

ANALYTICAL SUMMARY REPORT

October 11, 2012

Powertech USA Inc
PO Box 812
Edgemont, SD 57735

Workorder No.: R12070405 Quote ID: R411 - Alluvial Wells Dewey Burdock
Project Name: Alluvial Wells/Dewey Burdock

Energy Laboratories Inc. Rapid City SD received the following 7 samples for Powertech USA Inc on 7/24/2012 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R12070405-001	BC-3	07/23/12 11:47	07/24/12	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
R12070405-002	BC-3 Dup	07/23/12 11:55	07/24/12	Aqueous	Same As Above
R12070405-003	BC-1	07/23/12 13:33	07/24/12	Aqueous	Same As Above
R12070405-004	BC-2	07/23/12 14:34	07/24/12	Aqueous	Same As Above
R12070405-005	DC-2	07/23/12 16:30	07/24/12	Aqueous	Same As Above
R12070405-006	DC-1	07/24/12 08:00	07/24/12	Aqueous	Same As Above
R12070405-007	DC-4	07/24/12 09:07	07/24/12	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:

Linda K. Larson
Branch Manager

Digitally signed by
Linda Larson
Date: 2012.10.11 12:12:49 -06:00

CLIENT: Powertech USA Inc
Project: Alluvial Wells/Dewey Burdock
Sample Delivery Group: R12070405

Revised Date: 10/11/12

Report Date: 08/29/12

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.

Comments imported for SUBBED Workorder: C12070940

GROSS ALPHABETA ANALYSIS

The solid residue for this sample was outside of SOP recommended limits, but is still within the calibration curve.

End of comments imported for SUBBED Workorder: C12070940

The chloride for the BC-2 was rechecked for verification of result. The recheck value is reported. The recheck was run out of hold.

LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/23/12 11:47

Lab ID: R12070405-001

Date Received: 07/24/12

Client Sample ID: BC-3

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
PHYSICAL PARAMETERS							
Conductivity @ 25 C	2870	umhos/cm		5.0		1	A2510 B 07/24/12 17:48/tb
pH	7.15	su		0.01		1	A4500-H B 07/24/12 17:13/tb
Solids, Total Dissolved TDS @ 180 C	3200	mg/L		10		1	A2540 C 07/27/12 15:39/jmh
Alkalinity, Total as CaCO3	254	mg/L		5		1	A2320 B 07/25/12 15:37/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B 07/25/12 15:37/ch
Bicarbonate as HCO3	310	mg/L		5		1	A2320 B 07/25/12 15:37/ch
INORGANIC PARAMETERS							
Chloride	20	mg/L			1	1	E300.0 07/25/12 01:10/jmh
Fluoride	0.6	mg/L		0.1		1	E300.0 07/25/12 01:10/jmh
Sulfate	2010	mg/L	D	50		50	E300.0 07/27/12 09:31/tb
DATA QUALITY PARAMETERS							
Anions	47.6	meq/L		1.00		1	A1030 E 08/28/12 13:27/lkl
Cations	46.8	meq/L		1.00		1	A1030 E 08/28/12 13:27/lkl
Conductivity, Calculated	3890	umhos/cm		1.00		1	A1030 E 08/28/12 13:27/lkl
TDS Ratio	1.03			0.0100		1	A1030 E 08/28/12 13:27/lkl
A/C Balance	-0.896	%				1	A1030 E 08/28/12 13:27/lkl
NUTRIENT PARAMETERS							
Nitrogen, Nitrate as N	0.3	mg/L		0.1		1	E300.0 07/25/12 01:10/jmh
RADIONUCLIDES - DISSOLVED							
Gross Alpha	29.9	pCi/L				1	E900.0 07/31/12 17:20/eli-ca
Gross Alpha precision (±)	7.0	pCi/L				1	E900.0 07/31/12 17:20/eli-ca
Gross Alpha MDC	9.5	pCi/L				1	E900.0 07/31/12 17:20/eli-ca
Gross Beta	4.7	pCi/L	U			1	E900.0 07/31/12 17:20/eli-ca
Gross Beta precision (±)	5.6	pCi/L				1	E900.0 07/31/12 17:20/eli-ca
Gross Beta MDC	9.2	pCi/L				1	E900.0 07/31/12 17:20/eli-ca
Radium 228	-0.1	pCi/L	U			1	RA-05 08/03/12 18:15/eli-ca
Radium 228 precision (±)	0.6	pCi/L				1	RA-05 08/03/12 18:15/eli-ca
Radium 228 MDC	1	pCi/L				1	RA-05 08/03/12 18:15/eli-ca
Radium 226	0.08	pCi/L	U			1	E903.0 08/08/12 07:35/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0 08/08/12 07:35/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0 08/08/12 07:35/eli-ca
- See Case Narrative regarding Gross AlphaBeta analysis.							
RADIONUCLIDES - TOTAL							
Radon 222	1700	pCi/L				1	D5072-92 07/27/12 10:38/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.



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Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Collection Date: 07/23/12 11:47

Date Received: 07/24/12

Matrix: AQUEOUS

Client: Powertech USA Inc

Project: Alluvial Wells/Dewey Burdock

Lab ID: R12070405-001

Client Sample ID: BC-3

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
RADIONUCLIDES - TOTAL								
Radon 222 precision (±)	169	pCi/L				1	D5072-92	07/27/12 10:38/eli-c
Radon 222 MDC	245	pCi/L				1	D5072-92	07/27/12 10:38/eli-c
TOTAL METALS ANALYSES								
Mercury	ND	mg/L		0.0001		1	E245.1	07/27/12 14:23/eli-c
DISSOLVED METALS ANALYSES								
Arsenic	ND	mg/L		0.001		2	E200.8	08/04/12 02:46/eli-c
Barium	ND	mg/L		0.05		2	E200.8	08/04/12 02:46/eli-c
Boron	0.44	mg/L		0.05		2	E200.7	08/09/12 13:58/eli-ca
Cadmium	ND	mg/L		0.001		2	E200.8	08/04/12 02:46/eli-c
Chromium	ND	mg/L		0.005		2	E200.8	08/04/12 02:46/eli-c
Copper	ND	mg/L		0.005		2	E200.8	08/04/12 02:46/eli-c
Iron	0.05	mg/L		0.03		2	E200.8	08/04/12 02:46/eli-c
Lead	ND	mg/L		0.001		2	E200.8	08/04/12 02:46/eli-c
Manganese	0.498	mg/L		0.001		2	E200.8	08/04/12 02:46/eli-c
Molybdenum	0.006	mg/L		0.001		2	E200.8	08/04/12 02:46/eli-c
Nickel	ND	mg/L		0.005		2	E200.8	08/04/12 02:46/eli-c
Selenium	0.002	mg/L		0.001		2	E200.8	08/04/12 02:46/eli-c
Silver	ND	mg/L		0.001		2	E200.8	08/04/12 02:46/eli-c
Uranium	0.0208	mg/L		0.0003		2	E200.8	08/04/12 02:46/eli-c
Vanadium	ND	mg/L		0.01		2	E200.8	08/04/12 02:46/eli-c
Zinc	0.02	mg/L		0.01		2	E200.8	08/04/12 02:46/eli-c
Calcium	532	mg/L		1		2	E200.7	08/09/12 13:58/eli-ca
Magnesium	150	mg/L		1		2	E200.7	08/09/12 13:58/eli-ca
Potassium	11	mg/L		1		2	E200.7	08/09/12 13:58/eli-ca
Sodium	174	mg/L		1		2	E200.7	08/09/12 13:58/eli-ca

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

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Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/23/12 11:55

Lab ID: R12070405-002

Date Received: 07/24/12

Client Sample ID: BC-3 Dup

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
PHYSICAL PARAMETERS							
Conductivity @ 25 C	2860	umhos/cm		5.0		1	A2510 B 07/24/12 17:50/tb
pH	7.09	su		0.01		1	A4500-H B 07/24/12 17:15/tb
Solids, Total Dissolved TDS @ 180 C	3200	mg/L		10		1	A2540 C 07/27/12 15:40/jmh
Alkalinity, Total as CaCO3	256	mg/L		5		1	A2320 B 07/25/12 15:45/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B 07/25/12 15:45/ch
Bicarbonate as HCO3	312	mg/L		5		1	A2320 B 07/25/12 15:45/ch
INORGANIC PARAMETERS							
Chloride	20	mg/L		1		1	E300.0 07/25/12 01:28/jmh
Fluoride	0.6	mg/L		0.1		1	E300.0 07/25/12 01:28/jmh
Sulfate	2020	mg/L	D	50		50	E300.0 07/27/12 09:49/tb
DATA QUALITY PARAMETERS							
Anions	47.8	meq/L		1.00		1	A1030 E 08/28/12 13:41/lkl
Cations	45.8	meq/L		1.00		1	A1030 E 08/28/12 13:41/lkl
Conductivity, Calculated	3870	umhos/cm		1.00		1	A1030 E 08/28/12 13:41/lkl
TDS Ratio	1.03			0.0100		1	A1030 E 08/28/12 13:41/lkl
A/C Balance	-2.13	%				1	A1030 E 08/28/12 13:41/lkl
NUTRIENT PARAMETERS							
Nitrogen, Nitrate as N	0.3	mg/L		0.1		1	E300.0 07/25/12 01:28/jmh
RADIONUCLIDES - DISSOLVED							
Gross Alpha	23.4	pCi/L				1	E900.0 07/31/12 17:20/eli-ca
Gross Alpha precision (±)	5.5	pCi/L				1	E900.0 07/31/12 17:20/eli-ca
Gross Alpha MDC	7.2	pCi/L				1	E900.0 07/31/12 17:20/eli-ca
Gross Beta	7.1	pCi/L	U			1	E900.0 07/31/12 17:20/eli-ca
Gross Beta precision (±)	5.3	pCi/L				1	E900.0 07/31/12 17:20/eli-ca
Gross Beta MDC	8.6	pCi/L				1	E900.0 07/31/12 17:20/eli-ca
Radium 228	0.4	pCi/L	U			1	RA-05 08/03/12 18:15/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05 08/03/12 18:15/eli-ca
Radium 228 MDC	1.1	pCi/L				1	RA-05 08/03/12 18:15/eli-ca
Radium 226	0.06	pCi/L	U			1	E903.0 08/08/12 07:35/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0 08/08/12 07:35/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0 08/08/12 07:35/eli-ca
RADIONUCLIDES - TOTAL							
Radon 222	1640	pCi/L				1	D5072-92 07/27/12 10:38/eli-c
Radon 222 precision (±)	168	pCi/L				1	D5072-92 07/27/12 10:38/eli-c

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Matrix: AQUEOUS

Client: Powertech USA Inc

Project: Alluvial Wells/Dewey Burdock

Lab ID: R12070405-002

Client Sample ID: BC-3 Dup

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
RADIONUCLIDES - TOTAL								
Radon 222 MDC	245	pCi/L				1	D5072-92	07/27/12 10:38/eli-c
TOTAL METALS ANALYSES								
Mercury	ND	mg/L		0.0001		1	E245.1	07/27/12 14:27/eli-c
DISSOLVED METALS ANALYSES								
Arsenic	ND	mg/L		0.001		2	E200.8	08/04/12 03:09/eli-c
Barium	ND	mg/L		0.05		2	E200.8	08/04/12 03:09/eli-c
Boron	0.44	mg/L		0.05		2	E200.7	08/09/12 14:02/eli-ca
Cadmium	ND	mg/L		0.001		2	E200.8	08/04/12 03:09/eli-c
Chromium	ND	mg/L		0.005		2	E200.8	08/04/12 03:09/eli-c
Copper	ND	mg/L		0.005		2	E200.8	08/04/12 03:09/eli-c
Iron	0.05	mg/L		0.03		2	E200.8	08/04/12 03:09/eli-c
Lead	ND	mg/L		0.001		2	E200.8	08/04/12 03:09/eli-c
Manganese	0.494	mg/L		0.001		2	E200.8	08/04/12 03:09/eli-c
Molybdenum	0.006	mg/L		0.001		2	E200.8	08/04/12 03:09/eli-c
Nickel	ND	mg/L		0.005		2	E200.8	08/04/12 03:09/eli-c
Selenium	0.002	mg/L		0.001		2	E200.8	08/04/12 03:09/eli-c
Silver	ND	mg/L		0.001		2	E200.8	08/04/12 03:09/eli-c
Uranium	0.0208	mg/L		0.0003		2	E200.8	08/04/12 03:09/eli-c
Vanadium	ND	mg/L		0.01		2	E200.8	08/04/12 03:09/eli-c
Zinc	0.02	mg/L		0.01		2	E200.8	08/04/12 03:09/eli-c
Calcium	518	mg/L		1		2	E200.7	08/09/12 14:02/eli-ca
Magnesium	147	mg/L		1		2	E200.7	08/09/12 14:02/eli-ca
Potassium	11	mg/L		1		2	E200.7	08/09/12 14:02/eli-ca
Sodium	175	mg/L		1		2	E200.7	08/09/12 14:02/eli-ca

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Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/23/12 13:33

Lab ID: R12070405-003

Date Received: 07/24/12

Client Sample ID: BC-1

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
PHYSICAL PARAMETERS							
Conductivity @ 25 C	3200	umhos/cm		5.0		1	A2510 B 07/24/12 17:51/tb
pH	7.08	su		0.01		1	A4500-H B 07/24/12 17:17/tb
Solids, Total Dissolved TDS @ 180 C	3600	mg/L		10		1	A2540 C 07/27/12 15:40/jmh
Alkalinity, Total as CaCO3	288	mg/L		5		1	A2320 B 07/25/12 15:49/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B 07/25/12 15:49/ch
Bicarbonate as HCO3	351	mg/L		5		1	A2320 B 07/25/12 15:49/ch
INORGANIC PARAMETERS							
Chloride	28	mg/L			1	1	E300.0 07/25/12 01:46/jmh
Fluoride	0.6	mg/L		0.1		1	E300.0 07/25/12 01:46/jmh
Sulfate	2360	mg/L	D	50		50	E300.0 07/27/12 10:07/tb
DATA QUALITY PARAMETERS							
Anions	55.8	meq/L		1.00		1	A1030 E 08/28/12 14:13/lkl
Cations	54.4	meq/L		1.00		1	A1030 E 08/28/12 14:13/lkl
Conductivity, Calculated	4430	umhos/cm		1.00		1	A1030 E 08/28/12 14:13/lkl
TDS Ratio	1.03			0.0100		1	A1030 E 08/28/12 14:13/lkl
A/C Balance	-1.26	%				1	A1030 E 08/28/12 14:13/lkl
NUTRIENT PARAMETERS							
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0 07/25/12 01:46/jmh
RADIONUCLIDES - DISSOLVED							
Gross Alpha	65.9	pCi/L				1	E900.0 07/31/12 17:20/eli-ca
Gross Alpha precision (±)	9.1	pCi/L				1	E900.0 07/31/12 17:20/eli-ca
Gross Alpha MDC	10.5	pCi/L				1	E900.0 07/31/12 17:20/eli-ca
Gross Beta	4.4	pCi/L	U			1	E900.0 07/31/12 17:20/eli-ca
Gross Beta precision (±)	6.2	pCi/L				1	E900.0 07/31/12 17:20/eli-ca
Gross Beta MDC	10.2	pCi/L				1	E900.0 07/31/12 17:20/eli-ca
Radium 228	0.5	pCi/L	U			1	RA-05 08/03/12 18:15/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05 08/03/12 18:15/eli-ca
Radium 228 MDC	1.1	pCi/L				1	RA-05 08/03/12 18:15/eli-ca
Radium 226	0.4	pCi/L				1	E903.0 08/08/12 07:35/eli-ca
Radium 226 precision (±)	0.2	pCi/L				1	E903.0 08/08/12 07:35/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0 08/08/12 07:35/eli-ca
- See Case Narrative regarding Gross AlphaBeta analysis.							
RADIONUCLIDES - TOTAL							
Radon 222	1870	pCi/L				1	D5072-92 07/27/12 10:38/eli-c

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Lab ID: R12070405-003

Date Received: 07/24/12

Client Sample ID: BC-1

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
RADIONUCLIDES - TOTAL								
Radon 222 precision (±)	169	pCi/L				1	D5072-92	07/27/12 10:38/eli-c
Radon 222 MDC	242	pCi/L				1	D5072-92	07/27/12 10:38/eli-c
TOTAL METALS ANALYSES								
Mercury	ND	mg/L		0.0001		1	E245.1	07/27/12 14:31/eli-c
DISSOLVED METALS ANALYSES								
Arsenic	ND	mg/L		0.001		2	E200.8	08/04/12 03:14/eli-c
Barium	ND	mg/L		0.05		2	E200.8	08/04/12 03:14/eli-c
Boron	0.65	mg/L		0.05		2	E200.7	08/09/12 14:06/eli-ca
Cadmium	ND	mg/L		0.001		2	E200.8	08/04/12 03:14/eli-c
Chromium	ND	mg/L		0.005		2	E200.8	08/04/12 03:14/eli-c
Copper	ND	mg/L		0.005		2	E200.8	08/04/12 03:14/eli-c
Iron	0.06	mg/L		0.03		2	E200.8	08/04/12 03:14/eli-c
Lead	ND	mg/L		0.001		2	E200.8	08/04/12 03:14/eli-c
Manganese	0.110	mg/L		0.001		2	E200.8	08/04/12 03:14/eli-c
Molybdenum	0.005	mg/L		0.001		2	E200.8	08/04/12 03:14/eli-c
Nickel	ND	mg/L		0.005		2	E200.8	08/04/12 03:14/eli-c
Selenium	0.001	mg/L		0.001		2	E200.8	08/04/12 03:14/eli-c
Silver	ND	mg/L		0.001		2	E200.8	08/04/12 03:14/eli-c
Uranium	0.0757	mg/L		0.0003		2	E200.8	08/04/12 03:14/eli-c
Vanadium	ND	mg/L		0.01		2	E200.8	08/04/12 03:14/eli-c
Zinc	ND	mg/L		0.01		2	E200.8	08/04/12 03:14/eli-c
Calcium	515	mg/L		1		2	E200.7	08/09/12 14:06/eli-ca
Magnesium	236	mg/L		1		2	E200.7	08/09/12 14:06/eli-ca
Potassium	13	mg/L		1		2	E200.7	08/09/12 14:06/eli-ca
Sodium	206	mg/L		1		2	E200.7	08/09/12 14:06/eli-ca

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.

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Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/23/12 14:34

Lab ID: R12070405-004

Date Received: 07/24/12

Client Sample ID: BC-2

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
PHYSICAL PARAMETERS							
Conductivity @ 25 C	3430	umhos/cm		5.0		1	A2510 B 07/24/12 17:53/tb
pH	7.07	su		0.01		1	A4500-H B 07/24/12 17:19/tb
Solids, Total Dissolved TDS @ 180 C	3800	mg/L		10		1	A2540 C 07/27/12 15:41/jmh
Alkalinity, Total as CaCO3	230	mg/L		5		1	A2320 B 07/25/12 15:51/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B 07/25/12 15:51/ch
Bicarbonate as HCO3	280	mg/L		5		1	A2320 B 07/25/12 15:51/ch
INORGANIC PARAMETERS							
Chloride	21	mg/L	DH	5		1	E300.0 10/09/12 21:01/tb
Fluoride	0.8	mg/L		0.1		1	E300.0 07/25/12 02:04/jmh
Sulfate	2350	mg/L	D	50		50	E300.0 08/16/12 05:48/tb
See case narratvie for the chloride recheck							
DATA QUALITY PARAMETERS							
Anions	56.2	meq/L		1.00		1	A1030 E 08/28/12 14:17/lkl
Cations	56.0	meq/L		1.00		1	A1030 E 08/28/12 14:17/lkl
Conductivity, Calculated	4520	umhos/cm		1.00		1	A1030 E 08/28/12 14:17/lkl
TDS Ratio	1.06			0.0100		1	A1030 E 08/28/12 14:17/lkl
A/C Balance	-0.144	%				1	A1030 E 08/28/12 14:17/lkl
NUTRIENT PARAMETERS							
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0 07/25/12 02:04/jmh
See case narratvie for the chloride recheck							
RADIONUCLIDES - DISSOLVED							
Gross Alpha	20.0	pCi/L				1	E900.0 07/31/12 17:20/eli-ca
Gross Alpha precision (±)	7.8	pCi/L				1	E900.0 07/31/12 17:20/eli-ca
Gross Alpha MDC	11.5	pCi/L				1	E900.0 07/31/12 17:20/eli-ca
Gross Beta	4.5	pCi/L	U			1	E900.0 07/31/12 17:20/eli-ca
Gross Beta precision (±)	6.5	pCi/L				1	E900.0 07/31/12 17:20/eli-ca
Gross Beta MDC	10.7	pCi/L				1	E900.0 07/31/12 17:20/eli-ca
Radium 228	0.1	pCi/L	U			1	RA-05 08/03/12 18:15/eli-ca
Radium 228 precision (±)	0.6	pCi/L				1	RA-05 08/03/12 18:15/eli-ca
Radium 228 MDC	1	pCi/L				1	RA-05 08/03/12 18:15/eli-ca
Radium 226	0.07	pCi/L	U			1	E903.0 08/08/12 07:35/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0 08/08/12 07:35/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0 08/08/12 07:35/eli-ca

- See Case Narrative regarding Gross AlphaBeta analysis.

RADIONUCLIDES - TOTAL

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.
MDC - Minimum detectable concentration
H - Analysis performed past recommended holding time.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
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: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/23/12 14:34

Lab ID: R12070405-004

Date Received: 07/24/12

Client Sample ID: BC-2

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/			Method	Analysis Date / By
				RL	QCL	DF		
RADIONUCLIDES - TOTAL								
Radon 222	2860	pCi/L				1	D5072-92	07/27/12 10:38/eli-c
Radon 222 precision (±)	180	pCi/L				1	D5072-92	07/27/12 10:38/eli-c
Radon 222 MDC	240	pCi/L				1	D5072-92	07/27/12 10:38/eli-c
TOTAL METALS ANALYSES								
Mercury	ND	mg/L		0.0001		1	E245.1	07/27/12 14:32/eli-c
DISSOLVED METALS ANALYSES								
Arsenic	ND	mg/L		0.001		2	E200.8	08/04/12 03:18/eli-c
Barium	ND	mg/L		0.05		2	E200.7	07/27/12 13:28/eli-ca
Boron	0.44	mg/L		0.05		2	E200.7	07/27/12 13:28/eli-ca
Cadmium	ND	mg/L		0.001		2	E200.7	07/27/12 13:28/eli-ca
Chromium	ND	mg/L		0.005		2	E200.7	07/27/12 13:28/eli-ca
Copper	0.006	mg/L		0.005		2	E200.8	08/04/12 03:18/eli-c
Iron	ND	mg/L		0.03		2	E200.7	07/27/12 13:28/eli-ca
Lead	ND	mg/L		0.001		2	E200.8	08/04/12 03:18/eli-c
Manganese	0.042	mg/L	D	0.002		2	E200.7	07/27/12 13:28/eli-ca
Molybdenum	0.012	mg/L		0.001		2	E200.8	08/04/12 03:18/eli-c
Nickel	ND	mg/L		0.005		2	E200.7	07/27/12 13:28/eli-ca
Selenium	ND	mg/L		0.001		2	E200.8	08/04/12 03:18/eli-c
Silver	ND	mg/L		0.001		2	E200.8	08/04/12 03:18/eli-c
Uranium	0.0228	mg/L		0.0003		2	E200.8	08/04/12 03:18/eli-c
Vanadium	ND	mg/L		0.01		2	E200.8	08/04/12 03:18/eli-c
Zinc	ND	mg/L		0.01		2	E200.7	07/27/12 13:28/eli-ca
Calcium	544	mg/L		1		2	E200.7	08/15/12 15:35/eli-ca
Magnesium	200	mg/L		1		2	E200.7	08/14/12 18:58/eli-ca
Potassium	12	mg/L		1		2	E200.7	08/14/12 18:58/eli-ca
Sodium	278	mg/L		1		2	E200.7	08/14/12 18:58/eli-ca

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.

LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/23/12 16:30

Lab ID: R12070405-005

Date Received: 07/24/12

Client Sample ID: DC-2

Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By	
					QCL	DF			
PHYSICAL PARAMETERS									
Conductivity @ 25 C	5010	umhos/cm		5.0			1	A2510 B	07/24/12 17:54/tb
pH	7.17	su		0.01			1	A4500-H B	07/24/12 17:23/tb
Solids, Total Dissolved TDS @ 180 C	4600	mg/L		10			1	A2540 C	07/27/12 15:41/jmh
Alkalinity, Total as CaCO3	264	mg/L		5			1	A2320 B	08/06/12 11:20/ch
Carbonate as CO3	ND	mg/L		5			1	A2320 B	08/06/12 11:20/ch
Bicarbonate as HCO3	322	mg/L		5			1	A2320 B	08/06/12 11:20/ch
INORGANIC PARAMETERS									
Chloride	854	mg/L	D	50			50	E300.0	07/27/12 11:18/tb
Fluoride	0.7	mg/L		0.1			1	E300.0	07/25/12 02:58/jmh
Sulfate	2140	mg/L	D	50			50	E300.0	07/27/12 11:18/tb
DATA QUALITY PARAMETERS									
Anions	73.9	meq/L		1.00			1	A1030 E	08/28/12 14:17/kl
Cations	73.0	meq/L		1.00			1	A1030 E	08/28/12 14:17/kl
Conductivity, Calculated	5730	umhos/cm		1.00			1	A1030 E	08/28/12 14:17/kl
TDS Ratio	1.00			0.0100			1	A1030 E	08/28/12 14:17/kl
A/C Balance	-0.613	%					1	A1030 E	08/28/12 14:17/kl
NUTRIENT PARAMETERS									
Nitrogen, Nitrate as N	ND	mg/L		0.1			1	E300.0	07/25/12 02:58/jmh
RADIONUCLIDES - DISSOLVED									
Gross Alpha	-10	pCi/L	U				1	E900.0	07/31/12 17:20/eli-ca
Gross Alpha precision (±)	9.4	pCi/L					1	E900.0	07/31/12 17:20/eli-ca
Gross Alpha MDC	16.6	pCi/L					1	E900.0	07/31/12 17:20/eli-ca
Gross Beta	-1	pCi/L	U				1	E900.0	07/31/12 17:20/eli-ca
Gross Beta precision (±)	8.3	pCi/L					1	E900.0	07/31/12 17:20/eli-ca
Gross Beta MDC	14.0	pCi/L					1	E900.0	07/31/12 17:20/eli-ca
Radium 228	0.5	pCi/L	U				1	RA-05	08/03/12 18:15/eli-ca
Radium 228 precision (±)	0.6	pCi/L					1	RA-05	08/03/12 18:15/eli-ca
Radium 228 MDC	1.0	pCi/L					1	RA-05	08/03/12 18:15/eli-ca
Radium 226	0.4	pCi/L					1	E903.0	08/08/12 07:35/eli-ca
Radium 226 precision (±)	0.2	pCi/L					1	E903.0	08/08/12 07:35/eli-ca
Radium 226 MDC	0.2	pCi/L					1	E903.0	08/08/12 07:35/eli-ca
- See Case Narrative regarding Gross AlphaBeta analysis.									
RADIONUCLIDES - TOTAL									
Radon 222	1990	pCi/L					1	D5072-92	07/27/12 10:38/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: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/23/12 16:30

Lab ID: R12070405-005

Date Received: 07/24/12

Client Sample ID: DC-2

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
RADIONUCLIDES - TOTAL								
Radon 222 precision (±)	167	pCi/L				1	D5072-92	07/27/12 10:38/eli-c
Radon 222 MDC	237	pCi/L				1	D5072-92	07/27/12 10:38/eli-c
TOTAL METALS ANALYSES								
Mercury	ND	mg/L		0.0001		1	E245.1	07/27/12 14:34/eli-c
DISSOLVED METALS ANALYSES								
Arsenic	ND	mg/L		0.001		5	E200.8	08/04/12 03:23/eli-c
Barium	ND	mg/L		0.05		5	E200.8	08/04/12 03:23/eli-c
Boron	0.2	mg/L	D	0.1		5	E200.7	08/09/12 14:15/eli-ca
Cadmium	ND	mg/L		0.001		5	E200.8	08/04/12 03:23/eli-c
Chromium	ND	mg/L		0.005		5	E200.8	08/04/12 03:23/eli-c
Copper	ND	mg/L		0.005		5	E200.8	08/04/12 03:23/eli-c
Iron	0.48	mg/L		0.03		5	E200.8	08/04/12 03:23/eli-c
Lead	ND	mg/L		0.001		5	E200.8	08/04/12 03:23/eli-c
Manganese	3.88	mg/L		0.001		5	E200.8	08/04/12 03:23/eli-c
Molybdenum	0.005	mg/L		0.001		5	E200.8	08/04/12 03:23/eli-c
Nickel	ND	mg/L		0.005		5	E200.8	08/04/12 03:23/eli-c
Selenium	0.002	mg/L		0.001		5	E200.8	08/04/12 03:23/eli-c
Silver	ND	mg/L		0.001		5	E200.8	08/04/12 03:23/eli-c
Uranium	0.0089	mg/L		0.0003		5	E200.8	08/04/12 03:23/eli-c
Vanadium	ND	mg/L		0.01		5	E200.8	08/04/12 03:23/eli-c
Zinc	0.04	mg/L		0.01		5	E200.8	08/04/12 03:23/eli-c
Calcium	524	mg/L		1		5	E200.7	08/09/12 14:15/eli-ca
Magnesium	145	mg/L		1		5	E200.7	08/09/12 14:15/eli-ca
Potassium	7	mg/L		1		5	E200.7	08/09/12 14:15/eli-ca
Sodium	799	mg/L	D	2		5	E200.7	08/09/12 14:15/eli-ca

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.

LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/24/12 08:00

Lab ID: R12070405-006

Date Received: 07/24/12

Client Sample ID: DC-1

Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By	
					QCL	DF			
PHYSICAL PARAMETERS									
Conductivity @ 25 C	6080	umhos/cm		5.0			1	A2510 B	07/24/12 17:55/tb
pH	7.23	su		0.01			1	A4500-H B	07/24/12 17:25/tb
Solids, Total Dissolved TDS @ 180 C	6400	mg/L		10			1	A2540 C	07/27/12 15:42/jmh
Alkalinity, Total as CaCO3	404	mg/L		5			1	A2320 B	08/06/12 11:28/ch
Carbonate as CO3	ND	mg/L		5			1	A2320 B	08/06/12 11:28/ch
Bicarbonate as HCO3	492	mg/L		5			1	A2320 B	08/06/12 11:28/ch
INORGANIC PARAMETERS									
Chloride	92	mg/L		1			1	E300.0	07/25/12 03:16/jmh
Fluoride	1.1	mg/L		0.1			1	E300.0	07/25/12 03:16/jmh
Sulfate	4010	mg/L	D	50			50	E300.0	08/16/12 06:41/tb
DATA QUALITY PARAMETERS									
Anions	94.7	meq/L		1.00			1	A1030 E	08/28/12 14:19/lkl
Cations	95.0	meq/L		1.00			1	A1030 E	08/28/12 14:19/lkl
Conductivity, Calculated	7040	umhos/cm		1.00			1	A1030 E	08/28/12 14:19/lkl
TDS Ratio	1.03			0.0100			1	A1030 E	08/28/12 14:19/lkl
A/C Balance	0.155	%					1	A1030 E	08/28/12 14:19/lkl
NUTRIENT PARAMETERS									
Nitrogen, Nitrate as N	5.5	mg/L		0.1			1	E300.0	07/25/12 03:16/jmh
RADIONUCLIDES - DISSOLVED									
Gross Alpha	29.2	pCi/L					1	E900.0	07/31/12 17:20/eli-ca
Gross Alpha precision (±)	13.3	pCi/L					1	E900.0	07/31/12 17:20/eli-ca
Gross Alpha MDC	20.0	pCi/L					1	E900.0	07/31/12 17:20/eli-ca
Gross Beta	2.0	pCi/L	U				1	E900.0	07/31/12 17:20/eli-ca
Gross Beta precision (±)	10.3	pCi/L					1	E900.0	07/31/12 17:20/eli-ca
Gross Beta MDC	17.2	pCi/L					1	E900.0	07/31/12 17:20/eli-ca
Radium 228	1.1	pCi/L					1	RA-05	08/03/12 18:15/eli-ca
Radium 228 precision (±)	0.7	pCi/L					1	RA-05	08/03/12 18:15/eli-ca
Radium 228 MDC	1.1	pCi/L					1	RA-05	08/03/12 18:15/eli-ca
Radium 226	1.1	pCi/L					1	E903.0	08/08/12 07:35/eli-ca
Radium 226 precision (±)	0.2	pCi/L					1	E903.0	08/08/12 07:35/eli-ca
Radium 226 MDC	0.2	pCi/L					1	E903.0	08/08/12 07:35/eli-ca
- See Case Narrative regarding Gross AlphaBeta analysis.									
RADIONUCLIDES - TOTAL									
Radon 222	1830	pCi/L					1	D5072-92	07/27/12 10:38/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: 10/11/12

Report Date: 08/29/12

Collection Date: 07/24/12 08:00

Date Received: 07/24/12

Matrix: AQUEOUS

Client: Powertech USA Inc

Project: Alluvial Wells/Dewey Burdock

Lab ID: R12070405-006

Client Sample ID: DC-1

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
RADIONUCLIDES - TOTAL								
Radon 222 precision (±)	149	pCi/L				1	D5072-92	07/27/12 10:38/eli-c
Radon 222 MDC	210	pCi/L				1	D5072-92	07/27/12 10:38/eli-c
TOTAL METALS ANALYSES								
Mercury	ND	mg/L		0.0001		1	E245.1	07/27/12 14:35/eli-c
DISSOLVED METALS ANALYSES								
Arsenic	0.001	mg/L		0.001		5	E200.8	08/04/12 03:27/eli-c
Barium	ND	mg/L		0.05		5	E200.8	08/04/12 03:27/eli-c
Boron	1.2	mg/L	D	0.1		5	E200.7	08/09/12 14:19/eli-ca
Cadmium	ND	mg/L		0.001		5	E200.8	08/04/12 03:27/eli-c
Chromium	ND	mg/L		0.005		5	E200.8	08/04/12 03:27/eli-c
Copper	0.038	mg/L		0.005		5	E200.8	08/04/12 03:27/eli-c
Iron	0.04	mg/L		0.03		5	E200.8	08/04/12 03:27/eli-c
Lead	0.001	mg/L		0.001		5	E200.8	08/04/12 03:27/eli-c
Manganese	0.456	mg/L		0.001		5	E200.8	08/04/12 03:27/eli-c
Molybdenum	0.003	mg/L		0.001		5	E200.8	08/04/12 03:27/eli-c
Nickel	0.047	mg/L		0.005		5	E200.8	08/04/12 03:27/eli-c
Selenium	0.034	mg/L		0.001		5	E200.8	08/04/12 03:27/eli-c
Silver	ND	mg/L		0.001		5	E200.8	08/04/12 03:27/eli-c
Uranium	0.0225	mg/L		0.0003		5	E200.8	08/04/12 03:27/eli-c
Vanadium	ND	mg/L		0.01		5	E200.8	08/04/12 03:27/eli-c
Zinc	0.14	mg/L		0.01		5	E200.8	08/04/12 03:27/eli-c
Calcium	424	mg/L		1		5	E200.7	08/14/12 19:02/eli-ca
Magnesium	348	mg/L		1		5	E200.7	08/14/12 19:02/eli-ca
Potassium	15	mg/L		1		5	E200.7	08/14/12 19:02/eli-ca
Sodium	1030	mg/L	D	2		5	E200.7	08/14/12 19:02/eli-ca

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.

LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/24/12 09:07

Lab ID: R12070405-007

Date Received: 07/24/12

Client Sample ID: DC-4

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By	
				RL	QCL			
PHYSICAL PARAMETERS								
Conductivity @ 25 C	9270	umhos/cm		5.0		1	A2510 B	07/24/12 17:57/tb
pH	7.42	su		0.01		1	A4500-H B	07/24/12 17:27/tb
Solids, Total Dissolved TDS @ 180 C	11000	mg/L		10		1	A2540 C	07/27/12 15:42/jmh
Alkalinity, Total as CaCO3	334	mg/L		5		1	A2320 B	08/06/12 11:43/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B	08/06/12 11:43/ch
Bicarbonate as HCO3	407	mg/L		5		1	A2320 B	08/06/12 11:43/ch
INORGANIC PARAMETERS								
Chloride	116	mg/L				1	E300.0	07/25/12 03:34/jmh
Fluoride	2.9	mg/L				1	E300.0	07/25/12 03:34/jmh
Sulfate	7450	mg/L	D	100		100	E300.0	07/27/12 12:30/tb
DATA QUALITY PARAMETERS								
Anions	165	meq/L		1.00		1	A1030 E	08/28/12 14:19/lkl
Cations	161	meq/L		1.00		1	A1030 E	08/28/12 14:19/lkl
Conductivity, Calculated	11600	umhos/cm		1.00		1	A1030 E	08/28/12 14:19/lkl
TDS Ratio	0.970			0.0100		1	A1030 E	08/28/12 14:19/lkl
A/C Balance	-1.35	%				1	A1030 E	08/28/12 14:19/lkl
NUTRIENT PARAMETERS								
Nitrogen, Nitrate as N	1.7	mg/L		0.1		1	E300.0	07/25/12 03:34/jmh
RADIONUCLIDES - DISSOLVED								
Gross Alpha	-5	pCi/L	U			1	E900.0	08/07/12 17:23/eli-ca
Gross Alpha precision (±)	18.5	pCi/L				1	E900.0	08/07/12 17:23/eli-ca
Gross Alpha MDC	31.8	pCi/L				1	E900.0	08/07/12 17:23/eli-ca
Gross Beta	-9	pCi/L	U			1	E900.0	08/07/12 17:23/eli-ca
Gross Beta precision (±)	24.4	pCi/L				1	E900.0	08/07/12 17:23/eli-ca
Gross Beta MDC	41.2	pCi/L				1	E900.0	08/07/12 17:23/eli-ca
Radium 228	-0.5	pCi/L	U			1	RA-05	08/03/12 18:15/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05	08/03/12 18:15/eli-ca
Radium 228 MDC	1.2	pCi/L				1	RA-05	08/03/12 18:15/eli-ca
Radium 226	0.4	pCi/L				1	E903.0	08/08/12 09:16/eli-ca
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	08/08/12 09:16/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0	08/08/12 09:16/eli-ca
RADIONUCLIDES - TOTAL								
Radon 222	4820	pCi/L				1	D5072-92	07/27/12 10:38/eli-c
Radon 222 precision (±)	180	pCi/L				1	D5072-92	07/27/12 10:38/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: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Collection Date: 07/24/12 09:07

Lab ID: R12070405-007

Date Received: 07/24/12

Client Sample ID: DC-4

Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
RADIONUCLIDES - TOTAL								
Radon 222 MDC	208	pCi/L				1	D5072-92	07/27/12 10:38/eli-c
TOTAL METALS ANALYSES								
Mercury	ND	mg/L		0.0001		1	E245.1	07/27/12 14:36/eli-c
DISSOLVED METALS ANALYSES								
Arsenic	ND	mg/L		0.001		5	E200.8	08/04/12 03:32/eli-c
Barium	ND	mg/L		0.05		5	E200.8	08/04/12 03:32/eli-c
Boron	1.8	mg/L	D	0.2		10	E200.7	08/09/12 14:23/eli-ca
Cadmium	ND	mg/L		0.001		5	E200.8	08/04/12 03:32/eli-c
Chromium	ND	mg/L		0.005		5	E200.8	08/04/12 03:32/eli-c
Copper	ND	mg/L		0.005		5	E200.8	08/04/12 03:32/eli-c
Iron	ND	mg/L		0.03		5	E200.8	08/04/12 03:32/eli-c
Lead	ND	mg/L		0.001		5	E200.8	08/04/12 03:32/eli-c
Manganese	0.013	mg/L		0.001		5	E200.8	08/04/12 03:32/eli-c
Molybdenum	0.003	mg/L		0.001		5	E200.8	08/04/12 03:32/eli-c
Nickel	ND	mg/L		0.005		5	E200.8	08/04/12 03:32/eli-c
Selenium	0.032	mg/L		0.001		5	E200.8	08/04/12 03:32/eli-c
Silver	ND	mg/L		0.001		5	E200.8	08/04/12 03:32/eli-c
Uranium	0.0157	mg/L		0.0003		5	E200.8	08/04/12 03:32/eli-c
Vanadium	ND	mg/L		0.01		5	E200.8	08/04/12 03:32/eli-c
Zinc	0.02	mg/L		0.01		5	E200.8	08/04/12 03:32/eli-c
Calcium	388	mg/L		1		10	E200.7	08/09/12 14:23/eli-ca
Magnesium	620	mg/L		1		10	E200.7	08/09/12 14:23/eli-ca
Potassium	10	mg/L		1		10	E200.7	08/09/12 14:23/eli-ca
Sodium	2080	mg/L	D	3		10	E200.7	08/09/12 14:23/eli-ca

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: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Project: Alluvial Wells/Dewey Burdock

Work Order: R12070405

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B								Batch: 120725A-ALK-SEL-W		
Sample ID: LCS1_120725A		Laboratory Control Sample					Run: PH_COND1-R_120725A			07/25/12 13:48
Alkalinity, Total as CaCO3		940	mg/L	5.0	94	90	110			
Sample ID: MBLK1_120725A	3	Method Blank					Run: PH_COND1-R_120725A			07/25/12 13:48
Alkalinity, Total as CaCO3		4	mg/L	2						
Bicarbonate as HCO3		5	mg/L							
Carbonate as CO3			mg/L							
Sample ID: R12070291-008AMS		Sample Matrix Spike					Run: PH_COND1-R_120725A			07/25/12 15:20
Alkalinity, Total as CaCO3		306	mg/L	5.0	99	80	120			
Method: A2320 B								Batch: 120806A-ALK-SEL-W		
Sample ID: LCS1_120806A		Laboratory Control Sample					Run: PH_COND1-R_120806A			08/06/12 11:08
Alkalinity, Total as CaCO3		964	mg/L	5.0	96	90	110			
Sample ID: MBLK1_120806A		Method Blank					Run: PH_COND1-R_120806A			08/06/12 11:14
Alkalinity, Total as CaCO3		ND	mg/L	2						
Sample ID: R12070405-005ADUP	3	Sample Duplicate					Run: PH_COND1-R_120806A			08/06/12 11:25
Alkalinity, Total as CaCO3		266	mg/L	5.0				0.8	10	
Carbonate as CO3		ND	mg/L	5.0					10	
Bicarbonate as HCO3		324	mg/L	5.0				0.8	10	

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: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2510 B								Batch: 120724_1_COND-PROBE-W		
Sample ID: MBLK-1_120724		Method Blank					Run: PH_COND2-R_120724B			07/24/12 17:43
Conductivity @ 25 C		ND	umhos/cm	5						
Sample ID: R12070299-001BDUP		Sample Duplicate					Run: PH_COND2-R_120724B			07/24/12 17:45
Conductivity @ 25 C		562	umhos/cm	5.0				0.2	10	

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: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C										Batch: TDS120727A
Sample ID: MB-1_120727A		Method Blank								Run: BAL-TDS_120727A 07/27/12 15:35
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	3						
Sample ID: LCS-2_120727A		Laboratory Control Sample								Run: BAL-TDS_120727A 07/27/12 15:36
Solids, Total Dissolved TDS @ 180 C		200	mg/L	10	102	90	110			
Sample ID: R12070397-002A MS		Sample Matrix Spike								Run: BAL-TDS_120727A 07/27/12 15:38
Solids, Total Dissolved TDS @ 180 C		14000	mg/L	10	106	90	110			
Sample ID: R12070405-007A DUP		Sample Duplicate								Run: BAL-TDS_120727A 07/27/12 15:43
Solids, Total Dissolved TDS @ 180 C		11000	mg/L	10				0.1	5	

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

Client: Powertech USA Inc
Project: Alluvial Wells/Dewey Burdock

Revised Date: 10/11/12
Report Date: 08/29/12
Work Order: R12070405

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B								Analytical Run: PH_COND2-R_120724A		
Sample ID: ICV-1_120724		Initial Calibration Verification Standard						07/24/12 15:04		
pH		7.44	su	0.010	100	98	102			
Method: A4500-H B								Batch: 120724_1_PH-W		
Sample ID: R12070405-004ADUP		Sample Duplicate				Run: PH_COND2-R_120724A		07/24/12 17:20		
pH		7.11	su	0.010				0.6	3	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Work Order: R12070405

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: D5072-92										Batch: C_R162524
Sample ID: R12070405-007D	3	Sample Duplicate					Run: SUB-C162524			07/27/12 10:38
Radon 222		4550	pCi/L					5.7	20	
Radon 222 precision (±)		178	pCi/L							
Radon 222 MDC		208	pCi/L							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Client: Powertech USA Inc
Project: Alluvial Wells/Dewey Burdock

Revised Date: 10/11/12
Report Date: 08/29/12
Work Order: R12070405

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
Method: E200.7										Analytical Run: SUB-C162484	
Sample ID: ICV	12 Initial Calibration Verification Standard									07/27/12 11:57	
Barium		0.98	mg/L	0.10	98	95	105				
Boron		0.98	mg/L	0.10	98	95	105				
Cadmium		0.47	mg/L	0.010	94	95	105			S	
Calcium		51	mg/L	0.50	103	95	105				
Chromium		0.96	mg/L	0.050	96	95	105				
Iron		5.1	mg/L	0.030	102	95	105				
Magnesium		49	mg/L	0.50	99	95	105				
Manganese		4.8	mg/L	0.010	95	95	105				
Nickel		0.96	mg/L	0.050	96	95	105				
Potassium		50	mg/L	0.50	100	95	105				
Sodium		51	mg/L	0.50	102	95	105				
Zinc		0.95	mg/L	0.010	95	95	105				
Sample ID: ICSA	12 Interference Check Sample A									07/27/12 12:11	
Barium		0.00049	mg/L	0.10							
Boron		-0.018	mg/L	0.10							
Cadmium		0.0063	mg/L	0.010							
Calcium		460	mg/L	0.50	93	80	120				
Chromium		0.00021	mg/L	0.050							
Iron		180	mg/L	0.030	88	80	120				
Magnesium		500	mg/L	0.50	101	80	120				
Manganese		0.017	mg/L	0.010							
Nickel		0.00063	mg/L	0.050							
Potassium		-0.031	mg/L	0.50							
Sodium		0.33	mg/L	0.50							
Zinc		-0.013	mg/L	0.010							
Sample ID: ICSAB	12 Interference Check Sample AB									07/27/12 12:15	
Barium		0.46	mg/L	0.10	93	80	120				
Boron		-0.022	mg/L	0.10							
Cadmium		0.85	mg/L	0.010	85	80	120				
Calcium		470	mg/L	0.50	93	80	120				
Chromium		0.43	mg/L	0.050	85	80	120				
Iron		180	mg/L	0.030	88	80	120				
Magnesium		500	mg/L	0.50	101	80	120				
Manganese		0.45	mg/L	0.010	90	80	120				
Nickel		0.86	mg/L	0.050	86	80	120				
Potassium		-0.038	mg/L	0.50							
Sodium		0.37	mg/L	0.50							
Zinc		0.82	mg/L	0.010	82	80	120				
Method: E200.7										Batch: C_R162484	
Sample ID: MB-120727A	12 Method Blank									Run: SUB-C162484 07/27/12 12:38	
Barium		ND	mg/L	0.0002							
Boron		ND	mg/L	0.002							

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										
Batch: C_R162484										
Sample ID: MB-120727A	12	Method Blank								
										Run: SUB-C162484 07/27/12 12:38
Cadmium		ND	mg/L	0.0004						
Calcium		ND	mg/L	0.02						
Chromium		ND	mg/L	0.002						
Iron		ND	mg/L	0.002						
Magnesium		0.01	mg/L	0.01						
Manganese		ND	mg/L	0.0010						
Nickel		ND	mg/L	0.002						
Potassium		ND	mg/L	0.04						
Sodium		ND	mg/L	0.2						
Zinc		ND	mg/L	0.001						
Sample ID: LFB-120727A	12	Laboratory Fortified Blank								
										Run: SUB-C162484 07/27/12 12:41
Barium		0.96	mg/L	0.10	96	85	115			
Boron		0.92	mg/L	0.10	92	85	115			
Cadmium		0.95	mg/L	0.010	95	85	115			
Calcium		52	mg/L	0.50	104	85	115			
Chromium		0.90	mg/L	0.050	90	85	115			
Iron		1.00	mg/L	0.030	100	85	115			
Magnesium		48	mg/L	0.50	96	85	115			
Manganese		0.91	mg/L	0.010	91	85	115			
Nickel		0.97	mg/L	0.050	97	85	115			
Potassium		45	mg/L	0.50	90	85	115			
Sodium		49	mg/L	0.50	97	85	115			
Zinc		0.90	mg/L	0.010	90	85	115			
Sample ID: C12070943-001BMS2	12	Sample Matrix Spike								
										Run: SUB-C162484 07/27/12 13:36
Barium		1.02	mg/L	0.050	97	70	130			
Boron		0.954	mg/L	0.050	91	70	130			
Cadmium		0.962	mg/L	0.0010	94	70	130			
Chromium		0.920	mg/L	0.0050	90	70	130			
Iron		1.31	mg/L	0.030	99	70	130			
Manganese		0.973	mg/L	0.0010	90	70	130			
Nickel		0.983	mg/L	0.0050	96	70	130			
Zinc		0.924	mg/L	0.010	91	70	130			
Calcium		80.4	mg/L	1.0	104	70	130			
Magnesium		53.4	mg/L	1.0	97	70	130			
Potassium		50.4	mg/L	1.0	95	70	130			
Sodium		77.1	mg/L	1.0	100	70	130			
Sample ID: C12070943-001BMSD2	12	Sample Matrix Spike Duplicate								
										Run: SUB-C162484 07/27/12 13:40
Barium		1.03	mg/L	0.050	97	70	130	0.6	20	
Boron		0.946	mg/L	0.050	91	70	130	0.9	20	
Cadmium		0.962	mg/L	0.0010	94	70	130	0.0	20	
Chromium		0.913	mg/L	0.0050	90	70	130	0.7	20	
Iron		1.32	mg/L	0.030	100	70	130	0.8	20	

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: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
Method: E200.7								Batch: C_R162484			
Sample ID: C12070943-001BMSD2				12 Sample Matrix Spike Duplicate				Run: SUB-C162484		07/27/12 13:40	
Manganese		0.978	mg/L	0.0010	91	70	130	0.5	20		
Nickel		0.986	mg/L	0.0050	97	70	130	0.2	20		
Zinc		0.925	mg/L	0.010	91	70	130	0.1	20		
Calcium		80.5	mg/L	1.0	104	70	130	0.2	20		
Magnesium		53.5	mg/L	1.0	97	70	130	0.1	20		
Potassium		50.9	mg/L	1.0	96	70	130	1.1	20		
Sodium		77.7	mg/L	1.0	101	70	130	0.8	20		

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: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Work Order: R12070405

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
Method: E200.7								Analytical Run: SUB-C163079			
Sample ID: ICV	5	Initial Calibration Verification Standard						08/09/12 12:42			
Boron		1.0	mg/L	0.10	102	95	105				
Calcium		51	mg/L	0.50	102	95	105				
Magnesium		52	mg/L	0.50	103	95	105				
Potassium		52	mg/L	2.7	104	95	105				
Sodium		52	mg/L	0.50	105	95	105				
Sample ID: ICSA	5	Interference Check Sample A						08/09/12 13:22			
Boron		0.053	mg/L	0.10							
Calcium		500	mg/L	0.50	101	80	120				
Magnesium		520	mg/L	0.50	104	80	120				
Potassium		ND	mg/L	0.50							
Sodium		-0.14	mg/L	0.50							
Sample ID: ICSAB	5	Interference Check Sample AB						08/09/12 13:26			
Boron		0.048	mg/L	0.10							
Calcium		500	mg/L	0.50	100	80	120				
Magnesium		510	mg/L	0.50	102	80	120				
Potassium		-0.00040	mg/L	0.50							
Sodium		-0.19	mg/L	0.50							
Method: E200.7								Batch: C_R163079			
Sample ID: MB-120809A	5	Method Blank						Run: SUB-C163079		08/09/12 13:46	
Boron		ND	mg/L	0.02							
Calcium		ND	mg/L	0.06							
Magnesium		ND	mg/L	0.03							
Potassium		ND	mg/L	0.06							
Sodium		ND	mg/L	0.3							
Sample ID: LFB-120809A	5	Laboratory Fortified Blank						Run: SUB-C163079		08/09/12 13:50	
Boron		0.92	mg/L	0.10	92	85	115				
Calcium		49	mg/L	0.50	97	85	115				
Magnesium		48	mg/L	0.50	95	85	115				
Potassium		44	mg/L	0.50	88	85	115				
Sodium		49	mg/L	0.50	97	85	115				
Sample ID: MB-6545	5	Sample Matrix Spike						Run: SUB-C163079		08/09/12 14:43	
Boron		0.945	mg/L	0.050	93	70	130				
Calcium		51.2	mg/L	1.0	100	70	130				
Magnesium		49.7	mg/L	1.0	97	70	130				
Potassium		46.1	mg/L	1.0	90	70	130				
Sodium		50.9	mg/L	1.0	100	70	130				
Sample ID: MB-6545	5	Sample Matrix Spike Duplicate						Run: SUB-C163079		08/09/12 14:47	
Boron		0.954	mg/L	0.050	94	70	130	1.0	20		
Calcium		50.2	mg/L	1.0	98	70	130	2.0	20		
Magnesium		49.3	mg/L	1.0	97	70	130	0.7	20		

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: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Project: Alluvial Wells/Dewey Burdock

Work Order: R12070405

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7 Batch: C_R163079										
Sample ID: MB-6545	5	Sample Matrix Spike Duplicate					Run: SUB-C163079			08/09/12 14:47
Potassium		46.0	mg/L	1.0	90	70	130	0.2	20	
Sodium		50.8	mg/L	1.0	100	70	130	0.3	20	
Method: E200.7 Analytical Run: SUB-C163260										
Sample ID: ICV	4	Initial Calibration Verification Standard								08/14/12 12:35
Calcium		51	mg/L	0.50	102	95	105			
Magnesium		51	mg/L	0.50	101	95	105			
Potassium		50	mg/L	2.7	101	95	105			
Sodium		51	mg/L	0.50	103	95	105			
Sample ID: ICSA	4	Interference Check Sample A								08/14/12 13:16
Calcium		520	mg/L	0.50	104	80	120			
Magnesium		520	mg/L	0.50	105	80	120			
Potassium		0.0024	mg/L	0.50						
Sodium		-0.058	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB								08/14/12 13:20
Calcium		510	mg/L	0.50	103	80	120			
Magnesium		530	mg/L	0.50	105	80	120			
Potassium		0.0018	mg/L	0.50						
Sodium		-0.12	mg/L	0.50						
Method: E200.7 Batch: C_R163260										
Sample ID: MB-120814A	4	Method Blank					Run: SUB-C163260			08/14/12 13:40
Calcium		ND	mg/L	0.06						
Magnesium		ND	mg/L	0.03						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.3						
Sample ID: LFB-120814A	4	Laboratory Fortified Blank					Run: SUB-C163260			08/14/12 13:44
Calcium		50	mg/L	0.50	100	85	115			
Magnesium		49	mg/L	0.50	99	85	115			
Potassium		45	mg/L	0.50	90	85	115			
Sodium		48	mg/L	0.50	97	85	115			
Sample ID: C12080477-002BMS2	4	Sample Matrix Spike					Run: SUB-C163260			08/14/12 18:50
Calcium		51.6	mg/L	1.0	101	70	130			
Magnesium		49.4	mg/L	1.0	97	70	130			
Potassium		46.9	mg/L	1.0	89	70	130			
Sodium		90.4	mg/L	1.0	101	70	130			
Sample ID: C12080477-002BMSD2	4	Sample Matrix Spike Duplicate					Run: SUB-C163260			08/14/12 18:54
Calcium		51.8	mg/L	1.0	101	70	130	0.4	20	
Magnesium		50.0	mg/L	1.0	98	70	130	1.1	20	
Potassium		49.3	mg/L	1.0	94	70	130	5.1	20	
Sodium		90.1	mg/L	1.0	101	70	130	0.3	20	

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: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Project: Alluvial Wells/Dewey Burdock

Work Order: R12070405

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7								Analytical Run: SUB-C163320		
Sample ID: ICV		Initial Calibration Verification Standard								08/15/12 13:34
Calcium		51	mg/L	0.50	103	95	105			
Sample ID: ICSA		Interference Check Sample A								08/15/12 14:43
Calcium		490	mg/L	0.50	98	80	120			
Sample ID: ICSAB		Interference Check Sample AB								08/15/12 14:47
Calcium		490	mg/L	0.50	98	80	120			
Method: E200.7								Batch: C_R163320		
Sample ID: MB-120815C		Method Blank								Run: SUB-C163320
Calcium		ND	mg/L	0.06						08/15/12 15:07
Sample ID: LFB-120815C		Laboratory Fortified Blank								Run: SUB-C163320
Calcium		49	mg/L	0.50	98	85	115			08/15/12 15:11
Sample ID: R12070405-004B		Sample Matrix Spike								Run: SUB-C163320
Calcium		604	mg/L	1.0		70	130			08/15/12 15:27 A
Sample ID: R12070405-004B		Sample Matrix Spike Duplicate								Run: SUB-C163320
Calcium		602	mg/L	1.0		70	130	0.2	20	08/15/12 15:31 A

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: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
Method: E200.8								Analytical Run: SUB-C162824			
Sample ID: ICV	15 Initial Calibration Verification Standard								08/03/12 21:14		
Arsenic		0.0494	mg/L	0.0010	99	90	110				
Barium		0.0493	mg/L	0.0010	99	90	110				
Cadmium		0.0493	mg/L	0.0010	99	90	110				
Chromium		0.0469	mg/L	0.0010	94	90	110				
Copper		0.0496	mg/L	0.0010	99	90	110				
Iron		1.00	mg/L	0.0010	100	90	110				
Lead		0.0492	mg/L	0.0010	98	90	110				
Manganese		0.0502	mg/L	0.0010	100	90	110				
Molybdenum		0.0479	mg/L	0.0010	96	90	110				
Nickel		0.0494	mg/L	0.0010	99	90	110				
Selenium		0.0518	mg/L	0.0010	104	90	110				
Silver		0.0217	mg/L	0.0010	109	90	110				
Uranium		0.0508	mg/L	0.00030	102	90	110				
Vanadium		0.0467	mg/L	0.0010	93	90	110				
Zinc		0.0500	mg/L	0.0010	100	90	110				

Method: E200.8								Batch: C_R162824			
Sample ID: LRB	15 Method Blank								Run: SUB-C162824		08/03/12 21:50
Arsenic		ND	mg/L	5E-05							
Barium		ND	mg/L	7E-05							
Cadmium		ND	mg/L	3E-05							
Chromium		ND	mg/L	4E-05							
Copper		ND	mg/L	3E-05							
Iron		ND	mg/L	0.0006							
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							
Silver		ND	mg/L	6E-05							
Uranium		ND	mg/L	9E-06							
Vanadium		ND	mg/L	4E-05							
Zinc		ND	mg/L	0.0002							

Sample ID: LFB	15 Laboratory Fortified Blank								Run: SUB-C162824		08/03/12 21:54
Arsenic		0.0522	mg/L	0.0010	104	85	115				
Barium		0.0520	mg/L	0.0010	104	85	115				
Cadmium		0.0501	mg/L	0.0010	100	85	115				
Chromium		0.0508	mg/L	0.0010	102	85	115				
Copper		0.0527	mg/L	0.0010	105	85	115				
Iron		1.28	mg/L	0.0010	103	85	115				
Lead		0.0511	mg/L	0.0010	102	85	115				
Manganese		0.0533	mg/L	0.0010	107	85	115				
Molybdenum		0.0490	mg/L	0.0010	98	85	115				

Qualifiers:

RL - Analyte reporting limit.

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MDC - Minimum detectable concentration

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Work Order: R12070405

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
Method: E200.8											
Batch: C_R162824											
Sample ID: LFB	15	Laboratory Fortified Blank			Run: SUB-C162824			08/03/12 21:54			
Nickel		0.0529	mg/L	0.0010	106	85	115				
Selenium		0.0528	mg/L	0.0010	106	85	115				
Silver		0.0212	mg/L	0.0010	106	85	115				
Uranium		0.0516	mg/L	0.00030	103	85	115				
Vanadium		0.0500	mg/L	0.0010	100	85	115				
Zinc		0.0546	mg/L	0.0010	109	85	115				
Sample ID: C12070956-003CMS	15	Post Digestion Spike			Run: SUB-C162824			08/04/12 03:45			
Arsenic		0.0532	mg/L	0.0010	106	70	130				
Barium		0.0547	mg/L	0.050	105	70	130				
Cadmium		0.0521	mg/L	0.0010	104	70	130				
Chromium		0.0504	mg/L	0.0050	101	70	130				
Copper		0.0526	mg/L	0.0050	104	70	130				
Iron		1.22	mg/L	0.030	97	70	130				
Lead		0.0512	mg/L	0.0010	102	70	130				
Manganese		0.0541	mg/L	0.0010	107	70	130				
Molybdenum		0.0513	mg/L	0.0010	103	70	130				
Nickel		0.0515	mg/L	0.0050	103	70	130				
Selenium		0.0524	mg/L	0.0010	105	70	130				
Silver		0.0150	mg/L	0.0010	75	70	130				
Uranium		0.0539	mg/L	0.00030	108	70	130				
Vanadium		0.0511	mg/L	0.010	102	70	130				
Zinc		0.0557	mg/L	0.010	111	70	130				
Sample ID: C12070956-003CMSD	15	Post Digestion Spike Duplicate			Run: SUB-C162824			08/04/12 04:08			
Arsenic		0.0520	mg/L	0.0010	104	70	130	2.3	20		
Barium		0.0538	mg/L	0.050	103	70	130	1.6	20		
Cadmium		0.0514	mg/L	0.0010	103	70	130	1.3	20		
Chromium		0.0502	mg/L	0.0050	100	70	130	0.4	20		
Copper		0.0522	mg/L	0.0050	103	70	130	0.8	20		
Iron		1.23	mg/L	0.030	98	70	130	0.8	20		
Lead		0.0510	mg/L	0.0010	102	70	130	0.2	20		
Manganese		0.0532	mg/L	0.0010	105	70	130	1.7	20		
Molybdenum		0.0506	mg/L	0.0010	101	70	130	1.4	20		
Nickel		0.0510	mg/L	0.0050	102	70	130	0.9	20		
Selenium		0.0517	mg/L	0.0010	103	70	130	1.4	20		
Silver		0.0161	mg/L	0.0010	81	70	130	7.3	20		
Uranium		0.0535	mg/L	0.00030	107	70	130	0.6	20		
Vanadium		0.0504	mg/L	0.010	101	70	130	1.4	20		
Zinc		0.0541	mg/L	0.010	107	70	130	2.9	20		

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: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E245.1										Analytical Run: SUB-C162458
Sample ID: ICV		Initial Calibration Verification Standard								07/27/12 13:50
Mercury		0.0047	mg/L	0.00010	95	90	110			
Method: E245.1										Batch: C_34479
Sample ID: MB-34479		Method Blank								07/27/12 13:56
Mercury		ND	mg/L	3E-05						Run: SUB-C162458
Sample ID: LCS-34479		Laboratory Control Sample								07/27/12 13:57
Mercury		0.0053	mg/L	0.00010	106	85	115			Run: SUB-C162458
Sample ID: R12070405-001C		Sample Matrix Spike								07/27/12 14:24
Mercury		0.0050	mg/L	0.00010	101	70	130			Run: SUB-C162458
Sample ID: R12070405-001C		Sample Matrix Spike Duplicate								07/27/12 14:26
Mercury		0.0050	mg/L	0.00010	100	70	130	0.9	10	

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: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0 Analytical Run: DIONEX_120724A										
Sample ID: CCV072412-28	3	Continuing Calibration Verification Standard								07/25/12 02:22
Chloride		76.4	mg/L	1.0	102	90	110			
Fluoride		7.74	mg/L	0.10	103	90	110			
Nitrogen, Nitrate as N		7.51	mg/L	0.10	100	90	110			
Method: E300.0 Batch: R57307										
Sample ID: LFB072412-14	3	Laboratory Fortified Blank								07/24/12 22:11
Run: DIONEX_120724A										
Chloride		38.3	mg/L	1.0	96	90	110			
Fluoride		3.94	mg/L	0.10	99	90	110			
Nitrogen, Nitrate as N		3.82	mg/L	0.10	96	90	110			
Sample ID: R12070404-001AMS	3	Sample Matrix Spike								07/25/12 00:35
Run: DIONEX_120724A										
Chloride		84.0	mg/L	1.0	105	90	110			
Fluoride		4.61	mg/L	0.10	87	90	110			S
Nitrogen, Nitrate as N		3.81	mg/L	0.10	95	90	110			
Sample ID: R12070404-001AMSD	3	Sample Matrix Spike Duplicate								07/25/12 00:52
Run: DIONEX_120724A										
Chloride		84.3	mg/L	1.0	106	90	110	0.3	10	
Fluoride		4.73	mg/L	0.10	90	90	110	2.6	10	
Nitrogen, Nitrate as N		3.90	mg/L	0.10	97	90	110	2.4	10	
Sample ID: R12070405-007AMS	3	Sample Matrix Spike								07/25/12 03:52
Run: DIONEX_120724A										
Chloride		160	mg/L	1.0	110	90	110			
Fluoride		6.75	mg/L	0.10	96	90	110			
Nitrogen, Nitrate as N		5.59	mg/L	0.10	98	90	110			
Sample ID: R12070405-007AMSD	3	Sample Matrix Spike Duplicate								07/25/12 04:10
Run: DIONEX_120724A										
Chloride		160	mg/L	1.0	111	90	110	0.1	10	S
Fluoride		6.76	mg/L	0.10	97	90	110	0.1	10	
Nitrogen, Nitrate as N		5.61	mg/L	0.10	98	90	110	0.3	10	
Method: E300.0 Analytical Run: DIONEX_120726A										
Sample ID: CCV072612-42		Continuing Calibration Verification Standard								07/27/12 06:32
Sulfate		77.3	mg/L	1.0	103	90	110			
Sample ID: CCV072612-56		Continuing Calibration Verification Standard								07/27/12 10:42
Sulfate		78.5	mg/L	1.0	105	90	110			
Method: E300.0 Batch: R57379										
Sample ID: LFB072612-14		Laboratory Fortified Blank								07/26/12 22:28
Run: DIONEX_120726A										
Sulfate		39.8	mg/L	1.0	100	90	110			
Sample ID: R12070405-005AMS		Sample Matrix Spike								07/27/12 11:36
Run: DIONEX_120726A										
Sulfate		4360	mg/L	50	111	90	110			S
Sample ID: R12070405-005AMSD		Sample Matrix Spike Duplicate								07/27/12 11:54
Run: DIONEX_120726A										
Sulfate		4380	mg/L	50	112	90	110	0.7	10	S

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Client: Powertech USA Inc
Project: Alluvial Wells/Dewey Burdock

Revised Date: 10/11/12
Report Date: 08/29/12
Work Order: R12070405

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0								Analytical Run: DIONEX_120815A		
Sample ID: CCV081512-56	Continuing Calibration Verification Standard									08/16/12 05:12
Sulfate		71.6	mg/L	1.0	95	90	110			
Method: E300.0								Batch: R57657		
Sample ID: LFB081512-14	Laboratory Fortified Blank									08/15/12 16:57
Sulfate		38.2	mg/L	1.0	95	90	110			Run: DIONEX_120815A
Sample ID: R12070405-004AMS	Sample Matrix Spike									08/16/12 06:06
Sulfate		4380	mg/L	50	102	90	110			Run: DIONEX_120815A
Sample ID: R12070405-004AMSD	Sample Matrix Spike Duplicate									08/16/12 06:23
Sulfate		4390	mg/L	50	102	90	110	0.1	10	Run: DIONEX_120815A
Method: E300.0								Batch: R58412		
Sample ID: LFB100912-14	Laboratory Fortified Blank									10/09/12 20:43
Chloride		38.1	mg/L	5.0	95	90	110			Run: DIONEX_121009A
Sample ID: R12070405-004AMS	Sample Matrix Spike									10/09/12 21:19
Chloride		59.8	mg/L	5.0	97	90	110			Run: DIONEX_121009A
Sample ID: R12070405-004AMSD	Sample Matrix Spike Duplicate									10/09/12 21:37
Chloride		59.8	mg/L	5.0	97	90	110	0.1	10	Run: DIONEX_121009A

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Work Order: R12070405

Client: Powertech USA Inc

Project: Alluvial Wells/Dewey Burdock

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.0										
Batch: C_GrAB-1318										
Sample ID: Th230-GrAB-1318	Laboratory Control Sample			Run: SUB-C162702			07/31/12 17:20			
Gross Alpha	210	pCi/L	103	80	120					
Sample ID: Cs137-GrAB-1318	Laboratory Control Sample			Run: SUB-C162702			07/31/12 17:20			
Gross Beta	171	pCi/L	93	80	120					
Sample ID: MB-GrAB-1318	6 Method Blank			Run: SUB-C162702			07/31/12 17:20			
Gross Alpha	-2	pCi/L								U
Gross Alpha precision (±)	0.6	pCi/L								
Gross Alpha MDC	1	pCi/L								
Gross Beta	-2	pCi/L								U
Gross Beta precision (±)	1	pCi/L								
Gross Beta MDC	2	pCi/L								
Sample ID: R12070405-002E	6 Sample Duplicate			Run: SUB-C162702			07/31/12 17:20			
Gross Alpha	26	pCi/L				11	58.3			
Gross Alpha precision (±)	6.5	pCi/L								
Gross Alpha MDC	8.8	pCi/L								
Gross Beta	6.3	pCi/L				12	174.9			U
Gross Beta precision (±)	5.7	pCi/L								
Gross Beta MDC	9.3	pCi/L								
Sample ID: R12070405-004E	Sample Matrix Spike			Run: SUB-C162702			07/31/12 17:20			
Gross Alpha	550	pCi/L	67	70	130					S
Sample ID: R12070405-004E	Sample Matrix Spike Duplicate			Run: SUB-C162702			07/31/12 17:20			
Gross Alpha	520	pCi/L	63	70	130	6.1	17.9			S
Sample ID: R12070405-004E	Sample Matrix Spike			Run: SUB-C162702			07/31/12 17:20			
Gross Beta	670	pCi/L	94	70	130					
Sample ID: R12070405-004E	Sample Matrix Spike Duplicate			Run: SUB-C162702			07/31/12 17:20			
Gross Beta	740	pCi/L	103	70	130	9.2	14.1			

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Report Date: 08/29/12

Client: Powertech USA Inc

Work Order: R12070405

Project: Alluvial Wells/Dewey Burdock

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.0								Batch: C_GrAB-1323		
Sample ID: Th230-GrAB-1323	Laboratory Control Sample			Run: SUB-C162978			08/07/12 17:23			
Gross Alpha	194		pCi/L	95		80	120			
Sample ID: Cs137-GrAB-1323	Laboratory Control Sample			Run: SUB-C162978			08/07/12 17:23			
Gross Beta	172		pCi/L	92		80	120			
Sample ID: MB-GrAB-1323	6 Method Blank			Run: SUB-C162978			08/07/12 17:23			
Gross Alpha	-1		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 (±)	2		pCi/L							
Gross Beta MDC	3		pCi/L							
Sample ID: R12070405-001E	Sample Matrix Spike			Run: SUB-C162978			08/07/12 17:23			
Gross Alpha	540		pCi/L	64		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: R12070405-001E	Sample Matrix Spike Duplicate			Run: SUB-C162978			08/07/12 17:23			
Gross Alpha	490		pCi/L	57		70	130	10	16.9	S
Sample ID: R12070405-001E	Sample Matrix Spike			Run: SUB-C162978			08/07/12 17:23			
Gross Beta	720		pCi/L	96		70	130			
Sample ID: R12070405-001E	Sample Matrix Spike Duplicate			Run: SUB-C162978			08/07/12 17:23			
Gross Beta	770		pCi/L	103		70	130	7.3	14	
Sample ID: R12070405-007E	6 Sample Duplicate			Run: SUB-C162978			08/07/12 17:23			
Gross Alpha	-5.3		pCi/L					4.6	777.2	U
Gross Alpha precision (±)	21		pCi/L							
Gross Alpha MDC	36		pCi/L							
Gross Beta	-42		pCi/L					130	173.5	U
Gross Beta precision (±)	25		pCi/L							
Gross Beta MDC	43		pCi/L							

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Rapid City, SD Branch

Revised Date: 10/11/12

Client: Powertech USA Inc

Report Date: 08/29/12

Project: Alluvial Wells/Dewey Burdock

Work Order: R12070405

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: C_RA226-6138
Sample ID: LCS-RA226-6138		Laboratory Control Sample								Run: SUB-C163056 08/08/12 07:35
Radium 226		6.2	pCi/L		101	80	120			
Sample ID: R12070405-004E		Sample Matrix Spike								Run: SUB-C163056 08/08/12 07:35
Radium 226		12	pCi/L		93	70	130			
Sample ID: R12070405-004E		Sample Matrix Spike Duplicate								Run: SUB-C163056 08/08/12 07:35
Radium 226		14	pCi/L		109	70	130	14	30.2	
Sample ID: MB-RA226-6138	3	Method Blank								Run: SUB-C163056 08/08/12 09:16
Radium 226		-0.07	pCi/L							U
Radium 226 precision (±)		0.08	pCi/L							
Radium 226 MDC		0.2	pCi/L							

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

Client: Powertech USA Inc
Project: Alluvial Wells/Dewey Burdock

Revised Date: 10/11/12
Report Date: 08/29/12
Work Order: R12070405

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05								Batch: C_RA228-4177		
Sample ID: LCS-228-RA226-6138		Laboratory Control Sample			Run: SUB-C162936			08/03/12 18:15		
Radium 228		5.0	pCi/L	114		80	120			
Sample ID: MB-RA226-6138		3 Method Blank			Run: SUB-C162936			08/03/12 18:15		
Radium 228		-0.4	pCi/L							U
Radium 228 precision (±)		0.7	pCi/L							
Radium 228 MDC		1	pCi/L							
Sample ID: R12070405-007E		Sample Matrix Spike			Run: SUB-C162936			08/03/12 18:15		
Radium 228		8.5	pCi/L	97		70	130			
Sample ID: R12070405-007E		Sample Matrix Spike Duplicate			Run: SUB-C162936			08/03/12 18:15		
Radium 228		10.7	pCi/L	118		70	130	23	46.8	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration



Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: <i>Scott Environmental</i>	Project Name, PWS, Permit, Etc. <i>Dewey / Burdock Alluvial wells</i>	Sample Origin State:	EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>
Report Mail Address: <i>Scott Environmental PowerTech, Inc.</i>	Contact Name: <i>Allen Sutt</i>	Phone/Fax: <i>673-4459</i>	Email:
Invoice Address: <i>PowerTech, Inc.</i>	Invoice Contact & Phone:	Purchase Order:	Quote/Bottle Order:

Special Report/Formats:				ANALYSIS REQUESTED												Shipped by:	
<input type="checkbox"/> DW <input type="checkbox"/> EDD/EDT (Electronic Data) <input type="checkbox"/> POTW/WWTP Format: _____ <input type="checkbox"/> State: _____ <input type="checkbox"/> LEVEL IV <input type="checkbox"/> Other: _____ <input type="checkbox"/> NELAC				Number of Containers: _____ Sample Type: A W S V B O DW Air Water Solids/Solids Vegetation Bioassay Other DW - Drinking Water <i>Air & water</i>												Cooler ID(s):	
																Receipt Temp <i>3.6</i> °C	
				SEE ATTACHED												On Ice: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
																Custody Seal On Bottle Y N On Cooler Y N	
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.) Collection Date Collection Time MATRIX				Standard Turnaround (TAT) R U S H Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page Comments:												Intact Y N	
																Signature Match Y N	
1 <i>BC-3</i>																LABORATORY USE ONLY	
2 <i>BC-3 Dup.</i>																	
3 <i>BC-1</i>																	
4 <i>BC-2</i>																	
5 <i>708</i>																	
6 <i>BC-2</i>																	
7 <i>DC-1</i>																	
8 <i>DC-4</i>																	
9																<i>812070405-00</i>	
10																<i>00</i>	

Custody Record MUST be Signed	Relinquished by (print): <i>Allen Sutt</i>	Date/Time: <i>7-24-12 14:35</i>	Signature: <i>Allen Sutt</i>	Received by (print):	Date/Time:	Signature:
	Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
	Sample Disposal: Return to Client: _____	Lab Disposal: _____	Received by Laboratory: <i>Steve Frouland</i>	Date/Time: <i>7-24-12 14:35</i>	Signature: <i>Steve Frouland</i>	

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.