

PLEASE PRINT:

Collector I.D. #

2	2	2	4
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Reason Code

1	3
---	---

Cost Center

3	8	2
---	---	---

Program Code

0	0	0	4
---	---	---	---

MULTIPLE SAMPLE SUBMISSION SHEET

LABORATORY USE ONLY
 pH <2? Yes No
 Res. Cl? Yes No
 Temp. 56°C? Yes No
 Initials

Sequence Number	Date Collected	Time Collected	Sampling Location	SAC or Suite Code(s)	Additional Tests	Legal Seal Number(s)	Intact Y/N	Initials	Lab Number(s)
572	10/16/18	0930	SSP K-9	287		I185089			
573	10/16/18	1022	PBP S-6	287		I185082			
574	10/16/18	1037	PBP K-27	287		I185103			
575	10/16/18	1120	EVF K-31	287		I185102			
576	10/16/18	1150	SSA K-39	287		I185088			
577	10/16/18	1311	SMC K-49	287		I185101			
578	10/16/18	1340	WED S-2	287		I185097			
579	10/16/18	1348	BPB K-59	287		I185096			

NUMBER OF INORGANIC CONTAINERS SENT:

# Unfiltered	# Filtered

Unpreserv: _____ # CN: _____
 # NP: _____ # Metals: _____
 # Phenol: _____ # TPH/OAG: _____
 # TOC: _____ # DOC: _____
 # Fe+2: _____ # Sulfide: _____
 # Other: _____ # TOX: _____

Verified by (lab initials): _____

NUMBER OF ORGANIC CONTAINERS SENT:

# Preserved	# Unpreserved
40 mL VOA: _____	40 mL VOA: _____
60 mL VOA: _____	60 mL VOA: _____
1 L Amber: _____	Encore: _____
Other: _____	1 L Amber: _____

500 mL Amber: _____
 20 mL scint.: _____
 Other: _____

Verified by (lab initials): _____

Additional Information: _____

Check Here if Compliance Samples

Facility Name: AZR - ATSDR INVESTIGATION Facility ID #: _____
 Alternate Contact: DON ROOD, DEP, 570-826-5449
 Sample Collector Name: MEG BOYER, DEP Phone: 610-861-2076
 How Shipped: commercial courier Hand Delivered

Chain of Custody

Relinquished by Sample Collector:	MEG BOYER	Print Name	<i>Meg Boyer</i>	Signature	10/18/2018	Date	1330	Time
Accepted by:								
Relinquished by:								
Received at the Bureau of Labs:								

Lab Initials: _____

Note: Place this Sample Submission Sheet in a sealed plastic bag. Secure the bag to the top of the lid inside the cooler.

PLEASE PRINT:

Collector I.D. #	2	2	2	4
Reason Code	1	3		

Cost Center	3	8	2
Program Code	0	0	4

MULTIPLE SAMPLE SUBMISSION SHEET

Res. Cl?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Temp. 50°C?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Initials		
Matrix Code		

pH < 2?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Intact Y/N	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Legal Seal Number(s)	I185095	
Additional Tests		
SAC or Suite Code(s)	287	
Sampling Location	SRP S-6	
Time Collected	1440	
Date Collected	10/16/18	
Sequence Number	580	

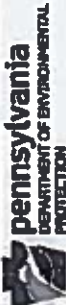
Sequence Number	Date Collected	Time Collected	Sampling Location	SAC or Suite Code(s)	Additional Tests	Legal Seal Number(s)	Intact Y/N	Initials	Lab Number(s)
580	10/16/18	1440	SRP S-6	287		I185095			
581	10/16/18	1451	SRP K-80	287		I185099			
583	10/17/18	0940	PHS S-8	287		I185093			
584	10/17/18	1000	PHS S-13	287		I185092			
585	10/17/18	1030	PHS S-17	287		I185091			
586	10/17/18	2400	BD-02	287		I185090			
587	10/17/18	1028	PHS K-26	287		I185100			
589	10/17/18	1053	PHS K-6	287		I185081			

NUMBER OF INORGANIC CONTAINERS SENT:	NUMBER OF ORGANIC CONTAINERS SENT:
# Unfiltered: <input type="checkbox"/> # Filtered: <input type="checkbox"/> # NP: <input type="checkbox"/> # Metals: <input type="checkbox"/> # Phend: <input type="checkbox"/> # TPHOAG: <input type="checkbox"/> # TOC: <input type="checkbox"/> # DOC: <input type="checkbox"/> # Fe+2: <input type="checkbox"/> # Sulfide: <input type="checkbox"/> # Other: <input type="checkbox"/> # TOX: <input type="checkbox"/> Verified by (lab initials): _____	# Preserved: <input type="checkbox"/> # Unpreserved: <input type="checkbox"/> 40 mL VOA: <input type="checkbox"/> 500 mL Amber: <input type="checkbox"/> 60 mL VOA: <input type="checkbox"/> 20 mL scint: <input type="checkbox"/> 1 L Amber: <input type="checkbox"/> Other: <input type="checkbox"/> Verified by (lab initials): _____
Additional Information: <input type="checkbox"/> Check Here If Compliance Samples	

Facility Name: AZR - ATSDR INVESTIGATION Facility ID #: _____
 Alternate Contact: DON ROOD, DEP, 570-826-5449
 Sample Collector Name: MEG BOYER, DEP Phone: 610-861-2076
 How Shipped: commercial courier Hand Delivered

Chain of Custody	Print Name	Signature	Date	Time
Relinquished by Sample Collector:	MEG BOYER	<i>Meg Boyer</i>	10/18/2018	1330
Accepted by:				
Relinquished by:				
Received at the Bureau of Labs:				

Note: Place this Sample Submission Sheet in a sealed plastic bag. Secure the bag to the top of the lid inside the cooler.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LABORATORIES

PLEASE PRINT:

Collector I.D. #

2	2	2	4
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Reason Code

1	3
---	---

Coast Center

3	8	2
---	---	---

Program Code

0	0	0	4
---	---	---	---

MULTIPLE SAMPLE SUBMISSION SHEET

LABORATORY USE ONLY
 pH <7? Yes No Res. Cl? Yes No Temp. 58°C? Yes No Initials _____ Matrix Code _____
 Yes No Yes No Yes No

Sequence Number	Date Collected	Time Collected	Sampling Location	SAC or Suite Code(s)	Additional Tests	Legal Seal Number(s)	Intact Y/N	Initials	Lab Number(s)
590	10/17/18	1142	PMP S-5	287		1185087			
591	10/17/18	1158	PMP S-10	287		1185086			
592	10/17/18	1125	PMP K-34	287		1185085			
593	10/16/18	2300	BD-01	287		1185083			
				287					
				287					
				287					
				287					

NUMBER OF INORGANIC CONTAINERS SENT:

# Unfiltered	# Filtered
# CN:	
# Metals:	4
# TPH/O&G:	
# DOC:	
# Sulfide:	
# TOX:	

Verified by (lab initials): _____

NUMBER OF ORGANIC CONTAINERS SENT:

# Preserved	# Unpreserved
40 mL VOA:	500 mL Amber:
60 mL VOA:	20 mL scintl.:
1 L Amber:	Other:
Other:	

Verified by (lab initials): _____

Additional Information: _____

Check Here If Compliance Samples

Facility Name: AZR - ATSDR INVESTIGATION Facility ID #: _____ Alternate Contact: DON ROOD, DEP, 570-826-5449
 Sample Collector Name: MEG BOYER, DEP Phone: 610-861-2076 How Shipped: commercial courier Hand Delivered

Chain of Custody

Relinquished by Sample Collector:	MEG BOYER	Signature	<i>Meg Boyer</i>	Date	10/18/2018	Time	1330
Accepted by:							
Relinquished by:							
Received at the Bureau of Labs:							

Note: Place this Sample Submission Sheet in a sealed plastic bag. Secure the bag to the top of the lid inside the cooler.



PLEASE PRINT:

Collector I.D. #	2	2	2	4
Reason Code	1	3		

Cost Center	3	8	2	2
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Program Code	0	0	0	4
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MULTIPLE SAMPLE SUBMISSION SHEET

pH <2?	Res. Cl?	Temp. 56°C?	Initials	Matrix Code
<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		

LABORATORY USE ONLY

Sequence Number	Date Collected	Time Collected	Sampling Location	SAC or Suite Code(s)	Additional Tests	Legal Seal Number(s)	Intact Y/N	Initials	Lab Number(s)
582	10/16/18	1530	RB-01	200	See Add. Info. below	1185094			
588	10/17/18	1038	RB-02	200	"	1185098			
					"				
					"				
					"				
					"				
					"				
					"				

NUMBER OF INORGANIC CONTAINERS SENT: # Unfiltered / Filtered # Unpreserv: # N/P: # Phenol: # TOC: # Fe+2: # Other: Verified by (lab initials):	# CN: # Metals: # TPHVO&G: # DOC # Sulfide: # TOX:	# Unfiltered # Filtered 2	NUMBER OF ORGANIC CONTAINERS SENT: # Preserved 40 mL VOA: 60 mL VOA: 1 L Amber: Other: Verified by (lab initials):	# Unpreserved 500 mL Amber: 20 mL scintl: Other: 1 L Amber:	Additional Information: Total Metals: Lead, Cadmium, Chromium, Nickel, Zinc, Copper <input type="checkbox"/> Check Here if Compliance Samples
---	---	------------------------------	---	---	--

Facility Name: AZR - ATSDR INVESTIGATION Facility ID #: _____
 Sample Collector Name: MEG BOYER, DEP Phone: 610-861-2076
 Alternate Contact: DON ROOD, DEP, 570-825-5449
 How Shipped: commercial courier Hand Delivered

Chain of Custody	Print Name	Signature	Date	Time
Relinquished by Sample Collector:	MEG BOYER	<i>Meg Boyer</i>	18/18/2018	1:30
Accepted by:				
Relinquished by:				
Received at the Bureau of Labs:				

Note: Place this Sample Submission Sheet in a sealed plastic bag. Secure the bag to the top of the lid inside the cooler.



Date of Issue: 12/04/2018 04:01:11
 DEP Bureau of Laboratories - Harrisburg
 P.O. Box 1467
 2575 Interstate Drive
 Harrisburg, PA 17105-1467

NE LAP - accredited by
 NJ DEP - Laboratory Number: PA059
 PA DEP LAP - DEP Lab ID: 22-00223

Contact Phone Number: (717) 346-7200

Analytical Report For
 Environmental Cleanup

Sample ID: 2224 572 Date Collected: 10/16/2018 09:30:00 AM Lab Sample ID: I2018027715 Status: Completed

Name of Sample Collector: Meg Boyer
 Date Received: 10/19/2018
 County: Carbon State:
 Municipality: Palmerton Boro
 AZR - ATSDR INVESTIGATION
 PALMERTON PA.

Sample Medium: Soil
 Sample Medium Type: Soil
 Location: SSP K-9
 Reason: Investigation
 Project: NOT INDICATED
 Standard Analysis: 287
 Matrix: Soil

Legal Seal: 1185089 Intact: Yes

Stream Condition:

Sample Standard Comment: This is a revised report

Test Code / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
80002K ACID DIGESTION / ICP ANALYSIS	0.0 Each	10/29/2018 12:00 PM	MBOTTS	EPA 3051
90002S ASTM-A H2O Lead*	0 Each	11/20/2018 12:00 AM	FHUNZIKER	ASTM D3987-06

Analytical Report For
Environmental Cleanup

Sample ID: 2224 572 Date Collected: 10/16/2018 09:30:00 AM Lab Sample ID: I2018027715 Status: Completed

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
46309K CADMIUM, MG/KG DRY WT. BASIS	3.83 mg/kg	10/30/2018 09:17 AM	MBOTTS	EPA 6010 D
46308K CHROMIUM, MG/KG DRY WT. BASIS	16.70 mg/kg	10/30/2018 09:17 AM	MBOTTS	EPA 6010 D
46257K COPPER, MG/KG DRY WT. BASIS	27.30 mg/kg	10/30/2018 09:17 AM	MBOTTS	EPA 6010 D
41032L Hexavalent Chromium dry weight	<30.32 ug/kg	11/20/2018 04:56 PM	FVODOPIVEC	EPA 218.6
41032A Hexachrome ASTM Leach	<1.0 ug/L	11/20/2018 04:56 PM	FVODOPIVEC	EPA 218.6
46258K LEAD, MG/KG DRY WT. BASIS	<76.50 mg/kg	10/30/2018 09:17 AM	MBOTTS	EPA 6010 D
46307K NICKEL, MG/KG DRY WT. BASIS	15.70 mg/kg	10/30/2018 09:17 AM	MBOTTS	EPA 6010 D
40005K PERCENT MOISTURE IN SOIL	34.04 %	10/24/2018 01:18 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40006K PERCENT SOLID CONTENT	65.96 %	10/24/2018 01:18 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40004K Sample Weight g	0.4954 GRAMS	10/29/2018 12:00 PM	MBOTTS	EPA 3051
40007 SOIL PH 1:1 DI H2O LEACH	6.34 pH units	10/19/2018 12:25 PM	LOJEDA	EPA 9045 D
00403T Temperature at which pH is measured	21.80 C	10/19/2018 12:25 PM	LOJEDA	SM 4500-H+ B
46905K ZINC, MG/KG DRY WT. BASIS	706.00 mg/kg	10/30/2018 09:17 AM	MBOTTS	EPA 6010 D

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2009 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

Taru Upadhyay, Technical Director, Bureau of Laboratories



Date of Issue: 12/04/2018 04:02:48

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Environmental Cleanup

Sample ID: 2224 573 Date Collected: 10/16/2018 10:22:00 AM Lab Sample ID: I2018027716 Status: Completed

Name of Sample Collector: Meg Boyer

Date Received: 10/19/2018

County: Carbon

State:

Municipality: Palmerton Boro

AZR - ATSDR INVESTIGATION
PALMERTON PA.

Sample Medium: Soil

Sample Medium Type: Soil

Location: PBP S-6

Reason: Investigation

Project: NOT INDICATED

Standard Analysis: 287

Matrix: Soil

Legal Seal: I185082

Intact: Yes

Stream Condition:

Sample Standard Comment: This is a revised report

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
80002K ACID DIGESTION / ICP ANALYSIS	0.0 Each	10/29/2018 12:00 PM	MBOTTS	EPA 3051
90002S ASTM-A H2O-Leach*	0 Each	11/20/2018 12:00 AM	FHUNZIKER	ASTM D3987-06

Analytical Report For
Environmental Cleanup

Sample ID: 2224 573

Date Collected: 10/16/2018 10:22:00 AM

Lab Sample ID: I2018027716

Status: Completed

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
46309K CADMIUM, MG/KG DRY WT. BASIS	73.90 mg/kg	10/30/2018 09:38 AM	MBOTTS	EPA 6010 D
46308K CHROMIUM, MG/KG DRY WT. BASIS	42.50 mg/kg	10/30/2018 09:38 AM	MBOTTS	EPA 6010 D
46257K COPPER, MG/KG DRY WT. BASIS	113.00 mg/kg	10/30/2018 09:38 AM	MBOTTS	EPA 6010 D
41032L Hexavalent Chromium dry weight	<25.24 ug/kg	11/20/2018 05:13 PM	FVODOPIVEC	EPA 218.6
41032A Hexachrome ASTM Leach	<1.0 ug/L	11/20/2018 05:13 PM	FVODOPIVEC	EPA 218.6
46266K LEAD, MG/KG DRY WT. BASIS	485.00 mg/kg	10/30/2018 09:38 AM	MBOTTS	EPA 6010 D
46307K NICKEL, MG/KG DRY WT. BASIS	71.90 mg/kg	10/30/2018 09:38 AM	MBOTTS	EPA 6010 D
40005K PERCENT MOISTURE IN SOIL	20.75 %	10/24/2018 01:19 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40006K PERCENT SOLID CONTENT	79.25 %	10/24/2018 01:19 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40004K Sample Weight, g	0.4997 GRAMS	10/29/2018 12:00 PM	MBOTTS	EPA 9051
40007 SOIL PH 1:1 DI H2O LEACH	6.38 pH units	10/19/2018 12:27 PM	LOJEDA	EPA 9045 D
00403T Temperature at which pH is measured	21.70 C	10/19/2018 12:27 PM	LOJEDA	SM 4500-H+B
46905K ZINC, MG/KG DRY WT. BASIS	7866.00 mg/kg	10/30/2018 01:20 PM	MBOTTS	EPA 6010 D

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2009 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

Taru Upadhyay, Technical Director, Bureau of Laboratories



Date of Issue: 12/04/2018 04:02:54

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by
NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Environmental Cleanup

Sample ID: 2224 574 Date Collected: 10/16/2018 10:37:00 AM Lab Sample ID: I2018027717 Status: Completed

Name of Sample Collector: Meg Boyer
Date Received: 10/19/2018
County: Carbon
Municipality: Palmerton Boro
AZR - ATSDR INVESTIGATION
PALMERTON PA.
State:

Sample Medium: Soil
Sample Medium Type: Soil

Location: PBP K-27
Reason: Investigation
Project: NOT INDICATED
Standard Analysis: 287
Matrix: Soil

Legal Seal: I185103 Intact: Yes

Stream Condition:

Sample Standard Comment: This is a revised report

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
80002K ACID DIGESTION / ICP ANALYSIS	0.0 Each	10/29/2018 12:00 PM	MBOTTS	EPA 3051
90002S ASTM-A H2O Leach*	0 Each	11/20/2018 12:00 AM	FHUNZIKER	ASTM D3987-06

Analytical Report For
Environmental Cleanup

Sample ID: 2224 574

Date Collected: 10/16/2018 10:37:00 AM

Lab Sample ID: I2018027717

Status: Completed

Test Codes./CAS.# - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
46309K CADMIUM, MG/KG DRY WT. BASIS	136.00 mg/kg	10/30/2018 10:05 AM	MBOTTS	EPA 6010 D
46308K CHROMIUM, MG/KG DRY WT. BASIS	86.00 mg/kg	10/30/2018 10:05 AM	MBOTTS	EPA 6010 D
46257K COPPER, MG/KG DRY WT. BASIS	223.00 mg/kg	10/30/2018 10:05 AM	MBOTTS	EPA 6010 D
41032L Hexavalent Chromium dry weight	<25.40 ug/kg	11/20/2018 05:21 PM	FVODOPIVEC	EPA 218.6
41032A Hexachrome ASTM Leach	<1.0 ug/L	11/20/2018 05:21 PM	FVODOPIVEC	EPA 218.6
46268K LEAD, MG/KG DRY WT. BASIS	812.00 mg/kg	10/30/2018 10:05 AM	MBOTTS	EPA 6010 D
46307K NICKEL, MG/KG DRY WT. BASIS	33.20 mg/kg	10/30/2018 10:05 AM	MBOTTS	EPA 6010 D
40005K PERCENT MOISTURE IN SOIL	21.26 %	10/24/2018 01:20 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40006K PERCENT SOLID CONTENT	78.74 %	10/24/2018 01:20 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40004K Sample Weight, g	0.4980 GRAMS	10/29/2018 12:00 PM	MBOTTS	EPA 9051
40007 SOIL PH 1:1 DI H2O LEACH	6.48 pH units	10/19/2018 12:29 PM	LOJEDA	EPA 9045 D
00403T Temperature at which pH is measured	22.50 C	10/19/2018 12:29 PM	LOJEDA	SM 4500-H+ B
46905K ZINC, MG/KG DRY WT. BASIS	11128.00 mg/kg	10/30/2018 01:24 PM	MBOTTS	EPA 6010 D

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2009 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

Taru Upadhyay, Technical Director, Bureau of Laboratories



Date of Issue: 12/04/2018 04:04:04

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Environmental Cleanup

Sample ID: 2224 575 Date Collected: 10/16/2018 11:20:00 AM Lab Sample ID: 12018027718 Status: Completed

Name of Sample Collector: Meg Boyer

Date Received: 10/19/2018

County: Carbon

State:

Municipality: Palmerton Boro

AZR - ATSDR INVESTIGATION
PALMERTON PA.

Sample Medium: Soil

Sample Medium Type: Soil

Location: EVF K-31

Reason: Investigation

Project: NOT INDICATED

Standard Analysis: 287

Matrix: Soil

Legal Seal: 1185102

Intact: Yes

Stream Condition:

Sample Standard Comment: This is a revised report

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
80002K ACID DIGESTION / ICP ANALYSIS	0.0 Each	10/29/2018 12:00 PM	MBOTTS	EPA 3051
90002S ASTM-A-H2O Leach*	0.1 Each	11/20/2018 12:00 AM	FHUNZIKER	ASTM D3987-06

Analytical Report For
Environmental Cleanup

Sample ID: 2224 575 Date Collected: 10/16/2018 11:20:00 AM

Lab Sample ID: I2018027718

Status: Completed

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
46309K CADMIUM, MG/KG DRY WT. BASIS	11.40 mg/kg	10/30/2018 10:19 AM	MBOTTS	EPA 6010 D
46308K CHROMIUM, MG/KG DRY WT. BASIS	37.00 mg/kg	10/30/2018 10:19 AM	MBOTTS	EPA 6010 D
46257K COPPER, MG/KG DRY WT. BASIS	126.00 mg/kg	10/30/2018 10:19 AM	MBOTTS	EPA 6010 D
41032L Hexavalent Chromium dry weight	<27.08 ug/kg	11/20/2018 05:29 PM	FVODOPIVEC	EPA 218.6
41032A Hexachrome ASTM Leach	<1.0 ug/L	11/20/2018 05:29 PM	FVODOPIVEC	EPA 218.6
46259K LEAD, MG/KG DRY WT. BASIS	183.00 mg/kg	10/30/2018 10:19 AM	MBOTTS	EPA 6010 D
46307K NICKEL, MG/KG DRY WT. BASIS	13.10 mg/kg	10/30/2018 10:19 AM	MBOTTS	EPA 6010 D
40006K PERCENT MOISTURE IN SOIL	26.54 %	10/24/2018 01:21 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40006K PERCENT SOLID CONTENT	73.86 %	10/24/2018 01:21 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40004K Sample Weight (g)	0.4937 GRAMS	10/29/2018 12:00 PM	MBOTTS	EPA 3051
40007 SOIL PH 1:1 DI H2O LEACH	6.92 pH units	10/19/2018 12:31 PM	LOJEDA	EPA 9045 D
00403T Temperature at which pH is measured	22.60 C	10/19/2018 12:31 PM	LOJEDA	SM 4500-H+ B
46905K ZINC, MG/KG DRY WT. BASIS	3411.00 mg/kg	10/30/2018 10:24 AM	MBOTTS	EPA 6010 D

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2009 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

Taru Upadhyay, Technical Director, Bureau of Laboratories



Date of Issue: 12/04/2018 04:04:05

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Environmental Cleanup

Sample ID: 2224 576 Date Collected: 10/16/2018 11:50:00 AM Lab Sample ID: I2018027719 Status: Completed

Name of Sample Collector: Meg Boyer

Date Received: 10/19/2018

County: Carbon

State:

Municipality: Palmerton Boro

AZR - ATSDR INVESTIGATION
PALMERTON PA.

Sample Medium: Soil

Sample Medium Type: Soil

Location: SSA K-39

Reason: Investigation

Project: NOT INDICATED

Standard Analysis: 287

Matrix: Soil

Legal Seal: 1185088

Intact: Yes

Stream Condition:

Sample Standard Comment: This is a revised report

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
80002K ACID DIGESTION / ICP ANALYSIS	0.0 Each	10/29/2018 12:00 PM	MBOTTS	EPA 3051
90002S ASTM-A-H2O Leach*	0 Each	11/20/2018 12:00 AM	FHUNZIKER	ASTM D3987-06

Analytical Report For
Environmental Cleanup

Sample ID: 2224 576 Date Collected: 10/16/2018 11:50:00 AM Lab Sample ID: I2018027719 Status: Completed

Test Codes / CAS# - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
46309K CADMIUM, MG/KG DRY WT. BASIS	12.50 mg/kg	10/30/2018 10:28 AM	MBOTTS	EPA 6010 D
46308K CHROMIUM, MG/KG DRY WT. BASIS	28.50 mg/kg	10/30/2018 10:28 AM	MBOTTS	EPA 6010 D
46257K COPPER, MG/KG DRY WT. BASIS	49.50 mg/kg	10/30/2018 10:28 AM	MBOTTS	EPA 6010 D
41032L Hexavalent Chromium dry weight	<25.21 ug/kg	11/20/2018 05:37 PM	FVODOPIVEC	EPA 218.6
41032A Hexachrome ASTM Leach	<1.0 ug/L	11/20/2018 05:37 PM	FVODOPIVEC	EPA 218.6
46258K2 Lead, MG/KG Dry WT Basis	65.10 mg/kg	10/06/2018 01:52 PM	SCHOY	EPA 6020B
46258K LEAD, MG/KG DRY WT. BASIS	Cancelled	11/01/2018 12:13 PM	MBOTTS	EPA 6010 D
Analyzed by another method				
46307K NICKEL, MG/KG DRY WT. BASIS	16.80 mg/kg	10/30/2018 10:28 AM	MBOTTS	EPA 6010 D
40005K PERCENT MOISTURE IN SOIL	20.66 %	10/24/2018 01:21 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40006K PERCENT SOLID CONTENT	79.34 %	10/24/2018 01:21 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40004K Sample Weight, g	0.5033 GRAMS	10/29/2018 12:00 PM	MBOTTS	EPA 3051
40007 SOIL PH (1:1 D) H2O LEACH	7.28 pH units	10/19/2018 12:34 PM	LOJEDA	EPA 9045 D
00403T Temperature at which pH is measured	22.00 C	10/19/2018 12:34 PM	LOJEDA	SM 4500-H+ B
46905K ZINC, MG/KG DRY WT. BASIS	830.00 mg/kg	10/30/2018 10:28 AM	MBOTTS	EPA 6010 D

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2009 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.
* denotes tests that the laboratory is not accredited for

Taru Upadhyay, Technical Director, Bureau of Laboratories



Date of Issue: 12/04/2018 04:04:59

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
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Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Environmental Cleanup

Sample ID: 2224 577 Date Collected: 10/16/2018 01:11:00 PM

Lab Sample ID: I2018027720 Status: Completed

Name of Sample Collector: Meg Boyer
Date Received: 10/19/2018

County: Carbon
Municipality: Palmerton Boro
AZR - ATSDR INVESTIGATION
PALMERTON PA.

State:

Sample Medium: Soil
Sample Medium Type: Soil

Location: SMC K-49
Reason: Investigation
Project: NOT INDICATED
Standard Analysis: 287
Matrix: Soil

Legal Seal: 1185101 Intact: Yes

Stream Condition:

Sample Standard Comment: This is a revised report

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
80002K ACID DIGESTION / ICP ANALYSIS	0.0 Each	10/29/2018 12:00 PM	MBOTTS	EPA 3051
90002S ASTM-A H2O Leach*	0 Each	11/27/2018 12:00 AM	FHUNZIKER	ASTM D3987-06

Analytical Report For
Environmental Cleanup

Sample ID: 2224 577 Date Collected: 10/16/2018 01:11:00 PM Lab Sample ID: I2018027720 Status: Completed

Test Codes / CAS# - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
46309K CADMIUM, MG/KG DRY WT. BASIS	26.00 mg/kg	10/30/2018 10:37 AM	MBOTTS	EPA 6010 D
46308K CHROMIUM, MG/KG DRY WT. BASIS	70.10 mg/kg	10/30/2018 10:37 AM	MBOTTS	EPA 6010 D
46257K COPPER, MG/KG DRY WT. BASIS	184.00 mg/kg	10/30/2018 10:37 AM	MBOTTS	EPA 6010 D
41032L Hexavalent Chromium dry weight	<25.64 ug/kg	11/28/2018 02:25 PM	FVODOPIVEC	EPA 218.6
41032A Hexachrome ASTM Leach	<1.0 ug/L	11/28/2018 02:25 PM	FVODOPIVEC	EPA 218.6
46258K LEAD, MG/KG DRY WT. BASIS	346.00 mg/kg	10/30/2018 10:37 AM	MBOTTS	EPA 6010 D
46307K NICKEL, MG/KG DRY WT. BASIS	42.90 mg/kg	10/30/2018 10:37 AM	MBOTTS	EPA 6010 D
40005K PERCENT MOISTURE IN SOIL	21.68 %	10/24/2018 01:22 PM	LOJEDA	SM 2640G
** Comment ** Holding time exceeded				
40006K PERCENT SOLID CONTENT	78.32 %	10/24/2018 01:22 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40004K Sample Weight g	0.5017 GRAMS	10/29/2018 12:00 PM	MBOTTS	EPA 3051
40007 SOIL PH 1:1 DI H2O LEACH	7.39 pH units	10/19/2018 12:35 PM	LOJEDA	EPA 9045 D
00403T Temperature at which pH is measured	21.70 C	10/19/2018 12:35 PM	LOJEDA	SM 4500-HH-B
46905K ZINC, MG/KG DRY WT. BASIS	4868.00 mg/kg	10/30/2018 10:55 AM	MBOTTS	EPA 6010 D

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Taru Upadhyay, Technical Director, Bureau of Laboratories



Date of Issue: 12/04/2018 04:01:48

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2575 Interstate Drive
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Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Environmental Cleanup

Sample ID: 2224 578 Date Collected: 10/16/2018 01:40:00 PM Lab Sample ID: I2018027721 Status: Completed

Name of Sample Collector: Meg Boyer
Date Received: 10/19/2018
County: Carbon State:
Municipality: Palmerton Boro
AZR - ATSDR INVESTIGATION
PALMERTON PA.

Sample Medium: Soil
Sample Medium Type: Soil
Location: WED S-2
Reason: Investigation
Project: NOT INDICATED
Standard Analysis: 287
Matrix: Soil
Legal Seal: I185097 Intact: Yes

Stream Condition:

Sample Standard Comment: This is a revised report

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
80002K ACID DIGESTION / ICP ANALYSIS	0.0 Each	10/29/2018 12:00 PM	MBOTTS	EPA 3051
90002S ASTM A H2O Leach*	0.1 Each	11/27/2018 12:00 AM	FHUNZIKER	ASTM D9987-06

Analytical Report For
Environmental Cleanup

Sample ID: 2224 578

Date Collected: 10/16/2018 01:40:00 PM

Lab Sample ID: I2018027721

Status: Completed

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
46309K CADMIUM, MG/KG DRY WT. BASIS	86.30 mg/kg	10/30/2018 11:00 AM	MBOTTS	EPA 6010 D
46308K CHROMIUM, MG/KG DRY WT. BASIS	32.30 mg/kg	10/30/2018 11:00 AM	MBOTTS	EPA 6010 D
46257K COPPER, MG/KG DRY WT. BASIS	346.00 mg/kg	10/30/2018 11:00 AM	MBOTTS	EPA 6010 D
41032L Hexavalent Chromium dry weight	<24.66 ug/kg	11/29/2018 02:41 PM	FVODOPIVEC	EPA 218.6
41032A Hexchrome ASTM Leach	<1.0 ug/L	11/28/2018 02:41 PM	FVODOPIVEC	EPA 218.6
46259K LEAD, MG/KG DRY WT. BASIS	701.00 mg/kg	10/30/2018 11:00 AM	MBOTTS	EPA 6010 D
46307K NICKEL, MG/KG DRY WT. BASIS	50.30 mg/kg	10/30/2018 11:00 AM	MBOTTS	EPA 6010 D
40006K PERCENT MOISTURE IN SOIL	18.68 %	10/24/2018 01:22 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40006K PERCENT SOLID CONTENT	81.42 %	10/24/2018 01:22 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40004K Sample Weight, g	0.5004 GRAMS	10/29/2018 12:00 PM	MBOTTS	EPA 3051
40007 SOIL PH 1:1 DI H2O LEACH	7.42 pH units	10/19/2018 12:37 PM	LOJEDA	EPA 9045 D
00403T Temperature at which pH is measured	22.20 C	10/19/2018 12:37 PM	LOJEDA	SM 4500-H+B
46905K ZINC, MG/KG DRY WT. BASIS	16046.00 mg/kg	10/30/2018 01:29 PM	MBOTTS	EPA 6010 D

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Taru Upadhyay, Technical Director, Bureau of Laboratories



Date of Issue: 12/04/2018 04:02:55

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Contact Phone Number: (717) 346-7200

NELAP - accredited by
NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Environmental Cleanup

Sample ID: 2224 579 Date Collected: 10/16/2018 01:48:00 PM Lab Sample ID: I2018027722 Status: Completed

Name of Sample Collector: Meg Boyer
Date Received: 10/19/2018
County: Carbon State:
Municipality: Palmerton Boro
AZR - ATSDR INVESTIGATION
PALMERTON PA.

Sample Medium: Soil
Sample Medium Type: Soil
Location: BPB K-59
Reason: Investigation
Project: NOT INDICATED
Standard Analysis: 287
Matrix: Soil
Legal Seal: I185096 Intact: Yes
Stream Condition:

Sample Standard Comment: This is a revised report

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
80002K ACID DIGESTION / ICP ANALYSIS	0.0 Each	10/29/2018 12:00 PM	MBOTTS	EPA 3051
90002S ASTM-A-H2O Leach*	0 Each	11/27/2018 12:00 AM	FHUNZIKER	ASTMID3987-06

Analytical Report For
Environmental Cleanup

Sample ID: 2224 579

Date Collected: 10/16/2018 01:48:00 PM

Lab Sample ID: I2018027722

Status: Completed

Test Codes / CAS# - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
46309K CADMIUM, MG/KG DRY WT. BASIS	3.37 mg/kg	10/30/2018 11:09 AM	MBOTTS	EPA 6010 D
46308K CHROMIUM, MG/KG DRY WT. BASIS	39.30 mg/kg	10/30/2018 11:09 AM	MBOTTS	EPA 6010 D
46257K COPPER, MG/KG DRY WT. BASIS	24.20 mg/kg	10/30/2018 11:09 AM	MBOTTS	EPA 6010 D
41032L Hexavalent Chromium dry weight	<22.97 ug/kg	11/28/2018 02:50 PM	FVODOPIVEC	EPA 218.6
41032A Hexchrome ASTM Leach	<1.0 ug/L	11/28/2018 02:50 PM	FVODOPIVEC	EPA 218.6
46258K LEAD, MG/KG DRY WT. BASIS	<56.10 mg/kg	10/30/2018 11:09 AM	MBOTTS	EPA 6010 D
46307K NICKEL, MG/KG DRY WT. BASIS	13.90 mg/kg	10/30/2018 11:09 AM	MBOTTS	EPA 6010 D
40005K PERCENT MOISTURE IN SOIL	12.93 %	10/24/2018 01:22 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40006K PERCENT SOLID CONTENT	87.07 %	10/24/2018 01:22 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40004K Sample Weight, g	0.6120 GRAMS	10/29/2018 12:00 PM	MBOTTS	EPA 8051
40007 SOIL PH 1:1 DI H2O LEACH	5.88 pH units	10/19/2018 12:39 PM	LOJEDA	EPA 9045 D
00403T Temperature at which pH is measured	22.20 C	10/19/2018 12:39 PM	LOJEDA	SM 4500-H+B
46905K ZINC, MG/KG DRY WT. BASIS	227.00 mg/kg	10/30/2018 11:09 AM	MBOTTS	EPA 6010 D

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Taru Upadhyay, Technical Director, Bureau of Laboratories



Date of Issue: 12/04/2018 04:03:40

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Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Environmental Cleanup

Sample ID: 2224 580 Date Collected: 10/16/2018 02:40:00 PM Lab Sample ID: I2018027723 Status: Completed

Name of Sample Collector: Meg Boyer
Date Received: 10/19/2018

County: Carbon
Municipality: Palmerton Boro
AZR - ATSDR INVESTIGATION
PALMERTON PA.

State:

Sample Medium: Soil
Sample Medium Type: Soil

Location: SRP S-6
Reason: Investigation
Project: NOT INDICATED
Standard Analysis: 287
Matrix: Soil

Legal Seal: 1185095 Intact: Yes

Stream Condition:

Sample Standard Comment: This is a revised report

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
80002K ACID DIGESTION / ICP ANALYSIS	0.0 Each	10/29/2018 12:00 PM	MBOTTS	EPA 3051
90002S ASTM-A H2O Leach*	0 Each	11/27/2018 12:00 AM	FHUNZIKER	ASTM D3987-06

Analytical Report For
Environmental Cleanup

Sample ID: 2224 580 Date Collected: 10/16/2018 02:40:00 PM Lab Sample ID: I2018027723 Status: Completed

Test Codes / CAS # - Description	Reported Results	Date and Time Analyzed	Approved by	Test Method
46309K CADMIUM, MG/KG DRY WT. BASIS	<0.62 mg/kg	10/30/2018 11:18 AM	MBOTTS	EPA 6010 D
46308K CHROMIUM, MG/KG DRY WT. BASIS	28.90 mg/kg	10/30/2018 11:18 AM	MBOTTS	EPA 6010 D
46257K COPPER, MG/KG DRY WT. BASIS	29.60 mg/kg	10/30/2018 11:18 AM	MBOTTS	EPA 6010 D
41032L Hexavalent Chromium dry weight	<24.66 ug/kg	11/28/2018 02:58 PM	FVODOPIVEC	EPA 218.6
41032A Hexachrome ASTM Leach	<1.0 ug/L	11/28/2018 02:58 PM	FVODOPIVEC	EPA 218.6
46258K LEAD, MG/KG DRY WT. BASIS	<62.10 mg/kg	10/30/2018 11:18 AM	MBOTTS	EPA 6010 D
46307K NICKEL, MG/KG DRY WT. BASIS	30.90 mg/kg	10/30/2018 11:18 AM	MBOTTS	EPA 6010 D
40005K PERCENT MOISTURE IN SOIL	18.58 %	10/24/2018 01:23 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40006K PERCENT SOLID CONTENT	81.42 %	10/24/2018 01:23 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40004K Sample Weight: g	0.4941 GRAMS	10/29/2018 12:00 PM	MBOTTS	EPA 3051
40007 SOIL PH 1:1 DI H2O LEACH	6.25 pH units	10/19/2018 12:41 PM	LOJEDA	EPA 9045 D
00403T Temperature at which pH is measured	21.80 C	10/19/2018 12:41 PM	LOJEDA	SM 4500-H+B
46905K ZINC, MG/KG DRY WT. BASIS	191.00 mg/kg	10/30/2018 11:18 AM	MBOTTS	EPA 6010 D

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2009 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Taru Upadhyay, Technical Director, Bureau of Laboratories



Date of Issue: 12/04/2018 04:04:32

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Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Environmental Cleanup

Sample ID: 2224 581 Date Collected: 10/16/2018 02:51:00 PM

Status: Completed

Lab Sample ID: I2018027724

Name of Sample Collector: Meg Boyer

Date Received: 10/19/2018

County: Carbon

State:

Municipality: Palmerton Boro
AZR - ATSDR INVESTIGATION
PALMERTON PA.

Sample Medium: Soil

Sample Medium Type: Soil

Location: SRP K-60

Reason: Investigation

Project: NOT INDICATED

Standard Analysis: 287

Matrix: Soil

Legal Seal: I185099 Intact: Yes

Stream Condition:

Sample Standard Comment: This is a revised report

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
80002K ACID DIGESTION / ICP ANALYSIS	0.0 Each	10/29/2018 12:00 PM	MBOTTS	EPA 3051
90002S ASTM-A H2O Lead*	0 Each	11/28/2018 12:00 AM	FHUNZIKER	ASTM D3987-06

Analytical Report For
Environmental Cleanup

Sample ID: 2224 561 Date Collected: 10/16/2018 02:51:00 PM Lab Sample ID: I2018027724 Status: Completed

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
46309K2 Cadmium, MG/KG Dry WT Basis	1.16 mg/kg	11/06/2018 01:54 PM	SCHOY	EPA 6020B
46309K GADMIUM, MG/KG DRY WT. BASIS	Cancelled	11/07/2018 12:45 PM	MBOTTS	EPA 6010 D
Analyzed by another method				
46308K2 Chromium, MG/KG Dry WT Basis	7.54 mg/kg	11/06/2018 01:54 PM	SCHOY	EPA 6020B
46308K CHROMIUM, MG/KG DRY WT. BASIS	Cancelled	11/07/2018 12:45 PM	MBOTTS	EPA 6010 D
Analyzed by another method				
46257K COPPER, MG/KG DRY WT. BASIS	45.00 mg/kg	10/30/2018 11:27 AM	MBOTTS	EPA 6010 D
41032L Hexavalent Chromium dry weight	<26.74 ug/kg	11/29/2018 03:31 PM	FVODOPIVEC	EPA 218.6
41032A Hexchrome ASTM Leach	<1.0 ug/L	11/29/2018 03:31 PM	FVODOPIVEC	EPA 218.6
46259K LEAD, MG/KG DRY WT. BASIS	<67.90 mg/kg	10/30/2018 11:27 AM	MBOTTS	EPA 6010 D
46307K NICKEL, MG/KG DRY WT. BASIS	7.61 mg/kg	10/30/2018 11:27 AM	MBOTTS	EPA 6010 D
40006K PERCENT MOISTURE IN SOIL	25.21%	10/24/2018 01:23 PM	LOJEDA	SM/2540G
** Comment ** Holding time exceeded				
40006K PERCENT SOLID CONTENT	74.79 %	10/24/2018 01:23 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40004K Sample Weight g	0.4920 GRAMS	10/29/2018 12:00 PM	MBOTTS	EPA 3051
40007 SOIL PH 1:1 DI H2O LEACH	7.48 pH units	10/19/2018 12:43 PM	LOJEDA	EPA 9045 D
00403T Temperature at which pH is measured	21.80 C	10/19/2018 12:43 PM	LOJEDA	SM 4500-H+B
46905K ZINC, MG/KG DRY WT. BASIS	9661.00 mg/kg	10/30/2018 02:01 PM	MBOTTS	EPA 6010 D

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2009 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Taru Upadhyay, Technical Director, Bureau of Laboratories



Date of Issue: 10/24/2018 04:08:26

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NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Environmental Cleanup

Sample ID: 2224 582 Date Collected: 10/16/2018 03:30:00 PM Lab Sample ID: I2018027601 Status: Completed

Name of Sample Collector: Meg Boyer
Date Received: 10/19/2018

County: Carbon State:
Municipality: Palmerton Boro
AZR - ATSDR INVESTIGATION
PALMERTON PA.

Sample Medium: Water
Sample Medium Type: Water

Location: RB-01
Reason: Investigation
Project: NOT INDICATED
Standard Analysis: 200
Matrix: Water

Legal Seal: I085094 Intact: Yes

Stream Condition:

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
01027H CADMIUM, TOTAL (WATER & WASTE) BY ICPMS	<0.200 ug/L	10/23/2018 12:35 PM	SCHOY	EPA 200.8
01094H CHROMIUM, TOTAL (WATER & WASTE) BY ICPMS	<4.00 ug/L	10/23/2018 12:35 PM	SCHOY	EPA 200.8
01042H COPPER, TOTAL (WATER & WASTE) BY ICPMS	5.960 ug/L	10/23/2018 12:35 PM	SCHOY	EPA 200.8

Analytical Report For
Environmental Cleanup

Sample ID: 2224 582 Date Collected: 10/16/2018 03:30:00 PM Lab Sample ID: I2018027601 Status: Completed

Test Codes / CAS # - Description	Reported Results	Date and Time Analyzed	Approved by	Test Method
01057H LEAD, TOTAL (WATER & WASTE) BY ICPMS	<1.00 ug/L	10/23/2018 12:35 PM	SGHOY	EPA 200.8
01067H NICKEL, TOTAL (WATER & WASTE) BY ICPMS	<4.00 ug/L	10/23/2018 12:35 PM	SGHOY	EPA 200.8
01092H ZINC, TOTAL (WATER & WASTE) BY ICPMS	<5.00 ug/L	10/23/2018 12:35 PM	SGHOY	EPA 200.8

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2009 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.
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Taru Upadhyay, Technical Director, Bureau of Laboratories



Date of Issue: 12/04/2018 04:01:12

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Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Environmental Cleanup

Sample ID: 2224 583 Date Collected: 10/17/2018 09:40:00 AM

Lab Sample ID: I2018027725

Status: Completed

Name of Sample Collector: Meg Boyer

Date Received: 10/19/2018

County: Carbon

State:

Municipality: Palmerton Boro

AZR - ATSDR INVESTIGATION
PALMERTON PA.

Sample Medium: Soil

Sample Medium Type: Soil

Location: PHS S-8

Reason: Investigation

Project: NOT INDICATED

Standard Analysis: 287

Matrix: Soil

Legal Seal: I185093 Intact: Yes

Stream Condition:

Sample Standard Comment: This is a revised report

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
80002K ACID DIGESTION / ICP ANALYSIS	0.0 Each	10/29/2018 12:00 PM	MBOTTS	EPA 3051
90002S ASTM-A H2O Leach*	0.1 Each	11/28/2018 12:00 AM	RIJUNZIKER	ASTM D3987-06

Analytical Report For
Environmental Cleanup

Sample ID: 2224 583 Date Collected: 10/17/2018 09:40:00 AM Lab Sample ID: I2018027725 Status: Completed

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
46309K CADMIUM, MG/KG DRY WT. BASIS	9.80 mg/kg	10/30/2018 11:36 AM	MBOTTS	EPA 6010 D
46308K CHROMIUM, MG/KG DRY WT. BASIS	26.80 mg/kg	10/30/2018 11:36 AM	MBOTTS	EPA 6010 D
46257K COPPER, MG/KG DRY WT. BASIS	42.30 mg/kg	10/30/2018 11:36 AM	MBOTTS	EPA 6010 D
41032L Hexavalent Chromium dry weight	<26.82 ug/kg	11/28/2018 03:47 PM	FVDDOPIVEC	EPA 218.6
41032A Hexchrome ASTM Leach	<1.0 ug/L	11/28/2018 03:47 PM	FVDDOPIVEC	EPA 218.6
46259K2 Lead, MG/KG Dry WT Basis	60.90 mg/kg	11/06/2018 01:59 PM	SCHOY	EPA 6020B
46307K NICKEL, MG/KG DRY WT. BASIS	19.30 mg/kg	10/30/2018 11:36 AM	MBOTTS	EPA 6010 D
40005K PERCENT MOISTURE IN SOIL	24.00 %	10/24/2018 01:24 PM	MBOTTS	SM 2540G
40006K PERCENT SOLID CONTENT	76.00 %	10/24/2018 01:24 PM	MBOTTS	SM 2540G
40004K Sample Weight, g	0.5071 GRAMS	10/29/2018 12:00 PM	MBOTTS	EPA 3051
40007 SOIL PH 1:1 DI H2O LEACH	7.23 pH units	10/19/2018 12:47 PM	LOJEDA	EPA 9045 D
00403T Temperature at which pH is measured	21/50 C	10/19/2018 12:47 PM	LOJEDA	SM 4500-H+B
46905K ZINC, MG/KG DRY WT. BASIS	933.00 mg/kg	10/30/2018 11:36 AM	MBOTTS	EPA 6010 D

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2009 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

Taru Upadhyay, Technical Director, Bureau of Laboratories



Date of Issue: 12/04/2018 04:03:40

DEP Bureau of Laboratories - Harrisburg
P.O. Box 1467
2575 Interstate Drive
Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Environmental Cleanup

Sample ID: 2224 584 Date Collected: 10/17/2018 10:00:00 AM Lab Sample ID: 12018027726 Status: Completed

Name of Sample Collector: Meg Boyer

Date Received: 10/19/2018

County: Carbon

State:

Municipality: Palmerton Boro

AZR - ATSDR INVESTIGATION

PALMERTON PA.

Sample Medium: Soil

Sample Medium Type: Soil

Location: PHS S-13

Reason: Investigation

Project: NOT INDICATED

Standard Analysis: 287

Matrix: Soil

Legal Seal: 1185092 Intact: Yes

Stream Condition:

Sample Standard Comment: This is a revised report

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
80002K ACID DIGESTION / ICP ANALYSIS	0.0 Each	10/29/2018 12:00 PM	MBOTTS	EPA 3051
90002S ASTM-A1 H2O Leach*	0 Each	11/28/2018 12:00 AM	FHUNZIKER	ASTM D9887-06

Analytical Report For
Environmental Cleanup

Sample ID: 2224 584 Date Collected: 10/17/2018 10:00:00 AM Lab Sample ID: 12018027726 Status: Completed

Test Codes / CAS# - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
46309K CADMIUM, MG/KG DRY WT. BASIS	25.30 mg/kg	10/30/2018 11:54 AM	MBOTTS	EPA 6010 D
46308K CHROMIUM, MG/KG DRY WT. BASIS	26.90 mg/kg	10/30/2018 11:54 AM	MBOTTS	EPA 6010 D
46257K COPPER, MG/KG DRY WT. BASIS	36.50 mg/kg	10/30/2018 11:54 AM	MBOTTS	EPA 6010 D
41032L Hexavalent Chromium dry weight	<27.26 ug/kg	11/28/2018 03:55 PM	FVODOPIVEC	EPA 218.6
41032A Hexachrome ASTM Leach	<1.0 ug/L	11/28/2018 03:55 PM	FVODOPIVEC	EPA 218.6
46258K2 Lead, MG/KG Dry WT Basis	109.00 mg/kg	11/06/2018 02:39 PM	SCHOY	EPA 6020B
46258K LEAD, MG/KG DRY WT. BASIS	Cancelled	11/01/2018 12:58 PM	MBOTTS	EPA 6010 D
Analyzed by another method				
46307K NICKEL, MG/KG DRY WT. BASIS	14.40 mg/kg	10/30/2018 11:54 AM	MBOTTS	EPA 6010 D
40005K PERCENT MOISTURE IN SOIL	26.63 %	10/24/2018 01:24 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40006K PERCENT SOLID CONTENT	73.37 %	10/24/2018 01:24 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40004K Sample Weight .9	0.4966 GRAMS	10/29/2018 12:00 PM	MBOTTS	EPA 3051
40007 SOIL PH 1:1 DI H2O LEACH	7.49 pH units	10/19/2018 12:48 PM	LOJEDA	EPA 9045 D
00403T Temperature at which pH is measured	21.90 C	10/19/2018 12:48 PM	LOJEDA	SM 4500-H+ B
46905K ZINC, MG/KG DRY WT. BASIS	2222.00 mg/kg	10/30/2018 11:59 AM	MBOTTS	EPA 6010 D

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2009 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.
* denotes tests that the laboratory is not accredited for

Taru Upadhyay, Technical Director, Bureau of Laboratories



Date of Issue: 12/04/2018 04:05:01

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P.O. Box 1467
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Harrisburg, PA 17105-1467

Contact Phone Number: (717) 346-7200

NELAP - accredited by

NJ DEP - Laboratory Number: PA059
PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
Environmental Cleanup

Sample ID: 2224 585 Date Collected: 10/17/2018 10:30:00 AM Lab Sample ID: I2018027727 Status: Completed

Name of Sample Collector: Meg Boyer

Date Received: 10/19/2018

County: Carbon

State:

Municipality: Palmerton Boro

AZR - ATSDR INVESTIGATION

PALMERTON PA.

Sample Medium: Soil

Sample Medium Type: Soil

Location: PHS S-17

Reason: Investigation

Project: NOT INDICATED

Standard Analysis: 287

Matrix: Soil

Legal Seal: 1185091 Intact: Yes

Stream Condition:

Sample Standard Comment: This is a revised report

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
80002K ACID DIGESTION / ICP ANALYSIS	0.0 Each	10/29/2018 12:00 PM	MBO TTS	EPA 3051
90002S ASTM-A H2O Leach*	0 Each	11/29/2018 12:00 AM	FHUNZIKER	ASTM D3987-06

Analytical Report For
Environmental Cleanup

Sample ID: 2224 585

Date Collected: 10/17/2018 10:30:00 AM

Lab Sample ID: I2018027727

Status: Completed

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
46309K CADMIUM, MG/KG DRY WT. BASIS	8.19 mg/kg	10/30/2018 12:03 PM	MBOTTS	EPA 6010 D
46908K CHROMIUM, MG/KG DRY WT. BASIS	27.50 mg/kg	10/30/2018 12:03 PM	MBOTTS	EPA 6010 D
46257K COPPER, MG/KG DRY WT. BASIS	37.90 mg/kg	10/30/2018 12:03 PM	MBOTTS	EPA 6010 D
41032L Hexavalent Chromium dry weight	<24.18 ug/kg	11/28/2018 04:03 PM	FVDDOPIVEC	EPA 218.6
41032A Hexachrome ASTM Leach	<1.0 ug/L	11/28/2018 04:03 PM	FVDDOPIVEC	EPA 218.6
46258K(2) Lead, MG/KG Dry WT Basis	69.10 mg/kg	11/06/2018 02:01 PM	SCHOY	EPA 8020B
46258K LEAD, MG/KG DRY WT. BASIS	Cancelled	11/02/2018 12:19 PM	MBOTTS	EPA 6010 D
Analyzed by another method				
46907K NICKEL, MG/KG DRY WT. BASIS	18.30 mg/kg	10/30/2018 12:03 PM	MBOTTS	EPA 6010 D
40005K PERCENT MOISTURE IN SOIL	17.30 %	10/24/2018 01:24 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40006K PERCENT SOLID CONTENT	82.70 %	10/24/2018 01:24 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40004K Sample Weight, g	0.4944 GRAMS	10/29/2018 12:00 PM	MBOTTS	EPA 3051
40007 SOIL PH:1:1 DI:H2O LEACH	7.32 pH units	10/19/2018 12:49 PM	LOJEDA	EPA 9045 D
00403T Temperature at which pH is measured	21.90 C	10/19/2018 12:49 PM	LOJEDA	SM 4500-H+ B
46905K ZINC, MG/KG DRY WT. BASIS	702.00 mg/kg	10/30/2018 12:03 PM	MBOTTS	EPA 6010 D

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2009 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.
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Taru Upadhyay, Technical Director, Bureau of Laboratories



Date of Issue: 12/04/2018 04:04:58
 DEP Bureau of Laboratories - Harrisburg
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 2575 Interstate Drive
 Harrisburg, PA 17105-1467
 Contact Phone Number: (717) 346-7200

NELAP - accredited by
 NJ DEP - Laboratory Number: PA059
 PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
 Environmental Cleanup

Sample ID: 2224 586 Date Collected: 10/17/2018 Lab Sample ID: 12018027728 Status: Completed

Name of Sample Collector: Meg Boyer
 Date Received: 10/19/2018
 County: Carbon
 Municipality: Palmerton Boro
 AZR - ATSDR INVESTIGATION
 PALMERTON PA.
 State:

Sample Medium: Soil
 Sample Medium Type: Soil
 Location: BD-02
 Reason: Investigation
 Project: NOT INDICATED
 Standard Analysis: 287
 Matrix: Soil

Legal Seal: 1185090 Intact: Yes

Stream Condition:

Sample Standard Comment: This is a revised report

Test Codes / CAS# - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
80002K ACID DIGESTION / ICP ANALYSIS	0.0 Each	10/29/2018 12:00 PM	MBOTTS	EPA 3051
90002S ASTM-A H2O Leach*	0 Each	11/28/2018 12:00 AM	FHUNZIKER	ASTM D3987-06

Analytical Report For
Environmental Cleanup

Sample ID: 2224 586

Date Collected: 10/17/2018

Lab Sample ID: I2018027728

Status: Completed

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
46309K CADMIUM, MG/KG DRY WT. BASIS	7.25 mg/kg	10/30/2018 12:08 PM	MBOTTS	EPA 6010 D
46808K CHROMIUM, MG/KG DRY WT. BASIS	27.60 mg/kg	10/30/2018 12:08 PM	MBOTTS	EPA 6010 D
46257K COPPER, MG/KG DRY WT. BASIS	161.00 mg/kg	10/30/2018 12:08 PM	MBOTTS	EPA 6010 D
41032L Hexavalent Chromium, dry weight	<24.73 ug/kg	11/28/2018 04:11 PM	FVDDOPIVEC	EPA 218.6
41032A Hexchrome ASTM Leach	<1.0 ug/L	11/28/2018 04:11 PM	FVDDOPIVEC	EPA 218.6
46258K2 Lead, MG/KG Dry WT Basis	53.90 mg/kg	11/07/2018 02:06 PM	SGHOY	EPA 6020B
46307K NICKEL, MG/KG DRY WT. BASIS	31.00 mg/kg	10/30/2018 12:08 PM	MBOTTS	EPA 6010 D
40005K PERCENT MOISTURE IN SOIL	19.14 %	10/24/2018 01:25 PM	MBOTTS	SM 2540G
40006K PERCENT SOLID CONTENT	80.86 %	10/24/2018 01:25 PM	MBOTTS	SM 2540G
40004K Sample Weight g	0.5034 GRAMS	10/29/2018 12:00 PM	MBOTTS	EPA 3051
40007 SOIL PH 1:1 DI H2O LEACH	7.41 pH units	10/19/2018 12:52 PM	LOJEDA	EPA 9045 D
00403T Temperature at which pH is measured	21.20°C	10/19/2018 12:52 PM	LOJEDA	SM 4500-H+B
46905K ZINC, MG/KG DRY WT. BASIS	625.00 mg/kg	10/30/2018 12:08 PM	MBOTTS	EPA 6010 D

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2009 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Date of Issue: 12/04/2018 04:02:18
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 Contact Phone Number: (717) 346-7200

NELAP - accredited by
 NJ DEP - Laboratory Number: PA059
 PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
 Environmental Cleanup

Sample ID: 2224 587 Date Collected: 10/17/2018 10:28:00 AM Lab Sample ID: I2018027729 Status: Completed

Name of Sample Collector: Meg Boyer
 Date Received: 10/19/2018
 County: Carbon
 Municipality: Palmerton Boro
 AZR - ATSDR INVESTIGATION
 PALMERTON PA.
 State:

Sample Medium: Soil
 Sample Medium Type: Soil

Location: PHS K-26
 Reason: Investigation
 Project: NOT INDICATED
 Standard Analysis: 287
 Matrix: Soil

Legal Seal: 1185100 Intact: Yes

Stream Condition:

Sample Standard Comment: This is a revised report

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
80002K ACID DIGESTION / ICP ANALYSIS	0.0 Each	10/29/2018 12:00 PM	MBOTTS	EPA 3051
90002S ASTM-A H2O Leach*	01 Each	11/29/2018 12:00/AM	FHUNZIKER	ASTM D3987-06

Analytical Report For
Environmental Cleanup

Sample ID: 2224 587

Date Collected: 10/17/2018 10:28:00 AM

Lab Sample ID: I2018027729

Status: Completed

Test Codes / CAS # - Description	Reported Results	Date and Time Analyzed	Approved by	Test Method
46309K2 Cadmium, MG/KG Dry WT Basis	6.78 mg/kg	11/06/2018 02:06 PM	SCHOY	EPA 6020B
46309K3 CADMIUM, MG/KG DRY WT. BASIS	Cancelled	11/02/2018 12:28 PM	MBOTTS	EPA 6010 D
Analyzed by another method				
46308K CHROMIUM, MG/KG DRY WT. BASIS	18.80 mg/kg	10/30/2018 12:13 PM	MBOTTS	EPA 6010 D
46257K COPPER, MG/KG DRY WT. BASIS	14180 mg/kg	10/30/2018 12:13 PM	MBOTTS	EPA 6010 D
411032L Hexavalent Chromium dry weight	<23.34 ug/kg	11/30/2018 11:22 AM	FVDDOPIVEC	EPA 218.6
411032A Hexachrome ASTM Leach	<1.0 ug/L	11/30/2018 11:22 AM	FVDDOPIVEC	EPA 218.6
46258K LEAD, MG/KG DRY WT. BASIS	<59.00 mg/kg	10/30/2018 12:13 PM	MBOTTS	EPA 6010 D
46307K NICKEL, MG/KG DRY WT. BASIS	6137 mg/kg	10/30/2018 12:13 PM	MBOTTS	EPA 6010 D
40005K PERCENT MOISTURE IN SOIL	14.32 %	10/24/2018 01:25 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40006K PERCENT SOLID CONTENT	85.68 %	10/24/2018 01:25 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40004K Sample Weight .g	0.4948 GRAMS	10/29/2018 12:00 PM	MBOTTS	EPA 3051
40007 SOIL PH 1:1(D) H2O LEACH	4.98 pH units	10/19/2018 02:48 PM	LOJEDA	EPA 9045 D
00403T Temperature at which pH is measured	20.60 C	10/19/2018 02:48 PM	LOJEDA	SM 4500-H+ B
46905K ZINC, MG/KG DRY WT. BASIS	228.00 mg/kg	10/30/2018 12:13 PM	MBOTTS	EPA 6010 D

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2009 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

Taru Upadhyay, Technical Director, Bureau of Laboratories



Date of Issue: 10/24/2018 04:16:39
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 P.O. Box 1467
 2575 Interstate Drive
 Harrisburg, PA 17105-1467
 Contact Phone Number: (717) 346-7200

NELAP - accredited by
 NJ DEP - Laboratory Number: PA059
 PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
 Environmental Cleanup

Sample ID: 2224 588 Date Collected: 10/17/2018 10:38:00 AM Lab Sample ID: I2018027602 Status: Completed

Name of Sample Collector: Meg Boyer
 Date Received: 10/19/2018
 County: Carbon State:
 Municipality: Palmerton Boro
 AZR - ATSDR INVESTIGATION
 PALMERTON PA.

Sample Medium: Water
 Sample Medium Type: Water

Location: RB-02
 Reason: Investigation
 Project: NOT INDICATED
 Standard Analysis: 200
 Matrix: Water

Stream Condition:

Test Codes / CAS# - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
01027H CADMIUM, TOTAL (WATER & WASTE) BY ICPMS	<0.200 ug/L	10/23/2018 12:45 PM	SCHOY	EPA 200.8
01094H CHROMIUM, TOTAL (WATER & WASTE) BY ICPMS	<4.00 ug/L	10/23/2018 12:45 PM	SCHOY	EPA 200.8
01042H COPPER, TOTAL (WATER & WASTE) BY ICPMS	5.950 ug/L	10/23/2018 12:45 PM	SCHOY	EPA 200.8

Analytical Report For
Environmental Cleanup

Sample ID: 2224 588

Date Collected: 10/17/2018 10:38:00 AM

Lab Sample ID: I2018027602

Status: Completed

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
01061H LEAD, TOTAL (WATER & WASTE) BY ICPMS	<1.00 ug/L	10/23/2018 12:45 PM	SCHOY	EPA 200.8
01067H NICKEL, TOTAL (WATER & WASTE) BY ICPMS	<4.00 ug/L	10/23/2018 12:45 PM	SCHOY	EPA 200.8
01062H ZINC, TOTAL (WATER & WASTE) BY ICPMS	<5.00 ug/L	10/23/2018 12:45 PM	SCHOY	EPA 200.8

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2009 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

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Taru Upadhyay, Technical Director, Bureau of Laboratories



Date of Issue: 12/04/2018 04:01:17
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 2575 Interstate Drive
 Harrisburg, PA 17105-1467
 Contact Phone Number: (717) 346-7200

NELAP - accredited by
 NJ DEP - Laboratory Number: PA059
 PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
 Environmental Cleanup

Sample ID: 2224 589 Date Collected: 10/17/2018 10:53:00 AM Lab Sample ID: I2018027730 Status: Completed

Name of Sample Collector: Meg Boyer
 Date Received: 10/19/2018
 County: Carbon State:
 Municipality: Palmerton Boro
 AZR - ATSDR INVESTIGATION
 PALMERTON PA.

Sample Medium: Soil
 Sample Medium Type: Soil

Location: PHS K-6
 Reason: Investigation
 Project: NOT INDICATED
 Standard Analysis: 287
 Matrix: Soil

Legal Seal: 1185081 Intact: Yes

Stream Condition:

Sample Standard Comment: This is a revised report

Test Codes / CAS # / Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
80002K ACID DIGESTION / ICP ANALYSIS	0.0 Each	10/29/2018 12:00 PM	MBOTTS	EPA 3051
90002S ASTM-A-H2O-Leach*	0 Each	11/29/2018 12:00 AM	FHUNZIKER	ASTM D3987-06

Analytical Report For
Environmental Cleanup

Sample ID: 2224 589

Date Collected: 10/17/2018 10:53:00 AM

Lab Sample ID: I2018027730

Status: Completed

Test Codes / CAS # - Description	Reported Results	Date and Time Analyzed	Approved by	Test Method
46309K CADMIUM, MG/KG DRY WT. BASIS	9.77 mg/kg	10/30/2018 12:17 PM	MBOTTS	EPA 6010 D
46308K CHROMIUM, MG/KG DRY WT. BASIS	22.80 mg/kg	10/30/2018 12:17 PM	MBOTTS	EPA 6010 D
46257K COPPER, MG/KG DRY WT. BASIS	45.50 mg/kg	10/30/2018 12:17 PM	MBOTTS	EPA 6010 D
41032L Hexavalent Chromium-dry weight	<30.32 ug/kg	11/30/2018 11:39 AM	FVODOPIVEC	EPA 218.6
41032A Hexachrome ASTM Leach	<1.0 ug/L	11/30/2018 11:39 AM	FVODOPIVEC	EPA 218.6
46258K2 Lead, MG/KG Dry WT Basis	91.10 mg/kg	11/08/2018 02:16 PM	SGHOY	EPA 6020B
46258K LEAD, MG/KG DRY WT. BASIS	Cancelled	11/02/2018 12:33 PM	MBOTTS	EPA 6010 D
Analyzed by another method				
46307K NICKEL, MG/KG DRY WT. BASIS	40.20 mg/kg	10/30/2018 12:17 PM	MBOTTS	EPA 6010 D
40005K PERCENT MOISTURE IN SOIL	34.03 %	10/24/2018 01:26 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40008K PERCENT SOLID CONTENT	85.97 %	10/24/2018 01:26 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40004K Sample Weight .g	0.5160 GRAMS	10/29/2018 12:00 PM	MBOTTS	EPA 3051
40007 SOIL PH 1:1 DI H2O/LEACH	6.02 pH units	10/18/2018 01:03 PM	LOJEDA	EPA 9045 D
00403T Temperature at which pH is measured	20.80 C	10/19/2018 01:03 PM	LOJEDA	SM 4500-H+ B
46905K ZINC, MG/KG DRY WT. BASIS	2644.00 mg/kg	10/30/2018 12:22 PM	MBOTTS	EPA 6010 D

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2009 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.
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Taru Upadhyay, Technical Director, Bureau of Laboratories



Date of Issue: 12/04/2018 04:04:04
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 2575 Interstate Drive
 Harrisburg, PA 17105-1467
 Contact Phone Number: (717) 346-7200

NELAP - accredited by
 NJ DEP - Laboratory Number: PA059
 PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
 Environmental Cleanup

Sample ID: 2224 590 Date Collected: 10/17/2018 11:42:00 AM Lab Sample ID: I2018027731 Status: Completed

Name of Sample Collector: Meg Boyer
 Date Received: 10/19/2018
 County: Carbon State:
 Municipality: Palmerton Boro
 AZR - ATSDR INVESTIGATION
 PALMERTON PA.

Sample Medium: Soil
 Sample Medium Type: Soil
 Location: PMP S-5
 Reason: Investigation
 Project: NOT INDICATED
 Standard Analysis: 287
 Matrix: Soil

Legal Seal: I185087	Intact: Yes
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Stream Condition:

Sample Standard Comment: This is a revised report

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
80002K ACID DIGESTION / ICP ANALYSIS	0.0 Each	10/29/2018 12:00 PM	MBOTTS	EPA 3051
90002S ASTM-A H2O Leach*	0 Each	11/29/2018 12:00 AM	FHUNZIKER	ASTM D3987-06

Analytical Report For
Environmental Cleanup

Sample ID: 2224 590

Date Collected: 10/17/2018 11:42:00 AM

Lab Sample ID: I2018027731

Status: Completed

Test Codes / CAS # - Description	Reported Results	Date Analyzed	Analyzed by	Test Method
46309K CADMIUM, MG/KG DRY WT. BASIS	11.60 mg/kg	10/30/2018 12:26 PM	MBOTTS	EPA 6010 D
46308K CHROMIUM, MG/KG DRY WT. BASIS	2670 mg/kg	10/30/2018 12:26 PM	MBOTTS	EPA 6010 D
46257K COPPER, MG/KG DRY WT. BASIS	28.50 mg/kg	10/30/2018 12:26 PM	MBOTTS	EPA 6010 D
41032L Hexavalent Chromium dry weight	<25.97 ug/kg	11/30/2018 11:47 AM	FVODOPIVEC	EPA 218.6
41032A Hexachrome ASTM Leach	<1.0 ug/L	11/30/2018 11:47 AM	FVODOPIVEC	EPA 218.6
46268K LEAD, MG/KG DRY WT. BASIS	<62.80 mg/kg	10/30/2018 12:26 PM	MBOTTS	EPA 6010 D
46307K NICKEL, MG/KG DRY WT. BASIS	22.60 mg/kg	10/30/2018 12:26 PM	MBOTTS	EPA 6010 D
40005K PERCENT MOISTURE IN SOIL	23.00 %	10/24/2018 01:26 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40006K PERCENT SOLID CONTENT	77.00 %	10/24/2018 01:26 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40004K Sample Weight g	0.5168 GRAMS	10/29/2018 12:00 PM	MBOTTS	EPA 3051
40007 SOIL PH 1:1 DI H2O LEACH	6.85 pH units	10/19/2018 01:05 PM	LOJEDA	EPA 9045 D
00403T Temperature at which pH is measured	20.50 C	10/19/2018 01:05 PM	LOJEDA	SM 4500-H+B
46905K ZINC, MG/KG DRY WT. BASIS	1333.00 mg/kg	10/30/2018 12:31 PM	MBOTTS	EPA 6010 D

The results of the analyses provided in this laboratory report relate only to the sample(s) identified therein. Unless otherwise noted, the results presented on this laboratory report meet all requirements of the 2009 TNI standard. Sample was in acceptable condition when received by the Laboratory. Any exceptions are noted in the report.

* denotes tests that the laboratory is not accredited for

Taru Upadhyay, Technical Director, Bureau of Laboratories



Date of issue: 12/04/2018 04:02:52
 DEP Bureau of Laboratories - Harrisburg
 P.O. Box 1467
 2575 Interstate Drive
 Harrisburg, PA 17105-1467
 Contact Phone Number: (717) 346-7200

NELAP - accredited by
 NJ DEP - Laboratory Number: PA059
 PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
 Environmental Cleanup

Sample ID: 2224 591 Date Collected: 10/17/2018 11:58:00 AM Lab Sample ID: I2018027732 Status: Completed

Name of Sample Collector: Meg Boyer
 Date Received: 10/19/2018
 County: Carbon
 Municipality: Palmerton Boro
 AZR - ATSDR INVESTIGATION
 PALMERTON PA.
 State:

Sample Medium: Soil
 Sample Medium Type: Soil

Location: PMP S-10
 Reason: Investigation
 Project: NOT INDICATED
 Standard Analysis: 287
 Matrix: Soil

Legal Seal: 1185086 Intact: Yes

Stream Condition:

Sample Standard Comment: This is a revised report

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
80002K ACID DIGESTION / ICP ANALYSIS	0.0 Each	10/29/2018 12:00 PM	MBOTTS	EPA 3051
90002S ASTM-A-R20 Leach*	0 Each	11/29/2118 12:00:AM	FHUNZIKER	ASTM D3987-06

Analytical Report For
Environmental Cleanup

Sample ID: 2224 591 Date Collected: 10/17/2018 11:58:00 AM Lab Sample ID: I2018027732 Status: Completed

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
46309K CADMIUM, MG/KG DRY WT. BASIS	17.70 mg/kg	10/30/2018 12:48 PM	MBOTTS	EPA 6010 D
46308K CHROMIUM, MG/KG DRY WT. BASIS	28.40 mg/kg	10/30/2018 12:48 PM	MBOTTS	EPA 6010 D
46257K COPPER, MG/KG DRY WT. BASIS	52.30 mg/kg	10/30/2018 12:48 PM	MBOTTS	EPA 6010 D
41032L Hexavalent Chromium dry weight	<26.72 ug/kg	11/30/2018 11:55 AM	FVODOPIVEC	EPA 218.6
41032A Hexachrome ASTM Leach	<1.0 ug/L	11/30/2018 11:55 AM	FVODOPIVEC	EPA 218.6
46258K2 Lead, MG/KG Dry WT Basis	72.80 mg/kg	11/08/2018 02:19 PM	SCHOY	EPA 6020B
46258K LEAD, MG/KG DRY WT. BASIS	Cancelled	11/02/2018 12:40 PM	MBOTTS	EPA 6010 D
Analyzed by another method				
46307K NICKEL, MG/KG DRY WT. BASIS	25.80 mg/kg	10/30/2018 12:48 PM	MBOTTS	EPA 6010 D
40005K PERCENT MOISTURE IN SOIL	25.15 %	10/24/2018 01:28 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40006K PERCENT SOLID CONTENT	74.86 %	10/24/2018 01:28 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40004K Sample Weight .g	0.4957 GRAMS	10/29/2018 12:00 PM	MBOTTS	EPA 3051
40007 SOIL PH 1:1 DI H2O LEACH	7.08 pH units	10/19/2018 01:08 PM	LOJEDA	EPA 8045 D
00403T Temperature at which pH is measured	20.50 C	10/19/2018 01:08 PM	LOJEDA	SM 4500-H+ B
46905K ZINC, MG/KG DRY WT. BASIS	1461.00 mg/kg	10/30/2018 12:53 PM	MBOTTS	EPA 6010 D

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* denotes tests that the laboratory is not accredited for

Taru Upadhyay, Technical Director, Bureau of Laboratories



Date of Issue: 12/04/2018 04:02:20
 DEP Bureau of Laboratories - Harrisburg
 P.O. Box 1467
 2575 Interstate Drive
 Harrisburg, PA 17105-1467
 Contact Phone Number: (717) 346-7200

NELAP - accredited by
 NJ DEP - Laboratory Number: PA059
 PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
 Environmental Cleanup

Sample ID: 2224 592 Date Collected: 10/17/2018 11:25:00 AM Lab Sample ID: I2018027733 Status: Completed

Name of Sample Collector: Meg Boyer
 Date Received: 10/19/2018
 County: Carbon
 Municipality: Palmerton Boro
 AZR - ATSDR INVESTIGATION
 PALMERTON PA.
 State:

Sample Medium: Soil
 Sample Medium Type: Soil
 Location: PMP K-34
 Reason: Investigation
 Project: NOT INDICATED
 Standard Analysis: 287
 Matrix: Soil

Legal Seal: I185085 Intact: Yes

Stream Condition:

Sample Standard Comment: This is a revised report

Test Codes / CAS # - Description	Reported Results	Date / And Time Analyzed	Approved by	Test Method
80002K ACID DIGESTION / ICP ANALYSIS	0.0 Each	10/29/2018 12:00 PM	MBOTTS	EPA 3051
90002S ASTM-A H2O Leach	0 Each	11/29/2018 12:00 AM	FHUNZIKER	ASTM D3987-08

Analytical Report For
Environmental Cleanup

Sample ID: 2224 592

Date Collected: 10/17/2018 11:25:00 AM

Lab Sample ID: I2018027733

Status: Completed

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
46309K CADMIUM, MG/KG DRY WT. BASIS	21.00 mg/kg	10/30/2018 12:58 PM	MBOTTS	EPA 6010 D
46308K CHROMIUM, MG/KG DRY WT. BASIS	20.30 mg/kg	10/30/2018 12:58 PM	MBOTTS	EPA 6010 D
46257K COPPER, MG/KG DRY WT. BASIS	36.00 mg/kg	10/30/2018 12:58 PM	MBOTTS	EPA 6010 D
41082L Hexavalent Chromium dry weight	<27.67 ug/kg	11/30/2018 12:03 PM	FVODOPIVEC	EPA 218.6
41032A Hexachrome ASTM Leach	<1.0 ug/L	11/30/2018 12:03 PM	FVODOPIVEC	EPA 218.6
46258K2 Lead, MG/KG Dry WT Basis	111.00 mg/kg	11/08/2018 02:21 PM	SCHOY	EPA 6020B
46258K LEAD, MG/KG DRY WT. BASIS	Cancelled	11/02/2018 12:46 PM	MBOTTS	EPA 6010 D
Analyzed by another method				
46307K NICKEL, MG/KG DRY WT. BASIS	22.60 mg/kg	10/30/2018 12:58 PM	MBOTTS	EPA 6010 D
40005K PERCENT MOISTURE IN SOIL	27.72 %	10/24/2018 01:29 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40006K PERCENT SOLID CONTENT	72.28 %	10/24/2018 01:29 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40004K Sample Weight .g	0.4945 GRAMS	10/29/2018 12:00 PM	MBOTTS	EPA 3051
40007 SOIL PH 1:1 DI/H2O LEACH	7.32 pH units	10/19/2018 01:10 PM	LOJEDA	EPA 9045 D
00403T Temperature at which pH is measured	20.40 C	10/19/2018 01:10 PM	LOJEDA	SM 4500-H+ B
46306K ZINC, MG/KG DRY WT. BASIS	4533.00 mg/kg	10/30/2018 01:02 PM	MBOTTS	EPA 6010 D

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Date of Issue: 12/04/2018 04:02:55
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 2575 Interstate Drive
 Harrisburg, PA 17105-1467
 Contact Phone Number: (717) 346-7200

NELAP - accredited by
 NJ DEP - Laboratory Number: PA059
 PA DEP LAP - DEP Lab ID: 22-00223

Analytical Report For
 Environmental Cleanup

Sample ID: 2224 593 Date Collected: 10/16/2018 Lab Sample ID: I2018027734 Status: Completed

Name of Sample Collector: Meg Boyer
 Date Received: 10/19/2018
 County: Carbon State:
 Municipality: Palmerton Boro
 AZR - ATSDR INVESTIGATION
 PALMERTON PA.

Sample Medium: Soil
 Sample Medium Type: Soil
 Location: BD-01
 Reason: Investigation
 Project: NOT INDICATED
 Standard Analysis: 287
 Matrix: Soil

Legal Seal: 1185083 Intact: Yes

Stream Condition:

Sample Standard Comment: This is a revised report

Test Codes / CAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
80002K ACID DIGESTION / ICP ANALYSIS	0.0 Each	10/29/2018 12:00 PM	MBOTTS	EPA 3051
90002S ASTM-A H2O Load*	0 Each	11/29/2018 12:00 AM	FHJNZIKER	ASTM D3987-06

Analytical Report For
Environmental Cleanup

Sample ID: 2224 593

Date Collected: 10/16/2018

Lab Sample ID: I2018027734

Status: Completed

Test Codes / GAS # - Description	Reported Results	Date And Time Analyzed	Approved by	Test Method
46309K CADMIUM, MG/KG DRY WT. BASIS	83.40 mg/kg	10/30/2018 01:06 PM	MBOTTS	EPA 6010 D
46308K CHROMIUM, MG/KG DRY WT. BASIS	31.80 mg/kg	10/30/2018 01:06 PM	MBOTTS	EPA 6010 D
46257K COPPER, MG/KG DRY WT. BASIS	110.00 mg/kg	10/30/2018 01:06 PM	MBOTTS	EPA 6010 D
41032L Hexavalent Chromium, dry weight	<25.38 ug/kg	11/30/2018 12:12 PM	FVDDOPIVEC	EPA 218.6
41032A Hexachrome ASTM Leach	<1.0 ug/L	11/30/2018 12:12 PM	FVDDOPIVEC	EPA 218.6
46258K LEAD, MG/KG DRY WT. BASIS	440.00 mg/kg	10/30/2018 01:06 PM	MBOTTS	EPA 6010 D
46307K NICKEL, MG/KG DRY WT. BASIS	72.10 mg/kg	10/30/2018 01:06 PM	MBOTTS	EPA 6010 D
40005K PERCENT MOISTURE IN SOIL	21.15 %	10/24/2018 01:29 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40006K PERCENT SOLID CONTENT	78.85 %	10/24/2018 01:29 PM	LOJEDA	SM 2540G
** Comment ** Holding time exceeded				
40004K Sample Weight, g	0.6031 GRAMS	10/29/2018 12:00 PM	MBOTTS	EPA 3051
40007 SOIL PH 1:1 DI H2O LEACH	7.03 pH units	10/19/2018 01:11 PM	LOJEDA	EPA 9045 D
00403T Temperature at which pH is measured	20.40 C	10/19/2018 01:11 PM	LOJEDA	SM 4500-H+B
46905K ZINC, MG/KG DRY WT. BASIS	9428.00 mg/kg	10/30/2018 02:05 PM	MBOTTS	EPA 6010 D

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