ENSOLUM

July 22, 2024

New Mexico Oil Conservation Division
New Mexico Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Response to NMOCD Review of the 2022 *Release Response Action Plan*
Bisti Landfarm
San Juan County, New Mexico
Western Refining Southwest LLC
NMOCD Permit Number: NM2-0010

Mr. Jones:

On behalf of Western Refining Southwest LLC (Western), Ensolum, LLC (Ensolum) is submitting this response to address comments presented in the New Mexico Oil Conservation Division (NMOCD) letter dated March 26, 2024, regarding the 2022 *Release Response Action Plan.* This letter also addresses the comment provided by the NMOCD via email on March 28, 2024.

Letter Comment 3: *Western must also address the exceedances of Manganese demonstrated on Table 5 for samples HA08, HA14, HA17 and HA19, ranging from 160 to 190 mg/kg that were not recognized in the written assessment and/or Table 5 of exceeding the facility background concentration of 150 mg/kg;*

- Ensolum proposes to include manganese in the list of constituents exceeding laboratory PQL and/or Site background concentrations, Page 2, last paragraph. Additionally, after further review of Table 5, magnesium was also detected at concentrations exceeding the laboratory PQL and/or Site background concentrations. Magnesium will also be added to the text. If approved, this would change the text to **"Of the analyzed constituents, arsenic, barium, calcium, chromium, copper, iron, magnesium, manganese, potassium, and zinc were detected above the laboratory PQL and/or Site background concentrations."** Table 5 will also be updated to identify exceedances in bold for magnesium and manganese.

Letter Comment 4: *Western must demonstrate compliance of the requirements of 19.15.29 NMAC (Part 29) by submitting a copy of OCD's approval of the C-141 for closure into OCD Permitting as a [C-137] Non-Fee SWMF Submittal;*

- Ensolum submitted the *Release Response Action Plan* and *Release Response Action Plan Addendum* to Mr. Nelson Velez of the NMOCD Incidents Group on December 19, 2022 and December 23, 2022, respectively. A follow up email and phone call were sent to Mr. Velez on February 24, 2023. No response has been received on how to proceed with reporting the "releases" (as defined under 19.15.36 of the New Mexico

Administrative Code [NMAC]) to the Incidents Group, since a "release" is defined differently under 19.15.29 NMAC.

To alleviate confusion when discussing the detected concentrations, Ensolum recommends adding applicable NMOCD, New Mexico Environment Department (NMED) and/or United States Environmental Protection Agency (EPA) soil screening levels to Tables 1 through 6 (draft revised tables attached) when resubmitting the *Release Response Action Plan*. The methodology that was presented in the NMOCD approved *Closure and Post-Closure Plan,* dated February 17, 2023, was used to evaluate applicable screening levels and are compiled in attached Table 7.

Based on the laboratory analytical results presented in Tables 2 through 7, the only constituent that exceeded applicable screening levels was chloride in sample HA09. Although the detected chloride concentration of 940 milligrams per kilogram (mg/kg) was above the NMOCD reclamation requirement (600 mg/kg) for soil within the top 4 feet from ground surface, the NMOCD Incidents Group has previously approved an alternative standard for chloride at the Bisti Landfarm of 20,000 mg/kg for any soil below the ground surface (*Site Characterization Report and Variance Request* prepared by LT Environmental, Inc. and dated October 2020). As such, no constituent concentrations exceed applicable NMOCD, NMED, and/or EPA screening levels and Ensolum does not believe that the detected concentrations constitute a "release" as defined in 19.15.29 NMAC. Because of this, a Form C-141 should not be required to be submitted to the NMOCD Incidents Group.

Letter Comment 5: *Western shall obtain written approval from OCD prior to implementing any changes to the December 22, 2022, vadose zone Release Response Action Plan.*

- Changes will not be implemented to the *Release Response Action Plan* dated December 22, 2022 until the NMOCD approves the recommendations presented in this letter.

March 28, 2024 Email: *OCD accepts the analytical results for Radium 226 and 228 into the administrative record. Western must address the reported exceedances of Radium 226 and 228 in the release response action plan OCD approved on March 26, 2024. If you have any questions regarding this mater, please contact me.*

- Ensolum will incorporate Radium results into the revised *Release Response Action Plan* prior to resubmittal.

For reference, the original figures and compiled laboratory analytical reports have also been included in this letter. If you should have any questions or comments regarding this document, please contact the undersigned.

Sincerely,

Ensolum, LLC

Stuart Hyde
Senior Managing Geologist
(970) 903-1607
shyde@ensolum.com

Attachments:

Figure 1:	Site Location Map
Figure 2:	Site Map
Figure 3:	Compliance Sample Locations
Figure 4:	Vadose Zone Sample Locations
Table 1:	2022 Quarterly and Semi-Annual Vadose Zone Soil Analytical Results
Table 2:	Soil Analytical Results – BTEX and TPH
Table 3:	Soil Analytical Results – PAH, PCB, and Phenol
Table 4:	Soil Analytical Results – Volatile Organic Compounds
Table 5:	Soil Analytical Results – Metals and Cyanide
Table 6:	Soil Analytical Results – General Chemistry and Radium
Figure 7:	Soil Screening Levels
Appendix A:	Laboratory Analytical Reports

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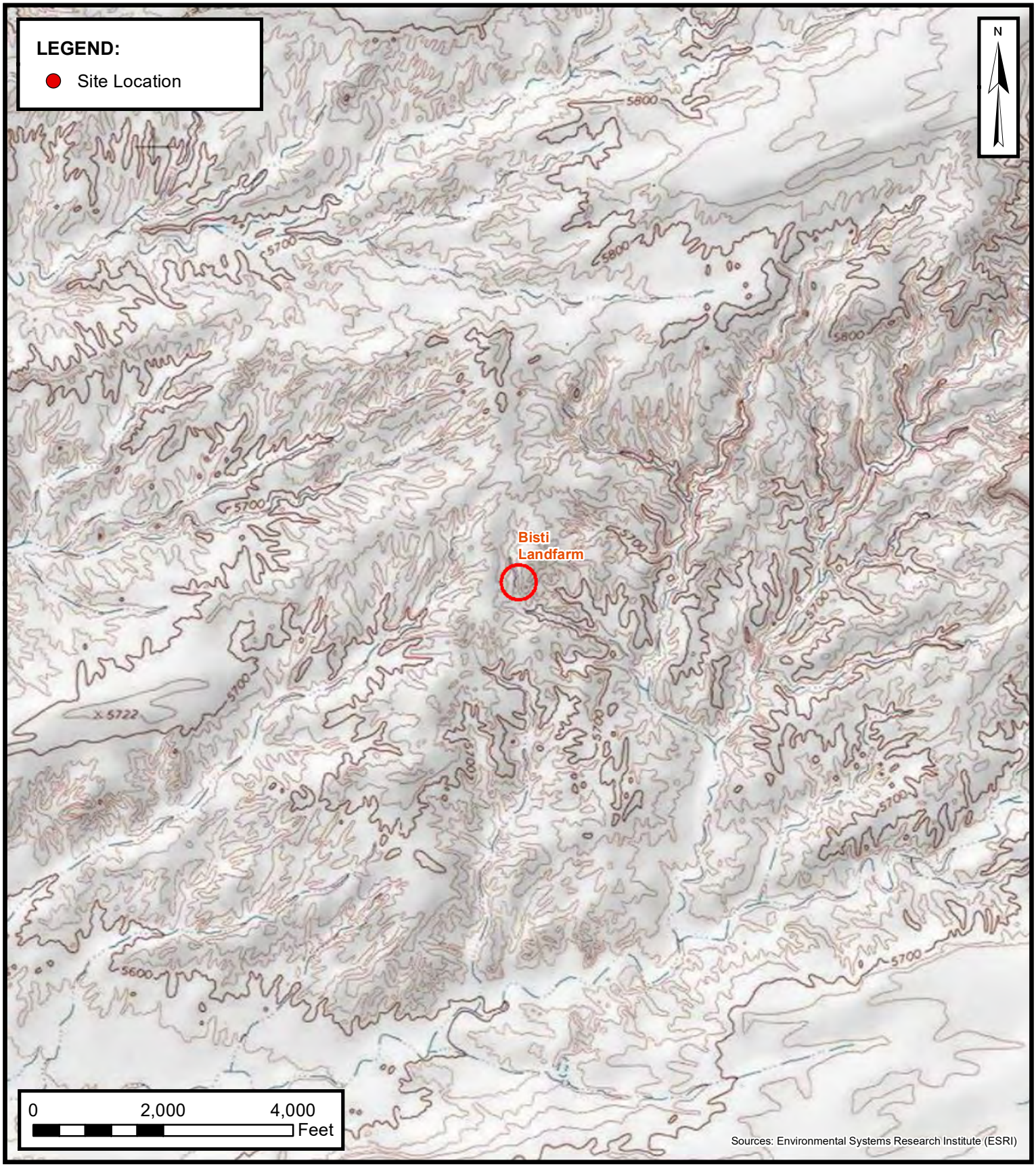
FIGURES



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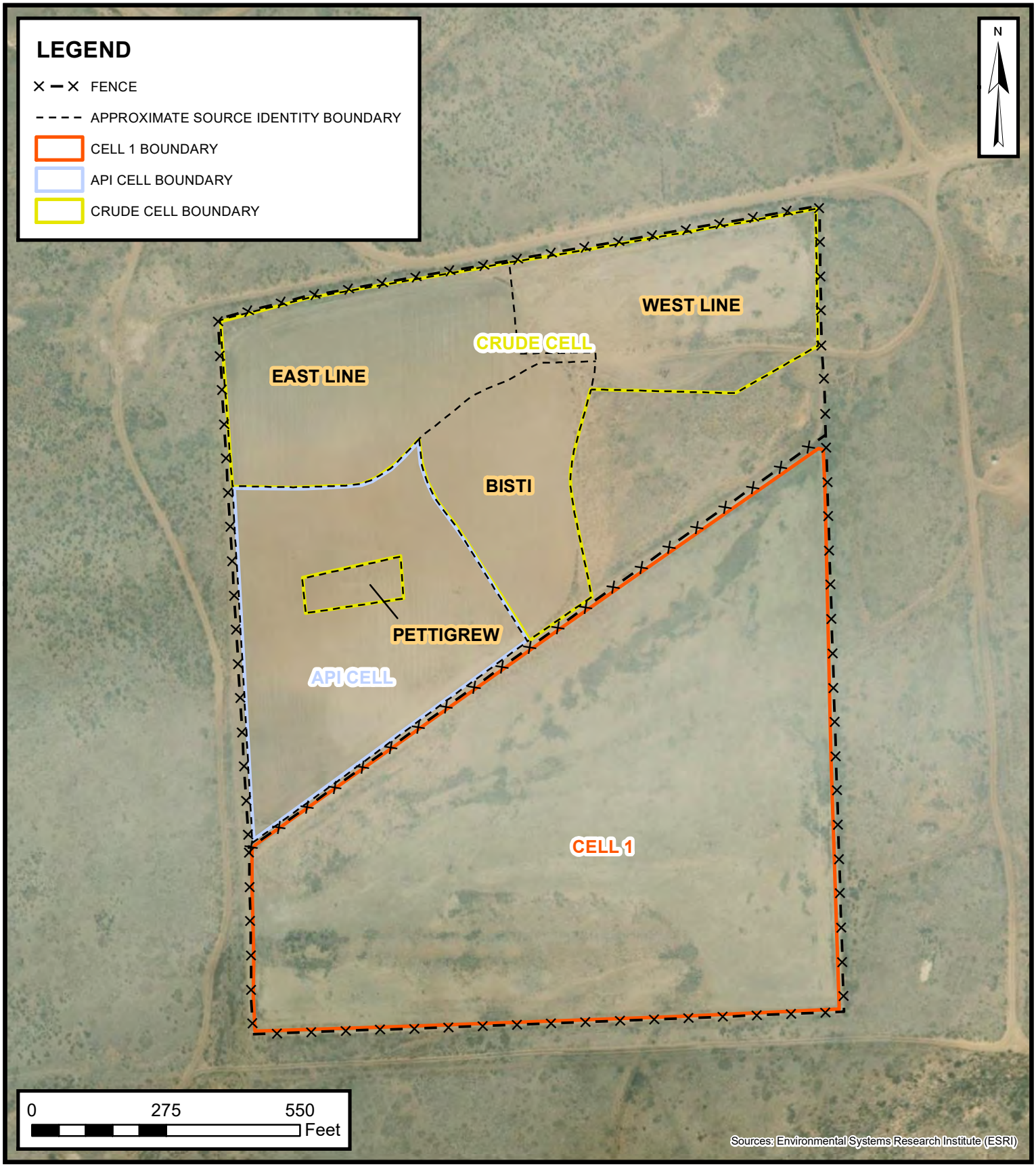
Site Location Map

BISTI LANDFARM
SEC 16 T25N R12W
SAN JUAN COUNTY, NM

WESTERN REFINING SOUTHWEST, LLC

FIGURE
1



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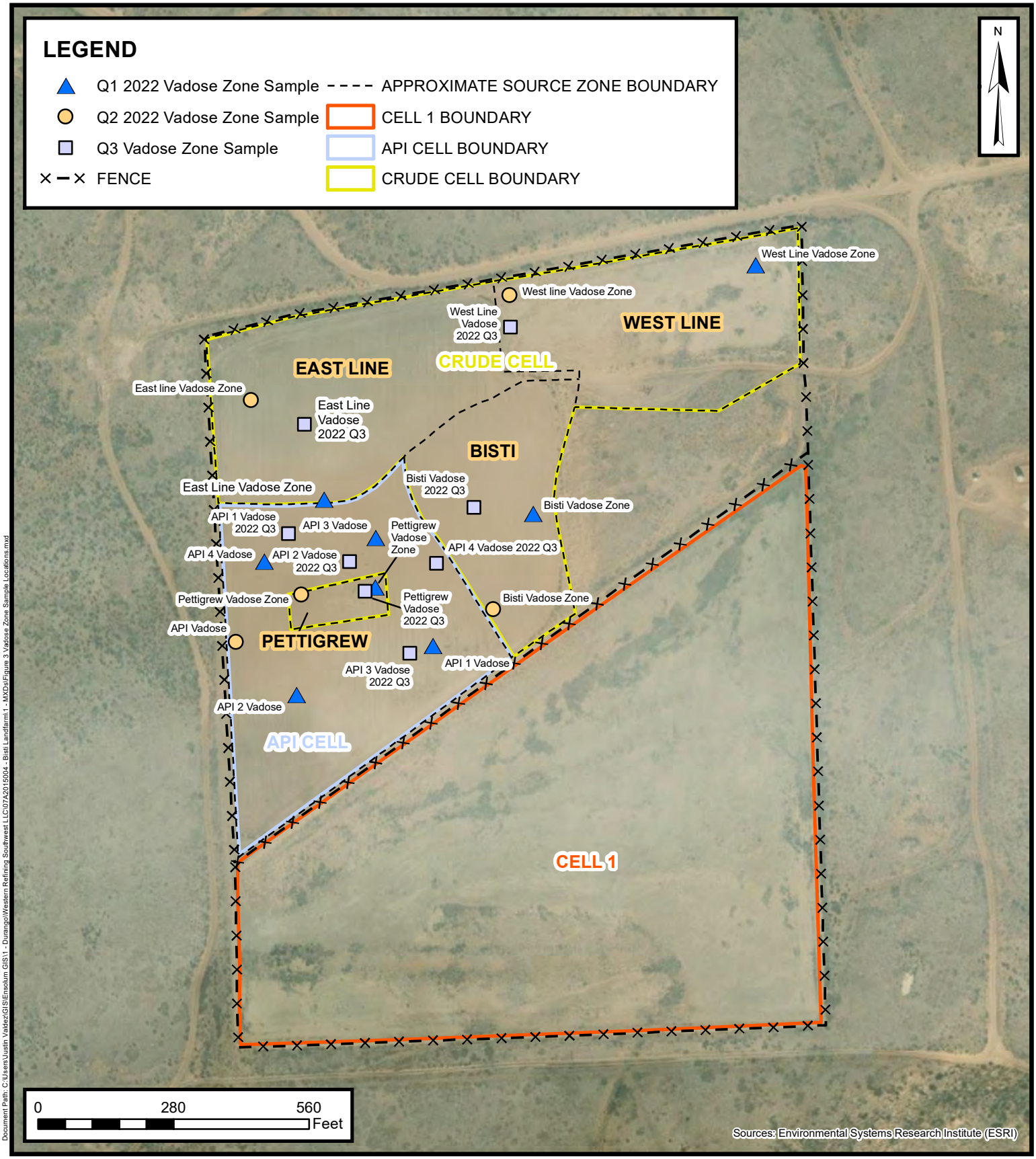
Site Map

BISTI LANDFARM
SEC 16 T25N R12W
SAN JUAN COUNTY, NM
WESTERN REFINING SOUTHWEST, LLC

FIGURE
2



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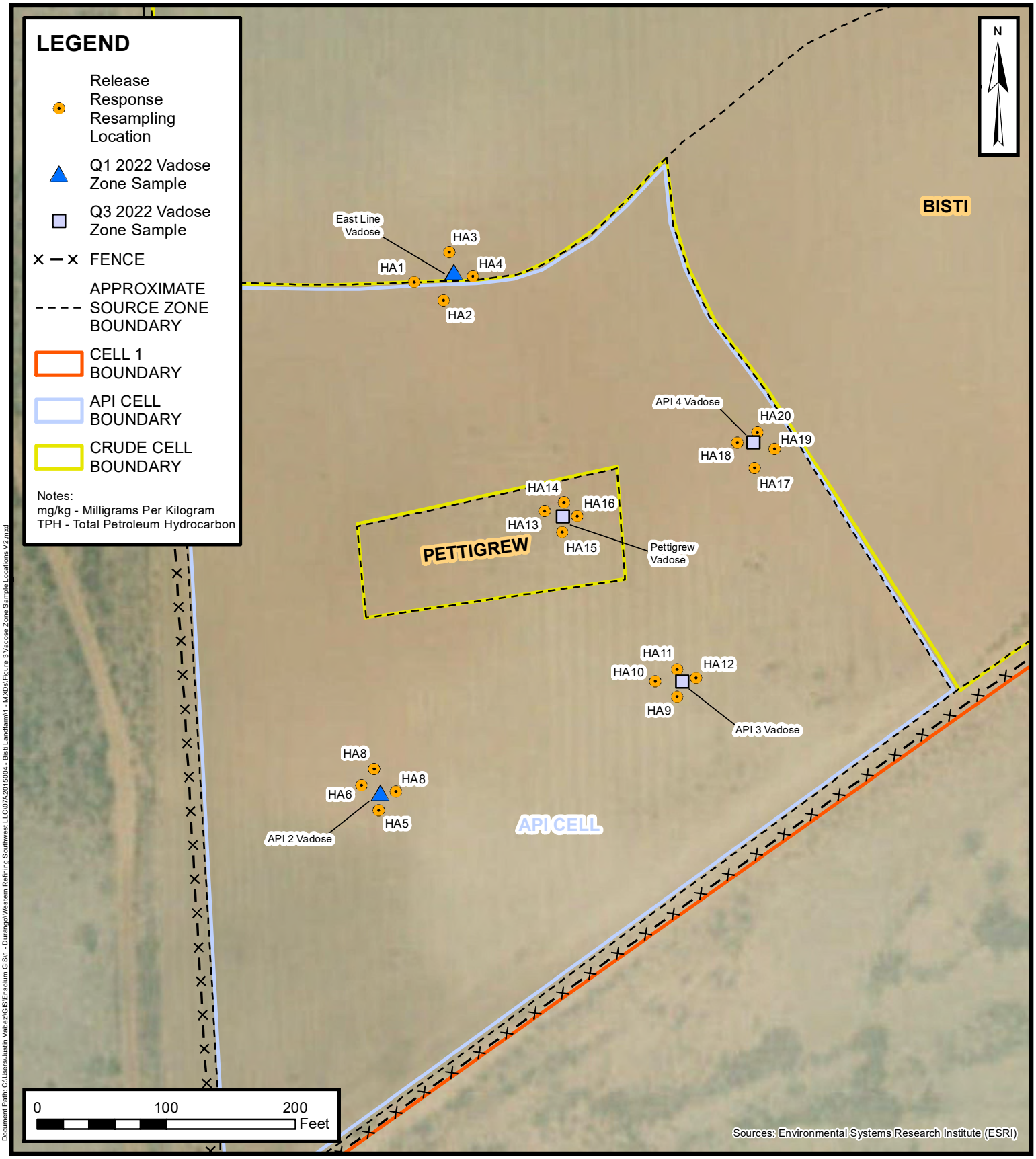
Compliance Sample Locations

BISTI LANDFORM
SEC 16 T25N R12W
SAN JUAN COUNTY, NM

WESTERN REFINING SOUTHWEST, INC

FIGURE
3



Document Path: C:\Users\Justin Vadez\GIS\Ensolum GIS\1 - Durango\Western Refining Southwest LLC\07A2015004 - Bisti Landfarm\1 - MXDs\Figure 3 Vadose Zone Sample Locations V2.mxd

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Vadose Zone Sample Locations

BISTI LANDFARM
SEC 16 T25N R12W
SAN JUAN COUNTY, NM
WESTERN REFINING SOUTHWEST, LLC

FIGURE
4

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TABLES

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TABLE 1
2022 QUARTERLY AND SEMI-ANNUAL VADOSE ZONE SOIL ANALYTICAL RESULTS
Bisti Landfarm
Western Refining Southwest LLC
San Juan County, New Mexico

Sample I.D.	Sample Date	Sample Depth (feet bgs)	TPH - 418.1 (mg/kg)	TPH - 8015 (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
Background Sample Result or Laboratory Practical Quantitation Limit (March 27, 1998 and September 1, 2015)			**<50**	**<50**	**<0.05**	**<0.05**	**<0.05**	**<0.095**	**<0.05**	**<50**
West Line Vadose Zone	2/10/2022	3	<18	--	<0.025	<0.050	<0.050	<0.099	<0.099	<7.5
West Line Vadose Zone	6/20/2022	3	--	<49	<0.024	<0.048	<0.048	<0.017 MDL	<0.048	<59 MDL
West Line Vadose Zone	9/22/2022	3	--	<41	<0.024	<0.049	<0.049	<0.018 MDL	<0.049	<3.0
East Line Vadose Zone	2/10/2022	3	<19	--	<0.024	<0.049	<0.049	<0.097	<0.097	**63**
East Line Vadose Zone	6/20/2022	3	--	<47	<0.025	<0.049	<0.049	<0.018 MDL	<0.049	<61 MDL
East Line Vadose Zone	9/22/2022	3	--	<45	<0.025	<0.050	<0.050	<0.018 MDL	<0.050	<3.0
Bisti Vadose Zone	2/10/2022	3	<20	--	<0.024	<0.048	<0.048	<0.096	<0.096	<7.5
Bisti Vadose Zone	6/20/2022	3	--	<25	<0.024	<0.048	<0.048	<0.017 MDL	<0.048	<60 MDL
Bisti Vadose Zone	9/22/2022	3	--	<45	<0.024	<0.049	<0.049	<0.018 MDL	<0.050	<3.0
Pettigrew Vadose Zone	2/10/2022	3	<18	--	<0.024	<0.048	<0.048	<0.096	<0.096	<7.5
Pettigrew Vadose Zone	6/20/2022	3	--	<47	<0.025	<0.049	<0.049	<0.018 MDL	<0.049	<61 MDL
Pettigrew Vadose Zone	9/22/2022	3	--	<49	<0.025	<0.050	<0.050	<0.018 MDL	<0.050	**120**
API 1 Vadose	2/10/2022	3	<19	--	<0.024	<0.047	<0.047	<0.095	<0.095	25
API 2 Vadose	2/10/2022	3	<19	--	<0.024	<0.048	<0.048	<0.096	<0.096	**610**
API 3 Vadose	2/10/2022	3	<18	--	<0.023	<0.047	<0.047	<0.093	<0.093	<15
API 4 Vadose	2/10/2022	3	<18	--	<0.024	<0.048	<0.048	<0.095	<0.095	<15
API Vadose	6/20/2022	3	--	<47	<0.025	<0.050	<0.050	<0.018 MDL	<0.050	<60 MDL
API 1 Vadose	9/22/2022	3	--	<47	<0.024	<0.048	<0.048	0.018 J	0.018 J	<3.0
API 2 Vadose	9/22/2022	3	--	<48	<0.024	<0.049	<0.049	<0.018 MDL	<0.049	<3.0
API 3 Vadose	9/22/2022	3	--	<49	<0.025	<0.049	<0.049	<0.018 MDL	<0.049	**380**
API 4 Vadose	9/22/2022	3	--	<50	<0.025	<0.050	<0.050	<0.018 MDL	<0.050	**89**

Notes:

bgs: Below ground surface

J: Estimated concentrations, analyte detected below the method quantitation/reporting limit

MDL: Laboratory result reported to the method detection limit

mg/kg: Milligrams per kilogram

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

TPH: Total Petroleum Hydrocarbon

<0.037: Indicates result less than the stated laboratory reporting limit (RL)

***BOLD** indicates results exceed the higher of the background sample result or practical quantitation limit*

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TABLE 2
SOIL ANALYTICAL RESULTS - BTEX AND TPH
Bisti Landfarm
Western Refining Southwest LLC
San Juan County, New Mexico

Analytical Method		BTEX Compounds by EPA Method 8260B					Petroleum Hydrocarbons by EPA Method 8015M/D				
Analyte		Benzene	Toluene	Ethylbenzene	Xylenes, Total	BTEX	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	GRO+DRO	TPH
Background Sample	27-Mar-98	<0.05	<0.05	<0.05	<0.05	--	NA	<50	NA	NA	NA
Background Sample	1-Sep-15	<0.05	<0.05	<0.05	<0.095	--	<5.0	<10	<50	<50	<50
Most Conservative Sceening Level (1)	--	10	--	--	--	50	--	--	--	1,000	2,500
Sample ID	**Sample Date**	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
HA01	11/11/2022	<0.025	<0.050	<0.050	<0.050	<0.050	<5.0	<15	<51	<51	<51
HA02	11/11/2022	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<14	<47	<47	<47
HA03	11/11/2022	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<13	<43	<43	<43
HA04	11/11/2022	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<15	<50	<50	<50
HA05	11/11/2022	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<14	<47	<47	<47
HA06	11/11/2022	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<15	<49	<49	<49
HA07	11/11/2022	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<15	<48	<48	<48
HA08	11/11/2022	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<14	<48	<48	<48
HA09	11/11/2022	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<15	<50	<50	<50
HA10	11/11/2022	<0.025	<0.050	<0.050	<0.099	<0.099	<5.0	<14	<47	<47	<47
HA11	11/11/2022	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<14	<47	<47	<47
HA12	11/11/2022	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	<15	<49	<49	<49
HA13	11/11/2022	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<14	<48	<48	<48
HA14	11/11/2022	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<15	<50	<50	<50
HA15	11/11/2022	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<15	<49	<49	<49
HA16	11/11/2022	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<14	<46	<46	<46
HA17	11/11/2022	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<15	<49	<49	<49
HA18	11/11/2022	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<15	<49	<49	<49
HA19	11/11/2022	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	<15	<49	<49	<49
HA20	11/11/2022	<0.025	<0.049	<0.049	<0.098	<0.098	<4.9	<15	<49	<49	<49

Notes:

(1): A comparison of screening levels is presented in Table 7

EPA: Environmental Protection Agency

mg/kg: Milligrams per kilogram

NA: Not analyzed

TPH: Total petroleum hydrocarbons

<: Indicates result is less than the stated laboratory method practical quantitation limit

BOLD *indicates results exceed the higher of the background sample result, practical quantitation limit, or most conservative screening level*

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TABLE 3
SOIL ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260
Bisti Landfarm
Western Refining Southwest LLC
San Juan County, New Mexico

Analyte		benzene	toluene	ethylbenzene	methyl tert-butyl ether (MTBE)	1,2-dichloroethane (EDC)	1,2-dibromoethane (EDB)	naphthalene	1-methylnaphthalene	2-methylnaphthalene	bromodichloromethane	bromoform (tribromomethane)	bromomethane	carbon tetrachloride (tetrachloromethane)	chlorobenzene (monochlorobenzene)	chloroform (trichloromethane)	chloromethane	cis-1,2-dichloroethene (cis-1,2-DCE)	cis-1,3-dichloropropene	1,2-dichlorobenzene
Background Sample	27-Mar-98	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Background Sample	1-Sep-15	<0.050	<0.050	<0.050	<0.048	<0.048	<0.048	<0.095	<0.19	<0.19	<0.048	<0.048	<0.14	<0.048	<0.048	<0.048	<0.14	<0.048	<0.048	<0.048
Most Conservative Sceening Level (1)	--	10.0	--	--	975	8.32	0.672	22.6	0.770	232	6.19	674	17.7	10.7	378	5.90	41.1	156	29.3	2,150
Sample ID	**Sample Date**	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
HA01	11/11/2022	<0.025	<0.050	<0.050	<0.050	<0.050	<0.050	<0.099	<0.20	<0.20	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050	<0.15	<0.050	<0.050	<0.099
HA02	11/11/2022	<0.025	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.20	<0.20	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050
HA03	11/11/2022	<0.025	<0.050	<0.050	<0.050	<0.050	<0.050	<0.099	<0.20	<0.20	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050
HA04	11/11/2022	<0.025	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.20	<0.20	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050
HA05	11/11/2022	<0.025	<0.050	<0.050	<0.050	<0.050	<0.050	<0.099	<0.20	<0.20	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050
HA06	11/11/2022	<0.025	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.20	<0.20	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050
HA07	11/11/2022	<0.025	<0.050	<0.050	<0.050	<0.050	<0.050	<0.099	<0.20	<0.20	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050
HA08	11/11/2022	<0.025	<0.049	<0.049	<0.049	<0.049	<0.049	<0.099	<0.20	<0.20	<0.049	<0.049	<0.15	<0.049	<0.049	<0.049	<0.15	<0.049	<0.049	<0.049
HA09	11/11/2022	<0.025	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.20	<0.20	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050
HA10	11/11/2022	<0.025	<0.050	<0.050	<0.050	<0.050	<0.050	<0.099	<0.20	<0.20	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050
HA11	11/11/2022	<0.025	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.20	<0.20	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050
HA12	11/11/2022	<0.025	<0.049	<0.049	<0.049	<0.049	<0.049	<0.099	<0.20	<0.20	<0.049	<0.049	<0.15	<0.049	<0.049	<0.049	<0.15	<0.049	<0.049	<0.049
HA13	11/11/2022	<0.025	<0.049	<0.049	<0.049	<0.049	<0.049	<0.098	<0.20	<0.20	<0.049	<0.049	<0.15	<0.049	<0.049	<0.049	<0.15	<0.049	<0.049	<0.049
HA14	11/11/2022	<0.025	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.20	<0.20	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050
HA15	11/11/2022	<0.025	<0.049	<0.049	<0.049	<0.049	<0.049	<0.098	<0.20	<0.20	<0.049	<0.049	<0.15	<0.049	<0.049	<0.049	<0.15	<0.049	<0.049	<0.049
HA16	11/11/2022	<0.025	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.20	<0.20	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050
HA17	11/11/2022	<0.025	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.20	<0.20	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050
HA18	11/11/2022	<0.025	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.20	<0.20	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050
HA19	11/11/2022	<0.025	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.20	<0.20	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050	<0.15	<0.050	<0.050	<0.050
HA20	11/11/2022	<0.025	<0.049	<0.049	<0.049	<0.049	<0.049	<0.098	<0.20	<0.20	<0.049	<0.049	<0.15	<0.049	<0.049	<0.049	<0.15	<0.049	<0.049	<0.049

Notes:

(1): A comparison of screening levels is presented in Table 7

EPA: Environmental Protection Agency

mg/kg: milligrams per kilogram

NA: not analyzed

NE: Not Established

<: indicates result is less than the stated laboratory method practical quantitation limit

***BOLD** indicates results exceed the higher of the background sample result, practical quantitation limit, or most conservative screening level*

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TABLE 3
SOIL ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS
Bisti Landfarm
Western Refining Southwest LLC
San Juan County, New Mexico

Analyte		1,4-dichlorobenzene	dichlorodifluoromethane	1,1-dichloroethane	1,1-dichloroethene	1,2-dichloropropane	1,1-dichloropropene	hexachlorobutadiene	methylene chloride (dichloromethane)	styrene	1,1,2,2-tetrachloroethane	tetrachloroethene (PCE)	trans-1,2-dichloroethene (trans-1,2-DCE)	trans-1,3-dichloropropene	1,2,4-trichlorobenzene	1,1,1-trichloroethane	1,1,2-trichloroethane	trichloroethene (TCE)	trichlorofluoromethane	vinyl chloride (chloroethene)	xylenes, total
Background Sample	27-Mar-98	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Background Sample	1-Sep-15	<0.048	<0.048	<0.048	<0.048	<0.048	<0.095	<0.095	<0.14	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.095
Most Conservative Sceening Level (1)	--	116	161	78.6	424	17.8	NE	52.1	409	7,260	7.98	111	206	NE	79.1	13,600	2.30	6.77	1,130	0.742	--
Sample ID	**Sample Date**	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
HA01	11/11/2022	<0.050	<0.050	<0.050	<0.050	<0.050	<0.099	<0.099	<0.15	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
HA02	11/11/2022	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.10	<0.15	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10
HA03	11/11/2022	<0.050	<0.050	<0.050	<0.050	<0.050	<0.099	<0.099	<0.15	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.099
HA04	11/11/2022	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.10	<0.15	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10
HA05	11/11/2022	<0.050	<0.050	<0.050	<0.050	<0.050	<0.099	<0.099	<0.15	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.099
HA06	11/11/2022	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.10	<0.15	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10
HA07	11/11/2022	<0.050	<0.050	<0.050	<0.050	<0.050	<0.099	<0.099	<0.15	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.099
HA08	11/11/2022	<0.049	<0.049	<0.049	<0.049	<0.049	<0.099	<0.099	<0.15	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.099
HA09	11/11/2022	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.10	<0.15	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10
HA10	11/11/2022	<0.050	<0.050	<0.050	<0.050	<0.050	<0.099	<0.099	<0.15	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.099
HA11	11/11/2022	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.10	<0.15	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10
HA12	11/11/2022	<0.049	<0.049	<0.049	<0.049	<0.049	<0.099	<0.099	<0.15	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.099
HA13	11/11/2022	<0.049	<0.049	<0.049	<0.049	<0.049	<0.098	<0.098	<0.15	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.098
HA14	11/11/2022	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.10	<0.15	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10
HA15	11/11/2022	<0.049	<0.049	<0.049	<0.049	<0.049	<0.098	<0.098	<0.15	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.098
HA16	11/11/2022	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.10	<0.15	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10
HA17	11/11/2022	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.10	<0.15	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10
HA18	11/11/2022	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.10	<0.15	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10
HA19	11/11/2022	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.10	<0.15	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10
HA20	11/11/2022	<0.049	<0.049	<0.049	<0.049	<0.049	<0.098	<0.098	<0.15	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.098

Notes:

(1): A comparison of screening levels is presented in Table 7

EPA: Environmental Protection Agency

mg/kg: milligrams per kilogram

NA: not analyzed

NE: Not Established

<: indicates result is less than the stated laboratory method practical quantitation limit

***BOLD** indicates results exceed the higher of the background sample result, practical quantitation limit, or most conservative screening level*

ENSOLUM

TABLE 4
SOIL ANALYTICAL RESULTS - PAH, PCB, AND PHENOL
Bisti Landfarm
Western Refining Southwest LLC
San Juan County, New Mexico

Analytical Method		Polycyclic Aromatic Hydrocarbons (PAH) by EPA Method 8270				Polychlorinated Biphenyls (PCB) by EPA Method 8082							Total Phenol by Method 9066
Analyte		Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Benzo(a)pyrene	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Phenol
Background Sample	27-Mar-98	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Background Sample	1-Sep-15	<0.25	<0.25	<0.25	<0.0099	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.67
Most Conservative Sceening Level (1)	--	22.6	0.770	232	1.12	3.98	1.81	1.86	2.43	2.43	1.14	2.43	18,500
Sample ID	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
HA01	11/11/2022	<0.0096	<0.0096	<0.0096	<0.019	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.67
HA02	11/11/2022	<0.0099	<0.0099	<0.0099	<0.020	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.67
HA03	11/11/2022	<0.0095	<0.0095	<0.0095	<0.019	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.67
HA04	11/11/2022	<0.0095	<0.0095	<0.0095	<0.019	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.67
HA05	11/11/2022	<0.0098	<0.0098	<0.0098	<0.20	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.67
HA06	11/11/2022	<0.0099	<0.0099	<0.0099	<0.020	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.67
HA07	11/11/2022	<0.0094	<0.0094	<0.0094	<0.019	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.67
HA08	11/11/2022	<0.0090	<0.0090	<0.0090	<0.018	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.67
HA09	11/11/2022	<0.0094	<0.0094	<0.0094	<0.019	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.67
HA10	11/11/2022	<0.0099	<0.0099	<0.0099	<0.020	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.67
HA11	11/11/2022	<0.010	<0.010	<0.010	<0.020	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.67
HA12	11/11/2022	<0.0098	<0.0098	<0.0098	<0.020	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.67
HA13	11/11/2022	<0.0097	<0.0097	<0.0097	<0.019	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.67
HA14	11/11/2022	<0.0099	<0.0099	<0.0099	<0.020	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.67
HA15	11/11/2022	<0.0095	<0.0095	<0.0095	<0.019	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	2.82 B
HA16	11/11/2022	<0.0089	<0.0089	<0.0089	<0.018	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.67
HA17	11/11/2022	<0.0096	<0.0096	<0.0096	<0.019	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.67
HA18	11/11/2022	<0.0097	<0.0097	<0.0097	<0.019	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.67
HA19	11/11/2022	<0.0091	<0.0091	<0.0091	<0.018	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016	<0.67
HA20	11/11/2022	<0.0096	<0.0096	<0.0096	<0.019	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.67

Notes:

(1): A comparison of screening levels is presented in Table 7

B: the same analyte is found in the associated method blank

EPA: Environmental Protection Agency

mg/kg: milligrams per kilogram

NA: not analyzed

TPH: total petroleum hydrocarbons

<: indicates result is less than the stated laboratory method practical quantitation limit

***BOLD** indicates results exceed the higher of the background sample result, practical quantitation limit, or most conservative screening level*

ENSOLUM

TABLE 5
SOIL ANALYTICAL RESULTS - METALS AND CYANIDE
Bisti Landfarm
Western Refining Southwest LLC
San Juan County, New Mexico

Analyte		Arsenic	Barium	Cadmium	Calcium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Potassium	Selenium	Silver	Uranium	Zinc	Cyanide by Method 9012B
Background Sample	27-Mar-98	2.8	180	<1.3	2,500	<5.0	NA	NA	6.8	1,300	NA	<0.5	810	<2.5	<1.3	NA	NA	NA
Background Sample	1-Sep-15	NA	NA	NA	NA	NA	3.2	7,200	NA	NA	150	NA	NA	NA	NA	<4.9	14	<0.25
Most Conservative Sceening Level (1)	--	7.07	4,390	70.5	8,840,000	96.6	3,130	54,800	400	1,540,000	464	10.9	15,600,000	391	391	234	23,500	11.2
Sample ID	**Sample Date**	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
HA01	11/11/2022	2.1	44	<0.20	2,700	2.3	<4.0 D	5,700	<2.0	1,100	110	<0.033	860	<4.9	<0.99	<0.49	10	<0.25
HA02	11/11/2022	1.8	73	<0.20	1,700	2.6	<4.0 D	5,800	2.3	1,100	110	<0.033	950	<5.0	<0.99	<0.50	11	<0.25
HA03	11/11/2022	2.1	58	<0.20	1,900	2.1	<3.9 D	6,000	3.1	1,000	120	<0.033	750	<4.9	<0.99	<0.49	9.7	<0.25
HA04	11/11/2022	2.2	400	<0.20	4,100	2.1	<4.0 D	5,200	3.1	970	110	<0.033	800	<5.0	<0.99	<0.50	9.3	<0.25
HA05	11/11/2022	2.0	73	<0.20	3,800	2.2	<4.0 D	5,100	2.9	1,000	110	<0.032	700	<5.0	<0.99	<0.50	10	<0.25
HA06	11/11/2022	2.0	37	<0.20	2,500	2.2	<4.0 D	5,300	2.4	1,000	110	<0.033	690	<5.0	<1.0	<0.50	9.5	<0.25
HA07	11/11/2022	2.1	120	<0.20	2,800	2.7	<4.0 D	5,700	2.7	1,100	120	<0.033	890	<4.9	<0.99	<0.49	12	<0.25
HA08	11/11/2022	2.1	50	<0.20	1,500	2.2	<3.9 D	5,300	2.3	1,000	120	<0.032	720	<4.9	<0.98	<0.49	9.7	<0.25
HA09	11/11/2022	2.8	120	<0.20	3,000	3.4	<3.9 D	7,700	2.6	1,400	160	<0.033	1,200	<4.9	<0.98	<0.49	13	<0.25
HA10	11/11/2022	2.4	140	<0.20	4,200	3.2	<3.9 D	7,000	2.5	1,300	150	<0.033	1,100	<4.9	<0.99	<0.49	13	<0.25
HA11	11/11/2022	2.0	190	<0.20	5,300	2.5	<4.0 D	6,000	2.8	1,000	110	<0.032	890	<5.0	<1.0	<0.50	10	<0.25
HA12	11/11/2022	2.2	120	<0.20	3,700	3.1	<3.9 D	6,200	<2.0	1,100	110	<0.033	950	<4.9	<0.99	<0.49	11	<0.25
HA13	11/11/2022	1.7	87	<0.20	3,700	1.5	<3.9 D	4,400	2.9	800	130	<0.032	550	<4.9	<0.99	<0.49	9.6	<0.25
HA14	11/11/2022	3.3	100	<0.20	9,700	5.1	4.4	9,600	2.6	2,100	170	<0.033	1,500	<5.0	<0.99	<0.50	18	<0.25
HA15	11/11/2022	2.3	200	<0.20	5,000	2.4	<4.0 D	5,900	2.1	1,000	120	<0.032	750	<4.9	<0.99	<0.49	11	<0.25
HA16	11/11/2022	2.4	110	<0.20	4,900	2.3	<4.0 D	5,800	2.0	1,100	110	<0.033	730	<5.0	<1.0	<0.50	10	<0.25
HA17	11/11/2022	3.1	99	<0.20	8,500	5.3	4.9	10,000	4.1	2,400	190	<0.033	1,600	<5.0	<0.99	<0.50	19	<0.25
HA18	11/11/2022	2.6	200	<0.20	8,000	3.4	<4.0 D	6,900	2.9	1,500	120	<0.033	1,100	<5.0	<1.0	<0.50	13	<0.25
HA19	11/11/2022	2.8	70	<0.20	6,700	4.5	4.1	8,500	2.6	1,900	160	<0.033	1,300	<5.0	<0.99	<0.50	16	<0.25
HA20	11/11/2022	2.7	81	<0.20	13,000	4.1	<4.0 D	8,000	2.9	1,800	150	<0.033	1,200	<4.9	<0.99	<0.49	15	<0.25

Notes:

(1): A comparison of screening levels is presented in Table 7

D: sample required dilation, elevation the associated reporting limit during analysis

EPA: Environmental Protection Agency

mg/kg: milligrams per kilogram

NA: not analyzed

TPH: total petroleum hydrocarbons

<: indicates result is less than the stated laboratory method practical quantitation limit

***BOLD** indicates results exceed the higher of the background sample result, practical quantitation limit, or most conservative screening level*

ENSOLUM

TABLE 6
SOIL ANALYTICAL RESULTS - GENERAL CHEMISTRY AND RADIUM
Bisti Landfarm
Western Refining Southwest LLC
San Juan County, New Mexico

Analytical Method		Anions by EPA Method 300.0				pH by Method SM4500-H+B	General Chemistry			Radiochemistry by EPA Method 901.1	
Analyte		Chloride	Fluoride	Nitrogen, Nitrate (As N)	Sulfate	pH	Bicarbonate	Carbonate	Sodium	Radium-226 (3)	Radium-228 (3)
Background Sample	27-Mar-98	<50	NA	NA	140	NA	110	26	90	NA	NA
Background Sample	1-Sep-15	NA	0.84	<0.30	NA	7.89	NA	NA	NA	0.737 +/- 0.242	0.806 +/- 0.338
Most Conservative Sceening Level (1)	--	600/20,000(2)	4,690	125,000	NE	NE	NE	NE	7,820,000	30	30
Sample ID	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	pH units	mg/kg	mg/kg	mg/kg	pCi/g	pCi/g
HA01	11/11/2022	55	2.0	17	140	8.35	NA (4)	NA (4)	190	0.247 +/- 0.155	0.638 +/- 0.248
HA02	11/11/2022	14	3.1	6.0	150	8.64	NA (4)	NA (4)	210	0.695 +/- 0.237	0.550 +/- 0.296
HA03	11/11/2022	100	1.5	18	89	8.29	NA (4)	NA (4)	160	0.424 +/- 0.149	0.598 +/- 0.257
HA04	11/11/2022	82	1.6	20	170	8.47	NA (4)	NA (4)	210	0.863 +/- 0.239	0.696 +/- 0.309
HA05	11/11/2022	130	0.65	11	470	8.66	NA (4)	NA (4)	520	0.336 +/- 0.215	0.706 +/- 0.311
HA06	11/11/2022	32	1.2	5.4	150	8.73	NA (4)	NA (4)	180	0.426 +/- 0.142	0.684 +/- 0.243
HA07	11/11/2022	130	1.3	27	490	8.82	NA (4)	NA (4)	730	0.589 +/- 0.233	0.751 +/- 0.362
HA08	11/11/2022	120	1.7	11	180	8.41	NA (4)	NA (4)	310	0.433 +/- 0.155	0.573 +/- 0.250
HA09	11/11/2022	**940**	1.5	31	1,700	9.03	NA (4)	NA (4)	2,600	0.519 +/- 0.161	0.471 +/- 0.208
HA10	11/11/2022	400	1.5	31	1,100	9.60	NA (4)	NA (4)	2,000	0.497 +/- 0.148	0.568 +/- 0.240
HA11	11/11/2022	290	1.4	25	1,400	9.39	NA (4)	NA (4)	1,800	0.666 +/- 0.315	0.998 +/- 0.488
HA12	11/11/2022	520	1.4	25	1,600	9.22	NA (4)	NA (4)	2,200	0.828 +/- 0.179	0.936 +/- 0.232
HA13	11/11/2022	88	1.6	20	210	8.81	NA (4)	NA (4)	470	0.450 +/- 0.167	0.635 +/- 0.250
HA14	11/11/2022	160	1.7	34	380	8.12	NA (4)	NA (4)	440	0.694 +/- 0.256	0.692 +/- 0.362
HA15	11/11/2022	14	1.2	12	310	8.66	NA (4)	NA (4)	330	0.563 +/- 0.143	0.332 +/- 0.223
HA16	11/11/2022	34	1.1	13	130	8.71	NA (4)	NA (4)	250	1.12 +/- 0.210	0.709 +/- 0.238
HA17	11/11/2022	40	2.6	33	280	8.50	NA (4)	NA (4)	630	0.692 +/- 0.267	0.780 +/- 0.399
HA18	11/11/2022	140	1.5	24	230	8.31	NA (4)	NA (4)	420	0.541 +/- 0.152	0.581 +/- 0.239
HA19	11/11/2022	31	2.2	19	450	8.56	NA (4)	NA (4)	650	1.18 +/- 0.386	0.459 +/- 0.462
HA20	11/11/2022	12	2.1	20	260	8.77	NA (4)	NA (4)	490	0.518 +/- 0.168	0.666 +/- 0.224

Notes:

(1): A comparison of screening levels is presented in Table 7

(2): The lower cleanup standard is used for site reclamation within the top four feet of soil

(3): Based on Title 20, Chapter 3, Part 14, Subpart 1403 of the New Mexico Administrative Code

(4): NA = Not analyzed due to insufficient sample volumes for analysis

EPA: Environmental Protection Agency

mg/kg: Milligrams per kilogram

pCi/g: Picocuries per gram

***BOLD** indicates results exceed the higher of the background sample result, practical quantitation limit, or most conservative screening level*

ENSOLUM

TABLE 7
SOIL SCREENING LEVELS
Bisti Landfarm
Western Refining Southwest LLC
San Juan County, New Mexico

ANALYTE	CAS	UNITS	Site Background Concentration (27-Mar-98 and 1-Sept-15)	NMOCD Table 1 Closure Criteria (NMAC 19.15.29)	NMED Soil Screening Level, Direct Contact/Ingestion, Residential Cancer (1)	NMED Soil Screening Level, Direct Contact/Ingestion, Residential Non-Cancer (1)	NMED Soil Screening Level, Direct Contact/Ingestion, Industrial/ Occupational Cancer (1)	NMED Soil Screening Level, Direct Contact/Ingestion, Industrial/ Occupational Non-Cancer (1)	NMED Soil Screening Level, Direct Contact/Ingestion, Construction Worker Cancer (1)	NMED Soil Screening Level, Direct Contact/Ingestion, Construction Worker Non-Cancer (1)	EPA Soil Screening Level, Inhalation of Volatiles and Fugitive Dusts (2)	Most Conservative SSL
Petroleum Hydrocarbons by EPA Method 8015M/D or 418.1												
Gasoline Range Organics (GRO)	-	mg/kg	<5.0	NE	---	---	---	---	---	---	---	---
Diesel Range Organics (DRO)	-	mg/kg	<10	NE	---	---	---	---	---	---	---	---
Motor Oil Range Organics (MRO)	-	mg/kg	<50	NE	---	---	---	---	---	---	---	---
GRO+DRO	-	mg/kg	<15	1,000	---	---	---	---	---	---	---	1,000
Total TPH	-	mg/kg	<65	100/2,500 (3)	---	---	---	---	---	---	---	100/2,500 (3)
Volatile Organic Compounds by EPA Method 8260B												
benzene	71-43-2	mg/kg	<0.050	10	---	---	---	---	---	---	---	10
total benzene, toluene, ethylbenzene, and xylenes	-	mg/kg	<0.050	50	---	---	---	---	---	---	---	50
toluene	108-88-3	mg/kg	<0.050	NE	---	---	---	---	---	---	---	---
ethylbenzene	100-41-4	mg/kg	<0.050	NE	---	---	---	---	---	---	---	---
xylenes, total	1330-20-7	mg/kg	<0.095	NE	---	---	---	---	---	---	---	---
methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	<0.048	NE	975	37,800	4,820	178,000	24,200	33,100	2,310	975
1,2-dichloroethane (EDC)	107-06-2	mg/kg	<0.048	NE	8.32	55.6	40.7	286	195	53.8	21.6	8.32
1,2-dibromoethane (EDB)	106-93-4	mg/kg	<0.048	NE	0.672	135	3.31	738	16.3	140	1.8	0.672
naphthalene	91-20-3	mg/kg	<0.095	NE	22.6	162	108	843	633	159	167	22.6
1-methylnaphthalene	90-12-0	mg/kg	<0.19	NE	172	4,060	813	58,900	6,060	17,600	0.77	0.770
2-methylnaphthalene	91-57-6	mg/kg	<0.19	NE	NE	232	NE	3,370	NE	1,000	NE	232
bromodichloromethane	75-27-4	mg/kg	<0.048	NE	6.19	1,560	30.2	26,000	143	7,080	13.1	6.19
bromoform (tribromomethane)	75-25-2	mg/kg	<0.048	NE	674	1,230	1,760	18,300	23,700	5,380	1,080	674
bromomethane	74-83-9	mg/kg	<0.14	NE	NE	17.7	NE	94.5	NE	17.9	30.6	17.7
carbon tetrachloride (tetrachloromethane)	56-23-5	mg/kg	<0.048	NE	10.7	144	52.5	1,020	252	202	30.5	10.7
chlorobenzene (monochlorobenzene)	108-90-7	mg/kg	<0.048	NE	NE	378	NE	2,160	NE	412	1,410	378
chloroform (trichloromethane)	67-66-3	mg/kg	<0.048	NE	5.90	306	28.7	2,000	134	391	14	5.90
chloromethane	74-87-3	mg/kg	<0.14	NE	41.1	268	201	1,260	956	235	463.0	41.1
cis-1,2-dichloroethene (cis-1,2-DCE)	156-59-2	mg/kg	<0.048	NE	NE	156	NE	2,600	NE	708	438	156
cis-1,3-dichloropropene	542-75-6	mg/kg	<0.048	NE	29.3	141	146	695	781	130	109	29.3
1,2-dichlorobenzene	95-50-1	mg/kg	<0.048	NE	NE	2,150	NE	13,000	NE	2,500	10,200	2,150
1,4-dichlorobenzene	106-46-7	mg/kg	<0.048	NE	1,290	548	6,730	90,800	45,900	24,800	116	116
dichlorodifluoromethane	75-71-8	mg/kg	<0.048	NE	NE	182	NE	865	NE	161	368	161
1,1-dichloroethane	75-34-3	mg/kg	<0.048	NE	78.6	15,600	383	260,000	1,820	70,800	160	78.6
1,1-dichloroethene	75-35-4	mg/kg	<0.048	NE	NE	440	NE	2,260	NE	424	NE	424
1,2-dichloropropane	78-87-5	mg/kg	<0.048	NE	17.8	29.0	86.8	137	415.0	25.4	66	17.8
1,1-dichloropropene	536-58-6	mg/kg	<0.095	NE	NE	NE	NE	NE	NE	NE	NE	NE
hexachlorobutadiene	87-68-3	mg/kg	<0.095	NE	68.3	61.6	52.1	916	2,400	269	60	52.1
methylene chloride (dichloromethane)	75-09-2	mg/kg	<0.14	NE	766	409	14,400	5,130	89,600	1,210	5,760	409
styrene	100-42-5	mg/kg	<0.048	NE	NE	7,260	NE	51,300	NE	10,200	40,900	7,260
1,1,2,2-tetrachloroethane	79-34-5	mg/kg	<0.048	NE	7.98	1,560	39.4	26,000	197	7,080	32	7.98
tetrachloroethene (PCE)	127-18-4	mg/kg	<0.048	NE	337	111	1,650	629	7,910	120	411.0	111
trans-1,2-dichloroethene (trans-1,2-DCE)	156-60-5	mg/kg	<0.048	NE	NE	210	NE	1,100	NE	206	306	206
trans-1,3-dichloropropene	10061-02-6	mg/kg	<0.048	NE	NE	NE	NE	NE	NE	NE	NE	NE

TABLE 7
SOIL SCREENING LEVELS
Bisti Landfarm
Western Refining Southwest LLC
San Juan County, New Mexico

ANALYTE	CAS	UNITS	Site Background Concentration (27-Mar-98 and 1-Sept-15)	NMOCD Table 1 Closure Criteria (NMAC 19.15.29)	NMED Soil Screening Level, Direct Contact/Ingestion, Residential Cancer (1)	NMED Soil Screening Level, Direct Contact/Ingestion, Residential Non-Cancer (1)	NMED Soil Screening Level, Direct Contact/Ingestion, Industrial/ Occupational Cancer (1)	NMED Soil Screening Level, Direct Contact/Ingestion, Industrial/ Occupational Non-Cancer (1)	NMED Soil Screening Level, Direct Contact/Ingestion, Construction Worker Cancer (1)	NMED Soil Screening Level, Direct Contact/Ingestion, Construction Worker Non-Cancer (1)	EPA Soil Screening Level, Inhalation of Volatiles and Fugitive Dusts (2)	Most Conservative SSL
1,2,4-trichlorobenzene	120-82-1	mg/kg	<0.048	NE	240	82.9	1,250	423	8,540	79.1	262.0	79.1
1,1,1-trichloroethane	71-55-6	mg/kg	<0.048	NE	NE	14,400	NE	72,500	NE	13,600	36,100	13,600
1,1,2-trichloroethane	79-00-5	mg/kg	<0.048	NE	18.8	2.61	92.1	12.4	4,300	2.30	6.3	2.30
trichloroethene (TCE)	79-01-6	mg/kg	<0.048	NE	15.5	6.77	112	36.5	5,370	6.90	19	6.77
trichlorofluoromethane	75-69-4	mg/kg	<0.048	NE	NE	1,230	NE	6,030	NE	1,130	NE	1,130
vinyl chloride (chloroethene)	75-01-4	mg/kg	<0.048	NE	0.742	113	28.4	816	161	162	26.6	0.742
Polycyclic Aromatic Hydrocarbons by EPA Method 8270												
Benzo(a)pyrene	50-32-8	mg/kg	<0.0099	NE	1.12	17.4	23.6	251	173	15.00	11,900	1.12
Naphthalene	91-20-3	mg/kg	<0.25	NE	22.6	162	108	843	633	159	167	22.6
1-Methylnaphthalene	90-12-0	mg/kg	<0.25	NE	172	4,060	813	58,900	6,060	17,600	0.8	0.770
2-Methylnaphthalene	91-57-6	mg/kg	<0.25	NE	NE	232.0	NE	3,370	NE	1,000	NE	232
Total Phenol by Method 9066												
Total Phenol	108-95-2	mg/kg	<0.67	NE	NE	18,500	NE	275,000	NE	77,400.0	1,190,000,000	18,500
Metals by EPA Method 6010/6020												
Arsenic	7440-38-2	mg/kg	2.8	NE	7.07	13	35.9	208	216	41.2	8,880	7.07
Barium	7440-39-3	mg/kg	180	NE	NE	15,600	NE	25,500	NE	4,390	709,000	4,390
Cadmium	7440-43-9	mg/kg	<1.3	NE	85,900	70.5	417,000	1,110	3,610	72.1	14,200	70.5
Calcium	-	mg/kg	2,500	NE	NE	13,000,000	NE	32,400,000	NE	8,840,000	NE	8,840,000
Chromium (total)	-	mg/kg	<5.0	NE	97	45,200	505	314,000	468	134	14,200	96.6
Copper	7440-50-8	mg/kg	3.2	NE	NE	3,130	NE	51,900	NE	14,200	NE	3,130
Iron (4)	7439-89-6	mg/kg	7,200	NE	NE	54,800	NE	908,000	NE	248,000	NE	54,800
Lead	7439-92-1	mg/kg	6.8	NE	NE	400	NE	800	NE	800	NE	400
Magnesium	-	mg/kg	1,300	NE	NE	15,600,000	NE	5,670,000	NE	1,540,000	NE	1,540,000
Manganese	7439-96-5	mg/kg	150	NE	NE	10,500	NE	160,000	NE	464	70,900	464
Mercury	7439-97-6	mg/kg	<0.5	NE	NE	23.8	NE	112	NE	20.7	10.9	10.9
Potassium	-	mg/kg	810	NE	NE	15,600,000	NE	76,200,000	NE	20,700,000	NE	15,600,000
Selenium	7782-49-2	mg/kg	<2.5	NE	NE	391	NE	6,490	NE	1,750	28,400,000	391
Silver	7440-22-4	mg/kg	<1.3	NE	NE	391	NE	6,490	NE	1,770	NE	391
Uranium	-	mg/kg	<4.9	NE	NE	234	NE	3,880	NE	277	56,700	234
Zinc	7440-66-6	mg/kg	14	NE	NE	23,500	NE	389,000	NE	106,000	NE	23,500
Polychlorinated Biphenyls by EPA Method 8082												
Aroclor 1016	12674-11-2	mg/kg	<0.020	NE	69.6	3.98	304	57.4	2,440	17.2	3,590	3.98
Aroclor 1221	11104-28-2	mg/kg	<0.020	NE	1.81	NE	8.57	NE	55.3	NE	43.7	1.81
Aroclor 1232	11141-16-5	mg/kg	<0.020	NE	1.86	NE	8.82	NE	57.6	NE	24	1.86
Aroclor 1242	53469-21-9	mg/kg	<0.020	NE	2.43	NE	10.9	NE	85.3	NE	127	2.43
Aroclor 1248	12672-29-6	mg/kg	<0.020	NE	2.43	NE	10.7	NE	85.3	NE	110	2.43
Aroclor 1254	11097-69-1	mg/kg	<0.020	NE	2.43	1.14	10.1	16.4	85.3	4.91	181	1.14
Aroclor 1260	11096-82-5	mg/kg	<0.020	NE	2.43	NE	11.1	NE	85.3	NE	282.0	2.43
Cyanide by Method 9012B												
Cyanide	57-12-5	mg/kg	<0.25	NE	NE	11.2	NE	63.3	NE	12.1	187	11.2

TABLE 7
SOIL SCREENING LEVELS
Bisti Landfarm
Western Refining Southwest LLC
San Juan County, New Mexico

ANALYTE	CAS	UNITS	Site Background Concentration (27-Mar-98 and 1-Sept-15)	NMOCD Table 1 Closure Criteria (NMAC 19.15.29)	NMED Soil Screening Level, Direct Contact/Ingestion, Residential Cancer (1)	NMED Soil Screening Level, Direct Contact/Ingestion, Residential Non-Cancer (1)	NMED Soil Screening Level, Direct Contact/Ingestion, Industrial/ Occupational Cancer (1)	NMED Soil Screening Level, Direct Contact/Ingestion, Industrial/ Occupational Non-Cancer (1)	NMED Soil Screening Level, Direct Contact/Ingestion, Construction Worker Cancer (1)	NMED Soil Screening Level, Direct Contact/Ingestion, Construction Worker Non-Cancer (1)	EPA Soil Screening Level, Inhalation of Volatiles and Fugitive Dusts (2)	Most Conservative SSL
Anions by EPA Method 300.0												
Chloride	-	mg/kg	<50	600/20,000 (3)	NE	11,900,000	NE	58,400,000	NE	15,900,000	NE	600/20,000 (3)
Fluoride	7782-41-4	mg/kg	0.84	NE	NE	4,690	NE	77,800	NE	18,100	77,400,000	4,690
Nitrogen, Nitrate (As N)	14797-55-8	mg/kg	<0.30	NE	NE	125,000	NE	2,070,000	NE	566,303	NE	125,000
Sodium	-	mg/kg	90	NE	NE	7,820,000	NE	37,300,000	NE	10,100,000	NE	7,820,000
Sulfate (5)	-	mg/kg	140	NE	NE	NE	NE	NE	NE	NE	NE	NE
pH by Method SM4500-H+B												
pH		pH units	7.89	NE	NE	NE	NE	NE	NE	NE	NE	NE
Radiochemistry by EPA Method 901.1												
Radium-226		pCi/g	0.737 +/- 0.242	NE	NE	NE	NE	NE	NE	NE	NE	NE
Radium-228		pCi/g	0.806 +/- 0.338	NE	NE	NE	NE	NE	NE	NE	NE	NE
General Chemistry												
Total Alkalinity (carbonate/bicarbonate) (3)		mg/kg	136	NE	NE	NE	NE	NE	NE	NE	NE	NE

Notes:

(1): Soil screening levels are based on the "NMED Risk Assessment Guidance for Site Investigations and Remediation, Volume I - Soil Screening Guidance for Human Health Risk Assessments" (November 2022)

(2): United Stated EPA regional screening level for inhalation by composite worker of fugitive dust using the EPA online "Regional Screening Level Calculator"

(3): the lower cleanup standard is used for site reclamation within the top four feet of soil

(4): Lead soil screening level based on Section 5.2 of the EPA online resource "Regional Screening Levels (RSLs) - User's Guide" dated November 2022

(5): Sulfate is a general chemistry soil parameter, not chemical. There are no soil screening levels for these parameters included in the EPA Regional Screening Levels (RSLs) or the NMED risk assessment guidance document.

BTEX: benzene, toluene, ethlybenzene, total xylenes

DRO: diesel range organics

GRO: gasoline range organics

mg/kg: milligrams per kilogram

NE: Not Established

NMAC: New Mexico Administrative Code

NMED: New Mexico Environment Department

NMOCD: New Mexico Oil and Gas Conservation Division

PQL: Practical quantitation limit

TPH: Total Petroleum Hydrocarbons

<: Indicates background result is less than the stated laboratory method practical quantitation limit

---: Constituent soil screening level based on the NMOCD Table I Closure Criteria, other screening levels are not presented

ENSOLUM

APPENDIX A

Laboratory Analytical Reports

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 15, 2022

Stuart Hyde
ENSOLUM
606 S. Rio Grande Suite A
Aztec, NM 87410
TEL: (903) 821-5603
FAX:

RE: Bisti LF OrderNo.: 2211751

Dear Stuart Hyde:

Hall Environmental Analysis Laboratory received 20 sample(s) on 11/12/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA1
Project: Bisti LF **Collection Date:** 11/11/2022 11:10:00 AM
Lab ID: 2211751-001 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8082A: PCB'S								Analyst: **SB**
12674-11-2	Aroclor 1016	ND	0.013	0.016		mg/Kg	1	11/29/2022 3:42:16 PM
11104-28-2	Aroclor 1221	ND	0.0042	0.016		mg/Kg	1	11/29/2022 3:42:16 PM
11141-16-5	Aroclor 1232	ND	0.016	0.016		mg/Kg	1	11/29/2022 3:42:16 PM
53469-21-9	Aroclor 1242	ND	0.0086	0.016		mg/Kg	1	11/29/2022 3:42:16 PM
12672-29-6	Aroclor 1248	ND	0.0097	0.016		mg/Kg	1	11/29/2022 3:42:16 PM
11097-69-1	Aroclor 1254	ND	0.0042	0.016		mg/Kg	1	11/29/2022 3:42:16 PM
11096-82-5	Aroclor 1260	ND	0.015	0.016		mg/Kg	1	11/29/2022 3:42:16 PM
2051-24-3	Surr: Decachlorobiphenyl	89.2	0	17.2-115		%Rec	1	11/29/2022 3:42:16 PM
877-09-8	Surr: Tetrachloro-m-xylene	89.2	0	15-110		%Rec	1	11/29/2022 3:42:16 PM
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS								Analyst: **DGH**
TPH-DRO	Diesel Range Organics (DRO)	ND	12	15		mg/Kg	1	11/21/2022 4:25:23 PM
TPH-MRO	Motor Oil Range Organics (MRO)	ND	28	51		mg/Kg	1	11/21/2022 4:25:23 PM
117-84-0	Surr: DNOP	111	0	21-129		%Rec	1	11/21/2022 4:25:23 PM
EPA METHOD 8015D: GASOLINE RANGE								Analyst: **CCM**
TPH-GRO	Gasoline Range Organics (GRO)	ND	1.5	5.0		mg/Kg	1	11/21/2022 7:32:00 PM
460-00-4	Surr: BFB	118	0	37.7-212		%Rec	1	11/21/2022 7:32:00 PM
EPA METHOD 300.0: ANIONS								Analyst: **JMT**
16984-48-8	Fluoride	2.0	0.30	0.30		mg/Kg	1	11/22/2022 8:01:19 PM
16887-00-6	Chloride	55	1.5	1.5		mg/Kg	1	11/22/2022 8:01:19 PM
7727-37-9	Nitrogen, Nitrate (As N)	17	0.30	0.30		mg/Kg	1	11/22/2022 8:01:19 PM
14808-79-8	Sulfate	140	30	30		mg/Kg	20	11/23/2022 9:44:51 AM
EPA METHOD 6020A: TOTAL METALS								Analyst: **ELS**
7440-38-2	Arsenic	2.1	0.25	0.49		mg/Kg	5	11/20/2022 12:58:46 PM
7440-61-1	Uranium	0.29	0.25	0.49	J	mg/Kg	5	11/21/2022 1:17:06 PM
EPA METHOD 7471B: MERCURY								Analyst: **VP**
7439-97-6	Mercury	ND	0.033	0.033		mg/Kg	1	11/30/2022 4:15:50 PM
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-39-3	Barium	44	0.19	0.20		mg/Kg	2	11/22/2022 10:33:32 AM
7440-43-9	Cadmium	ND	0.19	0.20		mg/Kg	2	11/22/2022 10:33:32 AM
7440-70-2	Calcium	2700	44	99		mg/Kg	2	11/22/2022 10:33:32 AM
7440-47-3	Chromium	2.3	0.45	0.59		mg/Kg	2	11/22/2022 10:33:32 AM
7440-50-8	Copper	2.2	2.0	4.0	J	mg/Kg	2	11/22/2022 10:33:32 AM
7439-89-6	Iron	5700	280	490		mg/Kg	50	12/2/2022 10:06:09 AM
7439-92-1	Lead	1.8	1.1	2.0	J	mg/Kg	2	11/22/2022 10:33:32 AM
7439-95-4	Magnesium	1100	11	99		mg/Kg	2	11/22/2022 10:33:32 AM
7439-96-5	Manganese	110	0.33	0.40		mg/Kg	2	11/22/2022 10:33:32 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA1
Project: Bisti LF **Collection Date:** 11/11/2022 11:10:00 AM
Lab ID: 2211751-001 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-09-7	Potassium	860	55	99		mg/Kg	2	11/22/2022 10:33:32 AM
7782-49-2	Selenium	ND	4.3	4.9		mg/Kg	2	11/22/2022 12:49:39 PM
7440-22-4	Silver	ND	0.74	0.99		mg/Kg	2	11/22/2022 12:49:39 PM
7440-23-5	Sodium	190	44	99		mg/Kg	2	11/22/2022 10:33:32 AM
7440-66-6	Zinc	10	4.7	4.9		mg/Kg	2	11/22/2022 10:33:32 AM
SW8270C								Analyst: **DAM**
91-20-3	Naphthalene	ND	0.0026	0.0096		mg/Kg	1	12/2/2022 2:57:00 PM
90-12-0	1-Methylnaphthalene	ND	0.0027	0.0096		mg/Kg	1	12/2/2022 2:57:00 PM
91-57-6	2-Methylnaphthalene	ND	0.0031	0.0096		mg/Kg	1	12/2/2022 2:57:00 PM
50-32-8	Benzo(a)pyrene	ND	0.0080	0.019		mg/Kg	1	12/2/2022 2:57:00 PM
4165-60-0	Surr: Nitrobenzene-d5	79.5	0	15-137		%Rec	1	12/2/2022 2:57:00 PM
321-60-8	Surr: 2-Fluorobiphenyl	81.5	0	15-121		%Rec	1	12/2/2022 2:57:00 PM
1718-51-0	Surr: 4-Terphenyl-d14	105	0	15.7-126		%Rec	1	12/2/2022 2:57:00 PM
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
71-43-2	Benzene	ND	0.0096	0.025		mg/Kg	1	11/18/2022 1:50:06 PM
108-88-3	Toluene	ND	0.0064	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
100-41-4	Ethylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	0.028	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
95-63-6	1,2,4-Trimethylbenzene	ND	0.0070	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
108-67-8	1,3,5-Trimethylbenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	0.011	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	0.020	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
91-20-3	Naphthalene	ND	0.018	0.099		mg/Kg	1	11/18/2022 1:50:06 PM
90-12-0	1-Methylnaphthalene	ND	0.057	0.20		mg/Kg	1	11/18/2022 1:50:06 PM
91-57-6	2-Methylnaphthalene	ND	0.046	0.20		mg/Kg	1	11/18/2022 1:50:06 PM
67-64-1	Acetone	ND	0.16	0.74		mg/Kg	1	11/18/2022 1:50:06 PM
108-86-1	Bromobenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
75-27-4	Bromodichloromethane	ND	0.0063	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
75-25-2	Bromoform	ND	0.012	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
74-83-9	Bromomethane	ND	0.082	0.15		mg/Kg	1	11/18/2022 1:50:06 PM
78-93-3	2-Butanone	ND	0.22	0.50		mg/Kg	1	11/18/2022 1:50:06 PM
75-15-0	Carbon disulfide	ND	0.020	0.50		mg/Kg	1	11/18/2022 1:50:06 PM
56-23-5	Carbon tetrachloride	ND	0.0055	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
108-90-7	Chlorobenzene	ND	0.0089	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
75-00-3	Chloroethane	ND	0.019	0.099		mg/Kg	1	11/18/2022 1:50:06 PM
67-66-3	Chloroform	ND	0.0070	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
74-87-3	Chloromethane	ND	0.017	0.15		mg/Kg	1	11/18/2022 1:50:06 PM
95-49-8	2-Chlorotoluene	ND	0.0067	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
106-43-4	4-Chlorotoluene	ND	0.026	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
156-59-2	cis-1,2-DCE	ND	0.025	0.050		mg/Kg	1	11/18/2022 1:50:06 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA1
Project: Bisti LF **Collection Date:** 11/11/2022 11:10:00 AM
Lab ID: 2211751-001 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
10061-01-5	cis-1,3-Dichloropropene	ND	0.0074	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.021	0.099		mg/Kg	1	11/18/2022 1:50:06 PM
124-48-1	Dibromochloromethane	ND	0.0080	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
74-95-3	Dibromomethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
95-50-1	1,2-Dichlorobenzene	ND	0.010	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
541-73-1	1,3-Dichlorobenzene	ND	0.0094	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
106-46-7	1,4-Dichlorobenzene	ND	0.013	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
75-71-8	Dichlorodifluoromethane	ND	0.019	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
75-34-3	1,1-Dichloroethane	ND	0.014	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
75-35-4	1,1-Dichloroethene	ND	0.011	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
78-87-5	1,2-Dichloropropane	ND	0.0097	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
142-28-9	1,3-Dichloropropane	ND	0.011	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
594-20-7	2,2-Dichloropropane	ND	0.0071	0.099		mg/Kg	1	11/18/2022 1:50:06 PM
563-58-6	1,1-Dichloropropene	ND	0.0060	0.099		mg/Kg	1	11/18/2022 1:50:06 PM
87-68-3	Hexachlorobutadiene	ND	0.034	0.099		mg/Kg	1	11/18/2022 1:50:06 PM
591-78-6	2-Hexanone	ND	0.022	0.50		mg/Kg	1	11/18/2022 1:50:06 PM
98-82-8	Isopropylbenzene	ND	0.0092	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
99-87-6	4-Isopropyltoluene	ND	0.013	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
108-10-1	4-Methyl-2-pentanone	ND	0.058	0.50		mg/Kg	1	11/18/2022 1:50:06 PM
75-09-2	Methylene chloride	ND	0.036	0.15		mg/Kg	1	11/18/2022 1:50:06 PM
104-51-8	n-Butylbenzene	ND	0.013	0.15		mg/Kg	1	11/18/2022 1:50:06 PM
103-65-1	n-Propylbenzene	ND	0.0080	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
135-98-8	sec-Butylbenzene	ND	0.041	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
100-42-5	Styrene	ND	0.0068	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
98-06-6	tert-Butylbenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0073	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.016	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
127-18-4	Tetrachloroethene (PCE)	ND	0.014	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
156-60-5	trans-1,2-DCE	ND	0.0096	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
10061-02-6	trans-1,3-Dichloropropene	ND	0.012	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
87-61-6	1,2,3-Trichlorobenzene	ND	0.0077	0.099		mg/Kg	1	11/18/2022 1:50:06 PM
120-82-1	1,2,4-Trichlorobenzene	ND	0.017	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
71-55-6	1,1,1-Trichloroethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
79-00-5	1,1,2-Trichloroethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
79-01-6	Trichloroethene (TCE)	ND	0.0097	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
75-69-4	Trichlorofluoromethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
96-18-4	1,2,3-Trichloropropane	ND	0.021	0.099		mg/Kg	1	11/18/2022 1:50:06 PM
75-01-4	Vinyl chloride	ND	0.0095	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
1330-20-7	Xylenes, Total	ND	0.026	0.050		mg/Kg	1	11/18/2022 1:50:06 PM
1868-53-7	Surr: Dibromofluoromethane	114		70-130		%Rec	1	11/18/2022 1:50:06 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	101		70-130		%Rec	1	11/18/2022 1:50:06 PM
2037-26-5	Surr: Toluene-d8	112		70-130		%Rec	1	11/18/2022 1:50:06 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA1
Project: Bisti LF **Collection Date:** 11/11/2022 11:10:00 AM
Lab ID: 2211751-001 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
460-00-4	Surr: 4-Bromofluorobenzene	97.1		70-130		%Rec	1	11/18/2022 1:50:06 PM
SM4500H+B/EPA 9040C								Analyst: **SNS**
pH	pH	8.35				pH Units	1	11/28/2022 4:12:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA2
Project: Bisti LF **Collection Date:** 11/11/2022 11:15:00 AM
Lab ID: 2211751-002 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8082A: PCB'S								Analyst: **SB**
12674-11-2	Aroclor 1016	ND	0.013	0.016		mg/Kg	1	11/29/2022 4:19:26 PM
11104-28-2	Aroclor 1221	ND	0.0042	0.016		mg/Kg	1	11/29/2022 4:19:26 PM
11141-16-5	Aroclor 1232	ND	0.016	0.016		mg/Kg	1	11/29/2022 4:19:26 PM
53469-21-9	Aroclor 1242	ND	0.0085	0.016		mg/Kg	1	11/29/2022 4:19:26 PM
12672-29-6	Aroclor 1248	ND	0.0095	0.016		mg/Kg	1	11/29/2022 4:19:26 PM
11097-69-1	Aroclor 1254	ND	0.0042	0.016		mg/Kg	1	11/29/2022 4:19:26 PM
11096-82-5	Aroclor 1260	ND	0.015	0.016		mg/Kg	1	11/29/2022 4:19:26 PM
2051-24-3	Surr: Decachlorobiphenyl	88.0	0	17.2-115		%Rec	1	11/29/2022 4:19:26 PM
877-09-8	Surr: Tetrachloro-m-xylene	87.6	0	15-110		%Rec	1	11/29/2022 4:19:26 PM
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS								Analyst: **DGH**
TPH-DRO	Diesel Range Organics (DRO)	ND	11	14		mg/Kg	1	11/21/2022 4:36:10 PM
TPH-MRO	Motor Oil Range Organics (MRO)	ND	26	47		mg/Kg	1	11/21/2022 4:36:10 PM
117-84-0	Surr: DNOP	111	0	21-129		%Rec	1	11/21/2022 4:36:10 PM
EPA METHOD 8015D: GASOLINE RANGE								Analyst: **CCM**
TPH-GRO	Gasoline Range Organics (GRO)	ND	1.5	5.0		mg/Kg	1	11/21/2022 8:11:00 PM
460-00-4	Surr: BFB	117	0	37.7-212		%Rec	1	11/21/2022 8:11:00 PM
EPA METHOD 300.0: ANIONS								Analyst: **JMT**
16984-48-8	Fluoride	3.1	0.30	0.30		mg/Kg	1	11/22/2022 8:38:21 PM
16887-00-6	Chloride	14	1.5	1.5		mg/Kg	1	11/22/2022 8:38:21 PM
7727-37-9	Nitrogen, Nitrate (As N)	6.0	0.30	0.30		mg/Kg	1	11/22/2022 8:38:21 PM
14808-79-8	Sulfate	150	1.5	1.5		mg/Kg	1	11/22/2022 8:38:21 PM
EPA METHOD 6020A: TOTAL METALS								Analyst: **ELS**
7440-38-2	Arsenic	1.8	0.25	0.50		mg/Kg	5	11/20/2022 1:02:55 PM
7440-61-1	Uranium	0.35	0.25	0.50	J	mg/Kg	5	11/21/2022 1:29:35 PM
EPA METHOD 7471B: MERCURY								Analyst: **VP**
7439-97-6	Mercury	ND	0.033	0.033		mg/Kg	1	11/30/2022 4:17:59 PM
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-39-3	Barium	73	0.19	0.20		mg/Kg	2	11/22/2022 10:43:45 AM
7440-43-9	Cadmium	ND	0.19	0.20		mg/Kg	2	11/22/2022 10:43:45 AM
7440-70-2	Calcium	1700	45	99		mg/Kg	2	11/22/2022 10:43:45 AM
7440-47-3	Chromium	2.6	0.45	0.60		mg/Kg	2	11/22/2022 10:43:45 AM
7440-50-8	Copper	2.3	2.0	4.0	J	mg/Kg	2	11/22/2022 10:43:45 AM
7439-89-6	Iron	5800	290	500		mg/Kg	50	12/2/2022 10:07:36 AM
7439-92-1	Lead	2.3	1.1	2.0		mg/Kg	2	11/22/2022 10:43:45 AM
7439-95-4	Magnesium	1100	11	99		mg/Kg	2	11/22/2022 10:43:45 AM
7439-96-5	Manganese	110	0.33	0.40		mg/Kg	2	11/22/2022 10:43:45 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA2
Project: Bisti LF **Collection Date:** 11/11/2022 11:15:00 AM
Lab ID: 2211751-002 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-09-7	Potassium	950	56	99		mg/Kg	2	11/22/2022 10:43:45 AM
7782-49-2	Selenium	ND	4.4	5.0		mg/Kg	2	11/22/2022 12:50:55 PM
7440-22-4	Silver	ND	0.74	0.99		mg/Kg	2	11/22/2022 12:50:55 PM
7440-23-5	Sodium	210	44	99		mg/Kg	2	11/22/2022 10:43:45 AM
7440-66-6	Zinc	11	4.7	5.0		mg/Kg	2	11/22/2022 10:43:45 AM
SW8270C								Analyst: **DAM**
91-20-3	Naphthalene	ND	0.0027	0.0099		mg/Kg	1	12/2/2022 3:43:00 PM
90-12-0	1-Methylnaphthalene	ND	0.0028	0.0099		mg/Kg	1	12/2/2022 3:43:00 PM
91-57-6	2-Methylnaphthalene	ND	0.0031	0.0099		mg/Kg	1	12/2/2022 3:43:00 PM
50-32-8	Benzo(a)pyrene	ND	0.0083	0.020		mg/Kg	1	12/2/2022 3:43:00 PM
4165-60-0	Surr: Nitrobenzene-d5	93.5	0	15-137		%Rec	1	12/2/2022 3:43:00 PM
321-60-8	Surr: 2-Fluorobiphenyl	93.0	0	15-121		%Rec	1	12/2/2022 3:43:00 PM
1718-51-0	Surr: 4-Terphenyl-d14	116	0	35.7-126		%Rec	1	12/2/2022 3:43:00 PM
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
71-43-2	Benzene	ND	0.0096	0.025		mg/Kg	1	11/18/2022 2:44:35 PM
108-88-3	Toluene	ND	0.0064	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
100-41-4	Ethylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	0.028	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
95-63-6	1,2,4-Trimethylbenzene	ND	0.0070	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
108-67-8	1,3,5-Trimethylbenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	0.011	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	0.020	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
91-20-3	Naphthalene	ND	0.019	0.10		mg/Kg	1	11/18/2022 2:44:35 PM
90-12-0	1-Methylnaphthalene	ND	0.057	0.20		mg/Kg	1	11/18/2022 2:44:35 PM
91-57-6	2-Methylnaphthalene	ND	0.046	0.20		mg/Kg	1	11/18/2022 2:44:35 PM
67-64-1	Acetone	ND	0.16	0.75		mg/Kg	1	11/18/2022 2:44:35 PM
108-86-1	Bromobenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
75-27-4	Bromodichloromethane	ND	0.0063	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
75-25-2	Bromoform	ND	0.012	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
74-83-9	Bromomethane	ND	0.083	0.15		mg/Kg	1	11/18/2022 2:44:35 PM
78-93-3	2-Butanone	ND	0.22	0.50		mg/Kg	1	11/18/2022 2:44:35 PM
75-15-0	Carbon disulfide	ND	0.021	0.50		mg/Kg	1	11/18/2022 2:44:35 PM
56-23-5	Carbon tetrachloride	ND	0.0056	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
108-90-7	Chlorobenzene	ND	0.0090	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
75-00-3	Chloroethane	ND	0.019	0.10		mg/Kg	1	11/18/2022 2:44:35 PM
67-66-3	Chloroform	ND	0.0071	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
74-87-3	Chloromethane	ND	0.017	0.15		mg/Kg	1	11/18/2022 2:44:35 PM
95-49-8	2-Chlorotoluene	ND	0.0067	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
106-43-4	4-Chlorotoluene	ND	0.026	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
156-59-2	cis-1,2-DCE	ND	0.025	0.050		mg/Kg	1	11/18/2022 2:44:35 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA2
Project: Bisti LF **Collection Date:** 11/11/2022 11:15:00 AM
Lab ID: 2211751-002 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
10061-01-5	cis-1,3-Dichloropropene	ND	0.0074	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.022	0.10		mg/Kg	1	11/18/2022 2:44:35 PM
124-48-1	Dibromochloromethane	ND	0.0080	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
74-95-3	Dibromomethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
95-50-1	1,2-Dichlorobenzene	ND	0.010	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
541-73-1	1,3-Dichlorobenzene	ND	0.0094	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
106-46-7	1,4-Dichlorobenzene	ND	0.013	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
75-71-8	Dichlorodifluoromethane	ND	0.019	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
75-34-3	1,1-Dichloroethane	ND	0.015	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
75-35-4	1,1-Dichloroethene	ND	0.011	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
78-87-5	1,2-Dichloropropane	ND	0.0097	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
142-28-9	1,3-Dichloropropane	ND	0.011	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
594-20-7	2,2-Dichloropropane	ND	0.0071	0.10		mg/Kg	1	11/18/2022 2:44:35 PM
563-58-6	1,1-Dichloropropene	ND	0.0060	0.10		mg/Kg	1	11/18/2022 2:44:35 PM
87-68-3	Hexachlorobutadiene	ND	0.034	0.10		mg/Kg	1	11/18/2022 2:44:35 PM
591-78-6	2-Hexanone	ND	0.022	0.50		mg/Kg	1	11/18/2022 2:44:35 PM
98-82-8	Isopropylbenzene	ND	0.0092	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
99-87-6	4-Isopropyltoluene	ND	0.013	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
108-10-1	4-Methyl-2-pentanone	ND	0.058	0.50		mg/Kg	1	11/18/2022 2:44:35 PM
75-09-2	Methylene chloride	ND	0.036	0.15		mg/Kg	1	11/18/2022 2:44:35 PM
104-51-8	n-Butylbenzene	ND	0.013	0.15		mg/Kg	1	11/18/2022 2:44:35 PM
103-65-1	n-Propylbenzene	ND	0.0080	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
135-98-8	sec-Butylbenzene	ND	0.041	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
100-42-5	Styrene	ND	0.0068	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
98-06-6	tert-Butylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0073	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.016	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
127-18-4	Tetrachloroethene (PCE)	ND	0.014	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
156-60-5	trans-1,2-DCE	ND	0.0096	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
10061-02-6	trans-1,3-Dichloropropene	ND	0.012	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
87-61-6	1,2,3-Trichlorobenzene	ND	0.0077	0.10		mg/Kg	1	11/18/2022 2:44:35 PM
120-82-1	1,2,4-Trichlorobenzene	ND	0.017	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
71-55-6	1,1,1-Trichloroethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
79-00-5	1,1,2-Trichloroethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
79-01-6	Trichloroethene (TCE)	ND	0.0098	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
75-69-4	Trichlorofluoromethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
96-18-4	1,2,3-Trichloropropane	ND	0.021	0.10		mg/Kg	1	11/18/2022 2:44:35 PM
75-01-4	Vinyl chloride	ND	0.0095	0.050		mg/Kg	1	11/18/2022 2:44:35 PM
1330-20-7	Xylenes, Total	ND	0.026	0.10		mg/Kg	1	11/18/2022 2:44:35 PM
1868-53-7	Surr: Dibromofluoromethane	109		70-130		%Rec	1	11/18/2022 2:44:35 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	97.7		70-130		%Rec	1	11/18/2022 2:44:35 PM
2037-26-5	Surr: Toluene-d8	111		70-130		%Rec	1	11/18/2022 2:44:35 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA2
Project: Bisti LF **Collection Date:** 11/11/2022 11:15:00 AM
Lab ID: 2211751-002 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
460-00-4	Surr: 4-Bromofluorobenzene	94.6		70-130		%Rec	1	11/18/2022 2:44:35 PM
SM4500H+B/EPA 9040C								Analyst: **SNS**
pH	pH	8.64				pH Units	1	11/28/2022 4:12:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA3
Project: Bisti LF **Collection Date:** 11/11/2022 11:17:00 AM
Lab ID: 2211751-003 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8082A: PCB'S								Analyst: **SB**
12674-11-2	Aroclor 1016	ND	0.014	0.017		mg/Kg	1	11/29/2022 4:56:34 PM
11104-28-2	Aroclor 1221	ND	0.0043	0.017		mg/Kg	1	11/29/2022 4:56:34 PM
11141-16-5	Aroclor 1232	ND	0.016	0.017		mg/Kg	1	11/29/2022 4:56:34 PM
53469-21-9	Aroclor 1242	ND	0.0088	0.017		mg/Kg	1	11/29/2022 4:56:34 PM
12672-29-6	Aroclor 1248	ND	0.0098	0.017		mg/Kg	1	11/29/2022 4:56:34 PM
11097-69-1	Aroclor 1254	ND	0.0043	0.017		mg/Kg	1	11/29/2022 4:56:34 PM
11096-82-5	Aroclor 1260	ND	0.015	0.017		mg/Kg	1	11/29/2022 4:56:34 PM
2051-24-3	Surr: Decachlorobiphenyl	82.0	0	17.2-115		%Rec	1	11/29/2022 4:56:34 PM
877-09-8	Surr: Tetrachloro-m-xylene	86.4	0	15-110		%Rec	1	11/29/2022 4:56:34 PM
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS								Analyst: **DGH**
TPH-DRO	Diesel Range Organics (DRO)	ND	9.9	13		mg/Kg	1	11/21/2022 4:46:53 PM
TPH-MRO	Motor Oil Range Organics (MRO)	ND	24	43		mg/Kg	1	11/21/2022 4:46:53 PM
117-84-0	Surr: DNOP	110	0	21-129		%Rec	1	11/21/2022 4:46:53 PM
EPA METHOD 8015D: GASOLINE RANGE								Analyst: **CCM**
TPH-GRO	Gasoline Range Organics (GRO)	ND	1.5	5.0		mg/Kg	1	11/21/2022 8:31:00 PM
460-00-4	Surr: BFB	118	0	37.7-212		%Rec	1	11/21/2022 8:31:00 PM
EPA METHOD 300.0: ANIONS								Analyst: **JMT**
16984-48-8	Fluoride	1.5	0.30	0.30		mg/Kg	1	11/22/2022 9:15:23 PM
16887-00-6	Chloride	100	30	30		mg/Kg	20	11/23/2022 9:57:16 AM
7727-37-9	Nitrogen, Nitrate (As N)	18	0.30	0.30		mg/Kg	1	11/22/2022 9:15:23 PM
14808-79-8	Sulfate	89	1.5	1.5		mg/Kg	1	11/22/2022 9:15:23 PM
EPA METHOD 6020A: TOTAL METALS								Analyst: **ELS**
7440-38-2	Arsenic	2.1	0.25	0.49		mg/Kg	5	11/20/2022 1:15:22 PM
7440-61-1	Uranium	ND	0.25	0.49		mg/Kg	5	11/21/2022 1:33:44 PM
EPA METHOD 7471B: MERCURY								Analyst: **VP**
7439-97-6	Mercury	ND	0.033	0.033		mg/Kg	1	11/30/2022 4:20:09 PM
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-39-3	Barium	58	0.19	0.20		mg/Kg	2	11/22/2022 10:45:39 AM
7440-43-9	Cadmium	ND	0.19	0.20		mg/Kg	2	11/22/2022 10:45:39 AM
7440-70-2	Calcium	1900	44	99		mg/Kg	2	11/22/2022 10:45:39 AM
7440-47-3	Chromium	2.1	0.45	0.59		mg/Kg	2	11/22/2022 10:45:39 AM
7440-50-8	Copper	2.1	2.0	3.9	J	mg/Kg	2	11/22/2022 10:45:39 AM
7439-89-6	Iron	6000	280	490		mg/Kg	50	12/2/2022 10:09:04 AM
7439-92-1	Lead	3.1	1.1	2.0		mg/Kg	2	11/22/2022 10:45:39 AM
7439-95-4	Magnesium	1000	11	99		mg/Kg	2	11/22/2022 10:45:39 AM
7439-96-5	Manganese	120	0.33	0.39		mg/Kg	2	11/22/2022 10:45:39 AM

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
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Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA3
Project: Bisti LF **Collection Date:** 11/11/2022 11:17:00 AM
Lab ID: 2211751-003 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-09-7	Potassium	750	55	99		mg/Kg	2	11/22/2022 10:45:39 AM
7782-49-2	Selenium	ND	4.3	4.9		mg/Kg	2	11/22/2022 12:52:10 PM
7440-22-4	Silver	ND	0.74	0.99		mg/Kg	2	11/22/2022 12:52:10 PM
7440-23-5	Sodium	160	44	99		mg/Kg	2	11/22/2022 10:45:39 AM
7440-66-6	Zinc	9.7	4.7	4.9		mg/Kg	2	11/22/2022 10:45:39 AM
SW8270C								Analyst: **DAM**
91-20-3	Naphthalene	ND	0.0026	0.0095		mg/Kg	1	12/2/2022 4:28:00 PM
90-12-0	1-Methylnaphthalene	ND	0.0027	0.0095		mg/Kg	1	12/2/2022 4:28:00 PM
91-57-6	2-Methylnaphthalene	ND	0.0030	0.0095		mg/Kg	1	12/2/2022 4:28:00 PM
50-32-8	Benzo(a)pyrene	ND	0.0080	0.019		mg/Kg	1	12/2/2022 4:28:00 PM
4165-60-0	Surr: Nitrobenzene-d5	81.5	0	15-137		%Rec	1	12/2/2022 4:28:00 PM
321-60-8	Surr: 2-Fluorobiphenyl	80.5	0	15-121		%Rec	1	12/2/2022 4:28:00 PM
1718-51-0	Surr: 4-Terphenyl-d14	102	0	35.7-126		%Rec	1	12/2/2022 4:28:00 PM
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
71-43-2	Benzene	ND	0.0095	0.025		mg/Kg	1	11/18/2022 3:11:51 PM
108-88-3	Toluene	ND	0.0064	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
100-41-4	Ethylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	0.028	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
95-63-6	1,2,4-Trimethylbenzene	ND	0.0070	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
108-67-8	1,3,5-Trimethylbenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	0.011	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	0.019	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
91-20-3	Naphthalene	ND	0.018	0.099		mg/Kg	1	11/18/2022 3:11:51 PM
90-12-0	1-Methylnaphthalene	ND	0.057	0.20		mg/Kg	1	11/18/2022 3:11:51 PM
91-57-6	2-Methylnaphthalene	ND	0.046	0.20		mg/Kg	1	11/18/2022 3:11:51 PM
67-64-1	Acetone	ND	0.16	0.74		mg/Kg	1	11/18/2022 3:11:51 PM
108-86-1	Bromobenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
75-27-4	Bromodichloromethane	ND	0.0063	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
75-25-2	Bromoform	ND	0.012	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
74-83-9	Bromomethane	ND	0.082	0.15		mg/Kg	1	11/18/2022 3:11:51 PM
78-93-3	2-Butanone	ND	0.21	0.50		mg/Kg	1	11/18/2022 3:11:51 PM
75-15-0	Carbon disulfide	ND	0.020	0.50		mg/Kg	1	11/18/2022 3:11:51 PM
56-23-5	Carbon tetrachloride	ND	0.0055	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
108-90-7	Chlorobenzene	ND	0.0089	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
75-00-3	Chloroethane	ND	0.019	0.099		mg/Kg	1	11/18/2022 3:11:51 PM
67-66-3	Chloroform	ND	0.0070	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
74-87-3	Chloromethane	ND	0.017	0.15		mg/Kg	1	11/18/2022 3:11:51 PM
95-49-8	2-Chlorotoluene	ND	0.0066	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
106-43-4	4-Chlorotoluene	ND	0.026	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
156-59-2	cis-1,2-DCE	ND	0.025	0.050		mg/Kg	1	11/18/2022 3:11:51 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA3
Project: Bisti LF **Collection Date:** 11/11/2022 11:17:00 AM
Lab ID: 2211751-003 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
10061-01-5	cis-1,3-Dichloropropene	ND	0.0074	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.021	0.099		mg/Kg	1	11/18/2022 3:11:51 PM
124-48-1	Dibromochloromethane	ND	0.0079	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
74-95-3	Dibromomethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
95-50-1	1,2-Dichlorobenzene	ND	0.010	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
541-73-1	1,3-Dichlorobenzene	ND	0.0094	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
106-46-7	1,4-Dichlorobenzene	ND	0.013	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
75-71-8	Dichlorodifluoromethane	ND	0.019	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
75-34-3	1,1-Dichloroethane	ND	0.014	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
75-35-4	1,1-Dichloroethene	ND	0.011	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
78-87-5	1,2-Dichloropropane	ND	0.0097	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
142-28-9	1,3-Dichloropropane	ND	0.011	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
594-20-7	2,2-Dichloropropane	ND	0.0070	0.099		mg/Kg	1	11/18/2022 3:11:51 PM
563-58-6	1,1-Dichloropropene	ND	0.0060	0.099		mg/Kg	1	11/18/2022 3:11:51 PM
87-68-3	Hexachlorobutadiene	ND	0.034	0.099		mg/Kg	1	11/18/2022 3:11:51 PM
591-78-6	2-Hexanone	ND	0.022	0.50		mg/Kg	1	11/18/2022 3:11:51 PM
98-82-8	Isopropylbenzene	ND	0.0092	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
99-87-6	4-Isopropyltoluene	ND	0.013	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
108-10-1	4-Methyl-2-pentanone	ND	0.058	0.50		mg/Kg	1	11/18/2022 3:11:51 PM
75-09-2	Methylene chloride	ND	0.036	0.15		mg/Kg	1	11/18/2022 3:11:51 PM
104-51-8	n-Butylbenzene	ND	0.013	0.15		mg/Kg	1	11/18/2022 3:11:51 PM
103-65-1	n-Propylbenzene	ND	0.0080	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
135-98-8	sec-Butylbenzene	ND	0.041	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
100-42-5	Styrene	ND	0.0068	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
98-06-6	tert-Butylbenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0073	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.016	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
127-18-4	Tetrachloroethene (PCE)	ND	0.014	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
156-60-5	trans-1,2-DCE	ND	0.0096	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
10061-02-6	trans-1,3-Dichloropropene	ND	0.012	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
87-61-6	1,2,3-Trichlorobenzene	ND	0.0077	0.099		mg/Kg	1	11/18/2022 3:11:51 PM
120-82-1	1,2,4-Trichlorobenzene	ND	0.017	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
71-55-6	1,1,1-Trichloroethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
79-00-5	1,1,2-Trichloroethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
79-01-6	Trichloroethene (TCE)	ND	0.0097	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
75-69-4	Trichlorofluoromethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
96-18-4	1,2,3-Trichloropropane	ND	0.021	0.099		mg/Kg	1	11/18/2022 3:11:51 PM
75-01-4	Vinyl chloride	ND	0.0095	0.050		mg/Kg	1	11/18/2022 3:11:51 PM
1330-20-7	Xylenes, Total	ND	0.026	0.099		mg/Kg	1	11/18/2022 3:11:51 PM
1868-53-7	Surr: Dibromofluoromethane	120		70-130		%Rec	1	11/18/2022 3:11:51 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	107		70-130		%Rec	1	11/18/2022 3:11:51 PM
2037-26-5	Surr: Toluene-d8	112		70-130		%Rec	1	11/18/2022 3:11:51 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA3
Project: Bisti LF **Collection Date:** 11/11/2022 11:17:00 AM
Lab ID: 2211751-003 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
460-00-4	Surr: 4-Bromofluorobenzene	97.0		70-130		%Rec	1	11/18/2022 3:11:51 PM
SM4500H+B/EPA 9040C								Analyst: **SNS**
pH	pH	8.29				pH Units	1	11/28/2022 4:12:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA4
Project: Bisti LF **Collection Date:** 11/11/2022 11:20:00 AM
Lab ID: 2211751-004 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8082A: PCB'S								Analyst: **SB**
12674-11-2	Aroclor 1016	ND	0.013	0.016		mg/Kg	1	11/29/2022 5:33:40 PM
11104-28-2	Aroclor 1221	ND	0.0043	0.016		mg/Kg	1	11/29/2022 5:33:40 PM
11141-16-5	Aroclor 1232	ND	0.016	0.016		mg/Kg	1	11/29/2022 5:33:40 PM
53469-21-9	Aroclor 1242	ND	0.0087	0.016		mg/Kg	1	11/29/2022 5:33:40 PM
12672-29-6	Aroclor 1248	ND	0.0097	0.016		mg/Kg	1	11/29/2022 5:33:40 PM
11097-69-1	Aroclor 1254	ND	0.0043	0.016		mg/Kg	1	11/29/2022 5:33:40 PM
11096-82-5	Aroclor 1260	ND	0.015	0.016		mg/Kg	1	11/29/2022 5:33:40 PM
2051-24-3	Surr: Decachlorobiphenyl	88.4	0	17.2-115		%Rec	1	11/29/2022 5:33:40 PM
877-09-8	Surr: Tetrachloro-m-xylene	91.2	0	15-110		%Rec	1	11/29/2022 5:33:40 PM
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS								Analyst: **DGH**
TPH-DRO	Diesel Range Organics (DRO)	ND	11	15		mg/Kg	1	11/21/2022 4:57:38 PM
TPH-MRO	Motor Oil Range Organics (MRO)	ND	28	50		mg/Kg	1	11/21/2022 4:57:38 PM
117-84-0	Surr: DNOP	110	0	21-129		%Rec	1	11/21/2022 4:57:38 PM
EPA METHOD 8015D: GASOLINE RANGE								Analyst: **CCM**
TPH-GRO	Gasoline Range Organics (GRO)	ND	1.5	5.0		mg/Kg	1	11/21/2022 8:51:00 PM
460-00-4	Surr: BFB	121	0	37.7-212		%Rec	1	11/21/2022 8:51:00 PM
EPA METHOD 300.0: ANIONS								Analyst: **JMT**
16984-48-8	Fluoride	1.6	0.30	0.30		mg/Kg	1	11/22/2022 9:27:44 PM
16887-00-6	Chloride	82	30	30		mg/Kg	20	11/23/2022 10:09:40 AM
7727-37-9	Nitrogen, Nitrate (As N)	20	0.30	0.30		mg/Kg	1	11/22/2022 9:27:44 PM
14808-79-8	Sulfate	170	30	30		mg/Kg	20	11/23/2022 10:09:40 AM
EPA METHOD 6020A: TOTAL METALS								Analyst: **ELS**
7440-38-2	Arsenic	2.2	0.25	0.50		mg/Kg	5	11/20/2022 1:19:32 PM
7440-61-1	Uranium	0.29	0.25	0.50	J	mg/Kg	5	11/21/2022 1:37:52 PM
EPA METHOD 7471B: MERCURY								Analyst: **VP**
7439-97-6	Mercury	ND	0.033	0.033		mg/Kg	1	11/30/2022 4:26:34 PM
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-39-3	Barium	400	0.19	0.20		mg/Kg	2	11/22/2022 10:47:31 AM
7440-43-9	Cadmium	ND	0.19	0.20		mg/Kg	2	11/22/2022 10:47:31 AM
7440-70-2	Calcium	4100	44	99		mg/Kg	2	11/22/2022 10:47:31 AM
7440-47-3	Chromium	2.1	0.45	0.60		mg/Kg	2	11/22/2022 10:47:31 AM
7440-50-8	Copper	2.1	2.0	4.0	J	mg/Kg	2	11/22/2022 10:47:31 AM
7439-89-6	Iron	5200	290	500		mg/Kg	50	12/2/2022 10:10:32 AM
7439-92-1	Lead	3.1	1.1	2.0		mg/Kg	2	11/22/2022 10:47:31 AM
7439-95-4	Magnesium	970	11	99		mg/Kg	2	11/22/2022 10:47:31 AM
7439-96-5	Manganese	110	0.33	0.40		mg/Kg	2	11/22/2022 10:47:31 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA4
Project: Bisti LF **Collection Date:** 11/11/2022 11:20:00 AM
Lab ID: 2211751-004 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-09-7	Potassium	800	56	99		mg/Kg	2	11/22/2022 10:47:31 AM
7782-49-2	Selenium	ND	4.4	5.0		mg/Kg	2	11/22/2022 12:53:25 PM
7440-22-4	Silver	ND	0.74	0.99		mg/Kg	2	11/22/2022 12:53:25 PM
7440-23-5	Sodium	210	44	99		mg/Kg	2	11/22/2022 10:47:31 AM
7440-66-6	Zinc	9.3	4.7	5.0		mg/Kg	2	11/22/2022 10:47:31 AM
SW8270C								Analyst: **DAM**
91-20-3	Naphthalene	ND	0.0026	0.0095		mg/Kg	1	12/2/2022 5:14:00 PM
90-12-0	1-Methylnaphthalene	ND	0.0027	0.0095		mg/Kg	1	12/2/2022 5:14:00 PM
91-57-6	2-Methylnaphthalene	ND	0.0030	0.0095		mg/Kg	1	12/2/2022 5:14:00 PM
50-32-8	Benzo(a)pyrene	ND	0.0079	0.019		mg/Kg	1	12/2/2022 5:14:00 PM
4165-60-0	Surr: Nitrobenzene-d5	73.5	0	15-137		%Rec	1	12/2/2022 5:14:00 PM
321-60-8	Surr: 2-Fluorobiphenyl	71.0	0	15-121		%Rec	1	12/2/2022 5:14:00 PM
1718-51-0	Surr: 4-Terphenyl-d14	93.0	0	15.7-126		%Rec	1	12/2/2022 5:14:00 PM
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
71-43-2	Benzene	ND	0.0096	0.025		mg/Kg	1	11/18/2022 3:39:11 PM
108-88-3	Toluene	ND	0.0064	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
100-41-4	Ethylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	0.028	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
95-63-6	1,2,4-Trimethylbenzene	ND	0.0070	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
108-67-8	1,3,5-Trimethylbenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	0.011	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	0.020	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
91-20-3	Naphthalene	ND	0.019	0.10		mg/Kg	1	11/18/2022 3:39:11 PM
90-12-0	1-Methylnaphthalene	ND	0.057	0.20		mg/Kg	1	11/18/2022 3:39:11 PM
91-57-6	2-Methylnaphthalene	ND	0.046	0.20		mg/Kg	1	11/18/2022 3:39:11 PM
67-64-1	Acetone	ND	0.16	0.75		mg/Kg	1	11/18/2022 3:39:11 PM
108-86-1	Bromobenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
75-27-4	Bromodichloromethane	ND	0.0063	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
75-25-2	Bromoform	ND	0.012	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
74-83-9	Bromomethane	ND	0.082	0.15		mg/Kg	1	11/18/2022 3:39:11 PM
78-93-3	2-Butanone	ND	0.22	0.50		mg/Kg	1	11/18/2022 3:39:11 PM
75-15-0	Carbon disulfide	ND	0.020	0.50		mg/Kg	1	11/18/2022 3:39:11 PM
56-23-5	Carbon tetrachloride	ND	0.0055	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
108-90-7	Chlorobenzene	ND	0.0089	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
75-00-3	Chloroethane	ND	0.019	0.10		mg/Kg	1	11/18/2022 3:39:11 PM
67-66-3	Chloroform	ND	0.0071	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
74-87-3	Chloromethane	ND	0.017	0.15		mg/Kg	1	11/18/2022 3:39:11 PM
95-49-8	2-Chlorotoluene	ND	0.0067	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
106-43-4	4-Chlorotoluene	ND	0.026	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
156-59-2	cis-1,2-DCE	ND	0.025	0.050		mg/Kg	1	11/18/2022 3:39:11 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA4
Project: Bisti LF **Collection Date:** 11/11/2022 11:20:00 AM
Lab ID: 2211751-004 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES							Analyst: **RAA**	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0074	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.021	0.10		mg/Kg	1	11/18/2022 3:39:11 PM
124-48-1	Dibromochloromethane	ND	0.0080	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
74-95-3	Dibromomethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
95-50-1	1,2-Dichlorobenzene	ND	0.010	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
541-73-1	1,3-Dichlorobenzene	ND	0.0094	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
106-46-7	1,4-Dichlorobenzene	ND	0.013	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
75-71-8	Dichlorodifluoromethane	ND	0.019	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
75-34-3	1,1-Dichloroethane	ND	0.014	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
75-35-4	1,1-Dichloroethene	ND	0.011	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
78-87-5	1,2-Dichloropropane	ND	0.0097	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
142-28-9	1,3-Dichloropropane	ND	0.011	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
594-20-7	2,2-Dichloropropane	ND	0.0071	0.10		mg/Kg	1	11/18/2022 3:39:11 PM
563-58-6	1,1-Dichloropropene	ND	0.0060	0.10		mg/Kg	1	11/18/2022 3:39:11 PM
87-68-3	Hexachlorobutadiene	ND	0.034	0.10		mg/Kg	1	11/18/2022 3:39:11 PM
591-78-6	2-Hexanone	0.041	0.022	0.50	J	mg/Kg	1	11/18/2022 3:39:11 PM
98-82-8	Isopropylbenzene	ND	0.0092	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
99-87-6	4-Isopropyltoluene	ND	0.013	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
108-10-1	4-Methyl-2-pentanone	ND	0.058	0.50		mg/Kg	1	11/18/2022 3:39:11 PM
75-09-2	Methylene chloride	ND	0.036	0.15		mg/Kg	1	11/18/2022 3:39:11 PM
104-51-8	n-Butylbenzene	ND	0.013	0.15		mg/Kg	1	11/18/2022 3:39:11 PM
103-65-1	n-Propylbenzene	ND	0.0080	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
135-98-8	sec-Butylbenzene	ND	0.041	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
100-42-5	Styrene	ND	0.0068	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
98-06-6	tert-Butylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0073	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.016	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
127-18-4	Tetrachloroethene (PCE)	ND	0.014	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
156-60-5	trans-1,2-DCE	ND	0.0096	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
10061-02-6	trans-1,3-Dichloropropene	ND	0.012	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
87-61-6	1,2,3-Trichlorobenzene	ND	0.0077	0.10		mg/Kg	1	11/18/2022 3:39:11 PM
120-82-1	1,2,4-Trichlorobenzene	ND	0.017	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
71-55-6	1,1,1-Trichloroethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
79-00-5	1,1,2-Trichloroethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
79-01-6	Trichloroethene (TCE)	ND	0.0098	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
75-69-4	Trichlorofluoromethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
96-18-4	1,2,3-Trichloropropane	ND	0.021	0.10		mg/Kg	1	11/18/2022 3:39:11 PM
75-01-4	Vinyl chloride	ND	0.0095	0.050		mg/Kg	1	11/18/2022 3:39:11 PM
1330-20-7	Xylenes, Total	ND	0.026	0.10		mg/Kg	1	11/18/2022 3:39:11 PM
1868-53-7	Surr: Dibromofluoromethane	119		70-130		%Rec	1	11/18/2022 3:39:11 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	111		70-130		%Rec	1	11/18/2022 3:39:11 PM
2037-26-5	Surr: Toluene-d8	103		70-130		%Rec	1	11/18/2022 3:39:11 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA4
Project: Bisti LF **Collection Date:** 11/11/2022 11:20:00 AM
Lab ID: 2211751-004 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
460-00-4	Surr: 4-Bromofluorobenzene	92.1		70-130		%Rec	1	11/18/2022 3:39:11 PM
SM4500H+B/EPA 9040C								Analyst: **SNS**
pH	pH	8.47				pH Units	1	11/28/2022 4:12:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA5
Project: Bisti LF **Collection Date:** 11/11/2022 11:30:00 AM
Lab ID: 2211751-005 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8082A: PCB'S								Analyst: **SB**
12674-11-2	Aroclor 1016	ND	0.013	0.017		mg/Kg	1	11/29/2022 6:10:53 PM
11104-28-2	Aroclor 1221	ND	0.0043	0.017		mg/Kg	1	11/29/2022 6:10:53 PM
11141-16-5	Aroclor 1232	ND	0.016	0.017		mg/Kg	1	11/29/2022 6:10:53 PM
53469-21-9	Aroclor 1242	ND	0.0087	0.017		mg/Kg	1	11/29/2022 6:10:53 PM
12672-29-6	Aroclor 1248	ND	0.0097	0.017		mg/Kg	1	11/29/2022 6:10:53 PM
11097-69-1	Aroclor 1254	ND	0.0043	0.017		mg/Kg	1	11/29/2022 6:10:53 PM
11096-82-5	Aroclor 1260	ND	0.015	0.017		mg/Kg	1	11/29/2022 6:10:53 PM
2051-24-3	Surr: Decachlorobiphenyl	86.4	0	17.2-115		%Rec	1	11/29/2022 6:10:53 PM
877-09-8	Surr: Tetrachloro-m-xylene	85.2	0	15-110		%Rec	1	11/29/2022 6:10:53 PM
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS								Analyst: **DGH**
TPH-DRO	Diesel Range Organics (DRO)	ND	11	14		mg/Kg	1	11/21/2022 5:08:20 PM
TPH-MRO	Motor Oil Range Organics (MRO)	ND	26	47		mg/Kg	1	11/21/2022 5:08:20 PM
117-84-0	Surr: DNOP	107	0	21-129		%Rec	1	11/21/2022 5:08:20 PM
EPA METHOD 8015D: GASOLINE RANGE								Analyst: **CCM**
TPH-GRO	Gasoline Range Organics (GRO)	ND	1.5	5.0		mg/Kg	1	11/21/2022 9:10:00 PM
460-00-4	Surr: BFB	127	0	37.7-212		%Rec	1	11/21/2022 9:10:00 PM
EPA METHOD 300.0: ANIONS								Analyst: **JMT**
16984-48-8	Fluoride	0.65	0.30	0.30		mg/Kg	1	11/22/2022 9:40:04 PM
16887-00-6	Chloride	130	30	30		mg/Kg	20	11/23/2022 10:22:04 AM
7727-37-9	Nitrogen, Nitrate (As N)	11	0.30	0.30		mg/Kg	1	11/22/2022 9:40:04 PM
14808-79-8	Sulfate	470	30	30		mg/Kg	20	11/23/2022 10:22:04 AM
EPA METHOD 6020A: TOTAL METALS								Analyst: **ELS**
7440-38-2	Arsenic	2.0	0.25	0.50		mg/Kg	5	11/20/2022 1:23:41 PM
7440-61-1	Uranium	0.25	0.25	0.50	J	mg/Kg	5	11/21/2022 1:42:01 PM
EPA METHOD 7471B: MERCURY								Analyst: **VP**
7439-97-6	Mercury	ND	0.032	0.032		mg/Kg	1	11/30/2022 4:28:43 PM
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-39-3	Barium	73	0.19	0.20		mg/Kg	2	11/22/2022 10:49:22 AM
7440-43-9	Cadmium	ND	0.19	0.20		mg/Kg	2	11/22/2022 10:49:22 AM
7440-70-2	Calcium	3800	44	99		mg/Kg	2	11/22/2022 10:49:22 AM
7440-47-3	Chromium	2.2	0.45	0.60		mg/Kg	2	11/22/2022 10:49:22 AM
7440-50-8	Copper	ND	2.0	4.0		mg/Kg	2	11/22/2022 10:49:22 AM
7439-89-6	Iron	5100	290	500		mg/Kg	50	12/2/2022 10:12:00 AM
7439-92-1	Lead	2.9	1.1	2.0		mg/Kg	2	11/22/2022 10:49:22 AM
7439-95-4	Magnesium	1000	11	99		mg/Kg	2	11/22/2022 10:49:22 AM
7439-96-5	Manganese	110	0.33	0.40		mg/Kg	2	11/22/2022 10:49:22 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA5
Project: Bisti LF **Collection Date:** 11/11/2022 11:30:00 AM
Lab ID: 2211751-005 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-09-7	Potassium	700	56	99		mg/Kg	2	11/22/2022 10:49:22 AM
7782-49-2	Selenium	ND	4.4	5.0		mg/Kg	2	11/22/2022 12:58:37 PM
7440-22-4	Silver	ND	0.74	0.99		mg/Kg	2	11/22/2022 12:58:37 PM
7440-23-5	Sodium	520	44	99		mg/Kg	2	11/22/2022 10:49:22 AM
7440-66-6	Zinc	10	4.7	5.0		mg/Kg	2	11/22/2022 10:49:22 AM
SW8270C								Analyst: **DAM**
91-20-3	Naphthalene	ND	0.0027	0.0098		mg/Kg	1	12/2/2022 5:59:00 PM
90-12-0	1-Methylnaphthalene	ND	0.0027	0.0098		mg/Kg	1	12/2/2022 5:59:00 PM
91-57-6	2-Methylnaphthalene	ND	0.0031	0.0098		mg/Kg	1	12/2/2022 5:59:00 PM
50-32-8	Benzo(a)pyrene	ND	0.0082	0.020		mg/Kg	1	12/2/2022 5:59:00 PM
4165-60-0	Surr: Nitrobenzene-d5	71.0	0	15-137		%Rec	1	12/2/2022 5:59:00 PM
321-60-8	Surr: 2-Fluorobiphenyl	68.5	0	15-121		%Rec	1	12/2/2022 5:59:00 PM
1718-51-0	Surr: 4-Terphenyl-d14	95.0	0	35.7-126		%Rec	1	12/2/2022 5:59:00 PM
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
71-43-2	Benzene	ND	0.0095	0.025		mg/Kg	1	11/18/2022 4:06:25 PM
108-88-3	Toluene	ND	0.0064	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
100-41-4	Ethylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	0.028	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
95-63-6	1,2,4-Trimethylbenzene	ND	0.0070	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
108-67-8	1,3,5-Trimethylbenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	0.011	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	0.019	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
91-20-3	Naphthalene	ND	0.018	0.099		mg/Kg	1	11/18/2022 4:06:25 PM
90-12-0	1-Methylnaphthalene	ND	0.057	0.20		mg/Kg	1	11/18/2022 4:06:25 PM
91-57-6	2-Methylnaphthalene	ND	0.046	0.20		mg/Kg	1	11/18/2022 4:06:25 PM
67-64-1	Acetone	ND	0.16	0.74		mg/Kg	1	11/18/2022 4:06:25 PM
108-86-1	Bromobenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
75-27-4	Bromodichloromethane	ND	0.0063	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
75-25-2	Bromoform	ND	0.012	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
74-83-9	Bromomethane	ND	0.082	0.15		mg/Kg	1	11/18/2022 4:06:25 PM
78-93-3	2-Butanone	ND	0.21	0.50		mg/Kg	1	11/18/2022 4:06:25 PM
75-15-0	Carbon disulfide	ND	0.020	0.50		mg/Kg	1	11/18/2022 4:06:25 PM
56-23-5	Carbon tetrachloride	ND	0.0055	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
108-90-7	Chlorobenzene	ND	0.0089	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
75-00-3	Chloroethane	ND	0.019	0.099		mg/Kg	1	11/18/2022 4:06:25 PM
67-66-3	Chloroform	ND	0.0070	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
74-87-3	Chloromethane	ND	0.017	0.15		mg/Kg	1	11/18/2022 4:06:25 PM
95-49-8	2-Chlorotoluene	ND	0.0066	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
106-43-4	4-Chlorotoluene	ND	0.026	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
156-59-2	cis-1,2-DCE	ND	0.025	0.050		mg/Kg	1	11/18/2022 4:06:25 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA5
Project: Bisti LF **Collection Date:** 11/11/2022 11:30:00 AM
Lab ID: 2211751-005 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
10061-01-5	cis-1,3-Dichloropropene	ND	0.0074	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.021	0.099		mg/Kg	1	11/18/2022 4:06:25 PM
124-48-1	Dibromochloromethane	ND	0.0079	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
74-95-3	Dibromomethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
95-50-1	1,2-Dichlorobenzene	ND	0.010	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
541-73-1	1,3-Dichlorobenzene	ND	0.0094	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
106-46-7	1,4-Dichlorobenzene	ND	0.013	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
75-71-8	Dichlorodifluoromethane	ND	0.019	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
75-34-3	1,1-Dichloroethane	ND	0.014	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
75-35-4	1,1-Dichloroethene	ND	0.011	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
78-87-5	1,2-Dichloropropane	ND	0.0096	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
142-28-9	1,3-Dichloropropane	ND	0.011	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
594-20-7	2,2-Dichloropropane	ND	0.0070	0.099		mg/Kg	1	11/18/2022 4:06:25 PM
563-58-6	1,1-Dichloropropene	ND	0.0060	0.099		mg/Kg	1	11/18/2022 4:06:25 PM
87-68-3	Hexachlorobutadiene	ND	0.034	0.099		mg/Kg	1	11/18/2022 4:06:25 PM
591-78-6	2-Hexanone	ND	0.022	0.50		mg/Kg	1	11/18/2022 4:06:25 PM
98-82-8	Isopropylbenzene	ND	0.0092	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
99-87-6	4-Isopropyltoluene	ND	0.013	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
108-10-1	4-Methyl-2-pentanone	ND	0.058	0.50		mg/Kg	1	11/18/2022 4:06:25 PM
75-09-2	Methylene chloride	ND	0.036	0.15		mg/Kg	1	11/18/2022 4:06:25 PM
104-51-8	n-Butylbenzene	ND	0.013	0.15		mg/Kg	1	11/18/2022 4:06:25 PM
103-65-1	n-Propylbenzene	ND	0.0080	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
135-98-8	sec-Butylbenzene	ND	0.041	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
100-42-5	Styrene	ND	0.0068	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
98-06-6	tert-Butylbenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0073	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.016	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
127-18-4	Tetrachloroethene (PCE)	ND	0.014	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
156-60-5	trans-1,2-DCE	ND	0.0096	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
10061-02-6	trans-1,3-Dichloropropene	ND	0.012	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
87-61-6	1,2,3-Trichlorobenzene	ND	0.0077	0.099		mg/Kg	1	11/18/2022 4:06:25 PM
120-82-1	1,2,4-Trichlorobenzene	ND	0.017	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
71-55-6	1,1,1-Trichloroethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
79-00-5	1,1,2-Trichloroethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
79-01-6	Trichloroethene (TCE)	ND	0.0097	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
75-69-4	Trichlorofluoromethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
96-18-4	1,2,3-Trichloropropane	ND	0.021	0.099		mg/Kg	1	11/18/2022 4:06:25 PM
75-01-4	Vinyl chloride	ND	0.0094	0.050		mg/Kg	1	11/18/2022 4:06:25 PM
1330-20-7	Xylenes, Total	ND	0.026	0.099		mg/Kg	1	11/18/2022 4:06:25 PM
1868-53-7	Surr: Dibromofluoromethane	116		70-130		%Rec	1	11/18/2022 4:06:25 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	103		70-130		%Rec	1	11/18/2022 4:06:25 PM
2037-26-5	Surr: Toluene-d8	111		70-130		%Rec	1	11/18/2022 4:06:25 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA5
Project: Bisti LF **Collection Date:** 11/11/2022 11:30:00 AM
Lab ID: 2211751-005 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
460-00-4	Surr: 4-Bromofluorobenzene	98.8		70-130		%Rec	1	11/18/2022 4:06:25 PM
SM4500H+B/EPA 9040C								Analyst: **SNS**
pH	pH	8.66				pH Units	1	11/28/2022 4:12:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA6
Project: Bisti LF **Collection Date:** 11/11/2022 11:32:00 AM
Lab ID: 2211751-006 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8082A: PCB'S								Analyst: **SB**
12674-11-2	Aroclor 1016	ND	0.013	0.016		mg/Kg	1	11/29/2022 6:48:02 PM
11104-28-2	Aroclor 1221	ND	0.0041	0.016		mg/Kg	1	11/29/2022 6:48:02 PM
11141-16-5	Aroclor 1232	ND	0.016	0.016		mg/Kg	1	11/29/2022 6:48:02 PM
53469-21-9	Aroclor 1242	ND	0.0084	0.016		mg/Kg	1	11/29/2022 6:48:02 PM
12672-29-6	Aroclor 1248	ND	0.0094	0.016		mg/Kg	1	11/29/2022 6:48:02 PM
11097-69-1	Aroclor 1254	ND	0.0041	0.016		mg/Kg	1	11/29/2022 6:48:02 PM
11096-82-5	Aroclor 1260	ND	0.015	0.016		mg/Kg	1	11/29/2022 6:48:02 PM
2051-24-3	Surr: Decachlorobiphenyl	88.4	0	17.2-115		%Rec	1	11/29/2022 6:48:02 PM
877-09-8	Surr: Tetrachloro-m-xylene	88.0	0	15-110		%Rec	1	11/29/2022 6:48:02 PM
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS								Analyst: **DGH**
TPH-DRO	Diesel Range Organics (DRO)	ND	11	15		mg/Kg	1	11/22/2022 8:42:19 AM
TPH-MRO	Motor Oil Range Organics (MRO)	ND	27	49		mg/Kg	1	11/22/2022 8:42:19 AM
117-84-0	Surr: DNOP	125	0	21-129		%Rec	1	11/22/2022 8:42:19 AM
EPA METHOD 8015D: GASOLINE RANGE								Analyst: **CCM**
TPH-GRO	Gasoline Range Organics (GRO)	ND	1.5	5.0		mg/Kg	1	11/21/2022 9:30:00 PM
460-00-4	Surr: BFB	130	0	37.7-212		%Rec	1	11/21/2022 9:30:00 PM
EPA METHOD 300.0: ANIONS								Analyst: **JMT**
16984-48-8	Fluoride	1.2	0.30	0.30		mg/Kg	1	11/22/2022 9:52:25 PM
16887-00-6	Chloride	32	1.5	1.5		mg/Kg	1	11/22/2022 9:52:25 PM
7727-37-9	Nitrogen, Nitrate (As N)	5.4	0.30	0.30		mg/Kg	1	11/22/2022 9:52:25 PM
14808-79-8	Sulfate	150	1.5	1.5		mg/Kg	1	11/22/2022 9:52:25 PM
EPA METHOD 6020A: TOTAL METALS								Analyst: **ELS**
7440-38-2	Arsenic	2.0	0.25	0.50		mg/Kg	5	11/20/2022 1:27:49 PM
7440-61-1	Uranium	0.27	0.25	0.50	J	mg/Kg	5	11/21/2022 1:46:10 PM
EPA METHOD 7471B: MERCURY								Analyst: **VP**
7439-97-6	Mercury	ND	0.033	0.033		mg/Kg	1	11/30/2022 4:30:51 PM
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-39-3	Barium	37	0.19	0.20		mg/Kg	2	11/22/2022 10:51:15 AM
7440-43-9	Cadmium	ND	0.19	0.20		mg/Kg	2	11/22/2022 10:51:15 AM
7440-70-2	Calcium	2500	45	100		mg/Kg	2	11/22/2022 10:51:15 AM
7440-47-3	Chromium	2.2	0.45	0.60		mg/Kg	2	11/22/2022 10:51:15 AM
7440-50-8	Copper	ND	2.1	4.0		mg/Kg	2	11/22/2022 10:51:15 AM
7439-89-6	Iron	5300	290	500		mg/Kg	50	12/2/2022 10:13:28 AM
7439-92-1	Lead	2.4	1.1	2.0		mg/Kg	2	11/22/2022 10:51:15 AM
7439-95-4	Magnesium	1000	12	100		mg/Kg	2	11/22/2022 10:51:15 AM
7439-96-5	Manganese	110	0.33	0.40		mg/Kg	2	11/22/2022 10:51:15 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA6
Project: Bisti LF **Collection Date:** 11/11/2022 11:32:00 AM
Lab ID: 2211751-006 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-09-7	Potassium	690	56	100		mg/Kg	2	11/22/2022 10:51:15 AM
7782-49-2	Selenium	ND	4.4	5.0		mg/Kg	2	11/22/2022 12:59:56 PM
7440-22-4	Silver	ND	0.74	1.0		mg/Kg	2	11/22/2022 12:59:56 PM
7440-23-5	Sodium	180	44	100		mg/Kg	2	11/22/2022 10:51:15 AM
7440-66-6	Zinc	9.5	4.8	5.0		mg/Kg	2	11/22/2022 10:51:15 AM
SW8270C								Analyst: **DAM**
91-20-3	Naphthalene	ND	0.0027	0.0099		mg/Kg	1	12/2/2022 6:45:00 PM
90-12-0	1-Methylnaphthalene	ND	0.0028	0.0099		mg/Kg	1	12/2/2022 6:45:00 PM
91-57-6	2-Methylnaphthalene	ND	0.0031	0.0099		mg/Kg	1	12/2/2022 6:45:00 PM
50-32-8	Benzo(a)pyrene	ND	0.0082	0.020		mg/Kg	1	12/2/2022 6:45:00 PM
4165-60-0	Surr: Nitrobenzene-d5	68.5	0	15-137		%Rec	1	12/2/2022 6:45:00 PM
321-60-8	Surr: 2-Fluorobiphenyl	66.5	0	15-121		%Rec	1	12/2/2022 6:45:00 PM
1718-51-0	Surr: 4-Terphenyl-d14	97.0	0	35.7-126		%Rec	1	12/2/2022 6:45:00 PM
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
71-43-2	Benzene	ND	0.0096	0.025		mg/Kg	1	11/18/2022 4:33:37 PM
108-88-3	Toluene	ND	0.0064	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
100-41-4	Ethylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	0.028	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
95-63-6	1,2,4-Trimethylbenzene	ND	0.0071	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
108-67-8	1,3,5-Trimethylbenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	0.011	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	0.020	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
91-20-3	Naphthalene	ND	0.019	0.10		mg/Kg	1	11/18/2022 4:33:37 PM
90-12-0	1-Methylnaphthalene	ND	0.057	0.20		mg/Kg	1	11/18/2022 4:33:37 PM
91-57-6	2-Methylnaphthalene	ND	0.046	0.20		mg/Kg	1	11/18/2022 4:33:37 PM
67-64-1	Acetone	ND	0.16	0.75		mg/Kg	1	11/18/2022 4:33:37 PM
108-86-1	Bromobenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
75-27-4	Bromodichloromethane	ND	0.0064	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
75-25-2	Bromoform	ND	0.012	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
74-83-9	Bromomethane	ND	0.083	0.15		mg/Kg	1	11/18/2022 4:33:37 PM
78-93-3	2-Butanone	ND	0.22	0.50		mg/Kg	1	11/18/2022 4:33:37 PM
75-15-0	Carbon disulfide	ND	0.021	0.50		mg/Kg	1	11/18/2022 4:33:37 PM
56-23-5	Carbon tetrachloride	ND	0.0056	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
108-90-7	Chlorobenzene	ND	0.0090	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
75-00-3	Chloroethane	ND	0.019	0.10		mg/Kg	1	11/18/2022 4:33:37 PM
67-66-3	Chloroform	ND	0.0071	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
74-87-3	Chloromethane	ND	0.018	0.15		mg/Kg	1	11/18/2022 4:33:37 PM
95-49-8	2-Chlorotoluene	ND	0.0067	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
106-43-4	4-Chlorotoluene	ND	0.026	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
156-59-2	cis-1,2-DCE	ND	0.025	0.050		mg/Kg	1	11/18/2022 4:33:37 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA6
Project: Bisti LF **Collection Date:** 11/11/2022 11:32:00 AM
Lab ID: 2211751-006 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
10061-01-5	cis-1,3-Dichloropropene	ND	0.0074	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.022	0.10		mg/Kg	1	11/18/2022 4:33:37 PM
124-48-1	Dibromochloromethane	ND	0.0080	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
74-95-3	Dibromomethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
95-50-1	1,2-Dichlorobenzene	ND	0.010	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
541-73-1	1,3-Dichlorobenzene	ND	0.0094	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
106-46-7	1,4-Dichlorobenzene	ND	0.013	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
75-71-8	Dichlorodifluoromethane	ND	0.019	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
75-34-3	1,1-Dichloroethane	ND	0.015	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
75-35-4	1,1-Dichloroethene	ND	0.011	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
78-87-5	1,2-Dichloropropane	ND	0.0097	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
142-28-9	1,3-Dichloropropane	ND	0.011	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
594-20-7	2,2-Dichloropropane	ND	0.0071	0.10		mg/Kg	1	11/18/2022 4:33:37 PM
563-58-6	1,1-Dichloropropene	ND	0.0060	0.10		mg/Kg	1	11/18/2022 4:33:37 PM
87-68-3	Hexachlorobutadiene	ND	0.034	0.10		mg/Kg	1	11/18/2022 4:33:37 PM
591-78-6	2-Hexanone	ND	0.022	0.50		mg/Kg	1	11/18/2022 4:33:37 PM
98-82-8	Isopropylbenzene	ND	0.0093	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
99-87-6	4-Isopropyltoluene	ND	0.013	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
108-10-1	4-Methyl-2-pentanone	ND	0.058	0.50		mg/Kg	1	11/18/2022 4:33:37 PM
75-09-2	Methylene chloride	ND	0.036	0.15		mg/Kg	1	11/18/2022 4:33:37 PM
104-51-8	n-Butylbenzene	ND	0.013	0.15		mg/Kg	1	11/18/2022 4:33:37 PM
103-65-1	n-Propylbenzene	ND	0.0081	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
135-98-8	sec-Butylbenzene	ND	0.041	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
100-42-5	Styrene	ND	0.0068	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
98-06-6	tert-Butylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0073	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.016	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
127-18-4	Tetrachloroethene (PCE)	ND	0.014	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
156-60-5	trans-1,2-DCE	ND	0.0097	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
10061-02-6	trans-1,3-Dichloropropene	ND	0.012	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
87-61-6	1,2,3-Trichlorobenzene	ND	0.0077	0.10		mg/Kg	1	11/18/2022 4:33:37 PM
120-82-1	1,2,4-Trichlorobenzene	ND	0.017	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
71-55-6	1,1,1-Trichloroethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
79-00-5	1,1,2-Trichloroethane	ND	0.013	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
79-01-6	Trichloroethene (TCE)	ND	0.0098	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
75-69-4	Trichlorofluoromethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
96-18-4	1,2,3-Trichloropropane	ND	0.021	0.10		mg/Kg	1	11/18/2022 4:33:37 PM
75-01-4	Vinyl chloride	ND	0.0095	0.050		mg/Kg	1	11/18/2022 4:33:37 PM
1330-20-7	Xylenes, Total	ND	0.026	0.10		mg/Kg	1	11/18/2022 4:33:37 PM
1868-53-7	Surr: Dibromofluoromethane	113		70-130		%Rec	1	11/18/2022 4:33:37 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	97.1		70-130		%Rec	1	11/18/2022 4:33:37 PM
2037-26-5	Surr: Toluene-d8	109		70-130		%Rec	1	11/18/2022 4:33:37 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA6
Project: Bisti LF **Collection Date:** 11/11/2022 11:32:00 AM
Lab ID: 2211751-006 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
460-00-4	Surr: 4-Bromofluorobenzene	97.6		70-130		%Rec	1	11/18/2022 4:33:37 PM
SM4500H+B/EPA 9040C								Analyst: **SNS**
pH	pH	8.73				pH Units	1	11/28/2022 4:12:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA7
Project: Bisti LF **Collection Date:** 11/11/2022 11:34:00 AM
Lab ID: 2211751-007 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8082A: PCB'S								Analyst: **SB**
12674-11-2	Aroclor 1016	ND	0.013	0.016		mg/Kg	1	11/29/2022 8:02:19 PM
11104-28-2	Aroclor 1221	ND	0.0043	0.016		mg/Kg	1	11/29/2022 8:02:19 PM
11141-16-5	Aroclor 1232	ND	0.016	0.016		mg/Kg	1	11/29/2022 8:02:19 PM
53469-21-9	Aroclor 1242	ND	0.0087	0.016		mg/Kg	1	11/29/2022 8:02:19 PM
12672-29-6	Aroclor 1248	ND	0.0097	0.016		mg/Kg	1	11/29/2022 8:02:19 PM
11097-69-1	Aroclor 1254	ND	0.0043	0.016		mg/Kg	1	11/29/2022 8:02:19 PM
11096-82-5	Aroclor 1260	ND	0.015	0.016		mg/Kg	1	11/29/2022 8:02:19 PM
2051-24-3	Surr: Decachlorobiphenyl	89.6	0	17.2-115		%Rec	1	11/29/2022 8:02:19 PM
877-09-8	Surr: Tetrachloro-m-xylene	90.0	0	15-110		%Rec	1	11/29/2022 8:02:19 PM
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS								Analyst: **DGH**
TPH-DRO	Diesel Range Organics (DRO)	ND	11	15		mg/Kg	1	11/22/2022 9:22:11 PM
TPH-MRO	Motor Oil Range Organics (MRO)	ND	27	48		mg/Kg	1	11/22/2022 9:22:11 PM
117-84-0	Surr: DNOP	121	0	21-129		%Rec	1	11/22/2022 9:22:11 PM
EPA METHOD 8015D: GASOLINE RANGE								Analyst: **CCM**
TPH-GRO	Gasoline Range Organics (GRO)	ND	1.5	5.0		mg/Kg	1	11/21/2022 9:50:00 PM
460-00-4	Surr: BFB	127	0	37.7-212		%Rec	1	11/21/2022 9:50:00 PM
EPA METHOD 300.0: ANIONS								Analyst: **JMT**
16984-48-8	Fluoride	1.3	0.30	0.30		mg/Kg	1	11/22/2022 10:29:28 PM
16887-00-6	Chloride	130	30	30		mg/Kg	20	11/23/2022 10:34:28 AM
7727-37-9	Nitrogen, Nitrate (As N)	27	6.0	6.0		mg/Kg	20	11/23/2022 10:34:28 AM
14808-79-8	Sulfate	490	30	30		mg/Kg	20	11/23/2022 10:34:28 AM
EPA METHOD 6020A: TOTAL METALS								Analyst: **ELS**
7440-38-2	Arsenic	2.1	0.25	0.49		mg/Kg	5	11/20/2022 1:31:59 PM
7440-61-1	Uranium	0.30	0.25	0.49	J	mg/Kg	5	11/21/2022 1:50:18 PM
EPA METHOD 7471B: MERCURY								Analyst: **VP**
7439-97-6	Mercury	ND	0.033	0.033		mg/Kg	1	11/30/2022 4:33:00 PM
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-39-3	Barium	120	0.19	0.20		mg/Kg	2	11/22/2022 10:53:20 AM
7440-43-9	Cadmium	ND	0.19	0.20		mg/Kg	2	11/22/2022 10:53:20 AM
7440-70-2	Calcium	2800	44	99		mg/Kg	2	11/22/2022 10:53:20 AM
7440-47-3	Chromium	2.7	0.45	0.59		mg/Kg	2	11/22/2022 10:53:20 AM
7440-50-8	Copper	2.6	2.0	4.0	J	mg/Kg	2	11/22/2022 10:53:20 AM
7439-89-6	Iron	5700	280	490		mg/Kg	50	12/2/2022 10:14:57 AM
7439-92-1	Lead	2.7	1.1	2.0		mg/Kg	2	11/22/2022 10:53:20 AM
7439-95-4	Magnesium	1100	11	99		mg/Kg	2	11/22/2022 10:53:20 AM
7439-96-5	Manganese	120	0.33	0.40		mg/Kg	2	11/22/2022 10:53:20 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA7
Project: Bisti LF **Collection Date:** 11/11/2022 11:34:00 AM
Lab ID: 2211751-007 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-09-7	Potassium	890	55	99		mg/Kg	2	11/22/2022 10:53:20 AM
7782-49-2	Selenium	ND	4.3	4.9		mg/Kg	2	11/22/2022 1:01:12 PM
7440-22-4	Silver	ND	0.74	0.99		mg/Kg	2	11/22/2022 1:01:12 PM
7440-23-5	Sodium	730	44	99		mg/Kg	2	11/22/2022 10:53:20 AM
7440-66-6	Zinc	12	4.7	4.9		mg/Kg	2	11/22/2022 10:53:20 AM
SW8270C								Analyst: **DAM**
91-20-3	Naphthalene	ND	0.0026	0.0094		mg/Kg	1	12/2/2022 7:30:00 PM
90-12-0	1-Methylnaphthalene	ND	0.0026	0.0094		mg/Kg	1	12/2/2022 7:30:00 PM
91-57-6	2-Methylnaphthalene	ND	0.0030	0.0094		mg/Kg	1	12/2/2022 7:30:00 PM
50-32-8	Benzo(a)pyrene	ND	0.0078	0.019		mg/Kg	1	12/2/2022 7:30:00 PM
4165-60-0	Surr: Nitrobenzene-d5	80.0	0	15-137		%Rec	1	12/2/2022 7:30:00 PM
321-60-8	Surr: 2-Fluorobiphenyl	75.5	0	15-121		%Rec	1	12/2/2022 7:30:00 PM
1718-51-0	Surr: 4-Terphenyl-d14	93.0	0	35.7-126		%Rec	1	12/2/2022 7:30:00 PM
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
71-43-2	Benzene	ND	0.0095	0.025		mg/Kg	1	11/18/2022 5:00:44 PM
108-88-3	Toluene	ND	0.0064	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
100-41-4	Ethylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	0.028	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
95-63-6	1,2,4-Trimethylbenzene	ND	0.0070	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
108-67-8	1,3,5-Trimethylbenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	0.011	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	0.019	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
91-20-3	Naphthalene	ND	0.018	0.099		mg/Kg	1	11/18/2022 5:00:44 PM
90-12-0	1-Methylnaphthalene	ND	0.057	0.20		mg/Kg	1	11/18/2022 5:00:44 PM
91-57-6	2-Methylnaphthalene	ND	0.046	0.20		mg/Kg	1	11/18/2022 5:00:44 PM
67-64-1	Acetone	ND	0.16	0.74		mg/Kg	1	11/18/2022 5:00:44 PM
108-86-1	Bromobenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
75-27-4	Bromodichloromethane	ND	0.0063	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
75-25-2	Bromoform	ND	0.012	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
74-83-9	Bromomethane	ND	0.082	0.15		mg/Kg	1	11/18/2022 5:00:44 PM
78-93-3	2-Butanone	ND	0.21	0.50		mg/Kg	1	11/18/2022 5:00:44 PM
75-15-0	Carbon disulfide	ND	0.020	0.50		mg/Kg	1	11/18/2022 5:00:44 PM
56-23-5	Carbon tetrachloride	ND	0.0055	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
108-90-7	Chlorobenzene	ND	0.0089	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
75-00-3	Chloroethane	ND	0.019	0.099		mg/Kg	1	11/18/2022 5:00:44 PM
67-66-3	Chloroform	ND	0.0070	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
74-87-3	Chloromethane	ND	0.017	0.15		mg/Kg	1	11/18/2022 5:00:44 PM
95-49-8	2-Chlorotoluene	ND	0.0066	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
106-43-4	4-Chlorotoluene	ND	0.026	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
156-59-2	cis-1,2-DCE	ND	0.025	0.050		mg/Kg	1	11/18/2022 5:00:44 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA7
Project: Bisti LF **Collection Date:** 11/11/2022 11:34:00 AM
Lab ID: 2211751-007 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
10061-01-5	cis-1,3-Dichloropropene	ND	0.0074	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.021	0.099		mg/Kg	1	11/18/2022 5:00:44 PM
124-48-1	Dibromochloromethane	ND	0.0079	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
74-95-3	Dibromomethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
95-50-1	1,2-Dichlorobenzene	ND	0.010	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
541-73-1	1,3-Dichlorobenzene	ND	0.0094	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
106-46-7	1,4-Dichlorobenzene	ND	0.013	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
75-71-8	Dichlorodifluoromethane	ND	0.019	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
75-34-3	1,1-Dichloroethane	ND	0.014	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
75-35-4	1,1-Dichloroethene	ND	0.011	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
78-87-5	1,2-Dichloropropane	ND	0.0096	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
142-28-9	1,3-Dichloropropane	ND	0.011	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
594-20-7	2,2-Dichloropropane	ND	0.0070	0.099		mg/Kg	1	11/18/2022 5:00:44 PM
563-58-6	1,1-Dichloropropene	ND	0.0060	0.099		mg/Kg	1	11/18/2022 5:00:44 PM
87-68-3	Hexachlorobutadiene	ND	0.034	0.099		mg/Kg	1	11/18/2022 5:00:44 PM
591-78-6	2-Hexanone	ND	0.022	0.50		mg/Kg	1	11/18/2022 5:00:44 PM
98-82-8	Isopropylbenzene	ND	0.0092	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
99-87-6	4-Isopropyltoluene	ND	0.013	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
108-10-1	4-Methyl-2-pentanone	ND	0.058	0.50		mg/Kg	1	11/18/2022 5:00:44 PM
75-09-2	Methylene chloride	ND	0.036	0.15		mg/Kg	1	11/18/2022 5:00:44 PM
104-51-8	n-Butylbenzene	ND	0.013	0.15		mg/Kg	1	11/18/2022 5:00:44 PM
103-65-1	n-Propylbenzene	ND	0.0080	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
135-98-8	sec-Butylbenzene	ND	0.041	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
100-42-5	Styrene	ND	0.0068	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
98-06-6	tert-Butylbenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0073	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.016	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
127-18-4	Tetrachloroethene (PCE)	ND	0.014	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
156-60-5	trans-1,2-DCE	ND	0.0096	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
10061-02-6	trans-1,3-Dichloropropene	ND	0.012	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
87-61-6	1,2,3-Trichlorobenzene	ND	0.0077	0.099		mg/Kg	1	11/18/2022 5:00:44 PM
120-82-1	1,2,4-Trichlorobenzene	ND	0.017	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
71-55-6	1,1,1-Trichloroethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
79-00-5	1,1,2-Trichloroethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
79-01-6	Trichloroethene (TCE)	ND	0.0097	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
75-69-4	Trichlorofluoromethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
96-18-4	1,2,3-Trichloropropane	ND	0.021	0.099		mg/Kg	1	11/18/2022 5:00:44 PM
75-01-4	Vinyl chloride	ND	0.0094	0.050		mg/Kg	1	11/18/2022 5:00:44 PM
1330-20-7	Xylenes, Total	ND	0.026	0.099		mg/Kg	1	11/18/2022 5:00:44 PM
1868-53-7	Surr: Dibromofluoromethane	119		70-130		%Rec	1	11/18/2022 5:00:44 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	106		70-130		%Rec	1	11/18/2022 5:00:44 PM
2037-26-5	Surr: Toluene-d8	112		70-130		%Rec	1	11/18/2022 5:00:44 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA7
Project: Bisti LF **Collection Date:** 11/11/2022 11:34:00 AM
Lab ID: 2211751-007 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
460-00-4	Surr: 4-Bromofluorobenzene	96.0		70-130		%Rec	1	11/18/2022 5:00:44 PM
SM4500H+B/EPA 9040C								Analyst: **SNS**
pH	pH	8.82				pH Units	1	11/28/2022 4:12:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA8
Project: Bisti LF **Collection Date:** 11/11/2022 11:36:00 AM
Lab ID: 2211751-008 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8082A: PCB'S								Analyst: **SB**
12674-11-2	Aroclor 1016	ND	0.013	0.016		mg/Kg	1	11/29/2022 8:39:34 PM
11104-28-2	Aroclor 1221	ND	0.0042	0.016		mg/Kg	1	11/29/2022 8:39:34 PM
11141-16-5	Aroclor 1232	ND	0.016	0.016		mg/Kg	1	11/29/2022 8:39:34 PM
53469-21-9	Aroclor 1242	ND	0.0086	0.016		mg/Kg	1	11/29/2022 8:39:34 PM
12672-29-6	Aroclor 1248	ND	0.0097	0.016		mg/Kg	1	11/29/2022 8:39:34 PM
11097-69-1	Aroclor 1254	ND	0.0042	0.016		mg/Kg	1	11/29/2022 8:39:34 PM
11096-82-5	Aroclor 1260	ND	0.015	0.016		mg/Kg	1	11/29/2022 8:39:34 PM
2051-24-3	Surr: Decachlorobiphenyl	93.2	0	17.2-115		%Rec	1	11/29/2022 8:39:34 PM
877-09-8	Surr: Tetrachloro-m-xylene	88.8	0	15-110		%Rec	1	11/29/2022 8:39:34 PM
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS								Analyst: **DGH**
TPH-DRO	Diesel Range Organics (DRO)	ND	11	14		mg/Kg	1	11/22/2022 9:32:32 PM
TPH-MRO	Motor Oil Range Organics (MRO)	ND	27	48		mg/Kg	1	11/22/2022 9:32:32 PM
117-84-0	Surr: DNOP	109	0	21-129		%Rec	1	11/22/2022 9:32:32 PM
EPA METHOD 8015D: GASOLINE RANGE								Analyst: **CCM**
TPH-GRO	Gasoline Range Organics (GRO)	ND	1.5	4.9		mg/Kg	1	11/21/2022 10:09:00 PM
460-00-4	Surr: BFB	122	0	37.7-212		%Rec	1	11/21/2022 10:09:00 PM
EPA METHOD 300.0: ANIONS								Analyst: **JMT**
16984-48-8	Fluoride	1.7	0.30	0.30		mg/Kg	1	11/22/2022 10:41:49 PM
16887-00-6	Chloride	120	30	30		mg/Kg	20	11/23/2022 10:46:53 AM
7727-37-9	Nitrogen, Nitrate (As N)	11	0.30	0.30		mg/Kg	1	11/22/2022 10:41:49 PM
14808-79-8	Sulfate	180	30	30		mg/Kg	20	11/23/2022 10:46:53 AM
EPA METHOD 6020A: TOTAL METALS								Analyst: **ELS**
7440-38-2	Arsenic	2.1	0.25	0.49		mg/Kg	5	11/20/2022 1:36:08 PM
7440-61-1	Uranium	ND	0.25	0.49		mg/Kg	5	11/21/2022 1:54:28 PM
EPA METHOD 7471B: MERCURY								Analyst: **VP**
7439-97-6	Mercury	ND	0.032	0.032		mg/Kg	1	11/30/2022 4:35:09 PM
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-39-3	Barium	50	0.19	0.20		mg/Kg	2	11/22/2022 10:55:13 AM
7440-43-9	Cadmium	ND	0.19	0.20		mg/Kg	2	11/22/2022 10:55:13 AM
7440-70-2	Calcium	1500	44	98		mg/Kg	2	11/22/2022 10:55:13 AM
7440-47-3	Chromium	2.2	0.45	0.59		mg/Kg	2	11/22/2022 10:55:13 AM
7440-50-8	Copper	2.4	2.0	3.9	J	mg/Kg	2	11/22/2022 10:55:13 AM
7439-89-6	Iron	5300	280	490		mg/Kg	50	12/2/2022 10:16:26 AM
7439-92-1	Lead	2.3	1.1	2.0		mg/Kg	2	11/22/2022 10:55:13 AM
7439-95-4	Magnesium	1000	11	98		mg/Kg	2	11/22/2022 10:55:13 AM
7439-96-5	Manganese	120	0.33	0.39		mg/Kg	2	11/22/2022 10:55:13 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA8
Project: Bisti LF **Collection Date:** 11/11/2022 11:36:00 AM
Lab ID: 2211751-008 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-09-7	Potassium	720	55	98		mg/Kg	2	11/22/2022 10:55:13 AM
7782-49-2	Selenium	ND	4.3	4.9		mg/Kg	2	11/22/2022 1:02:28 PM
7440-22-4	Silver	ND	0.73	0.98		mg/Kg	2	11/22/2022 1:02:28 PM
7440-23-5	Sodium	310	44	98		mg/Kg	2	11/22/2022 10:55:13 AM
7440-66-6	Zinc	9.7	4.7	4.9		mg/Kg	2	11/22/2022 10:55:13 AM
SW8270C								Analyst: **DAM**
91-20-3	Naphthalene	ND	0.0025	0.0090		mg/Kg	1	12/5/2022 10:20:00 AM
90-12-0	1-Methylnaphthalene	ND	0.0025	0.0090		mg/Kg	1	12/5/2022 10:20:00 AM
91-57-6	2-Methylnaphthalene	ND	0.0029	0.0090		mg/Kg	1	12/5/2022 10:20:00 AM
50-32-8	Benzo(a)pyrene	ND	0.0076	0.018		mg/Kg	1	12/5/2022 10:20:00 AM
4165-60-0	Surr: Nitrobenzene-d5	82.5	0	15-137		%Rec	1	12/5/2022 10:20:00 AM
321-60-8	Surr: 2-Fluorobiphenyl	80.0	0	15-121		%Rec	1	12/5/2022 10:20:00 AM
1718-51-0	Surr: 4-Terphenyl-d14	103	0	35.7-126		%Rec	1	12/5/2022 10:20:00 AM
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
71-43-2	Benzene	ND	0.0095	0.025		mg/Kg	1	11/18/2022 5:27:49 PM
108-88-3	Toluene	ND	0.0064	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
100-41-4	Ethylbenzene	ND	0.012	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	0.028	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
95-63-6	1,2,4-Trimethylbenzene	ND	0.0070	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
108-67-8	1,3,5-Trimethylbenzene	ND	0.011	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	0.011	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	0.019	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
91-20-3	Naphthalene	ND	0.018	0.099		mg/Kg	1	11/18/2022 5:27:49 PM
90-12-0	1-Methylnaphthalene	ND	0.057	0.20		mg/Kg	1	11/18/2022 5:27:49 PM
91-57-6	2-Methylnaphthalene	ND	0.046	0.20		mg/Kg	1	11/18/2022 5:27:49 PM
67-64-1	Acetone	ND	0.16	0.74		mg/Kg	1	11/18/2022 5:27:49 PM
108-86-1	Bromobenzene	ND	0.010	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
75-27-4	Bromodichloromethane	ND	0.0063	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
75-25-2	Bromoform	ND	0.012	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
74-83-9	Bromomethane	ND	0.082	0.15		mg/Kg	1	11/18/2022 5:27:49 PM
78-93-3	2-Butanone	ND	0.21	0.49		mg/Kg	1	11/18/2022 5:27:49 PM
75-15-0	Carbon disulfide	ND	0.020	0.49		mg/Kg	1	11/18/2022 5:27:49 PM
56-23-5	Carbon tetrachloride	ND	0.0055	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
108-90-7	Chlorobenzene	ND	0.0089	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
75-00-3	Chloroethane	ND	0.018	0.099		mg/Kg	1	11/18/2022 5:27:49 PM
67-66-3	Chloroform	ND	0.0070	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
74-87-3	Chloromethane	ND	0.017	0.15		mg/Kg	1	11/18/2022 5:27:49 PM
95-49-8	2-Chlorotoluene	ND	0.0066	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
106-43-4	4-Chlorotoluene	ND	0.026	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
156-59-2	cis-1,2-DCE	ND	0.024	0.049		mg/Kg	1	11/18/2022 5:27:49 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA8
Project: Bisti LF **Collection Date:** 11/11/2022 11:36:00 AM
Lab ID: 2211751-008 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
10061-01-5	cis-1,3-Dichloropropene	ND	0.0073	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.021	0.099		mg/Kg	1	11/18/2022 5:27:49 PM
124-48-1	Dibromochloromethane	ND	0.0079	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
74-95-3	Dibromomethane	ND	0.012	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
95-50-1	1,2-Dichlorobenzene	ND	0.010	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
541-73-1	1,3-Dichlorobenzene	ND	0.0093	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
106-46-7	1,4-Dichlorobenzene	ND	0.013	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
75-71-8	Dichlorodifluoromethane	ND	0.019	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
75-34-3	1,1-Dichloroethane	ND	0.014	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
75-35-4	1,1-Dichloroethene	ND	0.011	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
78-87-5	1,2-Dichloropropane	ND	0.0096	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
142-28-9	1,3-Dichloropropane	ND	0.011	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
594-20-7	2,2-Dichloropropane	ND	0.0070	0.099		mg/Kg	1	11/18/2022 5:27:49 PM
563-58-6	1,1-Dichloropropene	ND	0.0060	0.099		mg/Kg	1	11/18/2022 5:27:49 PM
87-68-3	Hexachlorobutadiene	ND	0.034	0.099		mg/Kg	1	11/18/2022 5:27:49 PM
591-78-6	2-Hexanone	ND	0.022	0.49		mg/Kg	1	11/18/2022 5:27:49 PM
98-82-8	Isopropylbenzene	ND	0.0091	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
99-87-6	4-Isopropyltoluene	ND	0.013	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
108-10-1	4-Methyl-2-pentanone	ND	0.057	0.49		mg/Kg	1	11/18/2022 5:27:49 PM
75-09-2	Methylene chloride	ND	0.036	0.15		mg/Kg	1	11/18/2022 5:27:49 PM
104-51-8	n-Butylbenzene	ND	0.013	0.15		mg/Kg	1	11/18/2022 5:27:49 PM
103-65-1	n-Propylbenzene	ND	0.0080	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
135-98-8	sec-Butylbenzene	ND	0.041	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
100-42-5	Styrene	ND	0.0067	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
98-06-6	tert-Butylbenzene	ND	0.011	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0072	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.016	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
127-18-4	Tetrachloroethene (PCE)	ND	0.014	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
156-60-5	trans-1,2-DCE	ND	0.0095	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
10061-02-6	trans-1,3-Dichloropropene	ND	0.012	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
87-61-6	1,2,3-Trichlorobenzene	ND	0.0076	0.099		mg/Kg	1	11/18/2022 5:27:49 PM
120-82-1	1,2,4-Trichlorobenzene	ND	0.017	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
71-55-6	1,1,1-Trichloroethane	ND	0.011	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
79-00-5	1,1,2-Trichloroethane	ND	0.012	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
79-01-6	Trichloroethene (TCE)	ND	0.0097	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
75-69-4	Trichlorofluoromethane	ND	0.011	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
96-18-4	1,2,3-Trichloropropane	ND	0.021	0.099		mg/Kg	1	11/18/2022 5:27:49 PM
75-01-4	Vinyl chloride	ND	0.0094	0.049		mg/Kg	1	11/18/2022 5:27:49 PM
1330-20-7	Xylenes, Total	ND	0.026	0.099		mg/Kg	1	11/18/2022 5:27:49 PM
1868-53-7	Surr: Dibromofluoromethane	128		70-130		%Rec	1	11/18/2022 5:27:49 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	109		70-130		%Rec	1	11/18/2022 5:27:49 PM
2037-26-5	Surr: Toluene-d8	109		70-130		%Rec	1	11/18/2022 5:27:49 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA8
Project: Bisti LF **Collection Date:** 11/11/2022 11:36:00 AM
Lab ID: 2211751-008 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
460-00-4	Surr: 4-Bromofluorobenzene	97.9		70-130		%Rec	1	11/18/2022 5:27:49 PM
SM4500H+B/EPA 9040C								Analyst: **SNS**
pH	pH	8.41				pH Units	1	11/28/2022 4:12:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA9
Project: Bisti LF **Collection Date:** 11/11/2022 11:45:00 AM
Lab ID: 2211751-009 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8082A: PCB'S								Analyst: **SB**
12674-11-2	Aroclor 1016	ND	0.013	0.016		mg/Kg	1	11/29/2022 9:16:42 PM
11104-28-2	Aroclor 1221	ND	0.0042	0.016		mg/Kg	1	11/29/2022 9:16:42 PM
11141-16-5	Aroclor 1232	ND	0.016	0.016		mg/Kg	1	11/29/2022 9:16:42 PM
53469-21-9	Aroclor 1242	ND	0.0086	0.016		mg/Kg	1	11/29/2022 9:16:42 PM
12672-29-6	Aroclor 1248	ND	0.0096	0.016		mg/Kg	1	11/29/2022 9:16:42 PM
11097-69-1	Aroclor 1254	ND	0.0042	0.016		mg/Kg	1	11/29/2022 9:16:42 PM
11096-82-5	Aroclor 1260	ND	0.015	0.016		mg/Kg	1	11/29/2022 9:16:42 PM
2051-24-3	Surr: Decachlorobiphenyl	96.4	0	17.2-115		%Rec	1	11/29/2022 9:16:42 PM
877-09-8	Surr: Tetrachloro-m-xylene	92.8	0	15-110		%Rec	1	11/29/2022 9:16:42 PM
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS								Analyst: **DGH**
TPH-DRO	Diesel Range Organics (DRO)	ND	11	15		mg/Kg	1	11/22/2022 9:42:54 PM
TPH-MRO	Motor Oil Range Organics (MRO)	ND	28	50		mg/Kg	1	11/22/2022 9:42:54 PM
117-84-0	Surr: DNOP	112	0	21-129		%Rec	1	11/22/2022 9:42:54 PM
EPA METHOD 8015D: GASOLINE RANGE								Analyst: **CCM**
TPH-GRO	Gasoline Range Organics (GRO)	ND	1.5	5.0		mg/Kg	1	11/21/2022 10:29:00 PM
460-00-4	Surr: BFB	122	0	37.7-212		%Rec	1	11/21/2022 10:29:00 PM
EPA METHOD 300.0: ANIONS								Analyst: **JMT**
16984-48-8	Fluoride	1.5	0.30	0.30		mg/Kg	1	11/22/2022 10:54:10 PM
16887-00-6	Chloride	940	30	30		mg/Kg	20	11/23/2022 10:59:18 AM
7727-37-9	Nitrogen, Nitrate (As N)	31	6.0	6.0		mg/Kg	20	11/23/2022 10:59:18 AM
14808-79-8	Sulfate	1700	30	30		mg/Kg	20	11/23/2022 10:59:18 AM
EPA METHOD 6020A: TOTAL METALS								Analyst: **ELS**
7440-38-2	Arsenic	2.8	0.25	0.49		mg/Kg	5	11/20/2022 1:40:17 PM
7440-61-1	Uranium	0.32	0.25	0.49	J	mg/Kg	5	11/21/2022 1:58:37 PM
EPA METHOD 7471B: MERCURY								Analyst: **VP**
7439-97-6	Mercury	ND	0.033	0.033		mg/Kg	1	11/30/2022 4:37:17 PM
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-39-3	Barium	120	0.19	0.20		mg/Kg	2	11/22/2022 10:57:06 AM
7440-43-9	Cadmium	ND	0.19	0.20		mg/Kg	2	11/22/2022 10:57:06 AM
7440-70-2	Calcium	3000	44	98		mg/Kg	2	11/22/2022 10:57:06 AM
7440-47-3	Chromium	3.4	0.45	0.59		mg/Kg	2	11/22/2022 10:57:06 AM
7440-50-8	Copper	3.1	2.0	3.9	J	mg/Kg	2	11/22/2022 10:57:06 AM
7439-89-6	Iron	7700	280	490		mg/Kg	50	12/2/2022 10:17:55 AM
7439-92-1	Lead	2.6	1.1	2.0		mg/Kg	2	11/22/2022 10:57:06 AM
7439-95-4	Magnesium	1400	11	98		mg/Kg	2	11/22/2022 10:57:06 AM
7439-96-5	Manganese	160	0.33	0.39		mg/Kg	2	11/22/2022 10:57:06 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA9
Project: Bisti LF **Collection Date:** 11/11/2022 11:45:00 AM
Lab ID: 2211751-009 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-09-7	Potassium	1200	55	98		mg/Kg	2	11/22/2022 10:57:06 AM
7782-49-2	Selenium	ND	4.3	4.9		mg/Kg	2	11/22/2022 1:03:43 PM
7440-22-4	Silver	ND	0.74	0.98		mg/Kg	2	11/22/2022 1:03:43 PM
7440-23-5	Sodium	2600	44	98		mg/Kg	2	11/22/2022 10:57:06 AM
7440-66-6	Zinc	13	4.7	4.9		mg/Kg	2	11/22/2022 10:57:06 AM
SW8270C								Analyst: **DAM**
91-20-3	Naphthalene	ND	0.0026	0.0094		mg/Kg	1	12/5/2022 11:05:00 AM
90-12-0	1-Methylnaphthalene	ND	0.0026	0.0094		mg/Kg	1	12/5/2022 11:05:00 AM
91-57-6	2-Methylnaphthalene	ND	0.0030	0.0094		mg/Kg	1	12/5/2022 11:05:00 AM
50-32-8	Benzo(a)pyrene	ND	0.0079	0.019		mg/Kg	1	12/5/2022 11:05:00 AM
4165-60-0	Surr: Nitrobenzene-d5	83.0	0	15-137		%Rec	1	12/5/2022 11:05:00 AM
321-60-8	Surr: 2-Fluorobiphenyl	78.5	0	15-121		%Rec	1	12/5/2022 11:05:00 AM
1718-51-0	Surr: 4-Terphenyl-d14	105	0	35.7-126		%Rec	1	12/5/2022 11:05:00 AM
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
71-43-2	Benzene	ND	0.0096	0.025		mg/Kg	1	11/18/2022 5:54:51 PM
108-88-3	Toluene	ND	0.0064	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
100-41-4	Ethylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	0.028	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
95-63-6	1,2,4-Trimethylbenzene	ND	0.0070	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
108-67-8	1,3,5-Trimethylbenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	0.011	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	0.020	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
91-20-3	Naphthalene	ND	0.019	0.10		mg/Kg	1	11/18/2022 5:54:51 PM
90-12-0	1-Methylnaphthalene	ND	0.057	0.20		mg/Kg	1	11/18/2022 5:54:51 PM
91-57-6	2-Methylnaphthalene	ND	0.046	0.20		mg/Kg	1	11/18/2022 5:54:51 PM
67-64-1	Acetone	ND	0.16	0.75		mg/Kg	1	11/18/2022 5:54:51 PM
108-86-1	Bromobenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
75-27-4	Bromodichloromethane	ND	0.0063	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
75-25-2	Bromoform	ND	0.012	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
74-83-9	Bromomethane	ND	0.082	0.15		mg/Kg	1	11/18/2022 5:54:51 PM
78-93-3	2-Butanone	ND	0.22	0.50		mg/Kg	1	11/18/2022 5:54:51 PM
75-15-0	Carbon disulfide	ND	0.020	0.50		mg/Kg	1	11/18/2022 5:54:51 PM
56-23-5	Carbon tetrachloride	ND	0.0055	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
108-90-7	Chlorobenzene	ND	0.0089	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
75-00-3	Chloroethane	ND	0.019	0.10		mg/Kg	1	11/18/2022 5:54:51 PM
67-66-3	Chloroform	ND	0.0071	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
74-87-3	Chloromethane	ND	0.017	0.15		mg/Kg	1	11/18/2022 5:54:51 PM
95-49-8	2-Chlorotoluene	ND	0.0067	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
106-43-4	4-Chlorotoluene	ND	0.026	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
156-59-2	cis-1,2-DCE	ND	0.025	0.050		mg/Kg	1	11/18/2022 5:54:51 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA9
Project: Bisti LF **Collection Date:** 11/11/2022 11:45:00 AM
Lab ID: 2211751-009 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
10061-01-5	cis-1,3-Dichloropropene	ND	0.0074	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.021	0.10		mg/Kg	1	11/18/2022 5:54:51 PM
124-48-1	Dibromochloromethane	ND	0.0080	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
74-95-3	Dibromomethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
95-50-1	1,2-Dichlorobenzene	ND	0.010	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
541-73-1	1,3-Dichlorobenzene	ND	0.0094	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
106-46-7	1,4-Dichlorobenzene	ND	0.013	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
75-71-8	Dichlorodifluoromethane	ND	0.019	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
75-34-3	1,1-Dichloroethane	ND	0.014	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
75-35-4	1,1-Dichloroethene	ND	0.011	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
78-87-5	1,2-Dichloropropane	ND	0.0097	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
142-28-9	1,3-Dichloropropane	ND	0.011	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
594-20-7	2,2-Dichloropropane	ND	0.0071	0.10		mg/Kg	1	11/18/2022 5:54:51 PM
563-58-6	1,1-Dichloropropene	ND	0.0060	0.10		mg/Kg	1	11/18/2022 5:54:51 PM
87-68-3	Hexachlorobutadiene	ND	0.034	0.10		mg/Kg	1	11/18/2022 5:54:51 PM
591-78-6	2-Hexanone	ND	0.022	0.50		mg/Kg	1	11/18/2022 5:54:51 PM
98-82-8	Isopropylbenzene	ND	0.0092	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
99-87-6	4-Isopropyltoluene	ND	0.013	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
108-10-1	4-Methyl-2-pentanone	ND	0.058	0.50		mg/Kg	1	11/18/2022 5:54:51 PM
75-09-2	Methylene chloride	ND	0.036	0.15		mg/Kg	1	11/18/2022 5:54:51 PM
104-51-8	n-Butylbenzene	ND	0.013	0.15		mg/Kg	1	11/18/2022 5:54:51 PM
103-65-1	n-Propylbenzene	ND	0.0080	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
135-98-8	sec-Butylbenzene	ND	0.041	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
100-42-5	Styrene	ND	0.0068	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
98-06-6	tert-Butylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0073	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.016	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
127-18-4	Tetrachloroethene (PCE)	ND	0.014	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
156-60-5	trans-1,2-DCE	ND	0.0096	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
10061-02-6	trans-1,3-Dichloropropene	ND	0.012	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
87-61-6	1,2,3-Trichlorobenzene	ND	0.0077	0.10		mg/Kg	1	11/18/2022 5:54:51 PM
120-82-1	1,2,4-Trichlorobenzene	ND	0.017	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
71-55-6	1,1,1-Trichloroethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
79-00-5	1,1,2-Trichloroethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
79-01-6	Trichloroethene (TCE)	ND	0.0098	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
75-69-4	Trichlorofluoromethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
96-18-4	1,2,3-Trichloropropane	ND	0.021	0.10		mg/Kg	1	11/18/2022 5:54:51 PM
75-01-4	Vinyl chloride	ND	0.0095	0.050		mg/Kg	1	11/18/2022 5:54:51 PM
1330-20-7	Xylenes, Total	ND	0.026	0.10		mg/Kg	1	11/18/2022 5:54:51 PM
1868-53-7	Surr: Dibromofluoromethane	112		70-130		%Rec	1	11/18/2022 5:54:51 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	93.7		70-130		%Rec	1	11/18/2022 5:54:51 PM
2037-26-5	Surr: Toluene-d8	108		70-130		%Rec	1	11/18/2022 5:54:51 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA9
Project: Bisti LF **Collection Date:** 11/11/2022 11:45:00 AM
Lab ID: 2211751-009 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
460-00-4	Surr: 4-Bromofluorobenzene	97.5		70-130		%Rec	1	11/18/2022 5:54:51 PM
SM4500H+B/EPA 9040C								Analyst: **SNS**
pH	pH	9.03				pH Units	1	11/28/2022 4:12:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA10
Project: Bisti LF **Collection Date:** 11/11/2022 11:50:00 PM
Lab ID: 2211751-010 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8082A: PCB'S								Analyst: **SB**
12674-11-2	Aroclor 1016	ND	0.013	0.016		mg/Kg	1	11/29/2022 9:53:51 PM
11104-28-2	Aroclor 1221	ND	0.0042	0.016		mg/Kg	1	11/29/2022 9:53:51 PM
11141-16-5	Aroclor 1232	ND	0.016	0.016		mg/Kg	1	11/29/2022 9:53:51 PM
53469-21-9	Aroclor 1242	ND	0.0086	0.016		mg/Kg	1	11/29/2022 9:53:51 PM
12672-29-6	Aroclor 1248	ND	0.0097	0.016		mg/Kg	1	11/29/2022 9:53:51 PM
11097-69-1	Aroclor 1254	ND	0.0042	0.016		mg/Kg	1	11/29/2022 9:53:51 PM
11096-82-5	Aroclor 1260	ND	0.015	0.016		mg/Kg	1	11/29/2022 9:53:51 PM
2051-24-3	Surr: Decachlorobiphenyl	86.8	0	17.2-115		%Rec	1	11/29/2022 9:53:51 PM
877-09-8	Surr: Tetrachloro-m-xylene	82.4	0	15-110		%Rec	1	11/29/2022 9:53:51 PM
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS								Analyst: **DGH**
TPH-DRO	Diesel Range Organics (DRO)	ND	11	14		mg/Kg	1	11/22/2022 9:53:16 PM
TPH-MRO	Motor Oil Range Organics (MRO)	ND	26	47		mg/Kg	1	11/22/2022 9:53:16 PM
117-84-0	Surr: DNOP	102	0	21-129		%Rec	1	11/22/2022 9:53:16 PM
EPA METHOD 8015D: GASOLINE RANGE								Analyst: **CCM**
TPH-GRO	Gasoline Range Organics (GRO)	ND	1.5	5.0		mg/Kg	1	11/21/2022 10:49:00 PM
460-00-4	Surr: BFB	131	0	37.7-212		%Rec	1	11/21/2022 10:49:00 PM
EPA METHOD 300.0: ANIONS								Analyst: **JMT**
16984-48-8	Fluoride	1.5	0.30	0.30		mg/Kg	1	11/22/2022 11:06:30 PM
16887-00-6	Chloride	400	30	30		mg/Kg	20	11/23/2022 11:11:43 AM
7727-37-9	Nitrogen, Nitrate (As N)	31	6.0	6.0		mg/Kg	20	11/23/2022 11:11:43 AM
14808-79-8	Sulfate	1100	30	30		mg/Kg	20	11/23/2022 11:11:43 AM
EPA METHOD 6020A: TOTAL METALS								Analyst: **ELS**
7440-38-2	Arsenic	2.4	0.25	0.49		mg/Kg	5	11/20/2022 1:44:26 PM
7440-61-1	Uranium	0.29	0.25	0.49	J	mg/Kg	5	11/21/2022 2:02:46 PM
EPA METHOD 7471B: MERCURY								Analyst: **VP**
7439-97-6	Mercury	ND	0.033	0.033		mg/Kg	1	11/30/2022 4:39:26 PM
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-39-3	Barium	140	0.19	0.20		mg/Kg	2	11/22/2022 10:58:54 AM
7440-43-9	Cadmium	ND	0.19	0.20		mg/Kg	2	11/22/2022 10:58:54 AM
7440-70-2	Calcium	4200	44	99		mg/Kg	2	11/22/2022 10:58:54 AM
7440-47-3	Chromium	3.2	0.45	0.59		mg/Kg	2	11/22/2022 10:58:54 AM
7440-50-8	Copper	3.1	2.0	3.9	J	mg/Kg	2	11/22/2022 10:58:54 AM
7439-89-6	Iron	7000	280	490		mg/Kg	50	12/2/2022 10:24:57 AM
7439-92-1	Lead	2.5	1.1	2.0		mg/Kg	2	11/22/2022 10:58:54 AM
7439-95-4	Magnesium	1300	11	99		mg/Kg	2	11/22/2022 10:58:54 AM
7439-96-5	Manganese	150	0.33	0.39		mg/Kg	2	11/22/2022 10:58:54 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA10
Project: Bisti LF **Collection Date:** 11/11/2022 11:50:00 PM
Lab ID: 2211751-010 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-09-7	Potassium	1100	55	99		mg/Kg	2	11/22/2022 10:58:54 AM
7782-49-2	Selenium	ND	4.3	4.9		mg/Kg	2	11/22/2022 1:05:00 PM
7440-22-4	Silver	ND	0.74	0.99		mg/Kg	2	11/22/2022 1:05:00 PM
7440-23-5	Sodium	2000	44	99		mg/Kg	2	11/22/2022 10:58:54 AM
7440-66-6	Zinc	13	4.7	4.9		mg/Kg	2	11/22/2022 10:58:54 AM
SW8270C								Analyst: **DAM**
91-20-3	Naphthalene	ND	0.0027	0.0099		mg/Kg	1	12/5/2022 11:51:00 AM
90-12-0	1-Methylnaphthalene	ND	0.0028	0.0099		mg/Kg	1	12/5/2022 11:51:00 AM
91-57-6	2-Methylnaphthalene	ND	0.0031	0.0099		mg/Kg	1	12/5/2022 11:51:00 AM
50-32-8	Benzo(a)pyrene	ND	0.0082	0.020		mg/Kg	1	12/5/2022 11:51:00 AM
4165-60-0	Surr: Nitrobenzene-d5	90.0	0	15-137		%Rec	1	12/5/2022 11:51:00 AM
321-60-8	Surr: 2-Fluorobiphenyl	84.5	0	15-121		%Rec	1	12/5/2022 11:51:00 AM
1718-51-0	Surr: 4-Terphenyl-d14	106	0	35.7-126		%Rec	1	12/5/2022 11:51:00 AM
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
71-43-2	Benzene	ND	0.0095	0.025		mg/Kg	1	11/18/2022 6:21:56 PM
108-88-3	Toluene	ND	0.0064	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
100-41-4	Ethylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	0.028	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
95-63-6	1,2,4-Trimethylbenzene	ND	0.0070	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
108-67-8	1,3,5-Trimethylbenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	0.011	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	0.020	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
91-20-3	Naphthalene	ND	0.018	0.099		mg/Kg	1	11/18/2022 6:21:56 PM
90-12-0	1-Methylnaphthalene	ND	0.057	0.20		mg/Kg	1	11/18/2022 6:21:56 PM
91-57-6	2-Methylnaphthalene	ND	0.046	0.20		mg/Kg	1	11/18/2022 6:21:56 PM
67-64-1	Acetone	ND	0.16	0.74		mg/Kg	1	11/18/2022 6:21:56 PM
108-86-1	Bromobenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
75-27-4	Bromodichloromethane	ND	0.0063	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
75-25-2	Bromoform	ND	0.012	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
74-83-9	Bromomethane	ND	0.082	0.15		mg/Kg	1	11/18/2022 6:21:56 PM
78-93-3	2-Butanone	ND	0.22	0.50		mg/Kg	1	11/18/2022 6:21:56 PM
75-15-0	Carbon disulfide	ND	0.020	0.50		mg/Kg	1	11/18/2022 6:21:56 PM
56-23-5	Carbon tetrachloride	ND	0.0055	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
108-90-7	Chlorobenzene	ND	0.0089	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
75-00-3	Chloroethane	ND	0.019	0.099		mg/Kg	1	11/18/2022 6:21:56 PM
67-66-3	Chloroform	ND	0.0070	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
74-87-3	Chloromethane	ND	0.017	0.15		mg/Kg	1	11/18/2022 6:21:56 PM
95-49-8	2-Chlorotoluene	ND	0.0066	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
106-43-4	4-Chlorotoluene	ND	0.026	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
156-59-2	cis-1,2-DCE	ND	0.025	0.050		mg/Kg	1	11/18/2022 6:21:56 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA10
Project: Bisti LF **Collection Date:** 11/11/2022 11:50:00 PM
Lab ID: 2211751-010 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
10061-01-5	cis-1,3-Dichloropropene	ND	0.0074	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.021	0.099		mg/Kg	1	11/18/2022 6:21:56 PM
124-48-1	Dibromochloromethane	ND	0.0079	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
74-95-3	Dibromomethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
95-50-1	1,2-Dichlorobenzene	ND	0.010	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
541-73-1	1,3-Dichlorobenzene	ND	0.0094	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
106-46-7	1,4-Dichlorobenzene	ND	0.013	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
75-71-8	Dichlorodifluoromethane	ND	0.019	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
75-34-3	1,1-Dichloroethane	ND	0.014	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
75-35-4	1,1-Dichloroethene	ND	0.011	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
78-87-5	1,2-Dichloropropane	ND	0.0097	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
142-28-9	1,3-Dichloropropane	ND	0.011	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
594-20-7	2,2-Dichloropropane	ND	0.0071	0.099		mg/Kg	1	11/18/2022 6:21:56 PM
563-58-6	1,1-Dichloropropene	ND	0.0060	0.099		mg/Kg	1	11/18/2022 6:21:56 PM
87-68-3	Hexachlorobutadiene	ND	0.034	0.099		mg/Kg	1	11/18/2022 6:21:56 PM
591-78-6	2-Hexanone	ND	0.022	0.50		mg/Kg	1	11/18/2022 6:21:56 PM
98-82-8	Isopropylbenzene	ND	0.0092	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
99-87-6	4-Isopropyltoluene	ND	0.013	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
108-10-1	4-Methyl-2-pentanone	ND	0.058	0.50		mg/Kg	1	11/18/2022 6:21:56 PM
75-09-2	Methylene chloride	ND	0.036	0.15		mg/Kg	1	11/18/2022 6:21:56 PM
104-51-8	n-Butylbenzene	ND	0.013	0.15		mg/Kg	1	11/18/2022 6:21:56 PM
103-65-1	n-Propylbenzene	ND	0.0080	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
135-98-8	sec-Butylbenzene	ND	0.041	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
100-42-5	Styrene	ND	0.0068	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
98-06-6	tert-Butylbenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0073	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.016	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
127-18-4	Tetrachloroethene (PCE)	ND	0.014	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
156-60-5	trans-1,2-DCE	ND	0.0096	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
10061-02-6	trans-1,3-Dichloropropene	ND	0.012	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
87-61-6	1,2,3-Trichlorobenzene	ND	0.0077	0.099		mg/Kg	1	11/18/2022 6:21:56 PM
120-82-1	1,2,4-Trichlorobenzene	ND	0.017	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
71-55-6	1,1,1-Trichloroethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
79-00-5	1,1,2-Trichloroethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
79-01-6	Trichloroethene (TCE)	ND	0.0097	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
75-69-4	Trichlorofluoromethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
96-18-4	1,2,3-Trichloropropane	ND	0.021	0.099		mg/Kg	1	11/18/2022 6:21:56 PM
75-01-4	Vinyl chloride	ND	0.0095	0.050		mg/Kg	1	11/18/2022 6:21:56 PM
1330-20-7	Xylenes, Total	ND	0.026	0.099		mg/Kg	1	11/18/2022 6:21:56 PM
1868-53-7	Surr: Dibromofluoromethane	125		70-130		%Rec	1	11/18/2022 6:21:56 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	113		70-130		%Rec	1	11/18/2022 6:21:56 PM
2037-26-5	Surr: Toluene-d8	111		70-130		%Rec	1	11/18/2022 6:21:56 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA10
Project: Bisti LF **Collection Date:** 11/11/2022 11:50:00 PM
Lab ID: 2211751-010 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
460-00-4	Surr: 4-Bromofluorobenzene	94.8		70-130		%Rec	1	11/18/2022 6:21:56 PM
SM4500H+B/EPA 9040C								Analyst: **SNS**
pH	pH	9.60				pH Units	1	11/28/2022 4:12:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA11
Project: Bisti LF **Collection Date:** 11/11/2022 11:55:00 PM
Lab ID: 2211751-011 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8082A: PCB'S								Analyst: **SB**
12674-11-2	Aroclor 1016	ND	0.013	0.016		mg/Kg	1	11/29/2022 10:30:57 PM
11104-28-2	Aroclor 1221	ND	0.0043	0.016		mg/Kg	1	11/29/2022 10:30:57 PM
11141-16-5	Aroclor 1232	ND	0.016	0.016		mg/Kg	1	11/29/2022 10:30:57 PM
53469-21-9	Aroclor 1242	ND	0.0087	0.016		mg/Kg	1	11/29/2022 10:30:57 PM
12672-29-6	Aroclor 1248	ND	0.0097	0.016		mg/Kg	1	11/29/2022 10:30:57 PM
11097-69-1	Aroclor 1254	ND	0.0042	0.016		mg/Kg	1	11/29/2022 10:30:57 PM
11096-82-5	Aroclor 1260	ND	0.015	0.016		mg/Kg	1	11/29/2022 10:30:57 PM
2051-24-3	Surr: Decachlorobiphenyl	89.6	0	17.2-115		%Rec	1	11/29/2022 10:30:57 PM
877-09-8	Surr: Tetrachloro-m-xylene	89.6	0	15-110		%Rec	1	11/29/2022 10:30:57 PM
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS								Analyst: **DGH**
TPH-DRO	Diesel Range Organics (DRO)	ND	11	14		mg/Kg	1	11/22/2022 10:03:39 PM
TPH-MRO	Motor Oil Range Organics (MRO)	ND	26	47		mg/Kg	1	11/22/2022 10:03:39 PM
117-84-0	Surr: DNOP	82.7	0	21-129		%Rec	1	11/22/2022 10:03:39 PM
EPA METHOD 8015D: GASOLINE RANGE								Analyst: **CCM**
TPH-GRO	Gasoline Range Organics (GRO)	ND	1.5	5.0		mg/Kg	1	11/21/2022 11:08:00 PM
460-00-4	Surr: BFB	133	0	37.7-212		%Rec	1	11/21/2022 11:08:00 PM
EPA METHOD 300.0: ANIONS								Analyst: **JMT**
16984-48-8	Fluoride	1.4	0.30	0.30		mg/Kg	1	11/22/2022 11:18:51 PM
16887-00-6	Chloride	290	30	30		mg/Kg	20	11/23/2022 11:24:07 AM
7727-37-9	Nitrogen, Nitrate (As N)	25	6.0	6.0		mg/Kg	20	11/23/2022 11:24:07 AM
14808-79-8	Sulfate	1400	30	30		mg/Kg	20	11/23/2022 11:24:07 AM
EPA METHOD 6020A: TOTAL METALS								Analyst: **ELS**
7440-38-2	Arsenic	2.0	0.25	0.50		mg/Kg	5	11/20/2022 1:48:36 PM
7440-61-1	Uranium	0.28	0.25	0.50	J	mg/Kg	5	11/21/2022 2:06:55 PM
EPA METHOD 7471B: MERCURY								Analyst: **VP**
7439-97-6	Mercury	ND	0.032	0.032		mg/Kg	1	11/30/2022 3:26:30 PM
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-39-3	Barium	190	0.19	0.20		mg/Kg	2	11/22/2022 11:00:47 AM
7440-43-9	Cadmium	ND	0.19	0.20		mg/Kg	2	11/22/2022 11:00:47 AM
7440-70-2	Calcium	5300	45	100		mg/Kg	2	11/22/2022 11:00:47 AM
7440-47-3	Chromium	2.5	0.45	0.60		mg/Kg	2	11/22/2022 11:00:47 AM
7440-50-8	Copper	2.4	2.1	4.0	J	mg/Kg	2	11/22/2022 11:00:47 AM
7439-89-6	Iron	6000	290	500		mg/Kg	50	12/2/2022 10:26:25 AM
7439-92-1	Lead	2.8	1.1	2.0		mg/Kg	2	11/22/2022 11:00:47 AM
7439-95-4	Magnesium	1000	11	100		mg/Kg	2	11/22/2022 11:00:47 AM
7439-96-5	Manganese	110	0.33	0.40		mg/Kg	2	11/22/2022 11:00:47 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA11
Project: Bisti LF **Collection Date:** 11/11/2022 11:55:00 PM
Lab ID: 2211751-011 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-09-7	Potassium	890	56	100		mg/Kg	2	11/22/2022 11:00:47 AM
7782-49-2	Selenium	ND	4.4	5.0		mg/Kg	2	11/22/2022 1:06:16 PM
7440-22-4	Silver	ND	0.74	1.0		mg/Kg	2	11/22/2022 1:06:16 PM
7440-23-5	Sodium	1800	44	100		mg/Kg	2	11/22/2022 11:00:47 AM
7440-66-6	Zinc	10	4.7	5.0		mg/Kg	2	11/22/2022 11:00:47 AM
SW8270C								Analyst: **DAM**
91-20-3	Naphthalene	ND	0.0027	0.010		mg/Kg	1	12/5/2022 12:38:00 PM
90-12-0	1-Methylnaphthalene	ND	0.0028	0.010		mg/Kg	1	12/5/2022 12:38:00 PM
91-57-6	2-Methylnaphthalene	ND	0.0032	0.010		mg/Kg	1	12/5/2022 12:38:00 PM
50-32-8	Benzo(a)pyrene	ND	0.0083	0.020		mg/Kg	1	12/5/2022 12:38:00 PM
4165-60-0	Surr: Nitrobenzene-d5	91.5	0	15-137		%Rec	1	12/5/2022 12:38:00 PM
321-60-8	Surr: 2-Fluorobiphenyl	87.5	0	15-121		%Rec	1	12/5/2022 12:38:00 PM
1718-51-0	Surr: 4-Terphenyl-d14	109	0	35.7-126		%Rec	1	12/5/2022 12:38:00 PM
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
71-43-2	Benzene	ND	0.0096	0.025		mg/Kg	1	11/18/2022 6:48:55 PM
108-88-3	Toluene	ND	0.0064	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
100-41-4	Ethylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	0.028	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
95-63-6	1,2,4-Trimethylbenzene	ND	0.0070	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
108-67-8	1,3,5-Trimethylbenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	0.011	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	0.020	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
91-20-3	Naphthalene	ND	0.019	0.10		mg/Kg	1	11/18/2022 6:48:55 PM
90-12-0	1-Methylnaphthalene	ND	0.057	0.20		mg/Kg	1	11/18/2022 6:48:55 PM
91-57-6	2-Methylnaphthalene	ND	0.046	0.20		mg/Kg	1	11/18/2022 6:48:55 PM
67-64-1	Acetone	ND	0.16	0.75		mg/Kg	1	11/18/2022 6:48:55 PM
108-86-1	Bromobenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
75-27-4	Bromodichloromethane	ND	0.0063	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
75-25-2	Bromoform	ND	0.012	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
74-83-9	Bromomethane	ND	0.083	0.15		mg/Kg	1	11/18/2022 6:48:55 PM
78-93-3	2-Butanone	ND	0.22	0.50		mg/Kg	1	11/18/2022 6:48:55 PM
75-15-0	Carbon disulfide	ND	0.021	0.50		mg/Kg	1	11/18/2022 6:48:55 PM
56-23-5	Carbon tetrachloride	ND	0.0056	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
108-90-7	Chlorobenzene	ND	0.0090	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
75-00-3	Chloroethane	ND	0.019	0.10		mg/Kg	1	11/18/2022 6:48:55 PM
67-66-3	Chloroform	ND	0.0071	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
74-87-3	Chloromethane	ND	0.017	0.15		mg/Kg	1	11/18/2022 6:48:55 PM
95-49-8	2-Chlorotoluene	ND	0.0067	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
106-43-4	4-Chlorotoluene	ND	0.026	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
156-59-2	cis-1,2-DCE	ND	0.025	0.050		mg/Kg	1	11/18/2022 6:48:55 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA11
Project: Bisti LF **Collection Date:** 11/11/2022 11:55:00 PM
Lab ID: 2211751-011 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
10061-01-5	cis-1,3-Dichloropropene	ND	0.0074	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.022	0.10		mg/Kg	1	11/18/2022 6:48:55 PM
124-48-1	Dibromochloromethane	ND	0.0080	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
74-95-3	Dibromomethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
95-50-1	1,2-Dichlorobenzene	ND	0.010	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
541-73-1	1,3-Dichlorobenzene	ND	0.0094	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
106-46-7	1,4-Dichlorobenzene	ND	0.013	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
75-71-8	Dichlorodifluoromethane	ND	0.019	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
75-34-3	1,1-Dichloroethane	ND	0.015	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
75-35-4	1,1-Dichloroethene	ND	0.011	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
78-87-5	1,2-Dichloropropane	ND	0.0097	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
142-28-9	1,3-Dichloropropane	ND	0.011	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
594-20-7	2,2-Dichloropropane	ND	0.0071	0.10		mg/Kg	1	11/18/2022 6:48:55 PM
563-58-6	1,1-Dichloropropene	ND	0.0060	0.10		mg/Kg	1	11/18/2022 6:48:55 PM
87-68-3	Hexachlorobutadiene	ND	0.034	0.10		mg/Kg	1	11/18/2022 6:48:55 PM
591-78-6	2-Hexanone	ND	0.022	0.50		mg/Kg	1	11/18/2022 6:48:55 PM
98-82-8	Isopropylbenzene	ND	0.0093	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
99-87-6	4-Isopropyltoluene	ND	0.013	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
108-10-1	4-Methyl-2-pentanone	ND	0.058	0.50		mg/Kg	1	11/18/2022 6:48:55 PM
75-09-2	Methylene chloride	ND	0.036	0.15		mg/Kg	1	11/18/2022 6:48:55 PM
104-51-8	n-Butylbenzene	ND	0.013	0.15		mg/Kg	1	11/18/2022 6:48:55 PM
103-65-1	n-Propylbenzene	ND	0.0081	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
135-98-8	sec-Butylbenzene	ND	0.041	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
100-42-5	Styrene	ND	0.0068	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
98-06-6	tert-Butylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0073	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.016	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
127-18-4	Tetrachloroethene (PCE)	ND	0.014	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
156-60-5	trans-1,2-DCE	ND	0.0096	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
10061-02-6	trans-1,3-Dichloropropene	ND	0.012	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
87-61-6	1,2,3-Trichlorobenzene	ND	0.0077	0.10		mg/Kg	1	11/18/2022 6:48:55 PM
120-82-1	1,2,4-Trichlorobenzene	ND	0.017	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
71-55-6	1,1,1-Trichloroethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
79-00-5	1,1,2-Trichloroethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
79-01-6	Trichloroethene (TCE)	ND	0.0098	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
75-69-4	Trichlorofluoromethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
96-18-4	1,2,3-Trichloropropane	ND	0.021	0.10		mg/Kg	1	11/18/2022 6:48:55 PM
75-01-4	Vinyl chloride	ND	0.0095	0.050		mg/Kg	1	11/18/2022 6:48:55 PM
1330-20-7	Xylenes, Total	ND	0.026	0.10		mg/Kg	1	11/18/2022 6:48:55 PM
1868-53-7	Surr: Dibromofluoromethane	118		70-130		%Rec	1	11/18/2022 6:48:55 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	109		70-130		%Rec	1	11/18/2022 6:48:55 PM
2037-26-5	Surr: Toluene-d8	110		70-130		%Rec	1	11/18/2022 6:48:55 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA11
Project: Bisti LF **Collection Date:** 11/11/2022 11:55:00 PM
Lab ID: 2211751-011 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
460-00-4	Surr: 4-Bromofluorobenzene	96.5		70-130		%Rec	1	11/18/2022 6:48:55 PM
SM4500H+B/EPA 9040C								Analyst: **SNS**
pH	pH	9.39				pH Units	1	11/28/2022 4:12:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA12
Project: Bisti LF **Collection Date:** 11/11/2022 12:00:00 PM
Lab ID: 2211751-012 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8082A: PCB'S								Analyst: **SB**
12674-11-2	Aroclor 1016	ND	0.013	0.016		mg/Kg	1	11/29/2022 11:08:10 PM
11104-28-2	Aroclor 1221	ND	0.0043	0.016		mg/Kg	1	11/29/2022 11:08:10 PM
11141-16-5	Aroclor 1232	ND	0.016	0.016		mg/Kg	1	11/29/2022 11:08:10 PM
53469-21-9	Aroclor 1242	ND	0.0087	0.016		mg/Kg	1	11/29/2022 11:08:10 PM
12672-29-6	Aroclor 1248	ND	0.0097	0.016		mg/Kg	1	11/29/2022 11:08:10 PM
11097-69-1	Aroclor 1254	ND	0.0043	0.016		mg/Kg	1	11/29/2022 11:08:10 PM
11096-82-5	Aroclor 1260	ND	0.015	0.016		mg/Kg	1	11/29/2022 11:08:10 PM
2051-24-3	Surr: Decachlorobiphenyl	96.0	0	17.2-115		%Rec	1	11/29/2022 11:08:10 PM
877-09-8	Surr: Tetrachloro-m-xylene	92.8	0	15-110		%Rec	1	11/29/2022 11:08:10 PM
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS								Analyst: **DGH**
TPH-DRO	Diesel Range Organics (DRO)	ND	11	15		mg/Kg	1	11/22/2022 10:14:03 PM
TPH-MRO	Motor Oil Range Organics (MRO)	ND	28	49		mg/Kg	1	11/22/2022 10:14:03 PM
117-84-0	Surr: DNOP	108	0	21-129		%Rec	1	11/22/2022 10:14:03 PM
EPA METHOD 8015D: GASOLINE RANGE								Analyst: **CCM**
TPH-GRO	Gasoline Range Organics (GRO)	ND	1.5	4.9		mg/Kg	1	11/21/2022 11:28:00 PM
460-00-4	Surr: BFB	133	0	37.7-212		%Rec	1	11/21/2022 11:28:00 PM
EPA METHOD 300.0: ANIONS								Analyst: **JMT**
16984-48-8	Fluoride	1.4	0.30	0.30		mg/Kg	1	11/22/2022 11:31:12 PM
16887-00-6	Chloride	520	30	30		mg/Kg	20	11/23/2022 11:36:31 AM
7727-37-9	Nitrogen, Nitrate (As N)	25	6.0	6.0		mg/Kg	20	11/23/2022 11:36:31 AM
14808-79-8	Sulfate	1600	30	30		mg/Kg	20	11/23/2022 11:36:31 AM
EPA METHOD 6020A: TOTAL METALS								Analyst: **ELS**
7440-38-2	Arsenic	2.2	0.25	0.49		mg/Kg	5	11/20/2022 1:52:45 PM
7440-61-1	Uranium	0.26	0.25	0.49	J	mg/Kg	5	11/21/2022 2:27:44 PM
EPA METHOD 7471B: MERCURY								Analyst: **VP**
7439-97-6	Mercury	ND	0.033	0.033		mg/Kg	1	11/30/2022 3:28:37 PM
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-39-3	Barium	120	0.19	0.20		mg/Kg	2	11/22/2022 11:08:53 AM
7440-43-9	Cadmium	ND	0.19	0.20		mg/Kg	2	11/22/2022 11:08:53 AM
7440-70-2	Calcium	3700	44	99		mg/Kg	2	11/22/2022 11:08:53 AM
7440-47-3	Chromium	3.1	0.45	0.59		mg/Kg	2	11/22/2022 11:08:53 AM
7440-50-8	Copper	2.7	2.0	3.9	J	mg/Kg	2	11/22/2022 11:08:53 AM
7439-89-6	Iron	6200	280	490		mg/Kg	50	12/2/2022 10:27:52 AM
7439-92-1	Lead	1.7	1.1	2.0	J	mg/Kg	2	11/22/2022 11:08:53 AM
7439-95-4	Magnesium	1100	11	99		mg/Kg	2	11/22/2022 11:08:53 AM
7439-96-5	Manganese	110	0.33	0.39		mg/Kg	2	11/22/2022 11:08:53 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA12
Project: Bisti LF **Collection Date:** 11/11/2022 12:00:00 PM
Lab ID: 2211751-012 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-09-7	Potassium	950	55	99		mg/Kg	2	11/22/2022 11:08:53 AM
7782-49-2	Selenium	ND	4.3	4.9		mg/Kg	2	11/22/2022 1:07:32 PM
7440-22-4	Silver	ND	0.74	0.99		mg/Kg	2	11/22/2022 1:07:32 PM
7440-23-5	Sodium	2200	44	99		mg/Kg	2	11/22/2022 11:08:53 AM
7440-66-6	Zinc	11	4.7	4.9		mg/Kg	2	11/22/2022 11:08:53 AM
SW8270C								Analyst: **DAM**
91-20-3	Naphthalene	ND	0.0027	0.0098		mg/Kg	1	12/5/2022 1:25:00 PM
90-12-0	1-Methylnaphthalene	ND	0.0028	0.0098		mg/Kg	1	12/5/2022 1:25:00 PM
91-57-6	2-Methylnaphthalene	ND	0.0031	0.0098		mg/Kg	1	12/5/2022 1:25:00 PM
50-32-8	Benzo(a)pyrene	ND	0.0082	0.020		mg/Kg	1	12/5/2022 1:25:00 PM
4165-60-0	Surr: Nitrobenzene-d5	90.5	0	15-137		%Rec	1	12/5/2022 1:25:00 PM
321-60-8	Surr: 2-Fluorobiphenyl	86.5	0	15-121		%Rec	1	12/5/2022 1:25:00 PM
1718-51-0	Surr: 4-Terphenyl-d14	104	0	35.7-126		%Rec	1	12/5/2022 1:25:00 PM
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
71-43-2	Benzene	ND	0.0095	0.025		mg/Kg	1	11/18/2022 7:15:57 PM
108-88-3	Toluene	ND	0.0064	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
100-41-4	Ethylbenzene	ND	0.012	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	0.028	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
95-63-6	1,2,4-Trimethylbenzene	ND	0.0070	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
108-67-8	1,3,5-Trimethylbenzene	ND	0.011	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	0.011	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	0.019	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
91-20-3	Naphthalene	ND	0.018	0.099		mg/Kg	1	11/18/2022 7:15:57 PM
90-12-0	1-Methylnaphthalene	ND	0.057	0.20		mg/Kg	1	11/18/2022 7:15:57 PM
91-57-6	2-Methylnaphthalene	ND	0.046	0.20		mg/Kg	1	11/18/2022 7:15:57 PM
67-64-1	Acetone	ND	0.16	0.74		mg/Kg	1	11/18/2022 7:15:57 PM
108-86-1	Bromobenzene	ND	0.010	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
75-27-4	Bromodichloromethane	ND	0.0063	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
75-25-2	Bromoform	ND	0.012	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
74-83-9	Bromomethane	ND	0.082	0.15		mg/Kg	1	11/18/2022 7:15:57 PM
78-93-3	2-Butanone	ND	0.21	0.49		mg/Kg	1	11/18/2022 7:15:57 PM
75-15-0	Carbon disulfide	ND	0.020	0.49		mg/Kg	1	11/18/2022 7:15:57 PM
56-23-5	Carbon tetrachloride	ND	0.0055	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
108-90-7	Chlorobenzene	ND	0.0089	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
75-00-3	Chloroethane	ND	0.018	0.099		mg/Kg	1	11/18/2022 7:15:57 PM
67-66-3	Chloroform	ND	0.0070	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
74-87-3	Chloromethane	ND	0.017	0.15		mg/Kg	1	11/18/2022 7:15:57 PM
95-49-8	2-Chlorotoluene	ND	0.0066	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
106-43-4	4-Chlorotoluene	ND	0.026	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
156-59-2	cis-1,2-DCE	ND	0.024	0.049		mg/Kg	1	11/18/2022 7:15:57 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA12
Project: Bisti LF **Collection Date:** 11/11/2022 12:00:00 PM
Lab ID: 2211751-012 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
10061-01-5	cis-1,3-Dichloropropene	ND	0.0073	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.021	0.099		mg/Kg	1	11/18/2022 7:15:57 PM
124-48-1	Dibromochloromethane	ND	0.0079	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
74-95-3	Dibromomethane	ND	0.012	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
95-50-1	1,2-Dichlorobenzene	ND	0.010	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
541-73-1	1,3-Dichlorobenzene	ND	0.0093	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
106-46-7	1,4-Dichlorobenzene	ND	0.013	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
75-71-8	Dichlorodifluoromethane	ND	0.019	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
75-34-3	1,1-Dichloroethane	ND	0.014	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
75-35-4	1,1-Dichloroethene	ND	0.011	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
78-87-5	1,2-Dichloropropane	ND	0.0096	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
142-28-9	1,3-Dichloropropane	ND	0.011	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
594-20-7	2,2-Dichloropropane	ND	0.0070	0.099		mg/Kg	1	11/18/2022 7:15:57 PM
563-58-6	1,1-Dichloropropene	ND	0.0060	0.099		mg/Kg	1	11/18/2022 7:15:57 PM
87-68-3	Hexachlorobutadiene	ND	0.034	0.099		mg/Kg	1	11/18/2022 7:15:57 PM
591-78-6	2-Hexanone	ND	0.022	0.49		mg/Kg	1	11/18/2022 7:15:57 PM
98-82-8	Isopropylbenzene	ND	0.0091	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
99-87-6	4-Isopropyltoluene	ND	0.013	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
108-10-1	4-Methyl-2-pentanone	ND	0.057	0.49		mg/Kg	1	11/18/2022 7:15:57 PM
75-09-2	Methylene chloride	ND	0.036	0.15		mg/Kg	1	11/18/2022 7:15:57 PM
104-51-8	n-Butylbenzene	ND	0.013	0.15		mg/Kg	1	11/18/2022 7:15:57 PM
103-65-1	n-Propylbenzene	ND	0.0080	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
135-98-8	sec-Butylbenzene	ND	0.041	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
100-42-5	Styrene	ND	0.0067	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
98-06-6	tert-Butylbenzene	ND	0.011	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0072	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.016	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
127-18-4	Tetrachloroethene (PCE)	ND	0.014	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
156-60-5	trans-1,2-DCE	ND	0.0095	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
10061-02-6	trans-1,3-Dichloropropene	ND	0.012	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
87-61-6	1,2,3-Trichlorobenzene	ND	0.0076	0.099		mg/Kg	1	11/18/2022 7:15:57 PM
120-82-1	1,2,4-Trichlorobenzene	ND	0.017	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
71-55-6	1,1,1-Trichloroethane	ND	0.011	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
79-00-5	1,1,2-Trichloroethane	ND	0.012	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
79-01-6	Trichloroethene (TCE)	ND	0.0097	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
75-69-4	Trichlorofluoromethane	ND	0.011	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
96-18-4	1,2,3-Trichloropropane	ND	0.021	0.099		mg/Kg	1	11/18/2022 7:15:57 PM
75-01-4	Vinyl chloride	ND	0.0094	0.049		mg/Kg	1	11/18/2022 7:15:57 PM
1330-20-7	Xylenes, Total	ND	0.026	0.099		mg/Kg	1	11/18/2022 7:15:57 PM
1868-53-7	Surr: Dibromofluoromethane	111		70-130		%Rec	1	11/18/2022 7:15:57 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	91.5		70-130		%Rec	1	11/18/2022 7:15:57 PM
2037-26-5	Surr: Toluene-d8	106		70-130		%Rec	1	11/18/2022 7:15:57 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA12
Project: Bisti LF **Collection Date:** 11/11/2022 12:00:00 PM
Lab ID: 2211751-012 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
460-00-4	Surr: 4-Bromofluorobenzene	96.4		70-130		%Rec	1	11/18/2022 7:15:57 PM
SM4500H+B/EPA 9040C								Analyst: **SNS**
pH	pH	9.22				pH Units	1	11/28/2022 4:12:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA13
Project: Bisti LF **Collection Date:** 11/11/2022 12:10:00 PM
Lab ID: 2211751-013 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8082A: PCB'S								Analyst: **SB**
12674-11-2	Aroclor 1016	ND	0.013	0.016		mg/Kg	1	11/29/2022 11:45:18 PM
11104-28-2	Aroclor 1221	ND	0.0043	0.016		mg/Kg	1	11/29/2022 11:45:18 PM
11141-16-5	Aroclor 1232	ND	0.016	0.016		mg/Kg	1	11/29/2022 11:45:18 PM
53469-21-9	Aroclor 1242	ND	0.0087	0.016		mg/Kg	1	11/29/2022 11:45:18 PM
12672-29-6	Aroclor 1248	ND	0.0097	0.016		mg/Kg	1	11/29/2022 11:45:18 PM
11097-69-1	Aroclor 1254	ND	0.0042	0.016		mg/Kg	1	11/29/2022 11:45:18 PM
11096-82-5	Aroclor 1260	ND	0.015	0.016		mg/Kg	1	11/29/2022 11:45:18 PM
2051-24-3	Surr: Decachlorobiphenyl	91.2	0	17.2-115		%Rec	1	11/29/2022 11:45:18 PM
877-09-8	Surr: Tetrachloro-m-xylene	91.6	0	15-110		%Rec	1	11/29/2022 11:45:18 PM
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS								Analyst: **DGH**
TPH-DRO	Diesel Range Organics (DRO)	ND	11	14		mg/Kg	1	11/22/2022 10:34:45 PM
TPH-MRO	Motor Oil Range Organics (MRO)	ND	27	48		mg/Kg	1	11/22/2022 10:34:45 PM
117-84-0	Surr: DNOP	118	0	21-129		%Rec	1	11/22/2022 10:34:45 PM
EPA METHOD 8015D: GASOLINE RANGE								Analyst: **CCM**
TPH-GRO	Gasoline Range Organics (GRO)	ND	1.5	4.9		mg/Kg	1	11/21/2022 11:47:00 PM
460-00-4	Surr: BFB	137	0	37.7-212		%Rec	1	11/21/2022 11:47:00 PM
EPA METHOD 300.0: ANIONS								Analyst: **JMT**
16984-48-8	Fluoride	1.6	0.30	0.30		mg/Kg	1	11/22/2022 11:43:32 PM
16887-00-6	Chloride	88	30	30		mg/Kg	20	11/23/2022 12:13:46 PM
7727-37-9	Nitrogen, Nitrate (As N)	20	6.0	6.0		mg/Kg	20	11/23/2022 12:13:46 PM
14808-79-8	Sulfate	210	30	30		mg/Kg	20	11/23/2022 12:13:46 PM
EPA METHOD 6020A: TOTAL METALS								Analyst: **ELS**
7440-38-2	Arsenic	1.7	0.25	0.49		mg/Kg	5	11/20/2022 2:09:25 PM
7440-61-1	Uranium	ND	0.25	0.49		mg/Kg	5	11/21/2022 2:31:53 PM
EPA METHOD 7471B: MERCURY								Analyst: **VP**
7439-97-6	Mercury	ND	0.032	0.032		mg/Kg	1	11/30/2022 3:35:00 PM
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-39-3	Barium	87	0.19	0.20		mg/Kg	2	11/22/2022 11:10:41 AM
7440-43-9	Cadmium	ND	0.19	0.20		mg/Kg	2	11/22/2022 11:10:41 AM
7440-70-2	Calcium	3700	44	99		mg/Kg	2	11/22/2022 11:10:41 AM
7440-47-3	Chromium	1.5	0.45	0.59		mg/Kg	2	11/22/2022 11:10:41 AM
7440-50-8	Copper	2.6	2.0	3.9	J	mg/Kg	2	11/22/2022 11:10:41 AM
7439-89-6	Iron	4400	280	490		mg/Kg	50	12/2/2022 10:29:22 AM
7439-92-1	Lead	2.9	1.1	2.0		mg/Kg	2	11/22/2022 11:10:41 AM
7439-95-4	Magnesium	800	11	99		mg/Kg	2	11/22/2022 11:10:41 AM
7439-96-5	Manganese	130	0.33	0.39		mg/Kg	2	11/22/2022 11:10:41 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA13
Project: Bisti LF **Collection Date:** 11/11/2022 12:10:00 PM
Lab ID: 2211751-013 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-09-7	Potassium	550	55	99		mg/Kg	2	11/22/2022 11:10:41 AM
7782-49-2	Selenium	ND	4.3	4.9		mg/Kg	2	11/22/2022 1:08:47 PM
7440-22-4	Silver	ND	0.74	0.99		mg/Kg	2	11/22/2022 1:08:47 PM
7440-23-5	Sodium	470	44	99		mg/Kg	2	11/22/2022 11:10:41 AM
7440-66-6	Zinc	9.6	4.7	4.9		mg/Kg	2	11/22/2022 11:10:41 AM
SW8270C								Analyst: **DAM**
91-20-3	Naphthalene	ND	0.0027	0.0097		mg/Kg	1	12/5/2022 2:12:00 PM
90-12-0	1-Methylnaphthalene	ND	0.0027	0.0097		mg/Kg	1	12/5/2022 2:12:00 PM
91-57-6	2-Methylnaphthalene	ND	0.0031	0.0097		mg/Kg	1	12/5/2022 2:12:00 PM
50-32-8	Benzo(a)pyrene	ND	0.0081	0.019		mg/Kg	1	12/5/2022 2:12:00 PM
4165-60-0	Surr: Nitrobenzene-d5	85.0	0	15-137		%Rec	1	12/5/2022 2:12:00 PM
321-60-8	Surr: 2-Fluorobiphenyl	79.0	0	15-121		%Rec	1	12/5/2022 2:12:00 PM
1718-51-0	Surr: 4-Terphenyl-d14	100	0	35.7-126		%Rec	1	12/5/2022 2:12:00 PM
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
71-43-2	Benzene	ND	0.0094	0.025		mg/Kg	1	11/18/2022 7:43:11 PM
108-88-3	Toluene	ND	0.0063	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
100-41-4	Ethylbenzene	ND	0.012	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	0.028	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
95-63-6	1,2,4-Trimethylbenzene	ND	0.0069	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
108-67-8	1,3,5-Trimethylbenzene	ND	0.011	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	0.011	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	0.019	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
91-20-3	Naphthalene	ND	0.018	0.098		mg/Kg	1	11/18/2022 7:43:11 PM
90-12-0	1-Methylnaphthalene	ND	0.056	0.20		mg/Kg	1	11/18/2022 7:43:11 PM
91-57-6	2-Methylnaphthalene	ND	0.045	0.20		mg/Kg	1	11/18/2022 7:43:11 PM
67-64-1	Acetone	ND	0.16	0.74		mg/Kg	1	11/18/2022 7:43:11 PM
108-86-1	Bromobenzene	ND	0.010	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
75-27-4	Bromodichloromethane	ND	0.0062	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
75-25-2	Bromoform	ND	0.012	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
74-83-9	Bromomethane	ND	0.081	0.15		mg/Kg	1	11/18/2022 7:43:11 PM
78-93-3	2-Butanone	ND	0.21	0.49		mg/Kg	1	11/18/2022 7:43:11 PM
75-15-0	Carbon disulfide	ND	0.020	0.49		mg/Kg	1	11/18/2022 7:43:11 PM
56-23-5	Carbon tetrachloride	ND	0.0055	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
108-90-7	Chlorobenzene	ND	0.0088	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
75-00-3	Chloroethane	ND	0.018	0.098		mg/Kg	1	11/18/2022 7:43:11 PM
67-66-3	Chloroform	ND	0.0070	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
74-87-3	Chloromethane	ND	0.017	0.15		mg/Kg	1	11/18/2022 7:43:11 PM
95-49-8	2-Chlorotoluene	ND	0.0066	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
106-43-4	4-Chlorotoluene	ND	0.026	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
156-59-2	cis-1,2-DCE	ND	0.024	0.049		mg/Kg	1	11/18/2022 7:43:11 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA13
Project: Bisti LF **Collection Date:** 11/11/2022 12:10:00 PM
Lab ID: 2211751-013 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
10061-01-5	cis-1,3-Dichloropropene	ND	0.0073	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.021	0.098		mg/Kg	1	11/18/2022 7:43:11 PM
124-48-1	Dibromochloromethane	ND	0.0079	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
74-95-3	Dibromomethane	ND	0.011	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
95-50-1	1,2-Dichlorobenzene	ND	0.010	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
541-73-1	1,3-Dichlorobenzene	ND	0.0093	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
106-46-7	1,4-Dichlorobenzene	ND	0.013	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
75-71-8	Dichlorodifluoromethane	ND	0.019	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
75-34-3	1,1-Dichloroethane	ND	0.014	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
75-35-4	1,1-Dichloroethene	ND	0.011	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
78-87-5	1,2-Dichloropropane	ND	0.0096	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
142-28-9	1,3-Dichloropropane	ND	0.011	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
594-20-7	2,2-Dichloropropane	ND	0.0070	0.098		mg/Kg	1	11/18/2022 7:43:11 PM
563-58-6	1,1-Dichloropropene	ND	0.0059	0.098		mg/Kg	1	11/18/2022 7:43:11 PM
87-68-3	Hexachlorobutadiene	ND	0.033	0.098		mg/Kg	1	11/18/2022 7:43:11 PM
591-78-6	2-Hexanone	ND	0.021	0.49		mg/Kg	1	11/18/2022 7:43:11 PM
98-82-8	Isopropylbenzene	ND	0.0091	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
99-87-6	4-Isopropyltoluene	ND	0.013	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
108-10-1	4-Methyl-2-pentanone	ND	0.057	0.49		mg/Kg	1	11/18/2022 7:43:11 PM
75-09-2	Methylene chloride	ND	0.036	0.15		mg/Kg	1	11/18/2022 7:43:11 PM
104-51-8	n-Butylbenzene	ND	0.013	0.15		mg/Kg	1	11/18/2022 7:43:11 PM
103-65-1	n-Propylbenzene	ND	0.0079	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
135-98-8	sec-Butylbenzene	ND	0.040	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
100-42-5	Styrene	ND	0.0067	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
98-06-6	tert-Butylbenzene	ND	0.011	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0072	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.016	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
127-18-4	Tetrachloroethene (PCE)	ND	0.013	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
156-60-5	trans-1,2-DCE	ND	0.0095	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
10061-02-6	trans-1,3-Dichloropropene	ND	0.012	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
87-61-6	1,2,3-Trichlorobenzene	ND	0.0076	0.098		mg/Kg	1	11/18/2022 7:43:11 PM
120-82-1	1,2,4-Trichlorobenzene	ND	0.017	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
71-55-6	1,1,1-Trichloroethane	ND	0.011	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
79-00-5	1,1,2-Trichloroethane	ND	0.012	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
79-01-6	Trichloroethene (TCE)	ND	0.0096	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
75-69-4	Trichlorofluoromethane	ND	0.011	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
96-18-4	1,2,3-Trichloropropane	ND	0.021	0.098		mg/Kg	1	11/18/2022 7:43:11 PM
75-01-4	Vinyl chloride	ND	0.0094	0.049		mg/Kg	1	11/18/2022 7:43:11 PM
1330-20-7	Xylenes, Total	ND	0.026	0.098		mg/Kg	1	11/18/2022 7:43:11 PM
1868-53-7	Surr: Dibromofluoromethane	118		70-130		%Rec	1	11/18/2022 7:43:11 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	95.5		70-130		%Rec	1	11/18/2022 7:43:11 PM
2037-26-5	Surr: Toluene-d8	111		70-130		%Rec	1	11/18/2022 7:43:11 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA13
Project: Bisti LF **Collection Date:** 11/11/2022 12:10:00 PM
Lab ID: 2211751-013 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
460-00-4	Surr: 4-Bromofluorobenzene	102		70-130		%Rec	1	11/18/2022 7:43:11 PM
SM4500H+B/EPA 9040C								Analyst: **SNS**
pH	pH	8.81				pH Units	1	11/28/2022 4:12:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA14
Project: Bisti LF **Collection Date:** 11/11/2022 12:15:00 PM
Lab ID: 2211751-014 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8082A: PCB'S								Analyst: **SB**
12674-11-2	Aroclor 1016	ND	0.013	0.016		mg/Kg	1	11/30/2022 12:22:29 AM
11104-28-2	Aroclor 1221	ND	0.0043	0.016		mg/Kg	1	11/30/2022 12:22:29 AM
11141-16-5	Aroclor 1232	ND	0.016	0.016		mg/Kg	1	11/30/2022 12:22:29 AM
53469-21-9	Aroclor 1242	ND	0.0087	0.016		mg/Kg	1	11/30/2022 12:22:29 AM
12672-29-6	Aroclor 1248	ND	0.0097	0.016		mg/Kg	1	11/30/2022 12:22:29 AM
11097-69-1	Aroclor 1254	ND	0.0042	0.016		mg/Kg	1	11/30/2022 12:22:29 AM
11096-82-5	Aroclor 1260	ND	0.015	0.016		mg/Kg	1	11/30/2022 12:22:29 AM
2051-24-3	Surr: Decachlorobiphenyl	90.0	0	17.2-115		%Rec	1	11/30/2022 12:22:29 AM
877-09-8	Surr: Tetrachloro-m-xylene	89.2	0	15-110		%Rec	1	11/30/2022 12:22:29 AM
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS								Analyst: **DGH**
TPH-DRO	Diesel Range Organics (DRO)	ND	11	15		mg/Kg	1	11/22/2022 10:45:05 PM
TPH-MRO	Motor Oil Range Organics (MRO)	ND	28	50		mg/Kg	1	11/22/2022 10:45:05 PM
117-84-0	Surr: DNOP	127	0	21-129		%Rec	1	11/22/2022 10:45:05 PM
EPA METHOD 8015D: GASOLINE RANGE								Analyst: **CCM**
TPH-GRO	Gasoline Range Organics (GRO)	ND	1.5	5.0		mg/Kg	1	11/22/2022 12:07:00 AM
460-00-4	Surr: BFB	139	0	37.7-212		%Rec	1	11/22/2022 12:07:00 AM
EPA METHOD 300.0: ANIONS								Analyst: **JMT**
16984-48-8	Fluoride	1.7	0.30	0.30		mg/Kg	1	11/22/2022 11:55:54 PM
16887-00-6	Chloride	160	30	30		mg/Kg	20	11/23/2022 12:26:10 PM
7727-37-9	Nitrogen, Nitrate (As N)	34	6.0	6.0		mg/Kg	20	11/23/2022 12:26:10 PM
14808-79-8	Sulfate	380	30	30		mg/Kg	20	11/23/2022 12:26:10 PM
EPA METHOD 6020A: TOTAL METALS								Analyst: **ELS**
7440-38-2	Arsenic	3.3	0.25	0.50		mg/Kg	5	11/20/2022 2:13:35 PM
7440-61-1	Uranium	0.37	0.25	0.50	J	mg/Kg	5	11/21/2022 2:36:04 PM
EPA METHOD 7471B: MERCURY								Analyst: **VP**
7439-97-6	Mercury	ND	0.033	0.033		mg/Kg	1	11/30/2022 3:37:07 PM
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-39-3	Barium	100	0.19	0.20		mg/Kg	2	11/22/2022 11:12:45 AM
7440-43-9	Cadmium	ND	0.19	0.20		mg/Kg	2	11/22/2022 11:12:45 AM
7440-70-2	Calcium	9700	44	99		mg/Kg	2	11/22/2022 11:12:45 AM
7440-47-3	Chromium	5.1	0.45	0.60		mg/Kg	2	11/22/2022 11:12:45 AM
7440-50-8	Copper	4.4	2.0	4.0		mg/Kg	2	11/22/2022 11:12:45 AM
7439-89-6	Iron	9600	290	500		mg/Kg	50	12/2/2022 10:30:52 AM
7439-92-1	Lead	2.6	1.1	2.0		mg/Kg	2	11/22/2022 11:12:45 AM
7439-95-4	Magnesium	2100	11	99		mg/Kg	2	11/22/2022 11:12:45 AM
7439-96-5	Manganese	170	0.33	0.40		mg/Kg	2	11/22/2022 11:12:45 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA14
Project: Bisti LF **Collection Date:** 11/11/2022 12:15:00 PM
Lab ID: 2211751-014 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-09-7	Potassium	1500	56	99		mg/Kg	2	11/22/2022 11:12:45 AM
7782-49-2	Selenium	ND	4.4	5.0		mg/Kg	2	11/22/2022 1:10:03 PM
7440-22-4	Silver	ND	0.74	0.99		mg/Kg	2	11/22/2022 1:10:03 PM
7440-23-5	Sodium	440	44	99		mg/Kg	2	11/22/2022 11:12:45 AM
7440-66-6	Zinc	18	4.7	5.0		mg/Kg	2	11/22/2022 11:12:45 AM
SW8270C								Analyst: **DAM**
91-20-3	Naphthalene	ND	0.0027	0.0099		mg/Kg	1	12/5/2022 3:00:00 PM
90-12-0	1-Methylnaphthalene	ND	0.0028	0.0099		mg/Kg	1	12/5/2022 3:00:00 PM
91-57-6	2-Methylnaphthalene	ND	0.0031	0.0099		mg/Kg	1	12/5/2022 3:00:00 PM
50-32-8	Benzo(a)pyrene	ND	0.0082	0.020		mg/Kg	1	12/5/2022 3:00:00 PM
4165-60-0	Surr: Nitrobenzene-d5	84.5	0	15-137		%Rec	1	12/5/2022 3:00:00 PM
321-60-8	Surr: 2-Fluorobiphenyl	78.0	0	15-121		%Rec	1	12/5/2022 3:00:00 PM
1718-51-0	Surr: 4-Terphenyl-d14	98.0	0	35.7-126		%Rec	1	12/5/2022 3:00:00 PM
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
71-43-2	Benzene	ND	0.0096	0.025		mg/Kg	1	11/18/2022 8:10:13 PM
108-88-3	Toluene	ND	0.0064	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
100-41-4	Ethylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	0.028	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
95-63-6	1,2,4-Trimethylbenzene	ND	0.0071	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
108-67-8	1,3,5-Trimethylbenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	0.011	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	0.020	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
91-20-3	Naphthalene	ND	0.019	0.10		mg/Kg	1	11/18/2022 8:10:13 PM
90-12-0	1-Methylnaphthalene	ND	0.057	0.20		mg/Kg	1	11/18/2022 8:10:13 PM
91-57-6	2-Methylnaphthalene	ND	0.046	0.20		mg/Kg	1	11/18/2022 8:10:13 PM
67-64-1	Acetone	ND	0.16	0.75		mg/Kg	1	11/18/2022 8:10:13 PM
108-86-1	Bromobenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
75-27-4	Bromodichloromethane	ND	0.0064	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
75-25-2	Bromoform	ND	0.012	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
74-83-9	Bromomethane	ND	0.083	0.15		mg/Kg	1	11/18/2022 8:10:13 PM
78-93-3	2-Butanone	ND	0.22	0.50		mg/Kg	1	11/18/2022 8:10:13 PM
75-15-0	Carbon disulfide	ND	0.021	0.50		mg/Kg	1	11/18/2022 8:10:13 PM
56-23-5	Carbon tetrachloride	ND	0.0056	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
108-90-7	Chlorobenzene	ND	0.0090	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
75-00-3	Chloroethane	ND	0.019	0.10		mg/Kg	1	11/18/2022 8:10:13 PM
67-66-3	Chloroform	ND	0.0071	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
74-87-3	Chloromethane	ND	0.018	0.15		mg/Kg	1	11/18/2022 8:10:13 PM
95-49-8	2-Chlorotoluene	ND	0.0067	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
106-43-4	4-Chlorotoluene	ND	0.026	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
156-59-2	cis-1,2-DCE	ND	0.025	0.050		mg/Kg	1	11/18/2022 8:10:13 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA14
Project: Bisti LF **Collection Date:** 11/11/2022 12:15:00 PM
Lab ID: 2211751-014 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
10061-01-5	cis-1,3-Dichloropropene	ND	0.0074	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.022	0.10		mg/Kg	1	11/18/2022 8:10:13 PM
124-48-1	Dibromochloromethane	ND	0.0080	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
74-95-3	Dibromomethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
95-50-1	1,2-Dichlorobenzene	ND	0.010	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
541-73-1	1,3-Dichlorobenzene	ND	0.0094	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
106-46-7	1,4-Dichlorobenzene	ND	0.013	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
75-71-8	Dichlorodifluoromethane	ND	0.019	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
75-34-3	1,1-Dichloroethane	ND	0.015	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
75-35-4	1,1-Dichloroethene	ND	0.011	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
78-87-5	1,2-Dichloropropane	ND	0.0097	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
142-28-9	1,3-Dichloropropane	ND	0.011	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
594-20-7	2,2-Dichloropropane	ND	0.0071	0.10		mg/Kg	1	11/18/2022 8:10:13 PM
563-58-6	1,1-Dichloropropene	ND	0.0060	0.10		mg/Kg	1	11/18/2022 8:10:13 PM
87-68-3	Hexachlorobutadiene	ND	0.034	0.10		mg/Kg	1	11/18/2022 8:10:13 PM
591-78-6	2-Hexanone	ND	0.022	0.50		mg/Kg	1	11/18/2022 8:10:13 PM
98-82-8	Isopropylbenzene	ND	0.0093	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
99-87-6	4-Isopropyltoluene	ND	0.013	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
108-10-1	4-Methyl-2-pentanone	ND	0.058	0.50		mg/Kg	1	11/18/2022 8:10:13 PM
75-09-2	Methylene chloride	ND	0.036	0.15		mg/Kg	1	11/18/2022 8:10:13 PM
104-51-8	n-Butylbenzene	ND	0.013	0.15		mg/Kg	1	11/18/2022 8:10:13 PM
103-65-1	n-Propylbenzene	ND	0.0081	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
135-98-8	sec-Butylbenzene	ND	0.041	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
100-42-5	Styrene	ND	0.0068	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
98-06-6	tert-Butylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0073	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.016	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
127-18-4	Tetrachloroethene (PCE)	ND	0.014	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
156-60-5	trans-1,2-DCE	ND	0.0097	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
10061-02-6	trans-1,3-Dichloropropene	ND	0.012	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
87-61-6	1,2,3-Trichlorobenzene	ND	0.0077	0.10		mg/Kg	1	11/18/2022 8:10:13 PM
120-82-1	1,2,4-Trichlorobenzene	ND	0.017	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
71-55-6	1,1,1-Trichloroethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
79-00-5	1,1,2-Trichloroethane	ND	0.013	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
79-01-6	Trichloroethene (TCE)	ND	0.0098	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
75-69-4	Trichlorofluoromethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
96-18-4	1,2,3-Trichloropropane	ND	0.021	0.10		mg/Kg	1	11/18/2022 8:10:13 PM
75-01-4	Vinyl chloride	ND	0.0095	0.050		mg/Kg	1	11/18/2022 8:10:13 PM
1330-20-7	Xylenes, Total	ND	0.026	0.10		mg/Kg	1	11/18/2022 8:10:13 PM
1868-53-7	Surr: Dibromofluoromethane	113		70-130		%Rec	1	11/18/2022 8:10:13 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	92.1		70-130		%Rec	1	11/18/2022 8:10:13 PM
2037-26-5	Surr: Toluene-d8	107		70-130		%Rec	1	11/18/2022 8:10:13 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA14
Project: Bisti LF **Collection Date:** 11/11/2022 12:15:00 PM
Lab ID: 2211751-014 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
460-00-4	Surr: 4-Bromofluorobenzene	100		70-130		%Rec	1	11/18/2022 8:10:13 PM
SM4500H+B/EPA 9040C								Analyst: **SNS**
pH	pH	8.12				pH Units	1	11/28/2022 4:12:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA15
Project: Bisti LF **Collection Date:** 11/11/2022 12:20:00 PM
Lab ID: 2211751-015 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8082A: PCB'S								Analyst: **SB**
12674-11-2	Aroclor 1016	ND	0.013	0.016		mg/Kg	1	11/30/2022 12:59:41 AM
11104-28-2	Aroclor 1221	ND	0.0042	0.016		mg/Kg	1	11/30/2022 12:59:41 AM
11141-16-5	Aroclor 1232	ND	0.016	0.016		mg/Kg	1	11/30/2022 12:59:41 AM
53469-21-9	Aroclor 1242	ND	0.0086	0.016		mg/Kg	1	11/30/2022 12:59:41 AM
12672-29-6	Aroclor 1248	ND	0.0096	0.016		mg/Kg	1	11/30/2022 12:59:41 AM
11097-69-1	Aroclor 1254	ND	0.0042	0.016		mg/Kg	1	11/30/2022 12:59:41 AM
11096-82-5	Aroclor 1260	ND	0.015	0.016		mg/Kg	1	11/30/2022 12:59:41 AM
2051-24-3	Surr: Decachlorobiphenyl	102	0	17.2-115		%Rec	1	11/30/2022 12:59:41 AM
877-09-8	Surr: Tetrachloro-m-xylene	96.8	0	15-110		%Rec	1	11/30/2022 12:59:41 AM
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS								Analyst: **DGH**
TPH-DRO	Diesel Range Organics (DRO)	ND	11	15		mg/Kg	1	11/22/2022 10:55:25 PM
TPH-MRO	Motor Oil Range Organics (MRO)	ND	27	49		mg/Kg	1	11/22/2022 10:55:25 PM
117-84-0	Surr: DNOP	101	0	21-129		%Rec	1	11/22/2022 10:55:25 PM
EPA METHOD 8015D: GASOLINE RANGE								Analyst: **CCM**
TPH-GRO	Gasoline Range Organics (GRO)	ND	1.5	4.9		mg/Kg	1	11/22/2022 12:26:00 AM
460-00-4	Surr: BFB	145	0	37.7-212		%Rec	1	11/22/2022 12:26:00 AM
EPA METHOD 300.0: ANIONS								Analyst: **JMT**
16984-48-8	Fluoride	1.2	0.30	0.30		mg/Kg	1	11/28/2022 6:11:53 PM
16887-00-6	Chloride	14	1.5	1.5		mg/Kg	1	11/28/2022 6:11:53 PM
7727-37-9	Nitrogen, Nitrate (As N)	12	0.30	0.30		mg/Kg	1	11/28/2022 6:11:53 PM
14808-79-8	Sulfate	310	30	30		mg/Kg	20	11/28/2022 6:24:18 PM
EPA METHOD 6020A: TOTAL METALS								Analyst: **ELS**
7440-38-2	Arsenic	2.3	0.25	0.49		mg/Kg	5	11/20/2022 2:17:45 PM
7440-61-1	Uranium	0.27	0.25	0.49	J	mg/Kg	5	11/21/2022 2:40:13 PM
EPA METHOD 7471B: MERCURY								Analyst: **VP**
7439-97-6	Mercury	ND	0.032	0.032		mg/Kg	1	11/30/2022 3:39:15 PM
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-39-3	Barium	200	0.19	0.20		mg/Kg	2	11/22/2022 11:14:38 AM
7440-43-9	Cadmium	ND	0.19	0.20		mg/Kg	2	11/22/2022 11:14:38 AM
7440-70-2	Calcium	5000	44	99		mg/Kg	2	11/22/2022 11:14:38 AM
7440-47-3	Chromium	2.4	0.45	0.59		mg/Kg	2	11/22/2022 11:14:38 AM
7440-50-8	Copper	2.5	2.0	4.0	J	mg/Kg	2	11/22/2022 11:14:38 AM
7439-89-6	Iron	5900	280	490		mg/Kg	50	12/2/2022 10:32:20 AM
7439-92-1	Lead	2.1	1.1	2.0		mg/Kg	2	11/22/2022 11:14:38 AM
7439-95-4	Magnesium	1000	11	99		mg/Kg	2	11/22/2022 11:14:38 AM
7439-96-5	Manganese	120	0.33	0.40		mg/Kg	2	11/22/2022 11:14:38 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA15
Project: Bisti LF **Collection Date:** 11/11/2022 12:20:00 PM
Lab ID: 2211751-015 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-09-7	Potassium	750	55	99		mg/Kg	2	11/22/2022 11:14:38 AM
7782-49-2	Selenium	ND	4.3	4.9		mg/Kg	2	11/22/2022 1:15:11 PM
7440-22-4	Silver	ND	0.74	0.99		mg/Kg	2	11/22/2022 1:15:11 PM
7440-23-5	Sodium	330	44	99		mg/Kg	2	11/22/2022 11:14:38 AM
7440-66-6	Zinc	11	4.7	4.9		mg/Kg	2	11/22/2022 11:14:38 AM
SW8270C								Analyst: **DAM**
91-20-3	Naphthalene	ND	0.0026	0.0095		mg/Kg	1	12/5/2022 3:49:00 PM
90-12-0	1-Methylnaphthalene	ND	0.0027	0.0095		mg/Kg	1	12/5/2022 3:49:00 PM
91-57-6	2-Methylnaphthalene	ND	0.0030	0.0095		mg/Kg	1	12/5/2022 3:49:00 PM
50-32-8	Benzo(a)pyrene	ND	0.0080	0.019		mg/Kg	1	12/5/2022 3:49:00 PM
4165-60-0	Surr: Nitrobenzene-d5	89.5	0	15-137		%Rec	1	12/5/2022 3:49:00 PM
321-60-8	Surr: 2-Fluorobiphenyl	82.5	0	15-121		%Rec	1	12/5/2022 3:49:00 PM
1718-51-0	Surr: 4-Terphenyl-d14	106	0	15.7-126		%Rec	1	12/5/2022 3:49:00 PM
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
71-43-2	Benzene	ND	0.0095	0.025		mg/Kg	1	11/18/2022 8:37:11 PM
108-88-3	Toluene	ND	0.0063	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
100-41-4	Ethylbenzene	ND	0.012	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	0.028	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
95-63-6	1,2,4-Trimethylbenzene	ND	0.0069	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
108-67-8	1,3,5-Trimethylbenzene	ND	0.011	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	0.011	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	0.019	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
91-20-3	Naphthalene	ND	0.018	0.098		mg/Kg	1	11/18/2022 8:37:11 PM
90-12-0	1-Methylnaphthalene	ND	0.056	0.20		mg/Kg	1	11/18/2022 8:37:11 PM
91-57-6	2-Methylnaphthalene	ND	0.045	0.20		mg/Kg	1	11/18/2022 8:37:11 PM
67-64-1	Acetone	ND	0.16	0.74		mg/Kg	1	11/18/2022 8:37:11 PM
108-86-1	Bromobenzene	ND	0.010	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
75-27-4	Bromodichloromethane	ND	0.0062	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
75-25-2	Bromoform	ND	0.012	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
74-83-9	Bromomethane	ND	0.081	0.15		mg/Kg	1	11/18/2022 8:37:11 PM
78-93-3	2-Butanone	ND	0.21	0.49		mg/Kg	1	11/18/2022 8:37:11 PM
75-15-0	Carbon disulfide	ND	0.020	0.49		mg/Kg	1	11/18/2022 8:37:11 PM
56-23-5	Carbon tetrachloride	ND	0.0055	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
108-90-7	Chlorobenzene	ND	0.0088	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
75-00-3	Chloroethane	ND	0.018	0.098		mg/Kg	1	11/18/2022 8:37:11 PM
67-66-3	Chloroform	ND	0.0070	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
74-87-3	Chloromethane	ND	0.017	0.15		mg/Kg	1	11/18/2022 8:37:11 PM
95-49-8	2-Chlorotoluene	ND	0.0066	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
106-43-4	4-Chlorotoluene	ND	0.026	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
156-59-2	cis-1,2-DCE	ND	0.024	0.049		mg/Kg	1	11/18/2022 8:37:11 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA15
Project: Bisti LF **Collection Date:** 11/11/2022 12:20:00 PM
Lab ID: 2211751-015 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
10061-01-5	cis-1,3-Dichloropropene	ND	0.0073	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.021	0.098		mg/Kg	1	11/18/2022 8:37:11 PM
124-48-1	Dibromochloromethane	ND	0.0079	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
74-95-3	Dibromomethane	ND	0.011	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
95-50-1	1,2-Dichlorobenzene	ND	0.010	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
541-73-1	1,3-Dichlorobenzene	ND	0.0093	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
106-46-7	1,4-Dichlorobenzene	ND	0.013	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
75-71-8	Dichlorodifluoromethane	ND	0.019	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
75-34-3	1,1-Dichloroethane	ND	0.014	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
75-35-4	1,1-Dichloroethene	ND	0.011	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
78-87-5	1,2-Dichloropropane	ND	0.0096	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
142-28-9	1,3-Dichloropropane	ND	0.011	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
594-20-7	2,2-Dichloropropane	ND	0.0070	0.098		mg/Kg	1	11/18/2022 8:37:11 PM
563-58-6	1,1-Dichloropropene	ND	0.0059	0.098		mg/Kg	1	11/18/2022 8:37:11 PM
87-68-3	Hexachlorobutadiene	ND	0.033	0.098		mg/Kg	1	11/18/2022 8:37:11 PM
591-78-6	2-Hexanone	ND	0.021	0.49		mg/Kg	1	11/18/2022 8:37:11 PM
98-82-8	Isopropylbenzene	ND	0.0091	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
99-87-6	4-Isopropyltoluene	ND	0.013	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
108-10-1	4-Methyl-2-pentanone	ND	0.057	0.49		mg/Kg	1	11/18/2022 8:37:11 PM
75-09-2	Methylene chloride	ND	0.036	0.15		mg/Kg	1	11/18/2022 8:37:11 PM
104-51-8	n-Butylbenzene	ND	0.013	0.15		mg/Kg	1	11/18/2022 8:37:11 PM
103-65-1	n-Propylbenzene	ND	0.0079	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
135-98-8	sec-Butylbenzene	ND	0.040	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
100-42-5	Styrene	ND	0.0067	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
98-06-6	tert-Butylbenzene	ND	0.011	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0072	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.016	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
127-18-4	Tetrachloroethene (PCE)	ND	0.013	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
156-60-5	trans-1,2-DCE	ND	0.0095	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
10061-02-6	trans-1,3-Dichloropropene	ND	0.012	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
87-61-6	1,2,3-Trichlorobenzene	ND	0.0076	0.098		mg/Kg	1	11/18/2022 8:37:11 PM
120-82-1	1,2,4-Trichlorobenzene	ND	0.017	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
71-55-6	1,1,1-Trichloroethane	ND	0.011	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
79-00-5	1,1,2-Trichloroethane	ND	0.012	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
79-01-6	Trichloroethene (TCE)	ND	0.0096	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
75-69-4	Trichlorofluoromethane	ND	0.011	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
96-18-4	1,2,3-Trichloropropane	ND	0.021	0.098		mg/Kg	1	11/18/2022 8:37:11 PM
75-01-4	Vinyl chloride	ND	0.0094	0.049		mg/Kg	1	11/18/2022 8:37:11 PM
1330-20-7	Xylenes, Total	ND	0.026	0.098		mg/Kg	1	11/18/2022 8:37:11 PM
1868-53-7	Surr: Dibromofluoromethane	116		70-130		%Rec	1	11/18/2022 8:37:11 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	102		70-130		%Rec	1	11/18/2022 8:37:11 PM
2037-26-5	Surr: Toluene-d8	116		70-130		%Rec	1	11/18/2022 8:37:11 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA15
Project: Bisti LF **Collection Date:** 11/11/2022 12:20:00 PM
Lab ID: 2211751-015 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
460-00-4	Surr: 4-Bromofluorobenzene	96.9		70-130		%Rec	1	11/18/2022 8:37:11 PM
SM4500H+B/EPA 9040C								Analyst: **SNS**
pH	pH	8.66				pH Units	1	11/28/2022 4:12:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA16
Project: Bisti LF **Collection Date:** 11/11/2022 12:25:00 PM
Lab ID: 2211751-016 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8082A: PCB'S								Analyst: **SB**
12674-11-2	Aroclor 1016	ND	0.013	0.016		mg/Kg	1	11/30/2022 1:36:50 AM
11104-28-2	Aroclor 1221	ND	0.0043	0.016		mg/Kg	1	11/30/2022 1:36:50 AM
11141-16-5	Aroclor 1232	ND	0.016	0.016		mg/Kg	1	11/30/2022 1:36:50 AM
53469-21-9	Aroclor 1242	ND	0.0087	0.016		mg/Kg	1	11/30/2022 1:36:50 AM
12672-29-6	Aroclor 1248	ND	0.0097	0.016		mg/Kg	1	11/30/2022 1:36:50 AM
11097-69-1	Aroclor 1254	ND	0.0043	0.016		mg/Kg	1	11/30/2022 1:36:50 AM
11096-82-5	Aroclor 1260	ND	0.015	0.016		mg/Kg	1	11/30/2022 1:36:50 AM
2051-24-3	Surr: Decachlorobiphenyl	93.2	0	17.2-115		%Rec	1	11/30/2022 1:36:50 AM
877-09-8	Surr: Tetrachloro-m-xylene	90.0	0	15-110		%Rec	1	11/30/2022 1:36:50 AM
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS								Analyst: **DGH**
TPH-DRO	Diesel Range Organics (DRO)	ND	10	14		mg/Kg	1	11/22/2022 11:05:44 PM
TPH-MRO	Motor Oil Range Organics (MRO)	ND	25	46		mg/Kg	1	11/22/2022 11:05:44 PM
117-84-0	Surr: DNOP	117	0	21-129		%Rec	1	11/22/2022 11:05:44 PM
EPA METHOD 8015D: GASOLINE RANGE								Analyst: **CCM**
TPH-GRO	Gasoline Range Organics (GRO)	ND	1.5	5.0		mg/Kg	1	11/22/2022 12:46:00 AM
460-00-4	Surr: BFB	148	0	37.7-212		%Rec	1	11/22/2022 12:46:00 AM
EPA METHOD 300.0: ANIONS								Analyst: **JMT**
16984-48-8	Fluoride	1.1	0.30	0.30		mg/Kg	1	11/28/2022 6:36:43 PM
16887-00-6	Chloride	34	1.5	1.5		mg/Kg	1	11/28/2022 6:36:43 PM
7727-37-9	Nitrogen, Nitrate (As N)	13	0.30	0.30		mg/Kg	1	11/28/2022 6:36:43 PM
14808-79-8	Sulfate	130	30	30		mg/Kg	20	11/28/2022 6:49:08 PM
EPA METHOD 6020A: TOTAL METALS								Analyst: **ELS**
7440-38-2	Arsenic	2.4	0.25	0.50		mg/Kg	5	11/20/2022 2:21:54 PM
7440-61-1	Uranium	0.28	0.25	0.50	J	mg/Kg	5	11/21/2022 2:44:23 PM
EPA METHOD 7471B: MERCURY								Analyst: **VP**
7439-97-6	Mercury	ND	0.033	0.033		mg/Kg	1	11/30/2022 3:41:24 PM
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-39-3	Barium	110	0.19	0.20		mg/Kg	2	11/22/2022 11:16:30 AM
7440-43-9	Cadmium	ND	0.19	0.20		mg/Kg	2	11/22/2022 11:16:30 AM
7440-70-2	Calcium	4900	45	100		mg/Kg	2	11/22/2022 11:16:30 AM
7440-47-3	Chromium	2.3	0.45	0.60		mg/Kg	2	11/22/2022 11:16:30 AM
7440-50-8	Copper	2.2	2.1	4.0	J	mg/Kg	2	11/22/2022 11:16:30 AM
7439-89-6	Iron	5800	290	500		mg/Kg	50	12/2/2022 10:33:49 AM
7439-92-1	Lead	2.0	1.1	2.0		mg/Kg	2	11/22/2022 11:16:30 AM
7439-95-4	Magnesium	1100	12	100		mg/Kg	2	11/22/2022 11:16:30 AM
7439-96-5	Manganese	110	0.33	0.40		mg/Kg	2	11/22/2022 11:16:30 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA16
Project: Bisti LF **Collection Date:** 11/11/2022 12:25:00 PM
Lab ID: 2211751-016 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-09-7	Potassium	730	56	100		mg/Kg	2	11/22/2022 11:16:30 AM
7782-49-2	Selenium	ND	4.4	5.0		mg/Kg	2	11/22/2022 1:16:28 PM
7440-22-4	Silver	ND	0.74	1.0		mg/Kg	2	11/22/2022 1:16:28 PM
7440-23-5	Sodium	250	44	100		mg/Kg	2	11/22/2022 11:16:30 AM
7440-66-6	Zinc	10	4.7	5.0		mg/Kg	2	11/22/2022 11:16:30 AM
SW8270C								Analyst: **DAM**
91-20-3	Naphthalene	ND	0.0025	0.0089		mg/Kg	1	12/5/2022 4:35:00 PM
90-12-0	1-Methylnaphthalene	ND	0.0025	0.0089		mg/Kg	1	12/5/2022 4:35:00 PM
91-57-6	2-Methylnaphthalene	ND	0.0028	0.0089		mg/Kg	1	12/5/2022 4:35:00 PM
50-32-8	Benzo(a)pyrene	ND	0.0075	0.018		mg/Kg	1	12/5/2022 4:35:00 PM
4165-60-0	Surr: Nitrobenzene-d5	97.0	0	15-137		%Rec	1	12/5/2022 4:35:00 PM
321-60-8	Surr: 2-Fluorobiphenyl	90.0	0	15-121		%Rec	1	12/5/2022 4:35:00 PM
1718-51-0	Surr: 4-Terphenyl-d14	108	0	35.7-126		%Rec	1	12/5/2022 4:35:00 PM
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
71-43-2	Benzene	ND	0.0096	0.025		mg/Kg	1	11/18/2022 9:04:07 PM
108-88-3	Toluene	ND	0.0064	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
100-41-4	Ethylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	0.028	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
95-63-6	1,2,4-Trimethylbenzene	ND	0.0070	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
108-67-8	1,3,5-Trimethylbenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	0.020	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
91-20-3	Naphthalene	ND	0.019	0.10		mg/Kg	1	11/18/2022 9:04:07 PM
90-12-0	1-Methylnaphthalene	ND	0.057	0.20		mg/Kg	1	11/18/2022 9:04:07 PM
91-57-6	2-Methylnaphthalene	ND	0.046	0.20		mg/Kg	1	11/18/2022 9:04:07 PM
67-64-1	Acetone	ND	0.16	0.75		mg/Kg	1	11/18/2022 9:04:07 PM
108-86-1	Bromobenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
75-27-4	Bromodichloromethane	ND	0.0063	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
75-25-2	Bromoform	ND	0.012	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
74-83-9	Bromomethane	ND	0.083	0.15		mg/Kg	1	11/18/2022 9:04:07 PM
78-93-3	2-Butanone	ND	0.22	0.50		mg/Kg	1	11/18/2022 9:04:07 PM
75-15-0	Carbon disulfide	ND	0.021	0.50		mg/Kg	1	11/18/2022 9:04:07 PM
56-23-5	Carbon tetrachloride	ND	0.0055	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
108-90-7	Chlorobenzene	ND	0.0090	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
75-00-3	Chloroethane	ND	0.019	0.10		mg/Kg	1	11/18/2022 9:04:07 PM
67-66-3	Chloroform	ND	0.0071	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
74-87-3	Chloromethane	ND	0.017	0.15		mg/Kg	1	11/18/2022 9:04:07 PM
95-49-8	2-Chlorotoluene	ND	0.0067	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
106-43-4	4-Chlorotoluene	ND	0.026	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
156-59-2	cis-1,2-DCE	ND	0.025	0.050		mg/Kg	1	11/18/2022 9:04:07 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA16
Project: Bisti LF **Collection Date:** 11/11/2022 12:25:00 PM
Lab ID: 2211751-016 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
10061-01-5	cis-1,3-Dichloropropene	ND	0.0074	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.022	0.10		mg/Kg	1	11/18/2022 9:04:07 PM
124-48-1	Dibromochloromethane	ND	0.0080	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
74-95-3	Dibromomethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
95-50-1	1,2-Dichlorobenzene	ND	0.010	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
541-73-1	1,3-Dichlorobenzene	ND	0.0094	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
106-46-7	1,4-Dichlorobenzene	ND	0.013	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
75-71-8	Dichlorodifluoromethane	ND	0.019	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
75-34-3	1,1-Dichloroethane	ND	0.014	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
75-35-4	1,1-Dichloroethene	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
78-87-5	1,2-Dichloropropane	ND	0.0097	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
142-28-9	1,3-Dichloropropane	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
594-20-7	2,2-Dichloropropane	ND	0.0071	0.10		mg/Kg	1	11/18/2022 9:04:07 PM
563-58-6	1,1-Dichloropropene	ND	0.0060	0.10		mg/Kg	1	11/18/2022 9:04:07 PM
87-68-3	Hexachlorobutadiene	ND	0.034	0.10		mg/Kg	1	11/18/2022 9:04:07 PM
591-78-6	2-Hexanone	ND	0.022	0.50		mg/Kg	1	11/18/2022 9:04:07 PM
98-82-8	Isopropylbenzene	ND	0.0092	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
99-87-6	4-Isopropyltoluene	ND	0.013	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
108-10-1	4-Methyl-2-pentanone	ND	0.058	0.50		mg/Kg	1	11/18/2022 9:04:07 PM
75-09-2	Methylene chloride	ND	0.036	0.15		mg/Kg	1	11/18/2022 9:04:07 PM
104-51-8	n-Butylbenzene	ND	0.013	0.15		mg/Kg	1	11/18/2022 9:04:07 PM
103-65-1	n-Propylbenzene	ND	0.0080	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
135-98-8	sec-Butylbenzene	ND	0.041	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
100-42-5	Styrene	ND	0.0068	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
98-06-6	tert-Butylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0073	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.016	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
127-18-4	Tetrachloroethene (PCE)	ND	0.014	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
156-60-5	trans-1,2-DCE	ND	0.0096	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
10061-02-6	trans-1,3-Dichloropropene	ND	0.012	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
87-61-6	1,2,3-Trichlorobenzene	ND	0.0077	0.10		mg/Kg	1	11/18/2022 9:04:07 PM
120-82-1	1,2,4-Trichlorobenzene	ND	0.017	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
71-55-6	1,1,1-Trichloroethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
79-00-5	1,1,2-Trichloroethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
79-01-6	Trichloroethene (TCE)	ND	0.0098	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
75-69-4	Trichlorofluoromethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
96-18-4	1,2,3-Trichloropropane	ND	0.021	0.10		mg/Kg	1	11/18/2022 9:04:07 PM
75-01-4	Vinyl chloride	ND	0.0095	0.050		mg/Kg	1	11/18/2022 9:04:07 PM
1330-20-7	Xylenes, Total	ND	0.026	0.10		mg/Kg	1	11/18/2022 9:04:07 PM
1868-53-7	Surr: Dibromofluoromethane	112		70-130		%Rec	1	11/18/2022 9:04:07 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	92.5		70-130		%Rec	1	11/18/2022 9:04:07 PM
2037-26-5	Surr: Toluene-d8	105		70-130		%Rec	1	11/18/2022 9:04:07 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA16
Project: Bisti LF **Collection Date:** 11/11/2022 12:25:00 PM
Lab ID: 2211751-016 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
460-00-4	Surr: 4-Bromofluorobenzene	99.3		70-130		%Rec	1	11/18/2022 9:04:07 PM
SM4500H+B/EPA 9040C								Analyst: **SNS**
pH	pH	8.71				pH Units	1	11/28/2022 4:12:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA17
Project: Bisti LF **Collection Date:** 11/11/2022 12:40:00 PM
Lab ID: 2211751-017 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8082A: PCB'S								Analyst: **SB**
12674-11-2	Aroclor 1016	ND	0.014	0.017		mg/Kg	1	11/30/2022 2:51:26 AM
11104-28-2	Aroclor 1221	ND	0.0043	0.017		mg/Kg	1	11/30/2022 2:51:26 AM
11141-16-5	Aroclor 1232	ND	0.016	0.017		mg/Kg	1	11/30/2022 2:51:26 AM
53469-21-9	Aroclor 1242	ND	0.0088	0.017		mg/Kg	1	11/30/2022 2:51:26 AM
12672-29-6	Aroclor 1248	ND	0.0098	0.017		mg/Kg	1	11/30/2022 2:51:26 AM
11097-69-1	Aroclor 1254	ND	0.0043	0.017		mg/Kg	1	11/30/2022 2:51:26 AM
11096-82-5	Aroclor 1260	ND	0.015	0.017		mg/Kg	1	11/30/2022 2:51:26 AM
2051-24-3	Surr: Decachlorobiphenyl	86.0	0	17.2-115		%Rec	1	11/30/2022 2:51:26 AM
877-09-8	Surr: Tetrachloro-m-xylene	88.0	0	15-110		%Rec	1	11/30/2022 2:51:26 AM
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS								Analyst: **DGH**
TPH-DRO	Diesel Range Organics (DRO)	ND	11	15		mg/Kg	1	11/22/2022 11:16:05 PM
TPH-MRO	Motor Oil Range Organics (MRO)	ND	27	49		mg/Kg	1	11/22/2022 11:16:05 PM
117-84-0	Surr: DNOP	96.9	0	21-129		%Rec	1	11/22/2022 11:16:05 PM
EPA METHOD 8015D: GASOLINE RANGE								Analyst: **CCM**
TPH-GRO	Gasoline Range Organics (GRO)	ND	1.5	5.0		mg/Kg	1	11/22/2022 1:05:00 AM
460-00-4	Surr: BFB	145	0	37.7-212		%Rec	1	11/22/2022 1:05:00 AM
EPA METHOD 300.0: ANIONS								Analyst: **JMT**
16984-48-8	Fluoride	2.6	0.30	0.30		mg/Kg	1	11/28/2022 7:01:33 PM
16887-00-6	Chloride	40	1.5	1.5		mg/Kg	1	11/28/2022 7:01:33 PM
7727-37-9	Nitrogen, Nitrate (As N)	33	6.0	6.0		mg/Kg	20	11/28/2022 7:13:57 PM
14808-79-8	Sulfate	280	30	30		mg/Kg	20	11/28/2022 7:13:57 PM
EPA METHOD 6020A: TOTAL METALS								Analyst: **ELS**
7440-38-2	Arsenic	3.1	0.25	0.50		mg/Kg	5	11/20/2022 2:26:04 PM
7440-61-1	Uranium	0.44	0.25	0.50	J	mg/Kg	5	11/21/2022 2:48:33 PM
EPA METHOD 7471B: MERCURY								Analyst: **VP**
7439-97-6	Mercury	ND	0.033	0.033		mg/Kg	1	11/30/2022 3:43:32 PM
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-39-3	Barium	99	0.19	0.20		mg/Kg	2	11/22/2022 11:18:23 AM
7440-43-9	Cadmium	ND	0.19	0.20		mg/Kg	2	11/22/2022 11:18:23 AM
7440-70-2	Calcium	8500	45	99		mg/Kg	2	11/22/2022 11:18:23 AM
7440-47-3	Chromium	5.3	0.45	0.60		mg/Kg	2	11/22/2022 11:18:23 AM
7440-50-8	Copper	4.9	2.0	4.0		mg/Kg	2	11/22/2022 11:18:23 AM
7439-89-6	Iron	10000	290	500		mg/Kg	50	12/2/2022 10:35:19 AM
7439-92-1	Lead	4.1	1.1	2.0		mg/Kg	2	11/22/2022 11:18:23 AM
7439-95-4	Magnesium	2400	11	99		mg/Kg	2	11/22/2022 11:18:23 AM
7439-96-5	Manganese	190	0.33	0.40		mg/Kg	2	11/22/2022 11:18:23 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA17
Project: Bisti LF **Collection Date:** 11/11/2022 12:40:00 PM
Lab ID: 2211751-017 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-09-7	Potassium	1600	56	99		mg/Kg	2	11/22/2022 11:18:23 AM
7782-49-2	Selenium	ND	4.4	5.0		mg/Kg	2	11/22/2022 1:17:44 PM
7440-22-4	Silver	ND	0.74	0.99		mg/Kg	2	11/22/2022 1:17:44 PM
7440-23-5	Sodium	630	44	99		mg/Kg	2	11/22/2022 11:18:23 AM
7440-66-6	Zinc	19	4.7	5.0		mg/Kg	2	11/22/2022 11:18:23 AM
SW8270C								Analyst: **DAM**
91-20-3	Naphthalene	ND	0.0026	0.0096		mg/Kg	1	12/5/2022 5:22:00 PM
90-12-0	1-Methylnaphthalene	ND	0.0027	0.0096		mg/Kg	1	12/5/2022 5:22:00 PM
91-57-6	2-Methylnaphthalene	ND	0.0031	0.0096		mg/Kg	1	12/5/2022 5:22:00 PM
50-32-8	Benzo(a)pyrene	ND	0.0080	0.019		mg/Kg	1	12/5/2022 5:22:00 PM
4165-60-0	Surr: Nitrobenzene-d5	90.5	0	15-137		%Rec	1	12/5/2022 5:22:00 PM
321-60-8	Surr: 2-Fluorobiphenyl	83.5	0	15-121		%Rec	1	12/5/2022 5:22:00 PM
1718-51-0	Surr: 4-Terphenyl-d14	110	0	35.7-126		%Rec	1	12/5/2022 5:22:00 PM
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
71-43-2	Benzene	ND	0.0096	0.025		mg/Kg	1	11/18/2022 9:31:03 PM
108-88-3	Toluene	ND	0.0064	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
100-41-4	Ethylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	0.028	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
95-63-6	1,2,4-Trimethylbenzene	ND	0.0070	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
108-67-8	1,3,5-Trimethylbenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	0.020	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
91-20-3	Naphthalene	ND	0.019	0.10		mg/Kg	1	11/18/2022 9:31:03 PM
90-12-0	1-Methylnaphthalene	ND	0.057	0.20		mg/Kg	1	11/18/2022 9:31:03 PM
91-57-6	2-Methylnaphthalene	ND	0.046	0.20		mg/Kg	1	11/18/2022 9:31:03 PM
67-64-1	Acetone	ND	0.16	0.75		mg/Kg	1	11/18/2022 9:31:03 PM
108-86-1	Bromobenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
75-27-4	Bromodichloromethane	ND	0.0063	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
75-25-2	Bromoform	ND	0.012	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
74-83-9	Bromomethane	ND	0.083	0.15		mg/Kg	1	11/18/2022 9:31:03 PM
78-93-3	2-Butanone	ND	0.22	0.50		mg/Kg	1	11/18/2022 9:31:03 PM
75-15-0	Carbon disulfide	ND	0.021	0.50		mg/Kg	1	11/18/2022 9:31:03 PM
56-23-5	Carbon tetrachloride	ND	0.0056	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
108-90-7	Chlorobenzene	ND	0.0090	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
75-00-3	Chloroethane	ND	0.019	0.10		mg/Kg	1	11/18/2022 9:31:03 PM
67-66-3	Chloroform	ND	0.0071	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
74-87-3	Chloromethane	ND	0.017	0.15		mg/Kg	1	11/18/2022 9:31:03 PM
95-49-8	2-Chlorotoluene	ND	0.0067	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
106-43-4	4-Chlorotoluene	ND	0.026	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
156-59-2	cis-1,2-DCE	ND	0.025	0.050		mg/Kg	1	11/18/2022 9:31:03 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA17
Project: Bisti LF **Collection Date:** 11/11/2022 12:40:00 PM
Lab ID: 2211751-017 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
10061-01-5	cis-1,3-Dichloropropene	ND	0.0074	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.022	0.10		mg/Kg	1	11/18/2022 9:31:03 PM
124-48-1	Dibromochloromethane	ND	0.0080	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
74-95-3	Dibromomethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
95-50-1	1,2-Dichlorobenzene	ND	0.010	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
541-73-1	1,3-Dichlorobenzene	ND	0.0094	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
106-46-7	1,4-Dichlorobenzene	ND	0.013	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
75-71-8	Dichlorodifluoromethane	ND	0.019	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
75-34-3	1,1-Dichloroethane	ND	0.015	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
75-35-4	1,1-Dichloroethene	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
78-87-5	1,2-Dichloropropane	ND	0.0097	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
142-28-9	1,3-Dichloropropane	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
594-20-7	2,2-Dichloropropane	ND	0.0071	0.10		mg/Kg	1	11/18/2022 9:31:03 PM
563-58-6	1,1-Dichloropropene	ND	0.0060	0.10		mg/Kg	1	11/18/2022 9:31:03 PM
87-68-3	Hexachlorobutadiene	ND	0.034	0.10		mg/Kg	1	11/18/2022 9:31:03 PM
591-78-6	2-Hexanone	ND	0.022	0.50		mg/Kg	1	11/18/2022 9:31:03 PM
98-82-8	Isopropylbenzene	ND	0.0093	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
99-87-6	4-Isopropyltoluene	ND	0.013	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
108-10-1	4-Methyl-2-pentanone	ND	0.058	0.50		mg/Kg	1	11/18/2022 9:31:03 PM
75-09-2	Methylene chloride	ND	0.036	0.15		mg/Kg	1	11/18/2022 9:31:03 PM
104-51-8	n-Butylbenzene	ND	0.013	0.15		mg/Kg	1	11/18/2022 9:31:03 PM
103-65-1	n-Propylbenzene	ND	0.0081	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
135-98-8	sec-Butylbenzene	ND	0.041	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
100-42-5	Styrene	ND	0.0068	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
98-06-6	tert-Butylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0073	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.016	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
127-18-4	Tetrachloroethene (PCE)	ND	0.014	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
156-60-5	trans-1,2-DCE	ND	0.0096	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
10061-02-6	trans-1,3-Dichloropropene	ND	0.012	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
87-61-6	1,2,3-Trichlorobenzene	ND	0.0077	0.10		mg/Kg	1	11/18/2022 9:31:03 PM
120-82-1	1,2,4-Trichlorobenzene	ND	0.017	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
71-55-6	1,1,1-Trichloroethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
79-00-5	1,1,2-Trichloroethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
79-01-6	Trichloroethene (TCE)	ND	0.0098	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
75-69-4	Trichlorofluoromethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
96-18-4	1,2,3-Trichloropropane	ND	0.021	0.10		mg/Kg	1	11/18/2022 9:31:03 PM
75-01-4	Vinyl chloride	ND	0.0095	0.050		mg/Kg	1	11/18/2022 9:31:03 PM
1330-20-7	Xylenes, Total	ND	0.026	0.10		mg/Kg	1	11/18/2022 9:31:03 PM
1868-53-7	Surr: Dibromofluoromethane	115		70-130		%Rec	1	11/18/2022 9:31:03 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	97.1		70-130		%Rec	1	11/18/2022 9:31:03 PM
2037-26-5	Surr: Toluene-d8	106		70-130		%Rec	1	11/18/2022 9:31:03 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA17
Project: Bisti LF **Collection Date:** 11/11/2022 12:40:00 PM
Lab ID: 2211751-017 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
460-00-4	Surr: 4-Bromofluorobenzene	101		70-130		%Rec	1	11/18/2022 9:31:03 PM
SM4500H+B/EPA 9040C								Analyst: **SNS**
pH	pH	8.50				pH Units	1	11/28/2022 4:12:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA18
Project: Bisti LF **Collection Date:** 11/11/2022 12:45:00 PM
Lab ID: 2211751-018 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8082A: PCB'S								Analyst: **SB**
12674-11-2	Aroclor 1016	ND	0.013	0.016		mg/Kg	1	11/30/2022 3:28:47 AM
11104-28-2	Aroclor 1221	ND	0.0042	0.016		mg/Kg	1	11/30/2022 3:28:47 AM
11141-16-5	Aroclor 1232	ND	0.016	0.016		mg/Kg	1	11/30/2022 3:28:47 AM
53469-21-9	Aroclor 1242	ND	0.0085	0.016		mg/Kg	1	11/30/2022 3:28:47 AM
12672-29-6	Aroclor 1248	ND	0.0095	0.016		mg/Kg	1	11/30/2022 3:28:47 AM
11097-69-1	Aroclor 1254	ND	0.0042	0.016		mg/Kg	1	11/30/2022 3:28:47 AM
11096-82-5	Aroclor 1260	ND	0.015	0.016		mg/Kg	1	11/30/2022 3:28:47 AM
2051-24-3	Surr: Decachlorobiphenyl	98.0	0	17.2-115		%Rec	1	11/30/2022 3:28:47 AM
877-09-8	Surr: Tetrachloro-m-xylene	94.0	0	15-110		%Rec	1	11/30/2022 3:28:47 AM
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS								Analyst: **DGH**
TPH-DRO	Diesel Range Organics (DRO)	ND	11	15		mg/Kg	1	11/22/2022 11:26:25 PM
TPH-MRO	Motor Oil Range Organics (MRO)	ND	27	49		mg/Kg	1	11/22/2022 11:26:25 PM
117-84-0	Surr: DNOP	111	0	21-129		%Rec	1	11/22/2022 11:26:25 PM
EPA METHOD 8015D: GASOLINE RANGE								Analyst: **CCM**
TPH-GRO	Gasoline Range Organics (GRO)	ND	1.5	5.0		mg/Kg	1	11/22/2022 1:25:00 AM
460-00-4	Surr: BFB	148	0	37.7-212		%Rec	1	11/22/2022 1:25:00 AM
EPA METHOD 300.0: ANIONS								Analyst: **JMT**
16984-48-8	Fluoride	1.5	0.30	0.30		mg/Kg	1	11/28/2022 7:51:11 PM
16887-00-6	Chloride	140	30	30		mg/Kg	20	11/28/2022 8:03:36 PM
7727-37-9	Nitrogen, Nitrate (As N)	24	6.0	6.0		mg/Kg	20	11/28/2022 8:03:36 PM
14808-79-8	Sulfate	230	30	30		mg/Kg	20	11/28/2022 8:03:36 PM
EPA METHOD 6020A: TOTAL METALS								Analyst: **ELS**
7440-38-2	Arsenic	2.6	0.25	0.50		mg/Kg	5	11/20/2022 2:30:13 PM
7440-61-1	Uranium	0.30	0.25	0.50	J	mg/Kg	5	11/21/2022 2:52:41 PM
EPA METHOD 7471B: MERCURY								Analyst: **VP**
7439-97-6	Mercury	ND	0.033	0.033		mg/Kg	1	11/30/2022 3:45:42 PM
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-39-3	Barium	200	0.19	0.20		mg/Kg	2	11/22/2022 11:20:17 AM
7440-43-9	Cadmium	ND	0.19	0.20		mg/Kg	2	11/22/2022 11:20:17 AM
7440-70-2	Calcium	8000	45	100		mg/Kg	2	11/22/2022 11:20:17 AM
7440-47-3	Chromium	3.4	0.45	0.60		mg/Kg	2	11/22/2022 11:20:17 AM
7440-50-8	Copper	3.4	2.1	4.0	J	mg/Kg	2	11/22/2022 11:20:17 AM
7439-89-6	Iron	6900	290	500		mg/Kg	50	12/2/2022 10:36:47 AM
7439-92-1	Lead	2.9	1.1	2.0		mg/Kg	2	11/22/2022 11:20:17 AM
7439-95-4	Magnesium	1500	11	100		mg/Kg	2	11/22/2022 11:20:17 AM
7439-96-5	Manganese	120	0.33	0.40		mg/Kg	2	11/22/2022 11:20:17 AM

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA18
Project: Bisti LF **Collection Date:** 11/11/2022 12:45:00 PM
Lab ID: 2211751-018 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-09-7	Potassium	1100	56	100		mg/Kg	2	11/22/2022 11:20:17 AM
7782-49-2	Selenium	ND	4.4	5.0		mg/Kg	2	11/22/2022 1:18:59 PM
7440-22-4	Silver	ND	0.74	1.0		mg/Kg	2	11/22/2022 1:18:59 PM
7440-23-5	Sodium	420	44	100		mg/Kg	2	11/22/2022 11:20:17 AM
7440-66-6	Zinc	13	4.7	5.0		mg/Kg	2	11/22/2022 11:20:17 AM
SW8270C								Analyst: **DAM**
91-20-3	Naphthalene	ND	0.0027	0.0097		mg/Kg	1	12/5/2022 6:09:00 PM
90-12-0	1-Methylnaphthalene	ND	0.0027	0.0097		mg/Kg	1	12/5/2022 6:09:00 PM
91-57-6	2-Methylnaphthalene	ND	0.0031	0.0097		mg/Kg	1	12/5/2022 6:09:00 PM
50-32-8	Benzo(a)pyrene	ND	0.0081	0.019		mg/Kg	1	12/5/2022 6:09:00 PM
4165-60-0	Surr: Nitrobenzene-d5	67.5	0	15-137		%Rec	1	12/5/2022 6:09:00 PM
321-60-8	Surr: 2-Fluorobiphenyl	60.5	0	15-121		%Rec	1	12/5/2022 6:09:00 PM
1718-51-0	Surr: 4-Terphenyl-d14	78.5	0	15.7-126		%Rec	1	12/5/2022 6:09:00 PM
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
71-43-2	Benzene	ND	0.0096	0.025		mg/Kg	1	11/18/2022 9:57:59 PM
108-88-3	Toluene	ND	0.0064	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
100-41-4	Ethylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	0.028	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
95-63-6	1,2,4-Trimethylbenzene	ND	0.0071	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
108-67-8	1,3,5-Trimethylbenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	0.020	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
91-20-3	Naphthalene	ND	0.019	0.10		mg/Kg	1	11/18/2022 9:57:59 PM
90-12-0	1-Methylnaphthalene	ND	0.057	0.20		mg/Kg	1	11/18/2022 9:57:59 PM
91-57-6	2-Methylnaphthalene	ND	0.046	0.20		mg/Kg	1	11/18/2022 9:57:59 PM
67-64-1	Acetone	ND	0.16	0.75		mg/Kg	1	11/18/2022 9:57:59 PM
108-86-1	Bromobenzene	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
75-27-4	Bromodichloromethane	ND	0.0064	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
75-25-2	Bromoform	ND	0.012	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
74-83-9	Bromomethane	ND	0.083	0.15		mg/Kg	1	11/18/2022 9:57:59 PM
78-93-3	2-Butanone	ND	0.22	0.50		mg/Kg	1	11/18/2022 9:57:59 PM
75-15-0	Carbon disulfide	ND	0.021	0.50		mg/Kg	1	11/18/2022 9:57:59 PM
56-23-5	Carbon tetrachloride	ND	0.0056	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
108-90-7	Chlorobenzene	ND	0.0090	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
75-00-3	Chloroethane	ND	0.019	0.10		mg/Kg	1	11/18/2022 9:57:59 PM
67-66-3	Chloroform	ND	0.0071	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
74-87-3	Chloromethane	ND	0.018	0.15		mg/Kg	1	11/18/2022 9:57:59 PM
95-49-8	2-Chlorotoluene	ND	0.0067	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
106-43-4	4-Chlorotoluene	ND	0.026	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
156-59-2	cis-1,2-DCE	ND	0.025	0.050		mg/Kg	1	11/18/2022 9:57:59 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA18
Project: Bisti LF **Collection Date:** 11/11/2022 12:45:00 PM
Lab ID: 2211751-018 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
10061-01-5	cis-1,3-Dichloropropene	ND	0.0074	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.022	0.10		mg/Kg	1	11/18/2022 9:57:59 PM
124-48-1	Dibromochloromethane	ND	0.0080	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
74-95-3	Dibromomethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
95-50-1	1,2-Dichlorobenzene	ND	0.010	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
541-73-1	1,3-Dichlorobenzene	ND	0.0094	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
106-46-7	1,4-Dichlorobenzene	ND	0.013	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
75-71-8	Dichlorodifluoromethane	ND	0.019	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
75-34-3	1,1-Dichloroethane	ND	0.015	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
75-35-4	1,1-Dichloroethene	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
78-87-5	1,2-Dichloropropane	ND	0.0097	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
142-28-9	1,3-Dichloropropane	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
594-20-7	2,2-Dichloropropane	ND	0.0071	0.10		mg/Kg	1	11/18/2022 9:57:59 PM
563-58-6	1,1-Dichloropropene	ND	0.0060	0.10		mg/Kg	1	11/18/2022 9:57:59 PM
87-68-3	Hexachlorobutadiene	ND	0.034	0.10		mg/Kg	1	11/18/2022 9:57:59 PM
591-78-6	2-Hexanone	ND	0.022	0.50		mg/Kg	1	11/18/2022 9:57:59 PM
98-82-8	Isopropylbenzene	ND	0.0093	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
99-87-6	4-Isopropyltoluene	ND	0.013	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
108-10-1	4-Methyl-2-pentanone	ND	0.058	0.50		mg/Kg	1	11/18/2022 9:57:59 PM
75-09-2	Methylene chloride	ND	0.036	0.15		mg/Kg	1	11/18/2022 9:57:59 PM
104-51-8	n-Butylbenzene	ND	0.013	0.15		mg/Kg	1	11/18/2022 9:57:59 PM
103-65-1	n-Propylbenzene	ND	0.0081	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
135-98-8	sec-Butylbenzene	ND	0.041	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
100-42-5	Styrene	ND	0.0068	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
98-06-6	tert-Butylbenzene	ND	0.012	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0073	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.016	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
127-18-4	Tetrachloroethene (PCE)	ND	0.014	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
156-60-5	trans-1,2-DCE	ND	0.0097	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
10061-02-6	trans-1,3-Dichloropropene	ND	0.012	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
87-61-6	1,2,3-Trichlorobenzene	ND	0.0077	0.10		mg/Kg	1	11/18/2022 9:57:59 PM
120-82-1	1,2,4-Trichlorobenzene	ND	0.017	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
71-55-6	1,1,1-Trichloroethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
79-00-5	1,1,2-Trichloroethane	ND	0.012	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
79-01-6	Trichloroethene (TCE)	ND	0.0098	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
75-69-4	Trichlorofluoromethane	ND	0.011	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
96-18-4	1,2,3-Trichloropropane	ND	0.021	0.10		mg/Kg	1	11/18/2022 9:57:59 PM
75-01-4	Vinyl chloride	ND	0.0095	0.050		mg/Kg	1	11/18/2022 9:57:59 PM
1330-20-7	Xylenes, Total	ND	0.026	0.10		mg/Kg	1	11/18/2022 9:57:59 PM
1868-53-7	Surr: Dibromofluoromethane	108		70-130		%Rec	1	11/18/2022 9:57:59 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	99.6		70-130		%Rec	1	11/18/2022 9:57:59 PM
2037-26-5	Surr: Toluene-d8	104		70-130		%Rec	1	11/18/2022 9:57:59 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA18
Project: Bisti LF **Collection Date:** 11/11/2022 12:45:00 PM
Lab ID: 2211751-018 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
460-00-4	Surr: 4-Bromofluorobenzene	96.7		70-130		%Rec	1	11/18/2022 9:57:59 PM
SM4500H+B/EPA 9040C								Analyst: **SNS**
pH	pH	8.31				pH Units	1	11/28/2022 4:12:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA19
Project: Bisti LF **Collection Date:** 11/11/2022 12:50:00 PM
Lab ID: 2211751-019 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8082A: PCB'S								Analyst: **SB**
12674-11-2	Aroclor 1016	ND	0.013	0.016		mg/Kg	1	11/30/2022 4:06:06 AM
11104-28-2	Aroclor 1221	ND	0.0043	0.016		mg/Kg	1	11/30/2022 4:06:06 AM
11141-16-5	Aroclor 1232	ND	0.016	0.016		mg/Kg	1	11/30/2022 4:06:06 AM
53469-21-9	Aroclor 1242	ND	0.0087	0.016		mg/Kg	1	11/30/2022 4:06:06 AM
12672-29-6	Aroclor 1248	ND	0.0097	0.016		mg/Kg	1	11/30/2022 4:06:06 AM
11097-69-1	Aroclor 1254	ND	0.0042	0.016		mg/Kg	1	11/30/2022 4:06:06 AM
11096-82-5	Aroclor 1260	ND	0.015	0.016		mg/Kg	1	11/30/2022 4:06:06 AM
2051-24-3	Surr: Decachlorobiphenyl	96.8	0	17.2-115		%Rec	1	11/30/2022 4:06:06 AM
877-09-8	Surr: Tetrachloro-m-xylene	96.0	0	15-110		%Rec	1	11/30/2022 4:06:06 AM
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS								Analyst: **DGH**
TPH-DRO	Diesel Range Organics (DRO)	ND	11	15		mg/Kg	1	11/22/2022 11:36:45 PM
TPH-MRO	Motor Oil Range Organics (MRO)	ND	27	49		mg/Kg	1	11/22/2022 11:36:45 PM
117-84-0	Surr: DNOP	101	0	21-129		%Rec	1	11/22/2022 11:36:45 PM
EPA METHOD 8015D: GASOLINE RANGE								Analyst: **CCM**
TPH-GRO	Gasoline Range Organics (GRO)	ND	1.5	5.0		mg/Kg	1	11/22/2022 1:44:00 AM
460-00-4	Surr: BFB	154	0	37.7-212		%Rec	1	11/22/2022 1:44:00 AM
EPA METHOD 300.0: ANIONS								Analyst: **JMT**
16984-48-8	Fluoride	2.2	0.30	0.30		mg/Kg	1	11/28/2022 8:16:00 PM
16887-00-6	Chloride	31	1.5	1.5		mg/Kg	1	11/28/2022 8:16:00 PM
7727-37-9	Nitrogen, Nitrate (As N)	19	6.0	6.0		mg/Kg	20	11/28/2022 8:28:25 PM
14808-79-8	Sulfate	450	30	30		mg/Kg	20	11/28/2022 8:28:25 PM
EPA METHOD 6020A: TOTAL METALS								Analyst: **ELS**
7440-38-2	Arsenic	2.8	0.25	0.50		mg/Kg	5	11/20/2022 2:34:24 PM
7440-61-1	Uranium	0.35	0.25	0.50	J	mg/Kg	5	11/21/2022 2:56:52 PM
EPA METHOD 7471B: MERCURY								Analyst: **VP**
7439-97-6	Mercury	ND	0.033	0.033		mg/Kg	1	11/30/2022 3:47:51 PM
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-39-3	Barium	70	0.19	0.20		mg/Kg	2	11/22/2022 11:22:10 AM
7440-43-9	Cadmium	ND	0.19	0.20		mg/Kg	2	11/22/2022 11:22:10 AM
7440-70-2	Calcium	6700	44	99		mg/Kg	2	11/22/2022 11:22:10 AM
7440-47-3	Chromium	4.5	0.45	0.60		mg/Kg	2	11/22/2022 11:22:10 AM
7440-50-8	Copper	4.1	2.0	4.0		mg/Kg	2	11/22/2022 11:22:10 AM
7439-89-6	Iron	8500	290	500		mg/Kg	50	12/2/2022 10:38:16 AM
7439-92-1	Lead	2.6	1.1	2.0		mg/Kg	2	11/22/2022 11:22:10 AM
7439-95-4	Magnesium	1900	11	99		mg/Kg	2	11/22/2022 11:22:10 AM
7439-96-5	Manganese	160	0.33	0.40		mg/Kg	2	11/22/2022 11:22:10 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA19
Project: Bisti LF **Collection Date:** 11/11/2022 12:50:00 PM
Lab ID: 2211751-019 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-09-7	Potassium	1300	56	99		mg/Kg	2	11/22/2022 11:22:10 AM
7782-49-2	Selenium	ND	4.4	5.0		mg/Kg	2	11/22/2022 1:20:16 PM
7440-22-4	Silver	ND	0.74	0.99		mg/Kg	2	11/22/2022 1:20:16 PM
7440-23-5	Sodium	650	44	99		mg/Kg	2	11/22/2022 11:22:10 AM
7440-66-6	Zinc	16	4.7	5.0		mg/Kg	2	11/22/2022 11:22:10 AM
SW8270C								Analyst: **DAM**
91-20-3	Naphthalene	ND	0.0025	0.0091		mg/Kg	1	12/5/2022 6:55:00 PM
90-12-0	1-Methylnaphthalene	ND	0.0026	0.0091		mg/Kg	1	12/5/2022 6:55:00 PM
91-57-6	2-Methylnaphthalene	ND	0.0029	0.0091		mg/Kg	1	12/5/2022 6:55:00 PM
50-32-8	Benzo(a)pyrene	ND	0.0076	0.018		mg/Kg	1	12/5/2022 6:55:00 PM
4165-60-0	Surr: Nitrobenzene-d5	79.5	0	15-137		%Rec	1	12/5/2022 6:55:00 PM
321-60-8	Surr: 2-Fluorobiphenyl	73.0	0	15-121		%Rec	1	12/5/2022 6:55:00 PM
1718-51-0	Surr: 4-Terphenyl-d14	98.5	0	35.7-126		%Rec	1	12/5/2022 6:55:00 PM
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
71-43-2	Benzene	ND	0.0096	0.025		mg/Kg	1	11/21/2022 2:47:16 PM
108-88-3	Toluene	ND	0.0064	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
100-41-4	Ethylbenzene	ND	0.012	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	0.028	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
95-63-6	1,2,4-Trimethylbenzene	ND	0.0070	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
108-67-8	1,3,5-Trimethylbenzene	ND	0.011	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	0.011	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	0.020	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
91-20-3	Naphthalene	ND	0.019	0.10		mg/Kg	1	11/21/2022 2:47:16 PM
90-12-0	1-Methylnaphthalene	ND	0.057	0.20		mg/Kg	1	11/21/2022 2:47:16 PM
91-57-6	2-Methylnaphthalene	ND	0.046	0.20		mg/Kg	1	11/21/2022 2:47:16 PM
67-64-1	Acetone	ND	0.16	0.75		mg/Kg	1	11/21/2022 2:47:16 PM
108-86-1	Bromobenzene	ND	0.011	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
75-27-4	Bromodichloromethane	ND	0.0063	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
75-25-2	Bromoform	ND	0.012	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
74-83-9	Bromomethane	ND	0.082	0.15		mg/Kg	1	11/21/2022 2:47:16 PM
78-93-3	2-Butanone	ND	0.22	0.50		mg/Kg	1	11/21/2022 2:47:16 PM
75-15-0	Carbon disulfide	ND	0.020	0.50		mg/Kg	1	11/21/2022 2:47:16 PM
56-23-5	Carbon tetrachloride	ND	0.0055	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
108-90-7	Chlorobenzene	ND	0.0089	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
75-00-3	Chloroethane	ND	0.019	0.10		mg/Kg	1	11/21/2022 2:47:16 PM
67-66-3	Chloroform	ND	0.0071	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
74-87-3	Chloromethane	ND	0.017	0.15		mg/Kg	1	11/21/2022 2:47:16 PM
95-49-8	2-Chlorotoluene	ND	0.0067	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
106-43-4	4-Chlorotoluene	ND	0.026	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
156-59-2	cis-1,2-DCE	ND	0.025	0.050		mg/Kg	1	11/21/2022 2:47:16 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA19
Project: Bisti LF **Collection Date:** 11/11/2022 12:50:00 PM
Lab ID: 2211751-019 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
10061-01-5	cis-1,3-Dichloropropene	ND	0.0074	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.021	0.10		mg/Kg	1	11/21/2022 2:47:16 PM
124-48-1	Dibromochloromethane	ND	0.0080	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
74-95-3	Dibromomethane	ND	0.012	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
95-50-1	1,2-Dichlorobenzene	ND	0.010	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
541-73-1	1,3-Dichlorobenzene	ND	0.0094	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
106-46-7	1,4-Dichlorobenzene	ND	0.013	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
75-71-8	Dichlorodifluoromethane	ND	0.019	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
75-34-3	1,1-Dichloroethane	ND	0.014	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
75-35-4	1,1-Dichloroethene	ND	0.011	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
78-87-5	1,2-Dichloropropane	ND	0.0097	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
142-28-9	1,3-Dichloropropane	ND	0.011	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
594-20-7	2,2-Dichloropropane	ND	0.0071	0.10		mg/Kg	1	11/21/2022 2:47:16 PM
563-58-6	1,1-Dichloropropene	ND	0.0060	0.10		mg/Kg	1	11/21/2022 2:47:16 PM
87-68-3	Hexachlorobutadiene	ND	0.034	0.10		mg/Kg	1	11/21/2022 2:47:16 PM
591-78-6	2-Hexanone	ND	0.022	0.50		mg/Kg	1	11/21/2022 2:47:16 PM
98-82-8	Isopropylbenzene	ND	0.0092	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
99-87-6	4-Isopropyltoluene	ND	0.013	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
108-10-1	4-Methyl-2-pentanone	ND	0.058	0.50		mg/Kg	1	11/21/2022 2:47:16 PM
75-09-2	Methylene chloride	ND	0.036	0.15		mg/Kg	1	11/21/2022 2:47:16 PM
104-51-8	n-Butylbenzene	ND	0.013	0.15		mg/Kg	1	11/21/2022 2:47:16 PM
103-65-1	n-Propylbenzene	ND	0.0080	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
135-98-8	sec-Butylbenzene	ND	0.041	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
100-42-5	Styrene	ND	0.0068	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
98-06-6	tert-Butylbenzene	ND	0.012	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0073	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.016	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
127-18-4	Tetrachloroethene (PCE)	ND	0.014	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
156-60-5	trans-1,2-DCE	ND	0.0096	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
10061-02-6	trans-1,3-Dichloropropene	ND	0.012	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
87-61-6	1,2,3-Trichlorobenzene	ND	0.0077	0.10		mg/Kg	1	11/21/2022 2:47:16 PM
120-82-1	1,2,4-Trichlorobenzene	ND	0.017	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
71-55-6	1,1,1-Trichloroethane	ND	0.011	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
79-00-5	1,1,2-Trichloroethane	ND	0.012	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
79-01-6	Trichloroethene (TCE)	ND	0.0098	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
75-69-4	Trichlorofluoromethane	ND	0.011	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
96-18-4	1,2,3-Trichloropropane	ND	0.021	0.10		mg/Kg	1	11/21/2022 2:47:16 PM
75-01-4	Vinyl chloride	ND	0.0095	0.050		mg/Kg	1	11/21/2022 2:47:16 PM
1330-20-7	Xylenes, Total	ND	0.026	0.10		mg/Kg	1	11/21/2022 2:47:16 PM
1868-53-7	Surr: Dibromofluoromethane	110		70-130		%Rec	1	11/21/2022 2:47:16 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	91.6		70-130		%Rec	1	11/21/2022 2:47:16 PM
2037-26-5	Surr: Toluene-d8	116		70-130		%Rec	1	11/21/2022 2:47:16 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA19
Project: Bisti LF **Collection Date:** 11/11/2022 12:50:00 PM
Lab ID: 2211751-019 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
460-00-4	Surr: 4-Bromofluorobenzene	101		70-130		%Rec	1	11/21/2022 2:47:16 PM
SM4500H+B/EPA 9040C								Analyst: **SNS**
pH	pH	8.56				pH Units	1	11/28/2022 4:12:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA20
Project: Bisti LF **Collection Date:** 11/11/2022 12:55:00 PM
Lab ID: 2211751-020 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8082A: PCB'S								Analyst: **JME**
12674-11-2	Aroclor 1016	ND	0.014	0.017		mg/Kg	1	12/1/2022 11:47:56 AM
11104-28-2	Aroclor 1221	ND	0.0043	0.017		mg/Kg	1	12/1/2022 11:47:56 AM
11141-16-5	Aroclor 1232	ND	0.016	0.017		mg/Kg	1	12/1/2022 11:47:56 AM
53469-21-9	Aroclor 1242	ND	0.0088	0.017		mg/Kg	1	12/1/2022 11:47:56 AM
12672-29-6	Aroclor 1248	ND	0.0098	0.017		mg/Kg	1	12/1/2022 11:47:56 AM
11097-69-1	Aroclor 1254	ND	0.0043	0.017		mg/Kg	1	12/1/2022 11:47:56 AM
11096-82-5	Aroclor 1260	ND	0.015	0.017		mg/Kg	1	12/1/2022 11:47:56 AM
2051-24-3	Surr: Decachlorobiphenyl	100	0	17.2-115		%Rec	1	12/1/2022 11:47:56 AM
877-09-8	Surr: Tetrachloro-m-xylene	92.8	0	15-110		%Rec	1	12/1/2022 11:47:56 AM
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS								Analyst: **DGH**
TPH-DRO	Diesel Range Organics (DRO)	ND	11	15		mg/Kg	1	11/22/2022 11:47:06 PM
TPH-MRO	Motor Oil Range Organics (MRO)	ND	27	49		mg/Kg	1	11/22/2022 11:47:06 PM
117-84-0	Surr: DNOP	110	0	21-129		%Rec	1	11/22/2022 11:47:06 PM
EPA METHOD 8015D: GASOLINE RANGE								Analyst: **CCM**
TPH-GRO	Gasoline Range Organics (GRO)	ND	1.5	4.9		mg/Kg	1	11/22/2022 2:04:00 AM
460-00-4	Surr: BFB	151	0	37.7-212		%Rec	1	11/22/2022 2:04:00 AM
EPA METHOD 300.0: ANIONS								Analyst: **JMT**
16984-48-8	Fluoride	2.1	0.30	0.30		mg/Kg	1	11/28/2022 8:40:50 PM
16887-00-6	Chloride	12	1.5	1.5		mg/Kg	1	11/28/2022 8:40:50 PM
7727-37-9	Nitrogen, Nitrate (As N)	20	0.30	0.30		mg/Kg	1	11/28/2022 8:40:50 PM
14808-79-8	Sulfate	260	30	30		mg/Kg	20	11/28/2022 8:53:14 PM
EPA METHOD 6020A: TOTAL METALS								Analyst: **ELS**
7440-38-2	Arsenic	2.7	0.25	0.49		mg/Kg	5	11/20/2022 2:38:34 PM
7440-61-1	Uranium	0.37	0.25	0.49	J	mg/Kg	5	11/21/2022 3:01:00 PM
EPA METHOD 7471B: MERCURY								Analyst: **VP**
7439-97-6	Mercury	ND	0.033	0.033		mg/Kg	1	11/30/2022 3:50:00 PM
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-39-3	Barium	81	0.19	0.20		mg/Kg	2	11/22/2022 11:24:03 AM
7440-43-9	Cadmium	ND	0.19	0.20		mg/Kg	2	11/22/2022 11:24:03 AM
7440-70-2	Calcium	13000	1100	2500		mg/Kg	50	12/2/2022 10:47:37 AM
7440-47-3	Chromium	4.1	0.45	0.59		mg/Kg	2	11/22/2022 11:24:03 AM
7440-50-8	Copper	3.7	2.0	4.0	J	mg/Kg	2	11/22/2022 11:24:03 AM
7439-89-6	Iron	8000	290	490		mg/Kg	50	12/2/2022 10:47:37 AM
7439-92-1	Lead	2.9	1.1	2.0		mg/Kg	2	11/22/2022 11:24:03 AM
7439-95-4	Magnesium	1800	11	99		mg/Kg	2	11/22/2022 11:24:03 AM
7439-96-5	Manganese	150	0.33	0.40		mg/Kg	2	11/22/2022 11:24:03 AM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA20
Project: Bisti LF **Collection Date:** 11/11/2022 12:55:00 PM
Lab ID: 2211751-020 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 6010B: SOIL METALS								Analyst: **JRR**
7440-09-7	Potassium	1200	55	99		mg/Kg	2	11/22/2022 11:24:03 AM
7782-49-2	Selenium	ND	4.3	4.9		mg/Kg	2	11/22/2022 1:21:33 PM
7440-22-4	Silver	ND	0.74	0.99		mg/Kg	2	11/22/2022 1:21:33 PM
7440-23-5	Sodium	490	44	99		mg/Kg	2	11/22/2022 11:24:03 AM
7440-66-6	Zinc	15	4.7	4.9		mg/Kg	2	11/22/2022 11:24:03 AM
SW8270C								Analyst: **DAM**
91-20-3	Naphthalene	ND	0.0026	0.0096		mg/Kg	1	12/5/2022 7:41:00 PM
90-12-0	1-Methylnaphthalene	ND	0.0027	0.0096		mg/Kg	1	12/5/2022 7:41:00 PM
91-57-6	2-Methylnaphthalene	ND	0.0030	0.0096		mg/Kg	1	12/5/2022 7:41:00 PM
50-32-8	Benzo(a)pyrene	ND	0.0080	0.019		mg/Kg	1	12/5/2022 7:41:00 PM
4165-60-0	Surr: Nitrobenzene-d5	94.0	0	15-137		%Rec	1	12/5/2022 7:41:00 PM
321-60-8	Surr: 2-Fluorobiphenyl	88.5	0	15-121		%Rec	1	12/5/2022 7:41:00 PM
1718-51-0	Surr: 4-Terphenyl-d14	113	0	15.7-126		%Rec	1	12/5/2022 7:41:00 PM
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
71-43-2	Benzene	ND	0.0094	0.025		mg/Kg	1	11/21/2022 3:14:14 PM
108-88-3	Toluene	ND	0.0063	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
100-41-4	Ethylbenzene	ND	0.012	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
1634-04-4	Methyl tert-butyl ether (MTBE)	ND	0.028	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
95-63-6	1,2,4-Trimethylbenzene	ND	0.0069	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
108-67-8	1,3,5-Trimethylbenzene	ND	0.011	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
107-06-2	1,2-Dichloroethane (EDC)	ND	0.011	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
106-93-4	1,2-Dibromoethane (EDB)	ND	0.019	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
91-20-3	Naphthalene	ND	0.018	0.098		mg/Kg	1	11/21/2022 3:14:14 PM
90-12-0	1-Methylnaphthalene	ND	0.056	0.20		mg/Kg	1	11/21/2022 3:14:14 PM
91-57-6	2-Methylnaphthalene	ND	0.045	0.20		mg/Kg	1	11/21/2022 3:14:14 PM
67-64-1	Acetone	ND	0.16	0.74		mg/Kg	1	11/21/2022 3:14:14 PM
108-86-1	Bromobenzene	ND	0.010	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
75-27-4	Bromodichloromethane	ND	0.0062	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
75-25-2	Bromoform	ND	0.012	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
74-83-9	Bromomethane	ND	0.081	0.15		mg/Kg	1	11/21/2022 3:14:14 PM
78-93-3	2-Butanone	ND	0.21	0.49		mg/Kg	1	11/21/2022 3:14:14 PM
75-15-0	Carbon disulfide	ND	0.020	0.49		mg/Kg	1	11/21/2022 3:14:14 PM
56-23-5	Carbon tetrachloride	ND	0.0055	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
108-90-7	Chlorobenzene	ND	0.0088	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
75-00-3	Chloroethane	ND	0.018	0.098		mg/Kg	1	11/21/2022 3:14:14 PM
67-66-3	Chloroform	ND	0.0070	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
74-87-3	Chloromethane	ND	0.017	0.15		mg/Kg	1	11/21/2022 3:14:14 PM
95-49-8	2-Chlorotoluene	ND	0.0066	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
106-43-4	4-Chlorotoluene	ND	0.026	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
156-59-2	cis-1,2-DCE	ND	0.024	0.049		mg/Kg	1	11/21/2022 3:14:14 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA20
Project: Bisti LF **Collection Date:** 11/11/2022 12:55:00 PM
Lab ID: 2211751-020 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
10061-01-5	cis-1,3-Dichloropropene	ND	0.0073	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.021	0.098		mg/Kg	1	11/21/2022 3:14:14 PM
124-48-1	Dibromochloromethane	ND	0.0079	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
74-95-3	Dibromomethane	ND	0.011	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
95-50-1	1,2-Dichlorobenzene	ND	0.010	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
541-73-1	1,3-Dichlorobenzene	ND	0.0093	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
106-46-7	1,4-Dichlorobenzene	ND	0.013	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
75-71-8	Dichlorodifluoromethane	ND	0.019	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
75-34-3	1,1-Dichloroethane	ND	0.014	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
75-35-4	1,1-Dichloroethene	ND	0.011	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
78-87-5	1,2-Dichloropropane	ND	0.0096	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
142-28-9	1,3-Dichloropropane	ND	0.011	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
594-20-7	2,2-Dichloropropane	ND	0.0070	0.098		mg/Kg	1	11/21/2022 3:14:14 PM
563-58-6	1,1-Dichloropropene	ND	0.0059	0.098		mg/Kg	1	11/21/2022 3:14:14 PM
87-68-3	Hexachlorobutadiene	ND	0.033	0.098		mg/Kg	1	11/21/2022 3:14:14 PM
591-78-6	2-Hexanone	ND	0.021	0.49		mg/Kg	1	11/21/2022 3:14:14 PM
98-82-8	Isopropylbenzene	ND	0.0091	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
99-87-6	4-Isopropyltoluene	ND	0.013	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
108-10-1	4-Methyl-2-pentanone	ND	0.057	0.49		mg/Kg	1	11/21/2022 3:14:14 PM
75-09-2	Methylene chloride	ND	0.036	0.15		mg/Kg	1	11/21/2022 3:14:14 PM
104-51-8	n-Butylbenzene	ND	0.013	0.15		mg/Kg	1	11/21/2022 3:14:14 PM
103-65-1	n-Propylbenzene	ND	0.0079	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
135-98-8	sec-Butylbenzene	ND	0.040	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
100-42-5	Styrene	ND	0.0067	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
98-06-6	tert-Butylbenzene	ND	0.011	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0072	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.016	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
127-18-4	Tetrachloroethene (PCE)	ND	0.013	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
156-60-5	trans-1,2-DCE	ND	0.0095	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
10061-02-6	trans-1,3-Dichloropropene	ND	0.012	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
87-61-6	1,2,3-Trichlorobenzene	ND	0.0076	0.098		mg/Kg	1	11/21/2022 3:14:14 PM
120-82-1	1,2,4-Trichlorobenzene	ND	0.017	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
71-55-6	1,1,1-Trichloroethane	ND	0.011	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
79-00-5	1,1,2-Trichloroethane	ND	0.012	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
79-01-6	Trichloroethene (TCE)	ND	0.0096	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
75-69-4	Trichlorofluoromethane	ND	0.011	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
96-18-4	1,2,3-Trichloropropane	ND	0.021	0.098		mg/Kg	1	11/21/2022 3:14:14 PM
75-01-4	Vinyl chloride	ND	0.0094	0.049		mg/Kg	1	11/21/2022 3:14:14 PM
1330-20-7	Xylenes, Total	ND	0.026	0.098		mg/Kg	1	11/21/2022 3:14:14 PM
1868-53-7	Surr: Dibromofluoromethane	113		70-130		%Rec	1	11/21/2022 3:14:14 PM
17060-07-0	Surr: 1,2-Dichloroethane-d4	97.1		70-130		%Rec	1	11/21/2022 3:14:14 PM
2037-26-5	Surr: Toluene-d8	109		70-130		%Rec	1	11/21/2022 3:14:14 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report
Lab Order **2211751**
Date Reported: **12/15/2022**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: ENSOLUM **Client Sample ID:** HA20
Project: Bisti LF **Collection Date:** 11/11/2022 12:55:00 PM
Lab ID: 2211751-020 **Matrix:** SOIL **Received Date:** 11/12/2022 8:00:00 AM

CAS#	Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES								Analyst: **RAA**
460-00-4	Surr: 4-Bromofluorobenzene	101		70-130		%Rec	1	11/21/2022 3:14:14 PM
SM4500H+B/EPA 9040C								Analyst: **SNS**
pH	pH	8.77				pH Units	1	11/28/2022 4:12:00 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Pace Analytical®

ANALYTICAL REPORT

November 28, 2022

Revised Report

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Hall Environmental Analysis Laboratory

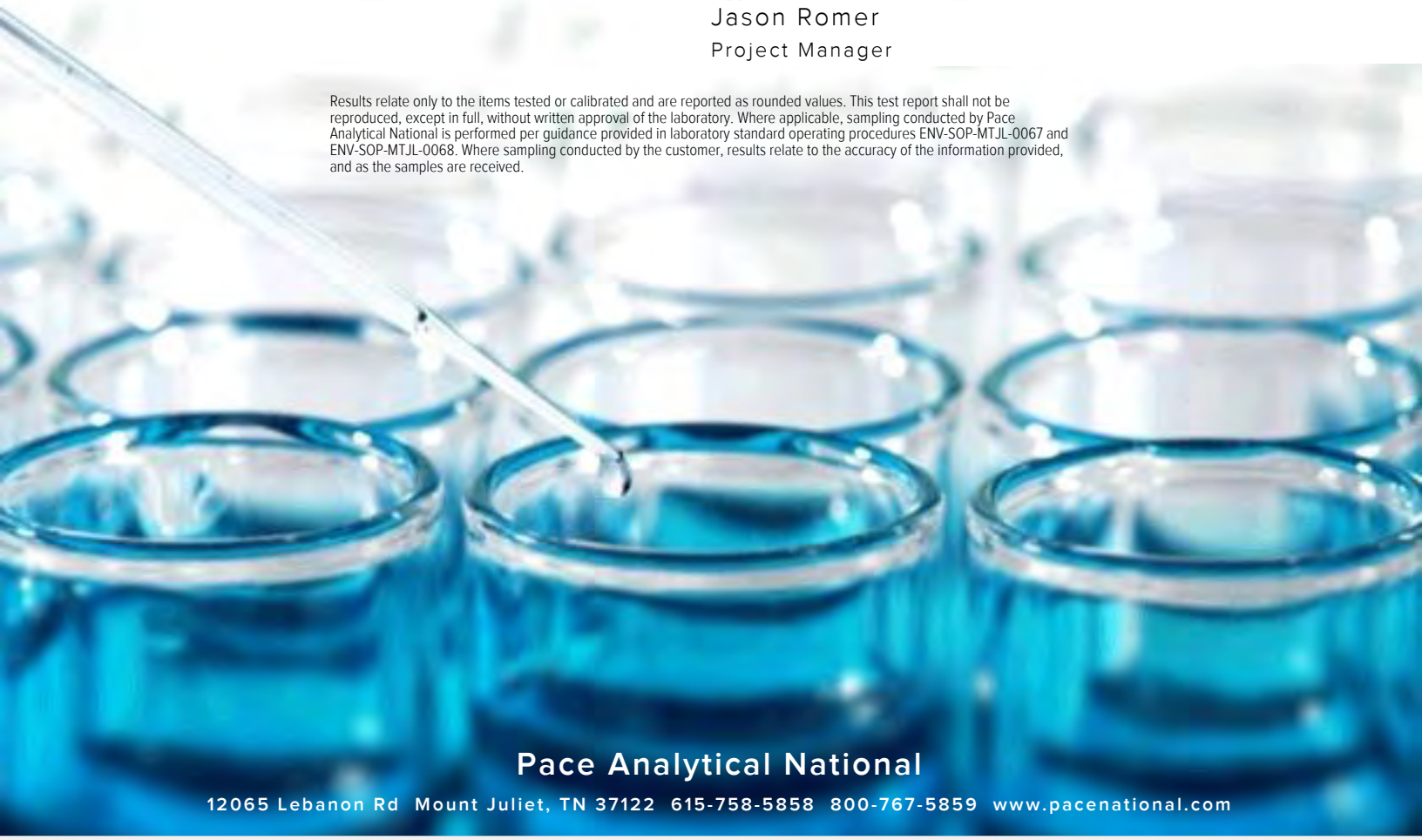
Sample Delivery Group:	L1557863
Samples Received:	11/15/2022
Project Number:	
Description:	

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

Entire Report Reviewed By:

Jason Romer
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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2211751-001B HA1 L1557863-01 Solid

Collected by	Collected date/time	Received date/time
	11/11/22 11:10	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012B	WG1959474	1	11/16/22 08:03	11/16/22 22:06	CAT	Mt. Juliet, TN
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 14:53	LDT	Mt. Juliet, TN

2211751-002B HA2 L1557863-02 Solid

Collected by	Collected date/time	Received date/time
	11/11/22 11:15	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012B	WG1959474	1	11/16/22 08:03	11/16/22 22:07	CAT	Mt. Juliet, TN
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 14:55	LDT	Mt. Juliet, TN

2211751-003B HA3 L1557863-03 Solid

Collected by	Collected date/time	Received date/time
	11/11/22 11:17	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012B	WG1959474	1	11/16/22 08:03	11/16/22 22:08	CAT	Mt. Juliet, TN
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 14:58	LDT	Mt. Juliet, TN

2211751-004B HA4 L1557863-04 Solid

Collected by	Collected date/time	Received date/time
	11/11/22 11:20	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012B	WG1959474	1	11/16/22 08:03	11/16/22 22:09	CAT	Mt. Juliet, TN
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 14:58	LDT	Mt. Juliet, TN

2211751-005B HA5 L1557863-05 Solid

Collected by	Collected date/time	Received date/time
	11/11/22 11:30	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012B	WG1959474	1	11/16/22 08:03	11/16/22 22:11	CAT	Mt. Juliet, TN
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 14:59	LDT	Mt. Juliet, TN

2211751-006B HA6 L1557863-06 Solid

Collected by	Collected date/time	Received date/time
	11/11/22 11:32	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 15:51	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:00	LDT	Mt. Juliet, TN

2211751-007B HA7 L1557863-07 Solid

Collected by	Collected date/time	Received date/time
	11/11/22 11:34	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 15:52	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:01	LDT	Mt. Juliet, TN

2211751-008B HA8 L1557863-08 Solid

Collected by	Collected date/time	Received date/time
	11/11/22 11:36	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 15:56	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:02	LDT	Mt. Juliet, TN

2211751-009B HA9 L1557863-09 Solid

Collected by	Collected date/time	Received date/time
	11/11/22 11:45	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 15:58	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:12	LDT	Mt. Juliet, TN

2211751-010B HA10 L1557863-10 Solid

Collected by	Collected date/time	Received date/time
	11/11/22 11:50	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 15:59	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:03	LDT	Mt. Juliet, TN

2211751-011B HA11 L1557863-11 Solid

Collected by	Collected date/time	Received date/time
	11/11/22 11:55	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:00	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:04	LDT	Mt. Juliet, TN

2211751-012B HA12 L1557863-12 Solid

Collected by	Collected date/time	Received date/time
	11/11/22 12:00	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:01	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:05	LDT	Mt. Juliet, TN

2211751-013B HA13 L1557863-13 Solid

Collected by	Collected date/time	Received date/time
	11/11/22 12:10	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:02	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:07	LDT	Mt. Juliet, TN

2211751-014B HA14 L1557863-14 Solid

Collected by	Collected date/time	Received date/time
	11/11/22 12:15	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:03	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:08	LDT	Mt. Juliet, TN

2211751-015B HA15 L1557863-15 Solid

Collected by	Collected date/time	Received date/time
	11/11/22 12:20	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:04	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:09	LDT	Mt. Juliet, TN

2211751-016B HA16 L1557863-16 Solid

Collected by	Collected date/time	Received date/time
	11/11/22 12:25	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:06	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:09	LDT	Mt. Juliet, TN

2211751-017B HA17 L1557863-17 Solid

Collected by	Collected date/time	Received date/time
	11/11/22 12:40	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:09	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:10	LDT	Mt. Juliet, TN

2211751-018B HA18 L1557863-18 Solid

Collected by	Collected date/time	Received date/time
	11/11/22 12:45	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:10	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:11	LDT	Mt. Juliet, TN

2211751-019B HA19 L1557863-19 Solid

Collected by	Collected date/time	Received date/time
	11/11/22 12:50	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:11	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:12	LDT	Mt. Juliet, TN

2211751-020B HA20 L1557863-20 Solid

Collected by	Collected date/time	Received date/time
	11/11/22 12:55	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:12	LDT	Mt. Juliet, TN
Wet Chemistry by Method 9066	WG1960609	1	11/23/22 10:49	11/23/22 13:45	CAT	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jason Romer
Project Manager

Report Revision History

Level II Report - Version 1: 11/23/22 19:20

Project Narrative

Revised Sample IDs

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cyanide	U		0.0733	0.250	1	11/16/2022 22:06	WG1959474

Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 14:53	WG1958244

Wet Chemistry by Method 9012B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cyanide	U		0.0733	0.250	1	11/16/2022 22:07	WG1959474

Wet Chemistry by Method 9066

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 14:55	WG1958244

2211J31-003B HA3
Collected date/time: 11/11/22 11:17
L1557863

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cyanide	U		0.0733	0.250	1	11/16/2022 22:08	WG1959474

Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 14:58	WG1958244

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cyanide	U		0.0733	0.250	1	11/16/2022 22:09	WG1959474

Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 14:58	WG1958244

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cyanide	U		0.0733	0.250	1	11/16/2022 22:11	WG1959474

Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 14:59	WG1958244

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cyanide	U		0.0733	0.250	1	11/19/2022 15:51	WG1960612

Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:00	WG1958244

Wet Chemistry by Method 9012B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cyanide	U		0.0733	0.250	1	11/19/2022 15:52	WG1960612

Wet Chemistry by Method 9066

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:01	WG1958244

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cyanide	U		0.0733	0.250	1	11/19/2022 15:56	WG1960612

Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:02	WG1958244

Wet Chemistry by Method 9012B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cyanide	U		0.0733	0.250	1	11/19/2022 15:58	WG1960612

Wet Chemistry by Method 9066

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:12	WG1958244

Collected date/time: 11/11/22 11:50

L1557863

Wet Chemistry by Method 9012B

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Cyanide	U		0.0733	0.250	1	11/19/2022 15:59	WG1960612

Wet Chemistry by Method 9066

Analyte	Result mg/kg	Qualifier	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	Batch
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:03	WG1958244

Collected date/time: 11/11/22 11:55

L1557863

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cyanide	U		0.0733	0.250	1	11/19/2022 16:00	WG1960612

Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:04	WG1958244

Collected date/time: 11/11/22 12:00

L1557863

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cyanide	U		0.0733	0.250	1	11/19/2022 16:01	WG1960612

Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:05	WG1958244

221754-013B HA13
Collected date/time: 11/11/22 12:10
L1557863

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cyanide	U		0.0733	0.250	1	11/19/2022 16:02	WG1960612

Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:07	WG1958244

22117-01-014B HA14
Collected date/time: 11/11/22 12:15
L1557863

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cyanide	U		0.0733	0.250	1	11/19/2022 16:03	WG1960612

Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:08	WG1958244

221754-015B HA15
Collected date/time: 11/11/22 12:20
L1557863

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cyanide	U		0.0733	0.250	1	11/19/2022 16:04	WG1960612

Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Total Phenol by 4AAP	2.82	B	0.220	0.670	1	11/17/2022 15:09	WG1958244

221754-016B TIA16
Collected date/time: 11/11/22 12:25
L1557863

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cyanide	U		0.0733	0.250	1	11/19/2022 16:06	WG1960612

Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:09	WG1958244

Collected date/time: 11/11/22 12:40
L1557863

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cyanide	U		0.0733	0.250	1	11/19/2022 16:09	WG1960612

Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:10	WG1958244

2211J31-018B TIA18
Collected date/time: 11/11/22 12:45
L1557863

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cyanide	U		0.0733	0.250	1	11/19/2022 16:10	WG1960612

Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:11	WG1958244

Collected date/time: 11/11/22 12:50
L1557863

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cyanide	U		0.0733	0.250	1	11/19/2022 16:11	WG1960612

Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:12	WG1958244

Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cyanide	U		0.0733	0.250	1	11/19/2022 16:12	WG1960612

Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Total Phenol by 4AAP	0.293	J P1	0.220	0.670	1	11/23/2022 13:45	WG1960609

Method Blank (MB)

(MB) R3861922-1 11/16/22 21:39

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Cyanide	U		0.0733	0.250

L1556828-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1556828-01 11/16/22 21:44 • (DUP) R3861922-3 11/16/22 21:45

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	U	U	1	0.000		20

L1557254-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1557254-01 11/16/22 21:51 • (DUP) R3861922-4 11/16/22 21:52

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3861922-2 11/16/22 21:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	2.50	2.45	98.0	85.0-115	

L1557483-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1557483-01 11/16/22 21:57 • (MS) R3861922-5 11/16/22 21:58 • (MSD) R3861922-6 11/16/22 21:59

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	1.67	U	1.59	1.59	95.4	95.6	1	75.0-125			0.209	20

Method Blank (MB)

(MB) R3863086-1 11/19/22 15:44

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Cyanide	U		0.0733	0.250

L1557863-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1557863-07 11/19/22 15:52 • (DUP) R3863086-5 11/19/22 15:53

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	U	U	1	0.000		20

L1557863-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1557863-08 11/19/22 15:56 • (DUP) R3863086-6 11/19/22 15:57

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3863086-2 11/19/22 15:45

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	2.50	2.43	97.3	85.0-115	

L1556745-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1556745-01 11/19/22 15:48 • (MS) R3863086-3 11/19/22 15:49 • (MSD) R3863086-4 11/19/22 15:50

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	1.67	3.67	3.82	4.42	8.74	44.8	1	75.0-125	E J6	E J6	14.6	20

Sample Narrative:

MS: Matrix spike failure due to matrix interference.

MSD: Matrix spike failure due to matrix interference.

Method Blank (MB)

(MB) R3862346-1 11/17/22 14:48

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Total Phenol by 4AAP	0.339	J	0.220	0.670

L1557538-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1557538-01 11/17/22 14:50 • (DUP) R3862346-3 11/17/22 14:51

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Phenol by 4AAP	0.526	0.221	1	0.000		20

L1557863-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1557863-01 11/17/22 14:53 • (DUP) R3862346-6 11/17/22 14:54

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Phenol by 4AAP	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3862346-2 11/17/22 14:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Phenol by 4AAP	8.33	9.17	110	72.1-129	

L1557538-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1557538-01 11/17/22 14:50 • (MS) R3862346-4 11/17/22 14:51 • (MSD) R3862346-5 11/17/22 14:52

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Total Phenol by 4AAP	16.7	0.526	4.05	4.85	21.1	25.9	1	15.4-151			17.9	20

L1557863-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1557863-01 11/17/22 14:53 • (MS) R3862346-7 11/17/22 14:55

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Total Phenol by 4AAP	16.7	U	16.2	96.8	1	15.4-151	

Method Blank (MB)

(MB) R3864582-1 11/23/22 13:43

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Total Phenol by 4AAP	U		0.220	0.670

L1557863-20 Original Sample (OS) • Duplicate (DUP)

(OS) L1557863-20 11/23/22 13:45 • (DUP) R3864582-3 11/23/22 13:45

Analyte	Original Result mg/kg	DUP Result mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Phenol by 4AAP	0.293	U	1	41.6	P1	20

Laboratory Control Sample (LCS)

(LCS) R3864582-2 11/23/22 13:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Phenol by 4AAP	8.33	8.51	102	72.1-129	

L1557863-20 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1557863-20 11/23/22 13:45 • (MS) R3864582-4 11/23/22 13:46 • (MSD) R3864582-5 11/23/22 13:47

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Total Phenol by 4AAP	16.7	0.293	14.6	14.6	85.9	85.7	1	15.4-151			0.284	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 2

E204

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

SUB CONTRATOR:	Pace TN	COMPANY: PACE TN	PHONE: (800) 767-5859	FAX: (615) 758-5859	
ADDRESS:	12065 Lebanon Rd		ACCOUNT #:	EMAIL:	
CITY, STATE, ZIP:	Mt. Juliet, TN 37122				

L1557863

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS	
1	2211751-001B	HA1	4OZGU	Soil	11/11/2022 11:10:00 AM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	01
2	2211751-002B	HA2	4OZGU	Soil	11/11/2022 11:15:00 AM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	02
3	2211751-003B	HA3	4OZGU	Soil	11/11/2022 11:17:00 AM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	03
4	2211751-004B	HA4	4OZGU	Soil	11/11/2022 11:20:00 AM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	04
5	2211751-005B	HA5	4OZGU	Soil	11/11/2022 11:30:00 AM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	05
6	2211751-006B	HA6	4OZGU	Soil	11/11/2022 11:32:00 AM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	06
7	2211751-007B	HA7	4OZGU	Soil	11/11/2022 11:34:00 AM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	07
8	2211751-008B	HA8	4OZGU	Soil	11/11/2022 11:36:00 AM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	08
9	2211751-009B	HA9	4OZGU	Soil	11/11/2022 11:45:00 AM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	09
10	2211751-010B	HA10	4OZGU	Soil	11/11/2022 11:50:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	10
11	2211751-011B	HA11	4OZGU	Soil	11/11/2022 11:55:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	11
12	2211751-012B	HA12	4OZGU	Soil	11/11/2022 12:00:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	12
13	2211751-013B	HA13	4OZGU	Soil	11/11/2022 12:10:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	13

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By:	Date: 11/14/2022	Time: 10:11 AM	Received By:	Date: 11-15-22	Time: 0800
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAT: Standard ☑ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY
Temp of samples _____ °C Attempt to Cool ? _____
Comments: _____

HALL ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

PAGE: 2 OF: 2

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

SUB CONTRATOR: Pace TN	COMPANY: PACE TN	PHONE: (800) 767-5859	FAX: (615) 758-5859		
ADDRESS: 12065 Lebanon Rd		ACCOUNT #:	EMAIL:		
CITY, STATE, ZIP: Mt. Juliet, TN 37122					

4557263

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS	
14	2211751-014B	HA14	4OZGU	Soil	11/11/2022 12:15:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	14
15	2211751-015B	HA15	4OZGU	Soil	11/11/2022 12:20:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	15
16	2211751-016B	HA16	4OZGU	Soil	11/11/2022 12:25:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	16
17	2211751-017B	HA17	4OZGU	Soil	11/11/2022 12:40:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	17
18	2211751-018B	HA18	4OZGU	Soil	11/11/2022 12:45:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	18
19	2211751-019B	HA19	4OZGU	Soil	11/11/2022 12:50:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	19
20	2211751-020B	HA20	4OZGU	Soil	11/11/2022 12:55:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	20

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By:	Date: 11/14/2022	Time: 10:11 AM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAT: Standard ☑ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:

☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples _____ ℃ Attempt to Cool ? _____

Comments: _____

Pace Analytical®

ANALYTICAL REPORT

December 15, 2022

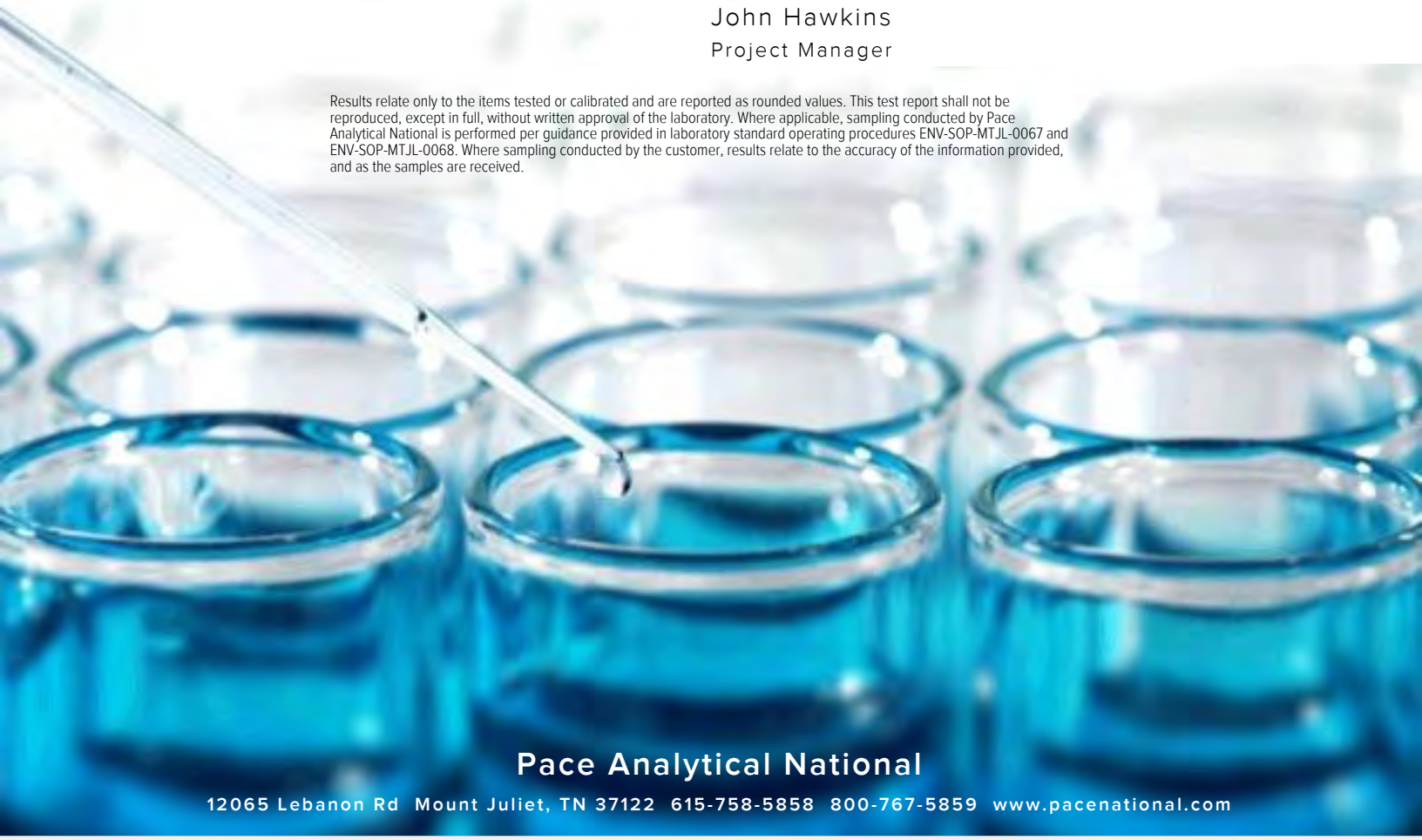
Hall Environmental Analysis Laboratory

Sample Delivery Group:	L1557879
Samples Received:	11/15/2022
Project Number:	
Description:	

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

Entire Report Reviewed By: John V Hawkins

John Hawkins
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

2211751-001B HA1 L1557879-01 Solids and Chemical Materials

Collected by | Collected date/time 11/11/22 11:10 | Received date/time 11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)	WG1963251	1	11/21/22 13:18	12/14/22 14:11	DME	Mt. Juliet, TN

2211751-002B HA2 L1557879-02 Solids and Chemical Materials

Collected by | Collected date/time 11/11/22 11:15 | Received date/time 11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)	WG1963251	1	11/21/22 13:18	12/13/22 17:34	DME	Mt. Juliet, TN

2211751-003B HA3 L1557879-03 Solids and Chemical Materials

Collected by | Collected date/time 11/11/22 11:17 | Received date/time 11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)	WG1963251	1	11/21/22 13:18	12/13/22 17:37	DME	Mt. Juliet, TN

2211751-004B HA4 L1557879-04 Solids and Chemical Materials

Collected by | Collected date/time 11/11/22 11:20 | Received date/time 11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)	WG1963251	1	11/21/22 13:18	12/14/22 11:33	DME	Mt. Juliet, TN

2211751-005B HA5 L1557879-05 Solids and Chemical Materials

Collected by | Collected date/time 11/11/22 11:30 | Received date/time 11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)	WG1963251	1	11/21/22 13:18	12/14/22 12:40	DME	Mt. Juliet, TN

2211751-006B HA6 L1557879-06 Solids and Chemical Materials

Collected by | Collected date/time 11/11/22 11:32 | Received date/time 11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)	WG1963251	1	11/21/22 13:18	12/14/22 13:02	DME	Mt. Juliet, TN

2211751-007B HA7 L1557879-07 Solids and Chemical Materials

Collected by | Collected date/time 11/11/22 11:34 | Received date/time 11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)	WG1963251	1	11/21/22 13:18	12/14/22 14:00	DME	Mt. Juliet, TN

2211751-008B HA8 L1557879-08 Solids and Chemical Materials

Collected by | Collected date/time 11/11/22 11:36 | Received date/time 11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)	WG1963251	1	11/21/22 13:18	12/14/22 14:44	DME	Mt. Juliet, TN

2211751-009B HA9 L1557879-09 Solids and Chemical Materials

Collected by | Collected date/time 11/11/22 11:45 | Received date/time 11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)	WG1963251	1	11/21/22 13:18	12/14/22 14:57	DME	Mt. Juliet, TN

2211751-010B HA10 L1557879-10 Solids and Chemical Materials

Collected by | Collected date/time 11/11/22 11:50 | Received date/time 11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)	WG1963251	1	11/21/22 13:18	12/14/22 15:20	DME	Mt. Juliet, TN

2211751-011B HA11 L1557879-11 Solids and Chemical Materials

Collected by | Collected date/time 11/11/22 11:55 | Received date/time 11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)	WG1963251	1	11/21/22 13:18	12/14/22 16:26	DME	Mt. Juliet, TN

2211751-012B HA12 L1557879-12 Solids and Chemical Materials

Collected by | Collected date/time 11/11/22 12:00 | Received date/time 11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)	WG1963251	1	11/21/22 13:18	12/14/22 16:27	DME	Mt. Juliet, TN

2211751-013B HA13 L1557879-13 Solids and Chemical Materials

Collected by | Collected date/time 11/11/22 12:10 | Received date/time 11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)	WG1963251	1	11/21/22 13:18	12/14/22 16:28	DME	Mt. Juliet, TN

2211751-014B HA14 L1557879-14 Solids and Chemical Materials

Collected by | Collected date/time 11/11/22 12:15 | Received date/time 11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)	WG1963251	1	11/21/22 13:18	12/14/22 16:28	DME	Mt. Juliet, TN

2211751-015B HA15 L1557879-15 Solids and Chemical Materials

Collected by | Collected date/time 11/11/22 12:20 | Received date/time 11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)	WG1963251	1	11/21/22 13:18	12/14/22 16:30	DME	Mt. Juliet, TN

2211751-016B HA16 L1557879-16 Solids and Chemical Materials

Collected by | Collected date/time 11/11/22 12:25 | Received date/time 11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)	WG1963251	1	11/21/22 13:18	12/14/22 17:46	DME	Mt. Juliet, TN

2211751-017B HA17 L1557879-17 Solids and Chemical Materials

Collected by	Collected date/time	Received date/time
	11/11/22 12:40	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)	WG1963251	1	11/21/22 13:18	12/14/22 17:47	DME	Mt. Juliet, TN

2211751-018B HA18 L1557879-18 Solids and Chemical Materials

Collected by	Collected date/time	Received date/time
	11/11/22 12:45	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)	WG1963251	1	11/21/22 13:18	12/14/22 17:48	DME	Mt. Juliet, TN

2211751-019B HA19 L1557879-19 Solids and Chemical Materials

Collected by	Collected date/time	Received date/time
	11/11/22 12:50	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)	WG1963251	1	11/21/22 13:18	12/14/22 19:32	DME	Mt. Juliet, TN

2211751-020B HA20 L1557879-20 Solids and Chemical Materials

Collected by	Collected date/time	Received date/time
	11/11/22 12:55	11/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)	WG1963251	1	11/21/22 13:18	12/14/22 19:33	DME	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

John Hawkins
Project Manager

22117-01B HAT
Collected date/time: 11/11/22 11:10
L1557879

Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)

Analyte	Result pCi/g	Qualifier	Uncertainty + / -	MDA pCi/g	Analysis Date date / time	Batch
Actinium-228 (Ra-228)	0.638		0.248	0.416	12/14/2022 14:11	WG1963251
Bismuth-214 (Ra-226)	0.247	J	0.155	0.275	12/14/2022 14:11	WG1963251

221754-002B HA2
Collected date/time: 11/11/22 11:15
L1557879

Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)

Analyte	Result pCi/g	Qualifier	Uncertainty + / -	MDA pCi/g	Analysis Date date / time	Batch
Actinium-228 (Ra-228)	0.550	J	0.296	0.572	12/13/2022 17:34	WG1963251
Bismuth-214 (Ra-226)	0.695		0.237	0.311	12/13/2022 17:34	WG1963251

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

SAMPLE RESULTS - 03

Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)

Analyte	Result pCi/g	Qualifier	Uncertainty + / -	MDA pCi/g	Analysis Date date / time	Batch
Actinium-228 (Ra-228)	0.598		0.257	0.496	12/13/2022 17:37	WG1963251
Bismuth-214 (Ra-226)	0.424		0.149	0.222	12/13/2022 17:37	WG1963251

2211J31-004B TIA4
Collected date/time: 11/11/22 11:20
L1557879

Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)

Analyte	Result pCi/g	Qualifier	Uncertainty + / -	MDA pCi/g	Analysis Date date / time	Batch
Actinium-228 (Ra-228)	0.696		0.309	0.497	12/14/2022 11:33	WG1963251
Bismuth-214 (Ra-226)	0.863		0.239	0.277	12/14/2022 11:33	WG1963251

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

2211734-005B HA3
Collected date/time: 11/11/22 11:30
L1557879

Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)

Analyte	Result pCi/g	Qualifier	Uncertainty + / -	MDA pCi/g	Analysis Date date / time	Batch
Actinium-228 (Ra-228)	0.706		0.311	0.553	12/14/2022 12:40	WG1963251
Bismuth-214 (Ra-226)	0.336	J	0.215	0.370	12/14/2022 12:40	WG1963251

Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)

Analyte	Result pCi/g	Qualifier	Uncertainty + / -	MDA pCi/g	Analysis Date date / time	Batch
Actinium-228 (Ra-228)	0.684		0.243	0.432	12/14/2022 13:02	WG1963251
Bismuth-214 (Ra-226)	0.426		0.142	0.196	12/14/2022 13:02	WG1963251

221754-007B HA7
Collected date/time: 11/11/22 11:34
L1557879

Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/g		+ / -	pCi/g	date / time	
Actinium-228 (Ra-228)	0.751		0.362	0.698	12/14/2022 14:00	WG1963251
Bismuth-214 (Ra-226)	0.589		0.233	0.339	12/14/2022 14:00	WG1963251

2211-31-008B HA8
Collected date/time: 11/11/22 11:36
L1557879

Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/g		+ / -	pCi/g	date / time	
Actinium-228 (Ra-228)	0.573		0.250	0.509	12/14/2022 14:44	WG1963251
Bismuth-214 (Ra-226)	0.433		0.155	0.239	12/14/2022 14:44	WG1963251

2211754-009B HA9
Collected date/time: 11/11/22 11:45
L1557879

Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)

Analyte	Result pCi/g	Qualifier	Uncertainty + / -	MDA pCi/g	Analysis Date date / time	Batch
Actinium-228 (Ra-228)	0.471		0.208	0.422	12/14/2022 14:57	WG1963251
Bismuth-214 (Ra-226)	0.519		0.161	0.275	12/14/2022 14:57	WG1963251

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

22117-01DB HALO

SAMPLE RESULTS - 10

Collected date/time: 11/11/22 11:50

L1557879

Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)

Analyte	Result pCi/g	Qualifier	Uncertainty + / -	MDA pCi/g	Analysis Date date / time	Batch
Actinium-228 (Ra-228)	0.568		0.240	0.431	12/14/2022 15:20	WG1963251
Bismuth-214 (Ra-226)	0.497		0.148	0.207	12/14/2022 15:20	WG1963251

Collected date/time: 11/11/22 11:55
L1557879

Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)

Analyte	Result pCi/g	Qualifier	Uncertainty + / -	MDA pCi/g	Analysis Date date / time	Batch
Actinium-228 (Ra-228)	0.998	J	0.488	1.11	12/14/2022 16:26	WG1963251
Bismuth-214 (Ra-226)	0.666		0.315	0.493	12/14/2022 16:26	WG1963251

221731-012B HA12
Collected date/time: 11/11/22 12:00
L1557879

Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)

Analyte	Result pCi/g	Qualifier	Uncertainty + / -	MDA pCi/g	Analysis Date date / time	Batch
Actinium-228 (Ra-228)	0.936		0.232	0.404	12/14/2022 16:27	WG1963251
Bismuth-214 (Ra-226)	0.828		0.179	0.270	12/14/2022 16:27	WG1963251

2211J31-013B HA13
Collected date/time: 11/11/22 12:10
L1557879

Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)

Analyte	Result pCi/g	Qualifier	Uncertainty + / -	MDA pCi/g	Analysis Date date / time	Batch
Actinium-228 (Ra-228)	0.635		0.250	0.478	12/14/2022 16:28	WG1963251
Bismuth-214 (Ra-226)	0.450		0.167	0.263	12/14/2022 16:28	WG1963251

Collected date/time: 11/11/22 12:15
L1557879

Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)

Analyte	Result pCi/g	Qualifier	Uncertainty + / -	MDA pCi/g	Analysis Date date / time	Batch
Actinium-228 (Ra-228)	0.692	J	0.362	0.700	12/14/2022 16:28	WG1963251
Bismuth-214 (Ra-226)	0.694		0.256	0.386	12/14/2022 16:28	WG1963251

22117-01SB HA15
Collected date/time: 11/11/22 12:20
L1557879

Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)

Analyte	Result pCi/g	Qualifier	Uncertainty + / -	MDA pCi/g	Analysis Date date / time	Batch
Actinium-228 (Ra-228)	0.332	J	0.223	0.481	12/14/2022 16:30	WG1963251
Bismuth-214 (Ra-226)	0.536		0.143	0.175	12/14/2022 16:30	WG1963251

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)

Analyte	Result pCi/g	Qualifier	Uncertainty + / -	MDA pCi/g	Analysis Date date / time	Batch
Actinium-228 (Ra-228)	0.709		0.238	0.490	12/14/2022 17:46	WG1963251
Bismuth-214 (Ra-226)	1.12		0.210	0.275	12/14/2022 17:46	WG1963251

221731-017B HA17
Collected date/time: 11/11/22 12:40
L1557879

Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)

Analyte	Result pCi/g	Qualifier	Uncertainty + / -	MDA pCi/g	Analysis Date date / time	Batch
Actinium-228 (Ra-228)	0.780		0.399	0.751	12/14/2022 17:47	WG1963251
Bismuth-214 (Ra-226)	0.692		0.267	0.400	12/14/2022 17:47	WG1963251

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

221754-018B HA18
Collected date/time: 11/11/22 12:45
L1557879

Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)

Analyte	Result pCi/g	Qualifier	Uncertainty + / -	MDA pCi/g	Analysis Date date / time	Batch
Actinium-228 (Ra-228)	0.581		0.239	0.453	12/14/2022 17:48	WG1963251
Bismuth-214 (Ra-226)	0.541		0.152	0.215	12/14/2022 17:48	WG1963251

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

22117-01-019B HA19
Collected date/time: 11/11/22 12:50
L1557879

Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)

Analyte	Result pCi/g	Qualifier	Uncertainty + / -	MDA pCi/g	Analysis Date date / time	Batch
Actinium-228 (Ra-228)	0.459	U	0.462	1.01	12/14/2022 19:32	WG1963251
Bismuth-214 (Ra-226)	1.18		0.386	0.499	12/14/2022 19:32	WG1963251

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

2211J31-020B TIA20
Collected date/time: 11/11/22 12:55
L1557879

Radiochemistry by Method DOE Ga-01-R/901.1 (21 day)

Analyte	Result pCi/g	Qualifier	Uncertainty + / -	MDA pCi/g	Analysis Date date / time	Batch
Actinium-228 (Ra-228)	0.666		0.224	0.426	12/14/2022 19:33	WG1963251
Bismuth-214 (Ra-226)	0.518		0.168	0.276	12/14/2022 19:33	WG1963251

Method Blank (MB)

(MB) R3872051-3 12/14/22 17:44

Analyte	MB Result pCi/g	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/g
Actinium-228 (Ra-228)	0.0230	U	0.226	0.968
Americium-241	0.0203	U	0.108	0.217
Bismuth-214 (Ra-226)	-0.0320	U	0.198	0.499
Cesium-137	-0.0354	U	0.107	0.279
Cobalt-60	-0.0425	U	0.0622	0.421

L1557879-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1557879-01 12/14/22 14:11 • (DUP) R3872051-4 12/14/22 17:45

Analyte	Original Result pCi/g	Original Uncertainty + / -	Original MDA pCi/g	DUP Result pCi/g	DUP Uncertainty + / -	DUP MDA pCi/g	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Actinium-228 (Ra-228)	0.638	0.248	0.416	0.507	0.252	0.416	1	22.9	0.370		20	3
Bismuth-214 (Ra-226)	0.247	0.155	0.275	0.530	0.177	0.275	1	72.8	1.20		20	3

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3872051-1 12/14/22 14:37 • (LCSD) R3872051-2 12/14/22 15:18

Analyte	Spike Amount pCi/g	LCS Result pCi/g	LCSD Result pCi/g	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Americium-241	128	133	163	104	127	60.0-140			19.8	20
Cesium-137	203	212	241	105	119	80.0-120			12.7	20
Cobalt-60	243	247	274	102	113	80.0-120			10.5	20

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 2

E204

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

SUB CONTRATOR: Pace TN	COMPANY: PACE TN	PHONE: (800) 767-5859	FAX: (615) 758-5859		
ADDRESS: 12065 Lebanon Rd		ACCOUNT #:	EMAIL:		
CITY, STATE, ZIP: Mt. Juliet, TN 37122					

L1557879

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS	
1	2211751-001B	HA1	4OZGU	Soil	11/11/2022 11:10:00 AM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	01
2	2211751-002B	HA2	4OZGU	Soil	11/11/2022 11:15:00 AM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	02
3	2211751-003B	HA3	4OZGU	Soil	11/11/2022 11:17:00 AM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	03
4	2211751-004B	HA4	4OZGU	Soil	11/11/2022 11:20:00 AM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	04
5	2211751-005B	HA5	4OZGU	Soil	11/11/2022 11:30:00 AM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	05
6	2211751-006B	HA6	4OZGU	Soil	11/11/2022 11:32:00 AM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	06
7	2211751-007B	HA7	4OZGU	Soil	11/11/2022 11:34:00 AM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	07
8	2211751-008B	HA8	4OZGU	Soil	11/11/2022 11:36:00 AM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	08
9	2211751-009B	HA9	4OZGU	Soil	11/11/2022 11:45:00 AM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	09
10	2211751-010B	HA10	4OZGU	Soil	11/11/2022 11:50:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	10
11	2211751-011B	HA11	4OZGU	Soil	11/11/2022 11:55:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	11
12	2211751-012B	HA12	4OZGU	Soil	11/11/2022 12:00:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	12
13	2211751-013B	HA13	4OZGU	Soil	11/11/2022 12:10:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	13

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

L580cpm

Relinquished By:	Date: 11/14/2022	Time: 10:11 AM	Received By:	Date: 11-15-22	Time: 0800
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAT: Standard ☑ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:

☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples _____ °C Attempt to Cool ? _____

Comments: _____

ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

PAGE: 2 OF: 2

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

SUB CONTRATOR: Pace TN	COMPANY: PACE TN		PHONE: (800) 767-5859	FAX: (615) 758-5859	
ADDRESS: 12065 Lebanon Rd			ACCOUNT #:	EMAIL:	
CITY, STATE, ZIP: Mt. Juliet, TN 37122					

L1557879

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS	
14	2211751-014B	HA14	4OZGU	Soil	11/11/2022 12:15:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	14
15	2211751-015B	HA15	4OZGU	Soil	11/11/2022 12:20:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	15
16	2211751-016B	HA16	4OZGU	Soil	11/11/2022 12:25:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	16
17	2211751-017B	HA17	4OZGU	Soil	11/11/2022 12:40:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	17
18	2211751-018B	HA18	4OZGU	Soil	11/11/2022 12:45:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	18
19	2211751-019B	HA19	4OZGU	Soil	11/11/2022 12:50:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	19
20	2211751-020B	HA20	4OZGU	Soil	11/11/2022 12:55:00 PM	1	Cyanide, Phenols by 9066, Alkalinity, RA226/228	20

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By:	Date: 11/14/2022	Time: 10:11 AM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAT: Standard ☒ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:

☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples _____ °C Attempt to Cool ? _____

Comments: _____

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211751**

15-Dec-22

Client: ENSOLUM

Project: Bisti LF

Sample ID: **MB-71660**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **71660**	RunNo: **92788**
Prep Date: **11/22/2022**	Analysis Date: **11/22/2022**	SeqNo: **3339922** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.30								
Chloride	ND	1.5								
Nitrogen, Nitrate (As N)	ND	0.30								
Sulfate	ND	1.5								

Sample ID: **LCS-71660**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS**	Batch ID: **71660**	RunNo: **92788**
Prep Date: **11/22/2022**	Analysis Date: **11/22/2022**	SeqNo: **3339923** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.5	0.30	1.500	0	98.7	90	110			
Chloride	14	1.5	15.00	0	94.5	90	110			
Nitrogen, Nitrate (As N)	7.6	0.30	7.500	0	101	90	110			
Sulfate	29	1.5	30.00	0	97.0	90	110			

Sample ID: **2211751-002AMS**	SampType: **ms**	TestCode: **EPA Method 300.0: Anions**
Client ID: **HA2**	Batch ID: **71660**	RunNo: **92788**
Prep Date: **11/22/2022**	Analysis Date: **11/22/2022**	SeqNo: **3339946** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	28	1.5	15.00	13.78	94.2	39.9	163			
Nitrogen, Nitrate (As N)	14	0.30	7.500	5.996	101	71.4	124			

Sample ID: **2211751-002AMSD**	SampType: **msd**	TestCode: **EPA Method 300.0: Anions**
Client ID: **HA2**	Batch ID: **71660**	RunNo: **92788**
Prep Date: **11/22/2022**	Analysis Date: **11/22/2022**	SeqNo: **3339947** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	29	1.5	15.00	13.78	99.6	39.9	163	2.88	20	
Nitrogen, Nitrate (As N)	14	0.30	7.500	5.996	108	71.4	124	4.03	20	

Sample ID: **MB-71725**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS**	Batch ID: **71725**	RunNo: **92840**
Prep Date: **11/28/2022**	Analysis Date: **11/28/2022**	SeqNo: **3343207** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.30								
Chloride	ND	1.5								
Nitrogen, Nitrate (As N)	ND	0.30								
Sulfate	ND	1.5								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211751**

15-Dec-22

Client: ENSOLUM

Project: Bisti LF

Sample ID: **LCS-71725**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **71725**	RunNo: **92840**							
Prep Date: **11/28/2022**	Analysis Date: **11/28/2022**	SeqNo: **3343208**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.5	0.30	1.500	0	98.5	90	110			
Chloride	14	1.5	15.00	0	93.5	90	110			
Nitrogen, Nitrate (As N)	7.5	0.30	7.500	0	99.8	90	110			
Sulfate	29	1.5	30.00	0	95.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211751**

15-Dec-22

Client: ENSOLUM

Project: Bisti LF

Sample ID: **MB-71582**	SampType: **MBLK**	TestCode: **EPA Method 6020A: Total Metals**
Client ID: **PBS**	Batch ID: **71582**	RunNo: **92713**
Prep Date: **11/17/2022**	Analysis Date: **11/20/2022**	SeqNo: **3336361** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.20								

Sample ID: **MSLCSLL-71582**	SampType: **LCSLL**	TestCode: **EPA Method 6020A: Total Metals**
Client ID: **BatchQC**	Batch ID: **71582**	RunNo: **92713**
Prep Date: **11/17/2022**	Analysis Date: **11/20/2022**	SeqNo: **3336362** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.092	0.20	0.1000	0	92.2	70	130			J

Sample ID: **MSLCS-71582**	SampType: **LCS**	TestCode: **EPA Method 6020A: Total Metals**
Client ID: **LCSS**	Batch ID: **71582**	RunNo: **92713**
Prep Date: **11/17/2022**	Analysis Date: **11/20/2022**	SeqNo: **3336363** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	4.5	0.20	5.000	0	90.0	80	120			

Sample ID: **MSLCSD-71582**	SampType: **LCSD**	TestCode: **EPA Method 6020A: Total Metals**
Client ID: **LCSS02**	Batch ID: **71582**	RunNo: **92713**
Prep Date: **11/17/2022**	Analysis Date: **11/20/2022**	SeqNo: **3336364** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	4.5	0.20	5.000	0	90.1	80	120	0.124	20	

Sample ID: **MB-71583**	SampType: **MBLK**	TestCode: **EPA Method 6020A: Total Metals**
Client ID: **PBS**	Batch ID: **71583**	RunNo: **92713**
Prep Date: **11/17/2022**	Analysis Date: **11/20/2022**	SeqNo: **3336365** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.20								

Sample ID: **MSLCSLL-71583**	SampType: **LCSLL**	TestCode: **EPA Method 6020A: Total Metals**
Client ID: **BatchQC**	Batch ID: **71583**	RunNo: **92713**
Prep Date: **11/17/2022**	Analysis Date: **11/20/2022**	SeqNo: **3336366** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.088	0.20	0.1000	0	87.8	70	130			J

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211751**

15-Dec-22

Client: ENSOLUM

Project: Bisti LF

Sample ID: **MSLCS-71583**	SampType: **LCS**	TestCode: **EPA Method 6020A: Total Metals**
Client ID: **LCSS**	Batch ID: **71583**	RunNo: **92713**
Prep Date: **11/17/2022**	Analysis Date: **11/20/2022**	SeqNo: **3336367** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	4.6	0.20	5.000	0	91.6	80	120			

Sample ID: **MSLCSD-71583**	SampType: **LCSD**	TestCode: **EPA Method 6020A: Total Metals**
Client ID: **LCSS02**	Batch ID: **71583**	RunNo: **92713**
Prep Date: **11/17/2022**	Analysis Date: **11/20/2022**	SeqNo: **3336368** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	4.5	0.20	5.000	0	90.8	80	120	0.889	20	

Sample ID: **MB-71582**	SampType: **MBLK**	TestCode: **EPA Method 6020A: Total Metals**
Client ID: **PBS**	Batch ID: **71582**	RunNo: **92747**
Prep Date: **11/17/2022**	Analysis Date: **11/21/2022**	SeqNo: **3337944** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.20								

Sample ID: **MSLCSLL-71582**	SampType: **LCSLL**	TestCode: **EPA Method 6020A: Total Metals**
Client ID: **BatchQC**	Batch ID: **71582**	RunNo: **92747**
Prep Date: **11/17/2022**	Analysis Date: **11/21/2022**	SeqNo: **3337945** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.093	0.20	0.1000	0	93.2	70	130			J

Sample ID: **MSLCS-71582**	SampType: **LCS**	TestCode: **EPA Method 6020A: Total Metals**
Client ID: **LCSS**	Batch ID: **71582**	RunNo: **92747**
Prep Date: **11/17/2022**	Analysis Date: **11/21/2022**	SeqNo: **3337946** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	5.4	0.20	5.000	0	108	80	120			

Sample ID: **MSLCSD-71582**	SampType: **LCSD**	TestCode: **EPA Method 6020A: Total Metals**
Client ID: **LCSS02**	Batch ID: **71582**	RunNo: **92747**
Prep Date: **11/17/2022**	Analysis Date: **11/21/2022**	SeqNo: **3337947** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	5.3	0.20	5.000	0	105	80	120	2.76	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211751**

15-Dec-22

Client: ENSOLUM

Project: Bisti LF

Sample ID: **MB-71583**	SampType: **MBLK**	TestCode: **EPA Method 6020A: Total Metals**
Client ID: **PBS**	Batch ID: **71583**	RunNo: **92747**
Prep Date: **11/17/2022**	Analysis Date: **11/21/2022**	SeqNo: **3337948** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	ND	0.20								

Sample ID: **MSLCSLL-71583**	SampType: **LCSLL**	TestCode: **EPA Method 6020A: Total Metals**
Client ID: **BatchQC**	Batch ID: **71583**	RunNo: **92747**
Prep Date: **11/17/2022**	Analysis Date: **11/21/2022**	SeqNo: **3337949** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.10	0.20	0.1000	0	103	70	130			J

Sample ID: **MSLCS-71583**	SampType: **LCS**	TestCode: **EPA Method 6020A: Total Metals**
Client ID: **LCSS**	Batch ID: **71583**	RunNo: **92747**
Prep Date: **11/17/2022**	Analysis Date: **11/21/2022**	SeqNo: **3337950** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	5.4	0.20	5.000	0	108	80	120			

Sample ID: **MSLCSD-71583**	SampType: **LCSD**	TestCode: **EPA Method 6020A: Total Metals**
Client ID: **LCSS02**	Batch ID: **71583**	RunNo: **92747**
Prep Date: **11/17/2022**	Analysis Date: **11/21/2022**	SeqNo: **3337951** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	5.1	0.20	5.000	0	101	80	120	5.98	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211751**

15-Dec-22

Client: ENSOLUM

Project: Bisti LF

Sample ID: **LCS-71614**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **71614**	RunNo: **92758**
Prep Date: **11/21/2022**	Analysis Date: **11/21/2022**	SeqNo: **3338811** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	15	50.00	0	90.7	64.4	127			
Surr: DNOP	5.7		5.000		113	21	129			

Sample ID: **MB-71614**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **71614**	RunNo: **92758**
Prep Date: **11/21/2022**	Analysis Date: **11/21/2022**	SeqNo: **3338813** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	11		10.00		106	21	129			

Sample ID: **LCS-71615**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **71615**	RunNo: **92769**
Prep Date: **11/21/2022**	Analysis Date: **11/22/2022**	SeqNo: **3338879** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	15	50.00	0	87.8	64.4	127			
Surr: DNOP	5.3		5.000		106	21	129			

Sample ID: **MB-71615**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **71615**	RunNo: **92769**
Prep Date: **11/21/2022**	Analysis Date: **11/22/2022**	SeqNo: **3338881** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	15								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	10		10.00		102	21	129			

Sample ID: **2211751-006AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **HA6**	Batch ID: **71615**	RunNo: **92769**
Prep Date: **11/21/2022**	Analysis Date: **11/22/2022**	SeqNo: **3340301** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	15	49.95	0	101	36.1	154			
Surr: DNOP	6.2		4.995		124	21	129			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211751**

15-Dec-22

Client: ENSOLUM

Project: Bisti LF

Sample ID: **2211751-006AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **HA6** Batch ID: **71615** RunNo: **92769**

Prep Date: **11/21/2022** Analysis Date: **11/22/2022** SeqNo: **3340302** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	15	49.75	0	81.9	36.1	154	21.6	33.9	
Surr: DNOP	5.0		4.975		101	21	129	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211751**

15-Dec-22

Client: ENSOLUM

Project: Bisti LF

Sample ID: **lcs-71585**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **71585**	RunNo: **92755**
Prep Date: **11/17/2022**	Analysis Date: **11/21/2022**	SeqNo: **3338318** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	105	72.3	137			
Surr: BFB	2400		1000		245	37.7	212			S

Sample ID: **lcsd-71585**	SampType: **LCSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS02**	Batch ID: **71585**	RunNo: **92755**
Prep Date: **11/17/2022**	Analysis Date: **11/21/2022**	SeqNo: **3338319** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	98.6	72.3	137	6.28	20	
Surr: BFB	2400		1000		236	37.7	212	0	0	S

Sample ID: **mb-71585**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **71585**	RunNo: **92755**
Prep Date: **11/17/2022**	Analysis Date: **11/21/2022**	SeqNo: **3338320** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1200		1000		116	37.7	212			

Sample ID: **2211751-001adup**	SampType: **DUP**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **HA1**	Batch ID: **71585**	RunNo: **92755**
Prep Date: **11/17/2022**	Analysis Date: **11/21/2022**	SeqNo: **3338322** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	4.9						0	20	
Surr: BFB	1100							0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211751**

15-Dec-22

Client: ENSOLUM

Project: Bisti LF

Sample ID: **MB-71629**	SampType: **MBLK**	TestCode: **EPA Method 8082A: PCB's**
Client ID: **PBS**	Batch ID: **71629**	RunNo: **92878**
Prep Date: **11/21/2022**	Analysis Date: **11/29/2022**	SeqNo: **3344008** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.025								
Aroclor 1221	ND	0.025								
Aroclor 1232	ND	0.025								
Aroclor 1242	ND	0.025								
Aroclor 1248	ND	0.025								
Aroclor 1254	ND	0.025								
Aroclor 1260	ND	0.025								
Surr: Decachlorobiphenyl	0.056		0.06250		88.8	47.2	115			
Surr: Tetrachloro-m-xylene	0.055		0.06250		88.0	15	110			

Sample ID: **LCS-71629**	SampType: **LCS**	TestCode: **EPA Method 8082A: PCB's**
Client ID: **LCSS**	Batch ID: **71629**	RunNo: **92878**
Prep Date: **11/21/2022**	Analysis Date: **11/29/2022**	SeqNo: **3344009** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	0.12	0.025	0.1250	0	94.6	38.2	137			
Aroclor 1260	0.12	0.025	0.1250	0	98.2	66.8	128			
Surr: Decachlorobiphenyl	0.058		0.06250		93.2	47.2	115			
Surr: Tetrachloro-m-xylene	0.056		0.06250		88.8	15	110			

Sample ID: **LCSD-71629**	SampType: **LCSD**	TestCode: **EPA Method 8082A: PCB's**
Client ID: **LCSS02**	Batch ID: **71629**	RunNo: **92878**
Prep Date: **11/21/2022**	Analysis Date: **11/29/2022**	SeqNo: **3344010** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	0.12	0.025	0.1250	0	93.6	38.2	137	1.06	20	
Aroclor 1260	0.12	0.025	0.1250	0	98.6	66.8	128	0.407	20	
Surr: Decachlorobiphenyl	0.056		0.06250		90.0	47.2	115	0	0	
Surr: Tetrachloro-m-xylene	0.054		0.06250		86.0	15	110	0	0	

Sample ID: **MB-71629**	SampType: **MBLK**	TestCode: **EPA Method 8082A: PCB's**
Client ID: **PBS**	Batch ID: **71629**	RunNo: **92878**
Prep Date: **11/21/2022**	Analysis Date: **11/29/2022**	SeqNo: **3344129** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.025								
Aroclor 1221	ND	0.025								
Aroclor 1232	ND	0.025								
Aroclor 1242	ND	0.025								
Aroclor 1248	ND	0.025								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211751**

15-Dec-22

Client: ENSOLUM

Project: Bisti LF

Sample ID: **MB-71629**	SampType: **MBLK**	TestCode: **EPA Method 8082A: PCB's**
Client ID: **PBS**	Batch ID: **71629**	RunNo: **92878**
Prep Date: **11/21/2022**	Analysis Date: **11/29/2022**	SeqNo: **3344129** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1254	ND	0.025								
Aroclor 1260	ND	0.025								
Surr: Decachlorobiphenyl	0.060		0.06250		96.4	47.2	115			
Surr: Tetrachloro-m-xylene	0.058		0.06250		93.6	15	110			

Sample ID: **MB-71661**	SampType: **MBLK**	TestCode: **EPA Method 8082A: PCB's**
Client ID: **PBS**	Batch ID: **71661**	RunNo: **92934**
Prep Date: **11/22/2022**	Analysis Date: **12/1/2022**	SeqNo: **3350050** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.025								
Aroclor 1221	ND	0.025								
Aroclor 1232	ND	0.025								
Aroclor 1242	ND	0.025								
Aroclor 1248	ND	0.025								
Aroclor 1254	ND	0.025								
Aroclor 1260	ND	0.025								
Surr: Decachlorobiphenyl	0.060		0.06250		95.6	47.2	115			
Surr: Tetrachloro-m-xylene	0.054		0.06250		87.2	15	110			

Sample ID: **LCS-71661**	SampType: **LCS**	TestCode: **EPA Method 8082A: PCB's**
Client ID: **LCSS**	Batch ID: **71661**	RunNo: **92934**
Prep Date: **11/22/2022**	Analysis Date: **12/1/2022**	SeqNo: **3350051** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	0.12	0.025	0.1250	0	92.3	38.2	137			
Aroclor 1260	0.12	0.025	0.1250	0	94.5	66.8	128			
Surr: Decachlorobiphenyl	0.057		0.06250		91.2	47.2	115			
Surr: Tetrachloro-m-xylene	0.057		0.06250		90.8	15	110			

Sample ID: **MB-71661**	SampType: **MBLK**	TestCode: **EPA Method 8082A: PCB's**
Client ID: **PBS**	Batch ID: **71661**	RunNo: **92934**
Prep Date: **11/22/2022**	Analysis Date: **12/1/2022**	SeqNo: **3350055** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	ND	0.025								
Aroclor 1221	ND	0.025								
Aroclor 1232	ND	0.025								
Aroclor 1242	ND	0.025								
Aroclor 1248	ND	0.025								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211751**

15-Dec-22

Client: ENSOLUM

Project: Bisti LF

Sample ID: **MB-71661**	SampType: **MBLK**	TestCode: **EPA Method 8082A: PCB's**
Client ID: **PBS**	Batch ID: **71661**	RunNo: **92934**
Prep Date: **11/22/2022**	Analysis Date: **12/1/2022**	SeqNo: **3350055** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1254	ND	0.025								
Aroclor 1260	ND	0.025								
Surr: Decachlorobiphenyl	0.066		0.06250		106	47.2	115			
Surr: Tetrachloro-m-xylene	0.058		0.06250		92.4	15	110			

Sample ID: **LCS-71661**	SampType: **LCS**	TestCode: **EPA Method 8082A: PCB's**
Client ID: **LCSS**	Batch ID: **71661**	RunNo: **93019**
Prep Date: **11/22/2022**	Analysis Date: **12/5/2022**	SeqNo: **3350085** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	0.12	0.025	0.1250	0	93.5	38.2	137			
Aroclor 1260	0.12	0.025	0.1250	0	96.9	66.8	128			
Surr: Decachlorobiphenyl	0.056		0.06250		88.8	47.2	115			
Surr: Tetrachloro-m-xylene	0.058		0.06250		92.8	15	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211751**

15-Dec-22

Client: ENSOLUM

Project: Bisti LF

Sample ID: **lcs-71585** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles**

Client ID: **LCSS** Batch ID: **71585** RunNo: **92717**

Prep Date: **11/17/2022** Analysis Date: **11/18/2022** SeqNo: **3336546** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.2	0.025	1.000	0	121	70	130			
Toluene	1.1	0.050	1.000	0	113	70	130			
Chlorobenzene	1.0	0.050	1.000	0	101	70	130			
1,1-Dichloroethene	1.1	0.050	1.000	0	115	70	130			
Trichloroethene (TCE)	1.1	0.050	1.000	0	107	70	130			
Surr: Dibromofluoromethane	0.59		0.5000		118	70	130			
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		101	70	130			
Surr: Toluene-d8	0.55		0.5000		109	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.5	70	130			

Sample ID: **lcsd-71585** SampType: **LCSD** TestCode: **EPA Method 8260B: Volatiles**

Client ID: **LCSS02** Batch ID: **71585** RunNo: **92717**

Prep Date: **11/17/2022** Analysis Date: **11/18/2022** SeqNo: **3336547** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	107	70	130	11.8	20	
Toluene	1.1	0.050	1.000	0	111	70	130	1.68	20	
Chlorobenzene	1.0	0.050	1.000	0	104	70	130	2.60	20	
1,1-Dichloroethene	1.0	0.050	1.000	0	104	70	130	9.56	20	
Trichloroethene (TCE)	0.98	0.050	1.000	0	97.6	70	130	9.37	20	
Surr: Dibromofluoromethane	0.55		0.5000		109	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	0.44		0.5000		88.1	70	130	0	0	
Surr: Toluene-d8	0.55		0.5000		109	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.51		0.5000		102	70	130	0	0	

Sample ID: **mb-71585** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles**

Client ID: **PBS** Batch ID: **71585** RunNo: **92717**

Prep Date: **11/17/2022** Analysis Date: **11/18/2022** SeqNo: **3336548** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Methyl tert-butyl ether (MTBE)	ND	0.050								
1,2,4-Trimethylbenzene	ND	0.050								
1,3,5-Trimethylbenzene	ND	0.050								
1,2-Dichloroethane (EDC)	ND	0.050								
1,2-Dibromoethane (EDB)	ND	0.050								
Naphthalene	ND	0.10								
1-Methylnaphthalene	ND	0.20								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211751**

15-Dec-22

Client: ENSOLUM

Project: Bisti LF

Sample ID: **mb-71585**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **PBS**	Batch ID: **71585**	RunNo: **92717**
Prep Date: **11/17/2022**	Analysis Date: **11/18/2022**	SeqNo: **3336548** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylnaphthalene	ND	0.20								
Acetone	ND	0.75								
Bromobenzene	ND	0.050								
Bromodichloromethane	ND	0.050								
Bromoform	ND	0.050								
Bromomethane	ND	0.15								
2-Butanone	ND	0.50								
Carbon disulfide	ND	0.50								
Carbon tetrachloride	ND	0.050								
Chlorobenzene	ND	0.050								
Chloroethane	ND	0.10								
Chloroform	ND	0.050								
Chloromethane	ND	0.15								
2-Chlorotoluene	ND	0.050								
4-Chlorotoluene	ND	0.050								
cis-1,2-DCE	ND	0.050								
cis-1,3-Dichloropropene	ND	0.050								
1,2-Dibromo-3-chloropropane	ND	0.10								
Dibromochloromethane	ND	0.050								
Dibromomethane	ND	0.050								
1,2-Dichlorobenzene	ND	0.050								
1,3-Dichlorobenzene	ND	0.050								
1,4-Dichlorobenzene	ND	0.050								
Dichlorodifluoromethane	ND	0.050								
1,1-Dichloroethane	ND	0.050								
1,1-Dichloroethene	ND	0.050								
1,2-Dichloropropane	ND	0.050								
1,3-Dichloropropane	ND	0.050								
2,2-Dichloropropane	ND	0.10								
1,1-Dichloropropene	ND	0.10								
Hexachlorobutadiene	ND	0.10								
2-Hexanone	ND	0.50								
Isopropylbenzene	ND	0.050								
4-Isopropyltoluene	ND	0.050								
4-Methyl-2-pentanone	ND	0.50								
Methylene chloride	ND	0.15								
n-Butylbenzene	ND	0.15								
n-Propylbenzene	ND	0.050								
sec-Butylbenzene	ND	0.050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211751**

15-Dec-22

Client: ENSOLUM

Project: Bisti LF

Sample ID: **mb-71585**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles**
Client ID: **PBS**	Batch ID: **71585**	RunNo: **92717**
Prep Date: **11/17/2022**	Analysis Date: **11/18/2022**	SeqNo: **3336548** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Styrene	ND	0.050								
tert-Butylbenzene	ND	0.050								
1,1,1,2-Tetrachloroethane	ND	0.050								
1,1,2,2-Tetrachloroethane	ND	0.050								
Tetrachloroethene (PCE)	ND	0.050								
trans-1,2-DCE	ND	0.050								
trans-1,3-Dichloropropene	ND	0.050								
1,2,3-Trichlorobenzene	ND	0.10								
1,2,4-Trichlorobenzene	ND	0.050								
1,1,1-Trichloroethane	ND	0.050								
1,1,2-Trichloroethane	ND	0.050								
Trichloroethene (TCE)	ND	0.050								
Trichlorofluoromethane	ND	0.050								
1,2,3-Trichloropropane	ND	0.10								
Vinyl chloride	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: Dibromofluoromethane	0.57		0.5000		114	70	130			
Surr: 1,2-Dichloroethane-d4	0.47		0.5000		94.5	70	130			
Surr: Toluene-d8	0.55		0.5000		110	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		99.7	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211751**

15-Dec-22

Client: ENSOLUM

Project: Bisti LF

Sample ID: **mb-71550**	SampType: **MBLK**	TestCode: **SW8270C**							
Client ID: **PBS**	Batch ID: **71550**	RunNo: **92998**							
Prep Date: **11/16/2022**	Analysis Date: **12/2/2022**	SeqNo: **3348686**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.010								
1-Methylnaphthalene	ND	0.010								
2-Methylnaphthalene	ND	0.010								
Benzo(a)pyrene	ND	0.020								
Surr: Nitrobenzene-d5	0.026		0.06670		39.5	15	137			
Surr: 2,4,6-Tribromophenol	0.065		0.1334		48.5	15	192			
Surr: 2-Fluorobiphenyl	0.030		0.06670		44.5	15	121			
Surr: 4-Terphenyl-d14	0.050		0.06670		74.5	65.7	126			

Sample ID: **lcs-71550**	SampType: **LCS**	TestCode: **SW8270C**							
Client ID: **LCSS**	Batch ID: **71550**	RunNo: **92998**							
Prep Date: **11/16/2022**	Analysis Date: **12/2/2022**	SeqNo: **3348687**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	0.024	0.010	0.03330	0	72.1	23.5	108			
1-Methylnaphthalene	0.024	0.010	0.03330	0	73.1	28.6	112			
2-Methylnaphthalene	0.026	0.010	0.03330	0	77.1	29.2	115			
Benzo(a)pyrene	0.025	0.020	0.03330	0	76.1	64.5	143			
Surr: Nitrobenzene-d5	0.070		0.1000		70.3	15	137			
Surr: 2,4,6-Tribromophenol	0.16		0.1667		94.0	15	192			
Surr: 2-Fluorobiphenyl	0.077		0.1000		76.7	15	121			
Surr: 4-Terphenyl-d14	0.091		0.1000		91.0	65.7	126			

Sample ID: **lcsd-71550**	SampType: **LCSD**	TestCode: **SW8270C**							
Client ID: **LCSS02**	Batch ID: **71550**	RunNo: **92998**							
Prep Date: **11/16/2022**	Analysis Date: **12/2/2022**	SeqNo: **3348688**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	0.024	0.010	0.03330	0	72.1	23.5	108	0	20	
1-Methylnaphthalene	0.025	0.010	0.03330	0	75.1	28.6	112	2.70	20	
2-Methylnaphthalene	0.026	0.010	0.03330	0	79.1	29.2	115	2.56	20	
Benzo(a)pyrene	0.026	0.020	0.03330	0	78.1	64.5	143	2.60	20	
Surr: Nitrobenzene-d5	0.067		0.1000		67.0	15	137	0	0	
Surr: 2,4,6-Tribromophenol	0.16		0.1667		96.6	15	192	0	0	
Surr: 2-Fluorobiphenyl	0.074		0.1000		73.7	15	121	0	0	
Surr: 4-Terphenyl-d14	0.092		0.1000		91.7	65.7	126	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211751**

15-Dec-22

Client: ENSOLUM

Project: Bisti LF

Sample ID: **MB-71735**	SampType: **MBLK**	TestCode: **EPA Method 7471B: Mercury**
Client ID: **PBS**	Batch ID: **71735**	RunNo: **92918**
Prep Date: **11/29/2022**	Analysis Date: **11/30/2022**	SeqNo: **3345553** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID: **LCSLL-71735**	SampType: **LCSLL**	TestCode: **EPA Method 7471B: Mercury**
Client ID: **BatchQC**	Batch ID: **71735**	RunNo: **92918**
Prep Date: **11/29/2022**	Analysis Date: **11/30/2022**	SeqNo: **3345554** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0078	0.033	0.006660	0	118	70	130			J

Sample ID: **LCS-71735**	SampType: **LCS**	TestCode: **EPA Method 7471B: Mercury**
Client ID: **LCSS**	Batch ID: **71735**	RunNo: **92918**
Prep Date: **11/29/2022**	Analysis Date: **11/30/2022**	SeqNo: **3345555** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	105	80	120			

Sample ID: **MB-71736**	SampType: **MBLK**	TestCode: **EPA Method 7471B: Mercury**
Client ID: **PBS**	Batch ID: **71736**	RunNo: **92918**
Prep Date: **11/29/2022**	Analysis Date: **11/30/2022**	SeqNo: **3345556** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID: **LCSLL-71736**	SampType: **LCSLL**	TestCode: **EPA Method 7471B: Mercury**
Client ID: **BatchQC**	Batch ID: **71736**	RunNo: **92918**
Prep Date: **11/29/2022**	Analysis Date: **11/30/2022**	SeqNo: **3345557** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0078	0.033	0.006660	0	117	70	130			J

Sample ID: **LCS-71736**	SampType: **LCS**	TestCode: **EPA Method 7471B: Mercury**
Client ID: **LCSS**	Batch ID: **71736**	RunNo: **92918**
Prep Date: **11/29/2022**	Analysis Date: **11/30/2022**	SeqNo: **3345558** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	103	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211751**

15-Dec-22

Client: ENSOLUM

Project: Bisti LF

Sample ID: **MB-71582**	SampType: **MBLK**	TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **PBS**	Batch ID: **71582**	RunNo: **92772**
Prep Date: **11/17/2022**	Analysis Date: **11/22/2022**	SeqNo: **3339040** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.10								
Cadmium	ND	0.10								
Calcium	ND	50								
Chromium	ND	0.30								
Copper	ND	2.0								
Iron	ND	10								
Lead	ND	1.0								
Magnesium	ND	50								
Manganese	ND	0.20								
Potassium	ND	50								
Selenium	ND	2.5								
Silver	ND	0.50								
Sodium	ND	50								
Zinc	ND	2.5								

Sample ID: **LCS-71582**	SampType: **LCS**	TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **LCSS**	Batch ID: **71582**	RunNo: **92772**
Prep Date: **11/17/2022**	Analysis Date: **11/22/2022**	SeqNo: **3339042** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	24	0.10	25.00	0	95.4	80	120			
Cadmium	24	0.10	25.00	0	95.1	80	120			
Calcium	2500	50	2500	0	98.1	80	120			
Chromium	24	0.30	25.00	0	96.3	80	120			
Copper	25	2.0	25.00	0	100	80	120			
Iron	25	10	25.00	0	99.6	80	120			
Lead	24	1.0	25.00	0	97.5	80	120			
Magnesium	2500	50	2500	0	98.9	80	120			
Manganese	24	0.20	25.00	0	94.1	80	120			
Potassium	2500	50	2500	0	99.0	80	120			
Selenium	21	2.5	25.00	0	83.5	80	120			
Silver	4.5	0.50	5.000	0	89.8	80	120			
Sodium	2500	50	2500	0	101	80	120			
Zinc	23	2.5	25.00	0	92.0	80	120			

Sample ID: **LCSD-71582**	SampType: **LCSD**	TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **LCSS02**	Batch ID: **71582**	RunNo: **92772**
Prep Date: **11/17/2022**	Analysis Date: **11/22/2022**	SeqNo: **3339043** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211751**

15-Dec-22

Client: ENSOLUM

Project: Bisti LF

Sample ID: **LCSD-71582**	SampType: **LCSD**	TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **LCSS02**	Batch ID: **71582**	RunNo: **92772**
Prep Date: **11/17/2022**	Analysis Date: **11/22/2022**	SeqNo: **3339043** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	24	0.10	25.00	0	97.3	80	120	1.97	20	
Cadmium	24	0.10	25.00	0	96.3	80	120	1.22	20	
Calcium	2500	50	2500	0	100	80	120	1.96	20	
Chromium	25	0.30	25.00	0	98.5	80	120	2.32	20	
Copper	26	2.0	25.00	0	103	80	120	2.13	20	
Iron	26	10	25.00	0	102	80	120	2.38	20	
Lead	24	1.0	25.00	0	97.6	80	120	0.178	20	
Magnesium	2500	50	2500	0	101	80	120	1.67	20	
Manganese	24	0.20	25.00	0	95.4	80	120	1.36	20	
Potassium	2500	50	2500	0	101	80	120	1.97	20	
Selenium	22	2.5	25.00	0	88.9	80	120	6.25	20	
Silver	4.6	0.50	5.000	0	92.1	80	120	2.53	20	
Sodium	2600	50	2500	0	104	80	120	2.87	20	
Zinc	24	2.5	25.00	0	95.0	80	120	3.24	20	

Sample ID: **MB-71583**	SampType: **MBLK**	TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **PBS**	Batch ID: **71583**	RunNo: **92772**
Prep Date: **11/17/2022**	Analysis Date: **11/22/2022**	SeqNo: **3339044** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.10								
Cadmium	ND	0.10								
Calcium	ND	50								
Chromium	ND	0.30								
Copper	ND	2.0								
Iron	ND	10								
Lead	ND	1.0								
Magnesium	ND	50								
Manganese	ND	0.20								
Potassium	ND	50								
Selenium	ND	2.5								
Silver	ND	0.50								
Sodium	ND	50								
Zinc	ND	2.5								

Sample ID: **LCS-71583**	SampType: **LCS**	TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **LCSS**	Batch ID: **71583**	RunNo: **92772**
Prep Date: **11/17/2022**	Analysis Date: **11/22/2022**	SeqNo: **3339046** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211751**

15-Dec-22

Client: ENSOLUM

Project: Bisti LF

Sample ID: **LCS-71583**	SampType: **LCS**	TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **LCSS**	Batch ID: **71583**	RunNo: **92772**
Prep Date: **11/17/2022**	Analysis Date: **11/22/2022**	SeqNo: **3339046** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	24	0.10	25.00	0	96.7	80	120			
Cadmium	24	0.10	25.00	0	96.3	80	120			
Calcium	2500	50	2500	0	99.1	80	120			
Chromium	24	0.30	25.00	0	97.8	80	120			
Copper	25	2.0	25.00	0	101	80	120			
Iron	25	10	25.00	0	101	80	120			
Lead	25	1.0	25.00	0	98.1	80	120			
Magnesium	2500	50	2500	0	99.4	80	120			
Manganese	24	0.20	25.00	0	94.8	80	120			
Potassium	2500	50	2500	0	99.7	80	120			
Selenium	22	2.5	25.00	0	87.7	80	120			
Silver	4.5	0.50	5.000	0	90.6	80	120			
Sodium	2600	50	2500	0	102	80	120			
Zinc	24	2.5	25.00	0	94.2	80	120			

Sample ID: **LCSD-71583**	SampType: **LCSD**	TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **LCSS02**	Batch ID: **71583**	RunNo: **92772**
Prep Date: **11/17/2022**	Analysis Date: **11/22/2022**	SeqNo: **3339050** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	24	0.10	25.00	0	96.8	80	120	0.0610	20	
Cadmium	24	0.10	25.00	0	95.6	80	120	0.776	20	
Calcium	2500	50	2500	0	101	80	120	1.48	20	
Chromium	25	0.30	25.00	0	98.3	80	120	0.523	20	
Copper	26	2.0	25.00	0	103	80	120	2.06	20	
Iron	26	10	25.00	0	104	80	120	2.31	20	
Lead	25	1.0	25.00	0	98.9	80	120	0.855	20	
Magnesium	2500	50	2500	0	100	80	120	0.724	20	
Manganese	24	0.20	25.00	0	96.3	80	120	1.62	20	
Potassium	2500	50	2500	0	100	80	120	0.705	20	
Selenium	22	2.5	25.00	0	87.1	80	120	0.625	20	
Silver	4.4	0.50	5.000	0	88.3	80	120	2.53	20	
Sodium	2600	50	2500	0	105	80	120	2.53	20	
Zinc	24	2.5	25.00	0	94.4	80	120	0.247	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2211751**

15-Dec-22

Client: ENSOLUM

Project: Bisti LF

Sample ID:	**2211751-007ADUP**	SampType:	**DUP**	TestCode:	**SM4500H+B/EPA 9040C**					
Client ID:	**HA7**	Batch ID:	**R92846**	RunNo:	**92846**					
Prep Date:		Analysis Date:	**11/28/2022**	SeqNo:	**3342298**	Units:	**pH Units**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	8.75									

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **ENSOLUM** Work Order Number: **2211751** RcptNo: 1

Received By: **Cheyenne Cason** **11/12/2022 8:00:00 AM**

Completed By: **Cheyenne Cason** **11/12/2022 10:48:15 AM**

Reviewed By: SCM 11/14/22

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: JN 11/12/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.2	Good	Yes			
2	0.9	Good	Yes			

Chain-of-Custody Record

Client: Ensolum LLC

Stuart Hyde

Mailing Address:

Phone #:

email or Fax#: Shyde@ensolum.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 5-day or Results by 11/28

☒ Standard ☐ Rush

Project Name: Bisti LF

Project #: 07A2015004

Project Manager: Stuart Hyde

Sampler: E. Carron Z. Myers

On Ice: ☒ Yes ☐ No

# of Coolers: 2 0.2 - 0 = 0.2

Cooler Temp(Including CF): 0.9 - 0 = 0.9 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2211751	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	See Attached
11-11	1110	Soil	HA1	3 4oz	Cool	001											X
	1115		HA2			002											
	1117		HA3			003											
	1120		HA4			004											
	1130		HA5			005											
	1132		HA6			006											
	1134		HA7			007											
	1136		HA8			008											
	1145		HA9			009											
	1150		HA10			010											
	1155		HA11			011											
	1200		HA12			012											

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
11-11	1407	Eric Carron			11/11/22	1407
11/11/22	1821				11/12/22	0800

Remarks: Reporting limits must meet background concentrations of the Attached table

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

2 of 2

Chain-of-Custody Record

Client: Ensolum LLC

Stuart Hyde

Mailing Address:

Phone #:

email or Fax#: shyde@ensolum.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time: 5-day or Results by 11/28

☒ Standard ☐ Rush

Project Name: BiSti LF

Project #: 07A2015004

Project Manager: Stuart Hyde

Sampler: E.Carroll Z.Myers

On Ice: ☒ Yes ☐ No

# of Coolers: 2 0.2 -0=0.2

Cooler Temp(Including CF): 0.9-0=0.9 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2211751	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	See Attached
11-11	1210	soil	HA13	3 4oz	cool	013											X
	1215		HA14			014											
	1220		HA15			015											
	1225		HA16			016											
	1240		HA17			017											
	1245		HA18			018											
	1250		HA19			019											
	1255		HA20			020											

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
11-11	1407	Eric Carroll				
11/11/22	1821			Courier	11/12/22	0800

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

ENSOLUM

TABLE 2
BACKGROUND/PRACTICAL QUANTITATION LIMIT CONCENTRATIONS
Bisti Landfarm
Western Refining Southwest LLC
San Juan County, New Mexico

ANALYTE	UNITS	BACKGROUND SAMPLE 27-Mar-98	BACKGROUND SAMPLE 1-Sept-15
BTEX Compounds by EPA Method 8260B			
Benzene	mg/kg	<0.05	<0.05
Toluene	mg/kg	<0.05	<0.05
Ethylbenzene	mg/kg	<0.05	<0.05
Xylenes, Total	mg/kg	<0.05	<0.05
Petroleum Hydrocarbons by EPA Method 8015M/D			
Gasoline Range Organics (GRO)	mg/kg	NA	<5.0
Diesel Range Organics (DRO)	mg/kg	<50	<10
Motor Oil Range Organics (MRO)	mg/kg	NA	<50
Total Petroleum Hydrocarbons by EPA Method 8015M/D			
TPH	mg/kg	NA	<50
Volatile Organic Compounds by EPA Method 8260B			
benzene	mg/kg	NA	<0.050
toluene	mg/kg	NA	<0.050
ethylbenzene	mg/kg	NA	<0.050
methyl tert-butyl ether (MTBE)	mg/kg	NA	<0.048
1,2-dichloroethane (EDC)	mg/kg	NA	<0.048
1,2-dibromoethane (EDB)	mg/kg	NA	<0.048
naphthalene	mg/kg	NA	<0.095
1-methylnaphthalene	mg/kg	NA	<0.19
2-methylnaphthalene	mg/kg	NA	<0.19
bromodichloromethane	mg/kg	NA	<0.048
bromoform (tribromomethane)	mg/kg	NA	<0.048
bromomethane	mg/kg	NA	<0.14
carbon tetrachloride (tetrachloromethane)	mg/kg	NA	<0.048
chlorobenzene (monochlorobenzene)	mg/kg	NA	<0.048
chloroform (trichloromethane)	mg/kg	NA	<0.048
chloromethane	mg/kg	NA	<0.14
cis-1,2-dichloroethene (cis-1,2-DCE)	mg/kg	NA	<0.048
cis-1,3-dichloropropene	mg/kg	NA	<0.048
1,2-dichlorobenzene	mg/kg	NA	<0.048
1,4-dichlorobenzene	mg/kg	NA	<0.048
dichlorodifluoromethane	mg/kg	NA	<0.048
1,1-dichloroethane	mg/kg	NA	<0.048
1,1-dichloroethene	mg/kg	NA	<0.048
1,2-dichloropropane	mg/kg	NA	<0.048
1,1-dichloropropene	mg/kg	NA	<0.095

ENSOLUM

TABLE 2
BACKGROUND/PRACTICAL QUANTITATION LIMIT CONCENTRATIONS
Bisti Landfarm
Western Refining Southwest LLC
San Juan County, New Mexico

ANALYTE	UNITS	BACKGROUND SAMPLE 27-Mar-98	BACKGROUND SAMPLE 1-Sept-15
hexachlorobutadiene	mg/kg	NA	<0.095
methylene chloride (dichloromethane)	mg/kg	NA	<0.14
styrene	mg/kg	NA	<0.048
1,1,2,2-tetrachloroethane	mg/kg	NA	<0.048
tetrachloroethene (PCE)	mg/kg	NA	<0.048
trans-1,2-dichloroethene (trans-1,2-DCE)	mg/kg	NA	<0.048
trans-1,3-dichloropropene	mg/kg	NA	<0.048
1,2,4-trichlorobenzene	mg/kg	NA	<0.048
1,1,1-trichloroethane	mg/kg	NA	<0.048
1,1,2-trichloroethane	mg/kg	NA	<0.048
trichloroethene (TCE)	mg/kg	NA	<0.048
trichlorofluoromethane	mg/kg	NA	<0.048
vinyl chloride (chloroethene)	mg/kg	NA	<0.048
xylenes, total	mg/kg	NA	<0.050
Polycyclic Aromatic Hydrocarbons by EPA Method 8270			
Naphthalene	mg/kg	NA	<0.25
1-Methylnaphthalene	mg/kg	NA	<0.25
2-Methylnaphthalene	mg/kg	NA	<0.25
Benzo(a)pyrene	mg/kg	NA	<0.0099
Total Phenol by Method 9066	mg/kg	NA	<0.67
Metals by EPA Method 6010/6020			
Arsenic	mg/kg	2.8	NA
Barium	mg/kg	180	NA
Cadmium	mg/kg	<1.3	NA
Calcium	mg/kg	2,500	NA
Chromium	mg/kg	<5.0	NA
Copper	mg/kg	NA	3.2
Iron	mg/kg	NA	7,200
Lead	mg/kg	6.8	NA
Magnesium	mg/kg	1,300	NA
Manganese	mg/kg	NA	150
Mercury	mg/kg	<0.5	NA
Potassium	mg/kg	810	NA
Selenium	mg/kg	<2.5	NA
Silver	mg/kg	<1.3	NA
Uranium	mg/kg	NA	<4.9
Zinc	mg/kg	NA	14

ENSOLUM

TABLE 2
BACKGROUND/PRACTICAL QUANTITATION LIMIT CONCENTRATIONS
Bisti Landfarm
Western Refining Southwest LLC
San Juan County, New Mexico

ANALYTE	UNITS	BACKGROUND SAMPLE 27-Mar-98	BACKGROUND SAMPLE 1-Sept-15
Polychlorinated Biphenyls by EPA Method 8082			
Aroclor 1016	mg/kg	NA	<0.020
Aroclor 1221	mg/kg	NA	<0.020
Aroclor 1232	mg/kg	NA	<0.020
Aroclor 1242	mg/kg	NA	<0.020
Aroclor 1248	mg/kg	NA	<0.020
Aroclor 1254	mg/kg	NA	<0.020
Aroclor 1260	mg/kg	NA	<0.020
Cyanide by Method 9012B	mg/kg	NA	<0.25
Anions by EPA Method 300.0			
Chloride	mg/kg	<50	NA
Fluoride	mg/kg	NA	0.84
Nitrogen, Nitrate (As N)	mg/kg	NA	<0.30
pH by Method SM4500-H+B	pH units	NA	7.89
Radiochemistry by EPA Method 901.1			
Radium-226	pCi/g	NA	0.737 +/- 0.242
Radium-228	pCi/g	NA	0.806 +/- 0.338
General Chemistry			
Bicarbonate	mg/kg	110	NA
Carbonate	mg/kg	26	NA
Sodium	mg/kg	90	NA
Sulfate	mg/kg	140	NA

Notes:

< - indicates result is less than the stated practical quantitation limit (PQL)

NA - not analyzed

Where two results are listed, the background will be considered the lower of the two.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

COMMENTS

Action 387360

COMMENTS

Operator: Western Refining Southwest LLC 539 South Main Street Findlay, OH 45840	OGRID: 267595
	Action Number: 387360
	Action Type: [C-137] Non-Fee SWMF Submittal (SWMF NON-FEE SUBMITTAL)

COMMENTS

Created By	Comment	Comment Date
lbarr	Approved by the OCD.	9/26/2024

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 387360

CONDITIONS

Operator: Western Refining Southwest LLC 539 South Main Street Findlay, OH 45840	OGRID: 267595
	Action Number: 387360
	Action Type: [C-137] Non-Fee SWMF Submittal (SWMF NON-FEE SUBMITTAL)

CONDITIONS

Created By	Condition	Condition Date
lbarr	None	9/26/2024