Non responsive based on revised scope

September 9, 2019

Non responsive based on revised scope
Environmental Restoration, LLC
1666 Fabick Drive
Fenton, MO 63026

Certificate of Analysis

Revised Report - 9/9/2019 9:48:15 AM - See workorder comment section for explanation

Project Name:	**Soil Samples**	Workorder:	**3053060**
Purchase Order:		Workorder ID:	**Shiloh Church Rd/35467**

Dear Non responsive based on rev:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, August 28, 2019.

The Non responsive based on revised scope is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Non responsive based on revised scope

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the Non responsive based on revised scope

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This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Project Coordinator

Non responsive based on revised scope

Non responsive based on revised scope

[redacted]

SAMPLE SUMMARY

Workorder: 3053060 Shiloh Church Rd/35467

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3053060001	Area 02	Solid	8/20/2019 11:45	8/28/2019 15:00	Collected by Client

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[redacted]

SAMPLE SUMMARY

Workorder: 3053060 Shiloh Church Rd/35467

Notes

- Samples collected by [redacted] personnel are done so in accordance with the procedures set forth in the [redacted] Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All L brary Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Sp ke
MSD	Matrix Sp ke Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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[redacted]

ANALYTICAL RESULTS

Workorder: 3053060 Shiloh Church Rd/35467

Lab ID: **3053060001** Date Collected: 8/20/2019 11:45 Matrix: Solid

Sample ID: **Area 02** Date Received: 8/28/2019 15:00

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP VOLATILE ORGANICS									Non responsiv	
Benzene	ND		ug/L	20.0	SW846 8260C			9/3/19 20:40	[redacted]	A
2-Butanone	ND		ug/L	200	SW846 8260C			9/3/19 20:40	[redacted]	A
Carbon Tetrachloride	ND		ug/L	20.0	SW846 8260C			9/3/19 20:40	[redacted]	A
Chlorobenzene	ND		ug/L	20.0	SW846 8260C			9/3/19 20:40	[redacted]	A
Chloroform	ND		ug/L	20.0	SW846 8260C			9/3/19 20:40	[redacted]	A
1,2-Dichloroethane	ND		ug/L	20.0	SW846 8260C			9/3/19 20:40	[redacted]	A
1,1-Dichloroethene	ND		ug/L	20.0	SW846 8260C			9/3/19 20:40	[redacted]	A
Tetrachloroethene	ND		ug/L	20.0	SW846 8260C			9/3/19 20:40	[redacted]	A
Trichloroethene	ND		ug/L	20.0	SW846 8260C			9/3/19 20:40	[redacted]	A
Vinyl Chloride	ND		ug/L	20.0	SW846 8260C			9/3/19 20:40	[redacted]	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	[redacted]	*Cntr*
1,2-Dichloroethane-d4 (S)	104		%	62 - 133	SW846 8260C			9/3/19 20:40	[redacted]	A
4-Bromofluorobenzene (S)	106		%	79 - 114	SW846 8260C			9/3/19 20:40	[redacted]	A
D bromofluoromethane (S)	100		%	78 - 116	SW846 8260C			9/3/19 20:40	[redacted]	A
Toluene-d8 (S)	98		%	76 - 127	SW846 8260C			9/3/19 20:40	[redacted]	A
PCBs										
Total Polychlorinated Biphenyl	30.2		mg/kg	17.8	SW846 8082A	8/22/19 16:15	S7M	8/25/19 23:26	[redacted]	A
Aroclor-1016	ND	1	mg/kg	2.0	SW846 8082A	8/22/19 16:15	S7M	8/25/19 23:26	[redacted]	A
Aroclor-1221	ND		mg/kg	2.0	SW846 8082A	8/22/19 16:15	S7M	8/25/19 23:26	[redacted]	A
Aroclor-1232	ND		mg/kg	2.0	SW846 8082A	8/22/19 16:15	S7M	8/25/19 23:26	[redacted]	A
Aroclor-1242	ND		mg/kg	2.0	SW846 8082A	8/22/19 16:15	S7M	8/25/19 23:26	[redacted]	A
Aroclor-1248	ND		mg/kg	2.0	SW846 8082A	8/22/19 16:15	S7M	8/25/19 23:26	[redacted]	A
Aroclor-1254	30.2		mg/kg	2.0	SW846 8082A	8/22/19 16:15	S7M	8/25/19 23:26	[redacted]	A
Aroclor-1260	ND		mg/kg	2.0	SW846 8082A	8/22/19 16:15	S7M	8/25/19 23:26	[redacted]	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	[redacted]	*Cntr*
Decachlorobiphenyl (S)	0	3	%	49 - 115	SW846 8082A	8/22/19 16:15	S7M	8/25/19 23:26	[redacted]	A
Tetrachloro-m-xylene (S)	0	2	%	27 - 137	SW846 8082A	8/22/19 16:15	S7M	8/25/19 23:26	[redacted]	A
WET CHEMISTRY										
Cyanide, Reactive	ND		ppm	10	SW-846 7.3CN	9/3/19 13:30	VXF	9/3/19 19:11	[redacted]	A
Ignitability	Not Ignitable	4			SW846 1030			9/4/19 09:00	[redacted]	A
Moisture	17.7		%	0.1	S2540G-11			8/22/19 11:00	[redacted]	
pH	7.54	5	pH_Units		SW846 9045D			8/31/19 07:09	[redacted]	A
Sulfide, Reactive	8.8		ppm	6.2	SW846 7.3	9/3/19 13:30	VXF	9/3/19 19:51	[redacted]	A
Total Solids	82.3		%	0.1	S2540G-11			8/22/19 11:00	[redacted]	

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[redacted]

ANALYTICAL RESULTS

Workorder: 3053060 Shiloh Church Rd/35467

Lab ID: **3053060001** Date Collected: 8/20/2019 11:45 Matrix: Solid

Sample ID: **Area 02** Date Received: 8/28/2019 15:00

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
TCLP METALS									Non responsive	
Arsenic, Total	ND		mg/L	0.56	SW846 6010C	8/23/19 13:50	AHI	8/26/19 16:09	[redacted]	A1
Barium, Total	ND		mg/L	11.2	SW846 6010C	8/23/19 13:50	AHI	8/26/19 16:09	[redacted]	A1
Cadmium, Total	1.4		mg/L	0.044	SW846 6010C	8/23/19 13:50	AHI	8/26/19 16:09	[redacted]	A1
Chromium, Total	ND		mg/L	0.11	SW846 6010C	8/23/19 13:50	AHI	8/26/19 16:09	[redacted]	A1
Lead, Total	1560		mg/L	0.13	SW846 6010C	8/23/19 13:50	AHI	8/26/19 16:09	[redacted]	A1
Selenium, Total	ND		mg/L	0.44	SW846 6010C	8/23/19 13:50	AHI	8/26/19 16:09	[redacted]	A1
Silver, Total	ND		mg/L	0.089	SW846 6010C	8/23/19 13:50	AHI	8/26/19 16:09	[redacted]	A1
TCLP SEMI-VOLATILES										
mp-Cresol	ND		ug/L	60.0	SW846 8270D	9/3/19 11:25	MXL	9/4/19 01:01	[redacted]	A
o-Cresol	ND		ug/L	60.0	SW846 8270D	9/3/19 11:25	MXL	9/4/19 01:01	[redacted]	A
1,4-Dichlorobenzene	ND		ug/L	60.0	SW846 8270D	9/3/19 11:25	MXL	9/4/19 01:01	[redacted]	A
2,4-Dinitrotoluene	ND		ug/L	60.0	SW846 8270D	9/3/19 11:25	MXL	9/4/19 01:01	[redacted]	A
Hexachlorobenzene	ND		ug/L	60.0	SW846 8270D	9/3/19 11:25	MXL	9/4/19 01:01	[redacted]	A
Hexachlorobutadiene	ND		ug/L	60.0	SW846 8270D	9/3/19 11:25	MXL	9/4/19 01:01	[redacted]	A
Hexachloroethane	ND		ug/L	60.0	SW846 8270D	9/3/19 11:25	MXL	9/4/19 01:01	[redacted]	A
Nitrobenzene	ND		ug/L	60.0	SW846 8270D	9/3/19 11:25	MXL	9/4/19 01:01	[redacted]	A
Pentachlorophenol	ND		ug/L	120	SW846 8270D	9/3/19 11:25	MXL	9/4/19 01:01	[redacted]	A
Pyridine	ND		ug/L	60.0	SW846 8270D	9/3/19 11:25	MXL	9/4/19 01:01	[redacted]	A
2,4,5-Trichlorophenol	ND		ug/L	60.0	SW846 8270D	9/3/19 11:25	MXL	9/4/19 01:01	[redacted]	A
2,4,6-Trichlorophenol	ND		ug/L	60.0	SW846 8270D	9/3/19 11:25	MXL	9/4/19 01:01	[redacted]	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*		*Cntr*
2,4,6-Tr bromophenol (S)	91.2		%	47 - 128	SW846 8270D	9/3/19 11:25	MXL	9/4/19 01:01	[redacted]	A
2-Fluorobiphenyl (S)	71.6		%	52 - 118	SW846 8270D	9/3/19 11:25	MXL	9/4/19 01:01	[redacted]	A
2-Fluorophenol (S)	61.8		%	20 - 87	SW846 8270D	9/3/19 11:25	MXL	9/4/19 01:01	[redacted]	A
Nitrobenzene-d5 (S)	83.4		%	27 - 139	SW846 8270D	9/3/19 11:25	MXL	9/4/19 01:01	[redacted]	A
Phenol-d5 (S)	39.8		%	10 - 81	SW846 8270D	9/3/19 11:25	MXL	9/4/19 01:01	[redacted]	A
Terphenyl-d14 (S)	97.1		%	46 - 133	SW846 8270D	9/3/19 11:25	MXL	9/4/19 01:01	[redacted]	A

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[redacted]

Project Coordinator

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[redacted]

ANALYTICAL RESULTS

Workorder: 3053060 Shiloh Church Rd/35467

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3053060001	1	Area 02	SW846 8082A	Aroclor-1016
This sample was analyzed at a dilution in the 8082 PCB analysis due to the level of Aroclor detected. Reporting limits were adjusted accordingly. One or more of the surrogates could not be evaluated as a result of the dilution.				
3053060001	2	Area 02	SW846 8082A	Tetrachloro-m-xylene
The surrogate Tetrachloro-m-xylene for method SW846 8082A was outside of control limits. The % Recovery was reported as 0 and the control limits were 27 to 137. This result was reported at a dilution of 50.				
3053060001	3	Area 02	SW846 8082A	Decachlorobiphenyl
The surrogate Decachlorobiphenyl for method SW846 8082A was outside of control limits. The % Recovery was reported as 0 and the control limits were 49 to 115. This result was reported at a dilution of 50.				
3053060001	4	Area 02	SW846 1030	Ignitability
According to Pa/USEPA regulations, this sample is not considered to be ignitable. (Ref 40 CFR 261.21)				
3053060001	5	Area 02	SW846 9045D	pH
The solid pH measured in water was 7.540 at 20.5 degrees C.				

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[redacted]

ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3053060 Shiloh Church Rd/35467

Lab ID	Sample ID	Analysis Method	Prep Method
3053060001	Area 02	S2540G-11	
3053060001	Area 02	SW-846 7.3CN	SW-846 7.3CN
3053060001	Area 02	SW846 1030	
3053060001	Area 02	SW846 6010C	SW846 3015
3053060001	Area 02	SW846 7.3	SW846 7.3
3053060001	Area 02	SW846 8082A	SW846 3546
3053060001	Area 02	SW846 8260C	
3053060001	Area 02	SW846 8270D	SW846 3510C
3053060001	Area 02	SW846 9045D	

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[redacted]

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. - INSTRUCTIONS ON THE BACK.

CO
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of

* 3 0 5 3 0 6 0 *

[redacted]

Client Name: ENVIRONMENTAL Restoration
Address: 1666 Fabick Drive
Fenton, Mo 63026
Contact: [redacted]
Phone#:
Project Name/#: Shiloh Church Road/33467
Bill To:

TAT: ☐ Normal-Standard TAT is 10-12 business days.
☒ Rush-Subject to [redacted] approval and surcharges. STAT
Date Required: 8/27/19 Approved?
Email? ☒ Y [redacted]
Fax? ☐ Y No.:

Container Type: Glass
Container Size: 16oz
Preservative: N/A

ANALYSES/METHOD REQUESTED: PCB; TCLP Metals No Hg

(completed by receiving lab)
W.O. Temp: 1 Therm ID: 525
Analyst Initials:
Courier/Tracking #:
Purchase Order #:
Project Comments: No Mercury TCLP Analyses

[redacted] Field Services: ☐ Pickup ☐ Labor
☐ Composite Sampling ☐ Rental Equipment
Other:

	Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	*G or C	**Matrix	Enter Number of Containers Per Sample or Field Results Below.										Sample/COC Comments
1	AREA 08	8/20/19	1145	C	SO	X										Hold Sample 60 Days
2																
3																
4																
5																
6																
7																
8																
9																
10																

SA[redacted]

Sampler Comments: NO Hg ANALYSES

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[redacted] ETL	8/20/19	1330	2			
3				4	[redacted]	8/21/19	0914
5				6			
7				8			
9				10			

Data Deliverables: ☒ Standard ☐ CLP-like ☐ USACE/DOD ☐

Special Processing: USACE ☐ ☐ ☐ ☐

State Samples Collected In: ☐ NY ☐ NJ ☐ PA ☒ other: VA

Reportable to PADEP? Yes ☐ No ☒
PWSID #

Sample Disposal: Lab ☒ Special ☐

EDDS: Format Type-

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

[redacted]

Rev 04/18

[redacted]

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Condition of Sample Receipt Form

Client: Kiv Restoration | Work Order #: 3053060 | Initials: [redacted] Non responsive based | Date: 8/21/19

1. Were airbills / tracking numbers present and recorded?	NONE	YES	NO
Tracking number: 7760 2820 3413			
2. Are Custody Seals on shipping containers intact?	NONE	YES	NO
3. Are Custody Seals on sample containers intact?	NONE	YES	NO
4. Is there a COC (Chain-of-Custody) present?		YES	NO
5. Are the COC and bottle labels complete, legible and in agreement?		YES	NO
5a. Does the COC contain sample locations?		YES	NO
5b. Does the COC contain date and time of sample collection for all samples?		YES	NO
5c. Does the COC contain sample collectors name?		YES	NO
5d. Does the COC note the type(s) of preservation for all bottles?		YES	NO
5e. Does the COC note the number of bottles submitted for each sample? [redacted] Non responsive		YES	NO
5f. Does the COC note the type of sample, composite or grab?		YES	NO
5g. Does the COC note the matrix of the sample(s)?		YES	NO
6. Are all aqueous samples requiring preservation preserved correctly?	N/A	YES	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?		YES	NO
8. Are all samples within holding times for the requested analyses?		YES	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)		YES	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	N/A	YES	NO
11. Were the samples received on ice?		YES	NO
12. Were sample temperatures measured at 0.0-6.0°C		YES	NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below		YES	NO
13a. Are the samples required for SDWA compliance reporting?	N/A	YES	NO
13b. Did the client provide a SDWA PWS ID#?	N/A	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	N/A	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	N/A	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	N/A	YES	NO

Cooler #: _____

Temperature (°C): 1

Thermometer ID: 525

Radiological (µCi): _____

COMMENTS (Required for all NO responses above and any sample non-conformance):