

ANALYTICAL SUMMARY REPORT

September 26, 2012

Powertech USA Inc
PO Box 812
Edgemont, SD 57735

Workorder No.: R12080362 Quote ID: R411

Project Name: Alluvial Wells Dewey Burdock

Energy Laboratories Inc. Rapid City SD received the following 7 samples for Powertech USA Inc on 8/21/2012 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R12080362-001	DC-2	08/20/12 09:25	08/21/12	Aqueous	Metals by ICP/ICPMS, Dissolved Alkalinity Anion - Cation Balance Conductivity Mercury, Total Anions by Ion Chromatography pH Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Radium 226, Dissolved Radium 228, Dissolved Radon 222 Solids, Total Dissolved
R12080362-002	DC-4	08/20/12 10:11	08/21/12	Aqueous	Same As Above
R12080362-003	BC-3	08/20/12 11:23	08/21/12	Aqueous	Same As Above
R12080362-004	BC-1	08/20/12 12:29	08/21/12	Aqueous	Same As Above
R12080362-005	BC-1 Dup	08/20/12 12:38	08/21/12	Aqueous	Same As Above
R12080362-006	BC-2	08/20/12 13:41	08/21/12	Aqueous	Same As Above
R12080362-007	DC-1	08/21/12 09:05	08/21/12	Aqueous	Same As Above

This report was prepared by Energy Laboratories, Inc., 2821 Plant St., Rapid City, SD 57702. As appropriate, any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By:



CLIENT: Powertech USA Inc
Project: Alluvial Wells Dewey Burdock
Sample Delivery Group: R12080362

Revised Date: 09/26/12

Report Date: 09/25/12

CASE NARRATIVE

Tests associated with analyst identified as ELI-CA were subcontracted to Energy Laboratories, 2393 Salt Creek Hwy., Casper, WY, EPA Number WY00002 and WY00937.

LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 09:25

Lab ID: R12080362-001

Date Received: 08/21/12

Client Sample ID: DC-2

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL DF		
PHYSICAL PARAMETERS							
Conductivity @ 25 C	5710	umhos/cm		5.0	1	A2510 B	08/21/12 17:26/tb
pH	7.13	su		0.01	1	A4500-H B	08/21/12 18:01/tb
Solids, Total Dissolved TDS @ 180 C	4600	mg/L		10	1	A2540 C	08/23/12 16:48/tb
Alkalinity, Total as CaCO3	260	mg/L		5	1	A2320 B	08/24/12 12:05/ch
Carbonate as CO3	ND	mg/L		5	1	A2320 B	08/24/12 12:05/ch
Bicarbonate as HCO3	317	mg/L		5	1	A2320 B	08/24/12 12:05/ch
INORGANIC PARAMETERS							
Chloride	756	mg/L	D	50	50	E300.0	08/21/12 23:49/tb
Fluoride	0.6	mg/L		0.1	1	E300.0	08/21/12 23:31/tb
Sulfate	1920	mg/L	D	50	50	E300.0	08/21/12 23:49/tb
DATA QUALITY PARAMETERS							
Anions	66.6	meq/L		1.00	1	A1030 E	09/25/12 16:21/lkl
Cations	69.3	meq/L		1.00	1	A1030 E	09/25/12 16:21/lkl
Conductivity, Calculated	5330	umhos/cm		1.00	1	A1030 E	09/25/12 16:21/lkl
TDS Ratio	1.08			0.0100	1	A1030 E	09/25/12 16:21/lkl
A/C Balance	1.99	%			1	A1030 E	09/25/12 16:21/lkl
NUTRIENT PARAMETERS							
Nitrogen, Nitrate as N	0.2	mg/L		0.1	1	E300.0	08/21/12 23:31/tb
RADIONUCLIDES - DISSOLVED							
Gross Alpha	-5	pCi/L	U		1	E900.0	09/01/12 16:36/eli-ca
Gross Alpha precision (±)	13.3	pCi/L			1	E900.0	09/01/12 16:36/eli-ca
Gross Alpha MDC	22.9	pCi/L			1	E900.0	09/01/12 16:36/eli-ca
Gross Beta	-10	pCi/L	U		1	E900.0	09/01/12 16:36/eli-ca
Gross Beta precision (±)	21.4	pCi/L			1	E900.0	09/01/12 16:36/eli-ca
Gross Beta MDC	36.3	pCi/L			1	E900.0	09/01/12 16:36/eli-ca
Radium 228	0.7	pCi/L	U		1	RA-05	08/30/12 17:59/eli-ca
Radium 228 precision (±)	0.7	pCi/L			1	RA-05	08/30/12 17:59/eli-ca
Radium 228 MDC	1.1	pCi/L			1	RA-05	08/30/12 17:59/eli-ca
Radium 226	0.4	pCi/L			1	E903.0	09/06/12 09:58/eli-c
Radium 226 precision (±)	0.1	pCi/L			1	E903.0	09/06/12 09:58/eli-c
Radium 226 MDC	0.1	pCi/L			1	E903.0	09/06/12 09:58/eli-c
RADIONUCLIDES - TOTAL							
Radon 222	1850	pCi/L			1	D5072-92	08/23/12 19:55/eli-c
Radon 222 precision (±)	159	pCi/L			1	D5072-92	08/23/12 19:55/eli-c

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 U - Not detected at 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 Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 09:25

Lab ID: R12080362-001

Date Received: 08/21/12

Client Sample ID: DC-2

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
RADIONUCLIDES - TOTAL								
Radon 222 MDC	226	pCi/L				1	D5072-92	08/23/12 19:55/eli-c
TOTAL METALS ANALYSES								
Mercury	ND	mg/L		0.0001		1	E245.1	08/24/12 14:50/eli-ca
DISSOLVED METALS ANALYSES								
Arsenic	ND	mg/L		0.001		5	E200.8	08/29/12 17:44/eli-c
Barium	ND	mg/L		0.05		5	E200.7	08/29/12 17:58/eli-ca
Boron	0.3	mg/L	D	0.1		5	E200.7	08/29/12 17:58/eli-ca
Cadmium	ND	mg/L		0.001		5	E200.8	08/29/12 17:44/eli-c
Chromium	ND	mg/L		0.005		5	E200.8	08/29/12 17:44/eli-c
Copper	ND	mg/L		0.005		5	E200.8	08/29/12 17:44/eli-c
Iron	0.36	mg/L		0.03		5	E200.7	08/29/12 17:58/eli-ca
Lead	ND	mg/L		0.001		5	E200.8	08/29/12 17:44/eli-c
Manganese	3.41	mg/L		0.001		5	E200.7	08/29/12 17:58/eli-ca
Molybdenum	0.005	mg/L		0.001		5	E200.8	08/29/12 17:44/eli-c
Nickel	ND	mg/L		0.005		5	E200.8	08/29/12 17:44/eli-c
Selenium	0.001	mg/L		0.001		5	E200.8	08/29/12 17:44/eli-c
Silver	ND	mg/L		0.001		5	E200.8	08/31/12 14:37/eli-c
Uranium	0.0081	mg/L		0.0003		5	E200.8	08/29/12 17:44/eli-c
Vanadium	0.09	mg/L	D	0.04		5	E200.7	08/29/12 17:58/eli-ca
Zinc	0.04	mg/L		0.01		5	E200.8	08/29/12 17:44/eli-c
Calcium	524	mg/L		1		5	E200.7	08/29/12 17:58/eli-ca
Magnesium	144	mg/L		1		5	E200.7	08/29/12 17:58/eli-ca
Potassium	7	mg/L		1		5	E200.7	08/29/12 17:58/eli-ca
Sodium	715	mg/L		1		5	E200.8	08/29/12 17:44/eli-c

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Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 10:11

Lab ID: R12080362-002

Date Received: 08/21/12

Client Sample ID: DC-4

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL DF		
PHYSICAL PARAMETERS							
Conductivity @ 25 C	10400	umhos/cm		5.0		1 A2510 B	08/21/12 17:30/tb
pH	7.44	su		0.01		1 A4500-H B	08/21/12 18:05/tb
Solids, Total Dissolved TDS @ 180 C	11000	mg/L		10		1 A2540 C	08/23/12 16:49/tb
Alkalinity, Total as CaCO3	346	mg/L		5		1 A2320 B	08/24/12 12:07/ch
Carbonate as CO3	ND	mg/L		5		1 A2320 B	08/24/12 12:07/ch
Bicarbonate as HCO3	422	mg/L		5		1 A2320 B	08/24/12 12:07/ch
INORGANIC PARAMETERS							
Chloride	114	mg/L			1	1 E300.0	08/22/12 00:07/tb
Fluoride	2.5	mg/L			0.1	1 E300.0	08/22/12 00:07/tb
Sulfate	6920	mg/L	D		100	100 E300.0	08/22/12 00:25/tb
DATA QUALITY PARAMETERS							
Anions	155	meq/L		1.00		1 A1030 E	09/25/12 16:21/lkl
Cations	149	meq/L		1.00		1 A1030 E	09/25/12 16:21/lkl
Conductivity, Calculated	10800	umhos/cm		1.00		1 A1030 E	09/25/12 16:21/lkl
TDS Ratio	1.13			0.0100		1 A1030 E	09/25/12 16:21/lkl
A/C Balance	-1.95	%				1 A1030 E	09/25/12 16:21/lkl
NUTRIENT PARAMETERS							
Nitrogen, Nitrate as N	1.6	mg/L		0.1		1 E300.0	08/22/12 00:07/tb
RADIONUCLIDES - DISSOLVED							
Gross Alpha	16.5	pCi/L	U			1 E900.0	09/01/12 16:36/eli-ca
Gross Alpha precision (±)	22.4	pCi/L				1 E900.0	09/01/12 16:36/eli-ca
Gross Alpha MDC	36.2	pCi/L				1 E900.0	09/01/12 16:36/eli-ca
Gross Beta	-20	pCi/L	U			1 E900.0	09/01/12 16:36/eli-ca
Gross Beta precision (±)	29.4	pCi/L				1 E900.0	09/01/12 16:36/eli-ca
Gross Beta MDC	49.8	pCi/L				1 E900.0	09/01/12 16:36/eli-ca
Radium 228	0.04	pCi/L	U			1 RA-05	08/30/12 17:59/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1 RA-05	08/30/12 17:59/eli-ca
Radium 228 MDC	1.2	pCi/L				1 RA-05	08/30/12 17:59/eli-ca
Radium 226	0.2	pCi/L				1 E903.0	09/06/12 09:58/eli-c
Radium 226 precision (±)	0.1	pCi/L				1 E903.0	09/06/12 09:58/eli-c
Radium 226 MDC	0.1	pCi/L				1 E903.0	09/06/12 09:58/eli-c
RADIONUCLIDES - TOTAL							
Radon 222	4530	pCi/L				1 D5072-92	08/23/12 19:55/eli-c
Radon 222 precision (±)	188	pCi/L				1 D5072-92	08/23/12 19:55/eli-c

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Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 10:11

Lab ID: R12080362-002

Date Received: 08/21/12

Client Sample ID: DC-4

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
RADIONUCLIDES - TOTAL								
Radon 222 MDC	225	pCi/L				1	D5072-92	08/23/12 19:55/eli-c
TOTAL METALS ANALYSES								
Mercury	ND	mg/L		0.0001		1	E245.1	08/24/12 14:54/eli-ca
DISSOLVED METALS ANALYSES								
Arsenic	ND	mg/L		0.001		5	E200.8	08/29/12 17:48/eli-c
Barium	ND	mg/L		0.05		10	E200.7	08/29/12 18:02/eli-ca
Boron	2.0	mg/L	D	0.2		10	E200.7	08/29/12 18:02/eli-ca
Cadmium	ND	mg/L		0.001		5	E200.8	08/29/12 17:48/eli-c
Chromium	ND	mg/L		0.005		5	E200.8	08/29/12 17:48/eli-c
Copper	ND	mg/L		0.005		5	E200.8	08/29/12 17:48/eli-c
Iron	ND	mg/L		0.03		10	E200.7	08/29/12 18:02/eli-ca
Lead	ND	mg/L		0.001		5	E200.8	08/29/12 17:48/eli-c
Manganese	0.004	mg/L		0.001		5	E200.8	08/29/12 17:48/eli-c
Molybdenum	0.002	mg/L		0.001		5	E200.8	08/29/12 17:48/eli-c
Nickel	ND	mg/L		0.005		5	E200.8	08/29/12 17:48/eli-c
Selenium	0.034	mg/L		0.001		5	E200.8	08/29/12 17:48/eli-c
Silver	ND	mg/L		0.001		5	E200.8	08/31/12 14:41/eli-c
Uranium	0.0159	mg/L		0.0003		5	E200.8	08/29/12 17:48/eli-c
Vanadium	ND	mg/L		0.01		5	E200.8	08/29/12 17:48/eli-c
Zinc	0.02	mg/L		0.01		5	E200.8	08/29/12 17:48/eli-c
Calcium	389	mg/L		1		10	E200.7	08/29/12 18:02/eli-ca
Magnesium	604	mg/L		1		10	E200.7	08/29/12 18:02/eli-ca
Potassium	10	mg/L		1		10	E200.7	08/29/12 18:02/eli-ca
Sodium	1820	mg/L		1		5	E200.8	08/29/12 17:48/eli-c

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Definitions: QCL - Quality control limit.
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LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 11:23

Lab ID: R12080362-003

Date Received: 08/21/12

Client Sample ID: BC-3

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL DF		
PHYSICAL PARAMETERS							
Conductivity @ 25 C	3200	umhos/cm		5.0	1	A2510 B	08/21/12 17:31/tb
pH	7.17	su		0.01	1	A4500-H B	08/21/12 18:07/tb
Solids, Total Dissolved TDS @ 180 C	3100	mg/L		10	1	A2540 C	08/23/12 16:50/tb
Alkalinity, Total as CaCO3	256	mg/L		5	1	A2320 B	08/24/12 13:43/ch
Carbonate as CO3	ND	mg/L		5	1	A2320 B	08/24/12 13:43/ch
Bicarbonate as HCO3	312	mg/L		5	1	A2320 B	08/24/12 13:43/ch
INORGANIC PARAMETERS							
Chloride	19	mg/L		1	1	E300.0	08/22/12 00:43/tb
Fluoride	0.6	mg/L		0.1	1	E300.0	08/22/12 00:43/tb
Sulfate	1850	mg/L	D	50	50	E300.0	08/22/12 01:01/tb
DATA QUALITY PARAMETERS							
Anions	44.3	meq/L		1.00	1	A1030 E	09/25/12 16:22/lkl
Cations	45.8	meq/L		1.00	1	A1030 E	09/25/12 16:22/lkl
Conductivity, Calculated	3720	umhos/cm		1.00	1	A1030 E	09/25/12 16:22/lkl
TDS Ratio	1.08			0.0100	1	A1030 E	09/25/12 16:22/lkl
A/C Balance	1.72	%			1	A1030 E	09/25/12 16:22/lkl
NUTRIENT PARAMETERS							
Nitrogen, Nitrate as N	0.3	mg/L		0.1	1	E300.0	08/22/12 00:43/tb
RADIONUCLIDES - DISSOLVED							
Gross Alpha	10.3	pCi/L	U		1	E900.0	09/01/12 16:36/eli-ca
Gross Alpha precision (±)	7.1	pCi/L			1	E900.0	09/01/12 16:36/eli-ca
Gross Alpha MDC	11.1	pCi/L			1	E900.0	09/01/12 16:36/eli-ca
Gross Beta	2.0	pCi/L	U		1	E900.0	09/01/12 16:36/eli-ca
Gross Beta precision (±)	9.4	pCi/L			1	E900.0	09/01/12 16:36/eli-ca
Gross Beta MDC	15.8	pCi/L			1	E900.0	09/01/12 16:36/eli-ca
Radium 228	-0.1	pCi/L	U		1	RA-05	08/30/12 17:59/eli-ca
Radium 228 precision (±)	0.7	pCi/L			1	RA-05	08/30/12 17:59/eli-ca
Radium 228 MDC	1.1	pCi/L			1	RA-05	08/30/12 17:59/eli-ca
Radium 226	0.1	pCi/L	U		1	E903.0	09/06/12 09:58/eli-c
Radium 226 precision (±)	0.1	pCi/L			1	E903.0	09/06/12 09:58/eli-c
Radium 226 MDC	0.1	pCi/L			1	E903.0	09/06/12 09:58/eli-c
RADIONUCLIDES - TOTAL							
Radon 222	1710	pCi/L			1	D5072-92	08/23/12 19:55/eli-c
Radon 222 precision (±)	155	pCi/L			1	D5072-92	08/23/12 19:55/eli-c

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Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 11:23

Lab ID: R12080362-003

Date Received: 08/21/12

Client Sample ID: BC-3

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
RADIONUCLIDES - TOTAL								
Radon 222 MDC	223	pCi/L				1	D5072-92	08/23/12 19:55/eli-c
TOTAL METALS ANALYSES								
Mercury	ND	mg/L		0.0001		1	E245.1	08/24/12 14:58/eli-ca
DISSOLVED METALS ANALYSES								
Arsenic	ND	mg/L		0.001		2	E200.8	08/29/12 17:52/eli-c
Barium	ND	mg/L		0.05		2	E200.7	08/29/12 18:06/eli-ca
Boron	0.45	mg/L		0.05		2	E200.7	08/29/12 18:06/eli-ca
Cadmium	ND	mg/L		0.001		2	E200.8	08/29/12 17:52/eli-c
Chromium	ND	mg/L		0.005		2	E200.7	08/29/12 18:06/eli-ca
Copper	ND	mg/L		0.005		2	E200.7	08/29/12 18:06/eli-ca
Iron	ND	mg/L		0.03		2	E200.7	08/29/12 18:06/eli-ca
Lead	ND	mg/L		0.001		2	E200.8	08/29/12 17:52/eli-c
Manganese	0.461	mg/L		0.001		2	E200.7	08/29/12 18:06/eli-ca
Molybdenum	0.006	mg/L		0.001		2	E200.8	08/29/12 17:52/eli-c
Nickel	ND	mg/L		0.005		2	E200.7	08/29/12 18:06/eli-ca
Selenium	0.003	mg/L		0.001		2	E200.8	08/29/12 17:52/eli-c
Silver	ND	mg/L		0.001		2	E200.8	08/31/12 14:46/eli-c
Uranium	0.0214	mg/L		0.0003		2	E200.8	08/29/12 17:52/eli-c
Vanadium	ND	mg/L		0.01		2	E200.8	08/29/12 17:52/eli-c
Zinc	ND	mg/L		0.01		2	E200.7	08/29/12 18:06/eli-ca
Calcium	531	mg/L		1		2	E200.7	08/29/12 18:06/eli-ca
Magnesium	148	mg/L		1		2	E200.7	08/29/12 18:06/eli-ca
Potassium	11	mg/L		1		2	E200.7	08/29/12 18:06/eli-ca
Sodium	158	mg/L		1		2	E200.8	08/29/12 17:52/eli-c

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Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 12:29

Lab ID: R12080362-004

Date Received: 08/21/12

Client Sample ID: BC-1

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL DF		
PHYSICAL PARAMETERS							
Conductivity @ 25 C	3630	umhos/cm		5.0		1 A2510 B	08/21/12 17:33/tb
pH	7.09	su		0.01		1 A4500-H B	08/21/12 18:08/tb
Solids, Total Dissolved TDS @ 180 C	3700	mg/L		10		1 A2540 C	08/23/12 16:51/tb
Alkalinity, Total as CaCO3	290	mg/L		5		1 A2320 B	08/24/12 13:55/ch
Carbonate as CO3	ND	mg/L		5		1 A2320 B	08/24/12 13:55/ch
Bicarbonate as HCO3	354	mg/L		5		1 A2320 B	08/24/12 13:55/ch
INORGANIC PARAMETERS							
Chloride	25	mg/L		1		1 E300.0	08/22/12 01:18/tb
Fluoride	0.6	mg/L		0.1		1 E300.0	08/22/12 01:18/tb
Sulfate	2170	mg/L	D	50		50 E300.0	08/22/12 02:12/tb
DATA QUALITY PARAMETERS							
Anions	51.8	meq/L		1.00		1 A1030 E	09/25/12 16:22/lki
Cations	53.7	meq/L		1.00		1 A1030 E	09/25/12 16:22/lki
Conductivity, Calculated	4240	umhos/cm		1.00		1 A1030 E	09/25/12 16:22/lki
TDS Ratio	1.11			0.0100		1 A1030 E	09/25/12 16:22/lki
A/C Balance	1.77	%				1 A1030 E	09/25/12 16:22/lki
NUTRIENT PARAMETERS							
Nitrogen, Nitrate as N	0.2	mg/L		0.1		1 E300.0	08/22/12 01:18/tb
RADIONUCLIDES - DISSOLVED							
Gross Alpha	71.1	pCi/L				1 E900.0	09/01/12 16:36/eli-ca
Gross Alpha precision (±)	10.8	pCi/L				1 E900.0	09/01/12 16:36/eli-ca
Gross Alpha MDC	12.8	pCi/L				1 E900.0	09/01/12 16:36/eli-ca
Gross Beta	-4	pCi/L	U			1 E900.0	09/01/12 16:36/eli-ca
Gross Beta precision (±)	10.6	pCi/L				1 E900.0	09/01/12 16:36/eli-ca
Gross Beta MDC	17.7	pCi/L				1 E900.0	09/01/12 16:36/eli-ca
Radium 228	0.7	pCi/L	U			1 RA-05	08/30/12 17:59/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1 RA-05	08/30/12 17:59/eli-ca
Radium 228 MDC	1.1	pCi/L				1 RA-05	08/30/12 17:59/eli-ca
Radium 226	0.1	pCi/L	U			1 E903.0	09/06/12 09:58/eli-c
Radium 226 precision (±)	0.1	pCi/L				1 E903.0	09/06/12 09:58/eli-c
Radium 226 MDC	0.1	pCi/L				1 E903.0	09/06/12 09:58/eli-c
RADIONUCLIDES - TOTAL							
Radon 222	1870	pCi/L				1 D5072-92	08/23/12 19:55/eli-c
Radon 222 precision (±)	156	pCi/L				1 D5072-92	08/23/12 19:55/eli-c

Report RL - Analyte reporting limit.

MCL - Maximum contaminant level.

Definitions: QCL - Quality control limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

D - RL increased due to sample matrix.

U - Not detected at minimum detectable concentration

LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 12:29

Lab ID: R12080362-004

Date Received: 08/21/12

Client Sample ID: BC-1

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
RADIONUCLIDES - TOTAL								
Radon 222 MDC	221	pCi/L				1	D5072-92	08/23/12 19:55/eli-c
TOTAL METALS ANALYSES								
Mercury	ND	mg/L		0.0001		1	E245.1	08/24/12 14:59/eli-ca
DISSOLVED METALS ANALYSES								
Arsenic	ND	mg/L		0.001		2	E200.8	08/29/12 17:57/eli-c
Barium	ND	mg/L		0.05		2	E200.7	08/29/12 18:10/eli-ca
Boron	0.66	mg/L		0.05		2	E200.7	08/29/12 18:10/eli-ca
Cadmium	ND	mg/L		0.001		2	E200.8	08/29/12 17:57/eli-c
Chromium	0.005	mg/L		0.005		2	E200.7	08/29/12 18:10/eli-ca
Copper	ND	mg/L		0.005		2	E200.7	08/29/12 18:10/eli-ca
Iron	ND	mg/L		0.03		2	E200.7	08/29/12 18:10/eli-ca
Lead	ND	mg/L		0.001		2	E200.8	08/29/12 17:57/eli-c
Manganese	0.061	mg/L		0.001		2	E200.7	08/29/12 18:10/eli-ca
Molybdenum	0.005	mg/L		0.001		2	E200.8	08/29/12 17:57/eli-c
Nickel	ND	mg/L		0.005		2	E200.7	08/29/12 18:10/eli-ca
Selenium	0.001	mg/L		0.001		2	E200.8	08/29/12 17:57/eli-c
Silver	ND	mg/L		0.001		2	E200.8	08/31/12 14:50/eli-c
Uranium	0.0842	mg/L		0.0003		2	E200.8	08/29/12 17:57/eli-c
Vanadium	ND	mg/L		0.01		2	E200.8	08/29/12 17:57/eli-c
Zinc	ND	mg/L		0.01		2	E200.7	08/29/12 18:10/eli-ca
Calcium	525	mg/L		1		2	E200.7	08/29/12 18:10/eli-ca
Magnesium	238	mg/L		1		2	E200.7	08/29/12 18:10/eli-ca
Potassium	12	mg/L		1		2	E200.7	08/29/12 18:10/eli-ca
Sodium	175	mg/L		1		2	E200.8	08/29/12 17:57/eli-c

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 12:38

Lab ID: R12080362-005

Date Received: 08/21/12

Client Sample ID: BC-1 Dup

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL DF		
PHYSICAL PARAMETERS							
Conductivity @ 25 C	3630	umhos/cm		5.0		1 A2510 B	08/21/12 17:35/tb
pH	7.10	su		0.01		1 A4500-H B	08/21/12 18:11/tb
Solids, Total Dissolved TDS @ 180 C	3500	mg/L		40		1 A2540 C	08/27/12 12:30/tb
Alkalinity, Total as CaCO3	290	mg/L		5		1 A2320 B	08/24/12 14:11/ch
Carbonate as CO3	ND	mg/L		5		1 A2320 B	08/24/12 14:11/ch
Bicarbonate as HCO3	354	mg/L		5		1 A2320 B	08/24/12 14:11/ch
INORGANIC PARAMETERS							
Chloride	25	mg/L		1		1 E300.0	08/22/12 03:06/tb
Fluoride	0.6	mg/L		0.1		1 E300.0	08/22/12 03:06/tb
Sulfate	2180	mg/L	D	50		50 E300.0	08/22/12 03:24/tb
DATA QUALITY PARAMETERS							
Anions	51.9	meq/L		1.00		1 A1030 E	09/25/12 16:22/lk
Cations	52.8	meq/L		1.00		1 A1030 E	09/25/12 16:22/lk
Conductivity, Calculated	4220	umhos/cm		1.00		1 A1030 E	09/25/12 16:22/lk
TDS Ratio	1.05			0.0100		1 A1030 E	09/25/12 16:22/lk
A/C Balance	0.802	%				1 A1030 E	09/25/12 16:22/lk
NUTRIENT PARAMETERS							
Nitrogen, Nitrate as N	0.2	mg/L		0.1		1 E300.0	08/22/12 03:06/tb
RADIONUCLIDES - DISSOLVED							
Gross Alpha	89.2	pCi/L				1 E900.0	09/01/12 16:36/eli-ca
Gross Alpha precision (±)	11.6	pCi/L				1 E900.0	09/01/12 16:36/eli-ca
Gross Alpha MDC	13.2	pCi/L				1 E900.0	09/01/12 16:36/eli-ca
Gross Beta	8.4	pCi/L	U			1 E900.0	09/01/12 16:36/eli-ca
Gross Beta precision (±)	10.9	pCi/L				1 E900.0	09/01/12 16:36/eli-ca
Gross Beta MDC	17.8	pCi/L				1 E900.0	09/01/12 16:36/eli-ca
Radium 228	0.9	pCi/L	U			1 RA-05	08/30/12 17:59/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1 RA-05	08/30/12 17:59/eli-ca
Radium 228 MDC	1.1	pCi/L				1 RA-05	08/30/12 17:59/eli-ca
Radium 226	0.2	pCi/L				1 E903.0	09/06/12 09:58/eli-c
Radium 226 precision (±)	0.1	pCi/L				1 E903.0	09/06/12 09:58/eli-c
Radium 226 MDC	0.1	pCi/L				1 E903.0	09/06/12 09:58/eli-c
RADIONUCLIDES - TOTAL							
Radon 222	1800	pCi/L				1 D5072-92	08/23/12 19:55/eli-c
Radon 222 precision (±)	155	pCi/L				1 D5072-92	08/23/12 19:55/eli-c

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 U - Not detected at 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 Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 12:38

Lab ID: R12080362-005

Date Received: 08/21/12

Client Sample ID: BC-1 Dup

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
RADIONUCLIDES - TOTAL								
Radon 222 MDC	221	pCi/L				1	D5072-92	08/23/12 19:55/eli-c
TOTAL METALS ANALYSES								
Mercury	ND	mg/L		0.0001		1	E245.1	08/24/12 15:01/eli-ca
DISSOLVED METALS ANALYSES								
Arsenic	ND	mg/L		0.001		2	E200.8	08/29/12 18:01/eli-c
Barium	ND	mg/L		0.05		2	E200.7	08/29/12 18:26/eli-ca
Boron	0.67	mg/L		0.05		2	E200.7	08/29/12 18:26/eli-ca
Cadmium	ND	mg/L		0.001		2	E200.8	08/29/12 18:01/eli-c
Chromium	ND	mg/L		0.005		2	E200.7	08/29/12 18:26/eli-ca
Copper	ND	mg/L		0.005		2	E200.7	08/29/12 18:26/eli-ca
Iron	0.04	mg/L		0.03		2	E200.7	08/29/12 18:26/eli-ca
Lead	ND	mg/L		0.001		2	E200.8	08/29/12 18:01/eli-c
Manganese	0.059	mg/L		0.001		2	E200.7	08/29/12 18:26/eli-ca
Molybdenum	0.005	mg/L		0.001		2	E200.8	08/29/12 18:01/eli-c
Nickel	ND	mg/L		0.005		2	E200.7	08/29/12 18:26/eli-ca
Selenium	0.001	mg/L		0.001		2	E200.8	08/29/12 18:01/eli-c
Silver	ND	mg/L		0.001		2	E200.8	08/31/12 14:55/eli-c
Uranium	0.0861	mg/L		0.0003		2	E200.8	08/29/12 18:01/eli-c
Vanadium	0.04	mg/L	D	0.02		2	E200.7	08/29/12 18:26/eli-ca
Zinc	ND	mg/L		0.01		2	E200.7	08/29/12 18:26/eli-ca
Calcium	515	mg/L		1		2	E200.7	08/29/12 18:26/eli-ca
Magnesium	231	mg/L		1		2	E200.7	08/29/12 18:26/eli-ca
Potassium	12	mg/L		1		2	E200.7	08/29/12 18:26/eli-ca
Sodium	179	mg/L		1		2	E200.8	08/29/12 18:01/eli-c

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 Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 13:41

Lab ID: R12080362-006

Date Received: 08/21/12

Client Sample ID: BC-2

Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By	
					QCL	DF			
PHYSICAL PARAMETERS									
Conductivity @ 25 C	3860	umhos/cm		5.0			1	A2510 B	08/21/12 17:36/tb
pH	7.11	su		0.01			1	A4500-H B	08/21/12 18:13/tb
Solids, Total Dissolved TDS @ 180 C	3900	mg/L		40			1	A2540 C	08/27/12 12:31/tb
Alkalinity, Total as CaCO3	234	mg/L		5			1	A2320 B	08/24/12 14:13/ch
Carbonate as CO3	ND	mg/L		5			1	A2320 B	08/24/12 14:13/ch
Bicarbonate as HCO3	285	mg/L		5			1	A2320 B	08/24/12 14:13/ch
INORGANIC PARAMETERS									
Chloride	21	mg/L		1			1	E300.0	08/22/12 03:42/tb
Fluoride	0.7	mg/L		0.1			1	E300.0	08/22/12 03:42/tb
Sulfate	2390	mg/L	D	50			50	E300.0	08/22/12 04:00/tb
DATA QUALITY PARAMETERS									
Anions	55.0	meq/L		1.00			1	A1030 E	09/25/12 16:23/lkl
Cations	55.3	meq/L		1.00			1	A1030 E	09/25/12 16:23/lkl
Conductivity, Calculated	4450	umhos/cm		1.00			1	A1030 E	09/25/12 16:23/lkl
TDS Ratio	1.10			0.0100			1	A1030 E	09/25/12 16:23/lkl
A/C Balance	0.209	%					1	A1030 E	09/25/12 16:23/lkl
NUTRIENT PARAMETERS									
Nitrogen, Nitrate as N	0.2	mg/L		0.1			1	E300.0	08/22/12 03:42/tb
RADIONUCLIDES - DISSOLVED									
Gross Alpha	3.5	pCi/L	U				1	E900.0	09/01/12 16:36/eli-ca
Gross Alpha precision (±)	9.7	pCi/L					1	E900.0	09/01/12 16:36/eli-ca
Gross Alpha MDC	16.1	pCi/L					1	E900.0	09/01/12 16:36/eli-ca
Gross Beta	0.5	pCi/L	U				1	E900.0	09/01/12 16:36/eli-ca
Gross Beta precision (±)	11.6	pCi/L					1	E900.0	09/01/12 16:36/eli-ca
Gross Beta MDC	19.5	pCi/L					1	E900.0	09/01/12 16:36/eli-ca
Radium 228	-0.1	pCi/L	U				1	RA-05	08/30/12 17:59/eli-ca
Radium 228 precision (±)	0.6	pCi/L					1	RA-05	08/30/12 17:59/eli-ca
Radium 228 MDC	1.1	pCi/L					1	RA-05	08/30/12 17:59/eli-ca
Radium 226	0.3	pCi/L					1	E903.0	09/06/12 09:58/eli-c
Radium 226 precision (±)	0.1	pCi/L					1	E903.0	09/06/12 09:58/eli-c
Radium 226 MDC	0.1	pCi/L					1	E903.0	09/06/12 09:58/eli-c
RADIONUCLIDES - TOTAL									
Radon 222	2460	pCi/L					1	D5072-92	08/23/12 19:55/eli-c
Radon 222 precision (±)	162	pCi/L					1	D5072-92	08/23/12 19:55/eli-c

Report Definitions:
 RL - Analyte reporting limit.
 QCL - Quality control limit.
 MDC - Minimum detectable concentration
 U - Not detected at 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 Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/20/12 13:41

Lab ID: R12080362-006

Date Received: 08/21/12

Client Sample ID: BC-2

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
RADIONUCLIDES - TOTAL							
Radon 222 MDC	219	pCi/L				1 D5072-92	08/23/12 19:55/eli-c
TOTAL METALS ANALYSES							
Mercury	ND	mg/L		0.0001		1 E245.1	08/24/12 15:02/eli-ca
DISSOLVED METALS ANALYSES							
Arsenic	ND	mg/L		0.001		2 E200.8	08/29/12 18:06/eli-c
Barium	ND	mg/L		0.05		2 E200.7	08/29/12 18:30/eli-ca
Boron	0.46	mg/L		0.05		2 E200.7	08/29/12 18:30/eli-ca
Cadmium	ND	mg/L		0.001		2 E200.8	08/29/12 18:06/eli-c
Chromium	ND	mg/L		0.005		2 E200.7	08/29/12 18:30/eli-ca
Copper	ND	mg/L		0.005		2 E200.7	08/29/12 18:30/eli-ca
Iron	ND	mg/L		0.03		2 E200.7	08/29/12 18:30/eli-ca
Lead	ND	mg/L		0.001		2 E200.8	08/29/12 18:06/eli-c
Manganese	0.045	mg/L		0.001		2 E200.7	08/29/12 18:30/eli-ca
Molybdenum	0.012	mg/L		0.001		2 E200.8	08/29/12 18:06/eli-c
Nickel	ND	mg/L		0.005		2 E200.7	08/29/12 18:30/eli-ca
Selenium	ND	mg/L		0.001		2 E200.8	08/29/12 18:06/eli-c
Silver	ND	mg/L		0.001		2 E200.8	08/31/12 14:59/eli-c
Uranium	0.0240	mg/L		0.0003		2 E200.8	08/29/12 18:06/eli-c
Vanadium	ND	mg/L		0.01		2 E200.8	08/29/12 18:06/eli-c
Zinc	ND	mg/L		0.01		2 E200.7	08/29/12 18:30/eli-ca
Calcium	516	mg/L		1		2 E200.7	08/29/12 18:30/eli-ca
Magnesium	218	mg/L		1		2 E200.7	08/29/12 18:30/eli-ca
Potassium	13	mg/L		1		2 E200.7	08/29/12 18:30/eli-ca
Sodium	258	mg/L		1		2 E200.8	08/29/12 18:06/eli-c

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

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

LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Collection Date: 08/21/12 09:05

Lab ID: R12080362-007

Date Received: 08/21/12

Client Sample ID: DC-1

Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By	
					QCL	DF			
PHYSICAL PARAMETERS									
Conductivity @ 25 C	5940	umhos/cm		5.0			1	A2510 B	08/21/12 17:38/tb
pH	7.25	su		0.01			1	A4500-H B	08/21/12 18:15/tb
Solids, Total Dissolved TDS @ 180 C	5700	mg/L		40			1	A2540 C	08/27/12 12:32/tb
Alkalinity, Total as CaCO3	366	mg/L		5			1	A2320 B	08/24/12 14:21/ch
Carbonate as CO3	ND	mg/L		5			1	A2320 B	08/24/12 14:21/ch
Bicarbonate as HCO3	446	mg/L		5			1	A2320 B	08/24/12 14:21/ch
INORGANIC PARAMETERS									
Chloride	73	mg/L		1			1	E300.0	08/22/12 04:18/tb
Fluoride	1.2	mg/L		0.1			1	E300.0	08/22/12 04:18/tb
Sulfate	3520	mg/L	D	50			50	E300.0	08/22/12 04:36/tb
DATA QUALITY PARAMETERS									
Anions	83.3	meq/L		1.00			1	A1030 E	09/25/12 16:23/lkl
Cations	90.2	meq/L		1.00			1	A1030 E	09/25/12 16:23/lkl
Conductivity, Calculated	6470	umhos/cm		1.00			1	A1030 E	09/25/12 16:23/lkl
TDS Ratio	1.02			0.0100			1	A1030 E	09/25/12 16:23/lkl
A/C Balance	4.00	%					1	A1030 E	09/25/12 16:23/lkl
NUTRIENT PARAMETERS									
Nitrogen, Nitrate as N	7.5	mg/L		0.1			1	E300.0	08/22/12 04:18/tb
RADIONUCLIDES - DISSOLVED									
Gross Alpha	13.3	pCi/L	U				1	E900.0	09/01/12 16:36/eli-ca
Gross Alpha precision (±)	17.7	pCi/L					1	E900.0	09/01/12 16:36/eli-ca
Gross Alpha MDC	28.8	pCi/L					1	E900.0	09/01/12 16:36/eli-ca
Gross Beta	-9	pCi/L	U				1	E900.0	09/01/12 16:36/eli-ca
Gross Beta precision (±)	25.2	pCi/L					1	E900.0	09/01/12 16:36/eli-ca
Gross Beta MDC	42.5	pCi/L					1	E900.0	09/01/12 16:36/eli-ca
Radium 228	0.3	pCi/L	U				1	RA-05	08/30/12 17:59/eli-ca
Radium 228 precision (±)	0.7	pCi/L					1	RA-05	08/30/12 17:59/eli-ca
Radium 228 MDC	1.1	pCi/L					1	RA-05	08/30/12 17:59/eli-ca
Radium 226	0.8	pCi/L					1	E903.0	09/06/12 09:58/eli-c
Radium 226 precision (±)	0.2	pCi/L					1	E903.0	09/06/12 09:58/eli-c
Radium 226 MDC	0.1	pCi/L					1	E903.0	09/06/12 09:58/eli-c
RADIONUCLIDES - TOTAL									
Radon 222	1440	pCi/L					1	D5072-92	08/23/12 19:55/eli-c
Radon 222 precision (±)	130	pCi/L					1	D5072-92	08/23/12 19:55/eli-c

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.
MDC - Minimum detectable concentration
U - Not detected at 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 Rapid City, SD Branch

Revised Date: 09/26/12

Report Date: 09/25/12

Collection Date: 08/21/12 09:05

Date Received: 08/21/12

Matrix: AQUEOUS

Client: Powertech USA Inc
Project: Alluvial Wells Dewey Burdock
Lab ID: R12080362-007
Client Sample ID: DC-1

Analyses	Result	Units	Qual	MCL/			Method	Analysis Date / By
				RL	QCL	DF		
RADIONUCLIDES - TOTAL								
Radon 222 MDC	187	pCi/L				1	D5072-92	08/23/12 19:55/eli-c
TOTAL METALS ANALYSES								
Mercury	ND	mg/L		0.0001		1	E245.1	08/24/12 15:03/eli-ca
DISSOLVED METALS ANALYSES								
Arsenic	ND	mg/L		0.001		5	E200.8	08/29/12 18:10/eli-c
Barium	ND	mg/L		0.05		5	E200.7	08/29/12 18:34/eli-ca
Boron	1.3	mg/L	D	0.1		5	E200.7	08/29/12 18:34/eli-ca
Cadmium	ND	mg/L		0.001		5	E200.8	08/29/12 18:10/eli-c
Chromium	ND	mg/L		0.005		5	E200.8	08/29/12 18:10/eli-c
Copper	ND	mg/L		0.005		5	E200.8	08/29/12 18:10/eli-c
Iron	ND	mg/L		0.03		5	E200.7	08/29/12 18:34/eli-ca
Lead	ND	mg/L		0.001		5	E200.8	08/29/12 18:10/eli-c
Manganese	0.330	mg/L		0.001		5	E200.8	08/29/12 18:10/eli-c
Molybdenum	0.003	mg/L		0.001		5	E200.8	08/29/12 18:10/eli-c
Nickel	0.032	mg/L		0.005		5	E200.8	08/29/12 18:10/eli-c
Selenium	0.032	mg/L		0.001		5	E200.8	08/29/12 18:10/eli-c
Silver	ND	mg/L		0.001		5	E200.8	08/31/12 15:03/eli-c
Uranium	0.0243	mg/L		0.0003		5	E200.8	08/29/12 18:10/eli-c
Vanadium	ND	mg/L		0.01		5	E200.8	08/29/12 18:10/eli-c
Zinc	0.05	mg/L		0.01		5	E200.8	08/29/12 18:10/eli-c
Calcium	438	mg/L		1		5	E200.7	08/29/12 18:34/eli-ca
Magnesium	353	mg/L		1		5	E200.7	08/29/12 18:34/eli-ca
Potassium	13	mg/L		1		5	E200.7	08/29/12 18:34/eli-ca
Sodium	896	mg/L		1		5	E200.8	08/29/12 18:10/eli-c

Report RL - Analyte reporting limit.
Definitions: 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.

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Work Order: R12080362

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B								Batch: 120824A-ALK-SEL-W		
Sample ID: LCS1_BatchId		Laboratory Control Sample			Run: PH_COND1-R_120824A			08/24/12 11:13		
Alkalinity, Total as CaCO3		936	mg/L	5.0	94	90	110			
Sample ID: MBLK1_BatchId		Method Blank			Run: PH_COND1-R_120824A			08/24/12 11:17		
Alkalinity, Total as CaCO3		ND	mg/L	2						
Sample ID: R12080362-003ADUP		3 Sample Duplicate			Run: PH_COND1-R_120824A			08/24/12 13:53		
Alkalinity, Total as CaCO3		252	mg/L	5.0				1.6	10	
Carbonate as CO3		ND	mg/L	5.0					10	
Bicarbonate as HCO3		307	mg/L	5.0				1.6	10	
Sample ID: R12080362-004AMS		Sample Matrix Spike			Run: PH_COND1-R_120824A			08/24/12 13:59		
Alkalinity, Total as CaCO3		414	mg/L	5.0	103	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Report Date: 09/25/12

Client: Powertech USA Inc

Project: Alluvial Wells Dewey Burdock

Work Order: R12080362

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2510 B								Batch: 120821_1_COND-PROBE-W		
Sample ID: MBLK-1_120821		Method Blank					Run: PH_COND2-R_120821A			08/21/12 13:00
Conductivity @ 25 C		ND	umhos/cm	5						
Sample ID: R12080362-001ADUP		Sample Duplicate					Run: PH_COND2-R_120821A			08/21/12 17:28
Conductivity @ 25 C		5700	umhos/cm	5.0				0.2	10	

Qualifiers:

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MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Report Date: 09/25/12

Client: Powertech USA Inc

Project: Alluvial Wells Dewey Burdock

Work Order: R12080362

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C Batch: TDS120823A										
Sample ID: MB-1_120823A		Method Blank								
Solids, Total Dissolved TDS @ 180 C		8	mg/L	3						08/23/12 16:27
Sample ID: LCS-2_120823A		Laboratory Control Sample								
Solids, Total Dissolved TDS @ 180 C		220	mg/L	10	106	90	110			08/23/12 16:30
Sample ID: R12080344-004A DUP		Sample Duplicate								
Solids, Total Dissolved TDS @ 180 C		220	mg/L	10				1.9	5	08/23/12 16:34
Sample ID: R12080344-005A MS		Sample Matrix Spike								
Solids, Total Dissolved TDS @ 180 C		350	mg/L	10	106	90	110			08/23/12 16:40
Method: A2540 C Batch: TDS120827A										
Sample ID: MB-1_120827A		Method Blank								
Solids, Total Dissolved TDS @ 180 C		10	mg/L	3						08/27/12 12:29
Sample ID: LCS-2_120827A		Laboratory Control Sample								
Solids, Total Dissolved TDS @ 180 C		230	mg/L	20	108	90	110			08/27/12 12:30
Sample ID: R12080362-005A DUP		Sample Duplicate								
Solids, Total Dissolved TDS @ 180 C		3600	mg/L	40				2.8	5	08/27/12 12:31
Sample ID: R12080362-006A MS		Sample Matrix Spike								
Solids, Total Dissolved TDS @ 180 C		4300	mg/L	40	101	90	110			08/27/12 12:32

Qualifiers:

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MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Report Date: 09/25/12

Client: Powertech USA Inc

Work Order: R12080362

Project: Alluvial Wells Dewey Burdock

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
Method: A4500-H B								Analytical Run: PH_COND2-R_120821B			
Sample ID: ICV-1_120821	Initial Calibration Verification Standard										
pH		7.42	su	0.010	100	98	102			08/21/12 17:57	
Method: A4500-H B								Batch: 120821_1_PH-W			
Sample ID: R12080362-001ADUP	Sample Duplicate										
pH		7.15	su	0.010				0.3	3	Run: PH_COND2-R_120821B 08/21/12 18:03	

Qualifiers:

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MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Report Date: 09/25/12

Work Order: R12080362

Client: Powertech USA Inc
Project: Alluvial Wells Dewey Burdock

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: D5072-92										Batch: C_R163788
Sample ID: C12080976-005ADUP	3	Sample Duplicate								Run: SUB-C163788 08/23/12 19:55
Radon 222		6300	pCi/L					2.4	20	
Radon 222 precision (±)		155	pCi/L							
Radon 222 MDC		149	pCi/L							
Sample ID: C12081036-001IDUP	3	Sample Duplicate								Run: SUB-C163788 08/24/12 17:29
Radon 222		1280	pCi/L					2.1	20	
Radon 222 precision (±)		108	pCi/L							
Radon 222 MDC		153	pCi/L							
Sample ID: MB-R163788	3	Method Blank								Run: SUB-C163788 08/23/12 19:55
Radon 222		60	pCi/L							U
Radon 222 precision (±)		70	pCi/L							
Radon 222 MDC		100	pCi/L							
Sample ID: LCS-R163788		Laboratory Control Sample								Run: SUB-C163788 08/23/12 19:55
Radon 222		471	pCi/L	81		80	120			

Qualifiers:

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MDC - Minimum detectable concentration

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U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Report Date: 09/25/12

Work Order: R12080362

Client: Powertech USA Inc
Project: Alluvial Wells Dewey Burdock

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
Method: E200.7		Analytical Run: SUB-C163960									
Sample ID: ICV	12	Initial Calibration Verification Standard							08/29/12 16:19		
Barium		0.98	mg/L	0.10	98	95	105				
Boron		1.0	mg/L	0.10	101	95	105				
Calcium		50	mg/L	0.50	99	95	105				
Chromium		0.98	mg/L	0.050	98	95	105				
Copper		0.99	mg/L	0.010	99	95	105				
Iron		5.0	mg/L	0.030	100	95	105				
Magnesium		50	mg/L	0.50	101	95	105				
Manganese		5.0	mg/L	0.010	99	95	105				
Nickel		0.99	mg/L	0.050	99	95	105				
Potassium		48	mg/L	2.7	96	95	105				
Vanadium		0.98	mg/L	0.10	98	95	105				
Zinc		1.0	mg/L	0.010	100	95	105				
Sample ID: ICSA	12	Interference Check Sample A							08/29/12 17:05		
Barium		-0.00070	mg/L	0.10							
Boron		-0.048	mg/L	0.10							
Calcium		500	mg/L	0.50	99	80	120				
Chromium		0.0078	mg/L	0.050							
Copper		0.0098	mg/L	0.010							
Iron		190	mg/L	0.030	95	80	120				
Magnesium		510	mg/L	0.50	103	80	120				
Manganese		-0.0031	mg/L	0.010							
Nickel		-0.0043	mg/L	0.050							
Potassium		-0.00070	mg/L	0.50							
Vanadium		0.036	mg/L	0.10							
Zinc		-0.0097	mg/L	0.010							
Sample ID: ICSAB	12	Interference Check Sample AB							08/29/12 17:09		
Barium		0.51	mg/L	0.10	102	80	120				
Boron		-0.016	mg/L	0.10							
Calcium		500	mg/L	0.50	100	80	120				
Chromium		0.50	mg/L	0.050	100	80	120				
Copper		0.54	mg/L	0.010	108	80	120				
Iron		190	mg/L	0.030	94	80	120				
Magnesium		510	mg/L	0.50	102	80	120				
Manganese		0.49	mg/L	0.010	99	80	120				
Nickel		0.96	mg/L	0.050	96	80	120				
Potassium		-0.00010	mg/L	0.50							
Vanadium		0.53	mg/L	0.10	106	80	120				
Zinc		1.0	mg/L	0.010	100	80	120				
Method: E200.7		Batch: C_R163960									
Sample ID: MB-120829A	12	Method Blank							Run: SUB-C163960 08/29/12 17:29		
Barium		ND	mg/L	0.0005							
Boron		ND	mg/L	0.02							

Qualifiers:

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QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Work Order: R12080362

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										
Batch: C_R163960										
Sample ID: MB-120829A	12	Method Blank								
										Run: SUB-C163960 08/29/12 17:29
Calcium		ND	mg/L	0.06						
Chromium		ND	mg/L	0.001						
Copper		ND	mg/L	0.002						
Iron		0.002	mg/L	0.001						
Magnesium		ND	mg/L	0.03						
Manganese		ND	mg/L	0.0002						
Nickel		ND	mg/L	0.002						
Potassium		ND	mg/L	0.06						
Vanadium		ND	mg/L	0.009						
Zinc		ND	mg/L	0.002						
Sample ID: LFB-120829A	12	Laboratory Fortified Blank								
										Run: SUB-C163960 08/29/12 17:33
Barium		0.94	mg/L	0.10	95	85	115			
Boron		0.94	mg/L	0.10	94	85	115			
Calcium		49	mg/L	0.50	98	85	115			
Chromium		0.96	mg/L	0.050	96	85	115			
Copper		0.96	mg/L	0.010	96	85	115			
Iron		0.97	mg/L	0.030	97	85	115			
Magnesium		49	mg/L	0.50	98	85	115			
Manganese		0.96	mg/L	0.010	96	85	115			
Nickel		0.98	mg/L	0.050	98	85	115			
Potassium		43	mg/L	0.50	87	85	115			
Vanadium		0.95	mg/L	0.10	95	85	115			
Zinc		0.99	mg/L	0.010	99	85	115			
Sample ID: Method Blank	12	Sample Matrix Spike								
										Run: SUB-C163960 08/29/12 18:42
Barium		0.932	mg/L	0.050	91	70	130			
Boron		0.921	mg/L	0.050	90	70	130			
Chromium		0.966	mg/L	0.0050	95	70	130			
Copper		0.950	mg/L	0.0050	93	70	130			
Iron		0.933	mg/L	0.030	92	70	130			
Manganese		0.970	mg/L	0.0010	95	70	130			
Nickel		0.974	mg/L	0.0050	96	70	130			
Vanadium		0.974	mg/L	0.010	91	70	130			
Zinc		1.01	mg/L	0.010	98	70	130			
Calcium		49.8	mg/L	1.0	98	70	130			
Magnesium		49.7	mg/L	1.0	97	70	130			
Potassium		44.0	mg/L	1.0	86	70	130			
Sample ID: Method Blank	12	Sample Matrix Spike Duplicate								
										Run: SUB-C163960 08/29/12 18:46
Barium		0.944	mg/L	0.050	93	70	130	1.2	20	
Boron		0.939	mg/L	0.050	92	70	130	2.0	20	
Chromium		0.970	mg/L	0.0050	95	70	130	0.4	20	
Copper		0.954	mg/L	0.0050	94	70	130	0.4	20	
Iron		0.939	mg/L	0.030	92	70	130	0.7	20	

Qualifiers:

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QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Report Date: 09/25/12

Client: Powertech USA Inc

Work Order: R12080362

Project: Alluvial Wells Dewey Burdock

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										
Batch: C_R163960										
Sample ID: Method Blank	12 Sample Matrix Spike Duplicate					Run: SUB-C163960			08/29/12 18:46	
Manganese		0.972	mg/L	0.0010	95	70	130	0.2	20	
Nickel		0.986	mg/L	0.0050	97	70	130	1.2	20	
Vanadium		0.985	mg/L	0.010	92	70	130	1.1	20	
Zinc		1.01	mg/L	0.010	98	70	130	0.6	20	
Calcium		49.7	mg/L	1.0	97	70	130	0.2	20	
Magnesium		49.8	mg/L	1.0	98	70	130	0.3	20	
Potassium		44.1	mg/L	1.0	86	70	130	0.1	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

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QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Report Date: 09/25/12

Client: Powertech USA Inc

Project: Alluvial Wells Dewey Burdock

Work Order: R12080362

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
Method: E200.8										Analytical Run: SUB-C163981	
Sample ID: ICV	13	Initial Calibration Verification Standard									08/29/12 11:57
Arsenic		0.0509	mg/L	0.0010	102	90	110				
Cadmium		0.0490	mg/L	0.0010	98	90	110				
Chromium		0.0485	mg/L	0.0010	97	90	110				
Copper		0.0494	mg/L	0.0010	99	90	110				
Lead		0.0495	mg/L	0.0010	99	90	110				
Manganese		0.0511	mg/L	0.0010	102	90	110				
Molybdenum		0.0480	mg/L	0.0010	96	90	110				
Nickel		0.0511	mg/L	0.0010	102	90	110				
Selenium		0.0525	mg/L	0.0010	105	90	110				
Sodium		9.88	mg/L	0.0043	99	90	110				
Uranium		0.0517	mg/L	0.00030	103	90	110				
Vanadium		0.0484	mg/L	0.0010	97	90	110				
Zinc		0.0517	mg/L	0.0010	103	90	110				
Method: E200.8										Batch: C_R163981	
Sample ID: LRB	13	Method Blank									08/29/12 12:32
Run: SUB-C163981											
Arsenic		ND	mg/L	5E-05							
Cadmium		ND	mg/L	3E-05							
Chromium		ND	mg/L	4E-05							
Copper		ND	mg/L	3E-05							
Lead		ND	mg/L	2E-05							
Manganese		ND	mg/L	3E-05							
Molybdenum		ND	mg/L	3E-05							
Nickel		ND	mg/L	9E-05							
Selenium		ND	mg/L	7E-05							
Sodium		ND	mg/L	0.004							
Uranium		9E-06	mg/L	9E-06							
Vanadium		ND	mg/L	4E-05							
Zinc		ND	mg/L	0.0002							
Sample ID: LFB	13	Laboratory Fortified Blank									08/29/12 12:36
Run: SUB-C163981											
Arsenic		0.0522	mg/L	0.0010	104	85	115				
Cadmium		0.0506	mg/L	0.0010	101	85	115				
Chromium		0.0502	mg/L	0.0010	100	85	115				
Copper		0.0503	mg/L	0.0010	101	85	115				
Lead		0.0513	mg/L	0.0010	103	85	115				
Manganese		0.0534	mg/L	0.0010	107	85	115				
Molybdenum		0.0492	mg/L	0.0010	99	85	115				
Nickel		0.0520	mg/L	0.0010	104	85	115				
Selenium		0.0527	mg/L	0.0010	105	85	115				
Sodium		12.8	mg/L	0.0043	103	85	115				
Uranium		0.0528	mg/L	0.00030	106	85	115				
Vanadium		0.0493	mg/L	0.0010	99	85	115				
Zinc		0.0543	mg/L	0.0010	109	85	115				

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Report Date: 09/25/12

Client: Powertech USA Inc

Project: Alluvial Wells Dewey Burdock

Work Order: R12080362

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8 Batch: C_R163981										
Sample ID: R12080362-007B	13 Post Digestion Spike			Run: SUB-C163981			08/29/12 18:15			
Arsenic		0.267	mg/L	0.0010	107	70	130			
Cadmium		0.241	mg/L	0.0010	96	70	130			
Chromium		0.262	mg/L	0.0050	105	70	130			
Copper		0.246	mg/L	0.0050	97	70	130			
Lead		0.264	mg/L	0.0010	105	70	130			
Manganese		0.571	mg/L	0.0010	96	70	130			
Molybdenum		0.266	mg/L	0.0010	105	70	130			
Nickel		0.282	mg/L	0.0050	100	70	130			
Selenium		0.292	mg/L	0.0010	104	70	130			
Uranium		0.308	mg/L	0.00030	113	70	130			
Vanadium		0.250	mg/L	0.010	100	70	130			
Zinc		0.281	mg/L	0.010	92	70	130			
Sodium		908	mg/L	1.0		70	130			A
Sample ID: R12080362-007B Run: SUB-C163981 08/29/12 18:37										
Arsenic		0.263	mg/L	0.0010	105	70	130	1.7	20	
Cadmium		0.241	mg/L	0.0010	96	70	130	0.0	20	
Chromium		0.259	mg/L	0.0050	104	70	130	1.1	20	
Copper		0.245	mg/L	0.0050	97	70	130	0.7	20	
Lead		0.265	mg/L	0.0010	106	70	130	0.5	20	
Manganese		0.578	mg/L	0.0010	99	70	130	1.1	20	
Molybdenum		0.269	mg/L	0.0010	107	70	130	1.2	20	
Nickel		0.281	mg/L	0.0050	99	70	130	0.5	20	
Selenium		0.292	mg/L	0.0010	104	70	130	0.1	20	
Uranium		0.311	mg/L	0.00030	115	70	130	1.0	20	
Vanadium		0.251	mg/L	0.010	100	70	130	0.3	20	
Zinc		0.277	mg/L	0.010	90	70	130	1.4	20	
Sodium		926	mg/L	1.0		70	130	2.0	20	A
Method: E200.8 Analytical Run: SUB-C164066										
Sample ID: ICV	Initial Calibration Verification Standard						08/30/12 13:34			
Silver		0.0201	mg/L	0.0010	101	90	110			
Method: E200.8 Batch: C_R164066										
Sample ID: LRB	Method Blank			Run: SUB-C164066			08/30/12 14:09			
Silver		ND	mg/L	6E-05						
Sample ID: LFB	Laboratory Fortified Blank			Run: SUB-C164066			08/30/12 14:13			
Silver		0.0186	mg/L	0.0010	93	85	115			
Sample ID: C12080415-002DMS4	Post Digestion Spike			Run: SUB-C164066			08/30/12 20:03			
Silver		0.0354	mg/L	0.0010	89	70	130			
Sample ID: C12080415-002DMSD4	Post Digestion Spike Duplicate			Run: SUB-C164066			08/30/12 20:08			
Silver		0.0386	mg/L	0.0010	97	70	130	8.7	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Report Date: 09/25/12

Client: Powertech USA Inc

Project: Alluvial Wells Dewey Burdock

Work Order: R12080362

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E245.1										
Analytical Run: SUB-C163748										
Sample ID: ICV	Initial Calibration Verification Standard									
Mercury		0.0049	mg/L	0.00010	99	90	110			08/24/12 14:37
Sample ID: CCV1	Continuing Calibration Verification Standard									
Mercury		0.0051	mg/L	0.00010	102	95	105			08/24/12 14:40
Method: E245.1										
Batch: C_34803										
Sample ID: MB-34803	Method Blank									
Mercury		ND	mg/L	3E-05						Run: SUB-C163748 08/24/12 14:42
Sample ID: LCS-34803	Laboratory Control Sample									
Mercury		0.0050	mg/L	0.00010	100	85	115			Run: SUB-C163748 08/24/12 14:44
Sample ID: R12080362-001C	Sample Matrix Spike									
Mercury		0.0047	mg/L	0.00010	95	70	130			Run: SUB-C163748 08/24/12 14:51
Sample ID: R12080362-001C	Sample Matrix Spike Duplicate									
Mercury		0.0047	mg/L	0.00010	93	70	130	1.7	10	Run: SUB-C163748 08/24/12 14:53

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

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Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Work Order: R12080362

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0										
Analytical Run: DIONEX_120821A										
Sample ID: CCV082112-40	4	Continuing Calibration Verification Standard								08/21/12 21:26
Chloride		73.2	mg/L	1.0	98	90	110			
Fluoride		7.39	mg/L	0.10	99	90	110			
Nitrogen, Nitrate as N		7.12	mg/L	0.10	95	90	110			
Sulfate		71.1	mg/L	1.0	95	90	110			
Sample ID: CCV082112-57	4	Continuing Calibration Verification Standard								08/22/12 01:36
Chloride		73.1	mg/L	1.0	98	90	110			
Fluoride		7.45	mg/L	0.10	99	90	110			
Nitrogen, Nitrate as N		7.14	mg/L	0.10	95	90	110			
Sulfate		71.2	mg/L	1.0	95	90	110			
Method: E300.0										
Batch: R57749										
Sample ID: LFB082112-14	4	Laboratory Fortified Blank								08/21/12 13:22
Run: DIONEX_120821A										
Chloride		38.7	mg/L	1.0	97	90	110			
Fluoride		3.94	mg/L	0.10	99	90	110			
Nitrogen, Nitrate as N		3.80	mg/L	0.10	95	90	110			
Sulfate		37.7	mg/L	1.0	94	90	110			
Sample ID: R12080367-002CMS	4	Sample Matrix Spike								08/21/12 22:19
Run: DIONEX_120821A										
Chloride		44.7	mg/L	1.0	97	90	110			
Fluoride		4.52	mg/L	0.10	96	90	110			
Nitrogen, Nitrate as N		4.02	mg/L	0.10	92	90	110			
Sulfate		63.0	mg/L	1.0	100	90	110			
Sample ID: R12080367-002CMSD	4	Sample Matrix Spike Duplicate								08/21/12 22:37
Run: DIONEX_120821A										
Chloride		44.8	mg/L	1.0	97	90	110	0.3	10	
Fluoride		4.52	mg/L	0.10	96	90	110	0.0	10	
Nitrogen, Nitrate as N		4.05	mg/L	0.10	93	90	110	0.9	10	
Sulfate		62.6	mg/L	1.0	99	90	110	0.5	10	
Sample ID: R12080362-004AMS	4	Sample Matrix Spike								08/22/12 02:30
Run: DIONEX_120821A										
Chloride		1980	mg/L	50	92	90	110			
Fluoride		201	mg/L	5.0	97	90	110			
Nitrogen, Nitrate as N		192	mg/L	5.0	96	90	110			
Sulfate		4250	mg/L	50	104	90	110			
Sample ID: R12080362-004AMSD	4	Sample Matrix Spike Duplicate								08/22/12 02:48
Run: DIONEX_120821A										
Chloride		1980	mg/L	50	92	90	110	0.1	10	
Fluoride		201	mg/L	5.0	97	90	110	0.1	10	
Nitrogen, Nitrate as N		192	mg/L	5.0	96	90	110	0.1	10	
Sulfate		4230	mg/L	50	103	90	110	0.5	10	
Sample ID: R12080307-008AMS	4	Sample Matrix Spike								08/22/12 06:41
Run: DIONEX_120821A										
Chloride		4440	mg/L	100	97	90	110			
Fluoride		408	mg/L	10	98	90	110			
Nitrogen, Nitrate as N		389	mg/L	10	97	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

QA/QC Summary Report

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Work Order: R12080362

Project: Alluvial Wells Dewey Burdock

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0										
Batch: R57749										
Sample ID: R12080307-008AMS	4	Sample Matrix Spike								
Run: DIONEX_120821A										
Sulfate		8320	mg/L	100	106	90	110			08/22/12 06:41
Sample ID: R12080307-008AMSD										
Run: DIONEX_120821A										
08/22/12 06:59										
Chloride		4460	mg/L	100	97	90	110	0.4	10	
Fluoride		408	mg/L	10	98	90	110	0.2	10	
Nitrogen, Nitrate as N		392	mg/L	10	98	90	110	0.7	10	
Sulfate		8320	mg/L	100	106	90	110	0.0	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

QA/QC Summary Report

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Revised Date: 09/26/12

Report Date: 09/25/12

Client: Powertech USA Inc

Work Order: R12080362

Project: Alluvial Wells Dewey Burdock

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.0										
Batch: C_GrAB-1346										
Sample ID: Th230-GrAB-1346	Laboratory Control Sample			Run: SUB-C164157			09/01/12 16:36			
Gross Alpha	233		pCi/L	114	80	120				
Sample ID: Cs137-GrAB-1346	Laboratory Control Sample			Run: SUB-C164157			09/01/12 16:36			
Gross Beta	173		pCi/L	94	80	120				
Sample ID: MB-GrAB-1346	6 Method Blank			Run: SUB-C164157			09/01/12 16:36			
Gross Alpha	-2		pCi/L							U
Gross Alpha precision (±)	0.6		pCi/L							
Gross Alpha MDC	1		pCi/L							
Gross Beta	-0.3		pCi/L							U
Gross Beta precision (±)	1		pCi/L							
Gross Beta MDC	2		pCi/L							
Sample ID: R12080362-005E	Sample Matrix Spike			Run: SUB-C164157			09/01/12 16:36			
Gross Alpha	990		pCi/L	66	70	130				S
- Spike response is outside of the acceptance range for this analysis. Since the LCS and the RPD for the MS MSD pair are acceptable, the response is considered to be matrix related. The batch is approved.										
Sample ID: R12080362-005E	Sample Matrix Spike Duplicate			Run: SUB-C164157			09/01/12 16:36			
Gross Alpha	870		pCi/L	58	70	130	12	16.3		S
- Spike response is outside of the acceptance range for this analysis. Since the LCS and the RPD for the MS MSD pair are acceptable, the response is considered to be matrix related. The batch is approved.										
Sample ID: R12080362-005E	Sample Matrix Spike			Run: SUB-C164157			09/01/12 16:36			
Gross Beta	1200		pCi/L	97	70	130				
Sample ID: R12080362-005E	Sample Matrix Spike Duplicate			Run: SUB-C164157			09/01/12 16:36			
Gross Beta	1100		pCi/L	91	70	130	6.3	14.1		
Sample ID: R12080362-007E	6 Sample Duplicate			Run: SUB-C164157			09/01/12 16:36			
Gross Alpha	12		pCi/L				10	290.3		U
Gross Alpha precision (±)	18		pCi/L							
Gross Alpha MDC	29		pCi/L							
Gross Beta	-20		pCi/L				79	329.4		U
Gross Beta precision (±)	25		pCi/L							
Gross Beta MDC	43		pCi/L							

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

S - Spike recovery outside of advisory limits.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

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Revised Date: 09/26/12

Report Date: 09/25/12

Client: Powertech USA Inc

Project: Alluvial Wells Dewey Burdock

Work Order: R12080362

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										
Batch: C_RA226-6196										
Sample ID: R12080362-002E	3	Sample Duplicate					Run: SUB-C164202			09/06/12 09:58
Radium 226		0.25	pCi/L					2.5	112.1	
Radium 226 precision (±)		0.12	pCi/L							
Radium 226 MDC		0.14	pCi/L							
Sample ID: R12080362-004E		Sample Matrix Spike					Run: SUB-C164202			09/06/12 09:58
Radium 226		11	pCi/L	84		70	130			
Sample ID: MB-RA226-6196	3	Method Blank					Run: SUB-C164202			09/06/12 11:51
Radium 226		0.06	pCi/L							U
Radium 226 precision (±)		0.10	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Sample ID: LCS-RA226-6196		Laboratory Control Sample					Run: SUB-C164202			09/06/12 11:51
Radium 226		6.0	pCi/L	94		80	120			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 09/26/12

Client: Powertech USA Inc

Report Date: 09/25/12

Project: Alluvial Wells Dewey Burdock

Work Order: R12080362

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05								Batch: C_RA228-4208		
Sample ID: LCS-228-RA226-6196	Laboratory Control Sample			Run: SUB-C164019			08/30/12 17:59			
Radium 228		4.5	pCi/L	106		80	120			
Sample ID: MB-RA226-6196	3	Method Blank		Run: SUB-C164019			08/30/12 17:59			
Radium 228		-0.5	pCi/L							U
Radium 228 precision (±)		0.7	pCi/L							
Radium 228 MDC		1	pCi/L							
Sample ID: R12080362-002E	3	Sample Duplicate		Run: SUB-C164019			08/30/12 17:59			
Radium 228		0.2	pCi/L					120	1102.4	U
Radium 228 precision (±)		0.7	pCi/L							
Radium 228 MDC		1.2	pCi/L							
Sample ID: R12080362-007E		Sample Matrix Spike		Run: SUB-C164019			08/30/12 17:59			
Radium 228		10.2	pCi/L	105		70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

