UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Environmental Science Center
Region III Laboratory
701 Mapes Road
Fort Meade, Maryland 20755-5350

SEMS DocID 2343388

Final Analytical Report

Site Name	WEIRTON BOP IMPLOSION SITE
Sample Collection Date(s)	2/19/2020 - 2/19/2020
Contact	Debbie Lindsey
Report Date	04/15/2020 14:30
Project #	DAS R35756
Work Order	2002010

Analyses included in this report:

Hexavalent Chromium IC by EPA 218.6 (ESAT)

Percent Dry Weight (105C) by USGS

Approved for Release

Non-responsive based on revised scope
Non-responsive based on revised scope
Non-responsive based on revised scope

Region III Laboratory Representative

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Report Narrative

Aqueous Hexavalent Chromium Analysis Note:

This report contains the results for dissolved hexavalent chromium in water by EPA Method 218.6. This report provides reporting units in ug/L.

Solid Hexavalent Chromium Analysis Note:

Soil samples were analyzed following the On-Demand protocols specified in the EPA Region III LSASD Laboratory Quality Manual and section 6.12 of SOP R3QA069-012320. The samples were digested using SW-846 Method 3060A and analyzed by EPA Method 218.6. This report provides reporting units in ug/g. Slight rounding errors will occur in the Electronic Data Deliverable (EDD).

The soluble and insoluble matrix spikes (BB02604-MS1, BB02604-MS2, BB02604-MS3 and BB02604-MS4) of QC source samples 2002010-01 and 2002010-11 yielded recoveries outside the acceptance limit (< 75%); however, the associated post digestion spikes passed. The pH and Oxidation Reduction Potential of samples 2002010-01 and 2002010-11 were measured and the results indicated that the samples could support hexavalent chromium. Samples 2002010-01, 2002010-11 and associated QCs were re-digested and re-analyzed, however matrix spike recoveries were comparable to the initial analysis. Hexavalent chromium was not detected at or above the quantitation limits in samples 2002010-01 and 2002010-11; therefore, the quantitation limits are qualified as estimated (UJ).

The results for QC source sample 2002010-11 and its associated duplicate sample (BB02604-DUP2) are below the quantitation limit (0.57 ug/g) and the RPD is artificially high (49%). Therefore, the RPD value is qualified as having no significance for this QC data (D).

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ANALYTICAL REPORT FOR SAMPLES

Station ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-01	2002010-01	Soil	02/19/2020 9:15	02/21/2020 10:30
SS-02	2002010-02	Soil	02/19/2020 9:37	02/21/2020 10:30
SS-03	2002010-03	Soil	02/19/2020 10:05	02/21/2020 10:30
SS-04	2002010-04	Soil	02/19/2020 10:10	02/21/2020 10:30
SS-05	2002010-05	Soil	02/19/2020 10:20	02/21/2020 10:30
SS-06	2002010-06	Soil	02/19/2020 10:35	02/21/2020 10:30
SS-07	2002010-07	Soil	02/19/2020 10:50	02/21/2020 10:30
SS-08	2002010-08	Soil	02/19/2020 11:15	02/21/2020 10:30
SS-09	2002010-09	Soil	02/19/2020 11:50	02/21/2020 10:30
SS-10	2002010-10	Soil	02/19/2020 11:55	02/21/2020 10:30
SS-11	2002010-11	Soil	02/19/2020 12:20	02/21/2020 10:30
SS-12	2002010-12	Soil	02/19/2020 13:25	02/21/2020 10:30
SS-13	2002010-13	Soil	02/19/2020 13:30	02/21/2020 10:30
SS-14	2002010-14	Soil	02/19/2020 13:40	02/21/2020 10:30
SS-15	2002010-15	Soil	02/19/2020 14:07	02/21/2020 10:30
SS-16	2002010-16	Soil	02/19/2020 14:23	02/21/2020 10:30
SS-17	2002010-17	Soil	02/19/2020 14:45	02/21/2020 10:30
SS-18	2002010-18	Soil	02/19/2020 15:10	02/21/2020 10:30
SS-19	2002010-19	Soil	02/19/2020 15:35	02/21/2020 10:30
RB-01	2002010-20	Water	02/19/2020 7:30	02/21/2020 10:30

USEPA CLP COC (LAB COPY)
DateShipped: 2/20/2020
CarrierName: FedEx
AirbillNo: 777818186723

CHAIN OF CUSTODY RECORD

DAS #: R35756
Cooler #: K5

No: 3-022020-125952-0002
Lab: USEPA Region III Environmental Science Center
Lab Contact: Kevin Poff
Lab Phone: 410-305-2938

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
SS-01	R35756-01	Soil/ [redacted]	Grab	Cr+6(21)	3-1052 (6 C) (1)	P-01	02/19/2020 09:15	2002010-01
SS-02	R35756-02	Soil/ [redacted]	Grab	Cr+6(21)	3-1055 (6 C) (1)	P-02	02/19/2020 09:37	-02
SS-03	R35756-03	Soil/ [redacted]	Grab	Cr+6(21)	3-1058 (6 C) (1)	P-03	02/19/2020 10:05	-03
SS-04	R35756-04	Soil/ [redacted]	Grab	Cr+6(21)	3-1061 (6 C) (1)	P-03	02/19/2020 10:10	-04
SS-05	R35756-05	Soil/ [redacted]	Grab	Cr+6(21)	3-1064 (6 C) (1)	P-04	02/19/2020 10:20	-05
SS-06	R35756-06	Soil/ [redacted]	Grab	Cr+6(21)	3-1067 (6 C) (1)	P-05	02/19/2020 10:35	-06
SS-07	R35756-07	Soil/ [redacted]	Grab	Cr+6(21)	3-1070 (6 C) (1)	P-06	02/19/2020 10:50	-07
SS-08	R35756-08	Soil/ [redacted]	Grab	Cr+6(21)	3-1073 (6 C) (1)	P-07	02/19/2020 11:15	-08
SS-09	R35756-09	Soil/ [redacted]	Grab	Cr+6(21)	3-1076 (6 C) (1)	P-08	02/19/2020 11:50	-09
SS-10	R35756-10	Soil/ [redacted]	Grab	Cr+6(21)	3-1079 (6 C) (1)	P-09	02/19/2020 11:55	-10
SS-11	R35756-11	Soil/ [redacted]	Grab	Cr+6(21)	3-1082 (6 C) (1)	P-10	02/19/2020 12:20	-11
SS-12	R35756-12	Soil/ [redacted]	Grab	Cr+6(21)	3-1085 (6 C) (1)	P-11	02/19/2020 13:25	-12

Sample(s) to be used for Lab QC: SS-01 Tag 3-1052 - Special Instructions: Please return cooler with FedEx return label inside

Samplers: [redacted]

Shipment for Case Complete? Y

Samples Transferred From Chain of Custody #

Analysis Key: Cr+6=Hexavalent Chromium

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[redacted] TechLaw	2/20/20 1700	[redacted] ESAT	2/21/20 / 10:30	4.8°C [redacted] 2/21/20

USEPA CLP COC (LAB COPY)

DateShipped: 2/20/2020
CarrierName: FedEx
AirbillNo: 777818186723

CHAIN OF CUSTODY RECORD

DAS #: R35756
Cooler #: K5

No: 3-022020-125952-0002

Lab: USEPA Region III Environmental Science Center
Lab Contact: Kevin Poff
Lab Phone: 410-305-2938

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
SS-13	R35756-13	Soil/ [redacted]	Grab	Cr+6(21)	3-1088 (6 C) (1)	P-12	02/19/2020 13:30	2002010-13
SS-14	R35756-14	Soil/ [redacted]	Grab	Cr+6(21)	3-1091 (6 C) (1)	P-12	02/19/2020 13:40	-14
SS-15	R35756-15	Soil/ [redacted]	Grab	Cr+6(21)	3-1094 (6 C) (1)	P-13	02/19/2020 14:07	-15
SS-16	R35756-16	Soil/ [redacted]	Grab	Cr+6(21)	3-1097 (6 C) (1)	P-14	02/19/2020 14:23	-16
SS-17	R35756-17	Soil/ [redacted]	Grab	Cr+6(21)	3-1100 (6 C) (1)	B-15	02/19/2020 14:45	-17
SS-18	R35756-18	Soil/ [redacted]	Grab	Cr+6(21)	3-1103 (6 C) (1)	B-16	02/19/2020 15:10	-18
SS-19	R35756-19	Soil/ [redacted]	Grab	Cr+6(21)	3-1106 (6 C) (1)	B-17	02/19/2020 15:35	-19
RB-01	R35756-R1	Water/ [redacted]	Grab	Cr+6(21)	3-1108 (NH4OH/(NH4)2SO4 pH 9.5) (1)	Z	02/19/2020 07:30	-20

Special Instructions: Please return cooler with FedEx return label inside

Shipment for Case Complete? Y

Samples Transferred From Chain of Custody #

Samplers: [redacted]

Analysis Key: Cr+6=Hexavalent Chromium

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[redacted] TechLaw	2/20/20 1700	[redacted] ESAT	2/21/20 10:30	4.8 °C [redacted] 2/21/20

Site Name: **WEIRTON BOP IMPLOSION SITE** **Project #:** **DAS R35756**

Physical Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-01								
Station ID: SS-01								
Sample Matrix: Soil								
Collected: 02/19/2020								
% Solids	**65.2**			% by Weight	1	02/26/2020 12:26	02/28/2020 12:40	USGS I-5753-85/R3QA056

Physical Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-02								
Station ID: SS-02								
Sample Matrix: Soil								
Collected: 02/19/2020								
% Solids	**78.3**			% by Weight	1	02/26/2020 12:26	02/28/2020 12:40	USGS I-5753-85/R3QA056

Physical Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-03								
Station ID: SS-03								
Sample Matrix: Soil								
Collected: 02/19/2020								
% Solids	**80.3**			% by Weight	1	02/26/2020 12:26	02/28/2020 12:40	USGS I-5753-85/R3QA056

Site Name: **WEIRTON BOP IMPLOSION SITE** **Project #:** **DAS R35756**

Physical Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-04								
Station ID: SS-04								
Sample Matrix: Soil								
Collected: 02/19/2020								
% Solids	**75.4**			% by Weight	1	02/26/2020 12:26	02/28/2020 12:40	USGS I-5753-85/R3QA056

Physical Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-05								
Station ID: SS-05								
Sample Matrix: Soil								
Collected: 02/19/2020								
% Solids	**68.5**			% by Weight	1	02/26/2020 12:26	02/28/2020 12:40	USGS I-5753-85/R3QA056

Physical Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-06								
Station ID: SS-06								
Sample Matrix: Soil								
Collected: 02/19/2020								
% Solids	**68.7**			% by Weight	1	02/26/2020 12:26	02/28/2020 12:40	USGS I-5753-85/R3QA056

Site Name: **WEIRTON BOP IMPLOSION SITE** **Project #:** **DAS R35756**

Physical Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-07								
Station ID: SS-07								
Sample Matrix: Soil								
Collected: 02/19/2020								
% Solids	**61.2**			% by Weight	1	02/26/2020 12:26	02/28/2020 12:40	USGS I-5753-85/R3QA056

Physical Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-08								
Station ID: SS-08								
Sample Matrix: Soil								
Collected: 02/19/2020								
% Solids	**68.0**			% by Weight	1	02/26/2020 12:26	02/28/2020 12:40	USGS I-5753-85/R3QA056

Physical Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-09								
Station ID: SS-09								
Sample Matrix: Soil								
Collected: 02/19/2020								
% Solids	**48.4**			% by Weight	1	02/26/2020 12:26	02/28/2020 12:40	USGS I-5753-85/R3QA056

Site Name: **WEIRTON BOP IMPLOSION SITE** **Project #:** **DAS R35756**

Physical Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-10								
Station ID: SS-10								
Sample Matrix: Soil								
Collected: 02/19/2020								
% Solids	**73.2**			% by Weight	1	02/26/2020 12:26	02/28/2020 12:40	USGS I-5753-85/R3QA056

Physical Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-11								
Station ID: SS-11								
Sample Matrix: Soil								
Collected: 02/19/2020								
% Solids	**69.6**			% by Weight	1	02/26/2020 12:26	02/28/2020 12:40	USGS I-5753-85/R3QA056

Physical Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-12								
Station ID: SS-12								
Sample Matrix: Soil								
Collected: 02/19/2020								
% Solids	**75.1**			% by Weight	1	02/26/2020 12:26	02/28/2020 12:40	USGS I-5753-85/R3QA056

Site Name: **WEIRTON BOP IMPLOSION SITE** **Project #:** **DAS R35756**

Physical Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-13								
Station ID: SS-13								
Sample Matrix: Soil								
Collected: 02/19/2020								
% Solids	**70.5**			% by Weight	1	02/26/2020 12:26	02/28/2020 12:40	USGS I-5753-85/R3QA056

Physical Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-14								
Station ID: SS-14								
Sample Matrix: Soil								
Collected: 02/19/2020								
% Solids	**70.1**			% by Weight	1	02/26/2020 12:26	02/28/2020 12:40	USGS I-5753-85/R3QA056

Physical Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-15								
Station ID: SS-15								
Sample Matrix: Soil								
Collected: 02/19/2020								
% Solids	**76.9**			% by Weight	1	02/26/2020 12:26	02/28/2020 12:40	USGS I-5753-85/R3QA056

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Physical Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-16								
Station ID: SS-16								
Sample Matrix: Soil								
Collected: 02/19/2020								
% Solids	**75.4**			% by Weight	1	02/26/2020 12:26	02/28/2020 12:40	USGS I-5753-85/R3QA056

Physical Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-17								
Station ID: SS-17								
Sample Matrix: Soil								
Collected: 02/19/2020								
% Solids	**66.2**			% by Weight	1	02/26/2020 12:26	02/28/2020 12:40	USGS I-5753-85/R3QA056

Physical Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-18								
Station ID: SS-18								
Sample Matrix: Soil								
Collected: 02/19/2020								
% Solids	**79.4**			% by Weight	1	02/26/2020 12:26	02/28/2020 12:40	USGS I-5753-85/R3QA056

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Physical Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-19								
Station ID: SS-19								
Sample Matrix: Soil								
Collected: 02/19/2020								
% Solids	**59.9**			% by Weight	1	02/26/2020 12:26	02/28/2020 12:40	USGS I-5753-85/R3QA056

Classical Chemistry Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-01								
Station ID: SS-01								
Sample Matrix: Soil								
Collected: 02/19/2020								
Hexavalent Chromium	U	UJ	0.61	ug/g dry	1	02/27/2020 15:25	03/03/2020 17:33	EPA 218.6/R3QA161

Classical Chemistry Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-02								
Station ID: SS-02								
Sample Matrix: Soil								
Collected: 02/19/2020								
Hexavalent Chromium	U		0.51	ug/g dry	1	02/27/2020 15:25	03/03/2020 13:56	EPA 218.6/R3QA161

Site Name: **WEIRTON BOP IMPLOSION SITE** **Project #:** **DAS R35756**

Classical Chemistry Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-03								
Station ID: SS-03								
Sample Matrix: Soil								
Collected: 02/19/2020								
Hexavalent Chromium	U		0.50	ug/g dry	1	02/27/2020 15:25	03/03/2020 14:03	EPA 218.6/R3QA161

Classical Chemistry Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-04								
Station ID: SS-04								
Sample Matrix: Soil								
Collected: 02/19/2020								
Hexavalent Chromium	U		0.53	ug/g dry	1	02/27/2020 15:25	03/03/2020 14:10	EPA 218.6/R3QA161

Classical Chemistry Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-05								
Station ID: SS-05								
Sample Matrix: Soil								
Collected: 02/19/2020								
Hexavalent Chromium	U		0.58	ug/g dry	1	02/27/2020 15:25	03/03/2020 14:17	EPA 218.6/R3QA161

Site Name: **WEIRTON BOP IMPLOSION SITE** **Project #:** **DAS R35756**

Classical Chemistry Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-06								
Station ID: SS-06								
Sample Matrix: Soil								
Collected: 02/19/2020								
Hexavalent Chromium	U		0.58	ug/g dry	1	02/27/2020 15:25	03/03/2020 14:24	EPA 218.6/R3QA161

Classical Chemistry Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-07								
Station ID: SS-07								
Sample Matrix: Soil								
Collected: 02/19/2020								
Hexavalent Chromium	U		0.65	ug/g dry	1	02/27/2020 15:25	03/03/2020 14:46	EPA 218.6/R3QA161

Classical Chemistry Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-08								
Station ID: SS-08								
Sample Matrix: Soil								
Collected: 02/19/2020								
Hexavalent Chromium	U		0.59	ug/g dry	1	02/27/2020 15:25	03/03/2020 14:53	EPA 218.6/R3QA161

Site Name: **WEIRTON BOP IMPLOSION SITE** **Project #:** **DAS R35756**

Classical Chemistry Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-09								
Station ID: SS-09								
Sample Matrix: Soil								
Collected: 02/19/2020								
Hexavalent Chromium	U		0.82	ug/g dry	1	02/27/2020 15:25	03/03/2020 15:00	EPA 218.6/R3QA161

Classical Chemistry Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-10								
Station ID: SS-10								
Sample Matrix: Soil								
Collected: 02/19/2020								
Hexavalent Chromium	U		0.55	ug/g dry	1	02/27/2020 15:25	03/03/2020 15:07	EPA 218.6/R3QA161

Classical Chemistry Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-11								
Station ID: SS-11								
Sample Matrix: Soil								
Collected: 02/19/2020								
Hexavalent Chromium	U	UJ	0.57	ug/g dry	1	02/27/2020 15:25	03/03/2020 18:09	EPA 218.6/R3QA161

Site Name: **WEIRTON BOP IMPLOSION SITE** **Project #:** **DAS R35756**

Classical Chemistry Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-12								
Station ID: SS-12								
Sample Matrix: Soil								
Collected: 02/19/2020								
Hexavalent Chromium	U		0.53	ug/g dry	1	02/27/2020 15:25	03/03/2020 16:04	EPA 218.6/R3QA161

Classical Chemistry Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-13								
Station ID: SS-13								
Sample Matrix: Soil								
Collected: 02/19/2020								
Hexavalent Chromium	U		0.57	ug/g dry	1	02/27/2020 15:25	03/03/2020 16:11	EPA 218.6/R3QA161

Classical Chemistry Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-14								
Station ID: SS-14								
Sample Matrix: Soil								
Collected: 02/19/2020								
Hexavalent Chromium	U		0.57	ug/g dry	1	02/27/2020 15:25	03/03/2020 16:37	EPA 218.6/R3QA161

Site Name: **WEIRTON BOP IMPLOSION SITE** **Project #:** **DAS R35756**

Classical Chemistry Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-15								
Station ID: SS-15								
Sample Matrix: Soil								
Collected: 02/19/2020								
Hexavalent Chromium	U		0.52	ug/g dry	1	02/27/2020 15:25	03/03/2020 16:43	EPA 218.6/R3QA161

Classical Chemistry Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-16								
Station ID: SS-16								
Sample Matrix: Soil								
Collected: 02/19/2020								
Hexavalent Chromium	U		0.53	ug/g dry	1	02/27/2020 15:25	03/03/2020 16:50	EPA 218.6/R3QA161

Classical Chemistry Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-17								
Station ID: SS-17								
Sample Matrix: Soil								
Collected: 02/19/2020								
Hexavalent Chromium	U		0.60	ug/g dry	1	02/27/2020 15:25	03/03/2020 16:57	EPA 218.6/R3QA161

Site Name: **WEIRTON BOP IMPLOSION SITE** **Project #:** **DAS R35756**

Classical Chemistry Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-18								
Station ID: SS-18								
Sample Matrix: Soil								
Collected: 02/19/2020								
Hexavalent Chromium	U		0.50	ug/g dry	1	02/27/2020 15:25	03/03/2020 17:05	EPA 218.6/R3QA161

Classical Chemistry Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-19								
Station ID: SS-19								
Sample Matrix: Soil								
Collected: 02/19/2020								
Hexavalent Chromium	U		0.67	ug/g dry	1	02/27/2020 15:25	03/03/2020 17:12	EPA 218.6/R3QA161

Classical Chemistry Parameters

Analyte	Result	Flags/ Qualifiers	Quantitation Limit	Units	Dilution	Prepared	Analyzed	Method/SOP#
Lab ID: 2002010-20								
Station ID: RB-01								
Sample Matrix: Water								
Collected: 02/19/2020								
Hexavalent Chromium	U		1.00	ug/L	1	02/26/2020 10:00	02/26/2020 12:40	EPA 218.6/R3QA161

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QC Data
Physical Parameters

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BB02603 - PD60/PD105 ESAT										
Duplicate (BB02603-DUP1)		**Source: 2002010-01**		Prepared: 02/26/2020 12:26			Analyzed: 02/28/2020 12:40			
% Solids	67.3		% by Weight		65.2			3	20	
Duplicate (BB02603-DUP2)		**Source: 2002010-11**		Prepared: 02/26/2020 12:26			Analyzed: 02/28/2020 12:40			
% Solids	68.2		% by Weight		69.6			2	20	

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QC Data
Classical Chemistry Parameters

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BB02602 - Hex Chrom Prep ESAT										
Blank (BB02602-BLK1)				Prepared: 02/26/2020 10:00			Analyzed: 02/26/2020 12:19			
Hexavalent Chromium	U	1.00	ug/L							
LCS (BB02602-BS1)				Prepared: 02/26/2020 10:00			Analyzed: 02/26/2020 12:33			
Hexavalent Chromium	39.7	1.00	ug/L	40.000		99	90-110			
Duplicate (BB02602-DUP1)		**Source: 2002010-20**		Prepared: 02/26/2020 10:00			Analyzed: 02/26/2020 12:48			
Hexavalent Chromium	U	1.00	ug/L		U				20	
Matrix Spike (BB02602-MS1)		**Source: 2002010-20**		Prepared: 02/26/2020 10:00			Analyzed: 02/26/2020 12:55			
Hexavalent Chromium	40.4	1.00	ug/L	40.000	U	101	90-110			
Batch BB02604 - Hex Chrom Prep ESAT										
Blank (BB02604-BLK1)				Prepared: 02/27/2020 15:25			Analyzed: 03/03/2020 12:22			
Hexavalent Chromium	U	0.40	ug/g wet							
LCS (BB02604-BS1)				Prepared: 02/27/2020 15:25			Analyzed: 03/03/2020 12:36			
Hexavalent Chromium	3.82	0.40	ug/g wet	4.0000		95	90-110			
Duplicate (BB02604-DUP1)		**Source: 2002010-01**		Prepared: 02/27/2020 15:25			Analyzed: 03/03/2020 17:40			
Hexavalent Chromium	0.105	0.61	ug/g dry		0.125			17	20	
Duplicate (BB02604-DUP2)		**Source: 2002010-11**		Prepared: 02/27/2020 15:25			Analyzed: 03/03/2020 18:16			
Hexavalent Chromium	0.120	0.57	ug/g dry		0.198			49	20	D
Matrix Spike (BB02604-MS1)		**Source: 2002010-01**		Prepared: 02/27/2020 15:25			Analyzed: 03/03/2020 17:47			
Hexavalent Chromium	0.132	0.61	ug/g dry	6.1186	0.125	0.1	75-125			A

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QC Data
Classical Chemistry Parameters

Analyte	Result	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BB02604 - Hex Chrom Prep ESAT										
Matrix Spike (BB02604-MS2)		**Source: 2002010-01**		Prepared: 02/27/2020 15:25			Analyzed: 03/03/2020 17:54			
Hexavalent Chromium	380	12.3	ug/g dry	1193.1	0.125	32	75-125			A
Matrix Spike (BB02604-MS3)		**Source: 2002010-11**		Prepared: 02/27/2020 15:25			Analyzed: 03/03/2020 18:23			
Hexavalent Chromium	0.180	0.57	ug/g dry	5.7368	0.198	NR	75-125			A
Matrix Spike (BB02604-MS4)		**Source: 2002010-11**		Prepared: 02/27/2020 15:25			Analyzed: 03/03/2020 18:30			
Hexavalent Chromium	1040	57.4	ug/g dry	1450.7	0.198	72	75-125			A
Post Spike (BB02604-PS1)		**Source: 2002010-01**		Prepared: 02/27/2020 15:25			Analyzed: 03/03/2020 18:01			
Hexavalent Chromium	103		ug/L	100.00	2.05	101	85-115			
Post Spike (BB02604-PS2)		**Source: 2002010-11**		Prepared: 02/27/2020 15:25			Analyzed: 03/03/2020 18:37			
Hexavalent Chromium	105		ug/L	100.00	3.44	101	85-115			
Reference (BB02604-SRM1)				Prepared: 02/27/2020 15:25			Analyzed: 03/03/2020 12:43			
Hexavalent Chromium	113	7.98	ug/g wet	126.00		89	65-135			

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Notes and Definitions

UJ	The analyte was not detected at or above the quantitation limit. The quantitation limit is an estimate.
D	Source sample result and/or duplicate sample result are below the quantitation limit and the RPD is artificially high. Precision data (RPD value) has no significance for this QC Sample.
A	Quality control value is outside acceptance limits.
%REC	Percent Recovery
RPD	Relative Percent Difference
U	Analyte included in the analysis, but not detected at or above the quantitation limit.
NR	Not Reported

QUANTITATION LIMIT: The lowest concentration of an analyte that can be reliably measured within specified limits of precision and accuracy for a specific laboratory analytical method and that takes into account analytical adjustments made during sample preparation and analysis.

SOLID SAMPLE RESULTS - REPORTING PROTOCOL: Percent Solids (percent dry wt at 105 degrees C) determinations are routinely performed for most organic and inorganic analyses. Consequently, these samples are analyzed wet and converted to a dry weight result for reporting purposes. If metals and mercury analyses are requested, they are routinely prepared for analyses by an initial drying at 60 degrees C, homogenized prior to digestion, and are analyzed and reported on a dry weight basis. Oil-type samples are analyzed and reported on a wet weight basis for all analyses because of the nature of the sample matrix. Any exceptions to this protocol will be noted in the narrative.

ON-DEMAND: The term 'on-demand' analysis, if noted in the report narrative, refers to Section 13.1.4 in the Region III OASQA Laboratory Quality Manual, which provides procedures for non-routine analyses or analytes.