Interval, etc.)	Collection Date	Collection Time	Number of Containers	Matrix (See Codes Above)	SW8270E S-VOC / SW8151A Herbicides (chlorinated)	SW8260B VOCs VOCs - short list / short-list	SW9012B Total Cyanide / E6010.2 C metals SPLP/TCLP total or soluble							See Attached	RUSH TAT	ELI LAB ID Laboratory Use Only
1	SR-5-5	8/11/22	1430	3	S	X	X	X									B22081341
2	SR-5-7.5	8/11/22	1435	3	S	X	X	X									
3	SR-5-10	8/11/22	1440	3	S	X	X	X									
4	SR-6-5	8/11/22	1135	3	S	X	X	X									
5	SR-6-7.5	8/11/22	1140	3	S	X	X	X									
6	SR-6-10	8/11/22	1150	3	S	X	X	X									
7	SR-7-5	8/11/22	1115	3	S	X	X	X									
8	SR-7-7.5	8/11/22	1120	3	S	X	X	X									
9	SR-7-10	8/11/22	1125	3	S	X	X	X									

ELI is REQUIRED to provide preservative traceability. If the preservatives supplied with the bottle order were **NOT** used, please attach your preservative information with this COC.

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Colin Barkley	8/12/22 0840	[signature]	Drop off		[signature]
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print): Taylor Jones	8/12/22 0710	[signature]

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals	Intact	Receipt Temp	Temp Blank	On Ice	Payment Type	Amount	Receipt Number (cash/check only)
		Y N C B	Y N	°C	Y N	Y N	CC Cash Check______	$	

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

ELI-COC-01/21 v.4

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Chain of Custody & Analytical Request Record

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Page 2 of 3

Account Information *(Billing information)*

Company/Name	Rubin
Contact	Shane Fitch
Phone	~~[illegible]~~ (775) 250-8288
Mailing Address	320 Flint St.
City, State, Zip	Reno, NV 89501
Email	SFitch@rubinenv.com
Receive Invoice	☐Hard Copy ☐Email
Receive Report	☐Hard Copy ☐Email
Purchase Order	
Quote	
Bottle Order	165979

Report Information *(if different than Account Information)*

Company/Name	
Contact	
Phone	
Mailing Address	
City, State, Zip	
Email	
Receive Report	☐Hard Copy ☐Email
Special Report/Formats:	☐ LEVEL IV ☐NELAC ☐ EDD/EDT *(contact laboratory)* ☐ Other_____

Comments

Project Information

Project Name, PWSID, Permit, etc.	Nutrien Billings LPI
Sampler Name	Colin Barkley
Sampler Phone	209 210 8391
Sample Origin State	Montana
EPA/State Compliance	☐ Yes ☐ No

URANIUM MINING CLIENTS MUST indicate sample type
☐ Unprocessed Ore
☐ Processed Ore (Ground or Refined) **CALL BEFORE SENDING
☐ 11(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)

Matrix Codes
A - Air
W - Water
S - Soils/Solids
V - Vegetation
B - Bioassay
O - Oil
DW - Drinking Water

Sample Identification *(Name, Location, Interval, etc.)*	Collection Date	Collection Time	Number of Containers	Matrix *(See Codes Above)*	SW 8260B-VOC	SW8260B-VOC-short list	SW8015B-Total Cyanide E300.0 Nitrate by IC Total or Soluble	See Attached	RUSH TAT	ELI LAB ID *Laboratory Use Only*
1 SR-8-5	8/11/22	1215	3	S	X	X	X			B22081361
2 SR-8-7.5	8/11/22	1220	3	S	X	X	X			
3 SR-8-10	8/11/22	1225	3	S	X	X	X			
4 SR-9-5	8/11/22	1600	2	S	X	X	X			
5 SR-10-5	8/11/22	1505	3	S	X	X	X			
6 SR-10-10	8/11/22	1525	3	S	X	X	X			
7 SR-15-5	8/11/22	1410	3	S	X	X	X			
8 SR-15-10	8/11/22	1415	3	S	X	X	X			
9 SR-16-5	8/11/22	1400	3	S	X	X	X			

All turnaround times are standard unless marked as RUSH.
Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling – See Instructions Page

ELI is REQUIRED to provide preservative traceability. If the preservatives supplied with the bottle order were **NOT** used, please attach your preservative information with this COC.

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Colin Barkley	8/12/22 0640		Drop off		
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
				Taylor Jones	8/12/22 0710	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp °C	Temp Blank Y N	On Ice Y N	Payment Type CC Cash Check_____	Amount $	Receipt Number *(cash/check only)*

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Chain of Custody & Analytical Request Record

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Page 3 of 3

Account Information (Billing information)

Company/Name	Rubin
Contact	Shane Fitch
Phone	(775) 250-8288
Mailing Address	320 Flint Street
City, State, Zip	Reno NV 89501
Email	Sfitch@rubinenv.com
Receive Invoice	☐Hard Copy ☐Email
Receive Report	☐Hard Copy ☐Email
Purchase Order	
Quote	
Bottle Order	165979

Report Information (if different than Account Information)

Company/Name	
Contact	
Phone	
Mailing Address	
City, State, Zip	
Email	
Receive Report	☐Hard Copy ☐Email
Special Report/Formats:	☐ LEVEL IV ☐NELAC ☐ EDD/EDT (contact laboratory) ☐ Other

Comments

Project Information

Project Name, PWSID, Permit, etc.	Nutrien Billings LPI
Sampler Name	Colm Barkley
Sampler Phone	(209) 210-8391
Sample Origin State	Montana
EPA/State Compliance	☐ Yes ☐ No

URANIUM MINING CLIENTS MUST indicate sample type
☐ Unprocessed Ore
☐ Processed Ore (Ground or Refined) **CALL BEFORE SENDING
☐ 11(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)

Matrix Codes
A - Air
W - Water
S - Soils/Solids
V - Vegetation
B - Bioassay
O - Oil
DW - Drinking Water

Analysis Requested

Sample Identification (Name, Location, Interval, etc.)	Collection Date	Collection Time	Number of Containers	Matrix (See Codes Above)	SW8260B 5-VOC	SW8260B VOC 8 chart list	SW8021B Total Cyanide E6010.20 metals by ICPOES, total or soluble	See Attached	RUSH TAT	ELI LAB ID (Laboratory Use Only)
1 SR-16-10	8/11/22	1405	3	S	X	X	X			B22081361
2 SR-17-5	8/11/22	1250	3	S	X	X	X			
3 SR-11-10	8/11/22	1300	3	S	X	X	X			
4										
5										
6										
7										
8										
9										

All turnaround times are standard unless marked as RUSH.
Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling – See Instructions Page

ELI is REQUIRED to provide preservative traceability. If the preservatives supplied with the bottle order were **NOT** used, please attach your preservative information with this COC.

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Colm Barkley	8/12/22 0640		Dropoff		
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
				Taylor Jones	8/12/22 0710	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp °C	Temp Blank Y N	On Ice Y N	Payment Type CC Cash Check	Amount $	Receipt Number (cash/check only)
				.					

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Billings, MT 800.735.4489 • Casper, WY 888.235.0515 • Gillette, WY 866.686.7175 • Helena, MT 877.472.0711

BOTTLE ORDER 165979

SHIPPED TO: **Rubik Environmental**

Contact: Colin Barkley/SW3

Phone:

Project: Nutrien/LPI Billings

Order Created by: Darcy Chirrick
Shipped From: Billings, MT
Ship Date: 8/8/2022
VIA: PickUp

Bottle Size/Type	Bottles Per Samp	Method	Tests	Critical Hold Time	Preservative	Notes	Num of Samp
AOC-4 (SR-1,SR-2,SR-3,SR-4) (16 Sets)							
4 oz Amber Glass Wide Mouth	1	SW8270E SW8151A	Semi-Volatile Organic Compounds 8151-Herbicides, Chlorinated			QUOTE B15448	1
4 oz Amber Glass Wide Mouth	1	SW8260B	8260-Volatile Organic Compounds - Short List				1
4 oz Amber Glass Wide Mouth	1	SW9012B E6010.20	Total Cyanide Metals by ICP/ICPMS, Total or Soluble				1
SWMU-8 (SR-5, SR-6, SR-7, SR-8, SR-9, SR-10) (24 Sets)							
4 oz Amber Glass Wide Mouth	1	SW8151A SW8270E	8151-Herbicides, Chlorinated Semi-Volatile Organic Compounds			QUOTE B15448	1
4 oz Amber Glass Wide Mouth	1	SW8260B	8260-Volatile Organic Compounds - Short List				1
4 oz Amber Glass Wide Mouth	1	SW9012B E6010.20	Total Cyanide Metals by ICP/ICPMS, Total or Soluble				1

SWMU-13 (4 Sets)							
4 oz Amber Glass Wide Mouth	1	SW8151A SW8270E	8151-Herbicides, Chlorinated Semi-Volatile Organic Compounds			QUOTE B15448	1
4 oz Amber Glass Wide Mouth	1	SW8260B	8260-Volatile Organic Compounds - Short List				1
4 oz Amber Glass Wide Mouth	1	SW9012B E6010.20	Total Cyanide Metals by ICP/ICPMS, Total or Soluble				1

SWMU-15 (SR-12, SR-13, SR-14) (12 Sets)							
4 oz Amber Glass Wide Mouth	1	SW8151A SW8270E	8151-Herbicides, Chlorinated Semi-Volatile Organic Compounds			QUOTE B15448	1
4 oz Amber Glass Wide Mouth	1	SW8260B	8260-Volatile Organic Compounds - Short List				1
4 oz Amber Glass Wide Mouth	1	SW8015C	Glycol by GC/FID				12

SWMU-16 (SR-15, SR-16, SR-17) (12 Sets)							
4 oz Amber Glass Wide Mouth	1	SW8151A SW8270E	8151-Herbicides, Chlorinated Semi-Volatile Organic Compounds			QUOTE B15448	1
4 oz Amber Glass Wide Mouth	1	SW8260B	8260-Volatile Organic Compounds - Short List				1
4 oz Amber Glass Wide Mouth	1	SW9012B E6010.20	Total Cyanide Metals by ICP/ICPMS, Total or Soluble				1

Comments

MUST USE QUOTE B15448 FOR LOGIN.

HNO3 - Nitric Acid | H2SO4 - Sulfuric Acid | NaOH - Sodium Hydroxide

ZnAc - Zinc Acetate | HCl - Hydrochloric Acid | H3PO4 - Phosphoric Acid

We strongly suggest that the samples are shipped the same day as they are collected.

Material Safety Data Sheets(MSDS) Available @ EnergyLab.com ->Services -> MSDS Sheets

Corrosive Chemicals: Nitric, Sulfuric, Phosphoric, Hydrochloric Acids and Sodium Hydroxide. Zinc Acetate is a skin irritant.

Subcontracting of sample analyses to an outside laboratory may be required. If so, Energy Laboratories will utilize its branch laboratories or qualified contract laboratories for this service. Any such laboratories will be indicated within the Laboratory Analytical Report.

ANALYTICAL SUMMARY REPORT

September 27, 2022

Rubik Environmental
320 Flint St
Reno, NV 89501-2006

Work Order: B22081406 Quote ID: B15448

Project Name: Nutrien/LPI Billings

Energy Laboratories Inc Billings MT received the following 19 samples for Rubik Environmental on 8/12/2022 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B22081406-001	SR-1-5	08/12/22 7:35	08/12/22	Soil	Metals by ICP/ICPMS, Total or Soluble Total Cyanide Cyanide Distillation SW9010 8151-Herbicides, Chlorinated Moisture Moisture Prep SW3550C Percent Moisture Total Metals Digestion by SW3050B Sonication Extraction SW3550C Soil Sonication SW3550C Extraction Semi-Volatile Organic Compounds Volatile Organics, Methanol Extraction SW5035 8260-Volatile Organic Compounds - Short List
B22081406-002	SR-1-10	08/12/22 7:40	08/12/22	Soil	Same As Above
B22081406-003	SR-2-5	08/12/22 7:50	08/12/22	Soil	Same As Above
B22081406-004	SR-4-5	08/12/22 8:10	08/12/22	Soil	Same As Above
B22081406-005	SR-4-10	08/12/22 8:15	08/12/22	Soil	Same As Above
B22081406-006	SR-3-5	08/12/22 8:25	08/12/22	Soil	Same As Above
B22081406-007	SR-3-10	08/12/22 8:30	08/12/22	Soil	Same As Above
B22081406-008	SR-2-10	08/12/22 7:55	08/12/22	Soil	Same As Above
B22081406-009	SR-11-5	08/12/22 9:10	08/12/22	Soil	Same As Above
B22081406-010	SR-11-10	08/12/22 9:15	08/12/22	Soil	Same As Above
B22081406-011	SR-12-5	08/12/22 9:35	08/12/22	Soil	Glycol by GC/FID Extraction for Polar Organics SW3580A 8151-Herbicides, Chlorinated Moisture Moisture Prep SW3550C Percent Moisture Sonication Extraction SW3550C Soil Sonication SW3550C Extraction Semi-Volatile Organic Compounds Volatile Organics, Methanol Extraction SW5035 8260-Volatile Organic Compounds - Short List
B22081406-012	SR-12-10	08/12/22 9:45	08/12/22	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

B22081406-013	SR-12-15	08/12/22 11:30	08/12/22	Soil	Same As Above
B22081406-014	SR-13-5	08/12/22 10:05	08/12/22	Soil	Same As Above
B22081406-015	SR-13-10	08/12/22 10:10	08/12/22	Soil	Same As Above
B22081406-016	SR-13-15	08/12/22 11:20	08/12/22	Soil	Same As Above
B22081406-017	SR-14-5	08/12/22 10:15	08/12/22	Soil	Same As Above
B22081406-018	SR-14-10	08/12/22 10:20	08/12/22	Soil	Same As Above
B22081406-019	SR-14-15	08/12/22 11:10	08/12/22	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager.

Report Approved By:

CLIENT: Rubik Environmental
Project: Nutrien/LPI Billings
Work Order: B22081406

Report Date: 09/27/22

CASE NARRATIVE

Sample SR-13-15, (B22081406-016) for EPA Method 8151A analysis required a dilution to bring 2,4-D and Dichlorprop into calibration range. The dilution was done past the recommended holding time so both the over-range value and the H qualified dilution are reported. The two values agree and indicate that there was no loss or degradation of the compound due to the holding time exceedance.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-001
Client Sample ID: SR-1-5

Report Date: 09/27/22
Collection Date: 08/12/22 07:35
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	8.0	wt%		0.2		SW3550C	08/19/22 09:41 / amn
CYANIDE							
Cyanide, Total	0.6	mg/kg-dry		0.3		SW9012B	08/19/22 11:25 / mas
METALS, TOTAL - EPA SW846							
Chromium	22	mg/kg-dry	D	3		SW6020	08/24/22 01:03 / aem
Cobalt	6	mg/kg-dry		1		SW6020	08/24/22 01:03 / aem
Nickel	15	mg/kg-dry	D	3		SW6020	08/24/22 01:03 / aem
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-001
Client Sample ID: SR-1-5

Report Date: 09/27/22
Collection Date: 08/12/22 07:35
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/25/22 18:12 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.22		SW8260B	08/25/22 18:12 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:12 / jdb
Surr: p-Bromofluorobenzene	99.0	%REC		78-160		SW8260B	08/25/22 18:12 / jdb
Surr: Dibromofluoromethane	101	%REC		70-132		SW8260B	08/25/22 18:12 / jdb
Surr: 1,2-Dichloroethane-d4	98.0	%REC		60-136		SW8260B	08/25/22 18:12 / jdb
Surr: Toluene-d8	105	%REC		75-138		SW8260B	08/25/22 18:12 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 09:47 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-001
Client Sample ID: SR-1-5

Report Date: 09/27/22
Collection Date: 08/12/22 07:35
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.37		SW8270C	08/23/22 09:47 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 09:47 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 09:47 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Benzidine	ND	mg/kg-dry		0.37		SW8270C	08/23/22 09:47 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.37		SW8270C	08/23/22 09:47 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-001
Client Sample ID: SR-1-5

Report Date: 09/27/22
Collection Date: 08/12/22 07:35
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 09:47 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 09:47 / jph
Diallate	ND	mg/kg-dry		0.18		SW8270C	08/23/22 09:47 / jph
Surr: 2,4,6-Tribromophenol	15.0	%REC	S	53-141		SW8270C	08/23/22 09:47 / jph
Surr: 2-Fluorobiphenyl	63.0	%REC		63-98		SW8270C	08/23/22 09:47 / jph
Surr: 2-Fluorophenol	55.0	%REC		53-101		SW8270C	08/23/22 09:47 / jph
Surr: Nitrobenzene-d5	57.0	%REC		53-101		SW8270C	08/23/22 09:47 / jph
Surr: Phenol-d5	60.0	%REC		55-100		SW8270C	08/23/22 09:47 / jph
Surr: Terphenyl-d14	93.0	%REC		71-118		SW8270C	08/23/22 09:47 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0043		SW8151A	08/23/22 17:31 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0043		SW8151A	08/23/22 17:31 / jmh
2,4-D	3.4	mg/kg-dry		2.2		SW8151A	09/15/22 22:13 / jmh
2,4-DB	ND	mg/kg-dry		0.054		SW8151A	08/23/22 17:31 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/23/22 17:31 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/23/22 17:31 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/23/22 17:31 / jmh
Bentazon	ND	mg/kg-dry		0.054		SW8151A	08/23/22 16:55 / jmh
Clopyralid	0.079	mg/kg-dry		0.0054		SW8151A	08/23/22 16:55 / jmh
Dacthal	ND	mg/kg-dry		0.022		SW8151A	08/23/22 17:31 / jmh
Dalapon	ND	mg/kg-dry		0.054		SW8151A	08/23/22 17:31 / jmh
Dicamba	1.2	mg/kg-dry		0.054		SW8151A	09/13/22 05:45 / jmh
Dichlorprop	ND	mg/kg-dry		0.022		SW8151A	08/23/22 17:31 / jmh
Dinoseb	ND	mg/kg-dry		0.022		SW8151A	08/23/22 17:31 / jmh
MCPA	ND	mg/kg-dry		4.3		SW8151A	08/23/22 17:31 / jmh
MCPP	ND	mg/kg-dry		4.3		SW8151A	08/23/22 17:31 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0022		SW8151A	08/23/22 17:31 / jmh
Picloram	ND	mg/kg-dry		0.011		SW8151A	08/23/22 16:55 / jmh
Surr: DCAA	71.0	%REC		45-117		SW8151A	08/23/22 17:31 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
S - Spike recovery outside of advisory limits
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-002
Client Sample ID: SR-1-10

Report Date: 09/27/22
Collection Date: 08/12/22 07:40
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	11	wt%		0.2		SW3550C	08/19/22 09:48 / amn
CYANIDE							
Cyanide, Total	ND	mg/kg-dry		0.3		SW9012B	08/19/22 11:27 / mas
METALS, TOTAL - EPA SW846							
Chromium	11	mg/kg-dry	D	3		SW6020	08/24/22 01:09 / aem
Cobalt	5	mg/kg-dry		1		SW6020	08/24/22 01:09 / aem
Nickel	10	mg/kg-dry	D	3		SW6020	08/24/22 01:09 / aem
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-002
Client Sample ID: SR-1-10

Report Date: 09/27/22
Collection Date: 08/12/22 07:40
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/25/22 17:47 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.23		SW8260B	08/25/22 17:47 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/25/22 17:47 / jdb
Surr: p-Bromofluorobenzene	99.0	%REC		78-160		SW8260B	08/25/22 17:47 / jdb
Surr: Dibromofluoromethane	110	%REC		70-132		SW8260B	08/25/22 17:47 / jdb
Surr: 1,2-Dichloroethane-d4	98.0	%REC		60-136		SW8260B	08/25/22 17:47 / jdb
Surr: Toluene-d8	104	%REC		75-138		SW8260B	08/25/22 17:47 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 10:17 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-002
Client Sample ID: SR-1-10

Report Date: 09/27/22
Collection Date: 08/12/22 07:40
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.37		SW8270C	08/23/22 10:17 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 10:17 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 10:17 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Benzidine	ND	mg/kg-dry		0.37		SW8270C	08/23/22 10:17 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.37		SW8270C	08/23/22 10:17 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-002
Client Sample ID: SR-1-10

Report Date: 09/27/22
Collection Date: 08/12/22 07:40
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 10:17 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:17 / jph
Diallate	ND	mg/kg-dry		0.19		SW8270C	08/23/22 10:17 / jph
Surr: 2,4,6-Tribromophenol	69.0	%REC		53-141		SW8270C	08/23/22 10:17 / jph
Surr: 2-Fluorobiphenyl	67.0	%REC		63-98		SW8270C	08/23/22 10:17 / jph
Surr: 2-Fluorophenol	70.0	%REC		53-101		SW8270C	08/23/22 10:17 / jph
Surr: Nitrobenzene-d5	67.0	%REC		53-101		SW8270C	08/23/22 10:17 / jph
Surr: Phenol-d5	65.0	%REC		55-100		SW8270C	08/23/22 10:17 / jph
Surr: Terphenyl-d14	98.0	%REC		71-118		SW8270C	08/23/22 10:17 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0045		SW8151A	08/23/22 15:07 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0045		SW8151A	08/23/22 15:07 / jmh
2,4-D	0.30	mg/kg-dry		0.11		SW8151A	09/15/22 19:50 / jmh
2,4-DB	ND	mg/kg-dry		0.056		SW8151A	08/23/22 15:07 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/23/22 15:07 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/23/22 15:07 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/23/22 15:07 / jmh
Bentazon	ND	mg/kg-dry		0.056		SW8151A	08/23/22 14:31 / jmh
Clopyralid	0.20	mg/kg-dry		0.0056		SW8151A	08/23/22 14:31 / jmh
Dacthal	ND	mg/kg-dry		0.023		SW8151A	08/23/22 15:07 / jmh
Dalapon	ND	mg/kg-dry		0.056		SW8151A	08/23/22 15:07 / jmh
Dicamba	0.056	mg/kg-dry		0.0056		SW8151A	08/23/22 15:07 / jmh
Dichlorprop	ND	mg/kg-dry		0.023		SW8151A	08/23/22 15:07 / jmh
Dinoseb	ND	mg/kg-dry		0.023		SW8151A	08/23/22 15:07 / jmh
MCPA	ND	mg/kg-dry		4.5		SW8151A	08/23/22 15:07 / jmh
MCPP	ND	mg/kg-dry		4.5		SW8151A	08/23/22 15:07 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0023		SW8151A	08/23/22 15:07 / jmh
Picloram	ND	mg/kg-dry		0.011		SW8151A	08/23/22 14:31 / jmh
Surr: DCAA	80.0	%REC		45-117		SW8151A	08/23/22 15:07 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-003
Client Sample ID: SR-2-5

Report Date: 09/27/22
Collection Date: 08/12/22 07:50
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	7.6	wt%		0.2		SW3550C	08/19/22 10:03 / amn
CYANIDE							
Cyanide, Total	ND	mg/kg-dry		0.3		SW9012B	08/19/22 11:30 / mas
METALS, TOTAL - EPA SW846							
Chromium	15	mg/kg-dry	D	2		SW6020	08/24/22 01:27 / aem
Cobalt	5	mg/kg-dry		1		SW6020	08/24/22 01:27 / aem
Nickel	13	mg/kg-dry	D	2		SW6020	08/24/22 01:27 / aem
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-003
Client Sample ID: SR-2-5

Report Date: 09/27/22
Collection Date: 08/12/22 07:50
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/25/22 18:37 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.22		SW8260B	08/25/22 18:37 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/25/22 18:37 / jdb
Surr: p-Bromofluorobenzene	107	%REC		78-160		SW8260B	08/25/22 18:37 / jdb
Surr: Dibromofluoromethane	120	%REC		70-132		SW8260B	08/25/22 18:37 / jdb
Surr: 1,2-Dichloroethane-d4	105	%REC		60-136		SW8260B	08/25/22 18:37 / jdb
Surr: Toluene-d8	113	%REC		75-138		SW8260B	08/25/22 18:37 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 10:48 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-003
Client Sample ID: SR-2-5

Report Date: 09/27/22
Collection Date: 08/12/22 07:50
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.36		SW8270C	08/23/22 10:48 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 10:48 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 10:48 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Benzidine	ND	mg/kg-dry		0.36		SW8270C	08/23/22 10:48 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.36		SW8270C	08/23/22 10:48 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-003
Client Sample ID: SR-2-5

Report Date: 09/27/22
Collection Date: 08/12/22 07:50
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 10:48 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 10:48 / jph
Diallate	ND	mg/kg-dry		0.18		SW8270C	08/23/22 10:48 / jph
Surr: 2,4,6-Tribromophenol	74.0	%REC		53-141		SW8270C	08/23/22 10:48 / jph
Surr: 2-Fluorobiphenyl	77.0	%REC		63-98		SW8270C	08/23/22 10:48 / jph
Surr: 2-Fluorophenol	79.0	%REC		53-101		SW8270C	08/23/22 10:48 / jph
Surr: Nitrobenzene-d5	75.0	%REC		53-101		SW8270C	08/23/22 10:48 / jph
Surr: Phenol-d5	71.0	%REC		55-100		SW8270C	08/23/22 10:48 / jph
Surr: Terphenyl-d14	95.0	%REC		71-118		SW8270C	08/23/22 10:48 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0043		SW8151A	08/23/22 18:07 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0043		SW8151A	08/23/22 18:07 / jmh
2,4-D	ND	mg/kg-dry		0.022		SW8151A	08/23/22 18:07 / jmh
2,4-DB	ND	mg/kg-dry		0.054		SW8151A	08/23/22 18:07 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/23/22 18:07 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/23/22 18:07 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/23/22 18:07 / jmh
Bentazon	ND	mg/kg-dry		0.054		SW8151A	08/23/22 17:31 / jmh
Clopyralid	ND	mg/kg-dry		0.0054		SW8151A	08/23/22 17:31 / jmh
Dacthal	ND	mg/kg-dry		0.022		SW8151A	08/23/22 18:07 / jmh
Dalapon	ND	mg/kg-dry		0.054		SW8151A	08/23/22 18:07 / jmh
Dicamba	ND	mg/kg-dry		0.0054		SW8151A	08/23/22 18:07 / jmh
Dichlorprop	ND	mg/kg-dry		0.022		SW8151A	08/23/22 18:07 / jmh
Dinoseb	ND	mg/kg-dry		0.022		SW8151A	08/23/22 18:07 / jmh
MCPA	ND	mg/kg-dry		4.3		SW8151A	08/23/22 18:07 / jmh
MCPP	ND	mg/kg-dry		4.3		SW8151A	08/23/22 18:07 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0022		SW8151A	08/23/22 18:07 / jmh
Picloram	ND	mg/kg-dry		0.011		SW8151A	08/23/22 17:31 / jmh
Surr: DCAA	84.0	%REC		45-117		SW8151A	08/23/22 18:07 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-004
Client Sample ID: SR-4-5

Report Date: 09/27/22
Collection Date: 08/12/22 08:10
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	3.6	wt%		0.2		SW3550C	08/19/22 10:11 / amn
CYANIDE							
Cyanide, Total	ND	mg/kg-dry		0.2		SW9012B	08/19/22 11:42 / mas
METALS, TOTAL - EPA SW846							
Chromium	13	mg/kg-dry	D	2		SW6020	08/24/22 01:33 / aem
Cobalt	5	mg/kg-dry		1		SW6020	08/24/22 01:33 / aem
Nickel	11	mg/kg-dry	D	2		SW6020	08/24/22 01:33 / aem
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-004
Client Sample ID: SR-4-5

Report Date: 09/27/22
Collection Date: 08/12/22 08:10
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/24/22 08:21 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.21		SW8260B	08/24/22 08:21 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:21 / jdb
Surr: p-Bromofluorobenzene	123	%REC		78-160		SW8260B	08/24/22 08:21 / jdb
Surr: Dibromofluoromethane	92.0	%REC		70-132		SW8260B	08/24/22 08:21 / jdb
Surr: 1,2-Dichloroethane-d4	136	%REC		60-136		SW8260B	08/24/22 08:21 / jdb
Surr: Toluene-d8	132	%REC		75-138		SW8260B	08/24/22 08:21 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 11:18 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-004
Client Sample ID: SR-4-5

Report Date: 09/27/22
Collection Date: 08/12/22 08:10
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.35		SW8270C	08/23/22 11:18 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 11:18 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 11:18 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Benzidine	ND	mg/kg-dry		0.35		SW8270C	08/23/22 11:18 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.35		SW8270C	08/23/22 11:18 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-004
Client Sample ID: SR-4-5

Report Date: 09/27/22
Collection Date: 08/12/22 08:10
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 11:18 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:18 / jph
Diallate	ND	mg/kg-dry		0.18		SW8270C	08/23/22 11:18 / jph
Surr: 2,4,6-Tribromophenol	0	%REC	S	53-141		SW8270C	08/23/22 11:18 / jph
Surr: 2-Fluorobiphenyl	68.0	%REC		63-98		SW8270C	08/23/22 11:18 / jph
Surr: 2-Fluorophenol	0	%REC	S	53-101		SW8270C	08/23/22 11:18 / jph
Surr: Nitrobenzene-d5	72.0	%REC		53-101		SW8270C	08/23/22 11:18 / jph
Surr: Phenol-d5	31.0	%REC	S	55-100		SW8270C	08/23/22 11:18 / jph
Surr: Terphenyl-d14	92.0	%REC		71-118		SW8270C	08/23/22 11:18 / jph
- Surrogates outside of the normal QC limits due to non-target interferences.							
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0041		SW8151A	08/23/22 18:43 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0041		SW8151A	08/23/22 18:43 / jmh
2,4-D	1.3	mg/kg-dry		1.0		SW8151A	09/15/22 22:49 / jmh
2,4-DB	ND	mg/kg-dry		0.052		SW8151A	08/23/22 18:43 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.010		SW8151A	08/23/22 18:43 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.010		SW8151A	08/23/22 18:43 / jmh
Acifluorfen	ND	mg/kg-dry		0.010		SW8151A	08/23/22 18:43 / jmh
Bentazon	ND	mg/kg-dry		0.052		SW8151A	08/23/22 18:07 / jmh
Clopyralid	0.022	mg/kg-dry		0.0052		SW8151A	08/23/22 18:07 / jmh
Dacthal	ND	mg/kg-dry		0.021		SW8151A	08/23/22 18:43 / jmh
Dalapon	ND	mg/kg-dry		0.052		SW8151A	08/23/22 18:43 / jmh
Dicamba	0.055	mg/kg-dry		0.0052		SW8151A	08/23/22 18:43 / jmh
Dichlorprop	ND	mg/kg-dry		0.021		SW8151A	08/23/22 18:43 / jmh
Dinoseb	ND	mg/kg-dry		0.021		SW8151A	08/23/22 18:43 / jmh
MCPA	ND	mg/kg-dry		4.1		SW8151A	08/23/22 18:43 / jmh
MCPP	ND	mg/kg-dry		4.1		SW8151A	08/23/22 18:43 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0021		SW8151A	08/23/22 18:43 / jmh
Picloram	ND	mg/kg-dry		0.010		SW8151A	08/23/22 18:07 / jmh
Surr: DCAA	67.0	%REC		45-117		SW8151A	08/23/22 18:43 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
S - Spike recovery outside of advisory limits
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-005
Client Sample ID: SR-4-10

Report Date: 09/27/22
Collection Date: 08/12/22 08:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	12	wt%		0.2		SW3550C	08/19/22 10:16 / amn
CYANIDE							
Cyanide, Total	ND	mg/kg-dry		0.3		SW9012B	08/19/22 11:44 / mas
METALS, TOTAL - EPA SW846							
Chromium	13	mg/kg-dry	D	3		SW6020	08/24/22 01:39 / aem
Cobalt	6	mg/kg-dry		1		SW6020	08/24/22 01:39 / aem
Nickel	12	mg/kg-dry	D	3		SW6020	08/24/22 01:39 / aem
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-005
Client Sample ID: SR-4-10

Report Date: 09/27/22
Collection Date: 08/12/22 08:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/24/22 08:46 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.23		SW8260B	08/24/22 08:46 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/24/22 08:46 / jdb
Surr: p-Bromofluorobenzene	113	%REC		78-160		SW8260B	08/24/22 08:46 / jdb
Surr: Dibromofluoromethane	120	%REC		70-132		SW8260B	08/24/22 08:46 / jdb
Surr: 1,2-Dichloroethane-d4	106	%REC		60-136		SW8260B	08/24/22 08:46 / jdb
Surr: Toluene-d8	112	%REC		75-138		SW8260B	08/24/22 08:46 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 11:49 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-005
Client Sample ID: SR-4-10

Report Date: 09/27/22
Collection Date: 08/12/22 08:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.38		SW8270C	08/23/22 11:49 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 11:49 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 11:49 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Benzidine	ND	mg/kg-dry		0.38		SW8270C	08/23/22 11:49 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.38		SW8270C	08/23/22 11:49 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-005
Client Sample ID: SR-4-10

Report Date: 09/27/22
Collection Date: 08/12/22 08:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 11:49 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 11:49 / jph
Diallate	ND	mg/kg-dry		0.19		SW8270C	08/23/22 11:49 / jph
Surr: 2,4,6-Tribromophenol	74.0	%REC		53-141		SW8270C	08/23/22 11:49 / jph
Surr: 2-Fluorobiphenyl	71.0	%REC		63-98		SW8270C	08/23/22 11:49 / jph
Surr: 2-Fluorophenol	72.0	%REC		53-101		SW8270C	08/23/22 11:49 / jph
Surr: Nitrobenzene-d5	71.0	%REC		53-101		SW8270C	08/23/22 11:49 / jph
Surr: Phenol-d5	68.0	%REC		55-100		SW8270C	08/23/22 11:49 / jph
Surr: Terphenyl-d14	94.0	%REC		71-118		SW8270C	08/23/22 11:49 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0046		SW8151A	08/23/22 19:19 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0046		SW8151A	08/23/22 19:19 / jmh
2,4-D	0.40	mg/kg-dry		0.11		SW8151A	09/15/22 21:37 / jmh
2,4-DB	ND	mg/kg-dry		0.057		SW8151A	08/23/22 19:19 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/23/22 19:19 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/23/22 19:19 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/23/22 19:19 / jmh
Bentazon	ND	mg/kg-dry		0.057		SW8151A	08/23/22 18:43 / jmh
Clopyralid	ND	mg/kg-dry		0.0057		SW8151A	08/23/22 18:43 / jmh
Dacthal	ND	mg/kg-dry		0.023		SW8151A	08/23/22 19:19 / jmh
Dalapon	ND	mg/kg-dry		0.057		SW8151A	08/23/22 19:19 / jmh
Dicamba	0.0092	mg/kg-dry		0.0057		SW8151A	08/23/22 19:19 / jmh
Dichlorprop	ND	mg/kg-dry		0.023		SW8151A	08/23/22 19:19 / jmh
Dinoseb	ND	mg/kg-dry		0.023		SW8151A	08/23/22 19:19 / jmh
MCPA	ND	mg/kg-dry		4.6		SW8151A	08/23/22 19:19 / jmh
MCPP	ND	mg/kg-dry		4.6		SW8151A	08/23/22 19:19 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0023		SW8151A	08/23/22 19:19 / jmh
Picloram	ND	mg/kg-dry		0.011		SW8151A	08/23/22 18:43 / jmh
Surr: DCAA	77.0	%REC		45-117		SW8151A	08/23/22 19:19 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-006
Client Sample ID: SR-3-5

Report Date: 09/27/22
Collection Date: 08/12/22 08:25
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	5.4	wt%		0.2		SW3550C	08/19/22 10:24 / amn
CYANIDE							
Cyanide, Total	0.6	mg/kg-dry		0.3		SW9012B	08/19/22 11:46 / mas
METALS, TOTAL - EPA SW846							
Chromium	15	mg/kg-dry	D	3		SW6020	08/24/22 01:45 / aem
Cobalt	5	mg/kg-dry		1		SW6020	08/24/22 01:45 / aem
Nickel	10	mg/kg-dry	D	3		SW6020	08/24/22 01:45 / aem
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-006
Client Sample ID: SR-3-5

Report Date: 09/27/22
Collection Date: 08/12/22 08:25
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/24/22 09:11 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.21		SW8260B	08/24/22 09:11 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/24/22 09:11 / jdb
Surr: p-Bromofluorobenzene	107	%REC		78-160		SW8260B	08/24/22 09:11 / jdb
Surr: Dibromofluoromethane	90.0	%REC		70-132		SW8260B	08/24/22 09:11 / jdb
Surr: 1,2-Dichloroethane-d4	106	%REC		60-136		SW8260B	08/24/22 09:11 / jdb
Surr: Toluene-d8	107	%REC		75-138		SW8260B	08/24/22 09:11 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 12:19 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-006
Client Sample ID: SR-3-5

Report Date: 09/27/22
Collection Date: 08/12/22 08:25
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.35		SW8270C	08/23/22 12:19 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 12:19 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 12:19 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Benzidine	ND	mg/kg-dry		0.35		SW8270C	08/23/22 12:19 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.35		SW8270C	08/23/22 12:19 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-006
Client Sample ID: SR-3-5

Report Date: 09/27/22
Collection Date: 08/12/22 08:25
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 12:19 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:19 / jph
Diallate	ND	mg/kg-dry		0.18		SW8270C	08/23/22 12:19 / jph
Surr: 2,4,6-Tribromophenol	0	%REC	S	53-141		SW8270C	08/23/22 12:19 / jph
Surr: 2-Fluorobiphenyl	73.0	%REC		63-98		SW8270C	08/23/22 12:19 / jph
Surr: 2-Fluorophenol	23.0	%REC	S	53-101		SW8270C	08/23/22 12:19 / jph
Surr: Nitrobenzene-d5	81.0	%REC		53-101		SW8270C	08/23/22 12:19 / jph
Surr: Phenol-d5	69.0	%REC		55-100		SW8270C	08/23/22 12:19 / jph
Surr: Terphenyl-d14	95.0	%REC		71-118		SW8270C	08/23/22 12:19 / jph
- Surrogates outside of the normal QC limits due to non-target interferences.							
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0042		SW8151A	08/23/22 19:55 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0042		SW8151A	08/23/22 19:55 / jmh
2,4-D	11	mg/kg-dry		11		SW8151A	09/15/22 23:25 / jmh
2,4-DB	ND	mg/kg-dry		0.053		SW8151A	08/23/22 19:55 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/23/22 19:55 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/23/22 19:55 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/23/22 19:55 / jmh
Bentazon	ND	mg/kg-dry		0.053		SW8151A	08/23/22 19:19 / jmh
Clopyralid	0.043	mg/kg-dry		0.0053		SW8151A	08/23/22 19:19 / jmh
Dacthal	ND	mg/kg-dry		0.021		SW8151A	08/23/22 19:55 / jmh
Dalapon	ND	mg/kg-dry		0.053		SW8151A	08/23/22 19:55 / jmh
Dicamba	0.50	mg/kg-dry		0.026		SW8151A	09/13/22 04:33 / jmh
Dichlorprop	ND	mg/kg-dry		0.021		SW8151A	08/23/22 19:55 / jmh
Dinoseb	ND	mg/kg-dry		0.021		SW8151A	08/23/22 19:55 / jmh
MCPA	ND	mg/kg-dry		4.2		SW8151A	08/23/22 19:55 / jmh
MCPP	ND	mg/kg-dry		4.2		SW8151A	08/23/22 19:55 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0021		SW8151A	08/23/22 19:55 / jmh
Picloram	ND	mg/kg-dry		0.011		SW8151A	08/23/22 19:19 / jmh
Surr: DCAA	69.0	%REC		45-117		SW8151A	08/23/22 19:55 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
S - Spike recovery outside of advisory limits
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-007
Client Sample ID: SR-3-10

Report Date: 09/27/22
Collection Date: 08/12/22 08:30
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	10	wt%		0.2		SW3550C	08/19/22 10:29 / amn
CYANIDE							
Cyanide, Total	ND	mg/kg-dry		0.3		SW9012B	08/19/22 11:48 / mas
METALS, TOTAL - EPA SW846							
Chromium	12	mg/kg-dry	D	3		SW6020	08/24/22 01:51 / aem
Cobalt	5	mg/kg-dry		1		SW6020	08/24/22 01:51 / aem
Nickel	11	mg/kg-dry	D	3		SW6020	08/24/22 01:51 / aem
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-007
Client Sample ID: SR-3-10

Report Date: 09/27/22
Collection Date: 08/12/22 08:30
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/25/22 19:02 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.22		SW8260B	08/25/22 19:02 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:02 / jdb
Surr: p-Bromofluorobenzene	98.0	%REC		78-160		SW8260B	08/25/22 19:02 / jdb
Surr: Dibromofluoromethane	111	%REC		70-132		SW8260B	08/25/22 19:02 / jdb
Surr: 1,2-Dichloroethane-d4	99.0	%REC		60-136		SW8260B	08/25/22 19:02 / jdb
Surr: Toluene-d8	103	%REC		75-138		SW8260B	08/25/22 19:02 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 12:49 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-007
Client Sample ID: SR-3-10

Report Date: 09/27/22
Collection Date: 08/12/22 08:30
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.37		SW8270C	08/23/22 12:49 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 12:49 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 12:49 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Benzidine	ND	mg/kg-dry		0.37		SW8270C	08/23/22 12:49 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.37		SW8270C	08/23/22 12:49 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-007
Client Sample ID: SR-3-10

Report Date: 09/27/22
Collection Date: 08/12/22 08:30
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 12:49 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 12:49 / jph
Diallate	ND	mg/kg-dry		0.19		SW8270C	08/23/22 12:49 / jph
Surr: 2,4,6-Tribromophenol	54.0	%REC		53-141		SW8270C	08/23/22 12:49 / jph
Surr: 2-Fluorobiphenyl	69.0	%REC		63-98		SW8270C	08/23/22 12:49 / jph
Surr: 2-Fluorophenol	70.0	%REC		53-101		SW8270C	08/23/22 12:49 / jph
Surr: Nitrobenzene-d5	72.0	%REC		53-101		SW8270C	08/23/22 12:49 / jph
Surr: Phenol-d5	67.0	%REC		55-100		SW8270C	08/23/22 12:49 / jph
Surr: Terphenyl-d14	94.0	%REC		71-118		SW8270C	08/23/22 12:49 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0045		SW8151A	08/23/22 20:30 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0045		SW8151A	08/23/22 20:30 / jmh
2,4-D	1.3	mg/kg-dry		1.1		SW8151A	09/16/22 00:00 / jmh
2,4-DB	ND	mg/kg-dry		0.056		SW8151A	08/23/22 20:30 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/23/22 20:30 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/23/22 20:30 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/23/22 20:30 / jmh
Bentazon	ND	mg/kg-dry		0.056		SW8151A	08/23/22 19:55 / jmh
Clopyralid	0.018	mg/kg-dry		0.0056		SW8151A	08/23/22 19:55 / jmh
Dacthal	ND	mg/kg-dry		0.022		SW8151A	08/23/22 20:30 / jmh
Dalapon	ND	mg/kg-dry		0.056		SW8151A	08/23/22 20:30 / jmh
Dicamba	0.050	mg/kg-dry		0.0056		SW8151A	08/23/22 20:30 / jmh
Dichlorprop	ND	mg/kg-dry		0.022		SW8151A	08/23/22 20:30 / jmh
Dinoseb	ND	mg/kg-dry		0.022		SW8151A	08/23/22 20:30 / jmh
MCPA	ND	mg/kg-dry		4.5		SW8151A	08/23/22 20:30 / jmh
MCPP	ND	mg/kg-dry		4.5		SW8151A	08/23/22 20:30 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0022		SW8151A	08/23/22 20:30 / jmh
Picloram	ND	mg/kg-dry		0.011		SW8151A	08/23/22 19:55 / jmh
Surr: DCAA	87.0	%REC		45-117		SW8151A	08/23/22 20:30 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-008
Client Sample ID: SR-2-10

Report Date: 09/27/22
Collection Date: 08/12/22 07:55
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	11	wt%		0.2		SW3550C	08/19/22 10:37 / amn
CYANIDE							
Cyanide, Total	ND	mg/kg-dry		0.3		SW9012B	08/19/22 11:59 / mas
METALS, TOTAL - EPA SW846							
Chromium	15	mg/kg-dry	D	3		SW6020	08/24/22 01:57 / aem
Cobalt	5	mg/kg-dry		1		SW6020	08/24/22 01:57 / aem
Nickel	12	mg/kg-dry	D	3		SW6020	08/24/22 01:57 / aem
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-008
Client Sample ID: SR-2-10

Report Date: 09/27/22
Collection Date: 08/12/22 07:55
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/25/22 19:27 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.22		SW8260B	08/25/22 19:27 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/25/22 19:27 / jdb
Surr: p-Bromofluorobenzene	103	%REC		78-160		SW8260B	08/25/22 19:27 / jdb
Surr: Dibromofluoromethane	95.0	%REC		70-132		SW8260B	08/25/22 19:27 / jdb
Surr: 1,2-Dichloroethane-d4	99.0	%REC		60-136		SW8260B	08/25/22 19:27 / jdb
Surr: Toluene-d8	107	%REC		75-138		SW8260B	08/25/22 19:27 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 13:20 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-008
Client Sample ID: SR-2-10

Report Date: 09/27/22
Collection Date: 08/12/22 07:55
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.37		SW8270C	08/23/22 13:20 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 13:20 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 13:20 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Benzidine	ND	mg/kg-dry		0.37		SW8270C	08/23/22 13:20 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.37		SW8270C	08/23/22 13:20 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-008
Client Sample ID: SR-2-10

Report Date: 09/27/22
Collection Date: 08/12/22 07:55
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/23/22 13:20 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/23/22 13:20 / jph
Diallate	ND	mg/kg-dry		0.18		SW8270C	08/23/22 13:20 / jph
Surr: 2,4,6-Tribromophenol	14.0	%REC	S	53-141		SW8270C	08/23/22 13:20 / jph
Surr: 2-Fluorobiphenyl	70.0	%REC		63-98		SW8270C	08/23/22 13:20 / jph
Surr: 2-Fluorophenol	61.0	%REC		53-101		SW8270C	08/23/22 13:20 / jph
Surr: Nitrobenzene-d5	69.0	%REC		53-101		SW8270C	08/23/22 13:20 / jph
Surr: Phenol-d5	66.0	%REC		55-100		SW8270C	08/23/22 13:20 / jph
Surr: Terphenyl-d14	96.0	%REC		71-118		SW8270C	08/23/22 13:20 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0045		SW8151A	08/23/22 21:06 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0045		SW8151A	08/23/22 21:06 / jmh
2,4-D	0.15	mg/kg-dry		0.022		SW8151A	08/23/22 21:06 / jmh
2,4-DB	ND	mg/kg-dry		0.056		SW8151A	08/23/22 21:06 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/23/22 21:06 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/23/22 21:06 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/23/22 21:06 / jmh
Bentazon	ND	mg/kg-dry		0.056		SW8151A	08/23/22 20:30 / jmh
Clopyralid	ND	mg/kg-dry		0.0056		SW8151A	08/23/22 20:30 / jmh
Dacthal	ND	mg/kg-dry		0.022		SW8151A	08/23/22 21:06 / jmh
Dalapon	ND	mg/kg-dry		0.056		SW8151A	08/23/22 21:06 / jmh
Dicamba	ND	mg/kg-dry		0.0056		SW8151A	08/23/22 21:06 / jmh
Dichlorprop	ND	mg/kg-dry		0.022		SW8151A	08/23/22 21:06 / jmh
Dinoseb	ND	mg/kg-dry		0.022		SW8151A	08/23/22 21:06 / jmh
MCPA	ND	mg/kg-dry		4.5		SW8151A	08/23/22 21:06 / jmh
MCPP	ND	mg/kg-dry		4.5		SW8151A	08/23/22 21:06 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0022		SW8151A	08/23/22 21:06 / jmh
Picloram	ND	mg/kg-dry		0.011		SW8151A	08/23/22 20:30 / jmh
Surr: DCAA	82.0	%REC		45-117		SW8151A	08/23/22 21:06 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
S - Spike recovery outside of advisory limits
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-009
Client Sample ID: SR-11-5

Report Date: 09/27/22
Collection Date: 08/12/22 09:10
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	10	wt%		0.2		SW3550C	08/19/22 10:43 / amn
CYANIDE							
Cyanide, Total	ND	mg/kg-dry		0.3		SW9012B	08/19/22 12:05 / mas
METALS, TOTAL - EPA SW846							
Chromium	12	mg/kg-dry	D	3		SW6020	08/24/22 02:03 / aem
Cobalt	6	mg/kg-dry		1		SW6020	08/24/22 02:03 / aem
Nickel	12	mg/kg-dry	D	3		SW6020	08/24/22 02:03 / aem
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-009
Client Sample ID: SR-11-5

Report Date: 09/27/22
Collection Date: 08/12/22 09:10
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/26/22 10:54 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.22		SW8260B	08/26/22 10:54 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/26/22 10:54 / jdb
Surr: p-Bromofluorobenzene	106	%REC		78-160		SW8260B	08/26/22 10:54 / jdb
Surr: Dibromofluoromethane	126	%REC		70-132		SW8260B	08/26/22 10:54 / jdb
Surr: 1,2-Dichloroethane-d4	115	%REC		60-136		SW8260B	08/26/22 10:54 / jdb
Surr: Toluene-d8	113	%REC		75-138		SW8260B	08/26/22 10:54 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 15:38 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-009
Client Sample ID: SR-11-5

Report Date: 09/27/22
Collection Date: 08/12/22 09:10
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.37		SW8270C	08/25/22 15:38 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 15:38 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 15:38 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Benzidine	ND	mg/kg-dry		0.37		SW8270C	08/25/22 15:38 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.37		SW8270C	08/25/22 15:38 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-009
Client Sample ID: SR-11-5

Report Date: 09/27/22
Collection Date: 08/12/22 09:10
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 15:38 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 15:38 / jph
Diallate	ND	mg/kg-dry		0.19		SW8270C	08/25/22 03:50 / jph
Surr: 2,4,6-Tribromophenol	87.0	%REC		53-141		SW8270C	08/25/22 15:38 / jph
Surr: 2-Fluorobiphenyl	74.0	%REC		63-98		SW8270C	08/25/22 15:38 / jph
Surr: 2-Fluorophenol	76.0	%REC		53-101		SW8270C	08/25/22 15:38 / jph
Surr: Nitrobenzene-d5	113	%REC	S	53-101		SW8270C	08/25/22 15:38 / jph
Surr: Phenol-d5	75.0	%REC		55-100		SW8270C	08/25/22 15:38 / jph
Surr: Terphenyl-d14	101	%REC		71-118		SW8270C	08/25/22 15:38 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0044		SW8151A	09/15/22 14:28 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0044		SW8151A	09/15/22 14:28 / jmh
2,4-D	0.78	mg/kg-dry		0.44		SW8151A	09/16/22 00:36 / jmh
2,4-DB	ND	mg/kg-dry		0.055		SW8151A	09/15/22 14:28 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	09/15/22 14:28 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	09/15/22 14:28 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	09/15/22 14:28 / jmh
Bentazon	ND	mg/kg-dry		0.055		SW8151A	09/15/22 13:52 / jmh
Clopyralid	ND	mg/kg-dry		0.0055		SW8151A	09/15/22 13:52 / jmh
Dacthal	ND	mg/kg-dry		0.022		SW8151A	09/15/22 14:28 / jmh
Dalapon	ND	mg/kg-dry		0.055		SW8151A	09/15/22 14:28 / jmh
Dicamba	ND	mg/kg-dry		0.0055		SW8151A	09/15/22 14:28 / jmh
Dichlorprop	ND	mg/kg-dry		0.022		SW8151A	09/15/22 14:28 / jmh
Dinoseb	ND	mg/kg-dry		0.022		SW8151A	09/15/22 14:28 / jmh
MCPA	ND	mg/kg-dry		4.4		SW8151A	09/15/22 14:28 / jmh
MCPP	ND	mg/kg-dry		4.4		SW8151A	09/15/22 14:28 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0022		SW8151A	09/15/22 14:28 / jmh
Picloram	ND	mg/kg-dry		0.011		SW8151A	09/15/22 13:52 / jmh
Surr: DCAA	68.0	%REC		45-117		SW8151A	09/15/22 14:28 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
S - Spike recovery outside of advisory limits
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-010
Client Sample ID: SR-11-10

Report Date: 09/27/22
Collection Date: 08/12/22 09:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	4.8	wt%		0.2		SW3550C	08/19/22 10:51 / amn
CYANIDE							
Cyanide, Total	ND	mg/kg-dry		0.3		SW9012B	08/19/22 12:07 / mas
METALS, TOTAL - EPA SW846							
Chromium	11	mg/kg-dry	D	3		SW6020	08/24/22 02:09 / aem
Cobalt	5	mg/kg-dry		1		SW6020	08/24/22 02:09 / aem
Nickel	10	mg/kg-dry	D	3		SW6020	08/24/22 02:09 / aem
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
D - Reporting Limit (RL) increased due to sample matrix
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-010
Client Sample ID: SR-11-10

Report Date: 09/27/22
Collection Date: 08/12/22 09:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/25/22 20:17 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.21		SW8260B	08/25/22 20:17 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:17 / jdb
Surr: p-Bromofluorobenzene	102	%REC		78-160		SW8260B	08/25/22 20:17 / jdb
Surr: Dibromofluoromethane	118	%REC		70-132		SW8260B	08/25/22 20:17 / jdb
Surr: 1,2-Dichloroethane-d4	106	%REC		60-136		SW8260B	08/25/22 20:17 / jdb
Surr: Toluene-d8	113	%REC		75-138		SW8260B	08/25/22 20:17 / jdb
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 16:09 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-010
Client Sample ID: SR-11-10

Report Date: 09/27/22
Collection Date: 08/12/22 09:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.35		SW8270C	08/25/22 16:09 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 16:09 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 16:09 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Benzidine	ND	mg/kg-dry		0.35		SW8270C	08/25/22 16:09 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.35		SW8270C	08/25/22 16:09 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-010
Client Sample ID: SR-11-10

Report Date: 09/27/22
Collection Date: 08/12/22 09:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 16:09 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:09 / jph
Diallate	ND	mg/kg-dry		0.18		SW8270C	08/25/22 04:20 / jph
Surr: 2,4,6-Tribromophenol	40.0	%REC	S	53-141		SW8270C	08/25/22 16:09 / jph
Surr: 2-Fluorobiphenyl	78.0	%REC		63-98		SW8270C	08/25/22 16:09 / jph
Surr: 2-Fluorophenol	71.0	%REC		53-101		SW8270C	08/25/22 16:09 / jph
Surr: Nitrobenzene-d5	104	%REC	S	53-101		SW8270C	08/25/22 16:09 / jph
Surr: Phenol-d5	74.0	%REC		55-100		SW8270C	08/25/22 16:09 / jph
Surr: Terphenyl-d14	97.0	%REC		71-118		SW8270C	08/25/22 16:09 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	0.0092	mg/kg-dry		0.0042		SW8151A	08/24/22 00:05 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0042		SW8151A	08/24/22 00:05 / jmh
2,4-D	4.2	mg/kg-dry		2.1		SW8151A	09/16/22 01:12 / jmh
2,4-DB	ND	mg/kg-dry		0.053		SW8151A	08/24/22 00:05 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/24/22 00:05 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/24/22 00:05 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/24/22 00:05 / jmh
Bentazon	ND	mg/kg-dry		0.053		SW8151A	08/23/22 23:30 / jmh
Clopyralid	ND	mg/kg-dry		0.0053		SW8151A	08/23/22 23:30 / jmh
Dacthal	ND	mg/kg-dry		0.021		SW8151A	08/24/22 00:05 / jmh
Dalapon	ND	mg/kg-dry		0.053		SW8151A	08/24/22 00:05 / jmh
Dicamba	0.026	mg/kg-dry		0.0053		SW8151A	08/24/22 00:05 / jmh
Dichlorprop	ND	mg/kg-dry		0.021		SW8151A	08/24/22 00:05 / jmh
Dinoseb	ND	mg/kg-dry		0.021		SW8151A	08/24/22 00:05 / jmh
MCPA	ND	mg/kg-dry		4.2		SW8151A	08/24/22 00:05 / jmh
MCPP	ND	mg/kg-dry		4.2		SW8151A	08/24/22 00:05 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0021		SW8151A	08/24/22 00:05 / jmh
Picloram	ND	mg/kg-dry		0.011		SW8151A	08/23/22 23:30 / jmh
Surr: DCAA	71.0	%REC		45-117		SW8151A	08/24/22 00:05 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
S - Spike recovery outside of advisory limits
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-011
Client Sample ID: SR-12-5

Report Date: 09/27/22
Collection Date: 08/12/22 09:35
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	7.8	wt%		0.2		SW3550C	08/19/22 10:54 / amn
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/25/22 20:42 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-011
Client Sample ID: SR-12-5

Report Date: 09/27/22
Collection Date: 08/12/22 09:35
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.22		SW8260B	08/25/22 20:42 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/25/22 20:42 / jdb
Surr: p-Bromofluorobenzene	111	%REC		78-160		SW8260B	08/25/22 20:42 / jdb
Surr: Dibromofluoromethane	131	%REC		70-132		SW8260B	08/25/22 20:42 / jdb
Surr: 1,2-Dichloroethane-d4	118	%REC		60-136		SW8260B	08/25/22 20:42 / jdb
Surr: Toluene-d8	121	%REC		75-138		SW8260B	08/25/22 20:42 / jdb
GLYCOL BY GC/FID							
Ethylene Glycol	ND	mg/kg-dry		5.4		SW8015C	08/23/22 11:56 / jrj
Surr: 2-Butoxyethanol	89.0	%REC		76-117		SW8015C	08/23/22 11:56 / jrj
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 16:39 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.36		SW8270C	08/25/22 16:39 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 16:39 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-011
Client Sample ID: SR-12-5

Report Date: 09/27/22
Collection Date: 08/12/22 09:35
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 16:39 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Benzidine	ND	mg/kg-dry		0.36		SW8270C	08/25/22 16:39 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.36		SW8270C	08/25/22 16:39 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 16:39 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-011
Client Sample ID: SR-12-5

Report Date: 09/27/22
Collection Date: 08/12/22 09:35
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 16:39 / jph
Diallate	ND	mg/kg-dry		0.18		SW8270C	08/25/22 04:51 / jph
Surr: 2,4,6-Tribromophenol	76.0	%REC		53-141		SW8270C	08/25/22 16:39 / jph
Surr: 2-Fluorobiphenyl	67.0	%REC		63-98		SW8270C	08/25/22 16:39 / jph
Surr: 2-Fluorophenol	67.0	%REC		53-101		SW8270C	08/25/22 16:39 / jph
Surr: Nitrobenzene-d5	92.0	%REC		53-101		SW8270C	08/25/22 16:39 / jph
Surr: Phenol-d5	66.0	%REC		55-100		SW8270C	08/25/22 16:39 / jph
Surr: Terphenyl-d14	92.0	%REC		71-118		SW8270C	08/25/22 16:39 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	0.012	mg/kg-dry		0.0043		SW8151A	08/24/22 00:41 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0043		SW8151A	08/24/22 00:41 / jmh
2,4-D	4.9	mg/kg-dry		2.2		SW8151A	09/16/22 01:48 / jmh
2,4-DB	ND	mg/kg-dry		0.054		SW8151A	08/24/22 00:41 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/24/22 00:41 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/24/22 00:41 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/24/22 00:41 / jmh
Bentazon	ND	mg/kg-dry		0.054		SW8151A	08/24/22 00:05 / jmh
Clopyralid	ND	mg/kg-dry		0.0054		SW8151A	08/24/22 00:05 / jmh
Dacthal	ND	mg/kg-dry		0.022		SW8151A	08/24/22 00:41 / jmh
Dalapon	ND	mg/kg-dry		0.054		SW8151A	08/24/22 00:41 / jmh
Dicamba	0.027	mg/kg-dry		0.0054		SW8151A	08/24/22 00:41 / jmh
Dichlorprop	ND	mg/kg-dry		0.022		SW8151A	08/24/22 00:41 / jmh
Dinoseb	ND	mg/kg-dry		0.022		SW8151A	08/24/22 00:41 / jmh
MCPA	ND	mg/kg-dry		4.3		SW8151A	08/24/22 00:41 / jmh
MCPP	ND	mg/kg-dry		4.3		SW8151A	08/24/22 00:41 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0022		SW8151A	08/24/22 00:41 / jmh
Picloram	ND	mg/kg-dry		0.011		SW8151A	08/24/22 00:05 / jmh
Surr: DCAA	74.0	%REC		45-117		SW8151A	08/24/22 00:41 / jmh

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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-012
Client Sample ID: SR-12-10

Report Date: 09/27/22
Collection Date: 08/12/22 09:45
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	14	wt%		0.2		SW3550C	08/19/22 10:59 / amn
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/25/22 21:07 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb

Report Definitions:
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QCL - Quality Control Limit
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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-012
Client Sample ID: SR-12-10

Report Date: 09/27/22
Collection Date: 08/12/22 09:45
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.23		SW8260B	08/25/22 21:07 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:07 / jdb
Surr: p-Bromofluorobenzene	94.0	%REC		78-160		SW8260B	08/25/22 21:07 / jdb
Surr: Dibromofluoromethane	116	%REC		70-132		SW8260B	08/25/22 21:07 / jdb
Surr: 1,2-Dichloroethane-d4	103	%REC		60-136		SW8260B	08/25/22 21:07 / jdb
Surr: Toluene-d8	104	%REC		75-138		SW8260B	08/25/22 21:07 / jdb
GLYCOL BY GC/FID							
Ethylene Glycol	ND	mg/kg-dry		5.7		SW8015C	08/23/22 12:15 / jrj
Surr: 2-Butoxyethanol	84.0	%REC		76-117		SW8015C	08/23/22 12:15 / jrj
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		2.0		SW8270C	08/25/22 17:09 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
2-Chlorophenol	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
2-Nitrophenol	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
3,3´-Dichlorobenzidine	ND	mg/kg-dry		2.0		SW8270C	08/25/22 17:09 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		2.0		SW8270C	08/25/22 17:09 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-012
Client Sample ID: SR-12-10

Report Date: 09/27/22
Collection Date: 08/12/22 09:45
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
4-Chloroaniline	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
4-Chlorophenol	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
4-Nitrophenol	ND	mg/kg-dry		2.0		SW8270C	08/25/22 17:09 / jph
Acenaphthene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Acenaphthylene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Anthracene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Azobenzene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Benzidine	ND	mg/kg-dry		2.0		SW8270C	08/25/22 17:09 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Chrysene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Diethyl phthalate	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Fluoranthene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Fluorene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		2.0		SW8270C	08/25/22 17:09 / jph
Hexachloroethane	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Isophorone	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
m+p-Cresols	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Naphthalene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Nitrobenzene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
o-Cresol	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Pentachlorophenol	ND	mg/kg-dry		2.0		SW8270C	08/25/22 17:09 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-012
Client Sample ID: SR-12-10

Report Date: 09/27/22
Collection Date: 08/12/22 09:45
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
Phenanthrene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Phenol	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Pyrene	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Pyridine	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Triallate	ND	mg/kg-dry		0.98		SW8270C	08/25/22 17:09 / jph
Diallate	ND	mg/kg-dry		0.98		SW8270C	08/25/22 05:21 / jph
Surr: 2,4,6-Tribromophenol	77.0	%REC		53-141		SW8270C	08/25/22 17:09 / jph
Surr: 2-Fluorobiphenyl	70.0	%REC		63-98		SW8270C	08/25/22 17:09 / jph
Surr: 2-Fluorophenol	61.0	%REC		53-101		SW8270C	08/25/22 17:09 / jph
Surr: Nitrobenzene-d5	75.0	%REC		53-101		SW8270C	08/25/22 17:09 / jph
Surr: Phenol-d5	62.0	%REC		55-100		SW8270C	08/25/22 17:09 / jph
Surr: Terphenyl-d14	86.0	%REC		71-118		SW8270C	08/25/22 17:09 / jph
- The sample extract was diluted 5 times at analysis due to non-target compound sample matrix interference. The Reporting Limit reflects this dilution.							
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0046		SW8151A	08/24/22 01:17 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0046		SW8151A	08/24/22 01:17 / jmh
2,4-D	ND	mg/kg-dry		0.023		SW8151A	08/24/22 01:17 / jmh
2,4-DB	ND	mg/kg-dry		0.058		SW8151A	08/24/22 01:17 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.012		SW8151A	08/24/22 01:17 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.012		SW8151A	08/24/22 01:17 / jmh
Acifluorfen	ND	mg/kg-dry		0.012		SW8151A	08/24/22 01:17 / jmh
Bentazon	ND	mg/kg-dry		0.058		SW8151A	08/24/22 00:41 / jmh
Clopyralid	ND	mg/kg-dry		0.0058		SW8151A	08/24/22 00:41 / jmh
Dacthal	ND	mg/kg-dry		0.023		SW8151A	08/24/22 01:17 / jmh
Dalapon	ND	mg/kg-dry		0.058		SW8151A	08/24/22 01:17 / jmh
Dicamba	ND	mg/kg-dry		0.0058		SW8151A	08/24/22 01:17 / jmh
Dichlorprop	ND	mg/kg-dry		0.023		SW8151A	08/24/22 01:17 / jmh
Dinoseb	ND	mg/kg-dry		0.023		SW8151A	08/24/22 01:17 / jmh
MCPA	ND	mg/kg-dry		4.6		SW8151A	08/24/22 01:17 / jmh
MCPP	ND	mg/kg-dry		4.6		SW8151A	08/24/22 01:17 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0023		SW8151A	08/24/22 01:17 / jmh
Picloram	ND	mg/kg-dry		0.012		SW8151A	08/24/22 00:41 / jmh
Surr: DCAA	84.0	%REC		45-117		SW8151A	08/24/22 01:17 / jmh

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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-013
Client Sample ID: SR-12-15

Report Date: 09/27/22
Collection Date: 08/12/22 11:30
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	11	wt%		0.2		SW3550C	08/19/22 11:16 / amn
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/25/22 21:32 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb

Report Definitions:
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QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-013
Client Sample ID: SR-12-15

Report Date: 09/27/22
Collection Date: 08/12/22 11:30
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
1,2,4-Trimethylbenzene	0.30	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
1,3,5-Trimethylbenzene	0.26	mg/kg-dry		0.23		SW8260B	08/25/22 21:32 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:32 / jdb
Surr: p-Bromofluorobenzene	105	%REC		78-160		SW8260B	08/25/22 21:32 / jdb
Surr: Dibromofluoromethane	126	%REC		70-132		SW8260B	08/25/22 21:32 / jdb
Surr: 1,2-Dichloroethane-d4	114	%REC		60-136		SW8260B	08/25/22 21:32 / jdb
Surr: Toluene-d8	117	%REC		75-138		SW8260B	08/25/22 21:32 / jdb
GLYCOL BY GC/FID							
Ethylene Glycol	ND	mg/kg-dry		5.6		SW8015C	08/23/22 14:13 / jrj
Surr: 2-Butoxyethanol	81.0	%REC		76-117		SW8015C	08/23/22 14:13 / jrj
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 17:40 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.37		SW8270C	08/25/22 17:40 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 17:40 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph

Report Definitions:
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MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-013
Client Sample ID: SR-12-15

Report Date: 09/27/22
Collection Date: 08/12/22 11:30
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 17:40 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Benzidine	ND	mg/kg-dry		0.37		SW8270C	08/25/22 17:40 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.37		SW8270C	08/25/22 17:40 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 17:40 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-013
Client Sample ID: SR-12-15

Report Date: 09/27/22
Collection Date: 08/12/22 11:30
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 17:40 / jph
Diallate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 07:41 / jph
Surr: 2,4,6-Tribromophenol	88.0	%REC		53-141		SW8270C	08/25/22 17:40 / jph
Surr: 2-Fluorobiphenyl	74.0	%REC		63-98		SW8270C	08/25/22 17:40 / jph
Surr: 2-Fluorophenol	77.0	%REC		53-101		SW8270C	08/25/22 17:40 / jph
Surr: Nitrobenzene-d5	107	%REC	S	53-101		SW8270C	08/25/22 17:40 / jph
Surr: Phenol-d5	75.0	%REC		55-100		SW8270C	08/25/22 17:40 / jph
Surr: Terphenyl-d14	99.0	%REC		71-118		SW8270C	08/25/22 17:40 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0045		SW8151A	08/24/22 01:52 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0045		SW8151A	08/24/22 01:52 / jmh
2,4-D	0.64	mg/kg-dry		0.11		SW8151A	09/16/22 02:23 / jmh
2,4-DB	ND	mg/kg-dry		0.056		SW8151A	08/24/22 01:52 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/24/22 01:52 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/24/22 01:52 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/24/22 01:52 / jmh
Bentazon	ND	mg/kg-dry		0.056		SW8151A	08/24/22 01:17 / jmh
Clopyralid	0.017	mg/kg-dry		0.0056		SW8151A	08/24/22 01:17 / jmh
Dacthal	ND	mg/kg-dry		0.022		SW8151A	08/24/22 01:52 / jmh
Dalapon	ND	mg/kg-dry		0.056		SW8151A	08/24/22 01:52 / jmh
Dicamba	0.17	mg/kg-dry		0.0056		SW8151A	08/24/22 01:52 / jmh
Dichlorprop	ND	mg/kg-dry		0.022		SW8151A	08/24/22 01:52 / jmh
Dinoseb	ND	mg/kg-dry		0.022		SW8151A	08/24/22 01:52 / jmh
MCPA	ND	mg/kg-dry		4.5		SW8151A	08/24/22 01:52 / jmh
MCPP	ND	mg/kg-dry		4.5		SW8151A	08/24/22 01:52 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0022		SW8151A	08/24/22 01:52 / jmh
Picloram	ND	mg/kg-dry		0.011		SW8151A	08/24/22 01:17 / jmh
Surr: DCAA	73.0	%REC		45-117		SW8151A	08/24/22 01:52 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
S - Spike recovery outside of advisory limits
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-014
Client Sample ID: SR-13-5

Report Date: 09/27/22
Collection Date: 08/12/22 10:05
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	7.1	wt%		0.2		SW3550C	08/19/22 11:16 / amn
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/25/22 21:57 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-014
Client Sample ID: SR-13-5

Report Date: 09/27/22
Collection Date: 08/12/22 10:05
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.22		SW8260B	08/25/22 21:57 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/25/22 21:57 / jdb
Surr: p-Bromofluorobenzene	105	%REC		78-160		SW8260B	08/25/22 21:57 / jdb
Surr: Dibromofluoromethane	86.0	%REC		70-132		SW8260B	08/25/22 21:57 / jdb
Surr: 1,2-Dichloroethane-d4	114	%REC		60-136		SW8260B	08/25/22 21:57 / jdb
Surr: Toluene-d8	119	%REC		75-138		SW8260B	08/25/22 21:57 / jdb
GLYCOL BY GC/FID							
Ethylene Glycol	12	mg/kg-dry		5.4		SW8015C	08/23/22 12:53 / jrj
Surr: 2-Butoxyethanol	90.0	%REC		76-117		SW8015C	08/23/22 12:53 / jrj
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 18:10 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.36		SW8270C	08/25/22 18:10 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 18:10 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-014
Client Sample ID: SR-13-5

Report Date: 09/27/22
Collection Date: 08/12/22 10:05
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 18:10 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Benzidine	ND	mg/kg-dry		0.36		SW8270C	08/25/22 18:10 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.36		SW8270C	08/25/22 18:10 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 18:10 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-014
Client Sample ID: SR-13-5

Report Date: 09/27/22
Collection Date: 08/12/22 10:05
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:10 / jph
Diallate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 08:12 / jph
Surr: 2,4,6-Tribromophenol	13.0	%REC	S	53-141		SW8270C	08/25/22 18:10 / jph
Surr: 2-Fluorobiphenyl	66.0	%REC		63-98		SW8270C	08/25/22 18:10 / jph
Surr: 2-Fluorophenol	56.0	%REC		53-101		SW8270C	08/25/22 18:10 / jph
Surr: Nitrobenzene-d5	105	%REC	S	53-101		SW8270C	08/25/22 18:10 / jph
Surr: Phenol-d5	68.0	%REC		55-100		SW8270C	08/25/22 18:10 / jph
Surr: Terphenyl-d14	89.0	%REC		71-118		SW8270C	08/25/22 18:10 / jph
- Surrogates outside of the normal QC limits due to non-target interferences.							
HERBICIDES, CHLORINATED							
2,4,5-T	0.029	mg/kg-dry		0.0043		SW8151A	08/24/22 02:28 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0043		SW8151A	08/24/22 02:28 / jmh
2,4-D	19	mg/kg-dry		11		SW8151A	09/16/22 02:59 / jmh
2,4-DB	ND	mg/kg-dry		0.054		SW8151A	08/24/22 02:28 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/24/22 02:28 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/24/22 02:28 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/24/22 02:28 / jmh
Bentazon	ND	mg/kg-dry		0.054		SW8151A	08/24/22 01:52 / jmh
Clopyralid	0.084	mg/kg-dry		0.0054		SW8151A	08/24/22 01:52 / jmh
Dacthal	ND	mg/kg-dry		0.022		SW8151A	08/24/22 02:28 / jmh
Dalapon	ND	mg/kg-dry		0.054		SW8151A	08/24/22 02:28 / jmh
Dicamba	2.3	mg/kg-dry		0.27		SW8151A	09/13/22 06:56 / jmh
Dichlorprop	2.8	mg/kg-dry		1.1		SW8151A	09/13/22 06:56 / jmh
Dinoseb	ND	mg/kg-dry		0.022		SW8151A	08/24/22 02:28 / jmh
MCPA	ND	mg/kg-dry		4.3		SW8151A	08/24/22 02:28 / jmh
MCPP	ND	mg/kg-dry		4.3		SW8151A	08/24/22 02:28 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0022		SW8151A	08/24/22 02:28 / jmh
Picloram	0.016	mg/kg-dry		0.011		SW8151A	08/24/22 01:52 / jmh
Surr: DCAA	67.0	%REC		45-117		SW8151A	08/24/22 02:28 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
S - Spike recovery outside of advisory limits
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-015
Client Sample ID: SR-13-10

Report Date: 09/27/22
Collection Date: 08/12/22 10:10
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	5.6	wt%		0.2		SW3550C	08/19/22 11:20 / amn
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/25/22 22:22 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-015
Client Sample ID: SR-13-10

Report Date: 09/27/22
Collection Date: 08/12/22 10:10
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.21		SW8260B	08/25/22 22:22 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:22 / jdb
Surr: p-Bromofluorobenzene	98.0	%REC		78-160		SW8260B	08/25/22 22:22 / jdb
Surr: Dibromofluoromethane	44.0	%REC	S	70-132		SW8260B	08/25/22 22:22 / jdb
Surr: 1,2-Dichloroethane-d4	101	%REC		60-136		SW8260B	08/25/22 22:22 / jdb
Surr: Toluene-d8	103	%REC		75-138		SW8260B	08/25/22 22:22 / jdb
- High pH samples are known to degrade the Dibromofluoromethane surrogate.							
GLYCOL BY GC/FID							
Ethylene Glycol	49	mg/kg-dry		5.3		SW8015C	08/23/22 13:12 / jrj
Surr: 2-Butoxyethanol	96.0	%REC		76-117		SW8015C	08/23/22 13:12 / jrj
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 18:41 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.35		SW8270C	08/25/22 18:41 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 18:41 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
S - Spike recovery outside of advisory limits
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-015
Client Sample ID: SR-13-10

Report Date: 09/27/22
Collection Date: 08/12/22 10:10
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 18:41 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Benzidine	ND	mg/kg-dry		0.35		SW8270C	08/25/22 18:41 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.35		SW8270C	08/25/22 18:41 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-015
Client Sample ID: SR-13-10

Report Date: 09/27/22
Collection Date: 08/12/22 10:10
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 18:41 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Triallate	0.70	mg/kg-dry		0.33		SW8270C	08/25/22 18:41 / jph
Diallate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 08:42 / jph
Surr: 2,4,6-Tribromophenol	4.00	%REC	JS	53-141		SW8270C	08/25/22 18:41 / jph
Surr: 2-Fluorobiphenyl	69.0	%REC		63-98		SW8270C	08/25/22 18:41 / jph
Surr: 2-Fluorophenol	27.0	%REC	S	53-101		SW8270C	08/25/22 18:41 / jph
Surr: Nitrobenzene-d5	101	%REC		53-101		SW8270C	08/25/22 18:41 / jph
Surr: Phenol-d5	65.0	%REC		55-100		SW8270C	08/25/22 18:41 / jph
Surr: Terphenyl-d14	93.0	%REC		71-118		SW8270C	08/25/22 18:41 / jph
- Surrogates outside of the normal QC limits due to non-target interferences.							
HERBICIDES, CHLORINATED							
2,4,5-T	0.079	mg/kg-dry		0.0042		SW8151A	08/24/22 03:04 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0042		SW8151A	08/24/22 03:04 / jmh
2,4-D	154	mg/kg-dry		21		SW8151A	09/16/22 08:21 / jmh
2,4-DB	ND	mg/kg-dry		0.053		SW8151A	08/24/22 03:04 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/24/22 03:04 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/24/22 03:04 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/24/22 03:04 / jmh
Bentazon	ND	mg/kg-dry		0.053		SW8151A	08/24/22 02:28 / jmh
Clopyralid	0.17	mg/kg-dry		0.0053		SW8151A	08/24/22 02:28 / jmh
Dacthal	ND	mg/kg-dry		0.021		SW8151A	08/24/22 03:04 / jmh
Dalapon	ND	mg/kg-dry		0.053		SW8151A	08/24/22 03:04 / jmh
Dicamba	8.6	mg/kg-dry		2.6		SW8151A	09/16/22 03:35 / jmh
Dichlorprop	8.1	mg/kg-dry		2.1		SW8151A	09/16/22 08:56 / jmh
Dinoseb	ND	mg/kg-dry		0.021		SW8151A	08/24/22 03:04 / jmh
MCPA	ND	mg/kg-dry		4.2		SW8151A	08/24/22 03:04 / jmh
MCPP	ND	mg/kg-dry		4.2		SW8151A	08/24/22 03:04 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0021		SW8151A	08/24/22 03:04 / jmh
Picloram	0.037	mg/kg-dry		0.011		SW8151A	08/24/22 02:28 / jmh
Surr: DCAA	70.0	%REC		45-117		SW8151A	08/24/22 03:04 / jmh

Report Definitions:

RL - Analyte Reporting Limit
QCL - Quality Control Limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
S - Spike recovery outside of advisory limits

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-016
Client Sample ID: SR-13-15

Report Date: 09/27/22
Collection Date: 08/12/22 11:20
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	5.9	wt%		0.2		SW3550C	08/19/22 11:26 / amn
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/25/22 22:47 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-016
Client Sample ID: SR-13-15

Report Date: 09/27/22
Collection Date: 08/12/22 11:20
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.21		SW8260B	08/25/22 22:47 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/25/22 22:47 / jdb
Surr: p-Bromofluorobenzene	104	%REC		78-160		SW8260B	08/25/22 22:47 / jdb
Surr: Dibromofluoromethane	57.0	%REC	S	70-132		SW8260B	08/25/22 22:47 / jdb
Surr: 1,2-Dichloroethane-d4	104	%REC		60-136		SW8260B	08/25/22 22:47 / jdb
Surr: Toluene-d8	106	%REC		75-138		SW8260B	08/25/22 22:47 / jdb
- High pH samples are known to degrade the Dibromofluoromethane surrogate.							
GLYCOL BY GC/FID							
Ethylene Glycol	36	mg/kg-dry		5.3		SW8015C	08/19/22 12:03 / jrj
Surr: 2-Butoxyethanol	94.0	%REC		76-117		SW8015C	08/19/22 12:03 / jrj
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 19:11 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.35		SW8270C	08/25/22 19:11 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 19:11 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
S - Spike recovery outside of advisory limits
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-016
Client Sample ID: SR-13-15

Report Date: 09/27/22
Collection Date: 08/12/22 11:20
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 19:11 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Benzidine	ND	mg/kg-dry		0.35		SW8270C	08/25/22 19:11 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.35		SW8270C	08/25/22 19:11 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-016
Client Sample ID: SR-13-15

Report Date: 09/27/22
Collection Date: 08/12/22 11:20
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 19:11 / jph
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Triallate	0.40	mg/kg-dry		0.33		SW8270C	08/25/22 19:11 / jph
Diallate	ND	mg/kg-dry		0.17		SW8270C	08/25/22 23:04 / jph
Surr: 2,4,6-Tribromophenol	0	%REC	S	53-141		SW8270C	08/25/22 19:11 / jph
Surr: 2-Fluorobiphenyl	68.0	%REC		63-98		SW8270C	08/25/22 19:11 / jph
Surr: 2-Fluorophenol	18.0	%REC	S	53-101		SW8270C	08/25/22 19:11 / jph
Surr: Nitrobenzene-d5	110	%REC	S	53-101		SW8270C	08/25/22 19:11 / jph
Surr: Phenol-d5	62.0	%REC		55-100		SW8270C	08/25/22 19:11 / jph
Surr: Terphenyl-d14	95.0	%REC		71-118		SW8270C	08/25/22 19:11 / jph
- Surrogates outside of the normal QC limits due to non-target interferences.							
HERBICIDES, CHLORINATED							
2,4,5-T	0.17	mg/kg-dry		0.0042		SW8151A	08/24/22 03:40 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0042		SW8151A	08/24/22 03:40 / jmh
2,4-D	300	mg/kg-dry	E	21		SW8151A	09/16/22 05:57 / jmh
2,4-D	327	mg/kg-dry	H	106		SW8151A	09/16/22 10:08 / jmh
2,4-DB	ND	mg/kg-dry		0.053		SW8151A	08/24/22 03:40 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/24/22 03:40 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/24/22 03:40 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/24/22 03:40 / jmh
Bentazon	ND	mg/kg-dry		0.053		SW8151A	08/24/22 03:04 / jmh
Clopyralid	0.37	mg/kg-dry		0.0053		SW8151A	08/24/22 03:04 / jmh
Dacthal	ND	mg/kg-dry		0.021		SW8151A	08/24/22 03:40 / jmh
Dalapon	ND	mg/kg-dry		0.053		SW8151A	08/24/22 03:40 / jmh
Dicamba	8.3	mg/kg-dry		5.3		SW8151A	09/16/22 05:57 / jmh
Dichlorprop	9.4	mg/kg-dry	J	21		SW8151A	09/16/22 05:57 / jmh
Dichlorprop	7.8	mg/kg-dry	H	1.1		SW8151A	09/16/22 09:32 / jmh
Dinoseb	ND	mg/kg-dry		0.021		SW8151A	08/24/22 03:40 / jmh
MCPA	ND	mg/kg-dry		4.2		SW8151A	08/24/22 03:40 / jmh
MCPP	ND	mg/kg-dry		4.2		SW8151A	08/24/22 03:40 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0021		SW8151A	08/24/22 03:40 / jmh
Picloram	0.060	mg/kg-dry		0.011		SW8151A	08/24/22 03:04 / jmh
Surr: DCAA	69.0	%REC		45-117		SW8151A	08/24/22 03:40 / jmh

Report Definitions:

RL - Analyte Reporting Limit
QCL - Quality Control Limit
E - Estimated value - result exceeds the instrument upper quantitation limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)
H - Analysis performed past the method holding time
S - Spike recovery outside of advisory limits

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-017
Client Sample ID: SR-14-5

Report Date: 09/27/22
Collection Date: 08/12/22 10:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	5.4	wt%		0.2		SW3550C	08/19/22 11:32 / amn
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/25/22 23:12 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-017
Client Sample ID: SR-14-5

Report Date: 09/27/22
Collection Date: 08/12/22 10:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.21		SW8260B	08/25/22 23:12 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:12 / jdb
Surr: p-Bromofluorobenzene	109	%REC		78-160		SW8260B	08/25/22 23:12 / jdb
Surr: Dibromofluoromethane	78.0	%REC		70-132		SW8260B	08/25/22 23:12 / jdb
Surr: 1,2-Dichloroethane-d4	110	%REC		60-136		SW8260B	08/25/22 23:12 / jdb
Surr: Toluene-d8	116	%REC		75-138		SW8260B	08/25/22 23:12 / jdb
GLYCOL BY GC/FID							
Ethylene Glycol	6.1	mg/kg-dry		5.3		SW8015C	08/19/22 13:00 / jrj
Surr: 2-Butoxyethanol	96.0	%REC		76-117		SW8015C	08/19/22 13:00 / jrj
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 19:41 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.35		SW8270C	08/25/22 19:41 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 19:41 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-017
Client Sample ID: SR-14-5

Report Date: 09/27/22
Collection Date: 08/12/22 10:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 19:41 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Benzidine	ND	mg/kg-dry		0.35		SW8270C	08/25/22 19:41 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.35		SW8270C	08/25/22 19:41 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 19:41 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-017
Client Sample ID: SR-14-5

Report Date: 09/27/22
Collection Date: 08/12/22 10:15
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 19:41 / jph
Diallate	ND	mg/kg-dry		0.18		SW8270C	08/25/22 23:34 / jph
Surr: 2,4,6-Tribromophenol	0	%REC	S	53-141		SW8270C	08/25/22 19:41 / jph
Surr: 2-Fluorobiphenyl	73.0	%REC		63-98		SW8270C	08/25/22 19:41 / jph
Surr: 2-Fluorophenol	39.0	%REC	S	53-101		SW8270C	08/25/22 19:41 / jph
Surr: Nitrobenzene-d5	103	%REC	S	53-101		SW8270C	08/25/22 19:41 / jph
Surr: Phenol-d5	69.0	%REC		55-100		SW8270C	08/25/22 19:41 / jph
Surr: Terphenyl-d14	95.0	%REC		71-118		SW8270C	08/25/22 19:41 / jph
- Surrogates outside of the normal QC limits due to non-target interferences.							
HERBICIDES, CHLORINATED							
2,4,5-T	0.022	mg/kg-dry		0.0042		SW8151A	08/24/22 04:16 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0042		SW8151A	08/24/22 04:16 / jmh
2,4-D	11	mg/kg-dry		11		SW8151A	09/16/22 04:46 / jmh
2,4-DB	ND	mg/kg-dry		0.053		SW8151A	08/24/22 04:16 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/24/22 04:16 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/24/22 04:16 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/24/22 04:16 / jmh
Bentazon	ND	mg/kg-dry		0.053		SW8151A	08/24/22 03:40 / jmh
Clopyralid	0.040	mg/kg-dry		0.0053		SW8151A	08/24/22 03:40 / jmh
Dacthal	ND	mg/kg-dry		0.021		SW8151A	08/24/22 04:16 / jmh
Dalapon	ND	mg/kg-dry		0.053		SW8151A	08/24/22 04:16 / jmh
Dicamba	0.82	mg/kg-dry		0.053		SW8151A	09/13/22 05:09 / jmh
Dichlorprop	1.5	mg/kg-dry		0.21		SW8151A	09/13/22 05:09 / jmh
Dinoseb	ND	mg/kg-dry		0.021		SW8151A	08/24/22 04:16 / jmh
MCPA	ND	mg/kg-dry		4.2		SW8151A	08/24/22 04:16 / jmh
MCPP	ND	mg/kg-dry		4.2		SW8151A	08/24/22 04:16 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0021		SW8151A	08/24/22 04:16 / jmh
Picloram	0.014	mg/kg-dry		0.011		SW8151A	08/24/22 03:40 / jmh
Surr: DCAA	64.0	%REC		45-117		SW8151A	08/24/22 04:16 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
S - Spike recovery outside of advisory limits
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-018
Client Sample ID: SR-14-10

Report Date: 09/27/22
Collection Date: 08/12/22 10:20
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	12	wt%		0.2		SW3550C	08/19/22 11:45 / amn
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/25/22 23:37 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-018
Client Sample ID: SR-14-10

Report Date: 09/27/22
Collection Date: 08/12/22 10:20
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
1,2,4-Trimethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
1,3,5-Trimethylbenzene	ND	mg/kg-dry		0.23		SW8260B	08/25/22 23:37 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/25/22 23:37 / jdb
Surr: p-Bromofluorobenzene	106	%REC		78-160		SW8260B	08/25/22 23:37 / jdb
Surr: Dibromofluoromethane	117	%REC		70-132		SW8260B	08/25/22 23:37 / jdb
Surr: 1,2-Dichloroethane-d4	106	%REC		60-136		SW8260B	08/25/22 23:37 / jdb
Surr: Toluene-d8	109	%REC		75-138		SW8260B	08/25/22 23:37 / jdb
GLYCOL BY GC/FID							
Ethylene Glycol	ND	mg/kg-dry		5.6		SW8015C	08/19/22 11:23 / jrj
Surr: 2-Butoxyethanol	82.0	%REC		76-117		SW8015C	08/19/22 11:23 / jrj
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 20:12 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
2-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
2-Nitrophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
3,3´-Dichlorobenzidine	ND	mg/kg-dry		0.38		SW8270C	08/25/22 20:12 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 20:12 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph

Report Definitions:
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QCL - Quality Control Limit
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ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-018
Client Sample ID: SR-14-10

Report Date: 09/27/22
Collection Date: 08/12/22 10:20
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
4-Chloro-2-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
4-Chloroaniline	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
4-Chlorophenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
4-Nitrophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 20:12 / jph
Acenaphthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Acenaphthylene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Azobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Benzidine	ND	mg/kg-dry		0.38		SW8270C	08/25/22 20:12 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Chrysene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Diethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Fluoranthene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Fluorene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		0.38		SW8270C	08/25/22 20:12 / jph
Hexachloroethane	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Isophorone	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
m+p-Cresols	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Naphthalene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Nitrobenzene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
o-Cresol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Pentachlorophenol	ND	mg/kg-dry		0.67		SW8270C	08/25/22 20:12 / jph

Report Definitions:
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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-018
Client Sample ID: SR-14-10

Report Date: 09/27/22
Collection Date: 08/12/22 10:20
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
Phenanthrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Phenol	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Pyrene	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Pyridine	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Triallate	ND	mg/kg-dry		0.33		SW8270C	08/25/22 20:12 / jph
Diallate	ND	mg/kg-dry		0.19		SW8270C	08/26/22 00:05 / jph
Surr: 2,4,6-Tribromophenol	79.0	%REC		53-141		SW8270C	08/25/22 20:12 / jph
Surr: 2-Fluorobiphenyl	66.0	%REC		63-98		SW8270C	08/25/22 20:12 / jph
Surr: 2-Fluorophenol	70.0	%REC		53-101		SW8270C	08/25/22 20:12 / jph
Surr: Nitrobenzene-d5	96.0	%REC		53-101		SW8270C	08/25/22 20:12 / jph
Surr: Phenol-d5	72.0	%REC		55-100		SW8270C	08/25/22 20:12 / jph
Surr: Terphenyl-d14	91.0	%REC		71-118		SW8270C	08/25/22 20:12 / jph
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0045		SW8151A	08/24/22 04:51 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0045		SW8151A	08/24/22 04:51 / jmh
2,4-D	0.085	mg/kg-dry		0.023		SW8151A	08/24/22 04:51 / jmh
2,4-DB	ND	mg/kg-dry		0.057		SW8151A	08/24/22 04:51 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/24/22 04:51 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/24/22 04:51 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/24/22 04:51 / jmh
Bentazon	ND	mg/kg-dry		0.057		SW8151A	08/24/22 04:16 / jmh
Clopyralid	0.025	mg/kg-dry		0.0057		SW8151A	08/24/22 04:16 / jmh
Dacthal	ND	mg/kg-dry		0.023		SW8151A	08/24/22 04:51 / jmh
Dalapon	ND	mg/kg-dry		0.057		SW8151A	08/24/22 04:51 / jmh
Dicamba	ND	mg/kg-dry		0.0057		SW8151A	08/24/22 04:51 / jmh
Dichlorprop	ND	mg/kg-dry		0.023		SW8151A	08/24/22 04:51 / jmh
Dinoseb	ND	mg/kg-dry		0.023		SW8151A	08/24/22 04:51 / jmh
MCPA	ND	mg/kg-dry		4.5		SW8151A	08/24/22 04:51 / jmh
MCPP	ND	mg/kg-dry		4.5		SW8151A	08/24/22 04:51 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0023		SW8151A	08/24/22 04:51 / jmh
Picloram	ND	mg/kg-dry		0.011		SW8151A	08/24/22 04:16 / jmh
Surr: DCAA	95.0	%REC		45-117		SW8151A	08/24/22 04:51 / jmh

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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-019
Client Sample ID: SR-14-15

Report Date: 09/27/22
Collection Date: 08/12/22 11:10
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	13	wt%		0.2		SW3550C	08/19/22 11:52 / amn
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Bromobenzene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Bromochloromethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Bromodichloromethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Bromoform	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Bromomethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Carbon tetrachloride	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Chlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Chloroethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
2-Chloroethyl vinyl ether	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Chloroform	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Chloromethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
2-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
4-Chlorotoluene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Chlorodibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
1,2-Dibromoethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Dibromomethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
1,2-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
1,3-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
1,4-Dichlorobenzene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Dichlorodifluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
1,1-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
1,2-Dichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
cis-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
1,1-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
trans-1,2-Dichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
1,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
1,3-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
2,2-Dichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
1,1-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
cis-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
trans-1,3-Dichloropropene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Ethylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Isopropylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Methyl tert-butyl ether (MTBE)	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Methylene chloride	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Methyl ethyl ketone	ND	mg/kg-dry		4.0		SW8260B	08/26/22 00:03 / jdb
n-Propylbenzene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Styrene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
1,1,1,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb

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LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-019
Client Sample ID: SR-14-15

Report Date: 09/27/22
Collection Date: 08/12/22 11:10
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
VOLATILE ORGANIC COMPOUNDS							
1,1,2,2-Tetrachloroethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Tetrachloroethene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Toluene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
1,1,1-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
1,1,2-Trichloroethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Trichloroethene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Trichlorofluoromethane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
1,2,3-Trichloropropane	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
1,2,4-Trimethylbenzene	1.1	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
1,3,5-Trimethylbenzene	0.40	mg/kg-dry		0.23		SW8260B	08/26/22 00:03 / jdb
Vinyl chloride	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
m+p-Xylenes	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
o-Xylene	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Xylenes, Total	ND	mg/kg-dry		0.20		SW8260B	08/26/22 00:03 / jdb
Surr: p-Bromofluorobenzene	105	%REC		78-160		SW8260B	08/26/22 00:03 / jdb
Surr: Dibromofluoromethane	122	%REC		70-132		SW8260B	08/26/22 00:03 / jdb
Surr: 1,2-Dichloroethane-d4	112	%REC		60-136		SW8260B	08/26/22 00:03 / jdb
Surr: Toluene-d8	112	%REC		75-138		SW8260B	08/26/22 00:03 / jdb
GLYCOL BY GC/FID							
Ethylene Glycol	ND	mg/kg-dry		5.7		SW8015C	08/23/22 11:38 / jrj
Surr: 2-Butoxyethanol	85.0	%REC		76-117		SW8015C	08/23/22 11:38 / jrj
SEMI-VOLATILE ORGANIC COMPOUNDS							
1,2,4-Trichlorobenzene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
1,2-Dichlorobenzene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
1,3-Dichlorobenzene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
1,4-Dichlorobenzene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
1-Methylnaphthalene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
2,4,5-Trichlorophenol	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
2,4,6-Trichlorophenol	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
2,4-Dichlorophenol	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
2,4-Dimethylphenol	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
2,4-Dinitrophenol	ND	mg/kg-dry		1.2		SW8270C	08/25/22 20:43 / jph
2,4-Dinitrotoluene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
2,6-Dinitrotoluene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
2-Chloronaphthalene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
2-Chlorophenol	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
2-Methylnaphthalene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
2-Nitrophenol	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
3,3´-Dichlorobenzidine	ND	mg/kg-dry		1.2		SW8270C	08/25/22 20:43 / jph
4,6-Dinitro-2-methylphenol	ND	mg/kg-dry		1.2		SW8270C	08/25/22 20:43 / jph
4-Bromophenyl phenyl ether	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-019
Client Sample ID: SR-14-15

Report Date: 09/27/22
Collection Date: 08/12/22 11:10
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
4-Chloro-2-methylphenol	3.1	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
4-Chloro-3-methylphenol	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
4-Chloroaniline	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
4-Chlorophenol	5.0	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
4-Chlorophenyl phenyl ether	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
4-Nitrophenol	ND	mg/kg-dry		1.2		SW8270C	08/25/22 20:43 / jph
Acenaphthene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Acenaphthylene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Anthracene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Azobenzene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Benzidine	ND	mg/kg-dry		1.2		SW8270C	08/25/22 20:43 / jph
Benzo(a)anthracene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Benzo(a)pyrene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Benzo(b)fluoranthene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Benzo(g,h,i)perylene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Benzo(k)fluoranthene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
bis(-2-chloroethoxy)Methane	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
bis(-2-chloroethyl)Ether	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
bis(2-chloroisopropyl)Ether	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
bis(2-ethylhexyl)Phthalate	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Butylbenzylphthalate	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Chrysene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Dibenzo(a,h)anthracene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Diethyl phthalate	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Dimethyl phthalate	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Di-n-butyl phthalate	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Di-n-octyl phthalate	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Fluoranthene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Fluorene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Hexachlorobenzene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Hexachlorobutadiene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Hexachlorocyclopentadiene	ND	mg/kg-dry		1.2		SW8270C	08/25/22 20:43 / jph
Hexachloroethane	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Indeno(1,2,3-cd)pyrene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Isophorone	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
m+p-Cresols	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Naphthalene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Nitrobenzene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
n-Nitrosodimethylamine	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
n-Nitroso-di-n-propylamine	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
n-Nitrosodiphenylamine	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
o-Cresol	0.44	mg/kg-dry	J	0.58		SW8270C	08/25/22 20:43 / jph
Pentachlorophenol	ND	mg/kg-dry		1.2		SW8270C	08/25/22 20:43 / jph

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
J - Estimated value - analyte was present but less than the Reporting Limit (RL)
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Rubik Environmental
Project: Nutrien/LPI Billings
Lab ID: B22081406-019
Client Sample ID: SR-14-15

Report Date: 09/27/22
Collection Date: 08/12/22 11:10
DateReceived: 08/12/22
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS							
Phenanthrene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Phenol	1.3	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Pyrene	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Pyridine	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Triallate	ND	mg/kg-dry		0.58		SW8270C	08/25/22 20:43 / jph
Diallate	ND	mg/kg-dry		0.58		SW8270C	08/26/22 00:35 / jph
Surr: 2,4,6-Tribromophenol	84.0	%REC		53-141		SW8270C	08/25/22 20:43 / jph
Surr: 2-Fluorobiphenyl	70.0	%REC		63-98		SW8270C	08/25/22 20:43 / jph
Surr: 2-Fluorophenol	73.0	%REC		53-101		SW8270C	08/25/22 20:43 / jph
Surr: Nitrobenzene-d5	93.0	%REC		53-101		SW8270C	08/25/22 20:43 / jph
Surr: Phenol-d5	72.0	%REC		55-100		SW8270C	08/25/22 20:43 / jph
Surr: Terphenyl-d14	96.0	%REC		71-118		SW8270C	08/25/22 20:43 / jph
- Due to the sample matrix, 10 g of sample were extracted, as opposed to a normal 30 g. The Reporting Limit reflects the initial sample mass.							
HERBICIDES, CHLORINATED							
2,4,5-T	ND	mg/kg-dry		0.0046		SW8151A	08/24/22 05:27 / jmh
2,4,5-TP (Silvex)	ND	mg/kg-dry		0.0046		SW8151A	08/24/22 05:27 / jmh
2,4-D	1.0	mg/kg-dry		0.46		SW8151A	09/16/22 05:21 / jmh
2,4-DB	ND	mg/kg-dry		0.057		SW8151A	08/24/22 05:27 / jmh
3,5-Dichlorobenzoic Acid	ND	mg/kg-dry		0.011		SW8151A	08/24/22 05:27 / jmh
4-Nitrophenol	ND	mg/kg-dry		0.011		SW8151A	08/24/22 05:27 / jmh
Acifluorfen	ND	mg/kg-dry		0.011		SW8151A	08/24/22 05:27 / jmh
Bentazon	ND	mg/kg-dry		0.057		SW8151A	08/24/22 04:51 / jmh
Clopyralid	0.16	mg/kg-dry		0.0057		SW8151A	08/24/22 04:51 / jmh
Dacthal	ND	mg/kg-dry		0.023		SW8151A	08/24/22 05:27 / jmh
Dalapon	ND	mg/kg-dry		0.057		SW8151A	08/24/22 05:27 / jmh
Dicamba	0.28	mg/kg-dry		0.011		SW8151A	09/13/22 03:22 / jmh
Dichlorprop	0.071	mg/kg-dry		0.023		SW8151A	08/24/22 05:27 / jmh
Dinoseb	ND	mg/kg-dry		0.023		SW8151A	08/24/22 05:27 / jmh
MCPA	ND	mg/kg-dry		4.6		SW8151A	08/24/22 05:27 / jmh
MCPP	ND	mg/kg-dry		4.6		SW8151A	08/24/22 05:27 / jmh
Pentachlorophenol	ND	mg/kg-dry		0.0023		SW8151A	08/24/22 05:27 / jmh
Picloram	ND	mg/kg-dry		0.011		SW8151A	08/24/22 04:51 / jmh
Surr: DCAA	67.0	%REC		45-117		SW8151A	08/24/22 05:27 / jmh

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 08/31/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW6020**									Analytical Run: ICPMS207-B_220822A	
Lab ID: **ICSA**	3	Interference Check Sample A							08/23/22 11:41	
Chromium		0.00187	mg/L	0.0010						
Cobalt		0.000185	mg/L	0.0010						
Nickel		0.000164	mg/L	0.0010						
Lab ID: **ICSAB**	3	Interference Check Sample AB							08/23/22 11:47	
Chromium		0.0223	mg/L	0.0010	111	80	120			
Cobalt		0.0189	mg/L	0.0010	95	80	120			
Nickel		0.0213	mg/L	0.0010	106	80	120			
Lab ID: **QCS**	3	Initial Calibration Verification Standard							08/23/22 21:06	
Chromium		0.0508	mg/L	0.0010	102	90	110			
Cobalt		0.0485	mg/L	0.0010	97	90	110			
Nickel		0.0515	mg/L	0.0010	103	90	110			
Method: **SW6020**									Batch: 169584	
Lab ID: **MB-169584**	3	Method Blank				Run: ICPMS207-B_220822A			08/24/22 00:39	
Chromium		ND	mg/kg	0.1						
Cobalt		ND	mg/kg	0.01						
Nickel		ND	mg/kg	0.2						
Lab ID: **LCS3-169584**	3	Laboratory Control Sample				Run: ICPMS207-B_220822A			08/24/22 00:45	
Chromium		48.6	mg/kg	10	97	80	120			
Cobalt		48.7	mg/kg	1.0	97	80	120			
Nickel		50.3	mg/kg	10	101	80	120			
Lab ID: **B22081406-019ADIL**	3	Serial Dilution				Run: ICPMS207-B_220822A			08/24/22 02:21	
Chromium		13.5	mg/kg-dry	13					10	N
Cobalt		5.90	mg/kg-dry	1.3				0.4	10	
Nickel		12.6	mg/kg-dry	13					10	N
Lab ID: **B22081406-019APDS1**	3	Post Digestion/Distillation Spike				Run: ICPMS207-B_220822A			08/24/22 02:40	
Chromium		24.7	mg/kg-dry	2.7	83	75	125			
Cobalt		16.3	mg/kg-dry	1.0	76	75	125			
Nickel		24.4	mg/kg-dry	2.7	86	75	125			
Lab ID: **B22081406-019AMS3**	3	Sample Matrix Spike				Run: ICPMS207-B_220822A			08/24/22 02:46	
Chromium		74.6	mg/kg-dry	11	108	75	125			
Cobalt		60.7	mg/kg-dry	1.1	96	75	125			
Nickel		70.9	mg/kg-dry	11	102	75	125			
Lab ID: **B22081406-019AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS207-B_220822A			08/24/22 02:52	
Chromium		68.9	mg/kg-dry	11	102	75	125	8.0	20	
Cobalt		56.4	mg/kg-dry	1.1	92	75	125	7.3	20	
Nickel		66.2	mg/kg-dry	11	98	75	125	6.9	20	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

N - Analyte concentration was not sufficiently high to calculate a Relative Percent Difference (RPD) for the serial dilution test

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 08/31/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW9012B										Batch: 169515
Lab ID: MB-169515		Method Blank				Run: SFA-201-B_220819A				08/19/22 11:08
Cyanide, Total		0.1	mg/kg	0.1						
Lab ID: LCS-169515		Laboratory Control Sample				Run: SFA-201-B_220819A				08/19/22 11:10
Cyanide, Total		5.48	mg/kg	0.25	112	60	140			
Lab ID: B22081361-017AMS		Sample Matrix Spike				Run: SFA-201-B_220819A				08/19/22 11:13
Cyanide, Total		5.81	mg/kg-dry	0.28	100	50	150			
Lab ID: B22081361-017AMSD		Sample Matrix Spike Duplicate				Run: SFA-201-B_220819A				08/19/22 11:16
Cyanide, Total		6.01	mg/kg-dry	0.28	103	50	150	3.4	30	
Lab ID: B22081406-007AMS		Sample Matrix Spike				Run: SFA-201-B_220819A				08/19/22 11:50
Cyanide, Total		4.62	mg/kg-dry	0.27	82	50	150			
Lab ID: B22081406-007AMSD		Sample Matrix Spike Duplicate				Run: SFA-201-B_220819A				08/19/22 11:52
Cyanide, Total		4.74	mg/kg-dry	0.27	86	50	150	2.7	30	
Method: SW9012B										Batch: 169532
Lab ID: MB-169532		Method Blank				Run: SFA-201-B_220819A				08/19/22 11:56
Cyanide, Total		0.1	mg/kg	0.1						
Lab ID: LCS-169532		Laboratory Control Sample				Run: SFA-201-B_220819A				08/19/22 11:58
Cyanide, Total		5.34	mg/kg	0.25	110	60	140			
Lab ID: B22081406-008AMS		Sample Matrix Spike				Run: SFA-201-B_220819A				08/19/22 12:01
Cyanide, Total		5.42	mg/kg-dry	0.28	94	50	150			
Lab ID: B22081406-008AMSD		Sample Matrix Spike Duplicate				Run: SFA-201-B_220819A				08/19/22 12:04
Cyanide, Total		5.19	mg/kg-dry	0.28	89	50	150	4.4	30	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8015C										Batch: 169491
Lab ID: LCS-169491	2	Laboratory Control Sample				Run: GCFID-HP1-B_220819A				08/19/22 10:06
Ethylene Glycol		108	mg/kg	5.0	108	73	128			
Surr: 2-Butoxyethanol				1.0	97	76	117			
Lab ID: MB-169491	2	Method Blank				Run: GCFID-HP1-B_220819A				08/19/22 10:46
Ethylene Glycol		ND	mg/kg	5.0						
Surr: 2-Butoxyethanol				1.0	98	76	117			
Lab ID: B22081406-016ADUP	2	Sample Duplicate				Run: GCFID-HP1-B_220819A				08/19/22 13:21
Ethylene Glycol		36.4	mg/kg-dry	5.3				2.3	20	
Surr: 2-Butoxyethanol				1.1	94	76	117			
Lab ID: B22081406-019AMS	2	Sample Matrix Spike				Run: GCFID-HP1-B_220823A				08/23/22 10:22
Ethylene Glycol		99.4	mg/kg-dry	5.7	87	73	128			
Surr: 2-Butoxyethanol				1.1	84	76	117			
Lab ID: B22081406-019AMSD	2	Sample Matrix Spike Duplicate				Run: GCFID-HP1-B_220823A				08/23/22 10:41
Ethylene Glycol		103	mg/kg-dry	5.7	90	73	128	3.4	20	
Surr: 2-Butoxyethanol				1.1	84	76	117			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8151A										Batch: 169588
Lab ID: LCS-169588	3	Laboratory Control Sample				Run: CECD.I_220822A				08/23/22 13:19
Bentazon		0.0613	mg/kg	0.050	61	34	115			
Clopyralid		0.0986	mg/kg	0.0050	99	70	130			
Picloram		0.0850	mg/kg	0.010	85	50	112			
Lab ID: MB-169588	3	Method Blank				Run: CECD.I_220822A				08/23/22 13:55
Bentazon		ND	mg/kg	0.050						
Clopyralid		ND	mg/kg	0.0050						
Picloram		ND	mg/kg	0.010						
Lab ID: B22081406-002AMS	3	Sample Matrix Spike				Run: CECD.I_220822A				08/23/22 15:07
Bentazon		0.0564	mg/kg-dry	0.056	50	34	115			
Clopyralid		0.314	mg/kg-dry	0.0056	104	70	130			
Picloram		0.0707	mg/kg-dry	0.011	63	50	112			
Lab ID: B22081406-002AMSD	3	Sample Matrix Spike Duplicate				Run: CECD.I_220822A				08/23/22 15:43
Bentazon		0.0488	mg/kg-dry	0.056	43	34	115		40	
Clopyralid		0.339	mg/kg-dry	0.0056	126	70	130	7.5	40	
Picloram		0.0678	mg/kg-dry	0.011	60	50	112	4.2	40	
Lab ID: LCS-169588	16	Laboratory Control Sample				Run: DECD.I_220822B				08/23/22 13:55
2,4,5-T		0.0827	mg/kg	0.0040	83	56	119			
2,4,5-TP (Silvex)		0.0770	mg/kg	0.0040	77	45	116			
2,4-D		0.0878	mg/kg	0.020	88	48	121			
2,4-DB		0.0820	mg/kg	0.050	82	28	125			
3,5-Dichlorobenzoic Acid		0.0808	mg/kg	0.010	81	59	115			
4-Nitrophenol		0.0801	mg/kg	0.010	80	19	114			
Acifluorfen		0.0849	mg/kg	0.010	85	46	123			
Dacthal		0.0867	mg/kg	0.020	87	40	120			
Dalapon		0.0499	mg/kg	0.050	50	30	100			
Dicamba		0.0763	mg/kg	0.0050	76	50	119			
Dichlorprop		0.0779	mg/kg	0.020	78	50	120			
Dinoseb		0.0514	mg/kg	0.020	51	7	100			
MCPA		4.92	mg/kg	4.0	49	26	117			
MCPP		5.08	mg/kg	4.0	51	30	119			
Pentachlorophenol		0.0661	mg/kg	0.0020	66	35	103			
Surr: DCAA				0.0020	82	45	117			
Lab ID: MB-169588	16	Method Blank				Run: DECD.I_220822B				08/23/22 14:31
2,4,5-T		ND	mg/kg	0.0040						
2,4,5-TP (Silvex)		ND	mg/kg	0.0040						
2,4-D		ND	mg/kg	0.020						
2,4-DB		ND	mg/kg	0.050						
3,5-Dichlorobenzoic Acid		ND	mg/kg	0.010						
4-Nitrophenol		ND	mg/kg	0.010						
Acifluorfen		ND	mg/kg	0.010						
Dacthal		ND	mg/kg	0.020						
Dalapon		ND	mg/kg	0.050						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8151A										Batch: 169588
Lab ID: MB-169588	16	Method Blank				Run: DECD.I_220822B				08/23/22 14:31
Dicamba		ND	mg/kg	0.0050						
Dichlorprop		ND	mg/kg	0.020						
Dinoseb		ND	mg/kg	0.020						
MCPA		ND	mg/kg	4.0						
MCPP		ND	mg/kg	4.0						
Pentachlorophenol		ND	mg/kg	0.0020						
Surr: DCAA				0.0020	78	45	117			
Lab ID: B22081406-002AMS	15	Sample Matrix Spike				Run: DECD.I_220822B				08/23/22 15:43
2,4,5-T		0.0730	mg/kg-dry	0.0045	65	56	119			
2,4,5-TP (Silvex)		0.0740	mg/kg-dry	0.0045	66	45	116			
2,4-DB		0.0917	mg/kg-dry	0.056	81	28	125			
3,5-Dichlorobenzoic Acid		0.0844	mg/kg-dry	0.011	75	59	115			
4-Nitrophenol		0.0950	mg/kg-dry	0.011	84	19	114			
Acifluorfen		0.0894	mg/kg-dry	0.011	79	46	123			
Dacthal		0.0972	mg/kg-dry	0.023	86	40	120			
Dalapon		0.0544	mg/kg-dry	0.056	48	30	100			
Dicamba		0.151	mg/kg-dry	0.0056	84	50	119			
Dichlorprop		0.0731	mg/kg-dry	0.023	65	50	120			
Dinoseb		0.0600	mg/kg-dry	0.023	53	7	100			
MCPA		3.92	mg/kg-dry	4.5	35	26	117			
MCPP		3.73	mg/kg-dry	4.5	33	30	119			
Pentachlorophenol		0.0604	mg/kg-dry	0.0023	54	35	103			
Surr: DCAA				0.0023	78	45	117			
Lab ID: B22081406-002AMSD	15	Sample Matrix Spike Duplicate				Run: DECD.I_220822B				08/23/22 16:19
2,4,5-T		0.0669	mg/kg-dry	0.0045	60	56	119	8.8	40	
2,4,5-TP (Silvex)		0.0683	mg/kg-dry	0.0045	61	45	116	8.0	40	
2,4-DB		0.103	mg/kg-dry	0.056	91	28	125	11	40	
3,5-Dichlorobenzoic Acid		0.0817	mg/kg-dry	0.011	73	59	115	3.2	40	
4-Nitrophenol		0.0945	mg/kg-dry	0.011	84	19	114	0.5	40	
Acifluorfen		0.0660	mg/kg-dry	0.011	59	46	123	30	40	
Dacthal		0.0836	mg/kg-dry	0.023	74	40	120	15	40	
Dalapon		0.0605	mg/kg-dry	0.056	54	30	100		40	
Dicamba		0.141	mg/kg-dry	0.0056	76	50	119	6.8	40	
Dichlorprop		0.0768	mg/kg-dry	0.023	68	50	120	5.0	40	
Dinoseb		0.0478	mg/kg-dry	0.023	42	7	100	23	40	
MCPA		3.36	mg/kg-dry	4.5	30	26	117		40	
MCPP		3.31	mg/kg-dry	4.5	29	30	119		40	S
Pentachlorophenol		0.0494	mg/kg-dry	0.0023	44	35	103	20	40	
Surr: DCAA				0.0023	73	45	117			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW8260B**										Batch: 169661
Lab ID: **B22081406-002AMS**	58	Sample Matrix Spike				Run: VOA5977B_220823B				08/24/22 05:26
Benzene		1.35	mg/kg-dry	0.11	120	70	127			
Bromobenzene		1.28	mg/kg-dry	0.11	114	70	135			
Bromochloromethane		1.43	mg/kg-dry	0.11	127	60	130			
Bromodichloromethane		1.38	mg/kg-dry	0.11	123	56	136			
Bromoform		1.33	mg/kg-dry	0.11	118	59	132			
Bromomethane		0.799	mg/kg-dry	0.11	71	18	134			
Carbon tetrachloride		1.49	mg/kg-dry	0.11	132	60	140			
Chlorobenzene		1.43	mg/kg-dry	0.11	127	75	132			
Chlorodibromomethane		1.43	mg/kg-dry	0.11	127	62	133			
Chloroethane		1.21	mg/kg-dry	0.11	107	12	80			S
Chloroform		1.40	mg/kg-dry	0.11	125	62	132			
Chloromethane		1.18	mg/kg-dry	0.11	105	41	138			
2-Chloroethyl vinyl ether		1.15	mg/kg-dry	0.11	102	41	149			
1,2-Dibromoethane		1.43	mg/kg-dry	0.11	127	60	135			
2-Chlorotoluene		1.28	mg/kg-dry	0.11	114	74	135			
Dibromomethane		1.36	mg/kg-dry	0.11	120	60	135			
1,2-Dichlorobenzene		1.32	mg/kg-dry	0.11	117	70	130			
4-Chlorotoluene		1.24	mg/kg-dry	0.11	110	75	136			
1,3-Dichlorobenzene		1.34	mg/kg-dry	0.11	119	71	132			
1,4-Dichlorobenzene		1.33	mg/kg-dry	0.11	118	71	131			
Dichlorodifluoromethane		1.01	mg/kg-dry	0.11	90	31	123			
1,1-Dichloroethane		1.40	mg/kg-dry	0.11	125	66	130			
1,2-Dichloroethane		1.41	mg/kg-dry	0.11	125	51	140			
1,1-Dichloroethene		1.36	mg/kg-dry	0.11	121	64	133			
cis-1,2-Dichloroethene		1.38	mg/kg-dry	0.11	122	63	131			
trans-1,2-Dichloroethene		1.40	mg/kg-dry	0.11	124	66	133			
1,2-Dichloropropane		1.32	mg/kg-dry	0.11	117	60	130			
1,3-Dichloropropane		1.27	mg/kg-dry	0.11	113	59	135			
2,2-Dichloropropane		1.14	mg/kg-dry	0.11	101	39	157			
1,1-Dichloropropene		1.36	mg/kg-dry	0.11	121	65	132			
cis-1,3-Dichloropropene		1.19	mg/kg-dry	0.11	106	55	134			
trans-1,3-Dichloropropene		1.29	mg/kg-dry	0.11	114	58	146			
Ethylbenzene		1.43	mg/kg-dry	0.11	127	74	136			
Isopropylbenzene		1.25	mg/kg-dry	0.11	111	70	133			
Methyl tert-butyl ether (MTBE)		1.22	mg/kg-dry	0.11	108	43	152			
Methyl ethyl ketone		13.8	mg/kg-dry	2.3	122	43	148			
Methylene chloride		1.34	mg/kg-dry	0.11	119	51	134			
n-Propylbenzene		1.23	mg/kg-dry	0.11	109	72	134			
Styrene		1.44	mg/kg-dry	0.11	128	70	135			
1,1,1,2-Tetrachloroethane		1.49	mg/kg-dry	0.11	132	35	156			
1,1,2,2-Tetrachloroethane		1.19	mg/kg-dry	0.11	105	59	135			
Tetrachloroethene		1.58	mg/kg-dry	0.11	141	64	139			S
Toluene		1.41	mg/kg-dry	0.11	126	73	137			
1,1,1-Trichloroethane		1.46	mg/kg-dry	0.11	129	63	134			
1,1,2-Trichloroethane		1.36	mg/kg-dry	0.11	121	56	136			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8260B										Batch: 169661
Lab ID: B22081406-002AMS	58	Sample Matrix Spike				Run: VOA5977B_220823B				08/24/22 05:26
Trichloroethene		1.42	mg/kg-dry	0.11	126	65	134			
Trichlorofluoromethane		1.21	mg/kg-dry	0.11	107	48	140			
1,2,3-Trichloropropane		1.21	mg/kg-dry	0.11	107	56	142			
1,2,4-Trimethylbenzene		1.24	mg/kg-dry	0.11	110	67	125			
1,3,5-Trimethylbenzene		1.24	mg/kg-dry	0.11	110	71	130			
Vinyl chloride		1.17	mg/kg-dry	0.11	103	32	136			
m+p-Xylenes		2.89	mg/kg-dry	0.23	128	75	136			
o-Xylene		1.45	mg/kg-dry	0.11	129	72	134			
Xylenes, Total		4.34	mg/kg-dry	0.11	128	72	136			
Surr: 1,2-Dichloroethane-d4				0.11	107	60	136			
Surr: Dibromofluoromethane				0.11	123	70	132			
Surr: p-Bromofluorobenzene				0.11	106	78	160			
Surr: Toluene-d8				0.11	117	75	138			
Lab ID: B22081406-002AMSD	58	Sample Matrix Spike Duplicate				Run: VOA5977B_220823B				08/24/22 05:51
Benzene		1.34	mg/kg-dry	0.11	119	70	127	0.6	20	
Bromobenzene		1.24	mg/kg-dry	0.11	110	70	135	3.9	20	
Bromochloromethane		1.46	mg/kg-dry	0.11	130	60	130	1.9	20	
Bromodichloromethane		1.36	mg/kg-dry	0.11	121	56	136	1.6	20	
Bromoform		1.30	mg/kg-dry	0.11	116	59	132	1.9	20	
Bromomethane		0.867	mg/kg-dry	0.11	77	18	134	8.2	20	
Carbon tetrachloride		1.48	mg/kg-dry	0.11	131	60	140	0.9	20	
Chlorobenzene		1.42	mg/kg-dry	0.11	126	75	132	0.6	20	
Chlorodibromomethane		1.39	mg/kg-dry	0.11	123	62	133	2.5	20	
Chloroethane		1.16	mg/kg-dry	0.11	103	12	80	4.2	20	S
Chloroform		1.36	mg/kg-dry	0.11	121	62	132	2.8	20	
Chloromethane		1.15	mg/kg-dry	0.11	102	41	138	2.9	20	
2-Chloroethyl vinyl ether		1.14	mg/kg-dry	0.11	101	41	149	1.2	20	
1,2-Dibromoethane		1.42	mg/kg-dry	0.11	126	60	135	0.1	20	
2-Chlorotoluene		1.23	mg/kg-dry	0.11	109	74	135	4.3	20	
Dibromomethane		1.36	mg/kg-dry	0.11	120	60	135	0.1	20	
1,2-Dichlorobenzene		1.27	mg/kg-dry	0.11	112	70	130	4.0	20	
4-Chlorotoluene		1.21	mg/kg-dry	0.11	108	75	136	2.0	20	
1,3-Dichlorobenzene		1.31	mg/kg-dry	0.11	116	71	132	2.7	20	
1,4-Dichlorobenzene		1.30	mg/kg-dry	0.11	116	71	131	2.2	20	
Dichlorodifluoromethane		0.931	mg/kg-dry	0.11	83	31	123	8.4	20	
1,1-Dichloroethane		1.37	mg/kg-dry	0.11	122	66	130	2.2	20	
1,2-Dichloroethane		1.41	mg/kg-dry	0.11	126	51	140	0.1	20	
1,1-Dichloroethene		1.31	mg/kg-dry	0.11	117	64	133	3.2	20	
cis-1,2-Dichloroethene		1.35	mg/kg-dry	0.11	120	63	131	1.8	20	
trans-1,2-Dichloroethene		1.39	mg/kg-dry	0.11	123	66	133	0.7	20	
1,2-Dichloropropane		1.30	mg/kg-dry	0.11	115	60	130	1.4	20	
1,3-Dichloropropane		1.28	mg/kg-dry	0.11	114	59	135	0.9	20	
2,2-Dichloropropane		1.09	mg/kg-dry	0.11	97	39	157	4.4	20	
1,1-Dichloropropene		1.35	mg/kg-dry	0.11	120	65	132	1.0	20	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8260B										Batch: 169661
Lab ID: B22081406-002AMSD	58	Sample Matrix Spike Duplicate				Run: VOA5977B_220823B				08/24/22 05:51
cis-1,3-Dichloropropene		1.16	mg/kg-dry	0.11	103	55	134	2.2	20	
trans-1,3-Dichloropropene		1.28	mg/kg-dry	0.11	114	58	146	0.7	20	
Ethylbenzene		1.40	mg/kg-dry	0.11	124	74	136	2.1	20	
Isopropylbenzene		1.20	mg/kg-dry	0.11	106	70	133	3.8	20	
Methyl tert-butyl ether (MTBE)		1.33	mg/kg-dry	0.11	118	43	152	8.5	20	
Methyl ethyl ketone		13.2	mg/kg-dry	2.3	117	43	148	4.3	20	
Methylene chloride		1.34	mg/kg-dry	0.11	119	51	134	0.1	20	
n-Propylbenzene		1.21	mg/kg-dry	0.11	108	72	134	1.7	20	
Styrene		1.42	mg/kg-dry	0.11	126	70	135	1.4	20	
1,1,1,2-Tetrachloroethane		1.43	mg/kg-dry	0.11	127	35	156	4.3	20	
1,1,2,2-Tetrachloroethane		1.15	mg/kg-dry	0.11	102	59	135	2.9	20	
Tetrachloroethene		1.51	mg/kg-dry	0.11	134	64	139	4.6	20	
Toluene		1.39	mg/kg-dry	0.11	123	73	137	1.8	20	
1,1,1-Trichloroethane		1.43	mg/kg-dry	0.11	127	63	134	2.0	20	
1,1,2-Trichloroethane		1.38	mg/kg-dry	0.11	122	56	136	1.0	20	
Trichloroethene		1.38	mg/kg-dry	0.11	123	65	134	2.8	20	
Trichlorofluoromethane		1.13	mg/kg-dry	0.11	101	48	140	6.2	20	
1,2,3-Trichloropropane		1.19	mg/kg-dry	0.11	106	56	142	1.1	20	
1,2,4-Trimethylbenzene		1.19	mg/kg-dry	0.11	106	67	125	4.0	20	
1,3,5-Trimethylbenzene		1.20	mg/kg-dry	0.11	107	71	130	3.5	20	
Vinyl chloride		1.12	mg/kg-dry	0.11	100	32	136	3.8	20	
m+p-Xylenes		2.84	mg/kg-dry	0.23	126	75	136	1.5	20	
o-Xylene		1.39	mg/kg-dry	0.11	124	72	134	4.1	20	
Xylenes, Total		4.23	mg/kg-dry	0.11	125	72	136	2.4	20	
Surr: 1,2-Dichloroethane-d4				0.11	115	60	136			
Surr: Dibromofluoromethane				0.11	129	70	132			
Surr: p-Bromofluorobenzene				0.11	112	78	160			
Surr: Toluene-d8				0.11	123	75	138			
Lab ID: LCS-169661	58	Laboratory Control Sample				Run: VOA5977B_220825A				08/25/22 14:51
Benzene		1.01	mg/kg	0.10	101	70	127			
Bromobenzene		1.03	mg/kg	0.10	103	70	135			
Bromochloromethane		1.11	mg/kg	0.10	111	60	130			
Bromodichloromethane		1.08	mg/kg	0.10	108	56	136			
Bromoform		1.11	mg/kg	0.10	111	59	132			
Bromomethane		0.617	mg/kg	0.10	62	18	134			
Carbon tetrachloride		1.13	mg/kg	0.10	113	60	140			
Chlorobenzene		1.11	mg/kg	0.10	111	75	132			
Chlorodibromomethane		1.14	mg/kg	0.10	114	62	133			
Chloroethane		0.937	mg/kg	0.10	94	12	80			S
Chloroform		1.02	mg/kg	0.10	102	62	132			
Chloromethane		0.863	mg/kg	0.10	86	41	138			
2-Chloroethyl vinyl ether		0.918	mg/kg	0.10	92	41	149			
1,2-Dibromoethane		1.10	mg/kg	0.10	110	60	135			
2-Chlorotoluene		1.02	mg/kg	0.10	102	74	135			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8260B										Batch: 169661
Lab ID: LCS-169661	58	Laboratory Control Sample				Run: VOA5977B_220825A				08/25/22 14:51
Dibromomethane		1.06	mg/kg	0.10	106	60	135			
1,2-Dichlorobenzene		1.05	mg/kg	0.10	105	70	130			
4-Chlorotoluene		0.985	mg/kg	0.10	98	75	136			
1,3-Dichlorobenzene		1.08	mg/kg	0.10	108	71	132			
1,4-Dichlorobenzene		1.06	mg/kg	0.10	106	71	131			
Dichlorodifluoromethane		0.822	mg/kg	0.10	82	31	123			
1,1-Dichloroethane		1.02	mg/kg	0.10	102	66	130			
1,2-Dichloroethane		1.06	mg/kg	0.10	106	51	140			
1,1-Dichloroethene		1.03	mg/kg	0.10	103	64	133			
cis-1,2-Dichloroethene		1.05	mg/kg	0.10	105	63	131			
trans-1,2-Dichloroethene		1.04	mg/kg	0.10	104	66	133			
1,2-Dichloropropane		1.00	mg/kg	0.10	100	60	130			
1,3-Dichloropropane		0.998	mg/kg	0.10	100	59	135			
2,2-Dichloropropane		1.04	mg/kg	0.10	104	39	157			
1,1-Dichloropropene		1.01	mg/kg	0.10	101	65	132			
cis-1,3-Dichloropropene		0.959	mg/kg	0.10	96	55	134			
trans-1,3-Dichloropropene		1.05	mg/kg	0.10	105	58	146			
Ethylbenzene		1.09	mg/kg	0.10	109	74	136			
Isopropylbenzene		0.991	mg/kg	0.10	99	70	133			
Methyl tert-butyl ether (MTBE)		0.987	mg/kg	0.10	99	43	152			
Methyl ethyl ketone		10.5	mg/kg	2.0	105	43	148			
Methylene chloride		0.982	mg/kg	0.10	98	51	134			
n-Propylbenzene		0.998	mg/kg	0.10	100	72	134			
Styrene		1.09	mg/kg	0.10	109	70	135			
1,1,1,2-Tetrachloroethane		1.14	mg/kg	0.10	114	35	156			
1,1,2,2-Tetrachloroethane		0.931	mg/kg	0.10	93	59	135			
Tetrachloroethene		1.24	mg/kg	0.10	124	64	139			
Toluene		1.13	mg/kg	0.10	113	73	137			
1,1,1-Trichloroethane		1.10	mg/kg	0.10	110	63	134			
1,1,2-Trichloroethane		1.05	mg/kg	0.10	105	56	136			
Trichloroethene		1.09	mg/kg	0.10	109	65	134			
Trichlorofluoromethane		0.968	mg/kg	0.10	97	48	140			
1,2,3-Trichloropropane		0.985	mg/kg	0.10	98	56	142			
1,2,4-Trimethylbenzene		0.982	mg/kg	0.10	98	67	125			
1,3,5-Trimethylbenzene		0.979	mg/kg	0.10	98	71	131			
Vinyl chloride		0.871	mg/kg	0.10	87	32	136			
m+p-Xylenes		2.23	mg/kg	0.20	111	75	136			
o-Xylene		1.11	mg/kg	0.10	111	72	134			
Xylenes, Total		3.34	mg/kg	0.10	111	72	136			
Surr: 1,2-Dichloroethane-d4				0.10	92	60	136			
Surr: Dibromofluoromethane				0.10	103	70	132			
Surr: p-Bromofluorobenzene				0.10	98	78	160			
Surr: Toluene-d8				0.10	101	75	138			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8260B										Batch: 169661
Lab ID: MB-169661	58	Method Blank				Run: VOA5977B_220825A				08/25/22 16:31
Benzene		ND	mg/kg	0.10						
Bromobenzene		ND	mg/kg	0.10						
Bromochloromethane		ND	mg/kg	0.10						
Bromodichloromethane		ND	mg/kg	0.10						
Bromoform		ND	mg/kg	0.10						
Bromomethane		ND	mg/kg	0.10						
Carbon tetrachloride		ND	mg/kg	0.10						
Chlorobenzene		ND	mg/kg	0.10						
Chlorodibromomethane		ND	mg/kg	0.10						
Chloroethane		ND	mg/kg	0.10						
Chloroform		ND	mg/kg	0.10						
Chloromethane		ND	mg/kg	0.10						
2-Chloroethyl vinyl ether		ND	mg/kg	0.10						
1,2-Dibromoethane		ND	mg/kg	0.10						
2-Chlorotoluene		ND	mg/kg	0.10						
Dibromomethane		ND	mg/kg	0.10						
1,2-Dichlorobenzene		ND	mg/kg	0.10						
4-Chlorotoluene		ND	mg/kg	0.10						
1,3-Dichlorobenzene		ND	mg/kg	0.10						
1,4-Dichlorobenzene		ND	mg/kg	0.10						
Dichlorodifluoromethane		ND	mg/kg	0.10						
1,1-Dichloroethane		ND	mg/kg	0.10						
1,2-Dichloroethane		ND	mg/kg	0.10						
1,1-Dichloroethene		ND	mg/kg	0.10						
cis-1,2-Dichloroethene		ND	mg/kg	0.10						
trans-1,2-Dichloroethene		ND	mg/kg	0.10						
1,2-Dichloropropane		ND	mg/kg	0.10						
1,3-Dichloropropane		ND	mg/kg	0.10						
2,2-Dichloropropane		ND	mg/kg	0.10						
1,1-Dichloropropene		ND	mg/kg	0.10						
cis-1,3-Dichloropropene		ND	mg/kg	0.10						
trans-1,3-Dichloropropene		ND	mg/kg	0.10						
Ethylbenzene		ND	mg/kg	0.10						
Isopropylbenzene		ND	mg/kg	0.10						
Methyl tert-butyl ether (MTBE)		ND	mg/kg	0.10						
Methyl ethyl ketone		ND	mg/kg	2.0						
Methylene chloride		ND	mg/kg	0.10						
n-Propylbenzene		ND	mg/kg	0.10						
Styrene		ND	mg/kg	0.10						
1,1,1,2-Tetrachloroethane		ND	mg/kg	0.10						
1,1,2,2-Tetrachloroethane		ND	mg/kg	0.10						
Tetrachloroethene		ND	mg/kg	0.10						
Toluene		ND	mg/kg	0.10						
1,1,1-Trichloroethane		ND	mg/kg	0.10						
1,1,2-Trichloroethane		ND	mg/kg	0.10						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8260B										Batch: 169661
Lab ID: MB-169661	58	Method Blank				Run: VOA5977B_220825A				08/25/22 16:31
Trichloroethene		ND	mg/kg	0.10						
Trichlorofluoromethane		ND	mg/kg	0.10						
1,2,3-Trichloropropane		ND	mg/kg	0.10						
1,2,4-Trimethylbenzene		ND	mg/kg	0.10						
1,3,5-Trimethylbenzene		ND	mg/kg	0.10						
Vinyl chloride		ND	mg/kg	0.10						
m+p-Xylenes		ND	mg/kg	0.20						
o-Xylene		ND	mg/kg	0.10						
Xylenes, Total		ND	mg/kg	0.10						
Surr: 1,2-Dichloroethane-d4				0.10	94	60	136			
Surr: Dibromofluoromethane				0.10	105	70	132			
Surr: p-Bromofluorobenzene				0.10	101	78	160			
Surr: Toluene-d8				0.10	102	75	138			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169606
Lab ID: MB-169606	72	Method Blank				Run: SV5973N2.I_220822A				08/22/22 20:19
1,2,4-Trichlorobenzene		ND	mg/kg	0.33						
1,2-Dichlorobenzene		ND	mg/kg	0.33						
1,3-Dichlorobenzene		ND	mg/kg	0.33						
1,4-Dichlorobenzene		ND	mg/kg	0.33						
1-Methylnaphthalene		ND	mg/kg	0.33						
2,4,5-Trichlorophenol		ND	mg/kg	0.33						
2,4,6-Trichlorophenol		ND	mg/kg	0.33						
2,4-Dichlorophenol		ND	mg/kg	0.33						
2,4-Dimethylphenol		ND	mg/kg	0.33						
2,4-Dinitrophenol		ND	mg/kg	0.67						
2,4-Dinitrotoluene		ND	mg/kg	0.33						
2,6-Dinitrotoluene		ND	mg/kg	0.33						
2-Chloronaphthalene		ND	mg/kg	0.33						
2-Chlorophenol		ND	mg/kg	0.33						
2-Methylnaphthalene		ND	mg/kg	0.33						
2-Nitrophenol		ND	mg/kg	0.33						
3,3´-Dichlorobenzidine		ND	mg/kg	0.67						
4,6-Dinitro-2-methylphenol		ND	mg/kg	0.67						
4-Bromophenyl phenyl ether		ND	mg/kg	0.33						
4-Chloro-2-methylphenol		ND	mg/kg	0.33						
4-Chloro-3-methylphenol		ND	mg/kg	0.33						
4-Chlorophenol		ND	mg/kg	0.33						
4-Chlorophenyl phenyl ether		ND	mg/kg	0.33						
4-Nitrophenol		ND	mg/kg	0.67						
Acenaphthene		ND	mg/kg	0.33						
Acenaphthylene		ND	mg/kg	0.33						
Anthracene		ND	mg/kg	0.33						
Azobenzene		ND	mg/kg	0.33						
Benzidine		ND	mg/kg	0.33						
Benzo(a)anthracene		ND	mg/kg	0.33						
Benzo(a)pyrene		ND	mg/kg	0.33						
Benzo(b)fluoranthene		ND	mg/kg	0.33						
Benzo(g,h,i)perylene		ND	mg/kg	0.33						
Benzo(k)fluoranthene		ND	mg/kg	0.33						
bis(-2-chloroethoxy)Methane		ND	mg/kg	0.33						
bis(-2-chloroethyl)Ether		ND	mg/kg	0.33						
bis(2-chloroisopropyl)Ether		ND	mg/kg	0.33						
bis(2-ethylhexyl)Phthalate		ND	mg/kg	0.33						
Butylbenzylphthalate		ND	mg/kg	0.33						
Chrysene		ND	mg/kg	0.33						
Dibenzo(a,h)anthracene		ND	mg/kg	0.33						
Diethyl phthalate		ND	mg/kg	0.33						
Dimethyl phthalate		ND	mg/kg	0.33						
Di-n-butyl phthalate		ND	mg/kg	0.33						
Di-n-octyl phthalate		ND	mg/kg	0.33						

Qualifiers:

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169606
Lab ID: MB-169606	72	Method Blank				Run: SV5973N2.I_220822A				08/22/22 20:19
Fluoranthene		ND	mg/kg	0.33						
Fluorene		ND	mg/kg	0.33						
Hexachlorobenzene		ND	mg/kg	0.33						
Hexachlorobutadiene		ND	mg/kg	0.33						
Hexachlorocyclopentadiene		ND	mg/kg	0.33						
Hexachloroethane		ND	mg/kg	0.33						
Indeno(1,2,3-cd)pyrene		ND	mg/kg	0.33						
Isophorone		ND	mg/kg	0.33						
m+p-Cresols		ND	mg/kg	0.33						
Naphthalene		ND	mg/kg	0.33						
Nitrobenzene		ND	mg/kg	0.33						
n-Nitrosodimethylamine		ND	mg/kg	0.33						
n-Nitroso-di-n-propylamine		ND	mg/kg	0.33						
n-Nitrosodiphenylamine		ND	mg/kg	0.33						
o-Cresol		ND	mg/kg	0.33						
Pentachlorophenol		ND	mg/kg	0.67						
Phenanthrene		ND	mg/kg	0.33						
Phenol		ND	mg/kg	0.33						
Pyrene		ND	mg/kg	0.33						
Pyridine		ND	mg/kg	0.33						
Triallate		ND	mg/kg	0.33						
Surr: 2,4,6-Tribromophenol				0.33	74	53	141			
Surr: 2-Fluorobiphenyl				0.33	69	63	98			
Surr: 2-Fluorophenol				0.33	76	53	101			
Surr: Nitrobenzene-d5				0.33	71	53	101			
Surr: Phenol-d5				0.33	72	55	100			
Surr: Terphenyl-d14				0.33	97	71	118			
Lab ID: LCS-169606	72	Laboratory Control Sample				Run: SV5973N2.I_220822A				08/22/22 20:49
1,2,4-Trichlorobenzene		2.27	mg/kg	0.33	68	39	100			
1,2-Dichlorobenzene		2.13	mg/kg	0.33	64	22	104			
1,3-Dichlorobenzene		2.02	mg/kg	0.33	61	19	103			
1,4-Dichlorobenzene		2.13	mg/kg	0.33	64	17	106			
1-Methylnaphthalene		2.36	mg/kg	0.33	71	63	97			
2,4,5-Trichlorophenol		2.78	mg/kg	0.33	84	68	120			
2,4,6-Trichlorophenol		2.29	mg/kg	0.33	69	65	117			
2,4-Dichlorophenol		2.20	mg/kg	0.33	66	61	110			
2,4-Dimethylphenol		2.11	mg/kg	0.33	63	62	100			
2,4-Dinitrophenol		2.25	mg/kg	0.67	68	47	115			
2,4-Dinitrotoluene		2.48	mg/kg	0.33	75	72	122			
2,6-Dinitrotoluene		2.96	mg/kg	0.33	89	60	126			
2-Chloronaphthalene		2.73	mg/kg	0.33	82	63	106			
2-Chlorophenol		2.04	mg/kg	0.33	61	61	103			
2-Methylnaphthalene		2.42	mg/kg	0.33	73	68	103			
2-Nitrophenol		2.13	mg/kg	0.33	64	58	102			

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169606
Lab ID: LCS-169606	72	Laboratory Control Sample				Run: SV5973N2.I_220822A				08/22/22 20:49
3,3´-Dichlorobenzidine		2.47	mg/kg	0.67	74	35	117			
4,6-Dinitro-2-methylphenol		2.26	mg/kg	0.67	68	55	121			
4-Bromophenyl phenyl ether		3.10	mg/kg	0.33	93	72	113			
4-Chloro-2-methylphenol		2.58	mg/kg	0.33	78	63	106			
4-Chloro-3-methylphenol		2.35	mg/kg	0.33	71	68	107			
4-Chlorophenol		2.80	mg/kg	0.33	84	61	109			
4-Chlorophenyl phenyl ether		3.03	mg/kg	0.33	91	71	110			
4-Nitrophenol		2.30	mg/kg	0.67	69	62	118			
Acenaphthene		2.74	mg/kg	0.33	82	73	104			
Acenaphthylene		2.63	mg/kg	0.33	79	64	101			
Anthracene		2.86	mg/kg	0.33	86	72	110			
Azobenzene		2.60	mg/kg	0.33	78	68	108			
Benzidine		0.198	mg/kg	0.33	6	10	80			S
Benzo(a)anthracene		3.21	mg/kg	0.33	96	75	112			
Benzo(a)pyrene		3.01	mg/kg	0.33	90	71	106			
Benzo(b)fluoranthene		3.30	mg/kg	0.33	99	65	121			
Benzo(g,h,i)perylene		2.90	mg/kg	0.33	87	79	117			
Benzo(k)fluoranthene		3.05	mg/kg	0.33	92	64	118			
bis(-2-chloroethoxy)Methane		2.58	mg/kg	0.33	77	63	104			
bis(-2-chloroethyl)Ether		2.46	mg/kg	0.33	74	20	130			
bis(2-chloroisopropyl)Ether		2.15	mg/kg	0.33	65	28	93			
bis(2-ethylhexyl)Phthalate		3.28	mg/kg	0.33	99	65	132			
Butylbenzylphthalate		3.32	mg/kg	0.33	100	68	131			
Chrysene		3.02	mg/kg	0.33	91	76	109			
Dibenzo(a,h)anthracene		3.01	mg/kg	0.33	91	75	111			
Diethyl phthalate		2.98	mg/kg	0.33	90	70	119			
Dimethyl phthalate		2.94	mg/kg	0.33	88	70	118			
Di-n-butyl phthalate		3.15	mg/kg	0.33	95	72	126			
Di-n-octyl phthalate		3.18	mg/kg	0.33	95	68	127			
Fluoranthene		2.94	mg/kg	0.33	88	76	109			
Fluorene		2.96	mg/kg	0.33	89	67	108			
Hexachlorobenzene		2.83	mg/kg	0.33	85	71	107			
Hexachlorobutadiene		2.27	mg/kg	0.33	68	31	103			
Hexachlorocyclopentadiene		2.43	mg/kg	0.33	73	56	108			
Hexachloroethane		2.11	mg/kg	0.33	63	10	127			
Indeno(1,2,3-cd)pyrene		3.18	mg/kg	0.33	95	63	112			
Isophorone		2.35	mg/kg	0.33	71	63	95			
m+p-Cresols		2.77	mg/kg	0.33	83	64	109			
Naphthalene		2.57	mg/kg	0.33	77	60	99			
Nitrobenzene		2.27	mg/kg	0.33	68	57	110			
n-Nitrosodimethylamine		2.25	mg/kg	0.33	67	43	106			
n-Nitroso-di-n-propylamine		2.81	mg/kg	0.33	84	61	107			
n-Nitrosodiphenylamine		2.97	mg/kg	0.33	89	71	119			
o-Cresol		2.56	mg/kg	0.33	77	65	111			
Pentachlorophenol		2.54	mg/kg	0.67	76	60	121			

Qualifiers:

RL - Analyte Reporting Limit

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S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169606
Lab ID: LCS-169606	72	Laboratory Control Sample				Run: SV5973N2.I_220822A				08/22/22 20:49
Phenanthrene		2.89	mg/kg	0.33	87	73	104			
Phenol		2.06	mg/kg	0.33	62	42	124			
Pyrene		2.85	mg/kg	0.33	86	77	111			
Pyridine		1.30	mg/kg	0.33	39	10	74			
Triallate		2.72	mg/kg	0.33	82	65	117			
Surr: 2,4,6-Tribromophenol				0.33	90	53	141			
Surr: 2-Fluorobiphenyl				0.33	74	63	98			
Surr: 2-Fluorophenol				0.33	78	53	101			
Surr: Nitrobenzene-d5				0.33	74	53	101			
Surr: Phenol-d5				0.33	78	55	100			
Surr: Terphenyl-d14				0.33	91	71	118			
Lab ID: B22081676-001AMS	72	Sample Matrix Spike				Run: SV5973N2.I_220822A				08/22/22 21:50
1,2,4-Trichlorobenzene		34.9	mg/kg	2.5	71	39	100			
1,2-Dichlorobenzene		29.8	mg/kg	2.5	61	22	104			
1,3-Dichlorobenzene		28.4	mg/kg	2.5	58	19	103			
1,4-Dichlorobenzene		29.4	mg/kg	2.5	60	17	106			
1-Methylnaphthalene		35.3	mg/kg	2.5	72	63	97			
2,4,5-Trichlorophenol		47.9	mg/kg	2.5	98	68	120			
2,4,6-Trichlorophenol		34.9	mg/kg	2.5	71	65	117			
2,4-Dichlorophenol		34.8	mg/kg	2.5	71	61	110			
2,4-Dimethylphenol		33.3	mg/kg	2.5	68	62	100			
2,4-Dinitrophenol		30.6	mg/kg	4.9	63	47	115			
2,4-Dinitrotoluene		39.5	mg/kg	2.5	81	72	122			
2,6-Dinitrotoluene		40.6	mg/kg	2.5	83	60	126			
2-Chloronaphthalene		42.1	mg/kg	2.5	86	63	106			
2-Chlorophenol		28.8	mg/kg	2.5	59	61	103			S
2-Methylnaphthalene		37.9	mg/kg	2.5	77	68	103			
2-Nitrophenol		31.3	mg/kg	2.5	64	58	102			
3,3´-Dichlorobenzidine		37.7	mg/kg	9.8	77	35	117			
4,6-Dinitro-2-methylphenol		31.1	mg/kg	4.9	63	55	121			
4-Bromophenyl phenyl ether		45.9	mg/kg	2.5	94	72	113			
4-Chloro-2-methylphenol		39.6	mg/kg	2.5	81	63	106			
4-Chloro-3-methylphenol		36.6	mg/kg	2.5	75	68	107			
4-Chlorophenol		43.7	mg/kg	2.5	89	61	109			
4-Chlorophenyl phenyl ether		48.6	mg/kg	2.5	99	71	110			
4-Nitrophenol		36.6	mg/kg	4.9	75	62	118			
Acenaphthene		42.7	mg/kg	2.5	87	73	104			
Acenaphthylene		40.0	mg/kg	2.5	82	64	101			
Anthracene		44.8	mg/kg	2.5	92	72	110			
Azobenzene		41.8	mg/kg	2.5	85	68	108			
Benzidine		7.43	mg/kg	4.9	15	10	80			
Benzo(a)anthracene		49.5	mg/kg	2.5	101	75	112			
Benzo(a)pyrene		47.4	mg/kg	2.5	97	71	106			
Benzo(b)fluoranthene		51.1	mg/kg	2.5	104	65	121			

Qualifiers:

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169606
Lab ID: B22081676-001AMS	72	Sample Matrix Spike				Run: SV5973N2.I_220822A				08/22/22 21:50
Benzo(g,h,i)perylene		44.8	mg/kg	2.5	91	79	117			
Benzo(k)fluoranthene		47.5	mg/kg	2.5	97	64	118			
bis(-2-chloroethoxy)Methane		40.5	mg/kg	2.5	83	63	104			
bis(-2-chloroethyl)Ether		34.6	mg/kg	2.5	71	20	130			
bis(2-chloroisopropyl)Ether		29.7	mg/kg	2.5	61	28	93			
bis(2-ethylhexyl)Phthalate		53.6	mg/kg	2.5	109	65	132			
Butylbenzylphthalate		54.1	mg/kg	4.9	110	68	131			
Chrysene		46.6	mg/kg	2.5	95	76	109			
Dibenzo(a,h)anthracene		47.4	mg/kg	2.5	97	75	111			
Diethyl phthalate		46.5	mg/kg	2.5	95	70	119			
Dimethyl phthalate		45.8	mg/kg	2.5	93	70	118			
Di-n-butyl phthalate		49.9	mg/kg	2.5	102	72	126			
Di-n-octyl phthalate		53.9	mg/kg	2.5	110	68	127			
Fluoranthene		46.1	mg/kg	2.5	94	76	109			
Fluorene		45.2	mg/kg	2.5	92	67	108			
Hexachlorobenzene		44.3	mg/kg	2.5	90	71	107			
Hexachlorobutadiene		33.8	mg/kg	2.5	69	31	103			
Hexachlorocyclopentadiene		26.3	mg/kg	4.9	54	56	108			S
Hexachloroethane		29.1	mg/kg	2.5	59	10	127			
Indeno(1,2,3-cd)pyrene		50.0	mg/kg	2.5	102	63	112			
Isophorone		37.6	mg/kg	2.5	77	63	95			
m+p-Cresols		41.4	mg/kg	2.5	84	64	109			
Naphthalene		38.5	mg/kg	2.5	79	60	99			
Nitrobenzene		32.8	mg/kg	2.5	67	57	110			
n-Nitrosodimethylamine		31.4	mg/kg	2.5	64	43	106			
n-Nitroso-di-n-propylamine		42.6	mg/kg	2.5	87	61	107			
n-Nitrosodiphenylamine		46.5	mg/kg	2.5	95	71	119			
o-Cresol		40.6	mg/kg	2.5	83	65	111			
Pentachlorophenol		35.9	mg/kg	4.9	73	60	121			
Phenanthrene		45.4	mg/kg	2.5	93	73	104			
Phenol		30.0	mg/kg	2.5	61	42	124			
Pyrene		44.9	mg/kg	2.5	92	77	111			
Pyridine		16.7	mg/kg	2.5	34	10	74			
Triallate		43.9	mg/kg	2.5	90	65	117			
Surr: 2,4,6-Tribromophenol				2.5	91	53	141			
Surr: 2-Fluorobiphenyl				2.5	76	63	98			
Surr: 2-Fluorophenol				2.5	72	53	101			
Surr: Nitrobenzene-d5				2.5	70	53	101			
Surr: Phenol-d5				2.5	77	55	100			
Surr: Terphenyl-d14				2.5	95	71	118			
Lab ID: B22081676-001AMSD	72	Sample Matrix Spike Duplicate				Run: SV5973N2.I_220822A				08/22/22 22:21
1,2,4-Trichlorobenzene		33.2	mg/kg	2.4	68	39	100	5.0	40	
1,2-Dichlorobenzene		29.5	mg/kg	2.4	61	22	104	1.0	40	
1,3-Dichlorobenzene		27.5	mg/kg	2.4	57	19	103	3.2	40	

Qualifiers:

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QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW8270C**										Batch: 169606
Lab ID: **B22081676-001AMSD**	72	Sample Matrix Spike Duplicate				Run: SV5973N2.I_220822A				08/22/22 22:21
1,4-Dichlorobenzene		28.6	mg/kg	2.4	59	17	106	2.8	40	
1-Methylnaphthalene		35.6	mg/kg	2.4	73	63	97	0.9	40	
2,4,5-Trichlorophenol		43.2	mg/kg	2.4	89	68	120	10	40	
2,4,6-Trichlorophenol		33.8	mg/kg	2.4	70	65	117	3.2	40	
2,4-Dichlorophenol		33.2	mg/kg	2.4	68	61	110	4.8	40	
2,4-Dimethylphenol		32.0	mg/kg	2.4	66	62	100	3.9	40	
2,4-Dinitrophenol		30.2	mg/kg	4.8	62	47	115	1.3	40	
2,4-Dinitrotoluene		38.4	mg/kg	2.4	79	72	122	2.8	40	
2,6-Dinitrotoluene		45.1	mg/kg	2.4	93	60	126	11	40	
2-Chloronaphthalene		40.0	mg/kg	2.4	83	63	106	5.0	40	
2-Chlorophenol		28.4	mg/kg	2.4	59	61	103	1.5	40	S
2-Methylnaphthalene		36.4	mg/kg	2.4	75	68	103	3.9	40	
2-Nitrophenol		30.5	mg/kg	2.4	63	58	102	2.5	40	
3,3´-Dichlorobenzidine		34.7	mg/kg	9.7	72	35	117	8.1	40	
4,6-Dinitro-2-methylphenol		28.3	mg/kg	4.8	58	55	121	9.4	40	
4-Bromophenyl phenyl ether		42.9	mg/kg	2.4	89	72	113	6.7	40	
4-Chloro-2-methylphenol		39.0	mg/kg	2.4	80	63	106	1.6	40	
4-Chloro-3-methylphenol		36.0	mg/kg	2.4	74	68	107	1.7	40	
4-Chlorophenol		42.2	mg/kg	2.4	87	61	109	3.4	40	
4-Chlorophenyl phenyl ether		44.2	mg/kg	2.4	91	71	110	9.5	40	
4-Nitrophenol		34.6	mg/kg	4.8	71	62	118	5.6	40	
Acenaphthene		40.3	mg/kg	2.4	83	73	104	5.8	40	
Acenaphthylene		38.7	mg/kg	2.4	80	64	101	3.2	40	
Anthracene		41.1	mg/kg	2.4	85	72	110	8.8	40	
Azobenzene		38.3	mg/kg	2.4	79	68	108	8.6	40	
Benzidine		7.31	mg/kg	4.8	15	10	80	1.6	40	
Benzo(a)anthracene		46.1	mg/kg	2.4	95	75	112	7.0	40	
Benzo(a)pyrene		44.5	mg/kg	2.4	92	71	106	6.2	40	
Benzo(b)fluoranthene		48.5	mg/kg	2.4	100	65	121	5.4	40	
Benzo(g,h,i)perylene		42.9	mg/kg	2.4	88	79	117	4.2	40	
Benzo(k)fluoranthene		45.1	mg/kg	2.4	93	64	118	5.1	40	
bis(-2-chloroethoxy)Methane		37.8	mg/kg	2.4	78	63	104	6.9	40	
bis(-2-chloroethyl)Ether		34.1	mg/kg	2.4	70	20	130	1.5	40	
bis(2-chloroisopropyl)Ether		28.7	mg/kg	2.4	59	28	93	3.3	40	
bis(2-ethylhexyl)Phthalate		48.9	mg/kg	2.4	101	65	132	9.1	40	
Butylbenzylphthalate		50.3	mg/kg	4.8	104	68	131	7.3	40	
Chrysene		44.3	mg/kg	2.4	91	76	109	5.0	40	
Dibenzo(a,h)anthracene		45.8	mg/kg	2.4	94	75	111	3.4	40	
Diethyl phthalate		45.4	mg/kg	2.4	94	70	119	2.3	40	
Dimethyl phthalate		43.8	mg/kg	2.4	90	70	118	4.3	40	
Di-n-butyl phthalate		46.6	mg/kg	2.4	96	72	126	6.9	40	
Di-n-octyl phthalate		49.7	mg/kg	2.4	102	68	127	8.1	40	
Fluoranthene		42.7	mg/kg	2.4	88	76	109	7.6	40	
Fluorene		42.5	mg/kg	2.4	88	67	108	6.2	40	
Hexachlorobenzene		42.8	mg/kg	2.4	88	71	107	3.4	40	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169606
Lab ID: B22081676-001AMSD	72	Sample Matrix Spike Duplicate				Run: SV5973N2.I_220822A				08/22/22 22:21
Hexachlorobutadiene		31.9	mg/kg	2.4	66	31	103	5.8	40	
Hexachlorocyclopentadiene		27.6	mg/kg	4.8	57	56	108	4.8	40	
Hexachloroethane		28.9	mg/kg	2.4	60	10	127	0.5	40	
Indeno(1,2,3-cd)pyrene		47.5	mg/kg	2.4	98	63	112	5.0	40	
Isophorone		36.3	mg/kg	2.4	75	63	95	3.5	40	
m+p-Cresols		41.1	mg/kg	2.4	85	64	109	0.6	40	
Naphthalene		36.7	mg/kg	2.4	76	60	99	4.9	40	
Nitrobenzene		31.7	mg/kg	2.4	65	57	110	3.6	40	
n-Nitrosodimethylamine		32.3	mg/kg	2.4	67	43	106	2.9	40	
n-Nitroso-di-n-propylamine		40.8	mg/kg	2.4	84	61	107	4.2	40	
n-Nitrosodiphenylamine		44.3	mg/kg	2.4	91	71	119	5.0	40	
o-Cresol		40.9	mg/kg	2.4	84	65	111	0.8	40	
Pentachlorophenol		34.0	mg/kg	4.8	70	60	121	5.6	40	
Phenanthrene		41.8	mg/kg	2.4	86	73	104	8.4	40	
Phenol		28.6	mg/kg	2.4	59	42	124	4.5	40	
Pyrene		41.8	mg/kg	2.4	86	77	111	7.2	40	
Pyridine		16.1	mg/kg	2.4	33	10	74	3.3	40	
Triallate		41.5	mg/kg	2.4	86	65	117	5.5	40	
Surr: 2,4,6-Tribromophenol				2.4	87	53	141			
Surr: 2-Fluorobiphenyl				2.4	74	63	98			
Surr: 2-Fluorophenol				2.4	76	53	101			
Surr: Nitrobenzene-d5				2.4	76	53	101			
Surr: Phenol-d5				2.4	79	55	100			
Surr: Terphenyl-d14				2.4	90	71	118			
Lab ID: APP2A-169606	7	Laboratory Control Sample				Run: SV5973N2.I_220822B				08/23/22 05:45
Diallate		3.38	mg/kg	0.17	102	24	141			
Surr: 2,4,6-Tribromophenol				0.33	92	64	125			
Surr: 2-Fluorobiphenyl				0.33	74	68	96			
Surr: 2-Fluorophenol				0.33	73	59	102			
Surr: Nitrobenzene-d5				0.33	76	65	92			
Surr: Phenol-d5				0.33	75	67	96			
Surr: Terphenyl-d14				0.33	103	46	147			
Lab ID: APP2AD-169606	7	Laboratory Control Sample				Run: SV5973N2.I_220822B				08/23/22 06:15
Diallate		3.22	mg/kg	0.17	97	24	141	4.8	40	
Surr: 2,4,6-Tribromophenol				0.33	85	64	125			
Surr: 2-Fluorobiphenyl				0.33	69	68	96			
Surr: 2-Fluorophenol				0.33	68	59	102			
Surr: Nitrobenzene-d5				0.33	80	65	92			
Surr: Phenol-d5				0.33	70	67	96			
Surr: Terphenyl-d14				0.33	96	46	147			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169704
Lab ID: MB-169704		Method Blank				Run: SV5973N2.I_220824A				08/24/22 21:46
Diallate		ND	mg/kg	0.17						
Lab ID: APP2A-169704	7	Laboratory Control Sample				Run: SV5973N2.I_220824A				08/24/22 22:47
Diallate		3.28	mg/kg	0.17	98	24	141			
Surr: 2,4,6-Tribromophenol				0.33	90	64	125			
Surr: 2-Fluorobiphenyl				0.33	76	68	96			
Surr: 2-Fluorophenol				0.33	77	59	102			
Surr: Nitrobenzene-d5				0.33	73	65	92			
Surr: Phenol-d5				0.33	76	67	96			
Surr: Terphenyl-d14				0.33	101	46	147			
Lab ID: APP2AD-169704	7	Laboratory Control Sample				Run: SV5973N2.I_220824A				08/24/22 23:17
Diallate		3.55	mg/kg	0.17	107	24	141	8.1	40	
Surr: 2,4,6-Tribromophenol				0.33	95	64	125			
Surr: 2-Fluorobiphenyl				0.33	77	68	96			
Surr: 2-Fluorophenol				0.33	81	59	102			
Surr: Nitrobenzene-d5				0.33	89	65	92			
Surr: Phenol-d5				0.33	81	67	96			
Surr: Terphenyl-d14				0.33	103	46	147			
Lab ID: MB-169704	70	Method Blank				Run: SV5973N2.I_220825A				08/25/22 10:34
1,2,4-Trichlorobenzene		ND	mg/kg	0.33						
1,2-Dichlorobenzene		ND	mg/kg	0.33						
1,3-Dichlorobenzene		ND	mg/kg	0.33						
1,4-Dichlorobenzene		ND	mg/kg	0.33						
1-Methylnaphthalene		ND	mg/kg	0.33						
2,4,5-Trichlorophenol		ND	mg/kg	0.33						
2,4,6-Trichlorophenol		ND	mg/kg	0.33						
2,4-Dichlorophenol		ND	mg/kg	0.33						
2,4-Dimethylphenol		ND	mg/kg	0.33						
2,4-Dinitrophenol		ND	mg/kg	0.67						
2,4-Dinitrotoluene		ND	mg/kg	0.33						
2,6-Dinitrotoluene		ND	mg/kg	0.33						
2-Chloronaphthalene		ND	mg/kg	0.33						
2-Chlorophenol		ND	mg/kg	0.33						
2-Methylnaphthalene		ND	mg/kg	0.33						
2-Nitrophenol		ND	mg/kg	0.33						
3,3´-Dichlorobenzidine		ND	mg/kg	0.33						
4,6-Dinitro-2-methylphenol		ND	mg/kg	0.67						
4-Bromophenyl phenyl ether		ND	mg/kg	0.33						
4-Chloro-3-methylphenol		ND	mg/kg	0.33						
4-Chlorophenol		ND	mg/kg	0.33						
4-Chlorophenyl phenyl ether		ND	mg/kg	0.33						
4-Nitrophenol		ND	mg/kg	0.67						
Acenaphthene		ND	mg/kg	0.33						
Acenaphthylene		ND	mg/kg	0.33						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169704
Lab ID: MB-169704	70	Method Blank				Run: SV5973N2.I_220825A				08/25/22 10:34
Anthracene		ND	mg/kg	0.33						
Azobenzene		ND	mg/kg	0.33						
Benzidine		ND	mg/kg	0.33						
Benzo(a)anthracene		ND	mg/kg	0.33						
Benzo(a)pyrene		ND	mg/kg	0.33						
Benzo(b)fluoranthene		ND	mg/kg	0.33						
Benzo(g,h,i)perylene		ND	mg/kg	0.33						
Benzo(k)fluoranthene		ND	mg/kg	0.33						
bis(-2-chloroethoxy)Methane		ND	mg/kg	0.33						
bis(-2-chloroethyl)Ether		ND	mg/kg	0.33						
bis(2-chloroisopropyl)Ether		ND	mg/kg	0.33						
bis(2-ethylhexyl)Phthalate		ND	mg/kg	0.33						
Butylbenzylphthalate		ND	mg/kg	0.33						
Chrysene		ND	mg/kg	0.33						
Dibenzo(a,h)anthracene		ND	mg/kg	0.33						
Diethyl phthalate		ND	mg/kg	0.33						
Dimethyl phthalate		ND	mg/kg	0.33						
Di-n-butyl phthalate		ND	mg/kg	0.33						
Di-n-octyl phthalate		ND	mg/kg	0.33						
Fluoranthene		ND	mg/kg	0.33						
Fluorene		ND	mg/kg	0.33						
Hexachlorobenzene		ND	mg/kg	0.33						
Hexachlorobutadiene		ND	mg/kg	0.33						
Hexachlorocyclopentadiene		ND	mg/kg	0.33						
Hexachloroethane		ND	mg/kg	0.33						
Indeno(1,2,3-cd)pyrene		ND	mg/kg	0.33						
Isophorone		ND	mg/kg	0.33						
m+p-Cresols		ND	mg/kg	0.33						
Naphthalene		ND	mg/kg	0.33						
Nitrobenzene		ND	mg/kg	0.33						
n-Nitrosodimethylamine		ND	mg/kg	0.33						
n-Nitroso-di-n-propylamine		ND	mg/kg	0.33						
n-Nitrosodiphenylamine		ND	mg/kg	0.33						
o-Cresol		ND	mg/kg	0.33						
Pentachlorophenol		ND	mg/kg	0.67						
Phenanthrene		ND	mg/kg	0.33						
Phenol		ND	mg/kg	0.33						
Pyrene		ND	mg/kg	0.33						
Pyridine		ND	mg/kg	0.33						
Surr: 2,4,6-Tribromophenol				0.33	75	53	141			
Surr: 2-Fluorobiphenyl				0.33	69	63	98			
Surr: 2-Fluorophenol				0.33	80	53	101			
Surr: Nitrobenzene-d5				0.33	80	53	101			
Surr: Phenol-d5				0.33	75	55	100			
Surr: Terphenyl-d14				0.33	97	71	118			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169704
Lab ID: MB-169704	70	Method Blank				Run: SV5973N2.I_220825A				08/25/22 10:34
Lab ID: LCS-169704	70	Laboratory Control Sample				Run: SV5973N2.I_220825A				08/25/22 11:05
1,2,4-Trichlorobenzene		2.28	mg/kg	0.33	68	63	93			
1,2-Dichlorobenzene		1.98	mg/kg	0.33	59	59	85			
1,3-Dichlorobenzene		1.89	mg/kg	0.33	57	57	83			
1,4-Dichlorobenzene		1.92	mg/kg	0.33	58	58	83			
1-Methylnaphthalene		2.31	mg/kg	0.33	69	63	97			
2,4,5-Trichlorophenol		2.95	mg/kg	0.33	89	68	120			
2,4,6-Trichlorophenol		2.38	mg/kg	0.33	71	65	117			
2,4-Dichlorophenol		2.25	mg/kg	0.33	68	61	110			
2,4-Dimethylphenol		2.09	mg/kg	0.33	63	62	100			
2,4-Dinitrophenol		2.99	mg/kg	0.67	90	47	115			
2,4-Dinitrotoluene		3.11	mg/kg	0.33	93	72	122			
2,6-Dinitrotoluene		3.30	mg/kg	0.33	99	60	126			
2-Chloronaphthalene		2.77	mg/kg	0.33	83	63	106			
2-Chlorophenol		1.95	mg/kg	0.33	59	61	103			S
2-Methylnaphthalene		2.55	mg/kg	0.33	77	68	103			
2-Nitrophenol		2.39	mg/kg	0.33	72	58	102			
3,3´-Dichlorobenzidine		2.60	mg/kg	0.33	78	35	117			
4,6-Dinitro-2-methylphenol		2.60	mg/kg	0.67	78	55	121			
4-Bromophenyl phenyl ether		3.24	mg/kg	0.33	97	72	113			
4-Chloro-3-methylphenol		2.41	mg/kg	0.33	72	68	107			
4-Chlorophenol		2.84	mg/kg	0.33	85	61	109			
4-Chlorophenyl phenyl ether		3.03	mg/kg	0.33	91	71	110			
4-Nitrophenol		2.45	mg/kg	0.67	74	62	118			
Acenaphthene		3.00	mg/kg	0.33	90	73	104			
Acenaphthylene		2.86	mg/kg	0.33	86	64	101			
Anthracene		3.41	mg/kg	0.33	102	72	110			
Azobenzene		2.78	mg/kg	0.33	83	68	108			
Benzidine		0.254	mg/kg	0.33	8	10	80			S
Benzo(a)anthracene		3.31	mg/kg	0.33	99	75	112			
Benzo(a)pyrene		3.24	mg/kg	0.33	97	71	106			
Benzo(b)fluoranthene		3.31	mg/kg	0.33	99	65	121			
Benzo(g,h,i)perylene		3.19	mg/kg	0.33	96	79	117			
Benzo(k)fluoranthene		3.14	mg/kg	0.33	94	64	118			
bis(-2-chloroethoxy)Methane		2.64	mg/kg	0.33	79	63	104			
bis(-2-chloroethyl)Ether		2.24	mg/kg	0.33	67	56	94			
bis(2-chloroisopropyl)Ether		2.04	mg/kg	0.33	61	51	84			
bis(2-ethylhexyl)Phthalate		3.55	mg/kg	0.33	107	65	132			
Butylbenzylphthalate		3.59	mg/kg	0.33	108	68	131			
Chrysene		3.22	mg/kg	0.33	97	76	109			
Dibenzo(a,h)anthracene		3.39	mg/kg	0.33	102	75	111			
Diethyl phthalate		3.04	mg/kg	0.33	91	70	119			
Dimethyl phthalate		3.21	mg/kg	0.33	97	70	118			
Di-n-butyl phthalate		3.47	mg/kg	0.33	104	72	126			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169704
Lab ID: LCS-169704	70	Laboratory Control Sample				Run: SV5973N2.I_220825A				08/25/22 11:05
Di-n-octyl phthalate		3.57	mg/kg	0.33	107	68	127			
Fluoranthene		3.26	mg/kg	0.33	98	76	109			
Fluorene		2.88	mg/kg	0.33	86	67	108			
Hexachlorobenzene		3.24	mg/kg	0.33	97	71	107			
Hexachlorobutadiene		2.19	mg/kg	0.33	66	62	91			
Hexachlorocyclopentadiene		2.71	mg/kg	0.33	81	56	108			
Hexachloroethane		2.11	mg/kg	0.33	64	54	95			
Indeno(1,2,3-cd)pyrene		3.33	mg/kg	0.33	100	63	112			
Isophorone		2.55	mg/kg	0.33	77	63	95			
m+p-Cresols		2.54	mg/kg	0.33	76	64	109			
Naphthalene		2.65	mg/kg	0.33	80	60	99			
Nitrobenzene		2.72	mg/kg	0.33	82	57	110			
n-Nitrosodimethylamine		1.99	mg/kg	0.33	60	43	106			
n-Nitroso-di-n-propylamine		2.78	mg/kg	0.33	84	61	107			
n-Nitrosodiphenylamine		3.18	mg/kg	0.33	95	71	119			
o-Cresol		2.64	mg/kg	0.33	79	65	111			
Pentachlorophenol		2.63	mg/kg	0.67	79	60	121			
Phenanthrene		3.14	mg/kg	0.33	94	73	104			
Phenol		1.90	mg/kg	0.33	57	57	99			
Pyrene		3.14	mg/kg	0.33	94	77	111			
Pyridine		1.00	mg/kg	0.33	30	18	76			
Surr: 2,4,6-Tribromophenol				0.33	88	64	125			
Surr: 2-Fluorobiphenyl				0.33	76	68	96			
Surr: 2-Fluorophenol				0.33	70	59	102			
Surr: Nitrobenzene-d5				0.33	82	65	92			
Surr: Phenol-d5				0.33	74	67	96			
Surr: Terphenyl-d14				0.33	97	46	147			
Lab ID: B22081853-001AMS	70	Sample Matrix Spike				Run: SV5973N2.I_220825A				08/25/22 12:05
1,2,4-Trichlorobenzene		14.7	mg/kg	0.97	76	63	93			
1,2-Dichlorobenzene		13.1	mg/kg	0.97	67	59	85			
1,3-Dichlorobenzene		11.9	mg/kg	0.97	61	57	83			
1,4-Dichlorobenzene		12.6	mg/kg	0.97	65	58	83			
1-Methylnaphthalene		15.9	mg/kg	0.97	82	63	97			
2,4,5-Trichlorophenol		19.3	mg/kg	0.97	99	68	120			
2,4,6-Trichlorophenol		15.0	mg/kg	0.97	77	65	117			
2,4-Dichlorophenol		13.9	mg/kg	0.97	71	61	110			
2,4-Dimethylphenol		13.6	mg/kg	0.97	70	62	100			
2,4-Dinitrophenol		18.2	mg/kg	1.9	94	47	115			
2,4-Dinitrotoluene		22.8	mg/kg	0.97	117	72	122			
2,6-Dinitrotoluene		19.2	mg/kg	0.97	99	60	126			
2-Chloronaphthalene		17.0	mg/kg	0.97	88	63	106			
2-Chlorophenol		12.6	mg/kg	0.97	65	61	103			
2-Methylnaphthalene		16.7	mg/kg	0.97	86	68	103			
2-Nitrophenol		17.2	mg/kg	0.97	88	58	102			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW8270C**										Batch: 169704
Lab ID: **B22081853-001AMS**	70	Sample Matrix Spike				Run: SV5973N2.I_220825A				08/25/22 12:05
3,3´-Dichlorobenzidine		17.4	mg/kg	1.9	89	35	117			
4,6-Dinitro-2-methylphenol		19.9	mg/kg	1.9	102	55	121			
4-Bromophenyl phenyl ether		20.0	mg/kg	0.97	103	72	113			
4-Chloro-3-methylphenol		14.8	mg/kg	0.97	76	68	107			
4-Chlorophenol		17.0	mg/kg	0.97	88	61	109			
4-Chlorophenyl phenyl ether		17.5	mg/kg	0.97	90	71	110			
4-Nitrophenol		13.5	mg/kg	1.9	69	62	118			
Acenaphthene		16.8	mg/kg	0.97	86	73	104			
Acenaphthylene		16.4	mg/kg	0.97	84	64	101			
Anthracene		19.3	mg/kg	0.97	99	72	110			
Azobenzene		16.6	mg/kg	0.97	85	68	108			
Benzidine		5.58	mg/kg	1.9	29	10	80			
Benzo(a)anthracene		19.5	mg/kg	0.97	100	75	112			
Benzo(a)pyrene		18.8	mg/kg	0.97	97	71	106			
Benzo(b)fluoranthene		18.6	mg/kg	0.97	96	65	121			
Benzo(g,h,i)perylene		17.4	mg/kg	0.97	90	79	117			
Benzo(k)fluoranthene		17.9	mg/kg	0.97	92	64	118			
bis(-2-chloroethoxy)Methane		17.6	mg/kg	0.97	90	63	104			
bis(-2-chloroethyl)Ether		14.9	mg/kg	0.97	77	56	94			
bis(2-chloroisopropyl)Ether		13.4	mg/kg	0.97	69	51	84			
bis(2-ethylhexyl)Phthalate		21.9	mg/kg	0.97	112	65	132			
Butylbenzylphthalate		22.3	mg/kg	0.97	115	68	131			
Chrysene		18.6	mg/kg	0.97	96	76	109			
Dibenzo(a,h)anthracene		19.1	mg/kg	0.97	98	75	111			
Diethyl phthalate		18.2	mg/kg	0.97	94	70	119			
Dimethyl phthalate		18.8	mg/kg	0.97	97	70	118			
Di-n-butyl phthalate		21.0	mg/kg	0.97	108	72	126			
Di-n-octyl phthalate		21.7	mg/kg	0.97	112	68	127			
Fluoranthene		18.9	mg/kg	0.97	97	76	109			
Fluorene		16.7	mg/kg	0.97	86	67	108			
Hexachlorobenzene		18.2	mg/kg	0.97	93	71	107			
Hexachlorobutadiene		15.5	mg/kg	0.97	80	62	91			
Hexachlorocyclopentadiene		18.5	mg/kg	1.9	95	56	108			
Hexachloroethane		15.8	mg/kg	0.97	81	54	95			
Indeno(1,2,3-cd)pyrene		20.5	mg/kg	0.97	105	63	112			
Isophorone		15.4	mg/kg	0.97	79	63	95			
m+p-Cresols		16.8	mg/kg	0.97	86	64	109			
Naphthalene		16.6	mg/kg	0.97	85	60	99			
Nitrobenzene		21.1	mg/kg	0.97	108	57	110			
n-Nitrosodimethylamine		15.3	mg/kg	0.97	79	43	106			
n-Nitroso-di-n-propylamine		18.1	mg/kg	0.97	93	61	107			
n-Nitrosodiphenylamine		18.1	mg/kg	0.97	93	71	119			
o-Cresol		16.8	mg/kg	0.97	86	65	111			
Pentachlorophenol		16.6	mg/kg	1.9	86	60	121			
Phenanthrene		17.2	mg/kg	0.97	88	73	104			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169704
Lab ID: B22081853-001AMS	70	Sample Matrix Spike				Run: SV5973N2.I_220825A				08/25/22 12:05
Phenol		11.8	mg/kg	0.97	61	57	99			
Pyrene		18.2	mg/kg	0.97	94	77	111			
Pyridine		8.50	mg/kg	0.97	44	18	76			
Surr: 2,4,6-Tribromophenol				0.97	100	64	125			
Surr: 2-Fluorobiphenyl				0.97	84	68	96			
Surr: 2-Fluorophenol				0.97	86	59	102			
Surr: Nitrobenzene-d5				0.97	116	65	92			S
Surr: Phenol-d5				0.97	86	67	96			
Surr: Terphenyl-d14				0.97	101	46	147			
Lab ID: B22081853-001AMSD	70	Sample Matrix Spike Duplicate				Run: SV5973N2.I_220825A				08/25/22 12:36
1,2,4-Trichlorobenzene		14.0	mg/kg	0.95	74	63	93	5.1	40	
1,2-Dichlorobenzene		11.9	mg/kg	0.95	63	59	85	9.8	40	
1,3-Dichlorobenzene		11.6	mg/kg	0.95	62	57	83	2.7	40	
1,4-Dichlorobenzene		11.5	mg/kg	0.95	61	58	83	9.4	40	
1-Methylnaphthalene		14.7	mg/kg	0.95	78	63	97	7.4	40	
2,4,5-Trichlorophenol		18.8	mg/kg	0.95	99	68	120	2.9	40	
2,4,6-Trichlorophenol		14.7	mg/kg	0.95	78	65	117	2.5	40	
2,4-Dichlorophenol		13.3	mg/kg	0.95	70	61	110	4.2	40	
2,4-Dimethylphenol		13.6	mg/kg	0.95	72	62	100	0.2	40	
2,4-Dinitrophenol		18.3	mg/kg	1.9	97	47	115	0.2	40	
2,4-Dinitrotoluene		23.9	mg/kg	0.95	127	72	122	4.9	40	S
2,6-Dinitrotoluene		18.2	mg/kg	0.95	97	60	126	5.1	40	
2-Chloronaphthalene		16.1	mg/kg	0.95	85	63	106	5.4	40	
2-Chlorophenol		11.8	mg/kg	0.95	63	61	103	6.3	40	
2-Methylnaphthalene		15.9	mg/kg	0.95	84	68	103	5.3	40	
2-Nitrophenol		16.8	mg/kg	0.95	89	58	102	1.9	40	
3,3´-Dichlorobenzidine		17.9	mg/kg	1.9	95	35	117	2.7	40	
4,6-Dinitro-2-methylphenol		20.8	mg/kg	1.9	110	55	121	4.2	40	
4-Bromophenyl phenyl ether		19.8	mg/kg	0.95	105	72	113	0.5	40	
4-Chloro-3-methylphenol		15.1	mg/kg	0.95	80	68	107	1.6	40	
4-Chlorophenol		16.9	mg/kg	0.95	90	61	109	0.6	40	
4-Chlorophenyl phenyl ether		16.9	mg/kg	0.95	89	71	110	3.7	40	
4-Nitrophenol		13.7	mg/kg	1.9	73	62	118	1.5	40	
Acenaphthene		16.2	mg/kg	0.95	86	73	104	3.5	40	
Acenaphthylene		16.0	mg/kg	0.95	84	64	101	2.9	40	
Anthracene		18.8	mg/kg	0.95	99	72	110	2.8	40	
Azobenzene		16.7	mg/kg	0.95	88	68	108	0.6	40	
Benzidine		6.93	mg/kg	1.9	37	10	80	22	40	
Benzo(a)anthracene		19.6	mg/kg	0.95	104	75	112	0.5	40	
Benzo(a)pyrene		18.6	mg/kg	0.95	99	71	106	0.6	40	
Benzo(b)fluoranthene		19.0	mg/kg	0.95	101	65	121	2.1	40	
Benzo(g,h,i)perylene		17.4	mg/kg	0.95	92	79	117	0.1	40	
Benzo(k)fluoranthene		18.6	mg/kg	0.95	99	64	118	3.9	40	
bis(-2-chloroethoxy)Methane		17.0	mg/kg	0.95	90	63	104	3.5	40	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Rubik Environmental **Work Order:** B22081406 **Report Date:** 09/27/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8270C										Batch: 169704
Lab ID: B22081853-001AMSD	70	Sample Matrix Spike Duplicate				Run: SV5973N2.I_220825A				08/25/22 12:36
bis(-2-chloroethyl)Ether		14.6	mg/kg	0.95	77	56	94	2.0	40	
bis(2-chloroisopropyl)Ether		12.6	mg/kg	0.95	67	51	84	6.2	40	
bis(2-ethylhexyl)Phthalate		22.6	mg/kg	0.95	120	65	132	3.2	40	
Butylbenzylphthalate		22.8	mg/kg	0.95	121	68	131	2.2	40	
Chrysene		18.7	mg/kg	0.95	99	76	109	0.5	40	
Dibenzo(a,h)anthracene		19.3	mg/kg	0.95	102	75	111	1.2	40	
Diethyl phthalate		18.7	mg/kg	0.95	99	70	119	2.6	40	
Dimethyl phthalate		18.8	mg/kg	0.95	99	70	118	0.1	40	
Di-n-butyl phthalate		20.8	mg/kg	0.95	110	72	126	0.8	40	
Di-n-octyl phthalate		21.9	mg/kg	0.95	116	68	127	0.7	40	
Fluoranthene		18.7	mg/kg	0.95	99	76	109	1.5	40	
Fluorene		16.5	mg/kg	0.95	87	67	108	1.5	40	
Hexachlorobenzene		18.3	mg/kg	0.95	97	71	107	0.9	40	
Hexachlorobutadiene		13.9	mg/kg	0.95	74	62	91	11	40	
Hexachlorocyclopentadiene		17.2	mg/kg	1.9	91	56	108	7.4	40	
Hexachloroethane		14.2	mg/kg	0.95	75	54	95	11	40	
Indeno(1,2,3-cd)pyrene		20.3	mg/kg	0.95	107	63	112	0.9	40	
Isophorone		15.3	mg/kg	0.95	81	63	95	0.6	40	
m+p-Cresols		16.4	mg/kg	0.95	87	64	109	2.5	40	
Naphthalene		16.0	mg/kg	0.95	84	60	99	3.8	40	
Nitrobenzene		19.9	mg/kg	0.95	106	57	110	5.5	40	
n-Nitrosodimethylamine		14.3	mg/kg	0.95	76	43	106	6.8	40	
n-Nitroso-di-n-propylamine		17.7	mg/kg	0.95	94	61	107	2.1	40	
n-Nitrosodiphenylamine		17.5	mg/kg	0.95	93	71	119	3.5	40	
o-Cresol		16.0	mg/kg	0.95	85	65	111	4.6	40	
Pentachlorophenol		16.0	mg/kg	1.9	85	60	121	4.2	40	
Phenanthrene		17.3	mg/kg	0.95	92	73	104	0.6	40	
Phenol		11.3	mg/kg	0.95	60	57	99	4.9	40	
Pyrene		17.8	mg/kg	0.95	94	77	111	2.2	40	
Pyridine		7.95	mg/kg	0.95	42	18	76	6.6	40	
Surr: 2,4,6-Tribromophenol				0.95	102	64	125			
Surr: 2-Fluorobiphenyl				0.95	80	68	96			
Surr: 2-Fluorophenol				0.95	81	59	102			
Surr: Nitrobenzene-d5				0.95	114	65	92			S
Surr: Phenol-d5				0.95	84	67	96			
Surr: Terphenyl-d14				0.95	99	46	147			

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

S - Spike recovery outside of advisory limits

Work Order Receipt Checklist

Rubik Environmental

B22081406

Login completed by: Dylan A. Chirrick
Date Received: 8/12/2022
Reviewed by: tedwards
Received by: dac
Reviewed Date: 8/22/2022
Carrier name: Hand Deliver

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	°C On Ice - From Field		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

Contact and Corrective Action Comments:

The Temperature Blank temperature for shipping container 1 was 7.7°C, shipping container 2 was 2.9°C, and shipping container 3 was 8.0°C.

Chain of Custody & Analytical Request Record

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Account Information *(Billing information)*

Company/Name	Rubin
Contact	Shane Fitch
Phone	(775) 250-8758
Mailing Address	320 Flint st.
City, State, Zip	Reno, NV 89501
Email	Sfitch@rubinenv.com
Receive Invoice	☐Hard Copy ☐Email
Receive Report	☐Hard Copy ☐Email
Purchase Order	
Quote	B15448
Bottle Order	165979

Report Information *(if different than Account Information)*

Company/Name	
Contact	
Phone	
Mailing Address	
City, State, Zip	
Email	
Receive Report	☐Hard Copy ☐Email
Special Report/Formats:	☐ LEVEL IV ☐NELAC ☑ EDD/EDT *(contact laboratory)* ☐ Other_____

Comments

Project Information

08/12/22 D2

Project Name, PWSID, Permit, etc.	Nutrien Billings CPI
Sampler Name	Colin Barkley
Sampler Phone	(289) 210-8391
Sample Origin State	Montana
EPA/State Compliance	☐ Yes ☐ No

URANIUM MINING CLIENTS MUST indicate sample type
☐ Unprocessed Ore
☐ Processed Ore (Ground or Refined) **CALL BEFORE SENDING
☐ 11(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)

Matrix Codes

A - Air
W - Water
S - Soils/Solids
V - Vegetation
B - Bioassay
O - Oil
DW - Drinking Water

All turnaround times are standard unless marked as RUSH.
Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling – See Instructions Page

	Sample Identification (Name, Location, Interval, etc.)	Collection Date	Collection Time	Number of Containers	Matrix (See Codes Above)	SW 8260B-VOC Short list	SW 8260B-VOC Short list	SW 9012B Total Cyanide	Analysis Requested	See Attached	RUSH TAT	ELI LAB ID (Laboratory Use Only)
1	SR-1-5	8/12/22	0735	3	S	X	X	X	cooler 2			
2	SR-1-10	8/12/22	0740	3	S	X	X	X	cooler 2			
3	SR-2-5	8/12/22	0750	3	S	X	X	X	cooler 2			
4	SR-4-5	8/12/22	0810	3	S	X	X	X	cooler 2			
5	SR-4-10	8/12/22	0815	3	S	X	X	X	cooler 2			
6	SR-3-5	8/12/22	0825	3	S	X	X	X	cooler 2			
7	SR-3-10	8/12/22	0830	3	S	X	X	X	cooler 2			
8	SR-2-10	8/12/22	0755	3	S	X	X	X	cooler 2			
9	SR-11-5	8/12/22	0910	3	S	X	X	X				

ELI is REQUIRED to provide preservative traceability. If the preservatives supplied with the bottle order were **NOT** used, please attach your preservative information with this COC.

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Colin Barkley	8/12/22 1400				
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
				Jamar Chivers	8/12/22 1400	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp °C	Temp Blank Y N	On Ice Y N	Payment Type CC Cash Check_____	Amount $	Receipt Number *(cash/check only)*

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.
This serves as notice of this possibility. All subcontracted data will be clearly notated on your analytical report.

Chain of Custody & Analytical Request Record

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Account Information *(Billing information)*

Company/Name	Rubyh
Contact	Shane Fitch
Phone	(775) 250-8288
Mailing Address	320 Hunt St
City, State, Zip	Reno, NV 89501
Email	Sfitch@rubyhenv.com
Receive Invoice	☐Hard Copy ☐Email
Receive Report	☐Hard Copy ☐Email
Purchase Order	
Quote	B-15448 08/12/22 DR
Bottle Order	165979

Report Information *(if different than Account Information)*

Company/Name	
Contact	
Phone	
Mailing Address	
City, State, Zip	
Email	
Receive Report	☐Hard Copy ☐Email
Special Report/Formats:	☐ LEVEL IV ☐NELAC ☐EDD/EDT *(contact laboratory)* ☐ Other_____

Comments

Project Information

Project Name, PWSID, Permit, etc.	Watson Billings CPT
Sampler Name	Colin Barkley
Sampler Phone	(209) 210 8391
Sample Origin State	Montana
EPA/State Compliance	☐ Yes ☐ No

URANIUM MINING CLIENTS MUST indicate sample type
☐ Unprocessed Ore
☐ Processed Ore (Ground or Refined) **CALL BEFORE SENDING
☐ 11(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)

Matrix Codes: A - Air; W - Water; S - Soils/Solids; V - Vegetation; B - Bioassay; O - Oil; DW - Drinking Water

All turnaround times are standard unless marked as RUSH.
Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling – See Instructions Page

Sample Identification (Name, Location, Interval, etc.)	Collection Date	Collection Time	Number of Containers	Matrix (See Codes Above)	SW8151A Herbicides, Chlorinated SW8270E S-VOC	SW8260B-8260-VOC-Short list	SW9012B Total Cyanide SW6020 Metals by ICP/ICPMS total & Soluble	SW6015C-Glycol by GC/FID	See Attached	RUSH TAT	ELI LAB ID *Laboratory Use Only*
1 SR-11-10	8/12/22	0915	3	S	X	X	X				
2 SR-12-S	8/12/22	0935	3	S	X	X		X			
3 SR-12-10	8/12/22	0945	3	S	X	X		X			
4 SR-12-15	8/12/22	1130	3	S	X	X		X			
5 SR-13-S	8/12/22	1085	3	S	X	X		X			
6 SR-13-10	8/12/22	1010	2	S	X	X		X			
7 SR-13-15	8/12/22	1120	3	S	X	X		X			
8 SR-14-S	8/12/22	1015	3	S	X	X		X			
9 SR-14-10	8/12/22	1020	3	S	X	X		X			

ELI is REQUIRED to provide preservative traceability. If the preservatives supplied with the bottle order were **NOT** used, please attach your preservative information with this COC.

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Colin Barkley	8/12/22 1400				
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
				Taylor Chirrick	8/12/22 14:00	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp °C	Temp Blank Y N	On Ice Y N	Payment Type CC Cash Check_____	Amount $	Receipt Number *(cash/check only)*

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Chain of Custody & Analytical Request Record

ENERGY LABORATORIES — Trust our People. Trust our Data.

www.energylab.com

Account Information *(Billing information)*

Company/Name	Rubin
Contact	Shane Fitch
Phone	(775) 250-8268
Mailing Address	320 Flint st.
City, State, Zip	Reno, NV 89501
Email	sfitch@rubinenv.com
Receive Invoice	☐Hard Copy ☐Email
Receive Report	☐Hard Copy ☐Email
Purchase Order	Quote: D-15448 08/12/22 DC
Bottle Order	165979

Report Information *(if different than Account Information)*

Company/Name	
Contact	
Phone	
Mailing Address	
City, State, Zip	
Email	
Receive Report	☐Hard Copy ☐Email

Special Report/Formats: ☐ LEVEL IV ☐NELAC ☐ EDD/EDT *(contact laboratory)* ☐ Other_____

Comments

Project Information

Project Name, PWSID, Permit, etc.	Nutrien Billings LPI
Sampler Name	Colin Bashley
Sampler Phone	(209) 210-8391
Sample Origin State	Montana
EPA/State Compliance	☐ Yes ☐ No

URANIUM MINING CLIENTS MUST indicate sample type
☐ Unprocessed Ore
☐ Processed Ore (Ground or Refined) **CALL BEFORE SENDING
☐ 11(e)2 Byproduct Material (Can ONLY be Submitted to ELI Casper Location)

Matrix Codes

A - Air
W - Water
S - Soils/Solids
V - Vegetation
B - Bioassay
O - Oil
DW - Drinking Water

All turnaround times are standard unless marked as RUSH.
Energy Laboratories MUST be contacted prior to RUSH sample submittal for charges and scheduling – See Instructions Page

	Sample Identification *(Name, Location, Interval, etc.)*	Collection Date	Collection Time	Number of Containers	Matrix *(See Codes Above)*	SW8270E 5-VOC SW8151A Herbicides; Chlorinated	SW8260B -VOC- Short list	SW8015C Glycol by GC/FID	See Attached	RUSH TAT	ELI LAB ID *Laboratory Use Only*
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]						
2	SR-14-15	8/12/22	1110	3	S	X	X	X			
3											
4											
5											
6											
7											
8											
9											

ELI is REQUIRED to provide preservative traceability. If the preservatives supplied with the bottle order were **NOT** used, please attach your preservative information with this COC.

Custody Record MUST be signed	Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
	Colin Bashley	8/12/22 1400				
	Relinquished by (print)	Date/Time	Signature	Received by Laboratory (print)	Date/Time	Signature
				Lyndon Chimak	8/12/22 14:00	

LABORATORY USE ONLY

Shipped By	Cooler ID(s)	Custody Seals Y N C B	Intact Y N	Receipt Temp °C	Temp Blank Y N	On Ice Y N	Payment Type CC Cash Check_____	Amount $	Receipt Number *(cash/check only)*

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