

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Crow Butte Resources
Project: Vegetation Baseline Sampling
Lab ID: C13060954-004
Client Sample ID: Marsland West Site

Report Date: 09/17/13
Collection Date: 06/26/13
Date Received: 06/26/13
Matrix: Vegetation

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES							
Lead 210	4.6E-05	uCi/kg		4.6E-06		E909.0	08/26/13 00:27 / eli-cs
Lead 210 precision (±)	4.0E-06	uCi/kg				E909.0	08/26/13 00:27 / eli-cs
Lead 210 MDC	4.6E-06	uCi/kg				E909.0	08/26/13 00:27 / eli-cs
Polonium 210	4.6E-06	uCi/kg		4.4E-06		E912.0	08/22/13 09:29 / plj
Polonium 210 precision (±)	4.2E-06	uCi/kg				E912.0	08/22/13 09:29 / plj
Polonium 210 MDC	4.4E-06	uCi/kg				E912.0	08/22/13 09:29 / plj
Radium 226	1.1E-06	uCi/kg		1.0E-06		E903.0	09/05/13 20:49 / trs
Radium 226 precision (±)	6.7E-07	uCi/kg				E903.0	09/05/13 20:49 / trs
Radium 226 MDC	1.0E-06	uCi/kg				E903.0	09/05/13 20:49 / trs
Thorium 230	4.6E-06	uCi/kg		2.2E-06		E908.0	09/06/13 12:33 / dmf
Thorium 230 precision (±)	2.1E-06	uCi/kg				E908.0	09/06/13 12:33 / dmf
Thorium 230 MDC	2.2E-06	uCi/kg				E908.0	09/06/13 12:33 / dmf
Uranium	0.63	mg/kg	D	0.0031		SW6020	08/10/13 04:52 / clm
Uranium, Activity	4.2E-04	uCi/kg	D	2.1E-06		SW6020	08/10/13 04:52 / clm

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Crow Butte Resources
Project: Marsland Vegetation Baseline Sampling
Lab ID: C13070769-001
Client Sample ID: Marsland West Site

Report Date: 10/17/13
Collection Date: 07/19/13
Date Received: 07/19/13
Matrix: Vegetation

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES							
Lead 210	1.0E-04	uCi/kg		8.2E-06		E909.0	10/02/13 04:39 / eli-cs
Lead 210 precision (±)	8.0E-06	uCi/kg				E909.0	10/02/13 04:39 / eli-cs
Lead 210 MDC	8.2E-06	uCi/kg				E909.0	10/02/13 04:39 / eli-cs
Polonium 210	2.9E-05	uCi/kg		2.5E-06		E912.0	10/09/13 12:51 / dmf
Polonium 210 precision (±)	7.0E-06	uCi/kg				E912.0	10/09/13 12:51 / dmf
Polonium 210 MDC	2.5E-06	uCi/kg				E912.0	10/09/13 12:51 / dmf
Radium 226	2.7E-06	uCi/kg		1.7E-07		E903.0	10/01/13 08:17 / trs
Radium 226 precision (±)	3.0E-07	uCi/kg				E903.0	10/01/13 08:17 / trs
Radium 226 MDC	1.7E-07	uCi/kg				E903.0	10/01/13 08:17 / trs
Thorium 230	3.6E-06	uCi/kg		1.8E-06		E908.0	10/02/13 08:54 / dmf
Thorium 230 precision (±)	1.6E-06	uCi/kg				E908.0	10/02/13 08:54 / dmf
Thorium 230 MDC	1.8E-06	uCi/kg				E908.0	10/02/13 08:54 / dmf
Uranium	0.0093	mg/kg	D	0.00073		SW6020	09/19/13 02:22 / clm
Uranium, Activity	6.3E-06	uCi/kg	D	4.9E-07		SW6020	09/19/13 02:22 / clm

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Crow Butte Resources
Project: Marsland Vegetation Baseline Sampling
Lab ID: C13090529-001
Client Sample ID: Marsland West Site

Revised Date: 01/27/14
Report Date: 01/06/14
Collection Date: 09/13/13 10:24
Date Received: 09/13/13
Matrix: Vegetation

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	51.1	%		0.1		D2974	09/20/13 14:33 / rw
RADIONUCLIDES							
Lead 210	1.5E-04	uCi/kg		3.3E-06		E909.0	12/21/13 19:32 / eli-cs
Lead 210 precision (±)	4.6E-06	uCi/kg				E909.0	12/21/13 19:32 / eli-cs
Lead 210 MDC	3.3E-06	uCi/kg				E909.0	12/21/13 19:32 / eli-cs
Polonium 210	5.9E-05	uCi/kg		2.8E-06		E912.0	12/30/13 10:20 / dmf
Polonium 210 precision (±)	1.0E-05	uCi/kg				E912.0	12/30/13 10:20 / dmf
Polonium 210 MDC	2.8E-06	uCi/kg				E912.0	12/30/13 10:20 / dmf
Radium 226	4.7E-06	uCi/kg		3.1E-07		E903.0	12/16/13 13:26 / lmc
Radium 226 precision (±)	5.0E-07	uCi/kg				E903.0	12/16/13 13:26 / lmc
Radium 226 MDC	3.1E-07	uCi/kg				E903.0	12/16/13 13:26 / lmc
Thorium 230	9.3E-06	uCi/kg		1.6E-06		E908.0	12/19/13 14:58 / dmf
Thorium 230 precision (±)	2.4E-06	uCi/kg				E908.0	12/19/13 14:58 / dmf
Thorium 230 MDC	1.6E-06	uCi/kg				E908.0	12/19/13 14:58 / dmf
Uranium	0.08	mg/kg		0.02		SW6020	09/27/13 12:18 / cp
Uranium, Activity	5.0E-05	uCi/kg		1.0E-05		SW6020	09/27/13 12:18 / cp

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Crow Butte Resources
Project: Vegetation Baseline Sampling
Lab ID: C13060954-006
Client Sample ID: Marsland East Site

Report Date: 09/17/13
Collection Date: 06/26/13
Date Received: 06/26/13
Matrix: Vegetation

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES							
Lead 210	2.5E-05	uCi/kg		2.6E-06		E909.0	08/30/13 06:15 / eli-cs
Lead 210 precision (±)	2.3E-06	uCi/kg				E909.0	08/30/13 06:15 / eli-cs
Lead 210 MDC	2.6E-06	uCi/kg				E909.0	08/30/13 06:15 / eli-cs
Polonium 210	2.7E-06	uCi/kg		1.3E-06		E912.0	09/06/13 12:31 / plj
Polonium 210 precision (±)	1.4E-06	uCi/kg				E912.0	09/06/13 12:31 / plj
Polonium 210 MDC	1.3E-06	uCi/kg				E912.0	09/06/13 12:31 / plj
Radium 226	1.8E-06	uCi/kg		4.7E-07		E903.0	09/05/13 20:49 / trs
Radium 226 precision (±)	3.8E-07	uCi/kg				E903.0	09/05/13 20:49 / trs
Radium 226 MDC	4.7E-07	uCi/kg				E903.0	09/05/13 20:49 / trs
Thorium 230	1.6E-06	uCi/kg		1.5E-06		E908.0	09/06/13 12:33 / dmf
Thorium 230 precision (±)	1.1E-06	uCi/kg				E908.0	09/06/13 12:33 / dmf
Thorium 230 MDC	1.5E-06	uCi/kg				E908.0	09/06/13 12:33 / dmf
Uranium	0.0010	mg/kg	D	0.00072		SW6020	08/22/13 00:16 / clm
Uranium, Activity	6.8E-07	uCi/kg	D	4.9E-07		SW6020	08/22/13 00:16 / clm

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Crow Butte Resources
Project: Marsland Vegetation Baseline Sampling
Lab ID: C13070769-003
Client Sample ID: Marsland East Site

Revised Date: 10/17/14
Report Date: 10/17/13
Collection Date: 07/19/13
Date Received: 07/19/13
Matrix: Vegetation

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES							
Lead 210	2.7E-05	uCi/kg		2.4E-06		E909.0	10/14/13 20:12 / eli-cs
Lead 210 precision (±)	2.2E-06	uCi/kg				E909.0	10/14/13 20:12 / eli-cs
Lead 210 MDC	2.4E-06	uCi/kg				E909.0	10/14/13 20:12 / eli-cs
Polonium 210	3.4E-06	uCi/kg		1.3E-06		E912.0	10/07/13 12:22 / dmf
Polonium 210 precision (±)	1.7E-06	uCi/kg				E912.0	10/07/13 12:22 / dmf
Polonium 210 MDC	1.3E-06	uCi/kg				E912.0	10/07/13 12:22 / dmf
Radium 226	<2.4E-08	uCi/kg	U	2.4E-08		E903.0	10/11/13 01:38 / trs
Radium 226 precision (±)	1.2E-08	uCi/kg				E903.0	10/11/13 01:38 / trs
Radium 226 MDC	2.4E-08	uCi/kg				E903.0	10/11/13 01:38 / trs
Thorium 230	2.3E-06	uCi/kg		1.5E-06		E908.0	10/08/13 09:07 / dmf
Thorium 230 precision (±)	1.2E-06	uCi/kg				E908.0	10/08/13 09:07 / dmf
Thorium 230 MDC	1.5E-06	uCi/kg				E908.0	10/08/13 09:07 / dmf
Uranium	0.0021	mg/kg		0.00030		SW6020	10/03/13 22:07 / clm
Uranium, Activity	1.4E-06	uCi/kg		2.0E-07		SW6020	10/03/13 22:07 / clm

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Crow Butte Resources
Project: Marsland Vegetation Baseline Sampling
Lab ID: C13090529-003
Client Sample ID: Marsland East Site

Revised Date: 01/27/14
Report Date: 01/06/14
Collection Date: 09/13/13 11:47
Date Received: 09/13/13
Matrix: Vegetation

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	53.9	%		0.1		D2974	09/20/13 14:45 / rw
RADIONUCLIDES							
Lead 210	7.5E-05	uCi/kg		2.5E-06		E909.0	12/22/13 09:03 / eli-cs
Lead 210 precision (±)	3.0E-06	uCi/kg				E909.0	12/22/13 09:03 / eli-cs
Lead 210 MDC	2.5E-06	uCi/kg				E909.0	12/22/13 09:03 / eli-cs
Polonium 210	1.4E-05	uCi/kg		2.1E-06		E912.0	01/22/14 09:08 / plj
Polonium 210 precision (±)	3.9E-06	uCi/kg				E912.0	01/22/14 09:08 / plj
Polonium 210 MDC	2.1E-06	uCi/kg				E912.0	01/22/14 09:08 / plj
Radium 226	2.6E-06	uCi/kg		1.8E-07		E903.0	12/30/13 11:35 / lmc
Radium 226 precision (±)	2.9E-07	uCi/kg				E903.0	12/30/13 11:35 / lmc
Radium 226 MDC	1.8E-07	uCi/kg				E903.0	12/30/13 11:35 / lmc
Thorium 230	3.1E-06	uCi/kg		1.1E-06		E908.0	12/20/13 14:56 / dmf
Thorium 230 precision (±)	1.2E-06	uCi/kg				E908.0	12/20/13 14:56 / dmf
Thorium 230 MDC	1.1E-06	uCi/kg				E908.0	12/20/13 14:56 / dmf
Uranium	0.16	mg/kg		0.02		SW6020	09/27/13 12:27 / cp
Uranium, Activity	1.1E-04	uCi/kg		1.0E-05		SW6020	09/27/13 12:27 / cp

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Crow Butte Resources
Project: Vegetation Baseline Sampling
Lab ID: C13060954-005
Client Sample ID: Marsland Middle Site

Report Date: 09/17/13
Collection Date: 06/26/13
Date Received: 06/26/13
Matrix: Vegetation

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES							
Lead 210	1.2E-04	uCi/kg		5.0E-06		E909.0	08/30/13 05:06 / eli-cs
Lead 210 precision (±)	6.2E-06	uCi/kg				E909.0	08/30/13 05:06 / eli-cs
Lead 210 MDC	5.0E-06	uCi/kg				E909.0	08/30/13 05:06 / eli-cs
Polonium 210	2.4E-05	uCi/kg		3.1E-06		E912.0	08/22/13 11:36 / plj
Polonium 210 precision (±)	8.6E-06	uCi/kg				E912.0	08/22/13 11:36 / plj
Polonium 210 MDC	3.1E-06	uCi/kg				E912.0	08/22/13 11:36 / plj
Radium 226	9.1E-06	uCi/kg		9.6E-07		E903.0	09/05/13 20:49 / trs
Radium 226 precision (±)	1.0E-06	uCi/kg				E903.0	09/05/13 20:49 / trs
Radium 226 MDC	9.6E-07	uCi/kg				E903.0	09/05/13 20:49 / trs
Thorium 230	7.4E-06	uCi/kg		4.9E-06		E908.0	08/27/13 09:12 / dmf
Thorium 230 precision (±)	4.2E-06	uCi/kg				E908.0	08/27/13 09:12 / dmf
Thorium 230 MDC	4.9E-06	uCi/kg				E908.0	08/27/13 09:12 / dmf
Uranium	0.043	mg/kg	D	0.0015		SW6020	08/22/13 00:10 / clm
Uranium, Activity	2.9E-05	uCi/kg	D	9.9E-07		SW6020	08/22/13 00:10 / clm

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Crow Butte Resources
Project: Marsland Vegetation Baseline Sampling
Lab ID: C13070769-002
Client Sample ID: Marsland Middle Site

Report Date: 10/17/13
Collection Date: 07/19/13
Date Received: 07/19/13
Matrix: Vegetation

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES							
Lead 210	1.1E-05	uCi/kg		4.5E-06		E909.0	10/02/13 08:08 / eli-cs
Lead 210 precision (±)	3.1E-06	uCi/kg				E909.0	10/02/13 08:08 / eli-cs
Lead 210 MDC	4.5E-06	uCi/kg				E909.0	10/02/13 08:08 / eli-cs
Polonium 210	2.1E-06	uCi/kg		1.2E-06		E912.0	10/09/13 12:51 / dmf
Polonium 210 precision (±)	1.4E-06	uCi/kg				E912.0	10/09/13 12:51 / dmf
Polonium 210 MDC	1.2E-06	uCi/kg				E912.0	10/09/13 12:51 / dmf
Radium 226	4.0E-07	uCi/kg		8.0E-08		E903.0	10/01/13 08:17 / trs
Radium 226 precision (±)	8.9E-08	uCi/kg				E903.0	10/01/13 08:17 / trs
Radium 226 MDC	8.0E-08	uCi/kg				E903.0	10/01/13 08:17 / trs
Thorium 230	9.3E-07	uCi/kg		7.2E-07		E908.0	10/02/13 08:54 / dmf
Thorium 230 precision (±)	5.7E-07	uCi/kg				E908.0	10/02/13 08:54 / dmf
Thorium 230 MDC	7.2E-07	uCi/kg				E908.0	10/02/13 08:54 / dmf
Uranium	0.0023	mg/kg	D	0.00040		SW6020	09/19/13 02:41 / cjm
Uranium, Activity	1.6E-06	uCi/kg	D	2.7E-07		SW6020	09/19/13 02:41 / cjm

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.
 D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Crow Butte Resources
Project: Marsland Vegetation Baseline Sampling
Lab ID: C13090529-002
Client Sample ID: Marsland Middle Site

Revised Date: 01/27/14
Report Date: 01/06/14
Collection Date: 09/13/13 11:08
Date Received: 09/13/13
Matrix: Vegetation

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	63.1	%		0.1		D2974	09/20/13 14:39 / rw
RADIONUCLIDES							
Lead 210	9.8E-05	uCi/kg		2.8E-06		E909.0	12/21/13 21:48 / eli-cs
Lead 210 precision (±)	3.5E-06	uCi/kg				E909.0	12/21/13 21:48 / eli-cs
Lead 210 MDC	2.8E-06	uCi/kg				E909.0	12/21/13 21:48 / eli-cs
Polonium 210	3.5E-05	uCi/kg		2.4E-06		E912.0	12/30/13 10:20 / dmf
Polonium 210 precision (±)	6.7E-06	uCi/kg				E912.0	12/30/13 10:20 / dmf
Polonium 210 MDC	2.4E-06	uCi/kg				E912.0	12/30/13 10:20 / dmf
Radium 226	2.8E-06	uCi/kg		2.5E-07		E903.0	12/16/13 13:26 / lmc
Radium 226 precision (±)	3.6E-07	uCi/kg				E903.0	12/16/13 13:26 / lmc
Radium 226 MDC	2.5E-07	uCi/kg				E903.0	12/16/13 13:26 / lmc
Thorium 230	6.2E-06	uCi/kg		1.8E-06		E908.0	12/19/13 14:58 / dmf
Thorium 230 precision (±)	1.9E-06	uCi/kg				E908.0	12/19/13 14:58 / dmf
Thorium 230 MDC	1.8E-06	uCi/kg				E908.0	12/19/13 14:58 / dmf
Uranium	0.20	mg/kg		0.02		SW6020	09/27/13 12:22 / cp
Uranium, Activity	1.3E-04	uCi/kg		1.0E-05		SW6020	09/27/13 12:22 / cp

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
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 ND - Not detected at the reporting limit.