



December 9, 2022

**New Mexico Oil Conservation Division**

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

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

To Whom It May Concern:

On behalf of Western Refining Southwest LLC (Western), Ensolum, LLC (Ensolum) is submitting this *Release Response Action Plan* in response to soil sampling data collected on February 10, 2022 (first quarter) and September 22, 2022 (third quarter) at the Bisti Landfarm (the Site, shown on Figure 1). Soil compliance monitoring activities were performed during the first, second, and third quarter sampling events in accordance with New Mexico Landfarm Permit Number NM2-0010 (approved under former Rule 711) and the current requirements set forth in 19.15.36.15 of the New Mexico Administrative Code (NMAC).

Soil samples were collected for quarterly compliance monitoring from the vadose zone at depths of approximately 3 feet below native ground surface. Four randomly selected, discrete soil samples were collected from below each treatment cell (Crude Cell and API Cell locations are presented in Figure 2) during the first and third quarter sampling events. Specifically, during each event, four discrete samples were collected from the Crude Cell and four discrete samples were collected from the API Cell at the locations indicated on Figure 3. Samples were submitted to Hall Environmental Analysis Laboratory (Hall) and analyzed for total petroleum hydrocarbons (TPH) by Environmental Protection Agency (EPA) Method 418.1 or EPA Method 8015, benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021B, and chloride by EPA Method 300.0.

Analytical results from the first quarter sampling event (February 10, 2022) indicated that chloride was detected above the Site background concentration/laboratory practical quantitation limit (PQL, also known as reporting limit) in two samples: East Line Vadose and API 2 Vadose. Chloride, TPH, and BTEX concentrations were not detected in any of the remaining samples above the Site background/laboratory PQLs. Analytical results collected during the second quarter 2022 sampling event (June 20, 2022) indicated that TPH, BTEX, and/or chloride did not exceed background/laboratory PQL concentrations. Analytical results from the third quarter sampling event (September 22, 2022) indicated that chloride was detected above the Site background concentration/laboratory PQL in three samples: Pettigrew Vadose, API 3 Vadose, and API 4 Vadose. Chloride, TPH, and BTEX concentrations were not detected in any of the remaining samples above the Site background/laboratory PQLs. Sample locations are shown on Figure 3, with analytical results summarized in Table 1.

## RELEASE RESPONSE RE-SAMPLING

As defined in Subsection E(5) of 19.15.36.15 NMAC, a “release” of chloride to vadose zone soils was identified at the Site. Specifically, a release under Subsection E(5) of 19.15.36.15 NMAC is defined as detections of TPH, BTEX, or chloride exceeding the higher of the laboratory PQL or the background soil concentrations established for the Site. In response to the first and third quarter sample results, Western collected four randomly selected, discrete samples (from a depth of 3 feet below native ground surface) around each vadose zone sample with an exceedance of the Site background/laboratory PQLs (total of 20 discrete samples). Samples were analyzed for TPH, BTEX, chloride, and the constituents listed in Subsections A and B of 20.6.2.3103 NMAC (constituents listed in attached Tables 2 through 6). PQL and/or background concentrations that were approved by the NMOCDD in their letter dated June 15, 2020 are also presented in Tables 2 through 6. Sample locations for the November 11, 2022 re-sampling event are presented on Figure 4 in addition to the compliance monitoring sample locations with exceedances in the first and third quarters.

Of note, due to the extended time required to analyze Radium 226 and Radium 228 (30 days laboratory turnaround timeframe), those results have not been received. An addendum, including an updated table, will be submitted to NMOCDD once these results are received. In addition, the laboratory was unable to complete the analysis of bicarbonate and carbonate parameters due to insufficient volumes of sample remaining. However, these constituents are general soil chemistry parameters and do not present a toxicity risk to human health, the environment, or groundwater. Lastly, soil samples used to establish the PQLs and background concentrations for the Site were gathered in 1998 and 2015 and were approved by the NMOCDD in 2020. The analytical laboratory was informed of the requirement that reporting limits must be equal to or less than the Site PQL and/or background concentrations; however, based on the current analytical methods and procedures used, several analytes were unable to meet this requirement, as presented in Tables 2 through 6. Because the laboratory is using standardized and approved analytical methods for analysis, no other actions can be taken at this time to address the laboratory PQLs obtained during this sampling program.

### Release Response Re-Sampling Analytical Results

TPH and BTEX data has been summarized on Table 2. Based on the analytical results collected during the November 11, 2022 re-sampling event, these analytes were not detected above the laboratory PQLs. A summary of volatile organic compounds (VOCs) analyzed by EPA Method 8260B are presented in Table 3. Based on analytical results, there were no detections of the analyzed VOCs above the laboratory PQLs. Analytical results for polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270, polychlorinated biphenyls (PCBs) by EPA Method 8082, and phenol by EPA Method 9066 are presented on Table 4. Of the analyzed constituents, only phenol was detected above the laboratory PQL in sample HA15. However, the laboratory noted that phenol was also detected in the method blank for this analysis. As such, this detection can be attributed to a laboratory error and is not present in the soil sample collected at the Site.

Results for metals analyzed by EPA Methods 6010B and 6020, as well as cyanide by Method 9012B, are presented in Table 5. Of the analyzed constituents, arsenic, barium, calcium, chromium, copper, iron, potassium, and zinc were detected above the laboratory PQL and/or Site background concentrations. Lastly, Table 6 presents the analytical results for anions by EPA Method 300.0, pH by Standard Method (SM) 4500-H+B, and sodium by EPA Method 6010B. Of the analyzed constituents, chloride, fluoride, nitrate, sulfate, pH, and sodium concentrations exceeded the laboratory PQL and/or Site background concentrations.

## RELEASE RESPONSE ACTION PLAN

In accordance with subsection E(5) of 19.15.36.15 NMAC, Western has prepared this Action Plan to address exceedances of PQL and/or background concentration in the vadose zone at the Site. Western has requested closure of the landfarm through the submittal of a *Closure and Post-Closure Plan* dated October 28, 2022. Based on the analytical results gathered during this re-sampling event, and as specified in Subsection E of 19.15.36.18 NMAC (outlining closure and post-closure requirements), Western will engage with the NMOCD Incidents Group to evaluate and/or address the constituents detected during the re-sampling event in accordance with 19.15.29 NMAC. This plan will be submitted to the Incidents Group through the NMOCD E-Permitting website within 15 days of initial submittal to the Permitting Group.

### Proposed Changes to Landfarm Operation

No new cells or lifts have been added to the Bisti Landfarm since 2004 and will not be added in the future. Additionally, the landfarm is tilled bi-weekly to maintain the treatment cells and mitigate further migration of chlorides and other constituents. There are no other proposed changes to the landfarm at this time. Additionally, Western will continue to pursue closure of the landfarm facility as outlined in the *Closure and Post-Closure Plan* submitted to the NMOCD on October 28, 2022.

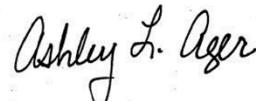
We appreciate the opportunity to provide this plan to the NMOCD. If you should have any questions or comments regarding this document, please contact the undersigned.

Sincerely,

**Ensolum, LLC**



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Principal, Geologist  
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### Attachments:

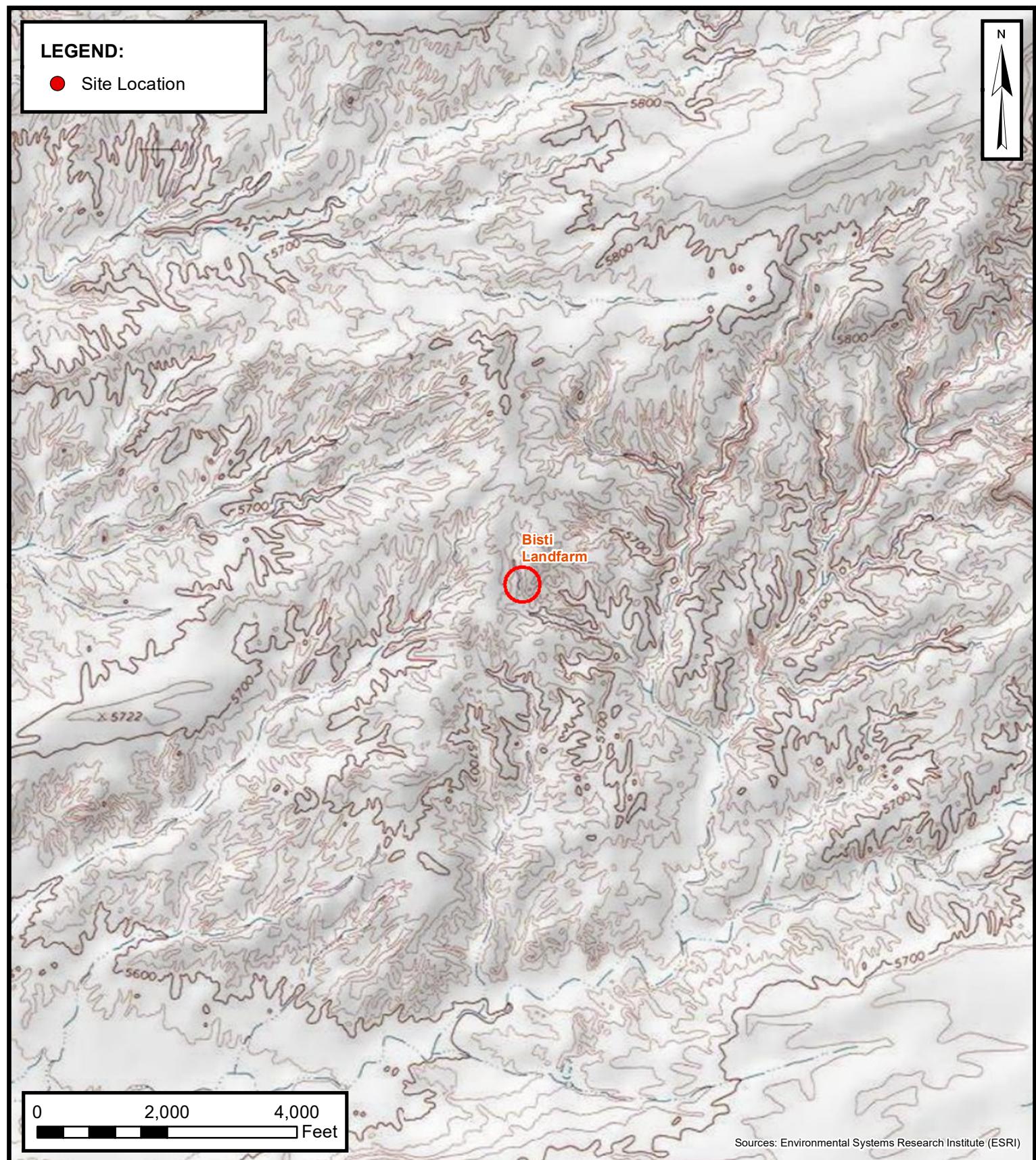
- Figure 1: Site Location Map
- Figure 2: Site Map
- Figure 3: Compliance Sample Locations
- Figure 4: Vadose Zone Sample Locations
  
- Table 1: 2022 Quarterly and Semi-Annual Vadose Zone Soil Analytical Results
- Table 2: Soil Analytical Results – BTEX and TPH
- Table 3: Soil Analytical Results – PAH, 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
  
- Appendix A: Laboratory Analytical Reports



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## FIGURES

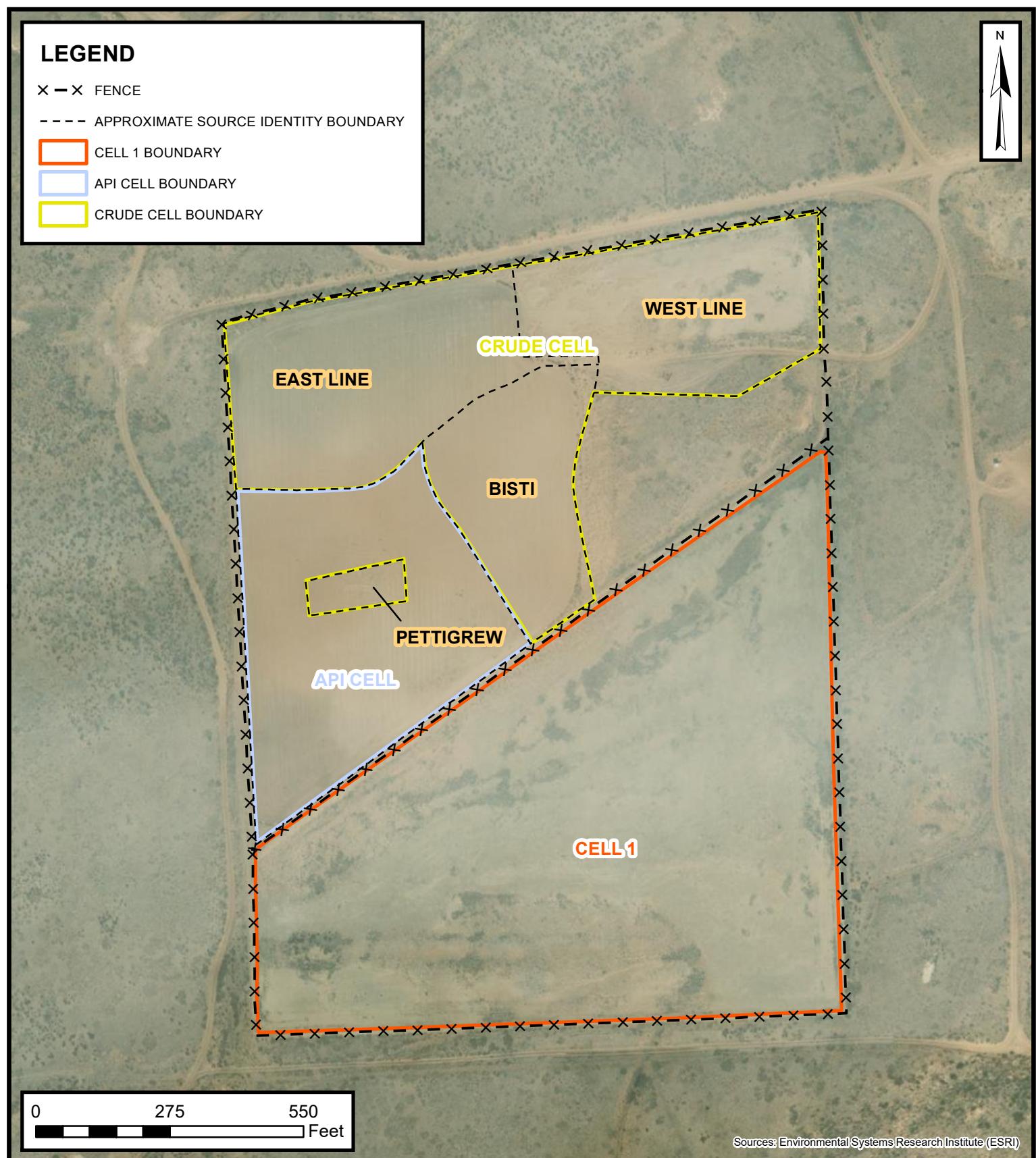
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## Site Location Map

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

**FIGURE**  
**1**



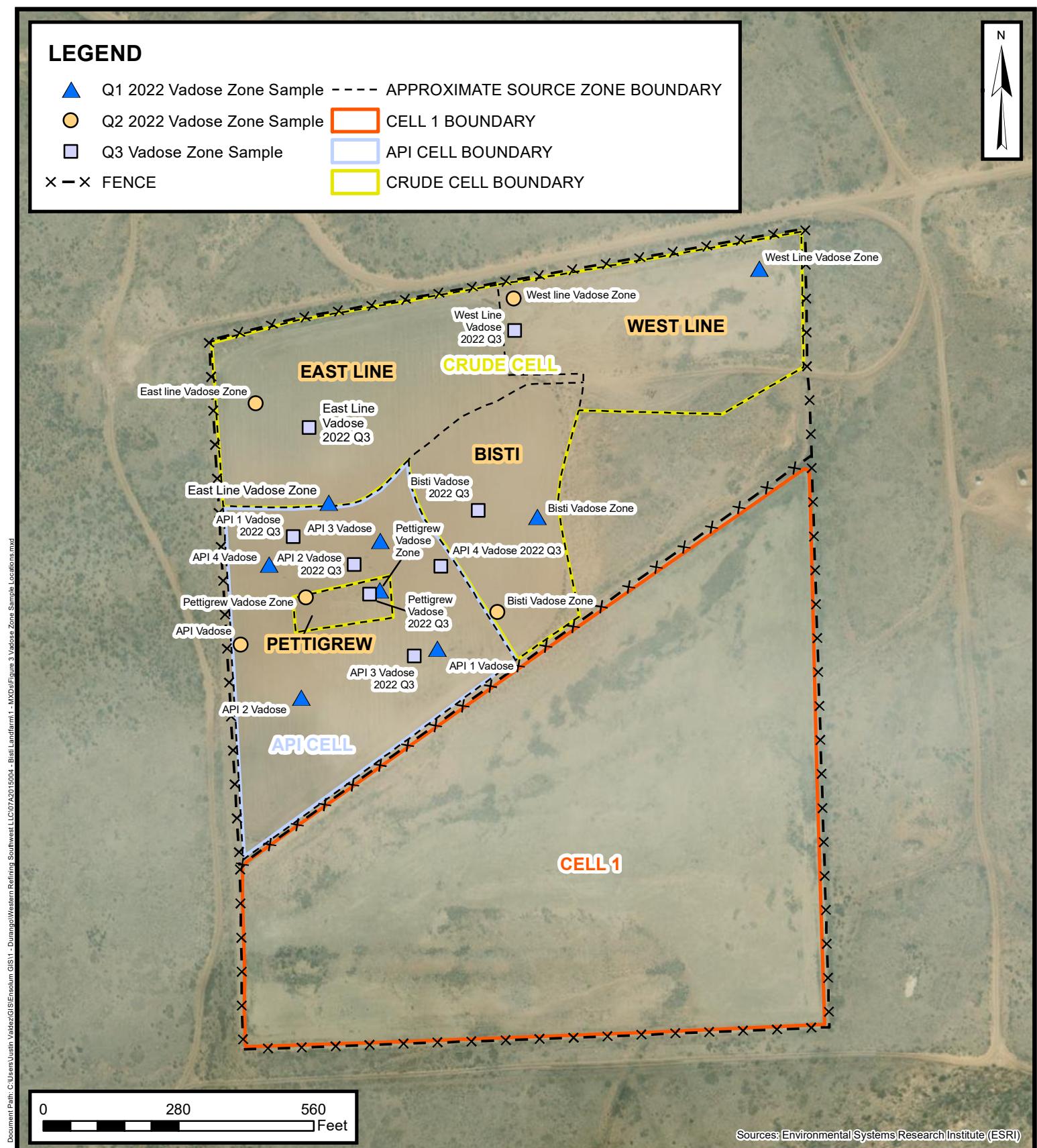
## Site Map

BISTI LANDFARM  
SEC 16 T25N R12W  
SAN JUAN COUNTY, NM

WESTERN REFINING SOUTHWEST, LLC



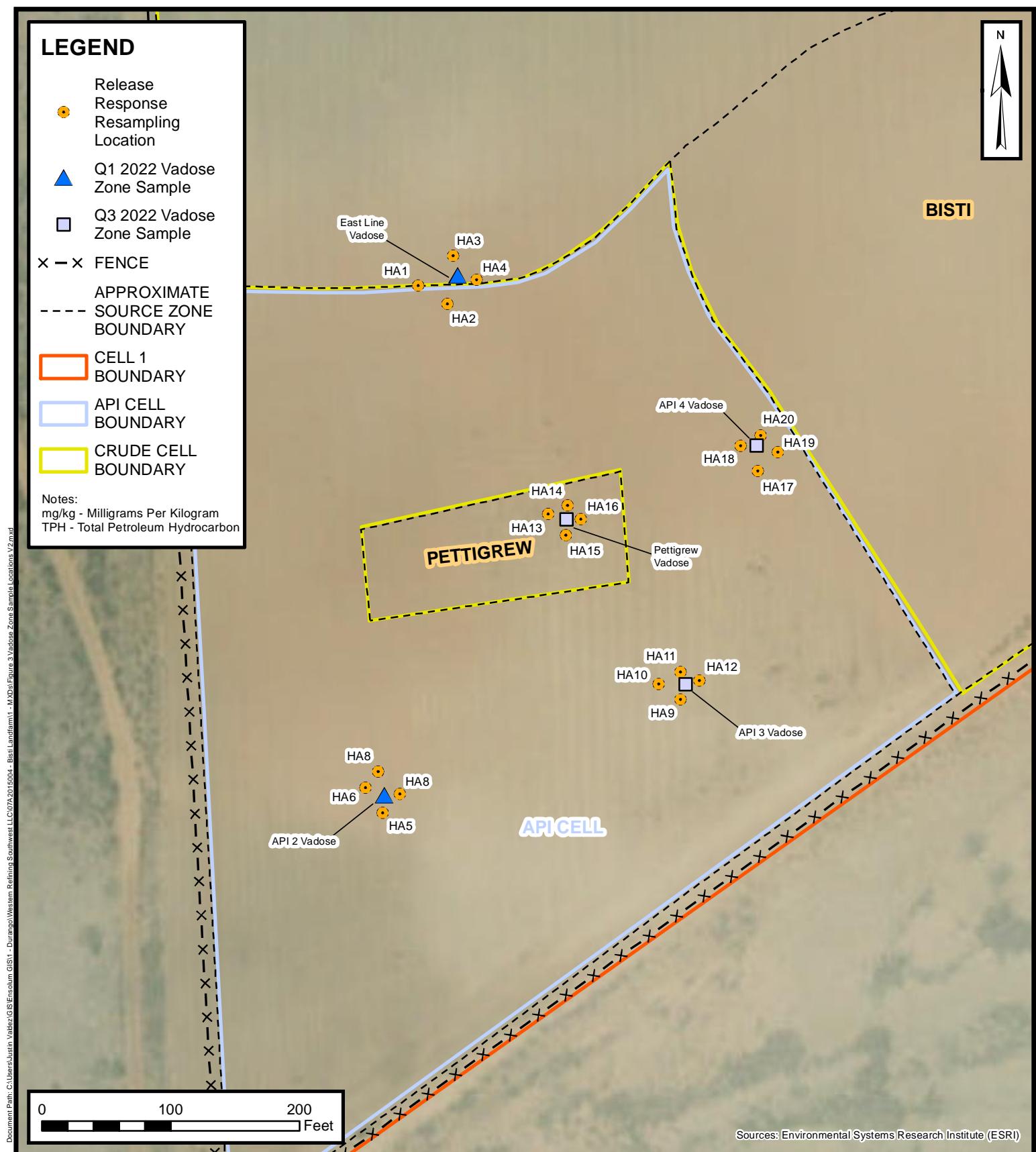
FIGURE  
**2**



## Compliance Sample Locations

BISTI LANDFORM  
SEC 16 T25N R12W  
SAN JUAN COUNTY, NM  
WESTERN REFINING SOUTHWEST, INC

**FIGURE**  
**3**



## Vadose Zone Sample Locations

BISTI LANDFARM

SEC 16 T25N R12W

SAN JUAN COUNTY, NM

WESTERN REFINING SOUTHWEST, LLC



Environmental, Engineering and  
Hydrogeologic Consultants

FIGURE  
4



## TABLES



**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)
<b>Background Sample Result or Laboratory Practical Quantitation Limit (March 27, 1998 and September 1, 2015)</b>			<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	<b>63</b>
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	<b>120</b>
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	<b>610</b>
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	<b>380</b>
API 4 Vadose	9/22/2022	3	--	<50	<0.025	<0.050	<0.050	<0.018 MDL	<0.050	<b>89</b>

**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

&lt;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



**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	Gasoline Range Organics (GRO)	Diesel Range Organics (DRO)	Motor Oil Range Organics (MRO)	TPH
Sample ID	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Background Sample	27-Mar-98	<0.05	<0.05	<0.05	<0.05	NA	<50	NA	NA
Background Sample	1-Sep-15	<0.05	<0.05	<0.05	<0.095	<5.0	<10	<50	<50
HA01	11/11/2022	<0.025	<0.050	<0.050	<0.050	<5.0	<15	<51	<51
HA02	11/11/2022	<0.025	<0.050	<0.050	<0.10	<5.0	<14	<47	<47
HA03	11/11/2022	<0.025	<0.050	<0.050	<0.099	<5.0	<13	<43	<43
HA04	11/11/2022	<0.025	<0.050	<0.050	<0.10	<5.0	<15	<50	<50
HA05	11/11/2022	<0.025	<0.050	<0.050	<0.099	<5.0	<14	<47	<47
HA06	11/11/2022	<0.025	<0.050	<0.050	<0.10	<5.0	<15	<49	<49
HA07	11/11/2022	<0.025	<0.050	<0.050	<0.099	<5.0	<15	<48	<48
HA08	11/11/2022	<0.025	<0.049	<0.049	<0.099	<4.9	<14	<48	<48
HA09	11/11/2022	<0.025	<0.050	<0.050	<0.10	<5.0	<15	<50	<50
HA10	11/11/2022	<0.025	<0.050	<0.050	<0.099	<5.0	<14	<47	<47
HA11	11/11/2022	<0.025	<0.050	<0.050	<0.10	<5.0	<14	<47	<47
HA12	11/11/2022	<0.025	<0.049	<0.049	<0.099	<4.9	<15	<49	<49
HA13	11/11/2022	<0.025	<0.049	<0.049	<0.098	<4.9	<14	<48	<48
HA14	11/11/2022	<0.025	<0.050	<0.050	<0.10	<5.0	<15	<50	<50
HA15	11/11/2022	<0.025	<0.049	<0.049	<0.098	<4.9	<15	<49	<49
HA16	11/11/2022	<0.025	<0.050	<0.050	<0.10	<5.0	<14	<46	<46
HA17	11/11/2022	<0.025	<0.050	<0.050	<0.10	<5.0	<15	<49	<49
HA18	11/11/2022	<0.025	<0.050	<0.050	<0.10	<5.0	<15	<49	<49
HA19	11/11/2022	<0.025	<0.050	<0.050	<0.10	<5.0	<15	<49	<49
HA20	11/11/2022	<0.025	<0.049	<0.049	<0.098	<4.9	<15	<49	<49

**Notes:**

EPA: Environmental Protection Agency

mg/kg: milligrams per kilogram

NA: not analyzed

TPH: total petroleum hydrocarbons

&lt;: indicates result is less than the stated laboratory method practical quantitation limit

Gray shading indicates the concentration to be used for treatment zone closure performance standard

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



**TABLE 3**  
**SOIL ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS**  
**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	
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
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
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	<0.050	<0.10	<0.20	<0.20	<0.050	<0.050	<0.15	<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	<0.050	<0.10	<0.20	<0.20	<0.050	<0.050	<0.15	<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	<0.049	<0.098	<0.20	<0.20	<0.049	<0.049	<0.15	<0.049	<0.049	<0.15	<0.049	<0.049	<0.049

**Notes:**

EPA: Environmental Protection Agency

mg/kg: milligrams per kilogram

NA: not analyzed

TPH: total petroleum hydrocarbons

&lt;: indicates result is less than the stated laboratory method practical quantitation limit

Gray shading indicates the concentration to be used for treatment zone closure performance standard

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



**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	v vinyl chloride (chloroethene)	x xylenes, total
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
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	<0.048	<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	<0.095	
HA01	11/11/2022	<0.050	<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	
HA02	11/11/2022	<0.050	<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	<0.10	
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	<0.099	
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	<0.10	
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	<0.099	
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	<0.10	
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	<0.099	
HA08	11/11/2022	<0.049	<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	<0.099	
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	<0.10	
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	<0.099	
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	<0.10	
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	<0.099	
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	<0.098	
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	<0.10	
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	<0.098	
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	<0.10	
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	<0.10	
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	<0.10	
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	<0.10	
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	<0.098	

**Notes:**

EPA: Environmental Protection Agency

mg/kg: milligrams per kilogram

NA: not analyzed

TPH: total petroleum hydrocarbons

&lt;: indicates result is less than the stated laboratory method practical quantitation limit

Gray shading indicates the concentration to be used for treatment zone closure performance standard

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



**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	
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
Background Sample	27-Mar-98	NA	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	<0.020	<0.67
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	<0.016	<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	<0.016	<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	<0.017	<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	<0.016	<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	<0.017	<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	<0.016	<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	<0.016	<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	<0.016	<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	<0.016	<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	<0.016	<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	<0.016	<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	<0.016	<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	<0.016	<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	<0.016	<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	<0.016	<b>2.82 B</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	<0.016	<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	<0.017	<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	<0.016	<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	<0.016	<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	<0.017	<0.67

**Notes:**

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

&lt;: indicates result is less than the stated laboratory method practical quantitation limit

Gray shading indicates the concentration to be used for treatment zone closure performance standard

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



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

<b>ANALYTE</b>		Arsenic	Barium	Cadmium	Calcium	Chromium	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Potassium	Selenium	Silver	Uranium	Zinc	Cyanide by Method 9012B
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	
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	
Background Sample	1-Sep-15	NA	NA	NA	NA	NA	3.2	7,200	NA	NA	150	NA	NA	NA	<4.9	14	<0.25	
HA01	11/11/2022	2.1	44	<0.20	<b>2,700</b>	2.3	<4.0 D	5,700	<2.0	1,100	110	<0.033	<b>860</b>	<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	<b>950</b>	<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	<b>400</b>	<0.20	<b>4,100</b>	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	<b>3,800</b>	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	<b>2,800</b>	2.7	<4.0 D	5,700	2.7	1,100	120	<0.033	<b>890</b>	<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	<b>3,000</b>	3.4	<3.9 D	<b>7,700</b>	2.6	1,400	160	<0.033	<b>1,200</b>	<4.9	<0.98	<0.49	13	<0.25
HA10	11/11/2022	2.4	140	<0.20	<b>4,200</b>	3.2	<3.9 D	7,000	2.5	1,300	150	<0.033	<b>1,100</b>	<4.9	<0.99	<0.49	13	<0.25
HA11	11/11/2022	2.0	<b>190</b>	<0.20	<b>5,300</b>	2.5	<4.0 D	6,000	2.8	1,000	110	<0.032	<b>890</b>	<5.0	<1.0	<0.50	10	<0.25
HA12	11/11/2022	2.2	120	<0.20	<b>3,700</b>	3.1	<3.9 D	6,200	<2.0	1,100	110	<0.033	<b>950</b>	<4.9	<0.99	<0.49	11	<0.25
HA13	11/11/2022	1.7	87	<0.20	<b>3,700</b>	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	<b>3.3</b>	100	<0.20	<b>9,700</b>	<b>5.1</b>	<b>4.4</b>	<b>9,600</b>	2.6	2,100	170	<0.033	<b>1,500</b>	<5.0	<0.99	<0.50	<b>18</b>	<0.25
HA15	11/11/2022	2.3	<b>200</b>	<0.20	<b>5,000</b>	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	<b>4,900</b>	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	<b>3.1</b>	99	<0.20	<b>8,500</b>	<b>5.3</b>	<b>4.9</b>	<b>10,000</b>	4.1	2,400	190	<0.033	<b>1,600</b>	<5.0	<0.99	<0.50	<b>19</b>	<0.25
HA18	11/11/2022	2.6	<b>200</b>	<0.20	<b>8,000</b>	3.4	<4.0 D	6,900	2.9	1,500	120	<0.033	<b>1,100</b>	<5.0	<1.0	<0.50	13	<0.25
HA19	11/11/2022	2.8	70	<0.20	<b>6,700</b>	4.5	<b>4.1</b>	<b>8,500</b>	2.6	1,900	160	<0.033	<b>1,300</b>	<5.0	<0.99	<0.50	<b>16</b>	<0.25
HA20	11/11/2022	2.7	81	<0.20	<b>13,000</b>	4.1	<4.0 D	<b>8,000</b>	2.9	1,800	150	<0.033	<b>1,200</b>	<4.9	<0.99	<0.49	<b>15</b>	<0.25

**Notes:**

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

EPA: Environmental Protection Agency

mg/kg: milligrams per kilogram

NA: not analyzed

TPH: total petroleum hydrocarbons

&lt;: indicates result is less than the stated laboratory method practical quantitation limit

Gray shading indicates the concentration to be used for treatment zone closure performance standard

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



**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	Radium-228
Sample ID	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	pH units	mg/kg	mg/kg	mg/kg	pCi/g	pCi/g
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
HA01	11/11/2022	55	2.0	17	140	8.35	NA (1)	NA (1)	190	Pending Results	
HA02	11/11/2022	14	3.1	6.0	150	8.64	NA (1)	NA (1)	210	Pending Results	
HA03	11/11/2022	100	1.5	18	89	8.29	NA (1)	NA (1)	160	Pending Results	
HA04	11/11/2022	82	1.6	20	170	8.47	NA (1)	NA (1)	210	Pending Results	
HA05	11/11/2022	130	0.65	11	470	8.66	NA (1)	NA (1)	520	Pending Results	
HA06	11/11/2022	32	1.2	5.4	150	8.73	NA (1)	NA (1)	180	Pending Results	
HA07	11/11/2022	130	1.3	27	490	8.82	NA (1)	NA (1)	730	Pending Results	
HA08	11/11/2022	120	1.7	11	180	8.41	NA (1)	NA (1)	310	Pending Results	
HA09	11/11/2022	940	1.5	31	1,700	9.03	NA (1)	NA (1)	2,600	Pending Results	
HA10	11/11/2022	400	1.5	31	1,100	9.60	NA (1)	NA (1)	2,000	Pending Results	
HA11	11/11/2022	290	1.4	25	1,400	9.39	NA (1)	NA (1)	1,800	Pending Results	
HA12	11/11/2022	520	1.4	25	1,600	9.22	NA (1)	NA (1)	2,200	Pending Results	
HA13	11/11/2022	88	1.6	20	210	8.81	NA (1)	NA (1)	470	Pending Results	
HA14	11/11/2022	160	1.7	34	380	8.12	NA (1)	NA (1)	440	Pending Results	
HA15	11/11/2022	14	1.2	12	310	8.66	NA (1)	NA (1)	330	Pending Results	
HA16	11/11/2022	34	1.1	13	130	8.71	NA (1)	NA (1)	250	Pending Results	
HA17	11/11/2022	40	2.6	33	280	8.50	NA (1)	NA (1)	630	Pending Results	
HA18	11/11/2022	140	1.5	24	230	8.31	NA (1)	NA (1)	420	Pending Results	
HA19	11/11/2022	31	2.2	19	450	8.56	NA (1)	NA (1)	650	Pending Results	
HA20	11/11/2022	12	2.1	20	260	8.77	NA (1)	NA (1)	490	Pending Results	

**Notes:**

EPA: Environmental Protection Agency

mg/kg: milligrams per kilogram

pCi/g: pico-Curies per gram

NA: not analyzed

NA (1): not analyzed due to insufficient sample volumes for analysis

&lt;: indicates result is less than the stated laboratory method practical quantitation limit

Gray shading indicates the concentration to be used for treatment zone closure performance standard

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



## APPENDIX A

### Laboratory Analytical Reports

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>SW8270C</b>							
Naphthalene	ND	0.0096	mg/Kg	1	12/2/2022 2:57:00 PM	71550	Analyst: <b>DAM</b>
1-Methylnaphthalene	ND	0.0096	mg/Kg	1	12/2/2022 2:57:00 PM	71550	
2-Methylnaphthalene	ND	0.0096	mg/Kg	1	12/2/2022 2:57:00 PM	71550	
Benzo(a)pyrene	ND	0.019	mg/Kg	1	12/2/2022 2:57:00 PM	71550	
Surr: Nitrobenzene-d5	79.5	15-137	%Rec	1	12/2/2022 2:57:00 PM	71550	
Surr: 2-Fluorobiphenyl	81.5	15-121	%Rec	1	12/2/2022 2:57:00 PM	71550	
Surr: 4-Terphenyl-d14	105	65.7-126	%Rec	1	12/2/2022 2:57:00 PM	71550	
<b>EPA METHOD 300.0: ANIONS</b>							
Fluoride	2.0	0.30	mg/Kg	1	11/22/2022 8:01:19 PM	71660	Analyst: <b>JMT</b>
Chloride	55	1.5	mg/Kg	1	11/22/2022 8:01:19 PM	71660	
Nitrogen, Nitrate (As N)	17	0.30	mg/Kg	1	11/22/2022 8:01:19 PM	71660	
Sulfate	140	30	mg/Kg	20	11/23/2022 9:44:51 AM	71660	
<b>EPA METHOD 6020A: TOTAL METALS</b>							
Arsenic	2.1	0.49	mg/Kg	5	11/20/2022 12:58:46 PM	71582	Analyst: <b>ELS</b>
Uranium	ND	0.49	mg/Kg	5	11/21/2022 1:17:06 PM	71582	
<b>EPA METHOD 7471B: MERCURY</b>							
Mercury	ND	0.033	mg/Kg	1	11/30/2022 4:15:50 PM	71736	Analyst: <b>VP</b>
<b>EPA METHOD 6010B: SOIL METALS</b>							
Barium	44	0.20	mg/Kg	2	11/22/2022 10:33:32 AM	71582	Analyst: <b>JRR</b>
Cadmium	ND	0.20	mg/Kg	2	11/22/2022 10:33:32 AM	71582	
Calcium	2700	99	mg/Kg	2	11/22/2022 10:33:32 AM	71582	
Chromium	2.3	0.59	mg/Kg	2	11/22/2022 10:33:32 AM	71582	
Copper	ND	4.0	mg/Kg	2	11/22/2022 10:33:32 AM	71582	
Iron	5700	490	mg/Kg	50	12/2/2022 10:06:09 AM	71582	
Lead	ND	2.0	mg/Kg	2	11/22/2022 10:33:32 AM	71582	
Magnesium	1100	99	mg/Kg	2	11/22/2022 10:33:32 AM	71582	
Manganese	110	0.40	mg/Kg	2	11/22/2022 10:33:32 AM	71582	
Potassium	860	99	mg/Kg	2	11/22/2022 10:33:32 AM	71582	
Selenium	ND	4.9	mg/Kg	2	11/22/2022 12:49:39 PM	71582	
Silver	ND	0.99	mg/Kg	2	11/22/2022 12:49:39 PM	71582	
Sodium	190	99	mg/Kg	2	11/22/2022 10:33:32 AM	71582	
Zinc	10	4.9	mg/Kg	2	11/22/2022 10:33:32 AM	71582	
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1016	ND	0.016	mg/Kg	1	11/29/2022 3:42:16 PM	71629	Analyst: <b>SB</b>
Aroclor 1221	ND	0.016	mg/Kg	1	11/29/2022 3:42:16 PM	71629	
Aroclor 1232	ND	0.016	mg/Kg	1	11/29/2022 3:42:16 PM	71629	
Aroclor 1242	ND	0.016	mg/Kg	1	11/29/2022 3:42:16 PM	71629	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst:</b>
<b>EPA METHOD 8082A: PCB'S</b>								
Aroclor 1248	ND	0.016		mg/Kg	1	11/29/2022 3:42:16 PM	71629	
Aroclor 1254	ND	0.016		mg/Kg	1	11/29/2022 3:42:16 PM	71629	
Aroclor 1260	ND	0.016		mg/Kg	1	11/29/2022 3:42:16 PM	71629	
Surr: Decachlorobiphenyl	89.2	47.2-115		%Rec	1	11/29/2022 3:42:16 PM	71629	
Surr: Tetrachloro-m-xylene	89.2	15-110		%Rec	1	11/29/2022 3:42:16 PM	71629	
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/21/2022 4:25:23 PM	71614	
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	11/21/2022 4:25:23 PM	71614	
Surr: DNOP	111	21-129		%Rec	1	11/21/2022 4:25:23 PM	71614	
<b>EPA METHOD 8015D: GASOLINE RANGE</b>								
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/21/2022 7:32:00 PM	71585	
Surr: BFB	118	37.7-212		%Rec	1	11/21/2022 7:32:00 PM	71585	
<b>EPA METHOD 8260B: VOLATILES</b>								
Benzene	ND	0.025		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Toluene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Ethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Naphthalene	ND	0.099		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Acetone	ND	0.74		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Bromobenzene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Bromodichloromethane	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Bromoform	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Bromomethane	ND	0.15		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
2-Butanone	ND	0.50		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Carbon disulfide	ND	0.50		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Carbon tetrachloride	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Chlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Chloroethane	ND	0.099		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Chloroform	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Chloromethane	ND	0.15		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst: RAA</b>
<b>EPA METHOD 8260B: VOLATILES</b>								
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1,2-Dibromo-3-chloropropane	ND	0.099		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Dibromochloromethane	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Dibromomethane	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1,1-Dichloroethane	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1,1-Dichloroethene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
2,2-Dichloropropane	ND	0.099		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1,1-Dichloropropene	ND	0.099		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Hexachlorobutadiene	ND	0.099		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
2-Hexanone	ND	0.50		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Isopropylbenzene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
4-Isopropyltoluene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Methylene chloride	ND	0.15		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
n-Butylbenzene	ND	0.15		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
n-Propylbenzene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
sec-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Styrene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1,2,3-Trichlorobenzene	ND	0.099		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
1,2,3-Trichloropropane	ND	0.099		mg/Kg	1	11/18/2022 1:50:06 PM	71585	
Vinyl chloride	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

**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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8260B: VOLATILES</b>							
Xylenes, Total	ND	0.050		mg/Kg	1	11/18/2022 1:50:06 PM	71585
Surr: Dibromofluoromethane	114	70-130	%Rec		1	11/18/2022 1:50:06 PM	71585
Surr: 1,2-Dichloroethane-d4	101	70-130	%Rec		1	11/18/2022 1:50:06 PM	71585
Surr: Toluene-d8	112	70-130	%Rec		1	11/18/2022 1:50:06 PM	71585
Surr: 4-Bromofluorobenzene	97.1	70-130	%Rec		1	11/18/2022 1:50:06 PM	71585
<b>SM4500H+B/EPA 9040C</b>							
pH	8.35			pH Units	1	11/28/2022 4:12:00 PM	R92846

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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

Page 4 of 0

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>SW8270C</b>							
Naphthalene	ND	0.0099	mg/Kg	1	12/2/2022 3:43:00 PM	71550	Analyst: DAM
1-Methylnaphthalene	ND	0.0099	mg/Kg	1	12/2/2022 3:43:00 PM	71550	
2-Methylnaphthalene	ND	0.0099	mg/Kg	1	12/2/2022 3:43:00 PM	71550	
Benzo(a)pyrene	ND	0.020	mg/Kg	1	12/2/2022 3:43:00 PM	71550	
Surr: Nitrobenzene-d5	93.5	15-137	%Rec	1	12/2/2022 3:43:00 PM	71550	
Surr: 2-Fluorobiphenyl	93.0	15-121	%Rec	1	12/2/2022 3:43:00 PM	71550	
Surr: 4-Terphenyl-d14	116	65.7-126	%Rec	1	12/2/2022 3:43:00 PM	71550	
<b>EPA METHOD 300.0: ANIONS</b>							
Fluoride	3.1	0.30	mg/Kg	1	11/22/2022 8:38:21 PM	71660	Analyst: JMT
Chloride	14	1.5	mg/Kg	1	11/22/2022 8:38:21 PM	71660	
Nitrogen, Nitrate (As N)	6.0	0.30	mg/Kg	1	11/22/2022 8:38:21 PM	71660	
Sulfate	150	1.5	mg/Kg	1	11/22/2022 8:38:21 PM	71660	
<b>EPA METHOD 6020A: TOTAL METALS</b>							
Arsenic	1.8	0.50	mg/Kg	5	11/20/2022 1:02:55 PM	71582	Analyst: ELS
Uranium	ND	0.50	mg/Kg	5	11/21/2022 1:29:35 PM	71582	
<b>EPA METHOD 7471B: MERCURY</b>							
Mercury	ND	0.033	mg/Kg	1	11/30/2022 4:17:59 PM	71736	Analyst: VP
<b>EPA METHOD 6010B: SOIL METALS</b>							
Barium	73	0.20	mg/Kg	2	11/22/2022 10:43:45 AM	71582	Analyst: JRR
Cadmium	ND	0.20	mg/Kg	2	11/22/2022 10:43:45 AM	71582	
Calcium	1700	99	mg/Kg	2	11/22/2022 10:43:45 AM	71582	
Chromium	2.6	0.60	mg/Kg	2	11/22/2022 10:43:45 AM	71582	
Copper	ND	4.0	mg/Kg	2	11/22/2022 10:43:45 AM	71582	
Iron	5800	500	mg/Kg	50	12/2/2022 10:07:36 AM	71582	
Lead	2.3	2.0	mg/Kg	2	11/22/2022 10:43:45 AM	71582	
Magnesium	1100	99	mg/Kg	2	11/22/2022 10:43:45 AM	71582	
Manganese	110	0.40	mg/Kg	2	11/22/2022 10:43:45 AM	71582	
Potassium	950	99	mg/Kg	2	11/22/2022 10:43:45 AM	71582	
Selenium	ND	5.0	mg/Kg	2	11/22/2022 12:50:55 PM	71582	
Silver	ND	0.99	mg/Kg	2	11/22/2022 12:50:55 PM	71582	
Sodium	210	99	mg/Kg	2	11/22/2022 10:43:45 AM	71582	
Zinc	11	5.0	mg/Kg	2	11/22/2022 10:43:45 AM	71582	
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1016	ND	0.016	mg/Kg	1	11/29/2022 4:19:26 PM	71629	Analyst: SB
Aroclor 1221	ND	0.016	mg/Kg	1	11/29/2022 4:19:26 PM	71629	
Aroclor 1232	ND	0.016	mg/Kg	1	11/29/2022 4:19:26 PM	71629	
Aroclor 1242	ND	0.016	mg/Kg	1	11/29/2022 4:19:26 PM	71629	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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

Page 5 of 0

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst:</b>
<b>EPA METHOD 8082A: PCB'S</b>								
Aroclor 1248	ND	0.016		mg/Kg	1	11/29/2022 4:19:26 PM	71629	
Aroclor 1254	ND	0.016		mg/Kg	1	11/29/2022 4:19:26 PM	71629	
Aroclor 1260	ND	0.016		mg/Kg	1	11/29/2022 4:19:26 PM	71629	
Surr: Decachlorobiphenyl	88.0	47.2-115		%Rec	1	11/29/2022 4:19:26 PM	71629	
Surr: Tetrachloro-m-xylene	87.6	15-110		%Rec	1	11/29/2022 4:19:26 PM	71629	
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/21/2022 4:36:10 PM	71614	
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/21/2022 4:36:10 PM	71614	
Surr: DNOP	111	21-129		%Rec	1	11/21/2022 4:36:10 PM	71614	
<b>EPA METHOD 8015D: GASOLINE RANGE</b>								
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/21/2022 8:11:00 PM	71585	
Surr: BFB	117	37.7-212		%Rec	1	11/21/2022 8:11:00 PM	71585	
<b>EPA METHOD 8260B: VOLATILES</b>								
Benzene	ND	0.025		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Toluene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Ethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Naphthalene	ND	0.10		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Acetone	ND	0.75		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Bromobenzene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Bromodichloromethane	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Bromoform	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Bromomethane	ND	0.15		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
2-Butanone	ND	0.50		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Carbon disulfide	ND	0.50		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Carbon tetrachloride	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Chlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Chloroethane	ND	0.10		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Chloroform	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Chloromethane	ND	0.15		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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

Page 6 of 0

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst: RAA</b>
<b>EPA METHOD 8260B: VOLATILES</b>								
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Dibromochloromethane	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Dibromomethane	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1,1-Dichloroethane	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1,1-Dichloroethene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
2,2-Dichloropropane	ND	0.10		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1,1-Dichloropropene	ND	0.10		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Hexachlorobutadiene	ND	0.10		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
2-Hexanone	ND	0.50		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Isopropylbenzene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
4-Isopropyltoluene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Methylene chloride	ND	0.15		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
n-Butylbenzene	ND	0.15		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
n-Propylbenzene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
sec-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Styrene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	11/18/2022 2:44:35 PM	71585	
Vinyl chloride	ND	0.050		mg/Kg	1	11/18/2022 2:44:35 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

**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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8260B: VOLATILES</b>							
Xylenes, Total	ND	0.10		mg/Kg	1	11/18/2022 2:44:35 PM	71585
Surr: Dibromofluoromethane	109	70-130	%Rec		1	11/18/2022 2:44:35 PM	71585
Surr: 1,2-Dichloroethane-d4	97.7	70-130	%Rec		1	11/18/2022 2:44:35 PM	71585
Surr: Toluene-d8	111	70-130	%Rec		1	11/18/2022 2:44:35 PM	71585
Surr: 4-Bromofluorobenzene	94.6	70-130	%Rec		1	11/18/2022 2:44:35 PM	71585
<b>SM4500H+B/EPA 9040C</b>							
pH	8.64			pH Units	1	11/28/2022 4:12:00 PM	R92846

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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

Page 8 of 0

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>SW8270C</b>							
Naphthalene	ND	0.0095	mg/Kg	1	12/2/2022 4:28:00 PM	71550	Analyst: DAM
1-Methylnaphthalene	ND	0.0095	mg/Kg	1	12/2/2022 4:28:00 PM	71550	
2-Methylnaphthalene	ND	0.0095	mg/Kg	1	12/2/2022 4:28:00 PM	71550	
Benzo(a)pyrene	ND	0.019	mg/Kg	1	12/2/2022 4:28:00 PM	71550	
Surr: Nitrobenzene-d5	81.5	15-137	%Rec	1	12/2/2022 4:28:00 PM	71550	
Surr: 2-Fluorobiphenyl	80.5	15-121	%Rec	1	12/2/2022 4:28:00 PM	71550	
Surr: 4-Terphenyl-d14	102	65.7-126	%Rec	1	12/2/2022 4:28:00 PM	71550	
<b>EPA METHOD 300.0: ANIONS</b>							
Fluoride	1.5	0.30	mg/Kg	1	11/22/2022 9:15:23 PM	71660	Analyst: JMT
Chloride	100	30	mg/Kg	20	11/23/2022 9:57:16 AM	71660	
Nitrogen, Nitrate (As N)	18	0.30	mg/Kg	1	11/22/2022 9:15:23 PM	71660	
Sulfate	89	1.5	mg/Kg	1	11/22/2022 9:15:23 PM	71660	
<b>EPA METHOD 6020A: TOTAL METALS</b>							
Arsenic	2.1	0.49	mg/Kg	5	11/20/2022 1:15:22 PM	71582	Analyst: ELS
Uranium	ND	0.49	mg/Kg	5	11/21/2022 1:33:44 PM	71582	
<b>EPA METHOD 7471B: MERCURY</b>							
Mercury	ND	0.033	mg/Kg	1	11/30/2022 4:20:09 PM	71736	Analyst: VP
<b>EPA METHOD 6010B: SOIL METALS</b>							
Barium	58	0.20	mg/Kg	2	11/22/2022 10:45:39 AM	71582	Analyst: JRR
Cadmium	ND	0.20	mg/Kg	2	11/22/2022 10:45:39 AM	71582	
Calcium	1900	99	mg/Kg	2	11/22/2022 10:45:39 AM	71582	
Chromium	2.1	0.59	mg/Kg	2	11/22/2022 10:45:39 AM	71582	
Copper	ND	3.9	mg/Kg	2	11/22/2022 10:45:39 AM	71582	
Iron	6000	490	mg/Kg	50	12/2/2022 10:09:04 AM	71582	
Lead	3.1	2.0	mg/Kg	2	11/22/2022 10:45:39 AM	71582	
Magnesium	1000	99	mg/Kg	2	11/22/2022 10:45:39 AM	71582	
Manganese	120	0.39	mg/Kg	2	11/22/2022 10:45:39 AM	71582	
Potassium	750	99	mg/Kg	2	11/22/2022 10:45:39 AM	71582	
Selenium	ND	4.9	mg/Kg	2	11/22/2022 12:52:10 PM	71582	
Silver	ND	0.99	mg/Kg	2	11/22/2022 12:52:10 PM	71582	
Sodium	160	99	mg/Kg	2	11/22/2022 10:45:39 AM	71582	
Zinc	9.7	4.9	mg/Kg	2	11/22/2022 10:45:39 AM	71582	
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1016	ND	0.017	mg/Kg	1	11/29/2022 4:56:34 PM	71629	Analyst: SB
Aroclor 1221	ND	0.017	mg/Kg	1	11/29/2022 4:56:34 PM	71629	
Aroclor 1232	ND	0.017	mg/Kg	1	11/29/2022 4:56:34 PM	71629	
Aroclor 1242	ND	0.017	mg/Kg	1	11/29/2022 4:56:34 PM	71629	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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

Page 9 of 0

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst:</b>
<b>EPA METHOD 8082A: PCB'S</b>								
Aroclor 1248	ND	0.017		mg/Kg	1	11/29/2022 4:56:34 PM	71629	
Aroclor 1254	ND	0.017		mg/Kg	1	11/29/2022 4:56:34 PM	71629	
Aroclor 1260	ND	0.017		mg/Kg	1	11/29/2022 4:56:34 PM	71629	
Surr: Decachlorobiphenyl	82.0	47.2-115		%Rec	1	11/29/2022 4:56:34 PM	71629	
Surr: Tetrachloro-m-xylene	86.4	15-110		%Rec	1	11/29/2022 4:56:34 PM	71629	
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								
Diesel Range Organics (DRO)	ND	13		mg/Kg	1	11/21/2022 4:46:53 PM	71614	
Motor Oil Range Organics (MRO)	ND	43		mg/Kg	1	11/21/2022 4:46:53 PM	71614	
Surr: DNOP	110	21-129		%Rec	1	11/21/2022 4:46:53 PM	71614	
<b>EPA METHOD 8015D: GASOLINE RANGE</b>								
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/21/2022 8:31:00 PM	71585	
Surr: BFB	118	37.7-212		%Rec	1	11/21/2022 8:31:00 PM	71585	
<b>EPA METHOD 8260B: VOLATILES</b>								
Benzene	ND	0.025		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Toluene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Ethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Naphthalene	ND	0.099		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Acetone	ND	0.74		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Bromobenzene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Bromodichloromethane	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Bromoform	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Bromomethane	ND	0.15		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
2-Butanone	ND	0.50		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Carbon disulfide	ND	0.50		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Carbon tetrachloride	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Chlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Chloroethane	ND	0.099		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Chloroform	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Chloromethane	ND	0.15		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst: RAA</b>
<b>EPA METHOD 8260B: VOLATILES</b>								
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1,2-Dibromo-3-chloropropane	ND	0.099		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Dibromochloromethane	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Dibromomethane	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1,1-Dichloroethane	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1,1-Dichloroethene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
2,2-Dichloropropane	ND	0.099		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1,1-Dichloropropene	ND	0.099		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Hexachlorobutadiene	ND	0.099		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
2-Hexanone	ND	0.50		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Isopropylbenzene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
4-Isopropyltoluene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Methylene chloride	ND	0.15		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
n-Butylbenzene	ND	0.15		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
n-Propylbenzene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
sec-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Styrene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1,2,3-Trichlorobenzene	ND	0.099		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
1,2,3-Trichloropropane	ND	0.099		mg/Kg	1	11/18/2022 3:11:51 PM	71585	
Vinyl chloride	ND	0.050		mg/Kg	1	11/18/2022 3:11:51 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

**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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8260B: VOLATILES</b>							
Xylenes, Total	ND	0.099		mg/Kg	1	11/18/2022 3:11:51 PM	71585
Surr: Dibromofluoromethane	120	70-130	%Rec		1	11/18/2022 3:11:51 PM	71585
Surr: 1,2-Dichloroethane-d4	107	70-130	%Rec		1	11/18/2022 3:11:51 PM	71585
Surr: Toluene-d8	112	70-130	%Rec		1	11/18/2022 3:11:51 PM	71585
Surr: 4-Bromofluorobenzene	97.0	70-130	%Rec		1	11/18/2022 3:11:51 PM	71585
<b>SM4500H+B/EPA 9040C</b>							
pH	8.29			pH Units	1	11/28/2022 4:12:00 PM	R92846

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**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>SW8270C</b>							
Naphthalene	ND	0.0095	mg/Kg	1	12/2/2022 5:14:00 PM	71550	Analyst: DAM
1-Methylnaphthalene	ND	0.0095	mg/Kg	1	12/2/2022 5:14:00 PM	71550	
2-Methylnaphthalene	ND	0.0095	mg/Kg	1	12/2/2022 5:14:00 PM	71550	
Benzo(a)pyrene	ND	0.019	mg/Kg	1	12/2/2022 5:14:00 PM	71550	
Surr: Nitrobenzene-d5	73.5	15-137	%Rec	1	12/2/2022 5:14:00 PM	71550	
Surr: 2-Fluorobiphenyl	71.0	15-121	%Rec	1	12/2/2022 5:14:00 PM	71550	
Surr: 4-Terphenyl-d14	93.0	65.7-126	%Rec	1	12/2/2022 5:14:00 PM	71550	
<b>EPA METHOD 300.0: ANIONS</b>							
Fluoride	1.6	0.30	mg/Kg	1	11/22/2022 9:27:44 PM	71660	Analyst: JMT
Chloride	82	30	mg/Kg	20	11/23/2022 10:09:40 AM	71660	
Nitrogen, Nitrate (As N)	20	0.30	mg/Kg	1	11/22/2022 9:27:44 PM	71660	
Sulfate	170	30	mg/Kg	20	11/23/2022 10:09:40 AM	71660	
<b>EPA METHOD 6020A: TOTAL METALS</b>							
Arsenic	2.2	0.50	mg/Kg	5	11/20/2022 1:19:32 PM	71582	Analyst: ELS
Uranium	ND	0.50	mg/Kg	5	11/21/2022 1:37:52 PM	71582	
<b>EPA METHOD 7471B: MERCURY</b>							
Mercury	ND	0.033	mg/Kg	1	11/30/2022 4:26:34 PM	71736	Analyst: VP
<b>EPA METHOD 6010B: SOIL METALS</b>							
Barium	400	0.20	mg/Kg	2	11/22/2022 10:47:31 AM	71582	Analyst: JRR
Cadmium	ND	0.20	mg/Kg	2	11/22/2022 10:47:31 AM	71582	
Calcium	4100	99	mg/Kg	2	11/22/2022 10:47:31 AM	71582	
Chromium	2.1	0.60	mg/Kg	2	11/22/2022 10:47:31 AM	71582	
Copper	ND	4.0	mg/Kg	2	11/22/2022 10:47:31 AM	71582	
Iron	5200	500	mg/Kg	50	12/2/2022 10:10:32 AM	71582	
Lead	3.1	2.0	mg/Kg	2	11/22/2022 10:47:31 AM	71582	
Magnesium	970	99	mg/Kg	2	11/22/2022 10:47:31 AM	71582	
Manganese	110	0.40	mg/Kg	2	11/22/2022 10:47:31 AM	71582	
Potassium	800	99	mg/Kg	2	11/22/2022 10:47:31 AM	71582	
Selenium	ND	5.0	mg/Kg	2	11/22/2022 12:53:25 PM	71582	
Silver	ND	0.99	mg/Kg	2	11/22/2022 12:53:25 PM	71582	
Sodium	210	99	mg/Kg	2	11/22/2022 10:47:31 AM	71582	
Zinc	9.3	5.0	mg/Kg	2	11/22/2022 10:47:31 AM	71582	
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1016	ND	0.016	mg/Kg	1	11/29/2022 5:33:40 PM	71629	Analyst: SB
Aroclor 1221	ND	0.016	mg/Kg	1	11/29/2022 5:33:40 PM	71629	
Aroclor 1232	ND	0.016	mg/Kg	1	11/29/2022 5:33:40 PM	71629	
Aroclor 1242	ND	0.016	mg/Kg	1	11/29/2022 5:33:40 PM	71629	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst:</b>
<b>EPA METHOD 8082A: PCB'S</b>								
Aroclor 1248	ND	0.016		mg/Kg	1	11/29/2022 5:33:40 PM	71629	
Aroclor 1254	ND	0.016		mg/Kg	1	11/29/2022 5:33:40 PM	71629	
Aroclor 1260	ND	0.016		mg/Kg	1	11/29/2022 5:33:40 PM	71629	
Surr: Decachlorobiphenyl	88.4	47.2-115		%Rec	1	11/29/2022 5:33:40 PM	71629	
Surr: Tetrachloro-m-xylene	91.2	15-110		%Rec	1	11/29/2022 5:33:40 PM	71629	
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/21/2022 4:57:38 PM	71614	
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/21/2022 4:57:38 PM	71614	
Surr: DNOP	110	21-129		%Rec	1	11/21/2022 4:57:38 PM	71614	
<b>EPA METHOD 8015D: GASOLINE RANGE</b>								
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/21/2022 8:51:00 PM	71585	
Surr: BFB	121	37.7-212		%Rec	1	11/21/2022 8:51:00 PM	71585	
<b>EPA METHOD 8260B: VOLATILES</b>								
Benzene	ND	0.025		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Toluene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Ethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Naphthalene	ND	0.10		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Acetone	ND	0.75		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Bromobenzene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Bromodichloromethane	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Bromoform	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Bromomethane	ND	0.15		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
2-Butanone	ND	0.50		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Carbon disulfide	ND	0.50		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Carbon tetrachloride	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Chlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Chloroethane	ND	0.10		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Chloroform	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Chloromethane	ND	0.15		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst: RAA</b>
<b>EPA METHOD 8260B: VOLATILES</b>								
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Dibromochloromethane	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Dibromomethane	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1,1-Dichloroethane	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1,1-Dichloroethene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
2,2-Dichloropropane	ND	0.10		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1,1-Dichloropropene	ND	0.10		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Hexachlorobutadiene	ND	0.10		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
2-Hexanone	ND	0.50		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Isopropylbenzene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
4-Isopropyltoluene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Methylene chloride	ND	0.15		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
n-Butylbenzene	ND	0.15		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
n-Propylbenzene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
sec-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Styrene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	11/18/2022 3:39:11 PM	71585	
Vinyl chloride	ND	0.050		mg/Kg	1	11/18/2022 3:39:11 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

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- 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, Inc.****Analytical Report**Lab Order **2211751**

Date Reported:

**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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8260B: VOLATILES</b>							
Xylenes, Total	ND	0.10		mg/Kg	1	11/18/2022 3:39:11 PM	71585
Surr: Dibromofluoromethane	119	70-130	%Rec		1	11/18/2022 3:39:11 PM	71585
Surr: 1,2-Dichloroethane-d4	111	70-130	%Rec		1	11/18/2022 3:39:11 PM	71585
Surr: Toluene-d8	103	70-130	%Rec		1	11/18/2022 3:39:11 PM	71585
Surr: 4-Bromofluorobenzene	92.1	70-130	%Rec		1	11/18/2022 3:39:11 PM	71585
<b>SM4500H+B/EPA 9040C</b>							
pH	8.47			pH Units	1	11/28/2022 4:12:00 PM	R92846

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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

Page 16 of 0

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>SW8270C</b>							
Naphthalene	ND	0.0098	mg/Kg	1	12/2/2022 5:59:00 PM	71550	Analyst: DAM
1-Methylnaphthalene	ND	0.0098	mg/Kg	1	12/2/2022 5:59:00 PM	71550	
2-Methylnaphthalene	ND	0.0098	mg/Kg	1	12/2/2022 5:59:00 PM	71550	
Benzo(a)pyrene	ND	0.020	mg/Kg	1	12/2/2022 5:59:00 PM	71550	
Surr: Nitrobenzene-d5	71.0	15-137	%Rec	1	12/2/2022 5:59:00 PM	71550	
Surr: 2-Fluorobiphenyl	68.5	15-121	%Rec	1	12/2/2022 5:59:00 PM	71550	
Surr: 4-Terphenyl-d14	95.0	65.7-126	%Rec	1	12/2/2022 5:59:00 PM	71550	
<b>EPA METHOD 300.0: ANIONS</b>							
Fluoride	0.65	0.30	mg/Kg	1	11/22/2022 9:40:04 PM	71660	Analyst: JMT
Chloride	130	30	mg/Kg	20	11/23/2022 10:22:04 AM	71660	
Nitrogen, Nitrate (As N)	11	0.30	mg/Kg	1	11/22/2022 9:40:04 PM	71660	
Sulfate	470	30	mg/Kg	20	11/23/2022 10:22:04 AM	71660	
<b>EPA METHOD 6020A: TOTAL METALS</b>							
Arsenic	2.0	0.50	mg/Kg	5	11/20/2022 1:23:41 PM	71582	Analyst: ELS
Uranium	ND	0.50	mg/Kg	5	11/21/2022 1:42:01 PM	71582	
<b>EPA METHOD 7471B: MERCURY</b>							
Mercury	ND	0.032	mg/Kg	1	11/30/2022 4:28:43 PM	71736	Analyst: VP
<b>EPA METHOD 6010B: SOIL METALS</b>							
Barium	73	0.20	mg/Kg	2	11/22/2022 10:49:22 AM	71582	Analyst: JRR
Cadmium	ND	0.20	mg/Kg	2	11/22/2022 10:49:22 AM	71582	
Calcium	3800	99	mg/Kg	2	11/22/2022 10:49:22 AM	71582	
Chromium	2.2	0.60	mg/Kg	2	11/22/2022 10:49:22 AM	71582	
Copper	ND	4.0	mg/Kg	2	11/22/2022 10:49:22 AM	71582	
Iron	5100	500	mg/Kg	50	12/2/2022 10:12:00 AM	71582	
Lead	2.9	2.0	mg/Kg	2	11/22/2022 10:49:22 AM	71582	
Magnesium	1000	99	mg/Kg	2	11/22/2022 10:49:22 AM	71582	
Manganese	110	0.40	mg/Kg	2	11/22/2022 10:49:22 AM	71582	
Potassium	700	99	mg/Kg	2	11/22/2022 10:49:22 AM	71582	
Selenium	ND	5.0	mg/Kg	2	11/22/2022 12:58:37 PM	71582	
Silver	ND	0.99	mg/Kg	2	11/22/2022 12:58:37 PM	71582	
Sodium	520	99	mg/Kg	2	11/22/2022 10:49:22 AM	71582	
Zinc	10	5.0	mg/Kg	2	11/22/2022 10:49:22 AM	71582	
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1016	ND	0.017	mg/Kg	1	11/29/2022 6:10:53 PM	71629	Analyst: SB
Aroclor 1221	ND	0.017	mg/Kg	1	11/29/2022 6:10:53 PM	71629	
Aroclor 1232	ND	0.017	mg/Kg	1	11/29/2022 6:10:53 PM	71629	
Aroclor 1242	ND	0.017	mg/Kg	1	11/29/2022 6:10:53 PM	71629	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1248	ND	0.017		mg/Kg	1	11/29/2022 6:10:53 PM	71629
Aroclor 1254	ND	0.017		mg/Kg	1	11/29/2022 6:10:53 PM	71629
Aroclor 1260	ND	0.017		mg/Kg	1	11/29/2022 6:10:53 PM	71629
Surr: Decachlorobiphenyl	86.4	47.2-115		%Rec	1	11/29/2022 6:10:53 PM	71629
Surr: Tetrachloro-m-xylene	85.2	15-110		%Rec	1	11/29/2022 6:10:53 PM	71629
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/21/2022 5:08:20 PM	71614
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/21/2022 5:08:20 PM	71614
Surr: DNOP	107	21-129		%Rec	1	11/21/2022 5:08:20 PM	71614
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/21/2022 9:10:00 PM	71585
Surr: BFB	127	37.7-212		%Rec	1	11/21/2022 9:10:00 PM	71585
<b>EPA METHOD 8260B: VOLATILES</b>							
Benzene	ND	0.025		mg/Kg	1	11/18/2022 4:06:25 PM	71585
Toluene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585
Ethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585
Naphthalene	ND	0.099		mg/Kg	1	11/18/2022 4:06:25 PM	71585
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 4:06:25 PM	71585
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 4:06:25 PM	71585
Acetone	ND	0.74		mg/Kg	1	11/18/2022 4:06:25 PM	71585
Bromobenzene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585
Bromodichloromethane	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585
Bromoform	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585
Bromomethane	ND	0.15		mg/Kg	1	11/18/2022 4:06:25 PM	71585
2-Butanone	ND	0.50		mg/Kg	1	11/18/2022 4:06:25 PM	71585
Carbon disulfide	ND	0.50		mg/Kg	1	11/18/2022 4:06:25 PM	71585
Carbon tetrachloride	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585
Chlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585
Chloroethane	ND	0.099		mg/Kg	1	11/18/2022 4:06:25 PM	71585
Chloroform	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585
Chloromethane	ND	0.15		mg/Kg	1	11/18/2022 4:06:25 PM	71585
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst: RAA</b>
<b>EPA METHOD 8260B: VOLATILES</b>								
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
1,2-Dibromo-3-chloropropane	ND	0.099		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
Dibromochloromethane	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
Dibromomethane	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
1,1-Dichloroethane	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
1,1-Dichloroethene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
2,2-Dichloropropane	ND	0.099		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
1,1-Dichloropropene	ND	0.099		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
Hexachlorobutadiene	ND	0.099		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
2-Hexanone	ND	0.50		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
Isopropylbenzene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
4-Isopropyltoluene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
Methylene chloride	ND	0.15		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
n-Butylbenzene	ND	0.15		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
n-Propylbenzene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
sec-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
Styrene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
1,2,3-Trichlorobenzene	ND	0.099		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
1,2,3-Trichloropropane	ND	0.099		mg/Kg	1	11/18/2022 4:06:25 PM	71585	
Vinyl chloride	ND	0.050		mg/Kg	1	11/18/2022 4:06:25 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

**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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8260B: VOLATILES</b>							
Xylenes, Total	ND	0.099		mg/Kg	1	11/18/2022 4:06:25 PM	71585
Surr: Dibromofluoromethane	116	70-130	%Rec		1	11/18/2022 4:06:25 PM	71585
Surr: 1,2-Dichloroethane-d4	103	70-130	%Rec		1	11/18/2022 4:06:25 PM	71585
Surr: Toluene-d8	111	70-130	%Rec		1	11/18/2022 4:06:25 PM	71585
Surr: 4-Bromofluorobenzene	98.8	70-130	%Rec		1	11/18/2022 4:06:25 PM	71585
<b>SM4500H+B/EPA 9040C</b>							
pH	8.66			pH Units	1	11/28/2022 4:12:00 PM	R92846

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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

Page 20 of 0

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>SW8270C</b>							
Naphthalene	ND	0.0099	mg/Kg	1	12/2/2022 6:45:00 PM	71550	Analyst: DAM
1-Methylnaphthalene	ND	0.0099	mg/Kg	1	12/2/2022 6:45:00 PM	71550	
2-Methylnaphthalene	ND	0.0099	mg/Kg	1	12/2/2022 6:45:00 PM	71550	
Benzo(a)pyrene	ND	0.020	mg/Kg	1	12/2/2022 6:45:00 PM	71550	
Surr: Nitrobenzene-d5	68.5	15-137	%Rec	1	12/2/2022 6:45:00 PM	71550	
Surr: 2-Fluorobiphenyl	66.5	15-121	%Rec	1	12/2/2022 6:45:00 PM	71550	
Surr: 4-Terphenyl-d14	97.0	65.7-126	%Rec	1	12/2/2022 6:45:00 PM	71550	
<b>EPA METHOD 300.0: ANIONS</b>							
Fluoride	1.2	0.30	mg/Kg	1	11/22/2022 9:52:25 PM	71660	Analyst: JMT
Chloride	32	1.5	mg/Kg	1	11/22/2022 9:52:25 PM	71660	
Nitrogen, Nitrate (As N)	5.4	0.30	mg/Kg	1	11/22/2022 9:52:25 PM	71660	
Sulfate	150	1.5	mg/Kg	1	11/22/2022 9:52:25 PM	71660	
<b>EPA METHOD 6020A: TOTAL METALS</b>							
Arsenic	2.0	0.50	mg/Kg	5	11/20/2022 1:27:49 PM	71582	Analyst: ELS
Uranium	ND	0.50	mg/Kg	5	11/21/2022 1:46:10 PM	71582	
<b>EPA METHOD 7471B: MERCURY</b>							
Mercury	ND	0.033	mg/Kg	1	11/30/2022 4:30:51 PM	71736	Analyst: VP
<b>EPA METHOD 6010B: SOIL METALS</b>							
Barium	37	0.20	mg/Kg	2	11/22/2022 10:51:15 AM	71582	Analyst: JRR
Cadmium	ND	0.20	mg/Kg	2	11/22/2022 10:51:15 AM	71582	
Calcium	2500	100	mg/Kg	2	11/22/2022 10:51:15 AM	71582	
Chromium	2.2	0.60	mg/Kg	2	11/22/2022 10:51:15 AM	71582	
Copper	ND	4.0	mg/Kg	2	11/22/2022 10:51:15 AM	71582	
Iron	5300	500	mg/Kg	50	12/2/2022 10:13:28 AM	71582	
Lead	2.4	2.0	mg/Kg	2	11/22/2022 10:51:15 AM	71582	
Magnesium	1000	100	mg/Kg	2	11/22/2022 10:51:15 AM	71582	
Manganese	110	0.40	mg/Kg	2	11/22/2022 10:51:15 AM	71582	
Potassium	690	100	mg/Kg	2	11/22/2022 10:51:15 AM	71582	
Selenium	ND	5.0	mg/Kg	2	11/22/2022 12:59:56 PM	71582	
Silver	ND	1.0	mg/Kg	2	11/22/2022 12:59:56 PM	71582	
Sodium	180	100	mg/Kg	2	11/22/2022 10:51:15 AM	71582	
Zinc	9.5	5.0	mg/Kg	2	11/22/2022 10:51:15 AM	71582	
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1016	ND	0.016	mg/Kg	1	11/29/2022 6:48:02 PM	71629	Analyst: SB
Aroclor 1221	ND	0.016	mg/Kg	1	11/29/2022 6:48:02 PM	71629	
Aroclor 1232	ND	0.016	mg/Kg	1	11/29/2022 6:48:02 PM	71629	
Aroclor 1242	ND	0.016	mg/Kg	1	11/29/2022 6:48:02 PM	71629	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst:</b>
<b>EPA METHOD 8082A: PCB'S</b>								
Aroclor 1248	ND	0.016		mg/Kg	1	11/29/2022 6:48:02 PM	71629	
Aroclor 1254	ND	0.016		mg/Kg	1	11/29/2022 6:48:02 PM	71629	
Aroclor 1260	ND	0.016		mg/Kg	1	11/29/2022 6:48:02 PM	71629	
Surr: Decachlorobiphenyl	88.4	47.2-115		%Rec	1	11/29/2022 6:48:02 PM	71629	
Surr: Tetrachloro-m-xylene	88.0	15-110		%Rec	1	11/29/2022 6:48:02 PM	71629	
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/22/2022 8:42:19 AM	71615	
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/22/2022 8:42:19 AM	71615	
Surr: DNOP	125	21-129		%Rec	1	11/22/2022 8:42:19 AM	71615	
<b>EPA METHOD 8015D: GASOLINE RANGE</b>								
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/21/2022 9:30:00 PM	71585	
Surr: BFB	130	37.7-212		%Rec	1	11/21/2022 9:30:00 PM	71585	
<b>EPA METHOD 8260B: VOLATILES</b>								
Benzene	ND	0.025		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Toluene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Ethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Naphthalene	ND	0.10		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Acetone	ND	0.75		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Bromobenzene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Bromodichloromethane	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Bromoform	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Bromomethane	ND	0.15		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
2-Butanone	ND	0.50		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Carbon disulfide	ND	0.50		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Carbon tetrachloride	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Chlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Chloroethane	ND	0.10		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Chloroform	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Chloromethane	ND	0.15		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst: RAA</b>
<b>EPA METHOD 8260B: VOLATILES</b>								
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Dibromochloromethane	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Dibromomethane	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1,1-Dichloroethane	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1,1-Dichloroethene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
2,2-Dichloropropane	ND	0.10		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1,1-Dichloropropene	ND	0.10		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Hexachlorobutadiene	ND	0.10		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
2-Hexanone	ND	0.50		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Isopropylbenzene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
4-Isopropyltoluene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Methylene chloride	ND	0.15		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
n-Butylbenzene	ND	0.15		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
n-Propylbenzene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
sec-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Styrene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	11/18/2022 4:33:37 PM	71585	
Vinyl chloride	ND	0.050		mg/Kg	1	11/18/2022 4:33:37 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

**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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8260B: VOLATILES</b>							
Xylenes, Total	ND	0.10		mg/Kg	1	11/18/2022 4:33:37 PM	71585
Surr: Dibromofluoromethane	113	70-130	%Rec		1	11/18/2022 4:33:37 PM	71585
Surr: 1,2-Dichloroethane-d4	97.1	70-130	%Rec		1	11/18/2022 4:33:37 PM	71585
Surr: Toluene-d8	109	70-130	%Rec		1	11/18/2022 4:33:37 PM	71585
Surr: 4-Bromofluorobenzene	97.6	70-130	%Rec		1	11/18/2022 4:33:37 PM	71585
<b>SM4500H+B/EPA 9040C</b>							
pH	8.73			pH Units	1	11/28/2022 4:12:00 PM	R92846

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>SW8270C</b>							
Naphthalene	ND	0.0094		mg/Kg	1	12/2/2022 7:30:00 PM	71550
1-Methylnaphthalene	ND	0.0094		mg/Kg	1	12/2/2022 7:30:00 PM	71550
2-Methylnaphthalene	ND	0.0094		mg/Kg	1	12/2/2022 7:30:00 PM	71550
Benzo(a)pyrene	ND	0.019		mg/Kg	1	12/2/2022 7:30:00 PM	71550
Surr: Nitrobenzene-d5	80.0	15-137		%Rec	1	12/2/2022 7:30:00 PM	71550
Surr: 2-Fluorobiphenyl	75.5	15-121		%Rec	1	12/2/2022 7:30:00 PM	71550
Surr: 4-Terphenyl-d14	93.0	65.7-126		%Rec	1	12/2/2022 7:30:00 PM	71550
<b>EPA METHOD 300.0: ANIONS</b>							
Fluoride	1.3	0.30		mg/Kg	1	11/22/2022 10:29:28 PM	71660
Chloride	130	30		mg/Kg	20	11/23/2022 10:34:28 AM	71660
Nitrogen, Nitrate (As N)	27	6.0		mg/Kg	20	11/23/2022 10:34:28 AM	71660
Sulfate	490	30		mg/Kg	20	11/23/2022 10:34:28 AM	71660
<b>EPA METHOD 6020A: TOTAL METALS</b>							
Arsenic	2.1	0.49		mg/Kg	5	11/20/2022 1:31:59 PM	71582
Uranium	ND	0.49		mg/Kg	5	11/21/2022 1:50:18 PM	71582
<b>EPA METHOD 7471B: MERCURY</b>							
Mercury	ND	0.033		mg/Kg	1	11/30/2022 4:33:00 PM	71736
<b>EPA METHOD 6010B: SOIL METALS</b>							
Barium	120	0.20		mg/Kg	2	11/22/2022 10:53:20 AM	71582
Cadmium	ND	0.20		mg/Kg	2	11/22/2022 10:53:20 AM	71582
Calcium	2800	99		mg/Kg	2	11/22/2022 10:53:20 AM	71582
Chromium	2.7	0.59		mg/Kg	2	11/22/2022 10:53:20 AM	71582
Copper	ND	4.0		mg/Kg	2	11/22/2022 10:53:20 AM	71582
Iron	5700	490		mg/Kg	50	12/2/2022 10:14:57 AM	71582
Lead	2.7	2.0		mg/Kg	2	11/22/2022 10:53:20 AM	71582
Magnesium	1100	99		mg/Kg	2	11/22/2022 10:53:20 AM	71582
Manganese	120	0.40		mg/Kg	2	11/22/2022 10:53:20 AM	71582
Potassium	890	99		mg/Kg	2	11/22/2022 10:53:20 AM	71582
Selenium	ND	4.9		mg/Kg	2	11/22/2022 1:01:12 PM	71582
Silver	ND	0.99		mg/Kg	2	11/22/2022 1:01:12 PM	71582
Sodium	730	99		mg/Kg	2	11/22/2022 10:53:20 AM	71582
Zinc	12	4.9		mg/Kg	2	11/22/2022 10:53:20 AM	71582
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1016	ND	0.016		mg/Kg	1	11/29/2022 8:02:19 PM	71629
Aroclor 1221	ND	0.016		mg/Kg	1	11/29/2022 8:02:19 PM	71629
Aroclor 1232	ND	0.016		mg/Kg	1	11/29/2022 8:02:19 PM	71629
Aroclor 1242	ND	0.016		mg/Kg	1	11/29/2022 8:02:19 PM	71629

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

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- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst:</b>
<b>EPA METHOD 8082A: PCB'S</b>								
Aroclor 1248	ND	0.016		mg/Kg	1	11/29/2022 8:02:19 PM	71629	
Aroclor 1254	ND	0.016		mg/Kg	1	11/29/2022 8:02:19 PM	71629	
Aroclor 1260	ND	0.016		mg/Kg	1	11/29/2022 8:02:19 PM	71629	
Surr: Decachlorobiphenyl	89.6	47.2-115		%Rec	1	11/29/2022 8:02:19 PM	71629	
Surr: Tetrachloro-m-xylene	90.0	15-110		%Rec	1	11/29/2022 8:02:19 PM	71629	
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/22/2022 9:22:11 PM	71615	
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/22/2022 9:22:11 PM	71615	
Surr: DNOP	121	21-129		%Rec	1	11/22/2022 9:22:11 PM	71615	
<b>EPA METHOD 8015D: GASOLINE RANGE</b>								
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/21/2022 9:50:00 PM	71585	
Surr: BFB	127	37.7-212		%Rec	1	11/21/2022 9:50:00 PM	71585	
<b>EPA METHOD 8260B: VOLATILES</b>								
Benzene	ND	0.025		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Toluene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Ethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Naphthalene	ND	0.099		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Acetone	ND	0.74		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Bromobenzene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Bromodichloromethane	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Bromoform	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Bromomethane	ND	0.15		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
2-Butanone	ND	0.50		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Carbon disulfide	ND	0.50		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Carbon tetrachloride	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Chlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Chloroethane	ND	0.099		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Chloroform	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Chloromethane	ND	0.15		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst: RAA</b>
<b>EPA METHOD 8260B: VOLATILES</b>								
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1,2-Dibromo-3-chloropropane	ND	0.099		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Dibromochloromethane	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Dibromomethane	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1,1-Dichloroethane	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1,1-Dichloroethene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
2,2-Dichloropropane	ND	0.099		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1,1-Dichloropropene	ND	0.099		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Hexachlorobutadiene	ND	0.099		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
2-Hexanone	ND	0.50		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Isopropylbenzene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
4-Isopropyltoluene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Methylene chloride	ND	0.15		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
n-Butylbenzene	ND	0.15		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
n-Propylbenzene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
sec-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Styrene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1,2,3-Trichlorobenzene	ND	0.099		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
1,2,3-Trichloropropane	ND	0.099		mg/Kg	1	11/18/2022 5:00:44 PM	71585	
Vinyl chloride	ND	0.050		mg/Kg	1	11/18/2022 5:00:44 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

**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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8260B: VOLATILES</b>							
Xylenes, Total	ND	0.099		mg/Kg	1	11/18/2022 5:00:44 PM	71585
Surr: Dibromofluoromethane	119	70-130	%Rec		1	11/18/2022 5:00:44 PM	71585
Surr: 1,2-Dichloroethane-d4	106	70-130	%Rec		1	11/18/2022 5:00:44 PM	71585
Surr: Toluene-d8	112	70-130	%Rec		1	11/18/2022 5:00:44 PM	71585
Surr: 4-Bromofluorobenzene	96.0	70-130	%Rec		1	11/18/2022 5:00:44 PM	71585
<b>SM4500H+B/EPA 9040C</b>							
pH	8.82			pH Units	1	11/28/2022 4:12:00 PM	R92846

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>SW8270C</b>							
Naphthalene	ND	0.0090	mg/Kg	1	12/5/2022 10:20:00 AM	71550	Analyst: DAM
1-Methylnaphthalene	ND	0.0090	mg/Kg	1	12/5/2022 10:20:00 AM	71550	
2-Methylnaphthalene	ND	0.0090	mg/Kg	1	12/5/2022 10:20:00 AM	71550	
Benzo(a)pyrene	ND	0.018	mg/Kg	1	12/5/2022 10:20:00 AM	71550	
Surr: Nitrobenzene-d5	82.5	15-137	%Rec	1	12/5/2022 10:20:00 AM	71550	
Surr: 2-Fluorobiphenyl	80.0	15-121	%Rec	1	12/5/2022 10:20:00 AM	71550	
Surr: 4-Terphenyl-d14	103	65.7-126	%Rec	1	12/5/2022 10:20:00 AM	71550	
<b>EPA METHOD 300.0: ANIONS</b>							
Fluoride	1.7	0.30	mg/Kg	1	11/22/2022 10:41:49 PM	71660	Analyst: JMT
Chloride	120	30	mg/Kg	20	11/23/2022 10:46:53 AM	71660	
Nitrogen, Nitrate (As N)	11	0.30	mg/Kg	1	11/22/2022 10:41:49 PM	71660	
Sulfate	180	30	mg/Kg	20	11/23/2022 10:46:53 AM	71660	
<b>EPA METHOD 6020A: TOTAL METALS</b>							
Arsenic	2.1	0.49	mg/Kg	5	11/20/2022 1:36:08 PM	71582	Analyst: ELS
Uranium	ND	0.49	mg/Kg	5	11/21/2022 1:54:28 PM	71582	
<b>EPA METHOD 7471B: MERCURY</b>							
Mercury	ND	0.032	mg/Kg	1	11/30/2022 4:35:09 PM	71736	Analyst: VP
<b>EPA METHOD 6010B: SOIL METALS</b>							
Barium	50	0.20	mg/Kg	2	11/22/2022 10:55:13 AM	71582	Analyst: JRR
Cadmium	ND	0.20	mg/Kg	2	11/22/2022 10:55:13 AM	71582	
Calcium	1500	98	mg/Kg	2	11/22/2022 10:55:13 AM	71582	
Chromium	2.2	0.59	mg/Kg	2	11/22/2022 10:55:13 AM	71582	
Copper	ND	3.9	mg/Kg	2	11/22/2022 10:55:13 AM	71582	
Iron	5300	490	mg/Kg	50	12/2/2022 10:16:26 AM	71582	
Lead	2.3	2.0	mg/Kg	2	11/22/2022 10:55:13 AM	71582	
Magnesium	1000	98	mg/Kg	2	11/22/2022 10:55:13 AM	71582	
Manganese	120	0.39	mg/Kg	2	11/22/2022 10:55:13 AM	71582	
Potassium	720	98	mg/Kg	2	11/22/2022 10:55:13 AM	71582	
Selenium	ND	4.9	mg/Kg	2	11/22/2022 1:02:28 PM	71582	
Silver	ND	0.98	mg/Kg	2	11/22/2022 1:02:28 PM	71582	
Sodium	310	98	mg/Kg	2	11/22/2022 10:55:13 AM	71582	
Zinc	9.7	4.9	mg/Kg	2	11/22/2022 10:55:13 AM	71582	
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1016	ND	0.016	mg/Kg	1	11/29/2022 8:39:34 PM	71629	Analyst: SB
Aroclor 1221	ND	0.016	mg/Kg	1	11/29/2022 8:39:34 PM	71629	
Aroclor 1232	ND	0.016	mg/Kg	1	11/29/2022 8:39:34 PM	71629	
Aroclor 1242	ND	0.016	mg/Kg	1	11/29/2022 8:39:34 PM	71629	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst:</b>
<b>EPA METHOD 8082A: PCB'S</b>								
Aroclor 1248	ND	0.016		mg/Kg	1	11/29/2022 8:39:34 PM	71629	
Aroclor 1254	ND	0.016		mg/Kg	1	11/29/2022 8:39:34 PM	71629	
Aroclor 1260	ND	0.016		mg/Kg	1	11/29/2022 8:39:34 PM	71629	
Surr: Decachlorobiphenyl	93.2	47.2-115		%Rec	1	11/29/2022 8:39:34 PM	71629	
Surr: Tetrachloro-m-xylene	88.8	15-110		%Rec	1	11/29/2022 8:39:34 PM	71629	
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/22/2022 9:32:32 PM	71615	
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/22/2022 9:32:32 PM	71615	
Surr: DNOP	109	21-129		%Rec	1	11/22/2022 9:32:32 PM	71615	
<b>EPA METHOD 8015D: GASOLINE RANGE</b>								
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/21/2022 10:09:00 PM	71585	
Surr: BFB	122	37.7-212		%Rec	1	11/21/2022 10:09:00 PM	71585	
<b>EPA METHOD 8260B: VOLATILES</b>								
Benzene	ND	0.025		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Toluene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Ethylbenzene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Methyl tert-butyl ether (MTBE)	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1,2,4-Trimethylbenzene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1,3,5-Trimethylbenzene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1,2-Dichloroethane (EDC)	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1,2-Dibromoethane (EDB)	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Naphthalene	ND	0.099		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Acetone	ND	0.74		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Bromobenzene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Bromodichloromethane	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Bromoform	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Bromomethane	ND	0.15		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
2-Butanone	ND	0.49		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Carbon disulfide	ND	0.49		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Carbon tetrachloride	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Chlorobenzene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Chloroethane	ND	0.099		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Chloroform	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Chloromethane	ND	0.15		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
2-Chlorotoluene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
4-Chlorotoluene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst: RAA</b>
<b>EPA METHOD 8260B: VOLATILES</b>								
cis-1,2-DCE	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
cis-1,3-Dichloropropene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1,2-Dibromo-3-chloropropane	ND	0.099		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Dibromochloromethane	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Dibromomethane	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1,2-Dichlorobenzene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1,3-Dichlorobenzene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1,4-Dichlorobenzene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Dichlorodifluoromethane	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1,1-Dichloroethane	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1,1-Dichloroethene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1,2-Dichloropropane	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1,3-Dichloropropane	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
2,2-Dichloropropane	ND	0.099		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1,1-Dichloropropene	ND	0.099		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Hexachlorobutadiene	ND	0.099		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
2-Hexanone	ND	0.49		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Isopropylbenzene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
4-Isopropyltoluene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
4-Methyl-2-pentanone	ND	0.49		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Methylene chloride	ND	0.15		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
n-Butylbenzene	ND	0.15		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
n-Propylbenzene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
sec-Butylbenzene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Styrene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
tert-Butylbenzene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1,1,1,2-Tetrachloroethane	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1,1,2,2-Tetrachloroethane	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Tetrachloroethene (PCE)	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
trans-1,2-DCE	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
trans-1,3-Dichloropropene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1,2,3-Trichlorobenzene	ND	0.099		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1,2,4-Trichlorobenzene	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1,1,1-Trichloroethane	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1,1,2-Trichloroethane	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Trichloroethene (TCE)	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Trichlorofluoromethane	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
1,2,3-Trichloropropane	ND	0.099		mg/Kg	1	11/18/2022 5:27:49 PM	71585	
Vinyl chloride	ND	0.049		mg/Kg	1	11/18/2022 5:27:49 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

**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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8260B: VOLATILES</b>							
Xylenes, Total	ND	0.099		mg/Kg	1	11/18/2022 5:27:49 PM	71585
Surr: Dibromofluoromethane	128	70-130	%Rec	1	1	11/18/2022 5:27:49 PM	71585
Surr: 1,2-Dichloroethane-d4	109	70-130	%Rec	1	1	11/18/2022 5:27:49 PM	71585
Surr: Toluene-d8	109	70-130	%Rec	1	1	11/18/2022 5:27:49 PM	71585
Surr: 4-Bromofluorobenzene	97.9	70-130	%Rec	1	1	11/18/2022 5:27:49 PM	71585
<b>SM4500H+B/EPA 9040C</b>							
pH	8.41			pH Units	1	11/28/2022 4:12:00 PM	R92846

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>SW8270C</b>							
Naphthalene	ND	0.0094	mg/Kg	1	12/5/2022 11:05:00 AM	71550	Analyst: DAM
1-Methylnaphthalene	ND	0.0094	mg/Kg	1	12/5/2022 11:05:00 AM	71550	
2-Methylnaphthalene	ND	0.0094	mg/Kg	1	12/5/2022 11:05:00 AM	71550	
Benzo(a)pyrene	ND	0.019	mg/Kg	1	12/5/2022 11:05:00 AM	71550	
Surr: Nitrobenzene-d5	83.0	15-137	%Rec	1	12/5/2022 11:05:00 AM	71550	
Surr: 2-Fluorobiphenyl	78.5	15-121	%Rec	1	12/5/2022 11:05:00 AM	71550	
Surr: 4-Terphenyl-d14	105	65.7-126	%Rec	1	12/5/2022 11:05:00 AM	71550	
<b>EPA METHOD 300.0: ANIONS</b>							
Fluoride	1.5	0.30	mg/Kg	1	11/22/2022 10:54:10 PM	71660	Analyst: JMT
Chloride	940	30	mg/Kg	20	11/23/2022 10:59:18 AM	71660	
Nitrogen, Nitrate (As N)	31	6.0	mg/Kg	20	11/23/2022 10:59:18 AM	71660	
Sulfate	1700	30	mg/Kg	20	11/23/2022 10:59:18 AM	71660	
<b>EPA METHOD 6020A: TOTAL METALS</b>							
Arsenic	2.8	0.49	mg/Kg	5	11/20/2022 1:40:17 PM	71582	Analyst: ELS
Uranium	ND	0.49	mg/Kg	5	11/21/2022 1:58:37 PM	71582	
<b>EPA METHOD 7471B: MERCURY</b>							
Mercury	ND	0.033	mg/Kg	1	11/30/2022 4:37:17 PM	71736	Analyst: VP
<b>EPA METHOD 6010B: SOIL METALS</b>							
Barium	120	0.20	mg/Kg	2	11/22/2022 10:57:06 AM	71582	Analyst: JRR
Cadmium	ND	0.20	mg/Kg	2	11/22/2022 10:57:06 AM	71582	
Calcium	3000	98	mg/Kg	2	11/22/2022 10:57:06 AM	71582	
Chromium	3.4	0.59	mg/Kg	2	11/22/2022 10:57:06 AM	71582	
Copper	ND	3.9	mg/Kg	2	11/22/2022 10:57:06 AM	71582	
Iron	7700	490	mg/Kg	50	12/2/2022 10:17:55 AM	71582	
Lead	2.6	2.0	mg/Kg	2	11/22/2022 10:57:06 AM	71582	
Magnesium	1400	98	mg/Kg	2	11/22/2022 10:57:06 AM	71582	
Manganese	160	0.39	mg/Kg	2	11/22/2022 10:57:06 AM	71582	
Potassium	1200	98	mg/Kg	2	11/22/2022 10:57:06 AM	71582	
Selenium	ND	4.9	mg/Kg	2	11/22/2022 1:03:43 PM	71582	
Silver	ND	0.98	mg/Kg	2	11/22/2022 1:03:43 PM	71582	
Sodium	2600	98	mg/Kg	2	11/22/2022 10:57:06 AM	71582	
Zinc	13	4.9	mg/Kg	2	11/22/2022 10:57:06 AM	71582	
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1016	ND	0.016	mg/Kg	1	11/29/2022 9:16:42 PM	71629	Analyst: SB
Aroclor 1221	ND	0.016	mg/Kg	1	11/29/2022 9:16:42 PM	71629	
Aroclor 1232	ND	0.016	mg/Kg	1	11/29/2022 9:16:42 PM	71629	
Aroclor 1242	ND	0.016	mg/Kg	1	11/29/2022 9:16:42 PM	71629	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst:</b>
<b>EPA METHOD 8082A: PCB'S</b>								
Aroclor 1248	ND	0.016		mg/Kg	1	11/29/2022 9:16:42 PM	71629	
Aroclor 1254	ND	0.016		mg/Kg	1	11/29/2022 9:16:42 PM	71629	
Aroclor 1260	ND	0.016		mg/Kg	1	11/29/2022 9:16:42 PM	71629	
Surr: Decachlorobiphenyl	96.4	47.2-115		%Rec	1	11/29/2022 9:16:42 PM	71629	
Surr: Tetrachloro-m-xylene	92.8	15-110		%Rec	1	11/29/2022 9:16:42 PM	71629	
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/22/2022 9:42:54 PM	71615	
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/22/2022 9:42:54 PM	71615	
Surr: DNOP	112	21-129		%Rec	1	11/22/2022 9:42:54 PM	71615	
<b>EPA METHOD 8015D: GASOLINE RANGE</b>								
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/21/2022 10:29:00 PM	71585	
Surr: BFB	122	37.7-212		%Rec	1	11/21/2022 10:29:00 PM	71585	
<b>EPA METHOD 8260B: VOLATILES</b>								
Benzene	ND	0.025		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Toluene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Ethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Naphthalene	ND	0.10		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Acetone	ND	0.75		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Bromobenzene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Bromodichloromethane	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Bromoform	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Bromomethane	ND	0.15		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
2-Butanone	ND	0.50		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Carbon disulfide	ND	0.50		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Carbon tetrachloride	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Chlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Chloroethane	ND	0.10		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Chloroform	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Chloromethane	ND	0.15		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst: RAA</b>
<b>EPA METHOD 8260B: VOLATILES</b>								
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Dibromochloromethane	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Dibromomethane	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1,1-Dichloroethane	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1,1-Dichloroethene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
2,2-Dichloropropane	ND	0.10		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1,1-Dichloropropene	ND	0.10		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Hexachlorobutadiene	ND	0.10		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
2-Hexanone	ND	0.50		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Isopropylbenzene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
4-Isopropyltoluene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Methylene chloride	ND	0.15		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
n-Butylbenzene	ND	0.15		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
n-Propylbenzene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
sec-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Styrene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	11/18/2022 5:54:51 PM	71585	
Vinyl chloride	ND	0.050		mg/Kg	1	11/18/2022 5:54:51 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

**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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8260B: VOLATILES</b>							
Xylenes, Total	ND	0.10		mg/Kg	1	11/18/2022 5:54:51 PM	71585
Surr: Dibromofluoromethane	112	70-130	%Rec		1	11/18/2022 5:54:51 PM	71585
Surr: 1,2-Dichloroethane-d4	93.7	70-130	%Rec		1	11/18/2022 5:54:51 PM	71585
Surr: Toluene-d8	108	70-130	%Rec		1	11/18/2022 5:54:51 PM	71585
Surr: 4-Bromofluorobenzene	97.5	70-130	%Rec		1	11/18/2022 5:54:51 PM	71585
<b>SM4500H+B/EPA 9040C</b>							
pH	9.03			pH Units	1	11/28/2022 4:12:00 PM	R92846

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>SW8270C</b>							
Naphthalene	ND	0.0099	mg/Kg	1	12/5/2022 11:51:00 AM	71550	Analyst: DAM
1-Methylnaphthalene	ND	0.0099	mg/Kg	1	12/5/2022 11:51:00 AM	71550	
2-Methylnaphthalene	ND	0.0099	mg/Kg	1	12/5/2022 11:51:00 AM	71550	
Benzo(a)pyrene	ND	0.020	mg/Kg	1	12/5/2022 11:51:00 AM	71550	
Surr: Nitrobenzene-d5	90.0	15-137	%Rec	1	12/5/2022 11:51:00 AM	71550	
Surr: 2-Fluorobiphenyl	84.5	15-121	%Rec	1	12/5/2022 11:51:00 AM	71550	
Surr: 4-Terphenyl-d14	106	65.7-126	%Rec	1	12/5/2022 11:51:00 AM	71550	
<b>EPA METHOD 300.0: ANIONS</b>							
Fluoride	1.5	0.30	mg/Kg	1	11/22/2022 11:06:30 PM	71660	Analyst: JMT
Chloride	400	30	mg/Kg	20	11/23/2022 11:11:43 AM	71660	
Nitrogen, Nitrate (As N)	31	6.0	mg/Kg	20	11/23/2022 11:11:43 AM	71660	
Sulfate	1100	30	mg/Kg	20	11/23/2022 11:11:43 AM	71660	
<b>EPA METHOD 6020A: TOTAL METALS</b>							
Arsenic	2.4	0.49	mg/Kg	5	11/20/2022 1:44:26 PM	71582	Analyst: ELS
Uranium	ND	0.49	mg/Kg	5	11/21/2022 2:02:46 PM	71582	
<b>EPA METHOD 7471B: MERCURY</b>							
Mercury	ND	0.033	mg/Kg	1	11/30/2022 4:39:26 PM	71736	Analyst: VP
<b>EPA METHOD 6010B: SOIL METALS</b>							
Barium	140	0.20	mg/Kg	2	11/22/2022 10:58:54 AM	71582	Analyst: JRR
Cadmium	ND	0.20	mg/Kg	2	11/22/2022 10:58:54 AM	71582	
Calcium	4200	99	mg/Kg	2	11/22/2022 10:58:54 AM	71582	
Chromium	3.2	0.59	mg/Kg	2	11/22/2022 10:58:54 AM	71582	
Copper	ND	3.9	mg/Kg	2	11/22/2022 10:58:54 AM	71582	
Iron	7000	490	mg/Kg	50	12/2/2022 10:24:57 AM	71582	
Lead	2.5	2.0	mg/Kg	2	11/22/2022 10:58:54 AM	71582	
Magnesium	1300	99	mg/Kg	2	11/22/2022 10:58:54 AM	71582	
Manganese	150	0.39	mg/Kg	2	11/22/2022 10:58:54 AM	71582	
Potassium	1100	99	mg/Kg	2	11/22/2022 10:58:54 AM	71582	
Selenium	ND	4.9	mg/Kg	2	11/22/2022 1:05:00 PM	71582	
Silver	ND	0.99	mg/Kg	2	11/22/2022 1:05:00 PM	71582	
Sodium	2000	99	mg/Kg	2	11/22/2022 10:58:54 AM	71582	
Zinc	13	4.9	mg/Kg	2	11/22/2022 10:58:54 AM	71582	
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1016	ND	0.016	mg/Kg	1	11/29/2022 9:53:51 PM	71629	Analyst: SB
Aroclor 1221	ND	0.016	mg/Kg	1	11/29/2022 9:53:51 PM	71629	
Aroclor 1232	ND	0.016	mg/Kg	1	11/29/2022 9:53:51 PM	71629	
Aroclor 1242	ND	0.016	mg/Kg	1	11/29/2022 9:53:51 PM	71629	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst:</b>
<b>EPA METHOD 8082A: PCB'S</b>								
Aroclor 1248	ND	0.016		mg/Kg	1	11/29/2022 9:53:51 PM	71629	
Aroclor 1254	ND	0.016		mg/Kg	1	11/29/2022 9:53:51 PM	71629	
Aroclor 1260	ND	0.016		mg/Kg	1	11/29/2022 9:53:51 PM	71629	
Surr: Decachlorobiphenyl	86.8	47.2-115		%Rec	1	11/29/2022 9:53:51 PM	71629	
Surr: Tetrachloro-m-xylene	82.4	15-110		%Rec	1	11/29/2022 9:53:51 PM	71629	
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/22/2022 9:53:16 PM	71615	
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/22/2022 9:53:16 PM	71615	
Surr: DNOP	102	21-129		%Rec	1	11/22/2022 9:53:16 PM	71615	
<b>EPA METHOD 8015D: GASOLINE RANGE</b>								
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/21/2022 10:49:00 PM	71585	
Surr: BFB	131	37.7-212		%Rec	1	11/21/2022 10:49:00 PM	71585	
<b>EPA METHOD 8260B: VOLATILES</b>								
Benzene	ND	0.025		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Toluene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Ethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Naphthalene	ND	0.099		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Acetone	ND	0.74		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Bromobenzene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Bromodichloromethane	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Bromoform	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Bromomethane	ND	0.15		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
2-Butanone	ND	0.50		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Carbon disulfide	ND	0.50		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Carbon tetrachloride	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Chlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Chloroethane	ND	0.099		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Chloroform	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Chloromethane	ND	0.15		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst: RAA</b>
<b>EPA METHOD 8260B: VOLATILES</b>								
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1,2-Dibromo-3-chloropropane	ND	0.099		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Dibromochloromethane	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Dibromomethane	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1,1-Dichloroethane	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1,1-Dichloroethene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
2,2-Dichloropropane	ND	0.099		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1,1-Dichloropropene	ND	0.099		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Hexachlorobutadiene	ND	0.099		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
2-Hexanone	ND	0.50		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Isopropylbenzene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
4-Isopropyltoluene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Methylene chloride	ND	0.15		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
n-Butylbenzene	ND	0.15		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
n-Propylbenzene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
sec-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Styrene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1,2,3-Trichlorobenzene	ND	0.099		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
1,2,3-Trichloropropane	ND	0.099		mg/Kg	1	11/18/2022 6:21:56 PM	71585	
Vinyl chloride	ND	0.050		mg/Kg	1	11/18/2022 6:21:56 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

**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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8260B: VOLATILES</b>							
Xylenes, Total	ND	0.099		mg/Kg	1	11/18/2022 6:21:56 PM	71585
Surr: Dibromofluoromethane	125	70-130	%Rec		1	11/18/2022 6:21:56 PM	71585
Surr: 1,2-Dichloroethane-d4	113	70-130	%Rec		1	11/18/2022 6:21:56 PM	71585
Surr: Toluene-d8	111	70-130	%Rec		1	11/18/2022 6:21:56 PM	71585
Surr: 4-Bromofluorobenzene	94.8	70-130	%Rec		1	11/18/2022 6:21:56 PM	71585
<b>SM4500H+B/EPA 9040C</b>							
pH	9.60			pH Units	1	11/28/2022 4:12:00 PM	R92846

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- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 40 of 0

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>SW8270C</b>							
Naphthalene	ND	0.010	mg/Kg	1	12/5/2022 12:38:00 PM	71550	Analyst: DAM
1-Methylnaphthalene	ND	0.010	mg/Kg	1	12/5/2022 12:38:00 PM	71550	
2-Methylnaphthalene	ND	0.010	mg/Kg	1	12/5/2022 12:38:00 PM	71550	
Benzo(a)pyrene	ND	0.020	mg/Kg	1	12/5/2022 12:38:00 PM	71550	
Surr: Nitrobenzene-d5	91.5	15-137	%Rec	1	12/5/2022 12:38:00 PM	71550	
Surr: 2-Fluorobiphenyl	87.5	15-121	%Rec	1	12/5/2022 12:38:00 PM	71550	
Surr: 4-Terphenyl-d14	109	65.7-126	%Rec	1	12/5/2022 12:38:00 PM	71550	
<b>EPA METHOD 300.0: ANIONS</b>							
Fluoride	1.4	0.30	mg/Kg	1	11/22/2022 11:18:51 PM	71660	Analyst: JMT
Chloride	290	30	mg/Kg	20	11/23/2022 11:24:07 AM	71660	
Nitrogen, Nitrate (As N)	25	6.0	mg/Kg	20	11/23/2022 11:24:07 AM	71660	
Sulfate	1400	30	mg/Kg	20	11/23/2022 11:24:07 AM	71660	
<b>EPA METHOD 6020A: TOTAL METALS</b>							
Arsenic	2.0	0.50	mg/Kg	5	11/20/2022 1:48:36 PM	71583	Analyst: ELS
Uranium	ND	0.50	mg/Kg	5	11/21/2022 2:06:55 PM	71583	
<b>EPA METHOD 7471B: MERCURY</b>							
Mercury	ND	0.032	mg/Kg	1	11/30/2022 3:26:30 PM	71735	Analyst: VP
<b>EPA METHOD 6010B: SOIL METALS</b>							
Barium	190	0.20	mg/Kg	2	11/22/2022 11:00:47 AM	71583	Analyst: JRR
Cadmium	ND	0.20	mg/Kg	2	11/22/2022 11:00:47 AM	71583	
Calcium	5300	100	mg/Kg	2	11/22/2022 11:00:47 AM	71583	
Chromium	2.5	0.60	mg/Kg	2	11/22/2022 11:00:47 AM	71583	
Copper	ND	4.0	mg/Kg	2	11/22/2022 11:00:47 AM	71583	
Iron	6000	500	mg/Kg	50	12/2/2022 10:26:25 AM	71583	
Lead	2.8	2.0	mg/Kg	2	11/22/2022 11:00:47 AM	71583	
Magnesium	1000	100	mg/Kg	2	11/22/2022 11:00:47 AM	71583	
Manganese	110	0.40	mg/Kg	2	11/22/2022 11:00:47 AM	71583	
Potassium	890	100	mg/Kg	2	11/22/2022 11:00:47 AM	71583	
Selenium	ND	5.0	mg/Kg	2	11/22/2022 1:06:16 PM	71583	
Silver	ND	1.0	mg/Kg	2	11/22/2022 1:06:16 PM	71583	
Sodium	1800	100	mg/Kg	2	11/22/2022 11:00:47 AM	71583	
Zinc	10	5.0	mg/Kg	2	11/22/2022 11:00:47 AM	71583	
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1016	ND	0.016	mg/Kg	1	11/29/2022 10:30:57 PM	71629	Analyst: SB
Aroclor 1221	ND	0.016	mg/Kg	1	11/29/2022 10:30:57 PM	71629	
Aroclor 1232	ND	0.016	mg/Kg	1	11/29/2022 10:30:57 PM	71629	
Aroclor 1242	ND	0.016	mg/Kg	1	11/29/2022 10:30:57 PM	71629	

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- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.

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- P Sample pH Not In Range
- RL Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst:</b>
<b>EPA METHOD 8082A: PCB'S</b>								
Aroclor 1248	ND	0.016		mg/Kg	1	11/29/2022 10:30:57 PM	71629	
Aroclor 1254	ND	0.016		mg/Kg	1	11/29/2022 10:30:57 PM	71629	
Aroclor 1260	ND	0.016		mg/Kg	1	11/29/2022 10:30:57 PM	71629	
Surr: Decachlorobiphenyl	89.6	47.2-115		%Rec	1	11/29/2022 10:30:57 PM	71629	
Surr: Tetrachloro-m-xylene	89.6	15-110		%Rec	1	11/29/2022 10:30:57 PM	71629	
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/22/2022 10:03:39 PM	71615	
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/22/2022 10:03:39 PM	71615	
Surr: DNOP	82.7	21-129		%Rec	1	11/22/2022 10:03:39 PM	71615	
<b>EPA METHOD 8015D: GASOLINE RANGE</b>								
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/21/2022 11:08:00 PM	71585	
Surr: BFB	133	37.7-212		%Rec	1	11/21/2022 11:08:00 PM	71585	
<b>EPA METHOD 8260B: VOLATILES</b>								
Benzene	ND	0.025		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Toluene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Ethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Naphthalene	ND	0.10		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Acetone	ND	0.75		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Bromobenzene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Bromodichloromethane	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Bromoform	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Bromomethane	ND	0.15		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
2-Butanone	ND	0.50		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Carbon disulfide	ND	0.50		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Carbon tetrachloride	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Chlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Chloroethane	ND	0.10		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Chloroform	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Chloromethane	ND	0.15		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
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- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of standard limits. If undiluted results may be estimated.

- B Analyte detected in the associated Method Blank
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- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst: RAA</b>
<b>EPA METHOD 8260B: VOLATILES</b>								
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Dibromochloromethane	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Dibromomethane	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1,1-Dichloroethane	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1,1-Dichloroethene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
2,2-Dichloropropane	ND	0.10		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1,1-Dichloropropene	ND	0.10		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Hexachlorobutadiene	ND	0.10		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
2-Hexanone	ND	0.50		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Isopropylbenzene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
4-Isopropyltoluene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Methylene chloride	ND	0.15		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
n-Butylbenzene	ND	0.15		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
n-Propylbenzene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
sec-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Styrene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	11/18/2022 6:48:55 PM	71585	
Vinyl chloride	ND	0.050		mg/Kg	1	11/18/2022 6:48:55 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

**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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8260B: VOLATILES</b>							
Xylenes, Total	ND	0.10		mg/Kg	1	11/18/2022 6:48:55 PM	71585
Surr: Dibromofluoromethane	118	70-130	%Rec		1	11/18/2022 6:48:55 PM	71585
Surr: 1,2-Dichloroethane-d4	109	70-130	%Rec		1	11/18/2022 6:48:55 PM	71585
Surr: Toluene-d8	110	70-130	%Rec		1	11/18/2022 6:48:55 PM	71585
Surr: 4-Bromofluorobenzene	96.5	70-130	%Rec		1	11/18/2022 6:48:55 PM	71585
<b>SM4500H+B/EPA 9040C</b>							
pH	9.39			pH Units	1	11/28/2022 4:12:00 PM	R92846

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>SW8270C</b>							
Naphthalene	ND	0.0098	mg/Kg	1	12/5/2022 1:25:00 PM	71550	Analyst: DAM
1-Methylnaphthalene	ND	0.0098	mg/Kg	1	12/5/2022 1:25:00 PM	71550	
2-Methylnaphthalene	ND	0.0098	mg/Kg	1	12/5/2022 1:25:00 PM	71550	
Benzo(a)pyrene	ND	0.020	mg/Kg	1	12/5/2022 1:25:00 PM	71550	
Surr: Nitrobenzene-d5	90.5	15-137	%Rec	1	12/5/2022 1:25:00 PM	71550	
Surr: 2-Fluorobiphenyl	86.5	15-121	%Rec	1	12/5/2022 1:25:00 PM	71550	
Surr: 4-Terphenyl-d14	104	65.7-126	%Rec	1	12/5/2022 1:25:00 PM	71550	
<b>EPA METHOD 300.0: ANIONS</b>							
Fluoride	1.4	0.30	mg/Kg	1	11/22/2022 11:31:12 PM	71660	Analyst: JMT
Chloride	520	30	mg/Kg	20	11/23/2022 11:36:31 AM	71660	
Nitrogen, Nitrate (As N)	25	6.0	mg/Kg	20	11/23/2022 11:36:31 AM	71660	
Sulfate	1600	30	mg/Kg	20	11/23/2022 11:36:31 AM	71660	
<b>EPA METHOD 6020A: TOTAL METALS</b>							
Arsenic	2.2	0.49	mg/Kg	5	11/20/2022 1:52:45 PM	71583	Analyst: ELS
Uranium	ND	0.49	mg/Kg	5	11/21/2022 2:27:44 PM	71583	
<b>EPA METHOD 7471B: MERCURY</b>							
Mercury	ND	0.033	mg/Kg	1	11/30/2022 3:28:37 PM	71735	Analyst: VP
<b>EPA METHOD 6010B: SOIL METALS</b>							
Barium	120	0.20	mg/Kg	2	11/22/2022 11:08:53 AM	71583	Analyst: JRR
Cadmium	ND	0.20	mg/Kg	2	11/22/2022 11:08:53 AM	71583	
Calcium	3700	99	mg/Kg	2	11/22/2022 11:08:53 AM	71583	
Chromium	3.1	0.59	mg/Kg	2	11/22/2022 11:08:53 AM	71583	
Copper	ND	3.9	mg/Kg	2	11/22/2022 11:08:53 AM	71583	
Iron	6200	490	mg/Kg	50	12/2/2022 10:27:52 AM	71583	
Lead	ND	2.0	mg/Kg	2	11/22/2022 11:08:53 AM	71583	
Magnesium	1100	99	mg/Kg	2	11/22/2022 11:08:53 AM	71583	
Manganese	110	0.39	mg/Kg	2	11/22/2022 11:08:53 AM	71583	
Potassium	950	99	mg/Kg	2	11/22/2022 11:08:53 AM	71583	
Selenium	ND	4.9	mg/Kg	2	11/22/2022 1:07:32 PM	71583	
Silver	ND	0.99	mg/Kg	2	11/22/2022 1:07:32 PM	71583	
Sodium	2200	99	mg/Kg	2	11/22/2022 11:08:53 AM	71583	
Zinc	11	4.9	mg/Kg	2	11/22/2022 11:08:53 AM	71583	
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1016	ND	0.016	mg/Kg	1	11/29/2022 11:08:10 PM	71629	Analyst: SB
Aroclor 1221	ND	0.016	mg/Kg	1	11/29/2022 11:08:10 PM	71629	
Aroclor 1232	ND	0.016	mg/Kg	1	11/29/2022 11:08:10 PM	71629	
Aroclor 1242	ND	0.016	mg/Kg	1	11/29/2022 11:08:10 PM	71629	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst:</b>
<b>EPA METHOD 8082A: PCB'S</b>								
Aroclor 1248	ND	0.016		mg/Kg	1	11/29/2022 11:08:10 PM	71629	
Aroclor 1254	ND	0.016		mg/Kg	1	11/29/2022 11:08:10 PM	71629	
Aroclor 1260	ND	0.016		mg/Kg	1	11/29/2022 11:08:10 PM	71629	
Surr: Decachlorobiphenyl	96.0	47.2-115		%Rec	1	11/29/2022 11:08:10 PM	71629	
Surr: Tetrachloro-m-xylene	92.8	15-110		%Rec	1	11/29/2022 11:08:10 PM	71629	
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/22/2022 10:14:03 PM	71615	
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/22/2022 10:14:03 PM	71615	
Surr: DNOP	108	21-129		%Rec	1	11/22/2022 10:14:03 PM	71615	
<b>EPA METHOD 8015D: GASOLINE RANGE</b>								
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/21/2022 11:28:00 PM	71585	
Surr: BFB	133	37.7-212		%Rec	1	11/21/2022 11:28:00 PM	71585	
<b>EPA METHOD 8260B: VOLATILES</b>								
Benzene	ND	0.025		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Toluene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Ethylbenzene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Methyl tert-butyl ether (MTBE)	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1,2,4-Trimethylbenzene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1,3,5-Trimethylbenzene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1,2-Dichloroethane (EDC)	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1,2-Dibromoethane (EDB)	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Naphthalene	ND	0.099		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Acetone	ND	0.74		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Bromobenzene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Bromodichloromethane	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Bromoform	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Bromomethane	ND	0.15		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
2-Butanone	ND	0.49		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Carbon disulfide	ND	0.49		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Carbon tetrachloride	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Chlorobenzene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Chloroethane	ND	0.099		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Chloroform	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Chloromethane	ND	0.15		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
2-Chlorotoluene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
4-Chlorotoluene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst: RAA</b>
<b>EPA METHOD 8260B: VOLATILES</b>								
cis-1,2-DCE	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
cis-1,3-Dichloropropene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1,2-Dibromo-3-chloropropane	ND	0.099		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Dibromochloromethane	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Dibromomethane	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1,2-Dichlorobenzene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1,3-Dichlorobenzene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1,4-Dichlorobenzene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Dichlorodifluoromethane	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1,1-Dichloroethane	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1,1-Dichloroethene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1,2-Dichloropropane	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1,3-Dichloropropane	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
2,2-Dichloropropane	ND	0.099		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1,1-Dichloropropene	ND	0.099		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Hexachlorobutadiene	ND	0.099		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
2-Hexanone	ND	0.49		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Isopropylbenzene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
4-Isopropyltoluene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
4-Methyl-2-pentanone	ND	0.49		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Methylene chloride	ND	0.15		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
n-Butylbenzene	ND	0.15		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
n-Propylbenzene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
sec-Butylbenzene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Styrene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
tert-Butylbenzene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1,1,1,2-Tetrachloroethane	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1,1,2,2-Tetrachloroethane	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Tetrachloroethene (PCE)	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
trans-1,2-DCE	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
trans-1,3-Dichloropropene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1,2,3-Trichlorobenzene	ND	0.099		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1,2,4-Trichlorobenzene	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1,1,1-Trichloroethane	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1,1,2-Trichloroethane	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Trichloroethene (TCE)	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Trichlorofluoromethane	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
1,2,3-Trichloropropane	ND	0.099		mg/Kg	1	11/18/2022 7:15:57 PM	71585	
Vinyl chloride	ND	0.049		mg/Kg	1	11/18/2022 7:15:57 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

**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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8260B: VOLATILES</b>							
Xylenes, Total	ND	0.099		mg/Kg	1	11/18/2022 7:15:57 PM	71585
Surr: Dibromofluoromethane	111	70-130	%Rec		1	11/18/2022 7:15:57 PM	71585
Surr: 1,2-Dichloroethane-d4	91.5	70-130	%Rec		1	11/18/2022 7:15:57 PM	71585
Surr: Toluene-d8	106	70-130	%Rec		1	11/18/2022 7:15:57 PM	71585
Surr: 4-Bromofluorobenzene	96.4	70-130	%Rec		1	11/18/2022 7:15:57 PM	71585
<b>SM4500H+B/EPA 9040C</b>							
pH	9.22			pH Units	1	11/28/2022 4:12:00 PM	R92846

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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

Page 48 of 0

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>SW8270C</b>							
Naphthalene	ND	0.0097	mg/Kg	1	12/5/2022 2:12:00 PM	71550	Analyst: DAM
1-Methylnaphthalene	ND	0.0097	mg/Kg	1	12/5/2022 2:12:00 PM	71550	
2-Methylnaphthalene	ND	0.0097	mg/Kg	1	12/5/2022 2:12:00 PM	71550	
Benzo(a)pyrene	ND	0.019	mg/Kg	1	12/5/2022 2:12:00 PM	71550	
Surr: Nitrobenzene-d5	85.0	15-137	%Rec	1	12/5/2022 2:12:00 PM	71550	
Surr: 2-Fluorobiphenyl	79.0	15-121	%Rec	1	12/5/2022 2:12:00 PM	71550	
Surr: 4-Terphenyl-d14	100	65.7-126	%Rec	1	12/5/2022 2:12:00 PM	71550	
<b>EPA METHOD 300.0: ANIONS</b>							
Fluoride	1.6	0.30	mg/Kg	1	11/22/2022 11:43:32 PM	71660	Analyst: JMT
Chloride	88	30	mg/Kg	20	11/23/2022 12:13:46 PM	71660	
Nitrogen, Nitrate (As N)	20	6.0	mg/Kg	20	11/23/2022 12:13:46 PM	71660	
Sulfate	210	30	mg/Kg	20	11/23/2022 12:13:46 PM	71660	
<b>EPA METHOD 6020A: TOTAL METALS</b>							
Arsenic	1.7	0.49	mg/Kg	5	11/20/2022 2:09:25 PM	71583	Analyst: ELS
Uranium	ND	0.49	mg/Kg	5	11/21/2022 2:31:53 PM	71583	
<b>EPA METHOD 7471B: MERCURY</b>							
Mercury	ND	0.032	mg/Kg	1	11/30/2022 3:35:00 PM	71735	Analyst: VP
<b>EPA METHOD 6010B: SOIL METALS</b>							
Barium	87	0.20	mg/Kg	2	11/22/2022 11:10:41 AM	71583	Analyst: JRR
Cadmium	ND	0.20	mg/Kg	2	11/22/2022 11:10:41 AM	71583	
Calcium	3700	99	mg/Kg	2	11/22/2022 11:10:41 AM	71583	
Chromium	1.5	0.59	mg/Kg	2	11/22/2022 11:10:41 AM	71583	
Copper	ND	3.9	mg/Kg	2	11/22/2022 11:10:41 AM	71583	
Iron	4400	490	mg/Kg	50	12/2/2022 10:29:22 AM	71583	
Lead	2.9	2.0	mg/Kg	2	11/22/2022 11:10:41 AM	71583	
Magnesium	800	99	mg/Kg	2	11/22/2022 11:10:41 AM	71583	
Manganese	130	0.39	mg/Kg	2	11/22/2022 11:10:41 AM	71583	
Potassium	550	99	mg/Kg	2	11/22/2022 11:10:41 AM	71583	
Selenium	ND	4.9	mg/Kg	2	11/22/2022 1:08:47 PM	71583	
Silver	ND	0.99	mg/Kg	2	11/22/2022 1:08:47 PM	71583	
Sodium	470	99	mg/Kg	2	11/22/2022 11:10:41 AM	71583	
Zinc	9.6	4.9	mg/Kg	2	11/22/2022 11:10:41 AM	71583	
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1016	ND	0.016	mg/Kg	1	11/29/2022 11:45:18 PM	71629	Analyst: SB
Aroclor 1221	ND	0.016	mg/Kg	1	11/29/2022 11:45:18 PM	71629	
Aroclor 1232	ND	0.016	mg/Kg	1	11/29/2022 11:45:18 PM	71629	
Aroclor 1242	ND	0.016	mg/Kg	1	11/29/2022 11:45:18 PM	71629	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst:</b>
<b>EPA METHOD 8082A: PCB'S</b>								
Aroclor 1248	ND	0.016		mg/Kg	1	11/29/2022 11:45:18 PM	71629	
Aroclor 1254	ND	0.016		mg/Kg	1	11/29/2022 11:45:18 PM	71629	
Aroclor 1260	ND	0.016		mg/Kg	1	11/29/2022 11:45:18 PM	71629	
Surr: Decachlorobiphenyl	91.2	47.2-115		%Rec	1	11/29/2022 11:45:18 PM	71629	
Surr: Tetrachloro-m-xylene	91.6	15-110		%Rec	1	11/29/2022 11:45:18 PM	71629	
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/22/2022 10:34:45 PM	71615	
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/22/2022 10:34:45 PM	71615	
Surr: DNOP	118	21-129		%Rec	1	11/22/2022 10:34:45 PM	71615	
<b>EPA METHOD 8015D: GASOLINE RANGE</b>								
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/21/2022 11:47:00 PM	71585	
Surr: BFB	137	37.7-212		%Rec	1	11/21/2022 11:47:00 PM	71585	
<b>EPA METHOD 8260B: VOLATILES</b>								
Benzene	ND	0.025		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Toluene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Ethylbenzene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Methyl tert-butyl ether (MTBE)	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1,2,4-Trimethylbenzene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1,3,5-Trimethylbenzene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1,2-Dichloroethane (EDC)	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1,2-Dibromoethane (EDB)	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Naphthalene	ND	0.098		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Acetone	ND	0.74		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Bromobenzene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Bromodichloromethane	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Bromoform	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Bromomethane	ND	0.15		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
2-Butanone	ND	0.49		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Carbon disulfide	ND	0.49		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Carbon tetrachloride	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Chlorobenzene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Chloroethane	ND	0.098		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Chloroform	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Chloromethane	ND	0.15		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
2-Chlorotoluene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
4-Chlorotoluene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst: RAA</b>
<b>EPA METHOD 8260B: VOLATILES</b>								
cis-1,2-DCE	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
cis-1,3-Dichloropropene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1,2-Dibromo-3-chloropropane	ND	0.098		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Dibromochloromethane	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Dibromomethane	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1,2-Dichlorobenzene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1,3-Dichlorobenzene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1,4-Dichlorobenzene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Dichlorodifluoromethane	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1,1-Dichloroethane	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1,1-Dichloroethene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1,2-Dichloropropane	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1,3-Dichloropropane	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
2,2-Dichloropropane	ND	0.098		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1,1-Dichloropropene	ND	0.098		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Hexachlorobutadiene	ND	0.098		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
2-Hexanone	ND	0.49		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Isopropylbenzene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
4-Isopropyltoluene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
4-Methyl-2-pentanone	ND	0.49		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Methylene chloride	ND	0.15		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
n-Butylbenzene	ND	0.15		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
n-Propylbenzene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
sec-Butylbenzene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Styrene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
tert-Butylbenzene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1,1,1,2-Tetrachloroethane	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1,1,2,2-Tetrachloroethane	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Tetrachloroethene (PCE)	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
trans-1,2-DCE	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
trans-1,3-Dichloropropene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1,2,3-Trichlorobenzene	ND	0.098		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1,2,4-Trichlorobenzene	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1,1,1-Trichloroethane	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1,1,2-Trichloroethane	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Trichloroethene (TCE)	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Trichlorofluoromethane	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
1,2,3-Trichloropropane	ND	0.098		mg/Kg	1	11/18/2022 7:43:11 PM	71585	
Vinyl chloride	ND	0.049		mg/Kg	1	11/18/2022 7:43:11 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

**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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8260B: VOLATILES</b>							
Xylenes, Total	ND	0.098		mg/Kg	1	11/18/2022 7:43:11 PM	71585
Surr: Dibromofluoromethane	118	70-130	%Rec		1	11/18/2022 7:43:11 PM	71585
Surr: 1,2-Dichloroethane-d4	95.5	70-130	%Rec		1	11/18/2022 7:43:11 PM	71585
Surr: Toluene-d8	111	70-130	%Rec		1	11/18/2022 7:43:11 PM	71585
Surr: 4-Bromofluorobenzene	102	70-130	%Rec		1	11/18/2022 7:43:11 PM	71585
<b>SM4500H+B/EPA 9040C</b>							
pH	8.81			pH Units	1	11/28/2022 4:12:00 PM	R92846

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>SW8270C</b>							
Naphthalene	ND	0.0099	mg/Kg	1	12/5/2022 3:00:00 PM	71550	Analyst: DAM
1-Methylnaphthalene	ND	0.0099	mg/Kg	1	12/5/2022 3:00:00 PM	71550	
2-Methylnaphthalene	ND	0.0099	mg/Kg	1	12/5/2022 3:00:00 PM	71550	
Benzo(a)pyrene	ND	0.020	mg/Kg	1	12/5/2022 3:00:00 PM	71550	
Surr: Nitrobenzene-d5	84.5	15-137	%Rec	1	12/5/2022 3:00:00 PM	71550	
Surr: 2-Fluorobiphenyl	78.0	15-121	%Rec	1	12/5/2022 3:00:00 PM	71550	
Surr: 4-Terphenyl-d14	98.0	65.7-126	%Rec	1	12/5/2022 3:00:00 PM	71550	
<b>EPA METHOD 300.0: ANIONS</b>							
Fluoride	1.7	0.30	mg/Kg	1	11/22/2022 11:55:54 PM	71660	Analyst: JMT
Chloride	160	30	mg/Kg	20	11/23/2022 12:26:10 PM	71660	
Nitrogen, Nitrate (As N)	34	6.0	mg/Kg	20	11/23/2022 12:26:10 PM	71660	
Sulfate	380	30	mg/Kg	20	11/23/2022 12:26:10 PM	71660	
<b>EPA METHOD 6020A: TOTAL METALS</b>							
Arsenic	3.3	0.50	mg/Kg	5	11/20/2022 2:13:35 PM	71583	Analyst: ELS
Uranium	ND	0.50	mg/Kg	5	11/21/2022 2:36:04 PM	71583	
<b>EPA METHOD 7471B: MERCURY</b>							
Mercury	ND	0.033	mg/Kg	1	11/30/2022 3:37:07 PM	71735	Analyst: VP
<b>EPA METHOD 6010B: SOIL METALS</b>							
Barium	100	0.20	mg/Kg	2	11/22/2022 11:12:45 AM	71583	Analyst: JRR
Cadmium	ND	0.20	mg/Kg	2	11/22/2022 11:12:45 AM	71583	
Calcium	9700	99	mg/Kg	2	11/22/2022 11:12:45 AM	71583	
Chromium	5.1	0.60	mg/Kg	2	11/22/2022 11:12:45 AM	71583	
Copper	4.4	4.0	mg/Kg	2	11/22/2022 11:12:45 AM	71583	
Iron	9600	500	mg/Kg	50	12/2/2022 10:30:52 AM	71583	
Lead	2.6	2.0	mg/Kg	2	11/22/2022 11:12:45 AM	71583	
Magnesium	2100	99	mg/Kg	2	11/22/2022 11:12:45 AM	71583	
Manganese	170	0.40	mg/Kg	2	11/22/2022 11:12:45 AM	71583	
Potassium	1500	99	mg/Kg	2	11/22/2022 11:12:45 AM	71583	
Selenium	ND	5.0	mg/Kg	2	11/22/2022 1:10:03 PM	71583	
Silver	ND	0.99	mg/Kg	2	11/22/2022 1:10:03 PM	71583	
Sodium	440	99	mg/Kg	2	11/22/2022 11:12:45 AM	71583	
Zinc	18	5.0	mg/Kg	2	11/22/2022 11:12:45 AM	71583	
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1016	ND	0.016	mg/Kg	1	11/30/2022 12:22:29 AM	71629	Analyst: SB
Aroclor 1221	ND	0.016	mg/Kg	1	11/30/2022 12:22:29 AM	71629	
Aroclor 1232	ND	0.016	mg/Kg	1	11/30/2022 12:22:29 AM	71629	
Aroclor 1242	ND	0.016	mg/Kg	1	11/30/2022 12:22:29 AM	71629	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1248	ND	0.016		mg/Kg	1	11/30/2022 12:22:29 AM	71629
Aroclor 1254	ND	0.016		mg/Kg	1	11/30/2022 12:22:29 AM	71629
Aroclor 1260	ND	0.016		mg/Kg	1	11/30/2022 12:22:29 AM	71629
Surr: Decachlorobiphenyl	90.0	47.2-115		%Rec	1	11/30/2022 12:22:29 AM	71629
Surr: Tetrachloro-m-xylene	89.2	15-110		%Rec	1	11/30/2022 12:22:29 AM	71629
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/22/2022 10:45:05 PM	71615
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/22/2022 10:45:05 PM	71615
Surr: DNOP	127	21-129		%Rec	1	11/22/2022 10:45:05 PM	71615
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/22/2022 12:07:00 AM	71585
Surr: BFB	139	37.7-212		%Rec	1	11/22/2022 12:07:00 AM	71585
<b>EPA METHOD 8260B: VOLATILES</b>							
Benzene	ND	0.025		mg/Kg	1	11/18/2022 8:10:13 PM	71585
Toluene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585
Ethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585
Naphthalene	ND	0.10		mg/Kg	1	11/18/2022 8:10:13 PM	71585
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 8:10:13 PM	71585
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 8:10:13 PM	71585
Acetone	ND	0.75		mg/Kg	1	11/18/2022 8:10:13 PM	71585
Bromobenzene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585
Bromodichloromethane	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585
Bromoform	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585
Bromomethane	ND	0.15		mg/Kg	1	11/18/2022 8:10:13 PM	71585
2-Butanone	ND	0.50		mg/Kg	1	11/18/2022 8:10:13 PM	71585
Carbon disulfide	ND	0.50		mg/Kg	1	11/18/2022 8:10:13 PM	71585
Carbon tetrachloride	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585
Chlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585
Chloroethane	ND	0.10		mg/Kg	1	11/18/2022 8:10:13 PM	71585
Chloroform	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585
Chloromethane	ND	0.15		mg/Kg	1	11/18/2022 8:10:13 PM	71585
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst: RAA</b>
<b>EPA METHOD 8260B: VOLATILES</b>								
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
Dibromochloromethane	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
Dibromomethane	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
1,1-Dichloroethane	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
1,1-Dichloroethene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
2,2-Dichloropropane	ND	0.10		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
1,1-Dichloropropene	ND	0.10		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
Hexachlorobutadiene	ND	0.10		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
2-Hexanone	ND	0.50		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
Isopropylbenzene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
4-Isopropyltoluene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
Methylene chloride	ND	0.15		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
n-Butylbenzene	ND	0.15		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
n-Propylbenzene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
sec-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
Styrene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	11/18/2022 8:10:13 PM	71585	
Vinyl chloride	ND	0.050		mg/Kg	1	11/18/2022 8:10:13 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

**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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8260B: VOLATILES</b>							
Xylenes, Total	ND	0.10		mg/Kg	1	11/18/2022 8:10:13 PM	71585
Surr: Dibromofluoromethane	113	70-130	%Rec		1	11/18/2022 8:10:13 PM	71585
Surr: 1,2-Dichloroethane-d4	92.1	70-130	%Rec		1	11/18/2022 8:10:13 PM	71585
Surr: Toluene-d8	107	70-130	%Rec		1	11/18/2022 8:10:13 PM	71585
Surr: 4-Bromofluorobenzene	100	70-130	%Rec		1	11/18/2022 8:10:13 PM	71585
<b>SM4500H+B/EPA 9040C</b>							
pH	8.12			pH Units	1	11/28/2022 4:12:00 PM	R92846

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**Qualifiers:**

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- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>SW8270C</b>							
Naphthalene	ND	0.0095	mg/Kg	1	12/5/2022 3:49:00 PM	71550	Analyst: DAM
1-Methylnaphthalene	ND	0.0095	mg/Kg	1	12/5/2022 3:49:00 PM	71550	
2-Methylnaphthalene	ND	0.0095	mg/Kg	1	12/5/2022 3:49:00 PM	71550	
Benzo(a)pyrene	ND	0.019	mg/Kg	1	12/5/2022 3:49:00 PM	71550	
Surr: Nitrobenzene-d5	89.5	15-137	%Rec	1	12/5/2022 3:49:00 PM	71550	
Surr: 2-Fluorobiphenyl	82.5	15-121	%Rec	1	12/5/2022 3:49:00 PM	71550	
Surr: 4-Terphenyl-d14	106	65.7-126	%Rec	1	12/5/2022 3:49:00 PM	71550	
<b>EPA METHOD 300.0: ANIONS</b>							
Fluoride	1.2	0.30	mg/Kg	1	11/28/2022 6:11:53 PM	71725	Analyst: JMT
Chloride	14	1.5	mg/Kg	1	11/28/2022 6:11:53 PM	71725	
Nitrogen, Nitrate (As N)	12	0.30	mg/Kg	1	11/28/2022 6:11:53 PM	71725	
Sulfate	310	30	mg/Kg	20	11/28/2022 6:24:18 PM	71725	
<b>EPA METHOD 6020A: TOTAL METALS</b>							
Arsenic	2.3	0.49	mg/Kg	5	11/20/2022 2:17:45 PM	71583	Analyst: ELS
Uranium	ND	0.49	mg/Kg	5	11/21/2022 2:40:13 PM	71583	
<b>EPA METHOD 7471B: MERCURY</b>							
Mercury	ND	0.032	mg/Kg	1	11/30/2022 3:39:15 PM	71735	Analyst: VP
<b>EPA METHOD 6010B: SOIL METALS</b>							
Barium	200	0.20	mg/Kg	2	11/22/2022 11:14:38 AM	71583	Analyst: JRR
Cadmium	ND	0.20	mg/Kg	2	11/22/2022 11:14:38 AM	71583	
Calcium	5000	99	mg/Kg	2	11/22/2022 11:14:38 AM	71583	
Chromium	2.4	0.59	mg/Kg	2	11/22/2022 11:14:38 AM	71583	
Copper	ND	4.0	mg/Kg	2	11/22/2022 11:14:38 AM	71583	
Iron	5900	490	mg/Kg	50	12/2/2022 10:32:20 AM	71583	
Lead	2.1	2.0	mg/Kg	2	11/22/2022 11:14:38 AM	71583	
Magnesium	1000	99	mg/Kg	2	11/22/2022 11:14:38 AM	71583	
Manganese	120	0.40	mg/Kg	2	11/22/2022 11:14:38 AM	71583	
Potassium	750	99	mg/Kg	2	11/22/2022 11:14:38 AM	71583	
Selenium	ND	4.9	mg/Kg	2	11/22/2022 1:15:11 PM	71583	
Silver	ND	0.99	mg/Kg	2	11/22/2022 1:15:11 PM	71583	
Sodium	330	99	mg/Kg	2	11/22/2022 11:14:38 AM	71583	
Zinc	11	4.9	mg/Kg	2	11/22/2022 11:14:38 AM	71583	
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1016	ND	0.016	mg/Kg	1	11/30/2022 12:59:41 AM	71629	Analyst: SB
Aroclor 1221	ND	0.016	mg/Kg	1	11/30/2022 12:59:41 AM	71629	
Aroclor 1232	ND	0.016	mg/Kg	1	11/30/2022 12:59:41 AM	71629	
Aroclor 1242	ND	0.016	mg/Kg	1	11/30/2022 12:59:41 AM	71629	

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- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst:</b>
<b>EPA METHOD 8082A: PCB'S</b>								
Aroclor 1248	ND	0.016		mg/Kg	1	11/30/2022 12:59:41 AM	71629	
Aroclor 1254	ND	0.016		mg/Kg	1	11/30/2022 12:59:41 AM	71629	
Aroclor 1260	ND	0.016		mg/Kg	1	11/30/2022 12:59:41 AM	71629	
Surr: Decachlorobiphenyl	102	47.2-115		%Rec	1	11/30/2022 12:59:41 AM	71629	
Surr: Tetrachloro-m-xylene	96.8	15-110		%Rec	1	11/30/2022 12:59:41 AM	71629	
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/22/2022 10:55:25 PM	71615	
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/22/2022 10:55:25 PM	71615	
Surr: DNOP	101	21-129		%Rec	1	11/22/2022 10:55:25 PM	71615	
<b>EPA METHOD 8015D: GASOLINE RANGE</b>								
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/22/2022 12:26:00 AM	71585	
Surr: BFB	145	37.7-212		%Rec	1	11/22/2022 12:26:00 AM	71585	
<b>EPA METHOD 8260B: VOLATILES</b>								
Benzene	ND	0.025		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Toluene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Ethylbenzene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Methyl tert-butyl ether (MTBE)	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1,2,4-Trimethylbenzene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1,3,5-Trimethylbenzene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1,2-Dichloroethane (EDC)	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1,2-Dibromoethane (EDB)	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Naphthalene	ND	0.098		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Acetone	ND	0.74		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Bromobenzene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Bromodichloromethane	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Bromoform	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Bromomethane	ND	0.15		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
2-Butanone	ND	0.49		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Carbon disulfide	ND	0.49		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Carbon tetrachloride	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Chlorobenzene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Chloroethane	ND	0.098		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Chloroform	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Chloromethane	ND	0.15		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
2-Chlorotoluene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
4-Chlorotoluene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst: RAA</b>
<b>EPA METHOD 8260B: VOLATILES</b>								
cis-1,2-DCE	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
cis-1,3-Dichloropropene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1,2-Dibromo-3-chloropropane	ND	0.098		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Dibromochloromethane	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Dibromomethane	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1,2-Dichlorobenzene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1,3-Dichlorobenzene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1,4-Dichlorobenzene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Dichlorodifluoromethane	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1,1-Dichloroethane	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1,1-Dichloroethene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1,2-Dichloropropane	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1,3-Dichloropropane	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
2,2-Dichloropropane	ND	0.098		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1,1-Dichloropropene	ND	0.098		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Hexachlorobutadiene	ND	0.098		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
2-Hexanone	ND	0.49		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Isopropylbenzene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
4-Isopropyltoluene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
4-Methyl-2-pentanone	ND	0.49		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Methylene chloride	ND	0.15		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
n-Butylbenzene	ND	0.15		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
n-Propylbenzene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
sec-Butylbenzene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Styrene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
tert-Butylbenzene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1,1,1,2-Tetrachloroethane	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1,1,2,2-Tetrachloroethane	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Tetrachloroethene (PCE)	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
trans-1,2-DCE	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
trans-1,3-Dichloropropene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1,2,3-Trichlorobenzene	ND	0.098		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1,2,4-Trichlorobenzene	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1,1,1-Trichloroethane	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1,1,2-Trichloroethane	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Trichloroethene (TCE)	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Trichlorofluoromethane	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
1,2,3-Trichloropropane	ND	0.098		mg/Kg	1	11/18/2022 8:37:11 PM	71585	
Vinyl chloride	ND	0.049		mg/Kg	1	11/18/2022 8:37:11 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

**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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8260B: VOLATILES</b>							
Xylenes, Total	ND	0.098		mg/Kg	1	11/18/2022 8:37:11 PM	71585
Surr: Dibromofluoromethane	116	70-130	%Rec		1	11/18/2022 8:37:11 PM	71585
Surr: 1,2-Dichloroethane-d4	102	70-130	%Rec		1	11/18/2022 8:37:11 PM	71585
Surr: Toluene-d8	116	70-130	%Rec		1	11/18/2022 8:37:11 PM	71585
Surr: 4-Bromofluorobenzene	96.9	70-130	%Rec		1	11/18/2022 8:37:11 PM	71585
<b>SM4500H+B/EPA 9040C</b>							
pH	8.66			pH Units	1	11/28/2022 4:12:00 PM	R92846

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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

Page 60 of 0

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>SW8270C</b>							
Naphthalene	ND	0.0089	mg/Kg	1	12/5/2022 4:35:00 PM	71550	Analyst: DAM
1-Methylnaphthalene	ND	0.0089	mg/Kg	1	12/5/2022 4:35:00 PM	71550	
2-Methylnaphthalene	ND	0.0089	mg/Kg	1	12/5/2022 4:35:00 PM	71550	
Benzo(a)pyrene	ND	0.018	mg/Kg	1	12/5/2022 4:35:00 PM	71550	
Surr: Nitrobenzene-d5	97.0	15-137	%Rec	1	12/5/2022 4:35:00 PM	71550	
Surr: 2-Fluorobiphenyl	90.0	15-121	%Rec	1	12/5/2022 4:35:00 PM	71550	
Surr: 4-Terphenyl-d14	108	65.7-126	%Rec	1	12/5/2022 4:35:00 PM	71550	
<b>EPA METHOD 300.0: ANIONS</b>							
Fluoride	1.1	0.30	mg/Kg	1	11/28/2022 6:36:43 PM	71725	Analyst: JMT
Chloride	34	1.5	mg/Kg	1	11/28/2022 6:36:43 PM	71725	
Nitrogen, Nitrate (As N)	13	0.30	mg/Kg	1	11/28/2022 6:36:43 PM	71725	
Sulfate	130	30	mg/Kg	20	11/28/2022 6:49:08 PM	71725	
<b>EPA METHOD 6020A: TOTAL METALS</b>							
Arsenic	2.4	0.50	mg/Kg	5	11/20/2022 2:21:54 PM	71583	Analyst: ELS
Uranium	ND	0.50	mg/Kg	5	11/21/2022 2:44:23 PM	71583	
<b>EPA METHOD 7471B: MERCURY</b>							
Mercury	ND	0.033	mg/Kg	1	11/30/2022 3:41:24 PM	71735	Analyst: VP
<b>EPA METHOD 6010B: SOIL METALS</b>							
Barium	110	0.20	mg/Kg	2	11/22/2022 11:16:30 AM	71583	Analyst: JRR
Cadmium	ND	0.20	mg/Kg	2	11/22/2022 11:16:30 AM	71583	
Calcium	4900	100	mg/Kg	2	11/22/2022 11:16:30 AM	71583	
Chromium	2.3	0.60	mg/Kg	2	11/22/2022 11:16:30 AM	71583	
Copper	ND	4.0	mg/Kg	2	11/22/2022 11:16:30 AM	71583	
Iron	5800	500	mg/Kg	50	12/2/2022 10:33:49 AM	71583	
Lead	2.0	2.0	mg/Kg	2	11/22/2022 11:16:30 AM	71583	
Magnesium	1100	100	mg/Kg	2	11/22/2022 11:16:30 AM	71583	
Manganese	110	0.40	mg/Kg	2	11/22/2022 11:16:30 AM	71583	
Potassium	730	100	mg/Kg	2	11/22/2022 11:16:30 AM	71583	
Selenium	ND	5.0	mg/Kg	2	11/22/2022 1:16:28 PM	71583	
Silver	ND	1.0	mg/Kg	2	11/22/2022 1:16:28 PM	71583	
Sodium	250	100	mg/Kg	2	11/22/2022 11:16:30 AM	71583	
Zinc	10	5.0	mg/Kg	2	11/22/2022 11:16:30 AM	71583	
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1016	ND	0.016	mg/Kg	1	11/30/2022 1:36:50 AM	71629	Analyst: SB
Aroclor 1221	ND	0.016	mg/Kg	1	11/30/2022 1:36:50 AM	71629	
Aroclor 1232	ND	0.016	mg/Kg	1	11/30/2022 1:36:50 AM	71629	
Aroclor 1242	ND	0.016	mg/Kg	1	11/30/2022 1:36:50 AM	71629	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst:</b>
<b>EPA METHOD 8082A: PCB'S</b>								
Aroclor 1248	ND	0.016		mg/Kg	1	11/30/2022 1:36:50 AM	71629	
Aroclor 1254	ND	0.016		mg/Kg	1	11/30/2022 1:36:50 AM	71629	
Aroclor 1260	ND	0.016		mg/Kg	1	11/30/2022 1:36:50 AM	71629	
Surr: Decachlorobiphenyl	93.2	47.2-115		%Rec	1	11/30/2022 1:36:50 AM	71629	
Surr: Tetrachloro-m-xylene	90.0	15-110		%Rec	1	11/30/2022 1:36:50 AM	71629	
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								
Diesel Range Organics (DRO)	ND	14		mg/Kg	1	11/22/2022 11:05:44 PM	71615	
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	11/22/2022 11:05:44 PM	71615	
Surr: DNOP	117	21-129		%Rec	1	11/22/2022 11:05:44 PM	71615	
<b>EPA METHOD 8015D: GASOLINE RANGE</b>								
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/22/2022 12:46:00 AM	71585	
Surr: BFB	148	37.7-212		%Rec	1	11/22/2022 12:46:00 AM	71585	
<b>EPA METHOD 8260B: VOLATILES</b>								
Benzene	ND	0.025		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Toluene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Ethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Naphthalene	ND	0.10		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Acetone	ND	0.75		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Bromobenzene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Bromodichloromethane	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Bromoform	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Bromomethane	ND	0.15		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
2-Butanone	ND	0.50		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Carbon disulfide	ND	0.50		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Carbon tetrachloride	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Chlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Chloroethane	ND	0.10		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Chloroform	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Chloromethane	ND	0.15		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst: RAA</b>
<b>EPA METHOD 8260B: VOLATILES</b>								
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Dibromochloromethane	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Dibromomethane	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1,1-Dichloroethane	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1,1-Dichloroethene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
2,2-Dichloropropane	ND	0.10		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1,1-Dichloropropene	ND	0.10		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Hexachlorobutadiene	ND	0.10		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
2-Hexanone	ND	0.50		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Isopropylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
4-Isopropyltoluene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Methylene chloride	ND	0.15		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
n-Butylbenzene	ND	0.15		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
n-Propylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
sec-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Styrene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	11/18/2022 9:04:07 PM	71585	
Vinyl chloride	ND	0.050		mg/Kg	1	11/18/2022 9:04:07 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

**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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8260B: VOLATILES</b>							
Xylenes, Total	ND	0.10		mg/Kg	1	11/18/2022 9:04:07 PM	71585
Surr: Dibromofluoromethane	112	70-130	%Rec		1	11/18/2022 9:04:07 PM	71585
Surr: 1,2-Dichloroethane-d4	92.5	70-130	%Rec		1	11/18/2022 9:04:07 PM	71585
Surr: Toluene-d8	105	70-130	%Rec		1	11/18/2022 9:04:07 PM	71585
Surr: 4-Bromofluorobenzene	99.3	70-130	%Rec		1	11/18/2022 9:04:07 PM	71585
<b>SM4500H+B/EPA 9040C</b>							
pH	8.71			pH Units	1	11/28/2022 4:12:00 PM	R92846

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>SW8270C</b>							
Naphthalene	ND	0.0096	mg/Kg	1	12/5/2022 5:22:00 PM	71550	Analyst: DAM
1-Methylnaphthalene	ND	0.0096	mg/Kg	1	12/5/2022 5:22:00 PM	71550	
2-Methylnaphthalene	ND	0.0096	mg/Kg	1	12/5/2022 5:22:00 PM	71550	
Benzo(a)pyrene	ND	0.019	mg/Kg	1	12/5/2022 5:22:00 PM	71550	
Surr: Nitrobenzene-d5	90.5	15-137	%Rec	1	12/5/2022 5:22:00 PM	71550	
Surr: 2-Fluorobiphenyl	83.5	15-121	%Rec	1	12/5/2022 5:22:00 PM	71550	
Surr: 4-Terphenyl-d14	110	65.7-126	%Rec	1	12/5/2022 5:22:00 PM	71550	
<b>EPA METHOD 300.0: ANIONS</b>							
Fluoride	2.6	0.30	mg/Kg	1	11/28/2022 7:01:33 PM	71725	Analyst: JMT
Chloride	40	1.5	mg/Kg	1	11/28/2022 7:01:33 PM	71725	
Nitrogen, Nitrate (As N)	33	6.0	mg/Kg	20	11/28/2022 7:13:57 PM	71725	
Sulfate	280	30	mg/Kg	20	11/28/2022 7:13:57 PM	71725	
<b>EPA METHOD 6020A: TOTAL METALS</b>							
Arsenic	3.1	0.50	mg/Kg	5	11/20/2022 2:26:04 PM	71583	Analyst: ELS
Uranium	ND	0.50	mg/Kg	5	11/21/2022 2:48:33 PM	71583	
<b>EPA METHOD 7471B: MERCURY</b>							
Mercury	ND	0.033	mg/Kg	1	11/30/2022 3:43:32 PM	71735	Analyst: VP
<b>EPA METHOD 6010B: SOIL METALS</b>							
Barium	99	0.20	mg/Kg	2	11/22/2022 11:18:23 AM	71583	Analyst: JRR
Cadmium	ND	0.20	mg/Kg	2	11/22/2022 11:18:23 AM	71583	
Calcium	8500	99	mg/Kg	2	11/22/2022 11:18:23 AM	71583	
Chromium	5.3	0.60	mg/Kg	2	11/22/2022 11:18:23 AM	71583	
Copper	4.9	4.0	mg/Kg	2	11/22/2022 11:18:23 AM	71583	
Iron	10000	500	mg/Kg	50	12/2/2022 10:35:19 AM	71583	
Lead	4.1	2.0	mg/Kg	2	11/22/2022 11:18:23 AM	71583	
Magnesium	2400	99	mg/Kg	2	11/22/2022 11:18:23 AM	71583	
Manganese	190	0.40	mg/Kg	2	11/22/2022 11:18:23 AM	71583	
Potassium	1600	99	mg/Kg	2	11/22/2022 11:18:23 AM	71583	
Selenium	ND	5.0	mg/Kg	2	11/22/2022 1:17:44 PM	71583	
Silver	ND	0.99	mg/Kg	2	11/22/2022 1:17:44 PM	71583	
Sodium	630	99	mg/Kg	2	11/22/2022 11:18:23 AM	71583	
Zinc	19	5.0	mg/Kg	2	11/22/2022 11:18:23 AM	71583	
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1016	ND	0.017	mg/Kg	1	11/30/2022 2:51:26 AM	71629	Analyst: SB
Aroclor 1221	ND	0.017	mg/Kg	1	11/30/2022 2:51:26 AM	71629	
Aroclor 1232	ND	0.017	mg/Kg	1	11/30/2022 2:51:26 AM	71629	
Aroclor 1242	ND	0.017	mg/Kg	1	11/30/2022 2:51:26 AM	71629	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1248	ND	0.017		mg/Kg	1	11/30/2022 2:51:26 AM	71629
Aroclor 1254	ND	0.017		mg/Kg	1	11/30/2022 2:51:26 AM	71629
Aroclor 1260	ND	0.017		mg/Kg	1	11/30/2022 2:51:26 AM	71629
Surr: Decachlorobiphenyl	86.0	47.2-115		%Rec	1	11/30/2022 2:51:26 AM	71629
Surr: Tetrachloro-m-xylene	88.0	15-110		%Rec	1	11/30/2022 2:51:26 AM	71629
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/22/2022 11:16:05 PM	71615
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/22/2022 11:16:05 PM	71615
Surr: DNOP	96.9	21-129		%Rec	1	11/22/2022 11:16:05 PM	71615
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/22/2022 1:05:00 AM	71585
Surr: BFB	145	37.7-212		%Rec	1	11/22/2022 1:05:00 AM	71585
<b>EPA METHOD 8260B: VOLATILES</b>							
Benzene	ND	0.025		mg/Kg	1	11/18/2022 9:31:03 PM	71585
Toluene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585
Ethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585
Naphthalene	ND	0.10		mg/Kg	1	11/18/2022 9:31:03 PM	71585
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 9:31:03 PM	71585
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 9:31:03 PM	71585
Acetone	ND	0.75		mg/Kg	1	11/18/2022 9:31:03 PM	71585
Bromobenzene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585
Bromodichloromethane	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585
Bromoform	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585
Bromomethane	ND	0.15		mg/Kg	1	11/18/2022 9:31:03 PM	71585
2-Butanone	ND	0.50		mg/Kg	1	11/18/2022 9:31:03 PM	71585
Carbon disulfide	ND	0.50		mg/Kg	1	11/18/2022 9:31:03 PM	71585
Carbon tetrachloride	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585
Chlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585
Chloroethane	ND	0.10		mg/Kg	1	11/18/2022 9:31:03 PM	71585
Chloroform	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585
Chloromethane	ND	0.15		mg/Kg	1	11/18/2022 9:31:03 PM	71585
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst: RAA</b>
<b>EPA METHOD 8260B: VOLATILES</b>								
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
Dibromochloromethane	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
Dibromomethane	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
1,1-Dichloroethane	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
1,1-Dichloroethene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
2,2-Dichloropropane	ND	0.10		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
1,1-Dichloropropene	ND	0.10		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
Hexachlorobutadiene	ND	0.10		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
2-Hexanone	ND	0.50		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
Isopropylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
4-Isopropyltoluene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
Methylene chloride	ND	0.15		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
n-Butylbenzene	ND	0.15		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
n-Propylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
sec-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
Styrene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	11/18/2022 9:31:03 PM	71585	
Vinyl chloride	ND	0.050		mg/Kg	1	11/18/2022 9:31:03 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

**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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8260B: VOLATILES</b>							
Xylenes, Total	ND	0.10		mg/Kg	1	11/18/2022 9:31:03 PM	71585
Surr: Dibromofluoromethane	115	70-130	%Rec		1	11/18/2022 9:31:03 PM	71585
Surr: 1,2-Dichloroethane-d4	97.1	70-130	%Rec		1	11/18/2022 9:31:03 PM	71585
Surr: Toluene-d8	106	70-130	%Rec		1	11/18/2022 9:31:03 PM	71585
Surr: 4-Bromofluorobenzene	101	70-130	%Rec		1	11/18/2022 9:31:03 PM	71585
<b>SM4500H+B/EPA 9040C</b>							
pH	8.50			pH Units	1	11/28/2022 4:12:00 PM	R92846

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>SW8270C</b>							
Naphthalene	ND	0.0097	mg/Kg	1	12/5/2022 6:09:00 PM	71550	Analyst: DAM
1-Methylnaphthalene	ND	0.0097	mg/Kg	1	12/5/2022 6:09:00 PM	71550	
2-Methylnaphthalene	ND	0.0097	mg/Kg	1	12/5/2022 6:09:00 PM	71550	
Benzo(a)pyrene	ND	0.019	mg/Kg	1	12/5/2022 6:09:00 PM	71550	
Surr: Nitrobenzene-d5	67.5	15-137	%Rec	1	12/5/2022 6:09:00 PM	71550	
Surr: 2-Fluorobiphenyl	60.5	15-121	%Rec	1	12/5/2022 6:09:00 PM	71550	
Surr: 4-Terphenyl-d14	78.5	65.7-126	%Rec	1	12/5/2022 6:09:00 PM	71550	
<b>EPA METHOD 300.0: ANIONS</b>							
Fluoride	1.5	0.30	mg/Kg	1	11/28/2022 7:51:11 PM	71725	Analyst: JMT
Chloride	140	30	mg/Kg	20	11/28/2022 8:03:36 PM	71725	
Nitrogen, Nitrate (As N)	24	6.0	mg/Kg	20	11/28/2022 8:03:36 PM	71725	
Sulfate	230	30	mg/Kg	20	11/28/2022 8:03:36 PM	71725	
<b>EPA METHOD 6020A: TOTAL METALS</b>							
Arsenic	2.6	0.50	mg/Kg	5	11/20/2022 2:30:13 PM	71583	Analyst: ELS
Uranium	ND	0.50	mg/Kg	5	11/21/2022 2:52:41 PM	71583	
<b>EPA METHOD 7471B: MERCURY</b>							
Mercury	ND	0.033	mg/Kg	1	11/30/2022 3:45:42 PM	71735	Analyst: VP
<b>EPA METHOD 6010B: SOIL METALS</b>							
Barium	200	0.20	mg/Kg	2	11/22/2022 11:20:17 AM	71583	Analyst: JRR
Cadmium	ND	0.20	mg/Kg	2	11/22/2022 11:20:17 AM	71583	
Calcium	8000	100	mg/Kg	2	11/22/2022 11:20:17 AM	71583	
Chromium	3.4	0.60	mg/Kg	2	11/22/2022 11:20:17 AM	71583	
Copper	ND	4.0	mg/Kg	2	11/22/2022 11:20:17 AM	71583	
Iron	6900	500	mg/Kg	50	12/2/2022 10:36:47 AM	71583	
Lead	2.9	2.0	mg/Kg	2	11/22/2022 11:20:17 AM	71583	
Magnesium	1500	100	mg/Kg	2	11/22/2022 11:20:17 AM	71583	
Manganese	120	0.40	mg/Kg	2	11/22/2022 11:20:17 AM	71583	
Potassium	1100	100	mg/Kg	2	11/22/2022 11:20:17 AM	71583	
Selenium	ND	5.0	mg/Kg	2	11/22/2022 1:18:59 PM	71583	
Silver	ND	1.0	mg/Kg	2	11/22/2022 1:18:59 PM	71583	
Sodium	420	100	mg/Kg	2	11/22/2022 11:20:17 AM	71583	
Zinc	13	5.0	mg/Kg	2	11/22/2022 11:20:17 AM	71583	
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1016	ND	0.016	mg/Kg	1	11/30/2022 3:28:47 AM	71629	Analyst: SB
Aroclor 1221	ND	0.016	mg/Kg	1	11/30/2022 3:28:47 AM	71629	
Aroclor 1232	ND	0.016	mg/Kg	1	11/30/2022 3:28:47 AM	71629	
Aroclor 1242	ND	0.016	mg/Kg	1	11/30/2022 3:28:47 AM	71629	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst:</b>
<b>EPA METHOD 8082A: PCB'S</b>								
Aroclor 1248	ND	0.016		mg/Kg	1	11/30/2022 3:28:47 AM	71629	
Aroclor 1254	ND	0.016		mg/Kg	1	11/30/2022 3:28:47 AM	71629	
Aroclor 1260	ND	0.016		mg/Kg	1	11/30/2022 3:28:47 AM	71629	
Surr: Decachlorobiphenyl	98.0	47.2-115		%Rec	1	11/30/2022 3:28:47 AM	71629	
Surr: Tetrachloro-m-xylene	94.0	15-110		%Rec	1	11/30/2022 3:28:47 AM	71629	
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/22/2022 11:26:25 PM	71615	
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/22/2022 11:26:25 PM	71615	
Surr: DNOP	111	21-129		%Rec	1	11/22/2022 11:26:25 PM	71615	
<b>EPA METHOD 8015D: GASOLINE RANGE</b>								
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/22/2022 1:25:00 AM	71585	
Surr: BFB	148	37.7-212		%Rec	1	11/22/2022 1:25:00 AM	71585	
<b>EPA METHOD 8260B: VOLATILES</b>								
Benzene	ND	0.025		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Toluene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Ethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Naphthalene	ND	0.10		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Acetone	ND	0.75		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Bromobenzene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Bromodichloromethane	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Bromoform	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Bromomethane	ND	0.15		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
2-Butanone	ND	0.50		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Carbon disulfide	ND	0.50		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Carbon tetrachloride	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Chlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Chloroethane	ND	0.10		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Chloroform	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Chloromethane	ND	0.15		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst: RAA</b>
<b>EPA METHOD 8260B: VOLATILES</b>								
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Dibromochloromethane	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Dibromomethane	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1,1-Dichloroethane	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1,1-Dichloroethene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
2,2-Dichloropropane	ND	0.10		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1,1-Dichloropropene	ND	0.10		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Hexachlorobutadiene	ND	0.10		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
2-Hexanone	ND	0.50		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Isopropylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
4-Isopropyltoluene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Methylene chloride	ND	0.15		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
n-Butylbenzene	ND	0.15		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
n-Propylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
sec-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Styrene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	11/18/2022 9:57:59 PM	71585	
Vinyl chloride	ND	0.050		mg/Kg	1	11/18/2022 9:57:59 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

**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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8260B: VOLATILES</b>							
Xylenes, Total	ND	0.10		mg/Kg	1	11/18/2022 9:57:59 PM	71585
Surr: Dibromofluoromethane	108	70-130	%Rec		1	11/18/2022 9:57:59 PM	71585
Surr: 1,2-Dichloroethane-d4	99.6	70-130	%Rec		1	11/18/2022 9:57:59 PM	71585
Surr: Toluene-d8	104	70-130	%Rec		1	11/18/2022 9:57:59 PM	71585
Surr: 4-Bromofluorobenzene	96.7	70-130	%Rec		1	11/18/2022 9:57:59 PM	71585
<b>SM4500H+B/EPA 9040C</b>							
pH	8.31			pH Units	1	11/28/2022 4:12:00 PM	R92846

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- PQL Practical Quantitative Limit
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- 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>SW8270C</b>							
Naphthalene	ND	0.0091	mg/Kg	1	12/5/2022 6:55:00 PM	71550	Analyst: DAM
1-Methylnaphthalene	ND	0.0091	mg/Kg	1	12/5/2022 6:55:00 PM	71550	
2-Methylnaphthalene	ND	0.0091	mg/Kg	1	12/5/2022 6:55:00 PM	71550	
Benzo(a)pyrene	ND	0.018	mg/Kg	1	12/5/2022 6:55:00 PM	71550	
Surr: Nitrobenzene-d5	79.5	15-137	%Rec	1	12/5/2022 6:55:00 PM	71550	
Surr: 2-Fluorobiphenyl	73.0	15-121	%Rec	1	12/5/2022 6:55:00 PM	71550	
Surr: 4-Terphenyl-d14	98.5	65.7-126	%Rec	1	12/5/2022 6:55:00 PM	71550	
<b>EPA METHOD 300.0: ANIONS</b>							
Fluoride	2.2	0.30	mg/Kg	1	11/28/2022 8:16:00 PM	71725	Analyst: JMT
Chloride	31	1.5	mg/Kg	1	11/28/2022 8:16:00 PM	71725	
Nitrogen, Nitrate (As N)	19	6.0	mg/Kg	20	11/28/2022 8:28:25 PM	71725	
Sulfate	450	30	mg/Kg	20	11/28/2022 8:28:25 PM	71725	
<b>EPA METHOD 6020A: TOTAL METALS</b>							
Arsenic	2.8	0.50	mg/Kg	5	11/20/2022 2:34:24 PM	71583	Analyst: ELS
Uranium	ND	0.50	mg/Kg	5	11/21/2022 2:56:52 PM	71583	
<b>EPA METHOD 7471B: MERCURY</b>							
Mercury	ND	0.033	mg/Kg	1	11/30/2022 3:47:51 PM	71735	Analyst: VP
<b>EPA METHOD 6010B: SOIL METALS</b>							
Barium	70	0.20	mg/Kg	2	11/22/2022 11:22:10 AM	71583	Analyst: JRR
Cadmium	ND	0.20	mg/Kg	2	11/22/2022 11:22:10 AM	71583	
Calcium	6700	99	mg/Kg	2	11/22/2022 11:22:10 AM	71583	
Chromium	4.5	0.60	mg/Kg	2	11/22/2022 11:22:10 AM	71583	
Copper	4.1	4.0	mg/Kg	2	11/22/2022 11:22:10 AM	71583	
Iron	8500	500	mg/Kg	50	12/2/2022 10:38:16 AM	71583	
Lead	2.6	2.0	mg/Kg	2	11/22/2022 11:22:10 AM	71583	
Magnesium	1900	99	mg/Kg	2	11/22/2022 11:22:10 AM	71583	
Manganese	160	0.40	mg/Kg	2	11/22/2022 11:22:10 AM	71583	
Potassium	1300	99	mg/Kg	2	11/22/2022 11:22:10 AM	71583	
Selenium	ND	5.0	mg/Kg	2	11/22/2022 1:20:16 PM	71583	
Silver	ND	0.99	mg/Kg	2	11/22/2022 1:20:16 PM	71583	
Sodium	650	99	mg/Kg	2	11/22/2022 11:22:10 AM	71583	
Zinc	16	5.0	mg/Kg	2	11/22/2022 11:22:10 AM	71583	
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1016	ND	0.016	mg/Kg	1	11/30/2022 4:06:06 AM	71629	Analyst: SB
Aroclor 1221	ND	0.016	mg/Kg	1	11/30/2022 4:06:06 AM	71629	
Aroclor 1232	ND	0.016	mg/Kg	1	11/30/2022 4:06:06 AM	71629	
Aroclor 1242	ND	0.016	mg/Kg	1	11/30/2022 4:06:06 AM	71629	

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**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1248	ND	0.016		mg/Kg	1	11/30/2022 4:06:06 AM	71629
Aroclor 1254	ND	0.016		mg/Kg	1	11/30/2022 4:06:06 AM	71629
Aroclor 1260	ND	0.016		mg/Kg	1	11/30/2022 4:06:06 AM	71629
Surr: Decachlorobiphenyl	96.8	47.2-115		%Rec	1	11/30/2022 4:06:06 AM	71629
Surr: Tetrachloro-m-xylene	96.0	15-110		%Rec	1	11/30/2022 4:06:06 AM	71629
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/22/2022 11:36:45 PM	71615
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/22/2022 11:36:45 PM	71615
Surr: DNOP	101	21-129		%Rec	1	11/22/2022 11:36:45 PM	71615
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/22/2022 1:44:00 AM	71585
Surr: BFB	154	37.7-212		%Rec	1	11/22/2022 1:44:00 AM	71585
<b>EPA METHOD 8260B: VOLATILES</b>							
Benzene	ND	0.025		mg/Kg	1	11/21/2022 2:47:16 PM	71585
Toluene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585
Ethylbenzene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585
Naphthalene	ND	0.10		mg/Kg	1	11/21/2022 2:47:16 PM	71585
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/21/2022 2:47:16 PM	71585
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/21/2022 2:47:16 PM	71585
Acetone	ND	0.75		mg/Kg	1	11/21/2022 2:47:16 PM	71585
Bromobenzene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585
Bromodichloromethane	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585
Bromoform	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585
Bromomethane	ND	0.15		mg/Kg	1	11/21/2022 2:47:16 PM	71585
2-Butanone	ND	0.50		mg/Kg	1	11/21/2022 2:47:16 PM	71585
Carbon disulfide	ND	0.50		mg/Kg	1	11/21/2022 2:47:16 PM	71585
Carbon tetrachloride	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585
Chlorobenzene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585
Chloroethane	ND	0.10		mg/Kg	1	11/21/2022 2:47:16 PM	71585
Chloroform	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585
Chloromethane	ND	0.15		mg/Kg	1	11/21/2022 2:47:16 PM	71585
2-Chlorotoluene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585
4-Chlorotoluene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

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- \* 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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst: RAA</b>
<b>EPA METHOD 8260B: VOLATILES</b>								
cis-1,2-DCE	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
Dibromochloromethane	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
Dibromomethane	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
1,1-Dichloroethane	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
1,1-Dichloroethene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
1,2-Dichloropropane	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
1,3-Dichloropropane	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
2,2-Dichloropropane	ND	0.10		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
1,1-Dichloropropene	ND	0.10		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
Hexachlorobutadiene	ND	0.10		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
2-Hexanone	ND	0.50		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
Isopropylbenzene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
4-Isopropyltoluene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
Methylene chloride	ND	0.15		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
n-Butylbenzene	ND	0.15		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
n-Propylbenzene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
sec-Butylbenzene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
Styrene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
tert-Butylbenzene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
trans-1,2-DCE	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
Trichlorofluoromethane	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	11/21/2022 2:47:16 PM	71585	
Vinyl chloride	ND	0.050		mg/Kg	1	11/21/2022 2:47:16 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

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- P Sample pH Not In Range
- RL Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**Lab Order **2211751**

Date Reported:

**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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8260B: VOLATILES</b>							
Xylenes, Total	ND	0.10		mg/Kg	1	11/21/2022 2:47:16 PM	71585
Surr: Dibromofluoromethane	110	70-130	%Rec		1	11/21/2022 2:47:16 PM	71585
Surr: 1,2-Dichloroethane-d4	91.6	70-130	%Rec		1	11/21/2022 2:47:16 PM	71585
Surr: Toluene-d8	116	70-130	%Rec		1	11/21/2022 2:47:16 PM	71585
Surr: 4-Bromofluorobenzene	101	70-130	%Rec		1	11/21/2022 2:47:16 PM	71585
<b>SM4500H+B/EPA 9040C</b>							
pH	8.56			pH Units	1	11/28/2022 4:12:00 PM	R92846

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>SW8270C</b>							
Naphthalene	ND	0.0096	mg/Kg	1	12/5/2022 7:41:00 PM	71550	Analyst: <b>DAM</b>
1-Methylnaphthalene	ND	0.0096	mg/Kg	1	12/5/2022 7:41:00 PM	71550	
2-Methylnaphthalene	ND	0.0096	mg/Kg	1	12/5/2022 7:41:00 PM	71550	
Benzo(a)pyrene	ND	0.019	mg/Kg	1	12/5/2022 7:41:00 PM	71550	
Surr: Nitrobenzene-d5	94.0	15-137	%Rec	1	12/5/2022 7:41:00 PM	71550	
Surr: 2-Fluorobiphenyl	88.5	15-121	%Rec	1	12/5/2022 7:41:00 PM	71550	
Surr: 4-Terphenyl-d14	113	65.7-126	%Rec	1	12/5/2022 7:41:00 PM	71550	
<b>EPA METHOD 300.0: ANIONS</b>							
Fluoride	2.1	0.30	mg/Kg	1	11/28/2022 8:40:50 PM	71725	Analyst: <b>JMT</b>
Chloride	12	1.5	mg/Kg	1	11/28/2022 8:40:50 PM	71725	
Nitrogen, Nitrate (As N)	20	0.30	mg/Kg	1	11/28/2022 8:40:50 PM	71725	
Sulfate	260	30	mg/Kg	20	11/28/2022 8:53:14 PM	71725	
<b>EPA METHOD 6020A: TOTAL METALS</b>							
Arsenic	2.7	0.49	mg/Kg	5	11/20/2022 2:38:34 PM	71583	Analyst: <b>ELS</b>
Uranium	ND	0.49	mg/Kg	5	11/21/2022 3:01:00 PM	71583	
<b>EPA METHOD 7471B: MERCURY</b>							
Mercury	ND	0.033	mg/Kg	1	11/30/2022 3:50:00 PM	71735	Analyst: <b>VP</b>
<b>EPA METHOD 6010B: SOIL METALS</b>							
Barium	81	0.20	mg/Kg	2	11/22/2022 11:24:03 AM	71583	Analyst: <b>JRR</b>
Cadmium	ND	0.20	mg/Kg	2	11/22/2022 11:24:03 AM	71583	
Calcium	13000	2500	mg/Kg	50	12/2/2022 10:47:37 AM	71583	
Chromium	4.1	0.59	mg/Kg	2	11/22/2022 11:24:03 AM	71583	
Copper	ND	4.0	mg/Kg	2	11/22/2022 11:24:03 AM	71583	
Iron	8000	490	mg/Kg	50	12/2/2022 10:47:37 AM	71583	
Lead	2.9	2.0	mg/Kg	2	11/22/2022 11:24:03 AM	71583	
Magnesium	1800	99	mg/Kg	2	11/22/2022 11:24:03 AM	71583	
Manganese	150	0.40	mg/Kg	2	11/22/2022 11:24:03 AM	71583	
Potassium	1200	99	mg/Kg	2	11/22/2022 11:24:03 AM	71583	
Selenium	ND	4.9	mg/Kg	2	11/22/2022 1:21:33 PM	71583	
Silver	ND	0.99	mg/Kg	2	11/22/2022 1:21:33 PM	71583	
Sodium	490	99	mg/Kg	2	11/22/2022 11:24:03 AM	71583	
Zinc	15	4.9	mg/Kg	2	11/22/2022 11:24:03 AM	71583	
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1016	ND	0.017	mg/Kg	1	12/1/2022 11:47:56 AM	71661	Analyst: <b>JME</b>
Aroclor 1221	ND	0.017	mg/Kg	1	12/1/2022 11:47:56 AM	71661	
Aroclor 1232	ND	0.017	mg/Kg	1	12/1/2022 11:47:56 AM	71661	
Aroclor 1242	ND	0.017	mg/Kg	1	12/1/2022 11:47:56 AM	71661	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8082A: PCB'S</b>							
Aroclor 1248	ND	0.017		mg/Kg	1	12/1/2022 11:47:56 AM	71661
Aroclor 1254	ND	0.017		mg/Kg	1	12/1/2022 11:47:56 AM	71661
Aroclor 1260	ND	0.017		mg/Kg	1	12/1/2022 11:47:56 AM	71661
Surr: Decachlorobiphenyl	100	47.2-115		%Rec	1	12/1/2022 11:47:56 AM	71661
Surr: Tetrachloro-m-xylene	92.8	15-110		%Rec	1	12/1/2022 11:47:56 AM	71661
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							
Diesel Range Organics (DRO)	ND	15		mg/Kg	1	11/22/2022 11:47:06 PM	71615
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/22/2022 11:47:06 PM	71615
Surr: DNOP	110	21-129		%Rec	1	11/22/2022 11:47:06 PM	71615
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/22/2022 2:04:00 AM	71585
Surr: BFB	151	37.7-212		%Rec	1	11/22/2022 2:04:00 AM	71585
<b>EPA METHOD 8260B: VOLATILES</b>							
Benzene	ND	0.025		mg/Kg	1	11/21/2022 3:14:14 PM	71585
Toluene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585
Ethylbenzene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585
Methyl tert-butyl ether (MTBE)	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585
1,2,4-Trimethylbenzene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585
1,3,5-Trimethylbenzene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585
1,2-Dichloroethane (EDC)	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585
1,2-Dibromoethane (EDB)	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585
Naphthalene	ND	0.098		mg/Kg	1	11/21/2022 3:14:14 PM	71585
1-Methylnaphthalene	ND	0.20		mg/Kg	1	11/21/2022 3:14:14 PM	71585
2-Methylnaphthalene	ND	0.20		mg/Kg	1	11/21/2022 3:14:14 PM	71585
Acetone	ND	0.74		mg/Kg	1	11/21/2022 3:14:14 PM	71585
Bromobenzene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585
Bromodichloromethane	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585
Bromoform	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585
Bromomethane	ND	0.15		mg/Kg	1	11/21/2022 3:14:14 PM	71585
2-Butanone	ND	0.49		mg/Kg	1	11/21/2022 3:14:14 PM	71585
Carbon disulfide	ND	0.49		mg/Kg	1	11/21/2022 3:14:14 PM	71585
Carbon tetrachloride	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585
Chlorobenzene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585
Chloroethane	ND	0.098		mg/Kg	1	11/21/2022 3:14:14 PM	71585
Chloroform	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585
Chloromethane	ND	0.15		mg/Kg	1	11/21/2022 3:14:14 PM	71585
2-Chlorotoluene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585
4-Chlorotoluene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

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- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
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- B Analyte detected in the associated Method Blank
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- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

**Hall Environmental Analysis Laboratory, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>	<b>Analyst: RAA</b>
<b>EPA METHOD 8260B: VOLATILES</b>								
cis-1,2-DCE	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
cis-1,3-Dichloropropene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
1,2-Dibromo-3-chloropropane	ND	0.098		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
Dibromochloromethane	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
Dibromomethane	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
1,2-Dichlorobenzene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
1,3-Dichlorobenzene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
1,4-Dichlorobenzene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
Dichlorodifluoromethane	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
1,1-Dichloroethane	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
1,1-Dichloroethene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
1,2-Dichloropropane	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
1,3-Dichloropropane	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
2,2-Dichloropropane	ND	0.098		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
1,1-Dichloropropene	ND	0.098		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
Hexachlorobutadiene	ND	0.098		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
2-Hexanone	ND	0.49		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
Isopropylbenzene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
4-Isopropyltoluene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
4-Methyl-2-pentanone	ND	0.49		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
Methylene chloride	ND	0.15		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
n-Butylbenzene	ND	0.15		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
n-Propylbenzene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
sec-Butylbenzene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
Styrene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
tert-Butylbenzene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
1,1,1,2-Tetrachloroethane	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
1,1,2,2-Tetrachloroethane	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
Tetrachloroethene (PCE)	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
trans-1,2-DCE	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
trans-1,3-Dichloropropene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
1,2,3-Trichlorobenzene	ND	0.098		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
1,2,4-Trichlorobenzene	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
1,1,1-Trichloroethane	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
1,1,2-Trichloroethane	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
Trichloroethene (TCE)	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
Trichlorofluoromethane	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
1,2,3-Trichloropropane	ND	0.098		mg/Kg	1	11/21/2022 3:14:14 PM	71585	
Vinyl chloride	ND	0.049		mg/Kg	1	11/21/2022 3:14:14 PM	71585	

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**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 Quantitative 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, Inc.****Analytical Report**

Lab Order 2211751

Date Reported:

**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

<b>Analyses</b>	<b>Result</b>	<b>RL</b>	<b>Qual</b>	<b>Units</b>	<b>DF</b>	<b>Date Analyzed</b>	<b>Batch</b>
<b>EPA METHOD 8260B: VOLATILES</b>							
Xylenes, Total	ND	0.098		mg/Kg	1	11/21/2022 3:14:14 PM	71585
Surr: Dibromofluoromethane	113	70-130	%Rec		1	11/21/2022 3:14:14 PM	71585
Surr: 1,2-Dichloroethane-d4	97.1	70-130	%Rec		1	11/21/2022 3:14:14 PM	71585
Surr: Toluene-d8	109	70-130	%Rec		1	11/21/2022 3:14:14 PM	71585
Surr: 4-Bromofluorobenzene	101	70-130	%Rec		1	11/21/2022 3:14:14 PM	71585
<b>SM4500H+B/EPA 9040C</b>							
pH	8.77			pH Units	1	11/28/2022 4:12:00 PM	R92846

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

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- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative 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

Page 80 of 0



# ANALYTICAL REPORT

November 28, 2022

Revised Report

## 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](http://www.pacenational.com)

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

<b>Cp: Cover Page</b>	<b>1</b>	<b>1</b> Cp
<b>Tc: Table of Contents</b>	<b>2</b>	<b>2</b> Tc
<b>Ss: Sample Summary</b>	<b>3</b>	<b>3</b> Ss
<b>Cn: Case Narrative</b>	<b>6</b>	<b>4</b> Cn
<b>Sr: Sample Results</b>	<b>7</b>	<b>5</b> Sr
2211751-001B HA1 L1557863-01	7	6 Qc
2211751-002B HA2 L1557863-02	8	7 Gl
2211751-003B HA3 L1557863-03	9	8 Al
2211751-004B HA4 L1557863-04	10	9 Sc
2211751-005B HA5 L1557863-05	11	
2211751-006B HA6 L1557863-06	12	
2211751-007B HA7 L1557863-07	13	
2211751-008B HA8 L1557863-08	14	
2211751-009B HA9 L1557863-09	15	
2211751-010B HA10 L1557863-10	16	
2211751-011B HA11 L1557863-11	17	
2211751-012B HA12 L1557863-12	18	
2211751-013B HA13 L1557863-13	19	
2211751-014B HA14 L1557863-14	20	
2211751-015B HA15 L1557863-15	21	
2211751-016B HA16 L1557863-16	22	
2211751-017B HA17 L1557863-17	23	
2211751-018B HA18 L1557863-18	24	
2211751-019B HA19 L1557863-19	25	
2211751-020B HA20 L1557863-20	26	
<b>Qc: Quality Control Summary</b>	<b>27</b>	
Wet Chemistry by Method 9012B	27	
Wet Chemistry by Method 9066	29	
<b>Gl: Glossary of Terms</b>	<b>31</b>	
<b>Al: Accreditations &amp; Locations</b>	<b>32</b>	
<b>Sc: Sample Chain of Custody</b>	<b>33</b>	

		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
Wet Chemistry by Method 9012B	WG1959474	1	11/16/22 08:03	11/16/22 22:06
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 14:53
		Collected by	Collected date/time	Received date/time
2211751-002B HA2 L1557863-02 Solid			11/11/22 11:15	11/15/22 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time
Wet Chemistry by Method 9012B	WG1959474	1	11/16/22 08:03	11/16/22 22:07
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 14:55
		Collected by	Collected date/time	Received date/time
2211751-003B HA3 L1557863-03 Solid			11/11/22 11:17	11/15/22 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time
Wet Chemistry by Method 9012B	WG1959474	1	11/16/22 08:03	11/16/22 22:08
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 14:58
		Collected by	Collected date/time	Received date/time
2211751-004B HA4 L1557863-04 Solid			11/11/22 11:20	11/15/22 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time
Wet Chemistry by Method 9012B	WG1959474	1	11/16/22 08:03	11/16/22 22:09
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 14:58
		Collected by	Collected date/time	Received date/time
2211751-005B HA5 L1557863-05 Solid			11/11/22 11:30	11/15/22 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time
Wet Chemistry by Method 9012B	WG1959474	1	11/16/22 08:03	11/16/22 22:11
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 14:59
		Collected by	Collected date/time	Received date/time
2211751-006B HA6 L1557863-06 Solid			11/11/22 11:32	11/15/22 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 15:51
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:00
		Collected by	Collected date/time	Received date/time
2211751-007B HA7 L1557863-07 Solid			11/11/22 11:34	11/15/22 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 15:52
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:01

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

		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
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 15:56
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:02
		Collected by	Collected date/time	Received date/time
2211751-008B HA8 L1557863-08 Solid			11/11/22 11:45	11/15/22 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 15:58
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:12
		Collected by	Collected date/time	Received date/time
2211751-009B HA9 L1557863-09 Solid			11/11/22 11:50	11/15/22 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 15:59
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:03
		Collected by	Collected date/time	Received date/time
2211751-010B HA10 L1557863-10 Solid			11/11/22 11:55	11/15/22 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:00
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:04
		Collected by	Collected date/time	Received date/time
2211751-011B HA11 L1557863-11 Solid			11/11/22 12:00	11/15/22 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:01
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:05
		Collected by	Collected date/time	Received date/time
2211751-012B HA12 L1557863-12 Solid			11/11/22 12:00	11/15/22 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:02
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:07
		Collected by	Collected date/time	Received date/time
2211751-013B HA13 L1557863-13 Solid			11/11/22 12:10	11/15/22 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:03
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:08
		Collected by	Collected date/time	Received date/time
2211751-014B HA14 L1557863-14 Solid			11/11/22 12:15	11/15/22 09:00
Method	Batch	Dilution	Preparation date/time	Analysis date/time
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:03
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:08

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

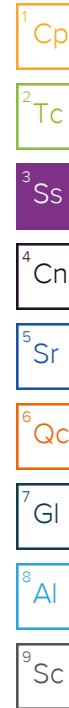
6 Qc

7 Gl

8 Al

9 Sc

		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
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:04
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:09
		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
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:06
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:09
		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
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:09
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:10
		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
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:10
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:11
		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
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:11
Wet Chemistry by Method 9066	WG1958244	1	11/17/22 08:12	11/17/22 15:12
		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
Wet Chemistry by Method 9012B	WG1960612	1	11/18/22 08:14	11/19/22 16:12
Wet Chemistry by Method 9066	WG1960609	1	11/23/22 10:49	11/23/22 13:45



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

- <sup>1</sup> Cp
- <sup>2</sup> Tc
- <sup>3</sup> Ss
- <sup>4</sup> Cn
- <sup>5</sup> Sr
- <sup>6</sup> Qc
- <sup>7</sup> GI
- <sup>8</sup> AI
- <sup>9</sup> SC

#### Report Revision History

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

#### Project Narrative

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Revised Sample IDs

## Wet Chemistry by Method 9012B

Analyte	Result	<u>Qualifier</u>	MDL	RDL	Dilution	Analysis date / time	<u>Batch</u>
Cyanide	U		0.0733	0.250	1	11/16/2022 22:06	<a href="#">WG1959474</a>

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

## Wet Chemistry by Method 9066

Analyte	Result	<u>Qualifier</u>	MDL	RDL	Dilution	Analysis date / time	<u>Batch</u>
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 14:53	<a href="#">WG1958244</a>

## Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Cyanide	U		0.0733	0.250	1	11/16/2022 22:07	<a href="#">WG1959474</a>

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

## Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 14:55	<a href="#">WG1958244</a>

## Wet Chemistry by Method 9012B

Analyte	Result	<u>Qualifier</u>	MDL	RDL	Dilution	Analysis date / time	<u>Batch</u>
Cyanide	U		0.0733	0.250	1	11/16/2022 22:08	<a href="#">WG1959474</a>

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

## Wet Chemistry by Method 9066

Analyte	Result	<u>Qualifier</u>	MDL	RDL	Dilution	Analysis date / time	<u>Batch</u>
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 14:58	<a href="#">WG1958244</a>

## Wet Chemistry by Method 9012B

Analyte	Result	<u>Qualifier</u>	MDL	RDL	Dilution	Analysis date / time	<u>Batch</u>
Cyanide	U		0.0733	0.250	1	11/16/2022 22:09	<a href="#">WG1959474</a>

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

## Wet Chemistry by Method 9066

Analyte	Result	<u>Qualifier</u>	MDL	RDL	Dilution	Analysis date / time	<u>Batch</u>
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 14:58	<a href="#">WG1958244</a>

Collected date/time: 11/11/22 11:30  
Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Cyanide	U		0.0733	0.250	1	11/16/2022 22:11	<a href="#">WG1959474</a>

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

## Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 14:59	<a href="#">WG1958244</a>

Collected date/time: 11/11/22 11:32

L1557863

## Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Cyanide	U		0.0733	0.250	1	11/19/2022 15:51	<a href="#">WG1960612</a>

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

## Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:00	<a href="#">WG1958244</a>

## Wet Chemistry by Method 9012B

Analyte	Result	<u>Qualifier</u>	MDL	RDL	Dilution	Analysis date / time	<u>Batch</u>
Cyanide	U		0.0733	0.250	1	11/19/2022 15:52	<a href="#">WG1960612</a>

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

## Wet Chemistry by Method 9066

Analyte	Result	<u>Qualifier</u>	MDL	RDL	Dilution	Analysis date / time	<u>Batch</u>
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:01	<a href="#">WG1958244</a>

Collected date/time: 11/11/22 11:36

L1557863

## Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Cyanide	U		0.0733	0.250	1	11/19/2022 15:56	<a href="#">WG1960612</a>

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

## Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:02	<a href="#">WG1958244</a>

## Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Cyanide	U		0.0733	0.250	1	11/19/2022 15:58	<a href="#">WG1960612</a>

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

## Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:12	<a href="#">WG1958244</a>

## Wet Chemistry by Method 9012B

Analyte	Result	<u>Qualifier</u>	MDL	RDL	Dilution	Analysis date / time	<u>Batch</u>
Cyanide	U		0.0733	0.250	1	11/19/2022 15:59	<a href="#">WG1960612</a>

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

## Wet Chemistry by Method 9066

Analyte	Result	<u>Qualifier</u>	MDL	RDL	Dilution	Analysis date / time	<u>Batch</u>
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:03	<a href="#">WG1958244</a>

## Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Cyanide	U		0.0733	0.250	1	11/19/2022 16:00	<a href="#">WG1960612</a>

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

## Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:04	<a href="#">WG1958244</a>

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

L1557863

## Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Cyanide	U		0.0733	0.250	1	11/19/2022 16:01	<a href="#">WG1960612</a>

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

## Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:05	<a href="#">WG1958244</a>

Collected date/time: 11/11/22 12:10

L1557863

## Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Cyanide	U		0.0733	0.250	1	11/19/2022 16:02	<a href="#">WG1960612</a>

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

## Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:07	<a href="#">WG1958244</a>

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

## Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Cyanide	U		0.0733	0.250	1	11/19/2022 16:03	<a href="#">WG1960612</a>

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

## Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:08	<a href="#">WG1958244</a>

## Wet Chemistry by Method 9012B

Analyte	Result mg/kg	<u>Qualifier</u>	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	<u>Batch</u>
Cyanide	U		0.0733	0.250	1	11/19/2022 16:04	<a href="#">WG1960612</a>

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

## Wet Chemistry by Method 9066

Analyte	Result mg/kg	<u>Qualifier</u>	MDL mg/kg	RDL mg/kg	Dilution	Analysis date / time	<u>Batch</u>
Total Phenol by 4AAP	2.82	<a href="#">B</a>	0.220	0.670	1	11/17/2022 15:09	<a href="#">WG1958244</a>

## Wet Chemistry by Method 9012B

Analyte	Result	<u>Qualifier</u>	MDL	RDL	Dilution	Analysis date / time	<u>Batch</u>
Cyanide	U		0.0733	0.250	1	11/19/2022 16:06	<a href="#">WG1960612</a>

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

## Wet Chemistry by Method 9066

Analyte	Result	<u>Qualifier</u>	MDL	RDL	Dilution	Analysis date / time	<u>Batch</u>
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:09	<a href="#">WG1958244</a>

## Wet Chemistry by Method 9012B

Analyte	Result	<u>Qualifier</u>	MDL	RDL	Dilution	Analysis date / time	<u>Batch</u>
Cyanide	U		0.0733	0.250	1	11/19/2022 16:09	<a href="#">WG1960612</a>

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

## Wet Chemistry by Method 9066

Analyte	Result	<u>Qualifier</u>	MDL	RDL	Dilution	Analysis date / time	<u>Batch</u>
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:10	<a href="#">WG1958244</a>

## Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Cyanide	U		0.0733	0.250	1	11/19/2022 16:10	<a href="#">WG1960612</a>

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

## Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:11	<a href="#">WG1958244</a>

## Wet Chemistry by Method 9012B

Analyte	Result	<u>Qualifier</u>	MDL	RDL	Dilution	Analysis date / time	<u>Batch</u>
Cyanide	U		0.0733	0.250	1	11/19/2022 16:11	<a href="#">WG1960612</a>

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

## Wet Chemistry by Method 9066

Analyte	Result	<u>Qualifier</u>	MDL	RDL	Dilution	Analysis date / time	<u>Batch</u>
Total Phenol by 4AAP	U		0.220	0.670	1	11/17/2022 15:12	<a href="#">WG1958244</a>

## Wet Chemistry by Method 9012B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Cyanide	U		0.0733	0.250	1	11/19/2022 16:12	<a href="#">WG1960612</a>

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

## Wet Chemistry by Method 9066

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Total Phenol by 4AAP	0.293	<a href="#">JP1</a>	0.220	0.670	1	11/23/2022 13:45	<a href="#">WG1960609</a>

## QUALITY CONTROL SUMMARY

[L1557863-01,02,03,04,05](#)

## Method Blank (MB)

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

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

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

## 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 %	<u>DUP Qualifier</u>	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 %	<u>DUP Qualifier</u>	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 %	<u>LCS Qualifier</u>
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 %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Cyanide	1.67	U	1.59	1.59	95.4	95.6	1	75.0-125			0.209	20

## QUALITY CONTROL SUMMARY

## Method Blank (MB)

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

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

<sup>1</sup>Cp

## 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 %	<u>DUP Qualifier</u>	DUP RPD Limits %
Cyanide	U	U	1	0.000		20

<sup>2</sup>Tc<sup>3</sup>Ss<sup>4</sup>Cn<sup>5</sup>Sr<sup>6</sup>Qc

## 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 %	<u>DUP Qualifier</u>	DUP RPD Limits %
Cyanide	U	U	1	0.000		20

<sup>7</sup>Gl<sup>8</sup>Al<sup>9</sup>Sc

## 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 %	<u>LCS Qualifier</u>
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 %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	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.

## QUALITY CONTROL SUMMARY

## Method Blank (MB)

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

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

<sup>1</sup>Cp

## 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 %	<u>DUP Qualifier</u>	DUP RPD Limits %
Total Phenol by 4AAP	0.526	0.221	1	0.000		20

<sup>2</sup>Tc<sup>3</sup>Ss<sup>4</sup>Cn<sup>5</sup>Sr<sup>6</sup>Qc

## 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 %	<u>DUP Qualifier</u>	DUP RPD Limits %
Total Phenol by 4AAP	U	U	1	0.000		20

<sup>7</sup>Gl<sup>8</sup>Al<sup>9</sup>Sc

## 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 %	<u>LCS Qualifier</u>
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 %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	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 %	<u>MS Qualifier</u>
Total Phenol by 4AAP	16.7	U	16.2	96.8	1	15.4-151	

## QUALITY CONTROL SUMMARY

L1557863-20

## Method Blank (MB)

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

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

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

## 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 %	<u>DUP Qualifier</u>	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 %	<u>LCS Qualifier</u>
Total Phenol by 4AAP	8.33	8.51	102	72.1-129	

<sup>7</sup>Gl<sup>8</sup>Al<sup>9</sup>Sc

## 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 %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	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.	<sup>1</sup> Cp
RDL	Reported Detection Limit.	<sup>2</sup> Tc
Rec.	Recovery.	<sup>3</sup> Ss
RPD	Relative Percent Difference.	<sup>4</sup> Cn
SDG	Sample Delivery Group.	<sup>5</sup> Sr
U	Not detected at the Reporting Limit (or MDL where applicable).	<sup>6</sup> Qc
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.	<sup>7</sup> Gl
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.	<sup>8</sup> Al
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.	<sup>9</sup> Sc
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

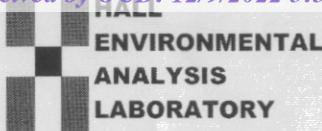
Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey—NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>16</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>14</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

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



## CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 2

E204

Page 130 of 135

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

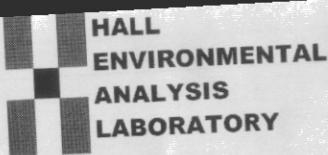
SUB CONTRACTOR:	Pace TN	COMPANY:	PACE TN	PHONE:	(800) 767-5859	FAX:	(615) 758-5859
ADDRESS:	12065 Lebanon Rd			ACCOUNT #:		EMAIL:	
CITY, STATE, ZIP:	Mt. Juliet, TN 37122						

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

## 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	REPORT TRANSMITTAL DESIRED:		
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	<input type="checkbox"/> HARDCOPY (extra cost)	<input type="checkbox"/> FAX	<input type="checkbox"/> EMAIL
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	<input type="checkbox"/> ONLINE		
						FOR LAB USE ONLY		
						Temp of samples	°C	Attempt to Cool?
						Comments: _____		
TAT: Standard <input checked="" type="checkbox"/>	RUSH <input type="checkbox"/>	Next BD <input type="checkbox"/>	2nd BD <input type="checkbox"/>	3rd BD <input type="checkbox"/>				



## 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 CONTRACTOR:	Pace TN	COMPANY:	PACE TN		PHONE:	(800) 767-5859	FAX:	(615) 758-5859
ADDRESS:	12065 Lebanon Rd				ACCOUNT #:			
CITY, STATE, ZIP:	Mt. Juliet, TN 37122				EMAIL:			
U587863								
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:	REPORT TRANSMITTAL DESIRED:		
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	<input type="checkbox"/> HARDCOPY (extra cost)	<input type="checkbox"/> FAX	<input type="checkbox"/> EMAIL
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	ONLINE		
FOR LAB USE ONLY								
Temp of samples _____						Attempt to Cool? _____		
Comments: _____								
TAT:	Standard	RUSH	Next BD <input type="checkbox"/>	2nd BD <input type="checkbox"/>	3rd BD <input type="checkbox"/>			

**Jones, Brad, EMNRD**

---

**From:** Jones, Brad, EMNRD  
**Sent:** Tuesday, March 26, 2024 8:58 AM  
**To:** Luka, Kateri A.; Stuart Hyde  
**Subject:** NM2-10 Bista Landfarm Release Response Action Plan  
**Attachments:** 2024 0326 NM2-10 Western Refining Company LP release response plan approval signed.pdf

Kateri and Stuart,

Please see the attached. OCD has completed the review of the December 22, 2022, Release Response Action Plan. If you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely,

Brad Jones

**Brad A. Jones** Environmental Scientist Specialist - Advanced Environmental Bureau  
EMNRD - Oil Conservation Division  
1220 S. Saint Francis Drive | Santa Fe, New Mexico 87505  
(505) 469-7486 | [brad.a.jones@emnrd.nm.gov](mailto:brad.a.jones@emnrd.nm.gov)  
[www.emnrd.nm.gov](http://www.emnrd.nm.gov)

State of New Mexico  
Energy, Minerals and Natural Resources Department

**Michelle Lujan Grisham**  
Governor

**Dylan M. Fuge**  
Deputy Secretary

**Dylan Fuge**, Division Director (Acting)  
Oil Conservation Division



**BY ELECTRONIC MAIL**

March 26, 2024

Ms. Kateri Luka  
Western Refining Company LP  
111 County Road 4990  
Bloomfield, New Mexico 87413  
[kaluka@marathonpetroleum.com](mailto:kaluka@marathonpetroleum.com)

**RE: Release Response Action Plan**  
**Western Refining Company LP – OGRID # 264727**  
**Bisti Landfarm – NM2-010**  
**Location: NW/4 SE/4 of Section 16, Township 25 North, Range 12 West, NMPM,**  
**San Juan County, New Mexico**

Dear Ms. Luka:

The Oil Conservation Division (OCD) has completed our review of Western Refining Company LP's (Western) vadose zone Release Response Action Plan, Dated December 22, 2022, for existing centralized surface waste management facility Permit NM2-10. The OCD hereby grants Western approval of the December 22, 2022, vadose zone Release Response Action Plan, with the following understandings and conditions:

1. Western shall comply with all applicable requirements of the Oil and Gas Act (Chapter 70, Article 2 NMSA 1978), the existing permit NM2-010, the transitional provisions of 19.15.36.20 NMAC, and all conditions specified in this approval;
2. Western shall comply with the applicable requirements of 19.15.29 NMAC;
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;

Western Refining Company LP  
Permit NM2-10  
March 26, 2024  
Page 2 of 2

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

Please be advised that approval of this request does not relieve Western of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve Western of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact me at (505) 469-7486 or [brad.a.jones@emnrd.nm.gov](mailto:brad.a.jones@emnrd.nm.gov).

Respectfully,



Brad A. Jones  
Environmental Specialist - Advanced

cc: Stuart Hyde, Ensolum, LLC, [shyde@ensolum.com](mailto:shyde@ensolum.com)

**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

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## State of New Mexico

### Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. Santa Fe, NM 87505

CONDITIONS

Action 165834

#### CONDITIONS

Operator:  Western Refining Southwest LLC 539 South Main Street Findlay, OH 45840	OGRID:  267595
	Action Number:  165834
	Action Type: [C-137] Non-Fee SWMF Submittal (SWMF NON-FEE SUBMITTAL)

#### CONDITIONS

Created By	Condition	Condition Date
bjones	OCD emailed the approval of the release response action plan to Kateri Luka (Western/Marathon) and Stuart Hyde (Ensolum) on March 26, 2024. Please see the OCD's Response.	3/26/2024