UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
11201 Renner Boulevard
Lenexa, Kansas 66219

October 1, 2014

Vickie Jarvis
11174 Green Acres Road
Mineral Point, MO 63660

Dear Vickie Jarvis:

Attached find the analytical data package for the subsoil borrow area that was sampled on 18 September 2014. There were two samples taken at 0-2 ft and 2 – 3.5 ft. Results indicate that no EPA Regional Screening levels for the contaminants analyzed for were exceeded. The data package and a summary of the data is enclosed.

Please call me at (913)551-7005 if you have any other questions or concerns about this activity.

Sincerely,

Janice Kroone, On-Scene Coordinator
Planning and Preparedness North Section
Superfund Division

Enclosures: ALS Environmental Data Package
Analytical Data Summary for Proposed Borrow Area

01CR 40478864 2.0
Superfund
OU-01
Printed on Recycled Paper

Analytical Data Summary for Proposed Subsoil Borrow Area
Big River Mine Tailings - Operable Unit-1 Site, St Francois County, Missouri

sampled 18 Sep 2014

Laboratory Sample Identification Number	BRMT-SSF-01-091814	BRMT-SSF-02-091814	EPA Regional
Analytical Method	Subsoil (0-2 ft bgs)	Subsoil (2-3.5 ft bgs)	Screening Level for Residential Soil
Semivolatile Organic Compounds (µg/kg)			
Acenaphthene	7.3 J	8.3 U	350,000
Benzo(a)anthracene	8.1 U	9.1	150
Bis(2-ethylhexyl) phthalate	32 J	31 J	38,000
Butyl benzyl phthalate	84 J	200 U	620,000 *
Chrysene	9.3	8.3 U	15,000
Di-n-butyl phthalate	8.1 J	410 U	620,000 *
Phenanthrene	6.1 J	4.6 J	1,700,000 **
Organochlorine Herbicides (µg/kg)			
2,4,5-TP (Silvex)	120 U	250	49,000
Organochlorine Pesticides (µg/kg)	No analytes detected		
Total Metals (mg/kg)			
Arsenic	9.7	15	22
Barium	120	140	15,000
Cadmium	0.11 J	0.17 J	70
Chromium	18	28	not established
Lead	31	38	100
Manganese	900	590	1800
Zinc	42	92	not established

NOTES:

bgs Below ground surface
ft feet
J Analyte is present at an estimated concentration between the method detection limit and the report limit.
mg/kg milligrams per kilogram
TP Trichlorophenoxypropionic acid
U Analyzed but not detected above the method detection limit.
µg/kg micrograms per kilogram

* The regional screening level for dibutyl phthalate is used for butyl benzyl phthalate and di-n-butyl phthalate.
** The regional screening level for anthracene is used for phenanthrene.

GPS Coordinates for Sampling Locations

	Latitude	Longitude
Trench #1	37.86953	-90.61591
Trench #2	37.86979	-90.61587
Trench #3	37.87004	-90.61617
Trench #4	37.87030	-90.61591
Trench #5	37.86966	-90.61568

ALS Environmental

30-Sep-2014

David Gray
Tetra Tech
415 Oak Street
Kansas City, MO 64106

Re: **Big River Mine Tailings 9.18.14** Work Order: **14091050**

Dear David,

ALS Environmental received 3 samples on 20-Sep-2014 10:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with NELAP standard requirements and QC results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 38.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Ann Preston

Electronically approved by: Ann Preston

Ann Preston
Project Manager

NELAP ACCREDITED TNI LABORATORY

Certificate No: MN 532786

ALS Group USA, Corp

Date: 30-Sep-14

Client: Tetra Tech
Project: Big River Mine Tailings 9.18.14
Work Order: **14091050**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
14091050-01	BRMT-SF-01-091814	Soil		9/18/2014 13:05	9/20/2014 10:30	☐
14091050-02	BRMT-SSF-01-091814	Soil		9/18/2014 10:50	9/20/2014 10:30	☐
14091050-03	BRMT-SSF-02-091814	Soil		9/18/2014 10:55	9/20/2014 10:30	☐

ALS Group USA, Corp

Date: 30-Sep-14

Client: Tetra Tech
Project: Big River Mine Tailings 9.18.14
Work Order: 14091050

Case Narrative

Samples for the above noted Work Order were received on 09/22/2014. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting.

With the following exceptions, all sample analyses achieved analytical criteria.

Extractable Organics :
Batch 63179 sample BRMT-SF-01-091814 MS recoveries for the surrogate, the compounds 2,4,5-T, 2,4,5-TP, Dicamba, and Dichloroprop and RPDs for many of the Herbicides were outside control limits. The surrogate recovery for the parent sample was also below control limits. The reporting limits for all compounds in the parent sample may be biased low.

Batch 63179 sample 14091050-03 Herbicide surrogate recovery was below the lower control limits. The reporting limits may be biased low for all compounds.

Batch 63192 MS/MSD data for Semi-Volatiles is not related to this project's samples. No data requires qualification.

Metals:
Batch 63099 MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Batch 63139 sample 14091050-03 reporting limits for Metals were elevated due to dilution for high concentrations of non-target analytes. The MS/MSD data for Metals is not related to this project's samples. No data requires qualification.

Wet Chemistry:
No deviations or anomalies noted.

ALS Group USA, Corp

Date: 30-Sep-14

Client: Tetra Tech
Project: Big River Mine Tailings 9.18.14
WorkOrder: **14091050**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
µg/Kg-dry	Micrograms per Kilogram Dry Weight
mg/Kg-dry	Milligrams per Kilogram Dry Weight

ALS Group USA, Corp

Date: *30-Sep-14*

Client: Tetra Tech
Project: Big River Mine Tailings 9.18.14
Sample ID: BRMT-SF-01-091814
Collection Date: 9/18/2014 01:05 PM

Work Order: 14091050
Lab ID: 14091050-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
HERBICIDES			Method:**SW8151**		Prep: SW8151M / 9/26/14		Analyst: **KYM**
2,4,5-T	U		1.1	57	µg/Kg-dry	1	9/29/2014 15:44
2,4,5-TP (Silvex)	U		0.76	110	µg/Kg-dry	1	9/29/2014 15:44
2,4-D	U		0.81	57	µg/Kg-dry	1	9/29/2014 15:44
2,4-DB	U		3.8	57	µg/Kg-dry	1	9/29/2014 15:44
Dalapon	U		3.8	57	µg/Kg-dry	1	9/29/2014 15:44
Dicamba	U		3.8	57	µg/Kg-dry	1	9/29/2014 15:44
Dichlorprop	U		3.8	57	µg/Kg-dry	1	9/29/2014 15:44
Dinoseb	U		3.8	57	µg/Kg-dry	1	9/29/2014 15:44
MCPA	U		380	1,900	µg/Kg-dry	1	9/29/2014 15:44
MCPP	U		380	1,900	µg/Kg-dry	1	9/29/2014 15:44
Surr: DCAA	*25.4*	S		*30-150*	*%REC*	1	9/29/2014 15:44
PESTICIDES			Method:**SW8081**		Prep: SW3541 / 9/23/14		Analyst: **KYM**
4,4´-DDD	U		3.5	11	µg/Kg-dry	1	9/24/2014 03:08
4,4´-DDE	U		2.2	11	µg/Kg-dry	1	9/24/2014 03:08
4,4´-DDT	U		2.6	11	µg/Kg-dry	1	9/24/2014 03:08
Aldrin	U		1.0	11	µg/Kg-dry	1	9/24/2014 03:08
alpha-BHC	U		3.6	11	µg/Kg-dry	1	9/24/2014 03:08
alpha-Chlordane	U		3.1	11	µg/Kg-dry	1	9/24/2014 03:08
beta-BHC	U		4.2	11	µg/Kg-dry	1	9/24/2014 03:08
Chlordane, Technical	U		11	28	µg/Kg-dry	1	9/24/2014 03:08
delta-BHC	U		4.1	11	µg/Kg-dry	1	9/24/2014 03:08
Dieldrin	**12**		**0.94**	**11**	**µg/Kg-dry**	1	9/24/2014 03:08
Endosulfan I	U		1.4	11	µg/Kg-dry	1	9/24/2014 03:08
Endosulfan II	U		1.2	11	µg/Kg-dry	1	9/24/2014 03:08
Endosulfan sulfate	U		1.4	11	µg/Kg-dry	1	9/24/2014 03:08
Endrin	U		3.2	11	µg/Kg-dry	1	9/24/2014 03:08
Endrin aldehyde	U		2.7	11	µg/Kg-dry	1	9/24/2014 03:08
Endrin ketone	U		4.3	11	µg/Kg-dry	1	9/24/2014 03:08
gamma-BHC (Lindane)	U		5.1	11	µg/Kg-dry	1	9/24/2014 03:08
gamma-Chlordane	U		1.9	11	µg/Kg-dry	1	9/24/2014 03:08
Heptachlor	U		5.7	11	µg/Kg-dry	1	9/24/2014 03:08
Heptachlor epoxide	U		1.8	11	µg/Kg-dry	1	9/24/2014 03:08
Methoxychlor	U		2.7	11	µg/Kg-dry	1	9/24/2014 03:08
Toxaphene	U		13	67	µg/Kg-dry	1	9/24/2014 03:08
Surr: Decachlorobiphenyl	*87.1*			*45-135*	*%REC*	1	9/24/2014 03:08
Surr: Tetrachloro-m-xylene	*84.1*			*45-124*	*%REC*	1	9/24/2014 03:08
METALS BY ICP-MS			Method:**SW6020A**		Prep: SW3050B / 9/23/14		Analyst: **ML**

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *30-Sep-14*

Client: Tetra Tech
Project: Big River Mine Tailings 9.18.14
Sample ID: BRMT-SF-01-091814
Collection Date: 9/18/2014 01:05 PM

Work Order: 14091050
Lab ID: 14091050-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Arsenic	**3.3**		**0.22**	**1.6**	**mg/Kg-dry**	4	9/23/2014 22:03
Barium	**99**		**0.046**	**1.6**	**mg/Kg-dry**	4	9/23/2014 22:03
Cadmium	**0.25**	J	**0.0065**	**0.65**	**mg/Kg-dry**	4	9/23/2014 22:03
Chromium	**7.9**		**0.27**	**1.6**	**mg/Kg-dry**	4	9/23/2014 22:03
Lead	**10**		**0.0065**	**1.6**	**mg/Kg-dry**	4	9/23/2014 22:03
Manganese	**290**		**0.14**	**1.6**	**mg/Kg-dry**	4	9/23/2014 22:03
Zinc	**37**		**0.14**	**3.3**	**mg/Kg-dry**	4	9/23/2014 22:03
SEMI-VOLATILE ORGANIC COMPOUNDS			Method: **SW846 8270D**		Prep: SW3541 / 9/25/14		Analyst: **JG**
1,1`-Biphenyl	U		5.6	380	µg/Kg-dry	1	9/26/2014 01:31
2,4,5-Trichlorophenol	U		9.5	180	µg/Kg-dry	1	9/26/2014 01:31
2,4,6-Trichlorophenol	U		6.4	180	µg/Kg-dry	1	9/26/2014 01:31
2,4-Dichlorophenol	U		11	180	µg/Kg-dry	1	9/26/2014 01:31
2,4-Dimethylphenol	U		61	380	µg/Kg-dry	1	9/26/2014 01:31
2,4-Dinitrophenol	U		34	750	µg/Kg-dry	1	9/26/2014 01:31
2,4-Dinitrotoluene	U		12	180	µg/Kg-dry	1	9/26/2014 01:31
2,6-Dinitrotoluene	U		20	180	µg/Kg-dry	1	9/26/2014 01:31
2-Chloronaphthalene	U		1.8	7.6	µg/Kg-dry	1	9/26/2014 01:31
2-Chlorophenol	U		11	180	µg/Kg-dry	1	9/26/2014 01:31
2-Methylnaphthalene	**9.9**		**3.1**	**7.6**	**µg/Kg-dry**	1	9/26/2014 01:31
2-Methylphenol	U		15	180	µg/Kg-dry	1	9/26/2014 01:31
2-Nitroaniline	U		15	750	µg/Kg-dry	1	9/26/2014 01:31
2-Nitrophenol	U		13	180	µg/Kg-dry	1	9/26/2014 01:31
3&4-Methyphenol	U		18	180	µg/Kg-dry	1	9/26/2014 01:31
3,3´-Dichlorobenzidine	U		470	750	µg/Kg-dry	1	9/26/2014 01:31
3-Nitroaniline	U		13	750	µg/Kg-dry	1	9/26/2014 01:31
4,6-Dinitro-2-methylphenol	U		31	380	µg/Kg-dry	1	9/26/2014 01:31
4-Bromophenyl phenyl ether	U		10	180	µg/Kg-dry	1	9/26/2014 01:31
4-Chloro-3-methylphenol	U		8.8	180	µg/Kg-dry	1	9/26/2014 01:31
4-Chloroaniline	U		11	750	µg/Kg-dry	1	9/26/2014 01:31
4-Chlorophenyl phenyl ether	U		11	180	µg/Kg-dry	1	9/26/2014 01:31
4-Nitroaniline	U		10	750	µg/Kg-dry	1	9/26/2014 01:31
4-Nitrophenol	U		7.5	750	µg/Kg-dry	1	9/26/2014 01:31
Acenaphthene	**27**		**1.1**	**7.6**	**µg/Kg-dry**	1	9/26/2014 01:31
Acenaphthylene	U		1.4	7.6	µg/Kg-dry	1	9/26/2014 01:31
Acetophenone	U		5.7	380	µg/Kg-dry	1	9/26/2014 01:31
Anthracene	**3.4**	J	**1.5**	**7.6**	**µg/Kg-dry**	1	9/26/2014 01:31
Atrazine	U		11	380	µg/Kg-dry	1	9/26/2014 01:31
Benzaldehyde	U		14	380	µg/Kg-dry	1	9/26/2014 01:31
Benzo(a)anthracene	**13**		**1.5**	**7.6**	**µg/Kg-dry**	1	9/26/2014 01:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *30-Sep-14*

Client: Tetra Tech
Project: Big River Mine Tailings 9.18.14
Sample ID: BRMT-SF-01-091814
Collection Date: 9/18/2014 01:05 PM

Work Order: 14091050
Lab ID: 14091050-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzo(a)pyrene	U		2.5	7.6	µg/Kg-dry	1	9/26/2014 01:31
Benzo(b)fluoranthene	U		2.2	7.6	µg/Kg-dry	1	9/26/2014 01:31
Benzo(g,h,i)perylene	U		3.0	7.6	µg/Kg-dry	1	9/26/2014 01:31
Benzo(k)fluoranthene	U		1.6	7.6	µg/Kg-dry	1	9/26/2014 01:31
Bis(2-chloroethoxy)methane	U		12	180	µg/Kg-dry	1	9/26/2014 01:31
Bis(2-chloroethyl)ether	U		12	180	µg/Kg-dry	1	9/26/2014 01:31
Bis(2-chloroisopropyl)ether	U		16	180	µg/Kg-dry	1	9/26/2014 01:31
Bis(2-ethylhexyl)phthalate	**41**	J	**12**	**380**	**µg/Kg-dry**	1	9/26/2014 01:31
Butyl benzyl phthalate	**27**	J	**14**	**180**	**µg/Kg-dry**	1	9/26/2014 01:31
Caprolactam	U		17	380	µg/Kg-dry	1	9/26/2014 01:31
Carbazole	U		11	180	µg/Kg-dry	1	9/26/2014 01:31
Chrysene	**7.2**	J	**1.8**	**7.6**	**µg/Kg-dry**	1	9/26/2014 01:31
Dibenzo(a,h)anthracene	U		2.8	7.6	µg/Kg-dry	1	9/26/2014 01:31
Dibenzofuran	U		12	180	µg/Kg-dry	1	9/26/2014 01:31
Diethyl phthalate	U		12	380	µg/Kg-dry	1	9/26/2014 01:31
Dimethyl phthalate	U		13	380	µg/Kg-dry	1	9/26/2014 01:31
Di-n-butyl phthalate	U		5.5	380	µg/Kg-dry	1	9/26/2014 01:31
Di-n-octyl phthalate	U		12	180	µg/Kg-dry	1	9/26/2014 01:31
Fluoranthene	**13**		**2.7**	**7.6**	**µg/Kg-dry**	1	9/26/2014 01:31
Fluorene	U		2.5	7.6	µg/Kg-dry	1	9/26/2014 01:31
Hexachlorobenzene	U		11	180	µg/Kg-dry	1	9/26/2014 01:31
Hexachlorobutadiene	U		13	180	µg/Kg-dry	1	9/26/2014 01:31
Hexachlorocyclopentadiene	U		12	380	µg/Kg-dry	1	9/26/2014 01:31
Hexachloroethane	U		18	180	µg/Kg-dry	1	9/26/2014 01:31
Indeno(1,2,3-cd)pyrene	U		2.5	7.6	µg/Kg-dry	1	9/26/2014 01:31
Isophorone	U		13	180	µg/Kg-dry	1	9/26/2014 01:31
Naphthalene	**7.2**	J	**2.8**	**7.6**	**µg/Kg-dry**	1	9/26/2014 01:31
Nitrobenzene	U		15	180	µg/Kg-dry	1	9/26/2014 01:31
N-Nitrosodi-n-propylamine	U		15	180	µg/Kg-dry	1	9/26/2014 01:31
N-Nitrosodiphenylamine	U		68	180	µg/Kg-dry	1	9/26/2014 01:31
Pentachlorophenol	U		7.3	380	µg/Kg-dry	1	9/26/2014 01:31
Phenanthrene	**11**		**1.5**	**7.6**	**µg/Kg-dry**	1	9/26/2014 01:31
Phenol	U		13	180	µg/Kg-dry	1	9/26/2014 01:31
Pyrene	**11**		**2.6**	**7.6**	**µg/Kg-dry**	1	9/26/2014 01:31
Surr: 2,4,6-Tribromophenol	*85.9*			*34-140*	*%REC*	1	9/26/2014 01:31
Surr: 2-Fluorobiphenyl	*70.7*			*12-100*	*%REC*	1	9/26/2014 01:31
Surr: 2-Fluorophenol	*67.5*			*33-117*	*%REC*	1	9/26/2014 01:31
Surr: 4-Terphenyl-d14	*98.4*			*25-137*	*%REC*	1	9/26/2014 01:31
Surr: Nitrobenzene-d5	*56.0*			*37-107*	*%REC*	1	9/26/2014 01:31
Surr: Phenol-d6	*69.0*			*40-106*	*%REC*	1	9/26/2014 01:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *30-Sep-14*

Client: Tetra Tech
Project: Big River Mine Tailings 9.18.14
Sample ID: BRMT-SF-01-091814
Collection Date: 9/18/2014 01:05 PM

Work Order: 14091050
Lab ID: 14091050-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MOISTURE		Method: **A2540 G**					Analyst: **RLM**
Moisture	**15**		**0.025**	**0.050**	**% of sample**	1	9/24/2014 17:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *30-Sep-14*

Client: Tetra Tech
Project: Big River Mine Tailings 9.18.14
Sample ID: BRMT-SSF-01-091814
Collection Date: 9/18/2014 10:50 AM

Work Order: 14091050
Lab ID: 14091050-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
HERBICIDES			Method:**SW8151**		Prep: SW8151M / 9/26/14		Analyst: **KYM**
2,4,5-T	U		1.2	61	µg/Kg-dry	1	9/29/2014 16:38
2,4,5-TP (Silvex)	U		0.81	120	µg/Kg-dry	1	9/29/2014 16:38
2,4-D	U		0.87	61	µg/Kg-dry	1	9/29/2014 16:38
2,4-DB	U		4.0	61	µg/Kg-dry	1	9/29/2014 16:38
Dalapon	U		4.0	61	µg/Kg-dry	1	9/29/2014 16:38
Dicamba	U		4.0	61	µg/Kg-dry	1	9/29/2014 16:38
Dichlorprop	U		4.0	61	µg/Kg-dry	1	9/29/2014 16:38
Dinoseb	U		4.0	61	µg/Kg-dry	1	9/29/2014 16:38
MCPA	U		400	2,100	µg/Kg-dry	1	9/29/2014 16:38
MCPP	U		400	2,100	µg/Kg-dry	1	9/29/2014 16:38
Surr: DCAA	*75.0*			*30-150*	*%REC*	1	9/29/2014 16:38
PESTICIDES			Method:**SW8081**		Prep: SW3541 / 9/23/14		Analyst: **KYM**
4,4´-DDD	U		3.8	12	µg/Kg-dry	1	9/24/2014 03:24
4,4´-DDE	U		2.3	12	µg/Kg-dry	1	9/24/2014 03:24
4,4´-DDT	U		2.8	12	µg/Kg-dry	1	9/24/2014 03:24
Aldrin	U		1.1	12	µg/Kg-dry	1	9/24/2014 03:24
alpha-BHC	U		3.8	12	µg/Kg-dry	1	9/24/2014 03:24
alpha-Chlordane	U		3.3	12	µg/Kg-dry	1	9/24/2014 03:24
beta-BHC	U		4.5	12	µg/Kg-dry	1	9/24/2014 03:24
Chlordane, Technical	U		12	30	µg/Kg-dry	1	9/24/2014 03:24
delta-BHC	U		4.4	12	µg/Kg-dry	1	9/24/2014 03:24
Dieldrin	U		1.0	12	µg/Kg-dry	1	9/24/2014 03:24
Endosulfan I	U		1.6	12	µg/Kg-dry	1	9/24/2014 03:24
Endosulfan II	U		1.3	12	µg/Kg-dry	1	9/24/2014 03:24
Endosulfan sulfate	U		1.5	12	µg/Kg-dry	1	9/24/2014 03:24
Endrin	U		3.5	12	µg/Kg-dry	1	9/24/2014 03:24
Endrin aldehyde	U		2.9	12	µg/Kg-dry	1	9/24/2014 03:24
Endrin ketone	U		4.6	12	µg/Kg-dry	1	9/24/2014 03:24
gamma-BHC (Lindane)	U		5.5	12	µg/Kg-dry	1	9/24/2014 03:24
gamma-Chlordane	U		2.0	12	µg/Kg-dry	1	9/24/2014 03:24
Heptachlor	U		6.1	12	µg/Kg-dry	1	9/24/2014 03:24
Heptachlor epoxide	U		1.9	12	µg/Kg-dry	1	9/24/2014 03:24
Methoxychlor	U		2.9	12	µg/Kg-dry	1	9/24/2014 03:24
Toxaphene	U		14	72	µg/Kg-dry	1	9/24/2014 03:24
Surr: Decachlorobiphenyl	*88.1*			*45-135*	*%REC*	1	9/24/2014 03:24
Surr: Tetrachloro-m-xylene	*82.1*			*45-124*	*%REC*	1	9/24/2014 03:24
METALS BY ICP-MS			Method:**SW6020A**		Prep: SW3050B / 9/23/14		Analyst: **ML**

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *30-Sep-14*

Client: Tetra Tech
Project: Big River Mine Tailings 9.18.14
Sample ID: BRMT-SSF-01-091814
Collection Date: 9/18/2014 10:50 AM

Work Order: 14091050
Lab ID: 14091050-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Arsenic	**9.7**		**0.22**	**1.6**	**mg/Kg-dry**	4	9/23/2014 22:09
Barium	**120**		**0.045**	**1.6**	**mg/Kg-dry**	4	9/23/2014 22:09
Cadmium	**0.11**	J	**0.0064**	**0.64**	**mg/Kg-dry**	4	9/23/2014 22:09
Chromium	**18**		**0.26**	**1.6**	**mg/Kg-dry**	4	9/23/2014 22:09
Lead	**31**		**0.0064**	**1.6**	**mg/Kg-dry**	4	9/23/2014 22:09
Manganese	**900**		**1.4**	**16**	**mg/Kg-dry**	40	9/24/2014 15:08
Zinc	**42**		**0.14**	**3.2**	**mg/Kg-dry**	4	9/23/2014 22:09
SEMI-VOLATILE ORGANIC COMPOUNDS			Method:**SW846 8270D**		Prep: SW3541 / 9/25/14		Analyst: **JG**
1,1`-Biphenyl	U		6.0	400	µg/Kg-dry	1	9/26/2014 01:57
2,4,5-Trichlorophenol	U		10	190	µg/Kg-dry	1	9/26/2014 01:57
2,4,6-Trichlorophenol	U		6.8	190	µg/Kg-dry	1	9/26/2014 01:57
2,4-Dichlorophenol	U		12	190	µg/Kg-dry	1	9/26/2014 01:57
2,4-Dimethylphenol	U		65	400	µg/Kg-dry	1	9/26/2014 01:57
2,4-Dinitrophenol	U		36	800	µg/Kg-dry	1	9/26/2014 01:57
2,4-Dinitrotoluene	U		13	190	µg/Kg-dry	1	9/26/2014 01:57
2,6-Dinitrotoluene	U		21	190	µg/Kg-dry	1	9/26/2014 01:57
2-Chloronaphthalene	U		1.9	8.1	µg/Kg-dry	1	9/26/2014 01:57
2-Chlorophenol	U		12	190	µg/Kg-dry	1	9/26/2014 01:57
2-Methylnaphthalene	U		3.4	8.1	µg/Kg-dry	1	9/26/2014 01:57
2-Methylphenol	U		16	190	µg/Kg-dry	1	9/26/2014 01:57
2-Nitroaniline	U		16	800	µg/Kg-dry	1	9/26/2014 01:57
2-Nitrophenol	U		14	190	µg/Kg-dry	1	9/26/2014 01:57
3&4-Methyphenol	U		19	190	µg/Kg-dry	1	9/26/2014 01:57
3,3´-Dichlorobenzidine	U		500	800	µg/Kg-dry	1	9/26/2014 01:57
3-Nitroaniline	U		14	800	µg/Kg-dry	1	9/26/2014 01:57
4,6-Dinitro-2-methylphenol	U		33	400	µg/Kg-dry	1	9/26/2014 01:57
4-Bromophenyl phenyl ether	U		11	190	µg/Kg-dry	1	9/26/2014 01:57
4-Chloro-3-methylphenol	U		9.4	190	µg/Kg-dry	1	9/26/2014 01:57
4-Chloroaniline	U		12	800	µg/Kg-dry	1	9/26/2014 01:57
4-Chlorophenyl phenyl ether	U		12	190	µg/Kg-dry	1	9/26/2014 01:57
4-Nitroaniline	U		11	800	µg/Kg-dry	1	9/26/2014 01:57
4-Nitrophenol	U		8.0	800	µg/Kg-dry	1	9/26/2014 01:57
Acenaphthene	**7.3**	J	**1.2**	**8.1**	**µg/Kg-dry**	1	9/26/2014 01:57
Acenaphthylene	U		1.5	8.1	µg/Kg-dry	1	9/26/2014 01:57
Acetophenone	U		6.0	400	µg/Kg-dry	1	9/26/2014 01:57
Anthracene	U		1.6	8.1	µg/Kg-dry	1	9/26/2014 01:57
Atrazine	U		12	400	µg/Kg-dry	1	9/26/2014 01:57
Benzaldehyde	U		15	400	µg/Kg-dry	1	9/26/2014 01:57
Benzo(a)anthracene	U		1.6	8.1	µg/Kg-dry	1	9/26/2014 01:57

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *30-Sep-14*

Client: Tetra Tech
Project: Big River Mine Tailings 9.18.14
Sample ID: BRMT-SSF-01-091814
Collection Date: 9/18/2014 10:50 AM

Work Order: 14091050
Lab ID: 14091050-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzo(a)pyrene	U		2.6	8.1	µg/Kg-dry	1	9/26/2014 01:57
Benzo(b)fluoranthene	U		2.4	8.1	µg/Kg-dry	1	9/26/2014 01:57
Benzo(g,h,i)perylene	U		3.2	8.1	µg/Kg-dry	1	9/26/2014 01:57
Benzo(k)fluoranthene	U		1.7	8.1	µg/Kg-dry	1	9/26/2014 01:57
Bis(2-chloroethoxy)methane	U		13	190	µg/Kg-dry	1	9/26/2014 01:57
Bis(2-chloroethyl)ether	U		13	190	µg/Kg-dry	1	9/26/2014 01:57
Bis(2-chloroisopropyl)ether	U		17	190	µg/Kg-dry	1	9/26/2014 01:57
Bis(2-ethylhexyl)phthalate	**32**	J	**13**	**400**	**µg/Kg-dry**	1	9/26/2014 01:57
Butyl benzyl phthalate	**84**	J	**15**	**190**	**µg/Kg-dry**	1	9/26/2014 01:57
Caprolactam	U		18	400	µg/Kg-dry	1	9/26/2014 01:57
Carbazole	U		12	190	µg/Kg-dry	1	9/26/2014 01:57
Chrysene	**9.3**		**1.9**	**8.1**	**µg/Kg-dry**	1	9/26/2014 01:57
Dibenzo(a,h)anthracene	U		3.0	8.1	µg/Kg-dry	1	9/26/2014 01:57
Dibenzofuran	U		13	190	µg/Kg-dry	1	9/26/2014 01:57
Diethyl phthalate	U		13	400	µg/Kg-dry	1	9/26/2014 01:57
Dimethyl phthalate	U		14	400	µg/Kg-dry	1	9/26/2014 01:57
Di-n-butyl phthalate	**8.1**	J	**5.8**	**400**	**µg/Kg-dry**	1	9/26/2014 01:57
Di-n-octyl phthalate	U		13	190	µg/Kg-dry	1	9/26/2014 01:57
Fluoranthene	U		2.8	8.1	µg/Kg-dry	1	9/26/2014 01:57
Fluorene	U		2.7	8.1	µg/Kg-dry	1	9/26/2014 01:57
Hexachlorobenzene	U		11	190	µg/Kg-dry	1	9/26/2014 01:57
Hexachlorobutadiene	U		14	190	µg/Kg-dry	1	9/26/2014 01:57
Hexachlorocyclopentadiene	U		13	400	µg/Kg-dry	1	9/26/2014 01:57
Hexachloroethane	U		19	190	µg/Kg-dry	1	9/26/2014 01:57
Indeno(1,2,3-cd)pyrene	U		2.7	8.1	µg/Kg-dry	1	9/26/2014 01:57
Isophorone	U		13	190	µg/Kg-dry	1	9/26/2014 01:57
Naphthalene	U		3.0	8.1	µg/Kg-dry	1	9/26/2014 01:57
Nitrobenzene	U		16	190	µg/Kg-dry	1	9/26/2014 01:57
N-Nitrosodi-n-propylamine	U		15	190	µg/Kg-dry	1	9/26/2014 01:57
N-Nitrosodiphenylamine	U		72	190	µg/Kg-dry	1	9/26/2014 01:57
Pentachlorophenol	U		7.8	400	µg/Kg-dry	1	9/26/2014 01:57
Phenanthrene	**6.1**	J	**1.6**	**8.1**	**µg/Kg-dry**	1	9/26/2014 01:57
Phenol	U		14	190	µg/Kg-dry	1	9/26/2014 01:57
Pyrene	U		2.7	8.1	µg/Kg-dry	1	9/26/2014 01:57
Surr: 2,4,6-Tribromophenol	*79.8*			*34-140*	*%REC*	1	9/26/2014 01:57
Surr: 2-Fluorobiphenyl	*83.0*			*12-100*	*%REC*	1	9/26/2014 01:57
Surr: 2-Fluorophenol	*83.3*			*33-117*	*%REC*	1	9/26/2014 01:57
Surr: 4-Terphenyl-d14	*96.6*			*25-137*	*%REC*	1	9/26/2014 01:57
Surr: Nitrobenzene-d5	*71.8*			*37-107*	*%REC*	1	9/26/2014 01:57
Surr: Phenol-d6	*90.9*			*40-106*	*%REC*	1	9/26/2014 01:57

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *30-Sep-14*

Client: Tetra Tech
Project: Big River Mine Tailings 9.18.14
Sample ID: BRMT-SSF-01-091814
Collection Date: 9/18/2014 10:50 AM

Work Order: 14091050
Lab ID: 14091050-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MOISTURE		Method: **A2540 G**					Analyst: **RLM**
Moisture	**18**		**0.025**	**0.050**	**% of sample**	1	9/24/2014 17:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *30-Sep-14*

Client: Tetra Tech
Project: Big River Mine Tailings 9.18.14
Sample ID: BRMT-SSF-02-091814
Collection Date: 9/18/2014 10:55 AM

Work Order: 14091050
Lab ID: 14091050-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
HERBICIDES			Method:**SW8151**		Prep: SW8151M / 9/26/14		Analyst: **KYM**
2,4,5-T	U		1.2	63	µg/Kg-dry	1	9/29/2014 16:54
2,4,5-TP (Silvex)	U		0.83	130	µg/Kg-dry	1	9/29/2014 16:54
2,4-D	U		0.89	63	µg/Kg-dry	1	9/29/2014 16:54
2,4-DB	U		4.1	63	µg/Kg-dry	1	9/29/2014 16:54
Dalapon	U		4.1	63	µg/Kg-dry	1	9/29/2014 16:54
Dicamba	U		4.1	63	µg/Kg-dry	1	9/29/2014 16:54
Dichlorprop	U		4.1	63	µg/Kg-dry	1	9/29/2014 16:54
Dinoseb	U		4.1	63	µg/Kg-dry	1	9/29/2014 16:54
MCPA	U		410	2,100	µg/Kg-dry	1	9/29/2014 16:54
MCPP	U		410	2,100	µg/Kg-dry	1	9/29/2014 16:54
Surr: DCAA	*25.6*	S		*30-150*	*%REC*	1	9/29/2014 16:54
PESTICIDES			Method:**SW8081**		Prep: SW3541 / 9/23/14		Analyst: **KYM**
4,4´-DDD	U		3.9	12	µg/Kg-dry	1	9/24/2014 03:39
4,4´-DDE	U		2.4	12	µg/Kg-dry	1	9/24/2014 03:39
4,4´-DDT	U		2.8	12	µg/Kg-dry	1	9/24/2014 03:39
Aldrin	U		1.1	12	µg/Kg-dry	1	9/24/2014 03:39
alpha-BHC	U		3.9	12	µg/Kg-dry	1	9/24/2014 03:39
alpha-Chlordane	U		3.4	12	µg/Kg-dry	1	9/24/2014 03:39
beta-BHC	U		4.6	12	µg/Kg-dry	1	9/24/2014 03:39
Chlordane, Technical	U		12	31	µg/Kg-dry	1	9/24/2014 03:39
delta-BHC	U		4.5	12	µg/Kg-dry	1	9/24/2014 03:39
Dieldrin	U		1.0	12	µg/Kg-dry	1	9/24/2014 03:39
Endosulfan I	U		1.6	12	µg/Kg-dry	1	9/24/2014 03:39
Endosulfan II	U		1.3	12	µg/Kg-dry	1	9/24/2014 03:39
Endosulfan sulfate	U		1.5	12	µg/Kg-dry	1	9/24/2014 03:39
Endrin	U		3.6	12	µg/Kg-dry	1	9/24/2014 03:39
Endrin aldehyde	U		3.0	12	µg/Kg-dry	1	9/24/2014 03:39
Endrin ketone	U		4.7	12	µg/Kg-dry	1	9/24/2014 03:39
gamma-BHC (Lindane)	U		5.7	12	µg/Kg-dry	1	9/24/2014 03:39
gamma-Chlordane	U		2.0	12	µg/Kg-dry	1	9/24/2014 03:39
Heptachlor	U		6.3	12	µg/Kg-dry	1	9/24/2014 03:39
Heptachlor epoxide	U		1.9	12	µg/Kg-dry	1	9/24/2014 03:39
Methoxychlor	U		3.0	12	µg/Kg-dry	1	9/24/2014 03:39
Toxaphene	U		14	73	µg/Kg-dry	1	9/24/2014 03:39
Surr: Decachlorobiphenyl	*92.1*			*45-135*	*%REC*	1	9/24/2014 03:39
Surr: Tetrachloro-m-xylene	*86.1*			*45-124*	*%REC*	1	9/24/2014 03:39
METALS BY ICP-MS			Method:**SW6020A**		Prep: SW3050B / 9/24/14		Analyst: **ML**

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *30-Sep-14*

Client: Tetra Tech
Project: Big River Mine Tailings 9.18.14
Sample ID: BRMT-SSF-02-091814
Collection Date: 9/18/2014 10:55 AM

Work Order: 14091050
Lab ID: 14091050-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Arsenic	**15**		**0.23**	**1.7**	**mg/Kg-dry**	4	9/24/2014 15:39
Barium	**140**		**0.047**	**1.7**	**mg/Kg-dry**	4	9/24/2014 15:39
Cadmium	**0.17**	J	**0.0067**	**0.67**	**mg/Kg-dry**	4	9/24/2014 15:39
Chromium	**28**		**0.27**	**1.7**	**mg/Kg-dry**	4	9/24/2014 15:39
Lead	**38**		**0.0067**	**1.7**	**mg/Kg-dry**	4	9/24/2014 15:39
Manganese	**590**		**0.15**	**1.7**	**mg/Kg-dry**	4	9/24/2014 15:39
Zinc	**92**		**0.14**	**3.4**	**mg/Kg-dry**	4	9/24/2014 15:39
SEMI-VOLATILE ORGANIC COMPOUNDS			Method:**SW846 8270D**		Prep: SW3541 / 9/25/14		Analyst: **JG**
1,1`-Biphenyl	U		6.2	410	µg/Kg-dry	1	9/26/2014 02:22
2,4,5-Trichlorophenol	U		10	200	µg/Kg-dry	1	9/26/2014 02:22
2,4,6-Trichlorophenol	U		7.0	200	µg/Kg-dry	1	9/26/2014 02:22
2,4-Dichlorophenol	U		12	200	µg/Kg-dry	1	9/26/2014 02:22
2,4-Dimethylphenol	U		66	410	µg/Kg-dry	1	9/26/2014 02:22
2,4-Dinitrophenol	U		37	820	µg/Kg-dry	1	9/26/2014 02:22
2,4-Dinitrotoluene	U		13	200	µg/Kg-dry	1	9/26/2014 02:22
2,6-Dinitrotoluene	U		21	200	µg/Kg-dry	1	9/26/2014 02:22
2-Chloronaphthalene	U		1.9	8.3	µg/Kg-dry	1	9/26/2014 02:22
2-Chlorophenol	U		12	200	µg/Kg-dry	1	9/26/2014 02:22
2-Methylnaphthalene	U		3.4	8.3	µg/Kg-dry	1	9/26/2014 02:22
2-Methylphenol	U		17	200	µg/Kg-dry	1	9/26/2014 02:22
2-Nitroaniline	U		16	820	µg/Kg-dry	1	9/26/2014 02:22
2-Nitrophenol	U		14	200	µg/Kg-dry	1	9/26/2014 02:22
3&4-Methyphenol	U		20	200	µg/Kg-dry	1	9/26/2014 02:22
3,3´-Dichlorobenzidine	U		510	820	µg/Kg-dry	1	9/26/2014 02:22
3-Nitroaniline	U		14	820	µg/Kg-dry	1	9/26/2014 02:22
4,6-Dinitro-2-methylphenol	U		34	410	µg/Kg-dry	1	9/26/2014 02:22
4-Bromophenyl phenyl ether	U		11	200	µg/Kg-dry	1	9/26/2014 02:22
4-Chloro-3-methylphenol	U		9.6	200	µg/Kg-dry	1	9/26/2014 02:22
4-Chloroaniline	U		12	820	µg/Kg-dry	1	9/26/2014 02:22
4-Chlorophenyl phenyl ether	U		12	200	µg/Kg-dry	1	9/26/2014 02:22
4-Nitroaniline	U		11	820	µg/Kg-dry	1	9/26/2014 02:22
4-Nitrophenol	U		8.2	820	µg/Kg-dry	1	9/26/2014 02:22
Acenaphthene	U		1.2	8.3	µg/Kg-dry	1	9/26/2014 02:22
Acenaphthylene	U		1.5	8.3	µg/Kg-dry	1	9/26/2014 02:22
Acetophenone	U		6.2	410	µg/Kg-dry	1	9/26/2014 02:22
Anthracene	U		1.6	8.3	µg/Kg-dry	1	9/26/2014 02:22
Atrazine	U		13	410	µg/Kg-dry	1	9/26/2014 02:22
Benzaldehyde	U		16	410	µg/Kg-dry	1	9/26/2014 02:22
Benzo(a)anthracene	**9.1**		**1.6**	**8.3**	**µg/Kg-dry**	1	9/26/2014 02:22

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *30-Sep-14*

Client: Tetra Tech
Project: Big River Mine Tailings 9.18.14
Sample ID: BRMT-SSF-02-091814
Collection Date: 9/18/2014 10:55 AM

Work Order: 14091050
Lab ID: 14091050-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzo(a)pyrene	U		2.7	8.3	µg/Kg-dry	1	9/26/2014 02:22
Benzo(b)fluoranthene	U		2.4	8.3	µg/Kg-dry	1	9/26/2014 02:22
Benzo(g,h,i)perylene	U		3.2	8.3	µg/Kg-dry	1	9/26/2014 02:22
Benzo(k)fluoranthene	U		1.7	8.3	µg/Kg-dry	1	9/26/2014 02:22
Bis(2-chloroethoxy)methane	U		13	200	µg/Kg-dry	1	9/26/2014 02:22
Bis(2-chloroethyl)ether	U		13	200	µg/Kg-dry	1	9/26/2014 02:22
Bis(2-chloroisopropyl)ether	U		17	200	µg/Kg-dry	1	9/26/2014 02:22
Bis(2-ethylhexyl)phthalate	**31**	J	**14**	**410**	**µg/Kg-dry**	1	9/26/2014 02:22
Butyl benzyl phthalate	U		15	200	µg/Kg-dry	1	9/26/2014 02:22
Caprolactam	U		18	410	µg/Kg-dry	1	9/26/2014 02:22
Carbazole	U		12	200	µg/Kg-dry	1	9/26/2014 02:22
Chrysene	U		2.0	8.3	µg/Kg-dry	1	9/26/2014 02:22
Dibenzo(a,h)anthracene	U		3.1	8.3	µg/Kg-dry	1	9/26/2014 02:22
Dibenzofuran	U		13	200	µg/Kg-dry	1	9/26/2014 02:22
Diethyl phthalate	U		13	410	µg/Kg-dry	1	9/26/2014 02:22
Dimethyl phthalate	U		14	410	µg/Kg-dry	1	9/26/2014 02:22
Di-n-butyl phthalate	U		6.0	410	µg/Kg-dry	1	9/26/2014 02:22
Di-n-octyl phthalate	U		13	200	µg/Kg-dry	1	9/26/2014 02:22
Fluoranthene	U		2.9	8.3	µg/Kg-dry	1	9/26/2014 02:22
Fluorene	U		2.8	8.3	µg/Kg-dry	1	9/26/2014 02:22
Hexachlorobenzene	U		12	200	µg/Kg-dry	1	9/26/2014 02:22
Hexachlorobutadiene	U		14	200	µg/Kg-dry	1	9/26/2014 02:22
Hexachlorocyclopentadiene	U		13	410	µg/Kg-dry	1	9/26/2014 02:22
Hexachloroethane	U		19	200	µg/Kg-dry	1	9/26/2014 02:22
Indeno(1,2,3-cd)pyrene	U		2.8	8.3	µg/Kg-dry	1	9/26/2014 02:22
Isophorone	U		14	200	µg/Kg-dry	1	9/26/2014 02:22
Naphthalene	U		3.0	8.3	µg/Kg-dry	1	9/26/2014 02:22
Nitrobenzene	U		16	200	µg/Kg-dry	1	9/26/2014 02:22
N-Nitrosodi-n-propylamine	U		16	200	µg/Kg-dry	1	9/26/2014 02:22
N-Nitrosodiphenylamine	U		74	200	µg/Kg-dry	1	9/26/2014 02:22
Pentachlorophenol	U		8.0	410	µg/Kg-dry	1	9/26/2014 02:22
Phenanthrene	**4.6**	J	**1.7**	**8.3**	**µg/Kg-dry**	1	9/26/2014 02:22
Phenol	U		14	200	µg/Kg-dry	1	9/26/2014 02:22
Pyrene	U		2.8	8.3	µg/Kg-dry	1	9/26/2014 02:22
Surr: 2,4,6-Tribromophenol	*84.6*			*34-140*	*%REC*	1	9/26/2014 02:22
Surr: 2-Fluorobiphenyl	*80.2*			*12-100*	*%REC*	1	9/26/2014 02:22
Surr: 2-Fluorophenol	*91.1*			*33-117*	*%REC*	1	9/26/2014 02:22
Surr: 4-Terphenyl-d14	*95.3*			*25-137*	*%REC*	1	9/26/2014 02:22
Surr: Nitrobenzene-d5	*75.0*			*37-107*	*%REC*	1	9/26/2014 02:22
Surr: Phenol-d6	*90.1*			*40-106*	*%REC*	1	9/26/2014 02:22

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: *30-Sep-14*

Client: Tetra Tech
Project: Big River Mine Tailings 9.18.14
Sample ID: BRMT-SSF-02-091814
Collection Date: 9/18/2014 10:55 AM

Work Order: 14091050
Lab ID: 14091050-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MOISTURE		Method: **A2540 G**					Analyst: **RLM**
Moisture	**20**		**0.025**	**0.050**	**% of sample**	1	9/24/2014 17:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 30-Sep-14

Client: Tetra Tech
Work Order: 14091050
Project: Big River Mine Tailings 9.18.14

QC BATCH REPORT

Batch ID: **63108** Instrument ID **GC12** Method: **SW8081**

MBLK Sample ID: **PBLKS1-63108-63108** Units: **µg/Kg** Analysis Date: **9/24/2014 12:48 AM**

Client ID: Run ID: **GC12_140923A** SeqNo: **2951831** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	U	10								
4,4´-DDE	U	10								
4,4´-DDT	U	10								
Aldrin	U	10								
alpha-BHC	U	10								
alpha-Chlordane	U	10								
beta-BHC	U	10								
Chlordane, Technical	U	25								
delta-BHC	U	10								
Dieldrin	U	10								
Endosulfan I	U	10								
Endosulfan II	U	10								
Endosulfan sulfate	U	10								
Endrin	U	10								
Endrin aldehyde	U	10								
Endrin ketone	U	10								
gamma-BHC (Lindane)	U	10								
gamma-Chlordane	U	10								
Heptachlor	U	10								
Heptachlor epoxide	U	10								
Methoxychlor	U	10								
Toxaphene	U	60								
Surr: Decachlorobiphenyl	*29.67*	0	*33.3*	0	*89.1*	*45-135*	0			
Surr: Tetrachloro-m-xylene	*28.67*	0	*33.3*	0	*86.1*	*45-124*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech
Work Order: 14091050
Project: Big River Mine Tailings 9.18.14

QC BATCH REPORT

Batch ID: **63108** Instrument ID **GC12** Method: **SW8081**

LCS Sample ID: **PLCSS1-63108-63108** Units: **µg/Kg** Analysis Date: **9/24/2014 01:03 AM**

Client ID: Run ID: **GC12_140923A** SeqNo: **2951832** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	37.67	10	33.33	0	113	30-135	0			
4,4´-DDE	37.67	10	33.33	0	113	70-125	0			
4,4´-DDT	38.33	10	33.33	0	115	45-140	0			
Aldrin	37.33	10	33.33	0	112	45-140	0			
alpha-BHC	37	10	33.33	0	111	60-125	0			
alpha-Chlordane	37.33	10	33.33	0	112	50-150	0			
beta-BHC	34.33	10	33.33	0	103	60-125	0			
delta-BHC	38	10	33.33	0	114	55-130	0			
Dieldrin	37.33	10	33.33	0	112	65-125	0			
Endosulfan I	36.33	10	33.33	0	109	15-135	0			
Endosulfan II	37.33	10	33.33	0	112	35-140	0			
Endosulfan sulfate	36.67	10	33.33	0	110	60-135	0			
Endrin	38.67	10	33.33	0	116	60-135	0			
Endrin aldehyde	32.33	10	33.33	0	97	35-145	0			
Endrin ketone	37.33	10	33.33	0	112	50-150	0			
gamma-BHC (Lindane)	37.33	10	33.33	0	112	60-125	0			
gamma-Chlordane	36.67	10	33.33	0	110	50-150	0			
Heptachlor	36.67	10	33.33	0	110	50-140	0			
Heptachlor epoxide	37	10	33.33	0	111	65-130	0			
Methoxychlor	43	10	33.33	0	129	55-145	0			
Surr: Decachlorobiphenyl	*30.33*	0	*33.3*	0	*91.1*	*45-135*	0			
Surr: Tetrachloro-m-xylene	*30*	0	*33.3*	0	*90.1*	*45-124*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech
Work Order: 14091050
Project: Big River Mine Tailings 9.18.14

QC BATCH REPORT

Batch ID: **63108** Instrument ID **GC12** Method: **SW8081**

MS	Sample ID: **1409981-08A MS**				Units: **µg/Kg**		Analysis Date: **9/24/2014 01:19 AM**			
Client ID:	Run ID: **GC12_140923A**				SeqNo: **2951833**		Prep Date: **9/23/2014**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	37.84	9.8	32.61	0	116	30-135	0			
4,4´-DDE	39.14	9.8	32.61	0	120	70-125	0			
4,4´-DDT	39.14	9.8	32.61	0	120	45-140	0			
Aldrin	36.21	9.8	32.61	0	111	45-140	0			
alpha-BHC	34.9	9.8	32.61	0	107	60-125	0			
alpha-Chlordane	35.55	9.8	32.61	0	109	50-150	0			
beta-BHC	31.97	9.8	32.61	0	98	60-125	0			
delta-BHC	37.51	9.8	32.61	0	115	55-130	0			
Dieldrin	35.23	9.8	32.61	0	108	65-125	0			
Endosulfan I	33.92	9.8	32.61	0	104	15-135	0			
Endosulfan II	35.55	9.8	32.61	0	109	35-140	0			
Endosulfan sulfate	34.57	9.8	32.61	0	106	60-135	0			
Endrin	39.47	9.8	32.61	0	121	60-135	0			
Endrin aldehyde	34.25	9.8	32.61	0	105	35-145	0			
Endrin ketone	36.86	9.8	32.61	0	113	50-150	0			
gamma-BHC (Lindane)	36.21	9.8	32.61	0	111	60-125	0			
gamma-Chlordane	30.99	9.8	32.61	0	95	50-150	0			
Heptachlor	36.53	9.8	32.61	0	112	50-140	0			
Heptachlor epoxide	34.57	9.8	32.61	0	106	65-130	0			
Methoxychlor	45.01	9.8	32.61	0	138	55-145	0			
Surr: Decachlorobiphenyl	*29.68*	0	*32.59*	0	*91.1*	*45-135*	0			
Surr: Tetrachloro-m-xylene	*28.7*	0	*32.59*	0	*88.1*	*45-124*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech
Work Order: 14091050
Project: Big River Mine Tailings 9.18.14

QC BATCH REPORT

Batch ID: **63108** Instrument ID **GC12** Method: **SW8081**

MSD Sample ID: **1409981-08A MSD** Units: **µg/Kg** Analysis Date: **9/24/2014 01:34 AM**

Client ID: Run ID: **GC12_140923A** SeqNo: **2951835** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	33.03	9.6	32.07	0	103	30-135	37.84	13.6	35	
4,4´-DDE	36.88	9.6	32.07	0	115	70-125	39.14	5.94	35	
4,4´-DDT	37.2	9.6	32.07	0	116	45-140	39.14	5.08	35	
Aldrin	34.32	9.6	32.07	0	107	45-140	36.21	5.36	35	
alpha-BHC	33.03	9.6	32.07	0	103	60-125	34.9	5.5	35	
alpha-Chlordane	32.71	9.6	32.07	0	102	50-150	35.55	8.32	35	
beta-BHC	29.83	9.6	32.07	0	93	60-125	31.97	6.92	35	
delta-BHC	34	9.6	32.07	0	106	55-130	37.51	9.83	35	
Dieldrin	33.03	9.6	32.07	0	103	65-125	35.23	6.43	35	
Endosulfan I	31.75	9.6	32.07	0	99	15-135	33.92	6.61	35	
Endosulfan II	34	9.6	32.07	0	106	35-140	35.55	4.48	35	
Endosulfan sulfate	32.71	9.6	32.07	0	102	60-135	34.57	5.53	35	
Endrin	37.2	9.6	32.07	0	116	60-135	39.47	5.91	35	
Endrin aldehyde	30.79	9.6	32.07	0	96	35-145	34.25	10.6	35	
Endrin ketone	33.68	9.6	32.07	0	105	50-150	36.86	9.02	35	
gamma-BHC (Lindane)	34.32	9.6	32.07	0	107	60-125	36.21	5.36	35	
gamma-Chlordane	29.19	9.6	32.07	0	91	50-150	30.99	5.99	35	
Heptachlor	34.32	9.6	32.07	0	107	50-140	36.53	6.25	35	
Heptachlor epoxide	32.39	9.6	32.07	0	101	65-130	34.57	6.52	35	
Methoxychlor	41.05	9.6	32.07	0	128	55-145	45.01	9.2	35	
Surr: Decachlorobiphenyl	*29.19*	0	*32.04*	0	*91.1*	*45-135*	29.68	*1.69*	*35*	
Surr: Tetrachloro-m-xylene	*28.22*	0	*32.04*	0	*88.1*	*45-124*	28.7	*1.69*	*35*	

The following samples were analyzed in this batch: 14091050-01A 14091050-02A 14091050-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech
Work Order: 14091050
Project: Big River Mine Tailings 9.18.14

QC BATCH REPORT

Batch ID: **63179** Instrument ID **GC7** Method: **SW8151**

MBLK Sample ID: **HBLKS1-63179-63179** Units: **µg/Kg** Analysis Date: **9/29/2014 02:31 PM**
Client ID: Run ID: **GC7_140929A** SeqNo: **2958202** Prep Date: **9/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-T	U	50								
2,4,5-TP (Silvex)	U	100								
2,4-D	U	50								
2,4-DB	U	50								
Dalapon	U	50								
Dicamba	U	50								
Dichlorprop	U	50								
Dinoseb	U	50								
MCPA	U	1,700								
MCPP	U	1,700								
Surr: DCAA	*131.3*	0	*166.7*	0	*78.8*	*30-150*	0			

LCS Sample ID: **HLCSS1-63179-63179** Units: **µg/Kg** Analysis Date: **9/29/2014 02:49 PM**
Client ID: Run ID: **GC7_140929A** SeqNo: **2958203** Prep Date: **9/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-T	139.7	50	166.7	0	83.8	30-150	0			
2,4,5-TP (Silvex)	137	100	166.7	0	82.2	30-150	0			
2,4-D	152.7	50	166.7	0	91.6	20-130	0			
2,4-DB	155.3	50	166.7	0	93.2	30-150	0			
Dalapon	131.3	50	166.7	0	78.8	30-150	0			
Dicamba	141	50	166.7	0	84.6	30-150	0			
Dichlorprop	131.7	50	166.7	0	79	30-150	0			
Dinoseb	136.3	50	166.7	0	81.8	10-110	0			
MCPA	15570	1,700	16670	0	93.4	20-130	0			
MCPP	16990	1,700	16670	0	102	20-130	0			
Surr: DCAA	*146.3*	0	*166.7*	0	*87.8*	*30-150*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech
Work Order: 14091050
Project: Big River Mine Tailings 9.18.14

QC BATCH REPORT

Batch ID: **63179** Instrument ID **GC7** Method: **SW8151**

MS Sample ID: **14091050-01A MS** Units: **µg/Kg** Analysis Date: **9/29/2014 03:07 PM**
Client ID: **BRMT-SF-01-091814** Run ID: **GC7_140929A** SeqNo: **2958198** Prep Date: **9/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-T	66.75	95	317.9	0	21	30-150	0			JS
2,4,5-TP (Silvex)	68.02	190	317.9	0	21.4	30-150	0			JS
2,4-D	89.64	95	317.9	0	28.2	20-130	0			J
2,4-DB	97.9	95	317.9	0	30.8	30-150	0			
Dalapon	155.1	95	317.9	0	48.8	30-150	0			
Dicamba	77.56	95	317.9	0	24.4	30-150	0			JS
Dichlorprop	68.66	95	317.9	0	21.6	30-150	0			JS
Dinoseb	51.49	95	317.9	0	16.2	10-110	0			J
MCPA	8576	3,200	31790	0	27	20-130	0			
MCPP	8094	3,200	31790	0	25.5	20-130	0			
Surr: DCAA	*53.4*	0	*317.9*	0	*16.8*	*30-150*	0			*S*

MSD Sample ID: **14091050-01A MSD** Units: **µg/Kg** Analysis Date: **9/29/2014 03:26 PM**
Client ID: **BRMT-SF-01-091814** Run ID: **GC7_140929A** SeqNo: **2958199** Prep Date: **9/26/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-T	172.5	100	331.7	0	52	30-150	66.75	88.4	30	R
2,4,5-TP (Silvex)	173.2	200	331.7	0	52.2	30-150	68.02	0	30	J
2,4-D	219.6	100	331.7	0	66.2	20-130	89.64	84.1	30	R
2,4-DB	197	100	331.7	0	59.4	30-150	97.9	67.2	30	R
Dalapon	358.3	100	331.7	0	108	30-150	155.1	79.1	30	R
Dicamba	199	100	331.7	0	60	30-150	77.56	87.8	30	R
Dichlorprop	173.2	100	331.7	0	52.2	30-150	68.66	86.4	30	R
Dinoseb	152.6	100	331.7	0	46	10-110	51.49	99.1	30	R
MCPA	25420	3,400	33170	0	76.6	20-130	8576	99.1	30	R
MCPP	22090	3,400	33170	0	66.6	20-130	8094	92.8	30	R
Surr: DCAA	*112.8*	0	*331.7*	0	*34*	*30-150*	53.4	*71.5*	*30*	*R*

The following samples were analyzed in this batch: 14091050-01A 14091050-02A 14091050-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech
Work Order: 14091050
Project: Big River Mine Tailings 9.18.14

QC BATCH REPORT

Batch ID: **63099** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK Sample ID: **MBLK-63099-63099** Units: **mg/Kg** Analysis Date: **9/23/2014 08:25 PM**
Client ID: Run ID: **ICPMS1_140923A** SeqNo: **2949712** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.25								
Barium	U	0.25								
Cadmium	U	0.10								
Chromium	U	0.25								
Lead	U	0.25								
Manganese	0.02743	0.25								J
Zinc	0.09125	0.50								J

LCS Sample ID: **LCS-63099-63099** Units: **mg/Kg** Analysis Date: **9/23/2014 08:31 PM**
Client ID: Run ID: **ICPMS1_140923A** SeqNo: **2949713** Prep Date: **9/23/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.563	0.25	5	0	91.3	80-120	0			
Barium	4.81	0.25	5	0	96.2	80-120	0			
Cadmium	4.895	0.10	5	0	97.9	80-120	0			
Chromium	5	0.25	5	0	100	80-120	0			
Lead	4.858	0.25	5	0	97.2	80-120	0			
Manganese	4.916	0.25	5	0	98.3	80-120	0			
Zinc	4.686	0.50	5	0	93.7	80-120	0			

MS Sample ID: **14091038-06BMS** Units: **mg/Kg** Analysis Date: **9/23/2014 09:08 PM**
Client ID: Run ID: **ICPMS1_140923A** SeqNo: **2949719** Prep Date: **9/23/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	15.04	1.6	7.886	9.94	64.7	75-125	0			S
Barium	114.7	1.6	7.886	93.81	265	75-125	0			SO
Cadmium	8.372	0.63	7.886	0.1749	104	75-125	0			
Chromium	33.72	1.6	7.886	22.79	139	75-125	0			S
Lead	24	1.6	7.886	14.2	124	75-125	0			
Manganese	278.5	1.6	7.886	384.1	-1340	75-125	0			SO
Zinc	59.81	3.2	7.886	52.25	95.8	75-125	0			O

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech
Work Order: 14091050
Project: Big River Mine Tailings 9.18.14

QC BATCH REPORT

Batch ID: **63099** Instrument ID **ICPMS1** Method: **SW6020A**

MSD Sample ID: **14091038-06BMSD** Units: **mg/Kg** Analysis Date: **9/23/2014 09:14 PM**

Client ID: Run ID: **ICPMS1_140923A** SeqNo: **2949720** Prep Date: **9/23/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	17.74	1.6	7.886	9.94	99	75-125	15.04	16.5	25	
Barium	116.3	1.6	7.886	93.81	286	75-125	114.7	1.42	25	SO
Cadmium	8.681	0.63	7.886	0.1749	108	75-125	8.372	3.63	25	
Chromium	35.14	1.6	7.886	22.79	157	75-125	33.72	4.12	25	S
Lead	23.72	1.6	7.886	14.2	121	75-125	24	1.16	25	
Manganese	387.7	1.6	7.886	384.1	45.3	75-125	278.5	32.8	25	SRO
Zinc	62.74	3.2	7.886	52.25	133	75-125	59.81	4.79	25	SO

The following samples were analyzed in this batch: 14091050-01A 14091050-02A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech
Work Order: 14091050
Project: Big River Mine Tailings 9.18.14

QC BATCH REPORT

Batch ID: **63139** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK Sample ID: **MBLK-63139-63139** Units: **mg/Kg** Analysis Date: **9/24/2014 03:27 PM**
Client ID: Run ID: **ICPMS1_140924A** SeqNo: **2951599** Prep Date: **9/24/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.25								
Barium	0.03231	0.25								J
Cadmium	U	0.10								
Chromium	U	0.25								
Lead	U	0.25								
Manganese	0.0472	0.25								J
Zinc	0.184	0.50								J

LCS Sample ID: **LCS-63139-63139** Units: **mg/Kg** Analysis Date: **9/24/2014 03:33 PM**
Client ID: Run ID: **ICPMS1_140924A** SeqNo: **2951601** Prep Date: **9/24/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.272	0.25	5	0	85.4	80-120	0			
Barium	4.694	0.25	5	0	93.9	80-120	0			
Cadmium	4.67	0.10	5	0	93.4	80-120	0			
Chromium	4.75	0.25	5	0	95	80-120	0			
Lead	4.634	0.25	5	0	92.7	80-120	0			
Manganese	4.73	0.25	5	0	94.6	80-120	0			
Zinc	4.725	0.50	5	0	94.5	80-120	0			

MS Sample ID: **14091068-01AMS** Units: **mg/Kg** Analysis Date: **9/24/2014 04:15 PM**
Client ID: Run ID: **ICPMS1_140924A** SeqNo: **2951615** Prep Date: **9/24/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	11.97	1.6	8.183	4.426	92.1	75-125	0			
Barium	43.67	1.6	8.183	31.3	151	75-125	0			S
Cadmium	8.966	0.65	8.183	0.7157	101	75-125	0			
Chromium	70.28	1.6	8.183	51.02	235	75-125	0			SO
Lead	41.41	1.6	8.183	28.04	163	75-125	0			S
Manganese	111.2	1.6	8.183	134.1	-279	75-125	0			SO
Zinc	107.5	3.3	8.183	91.24	199	75-125	0			SO

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech
Work Order: 14091050
Project: Big River Mine Tailings 9.18.14

QC BATCH REPORT

Batch ID: **63139** Instrument ID **ICPMS1** Method: **SW6020A**

MSD Sample ID: **14091068-01AMSD** Units: **mg/Kg** Analysis Date: **9/24/2014 04:21 PM**

Client ID: Run ID: **ICPMS1_140924A** SeqNo: **2951618** Prep Date: **9/24/2014** DF: **4**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	12.52	1.6	8.17	4.426	99.1	75-125	11.97	4.54	25	
Barium	42.12	1.6	8.17	31.3	132	75-125	43.67	3.59	25	S
Cadmium	8.693	0.65	8.17	0.7157	97.6	75-125	8.966	3.09	25	
Chromium	60.72	1.6	8.17	51.02	119	75-125	70.28	14.6	25	O
Lead	37.19	1.6	8.17	28.04	112	75-125	41.41	10.7	25	
Manganese	134.4	1.6	8.17	134.1	4.37	75-125	111.2	18.9	25	SO
Zinc	113.7	3.3	8.17	91.24	275	75-125	107.5	5.6	25	SO

The following samples were analyzed in this batch: 14091050-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech
Work Order: 14091050
Project: Big River Mine Tailings 9.18.14

QC BATCH REPORT

Batch ID: **63192** Instrument ID **SVMS4** Method: **SW846 8270D**

MBLK Sample ID: **SBLKS1-63192-63192** Units: **µg/Kg** Analysis Date: **9/25/2014 05:55 PM**

Client ID: Run ID: **SVMS4_140925A** SeqNo: **2954534** Prep Date: **9/25/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1`-Biphenyl	U	330								
2,4,5-Trichlorophenol	U	160								
2,4,6-Trichlorophenol	U	160								
2,4-Dichlorophenol	U	160								
2,4-Dimethylphenol	U	330								
2,4-Dinitrophenol	U	660								
2,4-Dinitrotoluene	U	160								
2,6-Dinitrotoluene	U	160								
2-Chloronaphthalene	U	6.7								
2-Chlorophenol	U	160								
2-Methylnaphthalene	U	6.7								
2-Methylphenol	U	160								
2-Nitroaniline	U	660								
2-Nitrophenol	U	160								
3&4-Methyphenol	U	160								
3,3´-Dichlorobenzidine	U	660								
3-Nitroaniline	U	660								
4,6-Dinitro-2-methylphenol	U	330								
4-Bromophenyl phenyl ether	U	160								
4-Chloro-3-methylphenol	U	160								
4-Chloroaniline	U	660								
4-Chlorophenyl phenyl ether	U	160								
4-Nitroaniline	U	660								
4-Nitrophenol	U	660								
Acenaphthene	U	6.7								
Acenaphthylene	U	6.7								
Acetophenone	U	330								
Anthracene	U	6.7								
Atrazine	U	330								
Benzaldehyde	U	330								
Benzo(a)anthracene	U	6.7								
Benzo(a)pyrene	U	6.7								
Benzo(b)fluoranthene	U	6.7								
Benzo(g,h,i)perylene	U	6.7								
Benzo(k)fluoranthene	U	6.7								
Bis(2-chloroethoxy)methane	U	160								
Bis(2-chloroethyl)ether	U	160								
Bis(2-chloroisopropyl)ether	U	160								
Bis(2-ethylhexyl)phthalate	U	330								
Butyl benzyl phthalate	U	160								
Caprolactam	U	330								
Carbazole	U	160								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **63192** Instrument ID **SVMS4** Method: **SW846 8270D**

Chrysene	U	6.7					
Dibenzo(a,h)anthracene	U	6.7					
Dibenzofuran	U	160					
Diethyl phthalate	U	330					
Dimethyl phthalate	U	330					
Di-n-butyl phthalate	U	330					
Di-n-octyl phthalate	U	160					
Fluoranthene	U	6.7					
Fluorene	U	6.7					
Hexachlorobenzene	U	160					
Hexachlorobutadiene	U	160					
Hexachlorocyclopentadiene	U	330					
Hexachloroethane	U	160					
Indeno(1,2,3-cd)pyrene	U	6.7					
Isophorone	U	160					
Naphthalene	U	6.7					
Nitrobenzene	U	160					
N-Nitrosodi-n-propylamine	U	160					
N-Nitrosodiphenylamine	U	160					
Pentachlorophenol	U	330					
Phenanthrene	U	6.7					
Phenol	U	160					
Pyrene	U	6.7					
Surr: 2,4,6-Tribromophenol	*1210*	0	*1667*	0	*72.6*	*34-140*	0
Surr: 2-Fluorobiphenyl	*1193*	0	*1667*	0	*71.6*	*12-100*	0
Surr: 2-Fluorophenol	*1352*	0	*1667*	0	*81.1*	*33-117*	0
Surr: 4-Terphenyl-d14	*1827*	0	*1667*	0	*110*	*25-137*	0
Surr: Nitrobenzene-d5	*1070*	0	*1667*	0	*64.2*	*37-107*	0
Surr: Phenol-d6	*1260*	0	*1667*	0	*75.6*	*40-106*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech
Work Order: 14091050
Project: Big River Mine Tailings 9.18.14

QC BATCH REPORT

Batch ID: **63192** Instrument ID **SVMS4** Method: **SW846 8270D**

LCS Sample ID: **SLCSS1-63192-63192** Units: **µg/Kg** Analysis Date: **9/25/2014 06:21 PM**

Client ID: Run ID: **SVMS4_140925A** SeqNo: **2954535** Prep Date: **9/25/2014** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	537.7	160	666.7	0	80.6	50-110	0			
2,4,6-Trichlorophenol	504.7	160	666.7	0	75.7	45-110	0			
2,4-Dichlorophenol	497.3	160	666.7	0	74.6	45-110	0			
2,4-Dimethylphenol	491	330	666.7	0	73.6	30-105	0			
2,4-Dinitrophenol	481.3	660	666.7	0	72.2	15-130	0			J
2,4-Dinitrotoluene	572.7	160	666.7	0	85.9	50-115	0			
2,6-Dinitrotoluene	562.3	160	666.7	0	84.3	50-110	0			
2-Chloronaphthalene	568.7	6.7	666.7	0	85.3	45-105	0			
2-Chlorophenol	549.3	160	666.7	0	82.4	45-105	0			
2-Methylnaphthalene	520.7	6.7	666.7	0	78.1	45-105	0			
2-Methylphenol	538.7	160	666.7	0	80.8	40-105	0			
2-Nitroaniline	541	660	666.7	0	81.1	45-120	0			J
2-Nitrophenol	486.7	160	666.7	0	73	40-110	0			
3-Nitroaniline	351	660	666.7	0	52.6	25-150	0			J
4,6-Dinitro-2-methylphenol	481.7	330	666.7	0	72.2	40-130	0			
4-Bromophenyl phenyl ether	661.7	160	666.7	0	99.2	45-115	0			
4-Chloro-3-methylphenol	493.7	160	666.7	0	74	45-115	0			
4-Chloroaniline	436.7	660	666.7	0	65.5	15-110	0			J
4-Chlorophenyl phenyl ether	576.7	160	666.7	0	86.5	45-110	0			
4-Nitroaniline	338	660	666.7	0	50.7	35-150	0			J
4-Nitrophenol	353	660	666.7	0	52.9	15-140	0			J
Acenaphthene	539.3	6.7	666.7	0	80.9	45-110	0			
Acenaphthylene	572	6.7	666.7	0	85.8	45-105	0			
Anthracene	676	6.7	666.7	0	101	55-105	0			
Benzo(a)anthracene	628	6.7	666.7	0	94.2	50-110	0			
Benzo(a)pyrene	667	6.7	666.7	0	100	50-110	0			
Benzo(b)fluoranthene	709.3	6.7	666.7	0	106	45-115	0			
Benzo(g,h,i)perylene	791.3	6.7	666.7	0	119	40-125	0			
Benzo(k)fluoranthene	709	6.7	666.7	0	106	45-115	0			
Bis(2-chloroethoxy)methane	548.3	160	666.7	0	82.2	45-110	0			
Bis(2-chloroethyl)ether	550	160	666.7	0	82.5	40-105	0			
Bis(2-chloroisopropyl)ether	519.7	160	666.7	0	77.9	20-115	0			
Bis(2-ethylhexyl)phthalate	644.7	330	666.7	0	96.7	45-125	0			
Butyl benzyl phthalate	658	160	666.7	0	98.7	50-125	0			
Carbazole	644.3	160	666.7	0	96.6	50-150	0			
Chrysene	666	6.7	666.7	0	99.9	55-110	0			
Dibenzo(a,h)anthracene	710.3	6.7	666.7	0	107	40-125	0			
Dibenzofuran	554	160	666.7	0	83.1	50-105	0			
Diethyl phthalate	615.7	330	666.7	0	92.3	50-115	0			
Dimethyl phthalate	578.3	330	666.7	0	86.7	50-110	0			
Di-n-butyl phthalate	648	330	666.7	0	97.2	55-110	0			
Di-n-octyl phthalate	624.3	160	666.7	0	93.6	40-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **63192** Instrument ID **SVMS4** Method: **SW846 8270D**

Fluoranthene	636.7	6.7	666.7	0	95.5	55-115	0
Fluorene	568	6.7	666.7	0	85.2	50-110	0
Hexachlorobenzene	650.7	160	666.7	0	97.6	45-120	0
Hexachlorobutadiene	539.3	160	666.7	0	80.9	40-115	0
Hexachlorocyclopentadiene	453.3	330	666.7	0	68	40-115	0
Hexachloroethane	530.3	160	666.7	0	79.5	35-110	0
Indeno(1,2,3-cd)pyrene	706	6.7	666.7	0	106	40-120	0
Isophorone	565	160	666.7	0	84.7	45-110	0
Naphthalene	542.3	6.7	666.7	0	81.3	40-105	0
Nitrobenzene	540	160	666.7	0	81	40-115	0
N-Nitrosodi-n-propylamine	536.7	160	666.7	0	80.5	40-115	0
N-Nitrosodiphenylamine	611	160	666.7	0	91.6	50-115	0
Pentachlorophenol	536.3	330	666.7	0	80.4	25-120	0
Phenanthrene	621	6.7	666.7	0	93.1	50-110	0
Phenol	528.7	160	666.7	0	79.3	40-100	0
Pyrene	722	6.7	666.7	0	108	45-125	0
Surr: 2,4,6-Tribromophenol	*1517*	0	*1667*	0	*91*	*34-140*	0
Surr: 2-Fluorobiphenyl	*1322*	0	*1667*	0	*79.3*	*12-100*	0
Surr: 2-Fluorophenol	*1494*	0	*1667*	0	*89.7*	*33-117*	0
Surr: 4-Terphenyl-d14	*1866*	0	*1667*	0	*112*	*25-137*	0
Surr: Nitrobenzene-d5	*1268*	0	*1667*	0	*76.1*	*37-107*	0
Surr: Phenol-d6	*1402*	0	*1667*	0	*84.1*	*40-106*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech
Work Order: 14091050
Project: Big River Mine Tailings 9.18.14

QC BATCH REPORT

Batch ID: **63192** Instrument ID **SVMS4** Method: **SW846 8270D**

MS	Sample ID: **14091046-02B MS**				Units: **µg/Kg**		Analysis Date: **9/25/2014 09:45 PM**			
Client ID:		Run ID: **SVMS4_140925A**			SeqNo: **2954536**		Prep Date: **9/25/2014**		DF: **5**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	1049	1,600	1308	0	80.2	50-110	0			J
2,4,6-Trichlorophenol	781.2	1,600	1308	0	59.7	45-110	0			J
2,4-Dichlorophenol	993.7	1,600	1308	0	76	45-110	0			J
2,4-Dimethylphenol	1134	3,200	1308	0	86.7	30-105	0			J
2,4-Dinitrophenol	1458	6,500	1308	0	111	15-130	0			J
2,4-Dinitrotoluene	1213	1,600	1308	0	92.7	50-115	0			J
2,6-Dinitrotoluene	1209	1,600	1308	0	92.5	50-110	0			J
2-Chloronaphthalene	1164	65	1308	0	89	45-105	0			
2-Chlorophenol	1017	1,600	1308	0	77.7	45-105	0			J
2-Methylnaphthalene	1088	65	1308	19.89	81.7	45-105	0			
2-Methylphenol	1085	1,600	1308	0	83	40-105	0			J
2-Nitroaniline	1422	6,500	1308	0	109	45-120	0			J
2-Nitrophenol	882.5	1,600	1308	0	67.5	40-110	0			J
3-Nitroaniline	1193	6,500	1308	0	91.2	25-110	0			J
4,6-Dinitro-2-methylphenol	1092	3,200	1308	0	83.5	40-130	0			J
4-Bromophenyl phenyl ether	1258	1,600	1308	0	96.2	45-115	0			J
4-Chloro-3-methylphenol	1347	1,600	1308	0	103	45-115	0			J
4-Chloroaniline	895.6	6,500	1308	0	68.5	15-110	0			J
4-Chlorophenyl phenyl ether	1216	1,600	1308	0	93	45-110	0			J
4-Nitroaniline	1281	6,500	1308	0	98	35-150	0			J
4-Nitrophenol	1085	6,500	1308	0	83	15-140	0			J
Acenaphthene	1190	65	1308	0	91	45-110	0			
Acenaphthylene	1337	65	1308	0	102	45-105	0			
Anthracene	1288	65	1308	0	98.5	55-105	0			
Benzo(a)anthracene	1356	65	1308	129.3	93.9	50-110	0			
Benzo(a)pyrene	1425	65	1308	0	109	50-110	0			
Benzo(b)fluoranthene	1569	65	1308	0	120	45-115	0			S
Benzo(g,h,i)perylene	1451	65	1308	0	111	40-125	0			
Benzo(k)fluoranthene	1337	65	1308	0	102	45-115	0			
Bis(2-chloroethoxy)methane	1111	1,600	1308	0	85	45-110	0			J
Bis(2-chloroethyl)ether	738.7	1,600	1308	0	56.5	40-105	0			J
Bis(2-chloroisopropyl)ether	911.9	1,600	1308	0	69.7	20-115	0			J
Bis(2-ethylhexyl)phthalate	4452	3,200	1308	2327	162	45-125	0			S
Butyl benzyl phthalate	1409	1,600	1308	0	108	50-125	0			J
Carbazole	1304	1,600	1308	0	99.7	50-150	0			J
Chrysene	1321	65	1308	0	101	55-110	0			
Dibenzo(a,h)anthracene	1441	65	1308	0	110	40-125	0			
Dibenzofuran	1157	1,600	1308	0	88.5	50-105	0			J
Diethyl phthalate	1177	3,200	1308	0	90	50-115	0			J
Dimethyl phthalate	1098	3,200	1308	0	84	50-110	0			J
Di-n-butyl phthalate	1406	3,200	1308	0	107	55-110	0			J
Di-n-octyl phthalate	8103	1,600	1308	7901	15.5	40-130	0			SO

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Batch ID: **63192** Instrument ID **SVMS4** Method: **SW846 8270D**

Fluoranthene	1543	65	1308	0	118	55-115	0	S
Fluorene	1236	65	1308	0	94.5	50-110	0	
Hexachlorobenzene	1177	1,600	1308	0	90	45-120	0	J
Hexachlorobutadiene	1003	1,600	1308	0	76.7	40-115	0	J
Hexachlorocyclopentadiene	U	3,200	1308	0	0	40-115	0	S
Hexachloroethane	895.6	1,600	1308	0	68.5	35-110	0	J
Indeno(1,2,3-cd)pyrene	1631	65	1308	397.9	94.3	40-120	0	
Isophorone	1137	1,600	1308	0	87	45-110	0	J
Naphthalene	1023	65	1308	0	78.2	40-105	0	
Nitrobenzene	1108	1,600	1308	0	84.7	40-115	0	J
N-Nitrosodi-n-propylamine	1010	1,600	1308	0	77.2	40-115	0	J
N-Nitrosodiphenylamine	1098	1,600	1308	0	84	50-115	0	J
Pentachlorophenol	885.8	3,200	1308	0	67.7	25-120	0	J
Phenanthrene	1265	65	1308	0	96.7	50-110	0	
Phenol	1095	1,600	1308	0	83.7	40-100	0	J
Pyrene	1458	65	1308	0	111	45-125	0	
Surr: 2,4,6-Tribromophenol	*2092*	0	*3269*	0	*64*	*34-140*	0	
Surr: 2-Fluorobiphenyl	*2569*	0	*3269*	0	*78.6*	*12-100*	0	
Surr: 2-Fluorophenol	*2481*	0	*3269*	0	*75.9*	*33-117*	0	
Surr: 4-Terphenyl-d14	*3383*	0	*3269*	0	*103*	*25-137*	0	
Surr: Nitrobenzene-d5	*2213*	0	*3269*	0	*67.7*	*37-107*	0	
Surr: Phenol-d6	*2713*	0	*3269*	0	*83*	*40-106*	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech
Work Order: 14091050
Project: Big River Mine Tailings 9.18.14

QC BATCH REPORT

Batch ID: **63192** Instrument ID **SVMS4** Method: **SW846 8270D**

MSD Sample ID: **14091046-02B MSD** Units: **µg/Kg** Analysis Date: **9/25/2014 10:10 PM**

Client ID: Run ID: **SVMS4_140925A** SeqNo: **2954537** Prep Date: **9/25/2014** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	1012	1,600	1311	0	77.2	50-110	1049	0	30	J
2,4,6-Trichlorophenol	933.8	1,600	1311	0	71.2	45-110	781.2	0	30	J
2,4-Dichlorophenol	1094	1,600	1311	0	83.5	45-110	993.7	0	30	J
2,4-Dimethylphenol	1019	3,200	1311	0	77.7	30-105	1134	0	30	J
2,4-Dinitrophenol	1356	6,500	1311	0	103	15-130	1458	0	30	J
2,4-Dinitrotoluene	1242	1,600	1311	0	94.7	50-115	1213	0	30	J
2,6-Dinitrotoluene	1347	1,600	1311	0	103	50-110	1209	0	30	J
2-Chloronaphthalene	1094	66	1311	0	83.5	45-105	1164	6.14	30	
2-Chlorophenol	891.2	1,600	1311	0	68	45-105	1017	0	30	J
2-Methylnaphthalene	1025	66	1311	19.89	76.7	45-105	1088	5.96	30	
2-Methylphenol	1094	1,600	1311	0	83.5	40-105	1085	0	30	J
2-Nitroaniline	1278	6,500	1311	0	97.5	45-120	1422	0	30	J
2-Nitrophenol	901	1,600	1311	0	68.7	40-110	882.5	0	30	J
3-Nitroaniline	1016	6,500	1311	0	77.5	25-110	1193	0	30	J
4,6-Dinitro-2-methylphenol	1052	3,200	1311	0	80.2	40-130	1092	0	30	J
4-Bromophenyl phenyl ether	1179	1,600	1311	0	90	45-115	1258	0	30	J
4-Chloro-3-methylphenol	1242	1,600	1311	0	94.7	45-115	1347	0	30	J
4-Chloroaniline	835.5	6,500	1311	0	63.7	15-110	895.6	0	30	J
4-Chlorophenyl phenyl ether	1166	1,600	1311	0	89	45-110	1216	0	30	J
4-Nitroaniline	1150	6,500	1311	0	87.7	35-150	1281	0	30	J
4-Nitrophenol	828.9	6,500	1311	0	63.2	15-140	1085	0	30	J
Acenaphthene	1107	66	1311	0	84.5	45-110	1190	7.17	30	
Acenaphthylene	1193	66	1311	0	91	45-105	1337	11.4	30	
Anthracene	1245	66	1311	0	95	55-105	1288	3.38	30	
Benzo(a)anthracene	1255	66	1311	129.3	85.9	50-110	1356	7.78	30	
Benzo(a)pyrene	1373	66	1311	0	105	50-110	1425	3.74	30	
Benzo(b)fluoranthene	1356	66	1311	0	103	45-115	1569	14.5	30	
Benzo(g,h,i)perylene	1389	66	1311	0	106	40-125	1451	4.37	30	
Benzo(k)fluoranthene	1301	66	1311	0	99.2	45-115	1337	2.74	30	
Bis(2-chloroethoxy)methane	986.2	1,600	1311	0	75.2	45-110	1111	0	30	J
Bis(2-chloroethyl)ether	609.4	1,600	1311	0	46.5	40-105	738.7	0	30	J
Bis(2-chloroisopropyl)ether	828.9	1,600	1311	0	63.2	20-115	911.9	0	30	J
Bis(2-ethylhexyl)phthalate	2510	3,200	1311	2327	13.9	45-125	4452	0	30	JS
Butyl benzyl phthalate	1425	1,600	1311	0	109	50-125	1409	0	30	J
Carbazole	1245	1,600	1311	0	95	50-150	1304	0	30	J
Chrysene	1202	66	1311	0	91.7	55-110	1321	9.36	30	
Dibenzo(a,h)anthracene	1379	66	1311	0	105	40-125	1441	4.4	30	
Dibenzofuran	1137	1,600	1311	0	86.7	50-105	1157	0	30	J
Diethyl phthalate	1147	3,200	1311	0	87.5	50-115	1177	0	30	J
Dimethyl phthalate	1055	3,200	1311	0	80.5	50-110	1098	0	30	J
Di-n-butyl phthalate	1278	3,200	1311	0	97.5	55-110	1406	0	30	J
Di-n-octyl phthalate	5953	1,600	1311	7901	-149	40-130	8103	30.6	30	SRO

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **63192** Instrument ID **SVMS4** Method: **SW846 8270D**

Fluoranthene	1376	66	1311	0	105	55-115	1543	11.4	30	
Fluorene	1166	66	1311	0	89	50-110	1236	5.76	30	
Hexachlorobenzene	1160	1,600	1311	0	88.5	45-120	1177	0	30	J
Hexachlorobutadiene	960	1,600	1311	0	73.2	40-115	1003	0	30	J
Hexachlorocyclopentadiene	U	3,200	1311	0	0	40-115	0	0	30	S
Hexachloroethane	789.6	1,600	1311	0	60.2	35-110	895.6	0	30	J
Indeno(1,2,3-cd)pyrene	1543	66	1311	397.9	87.4	40-120	1631	5.54	30	
Isophorone	943.6	1,600	1311	0	72	45-110	1137	0	30	J
Naphthalene	930.5	66	1311	0	71	40-105	1023	9.48	30	
Nitrobenzene	907.5	1,600	1311	0	69.2	40-115	1108	0	30	J
N-Nitrosodi-n-propylamine	966.5	1,600	1311	0	73.7	40-115	1010	0	30	J
N-Nitrosodiphenylamine	1065	1,600	1311	0	81.2	50-115	1098	0	30	J
Pentachlorophenol	887.9	3,200	1311	0	67.7	25-120	885.8	0	30	J
Phenanthrene	1209	66	1311	0	92.2	50-110	1265	4.53	30	
Phenol	1025	1,600	1311	0	78.2	40-100	1095	0	30	J
Pyrene	1297	66	1311	0	99	45-125	1458	11.6	30	
Surr: 2,4,6-Tribromophenol	*2035*	0	*3276*	0	*62.1*	*34-140*	2092	*2.78*	*40*	
Surr: 2-Fluorobiphenyl	*2510*	0	*3276*	0	*76.6*	*12-100*	2569	*2.34*	*40*	
Surr: 2-Fluorophenol	*2264*	0	*3276*	0	*69.1*	*33-117*	2481	*9.14*	*40*	
Surr: 4-Terphenyl-d14	*3237*	0	*3276*	0	*98.8*	*25-137*	3383	*4.41*	*40*	
Surr: Nitrobenzene-d5	*1972*	0	*3276*	0	*60.2*	*37-107*	2213	*11.5*	*40*	
Surr: Phenol-d6	*2634*	0	*3276*	0	*80.4*	*40-106*	2713	*2.95*	*40*	

The following samples were analyzed in this batch: 14091050-01A 14091050-02A 14091050-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech
Work Order: 14091050
Project: Big River Mine Tailings 9.18.14

QC BATCH REPORT

Batch ID: **R148877** Instrument ID **MOIST** Method: **A2540 G**

MBLK Sample ID: **WBLKS-R148877** Units: **% of sample** Analysis Date: **9/24/2014 05:45 PM**
Client ID: Run ID: **MOIST_140924D** SeqNo: **2951623** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.050								

LCS Sample ID: **LCS-R148877** Units: **% of sample** Analysis Date: **9/24/2014 05:45 PM**
Client ID: Run ID: **MOIST_140924D** SeqNo: **2951621** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.050	100	0	100	99.5-100.5	0			

DUP Sample ID: **1409969-11A DUP** Units: **% of sample** Analysis Date: **9/24/2014 05:45 PM**
Client ID: Run ID: **MOIST_140924D** SeqNo: **2951596** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	1.15	0.050	0	0	0	0-0	1.15	0	20	

DUP Sample ID: **1409981-08A DUP** Units: **% of sample** Analysis Date: **9/24/2014 05:45 PM**
Client ID: Run ID: **MOIST_140924D** SeqNo: **2951617** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	4.83	0.050	0	0	0	0-0	4.88	1.03	20	

The following samples were analyzed in this batch: 14091050-01A 14091050-02A 14091050-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Chain of Custody Form

Page 1 of 1

COC ID: 123456

- ☐ Cincinnati, OH +1 513 733 5336
- ☐ Holland, MI +1 616 399 6070
- ☐ Salt Lake City, UT +1 801 266 7700
- ☐ Everett, WA +1 425 356 2600
- ☐ Houston, TX +1 281 530 5656
- ☐ Spring City, PA +1 610 948 4903
- ☐ Fort Collins, CO +1 970 490 1511
- ☐ Middletown, PA +1 717 944 5541
- ☐ York, PA +1 717 505 5280

ALS Project Manager: | Work Order #: 1409105G

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	1105002	Project Name	Big River Mine Tailings	A	Pesticides / 8081
Work Order		Project Number	103X9025140038.000	B	Herbicides / 8151
Company Name	Tetra Tech	Bill To Company	Tetra Tech EM Inc.	C	SVOCs / 8270
Send Report To	Emily Fisher	Invoice Attn.	Emily Fisher	D	Metals (As/Ba/Cd/Mn/Pb/Zn / 6020
Address	415 Oak St.	Address	415 Oak St.	E	
				F	
City/State/Zip	Kansas City, MO 64106	City/State/Zip	Kansas City, MO 64106	G	
Phone	816-412-1755	Phone	816-412-1741	H	
Fax	816-410-1748	Fax	816-410-1748	I	
e-Mail Address	emily.fisher@tetratech.com	e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	BRMT-SF-01-091814	9/18/14	1305	SO	None	2	✓	✓	✓	✓							
2	BRMT-SSF-01-091814	9/18/14	1050	SO	None	2	✓	✓	✓	✓							
3	BRMT-SSF-02-091814	9/18/14	1055	SO	None	2	✓	✓	✓	✓							
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s): Please Print & Sign: Bryan Erickson

Shipment Method: Fed Ex

Required Turnaround Time: ☐ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☒ Other 7 day

Results Due Date: 9-27-14

Relinquished by:	Date:	Time:	Received by:	Notes:
Bryan Erickson	9/19/14	1400		
Relinquished by: FED EX	Date: 09/20/14	Time: 1030	Received by (Laboratory):	Cooler Temp.
Logged by (Laboratory): DFS	Date: 9/22/14	Time: 1200	Checked by (Laboratory):	2.4C

QC Package: (Check Box Below)

- Level II: Standard QC ☒
- Level III: Std QC + Raw Data
- Level IV: SW846 CLP-Like
- Other: _____

Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

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Sample Receipt Checklist

Client Name: **TETRATECH - MO** Date/Time Received: **20-Sep-14 10:30**

Work Order: **14091050** Received by: **TBB**

Checklist completed by Diane Shaw (eSignature) 22-Sep-14 (Date) Reviewed by: Ann Preston (eSignature) 22-Sep-14 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.6 c		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	9/22/2014 12:13:40 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

From: (816) 225-4030
Bryan Erickson
Tetra Tech
3524 S. Leslie Ave

Independence, MO 64055

Origin ID: MKCA

FedEx Express

J14201406190326

Ship Date: 19SEP14
ActWgt: 20.0 LB
CAD: 4534515/INET3550

Delivery Address Bar Code

Ref # 103X9025140038.000
Invoice #
PO #
Dept #

SHIP TO: (616) 738-7346 BILL SENDER

Lab Manager
ALS
3352 128TH AVE

HOLLAND, MI 49424

SATURDAY 12:00P
PRIORITY OVERNIGHT

TRK# 0201 **7712 1255 9842**

X0 HLMA

49424
MI-US
GRR

522G1/CDB4/8AC9

After printing this label:
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3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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9-19-14