



JOHN M. MAYS  
CHIEF OPERATING OFFICER

November 17, 2014

Matt Hicks  
Senior Hydrologist  
Groundwater Quality Program  
South Dakota Department of Environment and Natural Resources  
523 East Capitol Avenue - Joe Foss Building  
Pierre, SD 57501-3182

**Re: Dewey-Burdock Groundwater Discharge Plan, Sampling Results for Alluvial Compliance Wells**

Dear Mr. Hicks:

Powertech (USA) Inc. (Powertech) has completed one year of monthly ambient groundwater monitoring as well as additional quarterly sampling thereafter for more than a year. In addition, Powertech has completed one additional year of monthly groundwater sampling for radon.

The purpose of this letter is to transmit data summary tables for alluvial compliance samples collected to date and to provide laboratory sample analysis reports for samples collected between September 2013 and September 2014. Laboratory reports for earlier sampling events were provided to the South Dakota Department of Environment and Natural Resources Groundwater Quality Program (GWQ) during earlier submittals.

A second reason for this letter is to request agreement to suspend further quarterly groundwater sampling for alluvial compliance wells until a proposed time of six months prior to operation of land application systems. At such time, the sampling program will resume and samples will be collected and submitted to GWQ for review to reaffirm baseline concentrations at Dewey-Burdock alluvial compliance well locations.

Powertech believes data submitted through September 2014 fulfill GDP permitting requirements and support GWQ's recommended GDP permit. Specifically, the number of samples collected exceeds the requirements of ARSD 74:54:02:18 in that "New facilities submitting applications

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for groundwater discharge approval after the effective date of these rules shall, at a minimum, collect four groundwater samples from each applicable well within site boundaries over a six-month period with no two samples taken in the same month.”

If however GWQ’s review of the enclosed data identifies the need for additional sampling, Powertech would appreciate hearing from you regarding the additional sampling to be required as soon as possible.

Thank you for your time and consideration. Please do not hesitate to contact me with questions or for further discussion.

Sincerely,



John M. Mays, P.E.  
Chief Operating Officer

Encl. Summary Tables  
Sample Analysis Reports  
CD Copy

cc: R. Burrows, NRC (CD copy only)  
M. Cepak, SD DENR (CD copy only)  
G. Fesko, BLM (CD copy only)  
V. Shea, EPA (CD copy only)



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## SUMMARY TABLES



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	WL below TOC (feet)	Field pH (s.u.)	Field Temp (°C)	Field Cond (mS/cm)	Clarity	Color	Odor	RADON (pCi/L)										DUPLICATE		
								ELI	IML	MID	ELI +/-	IML +/-	MID +/-	ELI RL	IML RL	MID RL	ELI	ELI +/-	ELI RL	
<b>DC1</b>																				
8/20/13	23.33	7.2	11.8	6.76	murky	tan	none	388	419	516	45.7	18	109	70	80	68.6	---	---	---	
9/3/13	23.36	7.2	11.4	6.71				510	384	612	41.1	16	124	60	82	59.6	---	---	---	
10/1/13	23.49	7.1	11.2	7.32				498	346	292	47.6	16	64.9	71	80	47.0	---	---	---	
11/19/13	23.36	7.1	11.3	7.35				470	375	335	46.3	17	103	69	50	97.5	472	46.4	69	
12/17/13	23.37	7.1	11.4	7.10				451	367	474	59.3	17	137	92	95	140	---	---	---	
1/29/14	23.27	7.2	11.1	6.87				310	---	---	45.2	---	---	71	---	---	---	---	---	
2/26/14	23.27	7.0	10.4	6.96				457	---	---	46.2	---	---	69	---	---	---	---	---	
3/11/14	23.24	7.2	11.1	7.08				637	---	---	50.8	---	---	74	---	---	---	---	---	
4/9/14	23.30	7.2	10.3	6.70				579	---	---	49.6	---	---	73	---	---	---	---	---	
5/18/14	23.22	7.1	9.8	5.99				496	---	---	48.3	---	---	72	---	---	---	---	---	
6/25/14	23.25	7.2	10.2	6.58	413	---	---	47.4	---	---	72	---	---	---	---	---				
7/10/14	23.27	7.1	10.1	6.87	434	---	---	102	---	---	34.3	---	---	42.6	463	40.1	59			
9/4/14	23.47	7.1	10.7	6.22	279	---	---	38.8	---	---	61	---	---	---	---	---	---			
<b>DC2</b>																				
8/20/13	13.56	7.3	12.6	5.23	clear	clear	none	552	570	609	49.0	22	125	72	80	69.5	---	---	---	
9/2/13	13.69	7.4	12.4	5.35				738	649	669	50.8	24	133	71	82	58	749	51.0	72	
10/1/13	13.90	7.4	12.5	5.41				711	630	601	51.6	23	118	74	80	48.7	---	---	---	
11/19/13	13.62	7.4	12	5.56				686	674	721	50.2	24	160	72	50	105	---	---	---	
12/16/13	13.71	7.5	11.3	5.73				780	715	644	62.3	27	174	91	95	164	732	61.7	91	
1/29/14	13.54	7.4	10.4	5.65				391	---	---	47.3	---	---	73	---	---	---	---	---	
2/26/14	13.40	7.4	9.5	5.42				511	---	---	48.2	---	---	72	---	---	---	---	---	
3/10/14	13.27	7.4	10.1	5.41				613	---	---	58.9	---	---	88	---	---	---	---	---	
4/9/14	13.11	7.3	9.4	5.59				738	---	---	62.4	---	---	123	75	---	---	---	---	
5/18/14	13.25	7.3	9.4	5.81				661	---	---	51.4	---	---	74	---	---	---	---	---	
6/24/14	13.39	7.3	10.2	5.58	640	---	---	58.7	---	---	87	---	---	---	---	---				
7/10/14	13.56	7.3	10.5	5.51	598	---	---	565	---	---	111	60	---	---	---	---				
9/3/14	14.05	7.3	12.1	5.43	639	---	---	559	---	---	111	72.3	---	---	---	---				

	WL below TOC (feet)	Field pH (s.u.)	Field Temp (°C)	Field Cond (mS/cm)	Clarity	Color	Odor	RADON (pCi/L)										DUPLICATE	
								ELI	IML	MID	ELI +/-	IML +/-	MID +/-	ELI RL	IML RL	MID RL	ELI	ELI +/-	ELI RL
<b>DC3</b>																			
Not Sampled Due to Eagle																			
<b>DC4</b>																			
Not Sampled Due to Eagle																			
<b>BC1</b>																			
8/20/13	14.87	7.1	12.1	3.62	clear			707	562	775	50.1	22	154	71	80	68.9	---	---	---
9/2/13	14.95	7.2	12.1	3.69	clear			854	747	664	51.2	26	132	70	82	57.2	---	---	---
10/1/13	14.89	7.2	12.3	3.69	clear			966	682	721	53.9	24	139	73	80	48.2	---	---	---
11/19/13	14.28	7.2	12.2	3.73	clear			898	809	828	51.9	27	178	70	50	104	---	---	---
12/16/13	14.20	7.3	11.5	3.74	clear			955	826	817	63.2	29	201	89	95	161	---	---	---
1/29/14	13.95	7.3	11.3	3.74	clear		none	738	---	868	50.9	---	166	72	---	54.4	680	50.2	72
2/26/14	13.68	7.3	10	3.68	clear			922	---	---	52.2	---	---	70	---	---	---	---	---
3/10/14	13.49	7.2	10.6	3.68	clear			934	---	---	61.3	---	---	86	---	---	---	---	---
4/9/14	13.23	7.3	10.5	3.72	clear			928	---	824	53.9	---	158	73	---	50.8	976	54.4	73
5/18/14	12.82	7.3	10.1	3.62	clear			851	---	675	52.9	---	132	73	---	51.7	---	---	---
6/24/14	12.72	7.3	10.5	3.64	clear			800	---	---	59.5	---	---	85	---	---	---	---	---
7/10/14	12.88	7.2	10.7	3.59	clear			872	---	---	45.2	---	---	59	---	---	---	---	---
9/3/14	13.29	7.2	11.9	3.53	clear			781	---	587	50.3	---	116	70	---	49	770	50.2	70
<b>BC2</b>																			
8/20/13	6.11	7.3	10.3	3.9	clear			901	790	934	52.1	27	181	71	80	68.7	---	---	---
9/2/13	6.55	7.3	10.4	3.93	clear			972	871	857	52.1	28	166	69	82	56.9	---	---	---
10/1/13	6.34	7.3	10.5	3.93	clear			1050	867	846	54.2	28	161	72	80	48.0	---	---	---
11/19/13	4.91	7.4	10	3.93	clear			1050	861	881	53.4	28	188	70	50	106	---	---	---
12/16/13	4.76	7.3	9.7	3.93	clear			1050	---	868	64.7	---	209	89	---	162	---	---	---
1/29/14	4.55	7.4	9.7	3.95	clear			932	---	970	52.7	---	184	72	---	54.2	---	---	---
2/26/14	4.35	7.3	8.9	3.93	clear			1040	---	783	53.9	---	150	71	---	50.7	972	53.1	71
3/10/14	4.19	7.3	9.6	3.94	clear			1150	---	971	64.4	---	188	87	---	66.7	1080	63.6	87





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Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	Human Health Standards ARSD	Hydro ID	DC-1	DC-1	DC-1
Sample Collection Date	74:54:01:04	Units	7/24/2012	8/21/2012	9/11/2012

#### Field Measurements

Water Level Below Top of Casing		feet	22.86	23.00	23.06
Water Level Elevation (NGVD 29)		feet AMSL	3622.59	3622.45	3622.39
Well Volume		gal	0.8	0.8	0.7
Volume Purged Before Sampling		gal	2.75	2.5	2.5
Field pH		s.u.	7.04	7.05	6.93
Field Temperature		°C	14.8	10.0	11.4
Field Conductivity		mS/cm	5.7	6.3	7.61
Clarity		observed	sl. cloudy	cloudy	cloudy
Color		observed	tan-yellow	tan	tan
Odor		observed	none	none	none

#### Physical Properties

Lab pH	6.5 - 8.5	s.u.	7.23	7.25	7.17
Total Dissolved Solids	1000	mg/L	6400	5690	6090
Lab Conductivity		umhos/cm	6080	5940	6350

#### Common Elements and Ions

Alkalinity, Total as CaCO <sub>3</sub>		mg/L	404	366	392
Bicarbonate as HCO <sub>3</sub>		mg/L	492	446	478
Calcium, Ca		mg/L	424	438	442
Carbonate as CO <sub>3</sub>		mg/L	< 5	< 5	< 5
Chloride, Cl	250	mg/L	92	73	85
Magnesium, Mg		mg/L	348	353	400
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	10	mg/L	5.5	7.5	7.7
Potassium, K		mg/L	15	13	14
Sodium, Na		mg/L	1030	896	1210
Sulfate, SO <sub>4</sub>	500	mg/L	4010	3520	3970

#### Trace and Minor Elements

Dissolved Arsenic, As	0.01	mg/L	0.001	< 0.001	0.001
Dissolved Barium, Ba	2	mg/L	< 0.05	< 0.05	< 0.05
Dissolved Boron, B		mg/L	1.2	1.3	1.4
Dissolved Cadmium, Cd	0.005	mg/L	< 0.001	< 0.001	0.001
Dissolved Chromium, Cr	0.1	mg/L	< 0.005	< 0.005	0.010
Dissolved Copper, Cu	1.0	mg/L	0.038	< 0.005	0.009
Dissolved Fluoride, F	4	mg/L	1.1	1.2	1.1
Dissolved Iron, Fe		mg/L	0.04	< 0.03	< 0.03
Dissolved Lead, Pb	0.015	mg/L	0.001	< 0.001	< 0.001
Dissolved Manganese, Mn		mg/L	0.456	0.330	0.757
Total Mercury, Hg	0.002	mg/L	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	Human Health Standards ARSD	Hydro ID	DC-1	DC-1	DC-1
Sample Collection Date	74:54:01:04	Units	7/24/2012	8/21/2012	9/11/2012
Dissolved Molybdenum, Mo		mg/L	0.003	0.003	0.002
Dissolved Nickel, Ni		mg/L	0.047	0.032	0.086
Dissolved Selenium, Se	0.05	mg/L	0.034	0.032	0.060
Dissolved Silver, Ag	0.1	mg/L	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.03	mg/L	0.0225	0.0243	0.0184
Dissolved Vanadium, V		mg/L	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn		mg/L	0.14	0.05	0.11
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	15	pCi/L	29.2	13.3	-0.4
Precision (±)		pCi/L	13.3	17.7	17.8
MDC		pCi/L	20.0	28.8	30.0
Dissolved Gross Beta	4 mrem/yr <sup>1</sup>	pCi/L	2.0	-9	5.7
Precision (±)		pCi/L	10.3	25.2	28.8
MDC		pCi/L	17.2	42.5	48.1
Dissolved Radium 228	5 <sup>2</sup>	pCi/L	1.1	0.3	0.4
Precision (±)		pCi/L	0.7	0.7	0.6
MDC		pCi/L	1.1	1.1	0.9
Dissolved Radium 226	5 <sup>2</sup>	pCi/L	1.1	0.8	0.9
Precision (±)		pCi/L	0.2	0.2	0.2
MDC		pCi/L	0.2	0.1	0.1
Total Radon 222	300	pCi/L	---	---	---
Precision (±)		pCi/L	---	---	---
MDC		pCi/L	---	---	---



Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-1	DC-1	DC-1	DC-1	DC-1
Sample Collection Date	10/3/2012	11/6/2012	12/11/2012	1/8/2013	2/12/2013

#### Field Measurements

Water Level Below Top of Casing	23.16	23.27	23.29	23.29	23.36
Water Level Elevation (NGVD 29)	3622.29	3622.18	3622.16	3622.16	3622.09
Well Volume	0.7	0.7	0.7	0.7	0.7
Volume Purged Before Sampling	2.25	2.25	2.5	2.2	2.07
Field pH	7.00	6.9	7.1	7.1	7.3
Field Temperature	11.3	11.2	10.3	11.1	10.8
Field Conductivity	6.97	7.64	7.37	7.58	6.70
Clarity	cloudy	murky	murky	murky	murky
Color	tan	tan	gray-tan	yllw-brwn	tan
Odor	none	none	none	none	none

#### Physical Properties

Lab pH	7.14	6.90	7.12	7.10	7.13
Total Dissolved Solids	6250	6730	6120	5780	5580
Lab Conductivity	6260	6680	6480	6520	6650

#### Common Elements and Ions

Alkalinity, Total as CaCO <sub>3</sub>	390	430	392	368	380
Bicarbonate as HCO <sub>3</sub>	475	524	478	449	463
Calcium, Ca	430	425	355	419	405
Carbonate as CO <sub>3</sub>	< 5	< 5	< 5	< 5	< 5
Chloride, Cl	86	95	87	101	102
Magnesium, Mg	369	364	347	348	349
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	9.1	6.2	9.5	12.6	12.1
Potassium, K	18	10	9	12	11
Sodium, Na	1120	987	894	1290	1110
Sulfate, SO <sub>4</sub>	4040	4110	3920	3890	4030

#### Trace and Minor Elements

Dissolved Arsenic, As	0.001	< 0.001	< 0.001	< 0.001	0.001
Dissolved Barium, Ba	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	1.4	1.50	1.32	1.12	1.42
Dissolved Cadmium, Cd	< 0.001	< 0.001	< 0.001	0.002	< 0.001
Dissolved Chromium, Cr	0.007	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Copper, Cu	0.011	< 0.005	< 0.005	< 0.005	0.007
Dissolved Fluoride, F	1.3	0.9	1.0	1.1	1.1
Dissolved Iron, Fe	0.04	< 0.03	< 0.03	< 0.03	< 0.03
Dissolved Lead, Pb	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	0.398	0.154	0.150	0.576	0.474
Total Mercury, Hg	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-1	DC-1	DC-1	DC-1	DC-1
Sample Collection Date	10/3/2012	11/6/2012	12/11/2012	1/8/2013	2/12/2013
Dissolved Molybdenum, Mo	0.002	0.003	0.002	0.001	0.002
Dissolved Nickel, Ni	0.05	0.027	0.020	0.075	0.061
Dissolved Selenium, Se	0.040	0.028	0.031	0.050	0.050
Dissolved Silver, Ag	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.0189	0.0210	0.0228	0.0135	0.0164
Dissolved Vanadium, V	< 0.01	0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	0.08	0.08	0.05	0.18	0.10
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	-10	9.6	4.5	41.4	1.0
Precision (±)	16.3	15.8	13.9	13.7	12.8
MDC	28.3	25.8	23.1	19.0	21.5
Dissolved Gross Beta	20.0	-9	4.2	-5	-8.0
Precision (±)	17.5	15.9	17.7	15.5	16.7
MDC	28.8	27.0	29.6	26.1	28.3
Dissolved Radium 228	2.5	1.5	1.9	0.7	1.0
Precision (±)	1.2	1.4	1	0.9	1.1
MDC	1.8	2.3	1.5	1.4	1.9
Dissolved Radium 226	1.5	0.06	0.5	0.4	0.4
Precision (±)	0.2	0.09	0.2	0.2	0.2
MDC	0.1	0.1	0.1	0.2	0.2
Total Radon 222	---	---	---	---	---
Precision (±)	---	---	---	---	---
MDC	---	---	---	---	---

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-1	DC-1	DC-1	DC-1	DC-1
Sample Collection Date	3/5/2013	4/25/2013	5/21/2013	6/4/2013	9/3/2013

#### Field Measurements

Water Level Below Top of Casing	23.31	23.23	23.14	23.05	23.36
Water Level Elevation (NGVD 29)	3622.14	3622.22	3622.31	3622.40	3622.09
Well Volume	0.7	0.7	0.7	0.7	0.7
Volume Purged Before Sampling	2.1	2.25	2.19	2.25	2.1
Field pH	7.1	7.2	7.1	7.0	7.2
Field Temperature	10.1	10.1	10.6	10.9	11.4
Field Conductivity	7.21	7.23	7.38	6.90	6.71
Clarity	murky	turbid	murky	murky	murky
Color	tan-yellow	tan	tan	tan	tan
Odor	none	none	none	none	none

#### Physical Properties

Lab pH	6.99	6.80	7.13	7.05	6.97
Total Dissolved Solids	6600	7440	6250	5990	6250
Lab Conductivity	6860	7590	6570	6450	6490

#### Common Elements and Ions

Alkalinity, Total as CaCO <sub>3</sub>	388	356	354	352	378
Bicarbonate as HCO <sub>3</sub>	473	434	432	429	461
Calcium, Ca	424	395	414	418	399
Carbonate as CO <sub>3</sub>	< 5	< 5	< 5	< 5	< 5
Chloride, Cl	102	124	109	111	83
Magnesium, Mg	394	341	387	379	351
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	9.4	5.3	19.6	18.3	8.6
Potassium, K	14	8	9	9	8
Sodium, Na	1160	923	1100	1020	980
Sulfate, SO <sub>4</sub>	4190	4810	3630	3760	3790

#### Trace and Minor Elements

Dissolved Arsenic, As	0.001	0.002	< 0.001	0.003	0.001
Dissolved Barium, Ba	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	1.40	1.36	1.22	1.33	1.38
Dissolved Cadmium, Cd	0.001	< 0.001	0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	0.007	0.012	< 0.005	< 0.005	0.014
Dissolved Copper, Cu	0.009	0.005	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	0.8	1.0	1.2	1.4	0.8
Dissolved Iron, Fe	< 0.03	0.05	< 0.03	< 0.03	< 0.03
Dissolved Lead, Pb	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	0.484	0.112	0.380	0.309	0.14
Total Mercury, Hg	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-1	DC-1	DC-1	DC-1	DC-1
Sample Collection Date	3/5/2013	4/25/2013	5/21/2013	6/4/2013	9/3/2013
Dissolved Molybdenum, Mo	0.002	0.002	0.001	0.001	0.001
Dissolved Nickel, Ni	0.070	0.030	0.065	0.053	0.035
Dissolved Selenium, Se	0.054	0.039	0.057	0.047	0.034
Dissolved Silver, Ag	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.0148	0.0186	0.0138	0.0142	0.0173
Dissolved Vanadium, V	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	0.14	0.04	0.11	0.11	0.05
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	15.9	88.7	3.7	11.0	3.2
Precision (±)	14.2	16.4	13.4	11.8	10.5
MDC	22.6	19.2	22.2	19.0	17.4
Dissolved Gross Beta	9.2	22.0	9.6	-9	-10
Precision (±)	16.3	15.2	14.3	13.9	17.1
MDC	27.0	24.7	23.6	23.6	29.0
Dissolved Radium 228	1.2	-0.3	1.7	1	1.8
Precision (±)	1.3	0.8	0.8	0.7	1.1
MDC	2.0	1.4	1.2	1.1	1.6
Dissolved Radium 226	1.3	0.6	0.8	0.8	0.3
Precision (±)	0.3	0.2	0.2	0.2	0.2
MDC	0.2	0.2	0.1	0.2	0.2
Total Radon 222	---	---	---	---	510
Precision (±)	---	---	---	---	41.1
MDC	---	---	---	---	60.0

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-1	DC-1	DC-1	DC-1
Sample Collection Date	12/17/2013	3/11/2014	6/25/2014	9/4/2014
<b>Field Measurements</b>				
Water Level Below Top of Casing	23.37	23.24	23.25	23.47
Water Level Elevation (NGVD 29)	3622.08	3622.21	3622.2	3621.98
Well Volume	0.7	0.71	0.71	0.67
Volume Purged Before Sampling	2.1	2.13	2.13	2.01
Field pH	7.1	7.2	7.2	7.1
Field Temperature	11.4	11.1	10.2	10.7
Field Conductivity	7.10	7.08	6.58	6.22
Clarity	murky	murky	murky	murky
Color	tan	tan	tan	tan
Odor	none	none	none	none
<b>Physical Properties</b>				
Lab pH	7.01	7.07	6.75	7.12
Total Dissolved Solids	5940	5590	6260	5850
Lab Conductivity	6410	6180	6670	6100
<b>Common Elements and Ions</b>				
Alkalinity, Total as CaCO <sub>3</sub>	396	372	398	372
Bicarbonate as HCO <sub>3</sub>	483	454	485	454
Calcium, Ca	420	372	371	413
Carbonate as CO <sub>3</sub>	< 5	< 5	< 5	< 5
Chloride, Cl	68	70	89	70
Magnesium, Mg	314	336	347	392
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	6	7.3	3.8	4.0
Potassium, K	9	8	7	8
Sodium, Na	1090	958	962	1190
Sulfate, SO <sub>4</sub>	3780	3600	4340	3750
<b>Trace and Minor Elements</b>				
Dissolved Arsenic, As	0.002	< 0.001	0.002	0.002
Dissolved Barium, Ba	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	1.26	1.27	1.20	1.3
Dissolved Cadmium, Cd	< 0.001	0.001	< 0.001	0.002
Dissolved Chromium, Cr	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Copper, Cu	< 0.005	0.007	< 0.005	< 0.005
Dissolved Fluoride, F	1.6	0.9	0.8	0.5
Dissolved Iron, Fe	0.03	< 0.03	< 0.03	< 0.03
Dissolved Lead, Pb	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	0.167	0.19	0.131	0.44
Total Mercury, Hg	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-1	DC-1	DC-1	DC-1
Sample Collection Date	12/17/2013	3/11/2014	6/25/2014	9/4/2014
Dissolved Molybdenum, Mo	0.001	< 0.001	< 0.001	< 0.001
Dissolved Nickel, Ni	0.036	0.051	0.040	0.09
Dissolved Selenium, Se	0.026	0.032	0.027	0.043
Dissolved Silver, Ag	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.0138	0.0102	0.0122	0.0086
Dissolved Vanadium, V	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	0.06	0.13	0.08	0.25
<b>Radiological Parameters</b>				
Dissolved Gross Alpha	61.1	78.8	45.4	25.7
Precision (±)	13.9	16.1	10	17.1
MDC	15.9	18.1	11.3	26.5
Dissolved Gross Beta	0.2	-3	0.3	11.2
Precision (±)	15.2	17.1	13.2	21.6
MDC	25.4	28.6	22.0	35.8
Dissolved Radium 228	0.9	0.7	0.7	1.5
Precision (±)	0.9	0.7	0.8	0.8
MDC	1.4	1.2	1.3	1.2
Dissolved Radium 226	0.3	0.3	0.5	1.2
Precision (±)	0.2	0.2	0.2	0.24
MDC	0.2	0.2	0.2	0.19
Total Radon 222	451	637	413	279
Precision (±)	59.3	50.8	47.4	38.8
MDC	92.0	74.0	72.0	61.0

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	Human Health Standards ARSD	Hydro ID	DC-2	DC-2	DC-2
Sample Collection Date	74:54:01:04	Units	7/23/2012	8/20/2012	9/10/2012

#### Field Measurements

Water Level Below Top of Casing		feet	13.12	14.32	14.42
Water Level Elevation (NGVD 29)		feet AMSL	3603.16	3601.96	3601.86
Well Volume		gal	3.2	3.0	3.0
Volume Purged Before Sampling		gal	10.5	9	9
Field pH		s.u.	7.24	7.32	7.22
Field Temperature		°C	11.9	12.1	12.5
Field Conductivity		mS/cm	4.9	4.7	5.63
Clarity		observed	clear	clear	clear
Color		observed	clear	clear	clear
Odor		observed	none	none	none

#### Physical Properties

Lab pH	6.5 - 8.5	s.u.	7.17	7.13	7.19
Total Dissolved Solids	1000	mg/L	4640	4560	4610
Lab Conductivity		umhos/cm	5010	5710	5540

#### Common Elements and Ions

Alkalinity, Total as CaCO <sub>3</sub>		mg/L	264	260	264
Bicarbonate as HCO <sub>3</sub>		mg/L	322	317	322
Calcium, Ca		mg/L	524	524	516
Carbonate as CO <sub>3</sub>		mg/L	< 5	< 5	< 5
Chloride, Cl	250	mg/L	854	756	753
Magnesium, Mg		mg/L	145	144	147
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	10	mg/L	< 0.1	0.2	0.3
Potassium, K		mg/L	7	7	7
Sodium, Na		mg/L	799	715	714
Sulfate, SO <sub>4</sub>	500	mg/L	2140	1920	1890

#### Trace and Minor Elements

Dissolved Arsenic, As	0.01	mg/L	< 0.001	< 0.001	0.002
Dissolved Barium, Ba	2	mg/L	< 0.05	< 0.05	< 0.05
Dissolved Boron, B		mg/L	0.2	0.3	0.3
Dissolved Cadmium, Cd	0.005	mg/L	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	0.1	mg/L	< 0.005	< 0.005	0.005
Dissolved Copper, Cu	1.0	mg/L	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	4	mg/L	0.7	0.6	0.6
Dissolved Iron, Fe		mg/L	0.48	0.36	0.42
Dissolved Lead, Pb	0.015	mg/L	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn		mg/L	3.88	3.41	3.13
Total Mercury, Hg	0.002	mg/L	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	Human Health Standards ARSD	Hydro ID	DC-2	DC-2	DC-2
Sample Collection Date	74:54:01:04	Units	7/23/2012	8/20/2012	9/10/2012
Dissolved Molybdenum, Mo		mg/L	0.005	0.005	0.004
Dissolved Nickel, Ni		mg/L	< 0.005	< 0.005	0.010
Dissolved Selenium, Se	0.05	mg/L	0.002	0.001	0.003
Dissolved Silver, Ag	0.1	mg/L	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.03	mg/L	0.0089	0.0081	0.0091
Dissolved Vanadium, V		mg/L	< 0.01	0.09	< 0.01
Dissolved Zinc, Zn		mg/L	0.04	0.04	< 0.01
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	15	pCi/L	-10	-5	9.9
Precision (±)		pCi/L	9.4	13.3	17.7
MDC		pCi/L	16.6	22.9	29.0
Dissolved Gross Beta	4 mrem/yr <sup>1</sup>	pCi/L	-1	-10	2.2
Precision (±)		pCi/L	8.3	21.4	22.0
MDC		pCi/L	14.0	36.3	36.9
Dissolved Radium 228	5 <sup>2</sup>	pCi/L	0.5	0.7	0.6
Precision (±)		pCi/L	0.6	0.7	0.6
MDC		pCi/L	1.0	1.1	0.9
Dissolved Radium 226	5 <sup>2</sup>	pCi/L	0.4	0.4	0.3
Precision (±)		pCi/L	0.2	0.1	0.1
MDC		pCi/L	0.2	0.1	0.1
Total Radon 222	300	pCi/L	---	---	---
Precision (±)		pCi/L	---	---	---
MDC		pCi/L	---	---	---



Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-2	DC-2	DC-2	DC-2	DC-2
Sample Collection Date	10/2/2012	11/5/2012	12/10/2012	1/7/2013	2/11/2013
<b>Field Measurements</b>					
Water Level Below Top of Casing	14.49	14.33	14.28	14.22	14.00
Water Level Elevation (NGVD 29)	3601.79	3601.95	3602.00	3602.06	3602.28
Well Volume	3.0	3.0	3.0	3.1	3.1
Volume Purged Before Sampling	9	9	9	9	9.3
Field pH	7.20	7.4	7.4	7.4	7.40
Field Temperature	12.5	12.2	10.9	10.6	10.1
Field Conductivity	5.45	5.48	5.68	5.69	5.67
Clarity	clear	clear	clear	clear	clear
Color	clear	clear	clear	clear	clear
Odor	none	none	none	none	none
<b>Physical Properties</b>					
Lab pH	7.09	7.24	6.99	7.06	7.14
Total Dissolved Solids	4630	4620	4550	4540	4690
Lab Conductivity	5530	5670	5470	6250	5780
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	264	266	262	262	266
Bicarbonate as HCO <sub>3</sub>	322	324	319	319	324
Calcium, Ca	518	481	521	550	483
Carbonate as CO <sub>3</sub>	< 5	< 5	< 5	< 5	< 5
Chloride, Cl	824	827	813	788	863
Magnesium, Mg	147	142	149	153	139
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	0.2	< 0.1	< 0.1	< 0.1	< 0.1
Potassium, K	7	8	6	7	6
Sodium, Na	768	676	704	775	808
Sulfate, SO <sub>4</sub>	2080	1980	1960	1950	1970
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	0.001	0.001	< 0.001	0.001	< 0.001
Dissolved Barium, Ba	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	0.2	0.36	0.32	0.4	0.30
Dissolved Cadmium, Cd	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	< 0.005	< 0.005	0.010	< 0.005	< 0.005
Dissolved Copper, Cu	0.006	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	0.7	0.5	0.6	0.7	0.6
Dissolved Iron, Fe	0.80	2.79	4.73	4.08	0.92
Dissolved Lead, Pb	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	3.05	2.95	3.07	3.28	2.96
Total Mercury, Hg	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-2	DC-2	DC-2	DC-2	DC-2
Sample Collection Date	10/2/2012	11/5/2012	12/10/2012	1/7/2013	2/11/2013
Dissolved Molybdenum, Mo	0.005	0.004	0.026	0.003	0.004
Dissolved Nickel, Ni	0.022	0.013	< 0.005	< 0.005	0.010
Dissolved Selenium, Se	0.004	< 0.001	0.002	0.003	< 0.001
Dissolved Silver, Ag	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.0087	0.0088	0.0089	0.0079	0.0086
Dissolved Vanadium, V	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	0.01	0.04	0.02	< 0.01	< 0.01
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	20.7	3.1	7.5	2.6	-5
Precision (±)	15.6	9.2	11.1	11.4	7.3
MDC	24.7	15.2	18.0	19.0	12.9
Dissolved Gross Beta	-2	-10	3.1	-4	5.4
Precision (±)	21.9	11.6	13.0	13.3	11.7
MDC	36.8	19.7	21.7	22.5	19.5
Dissolved Radium 228	0.8	0.9	1.4	1.3	0.8
Precision (±)	0.7	0.8	1	0.7	1.1
MDC	1.1	1.2	1.5	1.1	1.7
Dissolved Radium 226	0.7	0.2	0.6	0.3	0.2
Precision (±)	0.1	0.08	0.2	0.2	0.1
MDC	0.09	0.09	0.3	0.2	0.2
Total Radon 222	---	---	---	---	---
Precision (±)	---	---	---	---	---
MDC	---	---	---	---	---

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-2	DC-2	DC-2	DC-2	DC-2
Sample Collection Date	3/4/2013	4/24/2013	5/21/2013	6/3/2013	9/2/2013
<b>Field Measurements</b>					
Water Level Below Top of Casing	13.97	13.95	14.05	14.09	13.69
Water Level Elevation (NGVD 29)	3602.31	3602.33	3602.23	3602.19	3602.59
Well Volume	3.1	3.1	3.08	3.08	3.14
Volume Purged Before Sampling	9.3	9.3	9.24	9.18	9.42
Field pH	7.5	7.4	7.4	7.4	7.4
Field Temperature	9.1	9.1	9.8	10.6	12.4
Field Conductivity	5.68	5.60	5.53	5.54	5.35
Clarity	clear	clear	clear	clear	clear
Color	clear	clear	clear	clear	clear
Odor	none	none	none	none	none
<b>Physical Properties</b>					
Lab pH	7.20	7.25	7.32	7.14	7.26
Total Dissolved Solids	4700	4680	4580	4660	4560
Lab Conductivity	5730	5650	5920	5610	5750
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	266	262	262	264	266
Bicarbonate as HCO <sub>3</sub>	324	319	319	322	324
Calcium, Ca	500	513	533	519	516
Carbonate as CO <sub>3</sub>	< 5	< 5	< 5	< 5	< 5
Chloride, Cl	885	870	782	784	776
Magnesium, Mg	156	143	150	143	147
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	0.6	0.9	< 0.1	< 0.1	< 0.1
Potassium, K	8	6	7	7	7
Sodium, Na	715	715	742	710	716
Sulfate, SO <sub>4</sub>	2030	2070	1880	1880	1950
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	0.001	0.002	< 0.001	0.005	0.001
Dissolved Barium, Ba	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	0.29	0.32	0.32	0.30	0.33
Dissolved Cadmium, Cd	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	< 0.005	0.011	< 0.005	0.008	0.006
Dissolved Copper, Cu	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	0.6	0.7	0.6	0.8	0.4
Dissolved Iron, Fe	0.71	4.09	1.31	0.94	0.32
Dissolved Lead, Pb	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	3.20	2.78	2.90	3.11	2.80
Total Mercury, Hg	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-2	DC-2	DC-2	DC-2	DC-2
Sample Collection Date	3/4/2013	4/24/2013	5/21/2013	6/3/2013	9/2/2013
Dissolved Molybdenum, Mo	0.004	0.004	0.004	0.004	0.005
Dissolved Nickel, Ni	< 0.005	0.010	0.007	0.009	0.010
Dissolved Selenium, Se	0.002	0.001	< 0.001	< 0.001	0.001
Dissolved Silver, Ag	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.0111	0.0098	0.0086	0.0089	0.0104
Dissolved Vanadium, V	< 0.01	< 0.01	< 0.01	< 0.01	0.02
Dissolved Zinc, Zn	< 0.01	< 0.01	< 0.01	0.03	< 0.01
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	7.3	41.7	-6	9.1	-4
Precision (±)	8.4	10.4	9.2	8.2	13.2
MDC	13.4	13.5	16.1	12.9	22.5
Dissolved Gross Beta	18.0	-6	-2	-10	5.1
Precision (±)	17.4	10	11.7	13.1	14.9
MDC	28.7	16.9	19.7	22.3	24.9
Dissolved Radium 228	0.4	0.3	0.5	0.7	1.0
Precision (±)	0.7	0.8	0.7	0.7	0.8
MDC	1.2	1.4	1.1	1.1	1.3
Dissolved Radium 226	0.6	0.3	0.3	0.4	0.2
Precision (±)	0.2	0.1	0.1	0.2	0.1
MDC	0.1	0.2	0.1	0.2	0.2
Total Radon 222	---	---	---	---	738
Precision (±)	---	---	---	---	50.8
MDC	---	---	---	---	71.0

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-2	DC-2	DC-2	DC-2
Sample Collection Date	12/16/2013	3/10/2014	6/24/2013	9/3/2014
<b>Field Measurements</b>				
Water Level Below Top of Casing	13.71	13.27	13.39	14.05
Water Level Elevation (NGVD 29)	3602.57	3603.01	3602.89	3602.23
Well Volume	3.14	3.21	3.2	3.08
Volume Purged Before Sampling	9.42	9.63	9.6	9.24
Field pH	7.5	7.4	7.3	7.3
Field Temperature	11.3	10.1	10.2	12.1
Field Conductivity	5.73	5.41	5.58	5.43
Clarity	clear	clear	clear	clear
Color	clear	clear	clear	clear
Odor	none	none	none	none
<b>Physical Properties</b>				
Lab pH	7.16	7.13	6.98	7.27
Total Dissolved Solids	4740	4310	4440	4580
Lab Conductivity	5870	5690	5370	5510
<b>Common Elements and Ions</b>				
Alkalinity, Total as CaCO <sub>3</sub>	268	254	262	264
Bicarbonate as HCO <sub>3</sub>	327	310	319	322
Calcium, Ca	540	510	532	516
Carbonate as CO <sub>3</sub>	< 5	< 5	< 5	< 5
Chloride, Cl	792	740	823	795
Magnesium, Mg	143	143	134	143
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	< 0.1	< 0.1	< 0.1	< 0.1
Potassium, K	7	6	7	7
Sodium, Na	793	702	740	725
Sulfate, SO <sub>4</sub>	2120	1890	2100	1990
<b>Trace and Minor Elements</b>				
Dissolved Arsenic, As	0.003	< 0.001	0.003	0.003
Dissolved Barium, Ba	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	0.30	0.29	0.27	0.3
Dissolved Cadmium, Cd	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	< 0.005	< 0.005	< 0.005	< 0.05
Dissolved Copper, Cu	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	1.0	0.5	0.4	0.2
Dissolved Iron, Fe	1.87	0.41	0.71	0.29
Dissolved Lead, Pb	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	2.93	2.93	2.99	2.74
Total Mercury, Hg	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-2	DC-2	DC-2	DC-2
Sample Collection Date	12/16/2013	3/10/2014	6/24/2013	9/3/2014
Dissolved Molybdenum, Mo	0.005	0.004	0.004	0.004
Dissolved Nickel, Ni	< 0.005	0.009	0.011	0.008
Dissolved Selenium, Se	< 0.001	0.001	< 0.001	< 0.001
Dissolved Silver, Ag	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.0100	0.0080	0.0076	0.0082
Dissolved Vanadium, V	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	< 0.01	< 0.01	< 0.01	< 0.01
<b>Radiological Parameters</b>				
Dissolved Gross Alpha	33.3	55.9	37.3	23.3
Precision (±)	10.2	11.2	12.4	15.9
MDC	12.9	12.4	16.6	25.1
Dissolved Gross Beta	5.7	6.4	4.2	7.3
Precision (±)	10.7	10.6	15.3	14.8
MDC	17.6	17.5	25.5	24.5
Dissolved Radium 228	0.6	0.6	0.8	1.8
Precision (±)	0.7	0.6	0.7	0.7
MDC	1.2	1.0	1.1	1.1
Dissolved Radium 226	0.1	0.2	0.4	0.56
Precision (±)	0.1	0.1	0.1	0.17
MDC	0.2	0.2	0.2	0.17
Total Radon 222	780	613	640	639
Precision (±)	62.3	58.9	58.7	49.7
MDC	91.0	88.0	87.0	72.3

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	Human Health Standards ARSD	Hydro ID	DC-3	DC-3	DC-3
Sample Collection Date	74:54:01:04	Units	7/23/2012	8/20/2012	9/10/2012

#### Field Measurements

Water Level Below Top of Casing		feet	Dry	Dry	Dry
Water Level Elevation (NGVD 29)		feet AMSL	Dry	Dry	Dry
Well Volume		gal	Dry	Dry	Dry
Volume Purged Before Sampling		gal	---	---	---
Field pH		s.u.	---	---	---
Field Temperature		°C	---	---	---
Field Conductivity		mS/cm	---	---	---
Clarity		observed	---	---	---
Color		observed	---	---	---
Odor		observed	---	---	---

#### Physical Properties

Lab pH	6.5 - 8.5	s.u.	---	---	---
Total Dissolved Solids	1000	mg/L	---	---	---
Lab Conductivity		umhos/cm	---	---	---

#### Common Elements and Ions

Alkalinity, Total as CaCO <sub>3</sub>		mg/L	---	---	---
Bicarbonate as HCO <sub>3</sub>		mg/L	---	---	---
Calcium, Ca		mg/L	---	---	---
Carbonate as CO <sub>3</sub>		mg/L	---	---	---
Chloride, Cl	250	mg/L	---	---	---
Magnesium, Mg		mg/L	---	---	---
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	10	mg/L	---	---	---
Potassium, K		mg/L	---	---	---
Sodium, Na		mg/L	---	---	---
Sulfate, SO <sub>4</sub>	500	mg/L	---	---	---

#### Trace and Minor Elements

Dissolved Arsenic, As	0.01	mg/L	---	---	---
Dissolved Barium, Ba	2	mg/L	---	---	---
Dissolved Boron, B		mg/L	---	---	---
Dissolved Cadmium, Cd	0.005	mg/L	---	---	---
Dissolved Chromium, Cr	0.1	mg/L	---	---	---
Dissolved Copper, Cu	1.0	mg/L	---	---	---
Dissolved Fluoride, F	4	mg/L	---	---	---
Dissolved Iron, Fe		mg/L	---	---	---
Dissolved Lead, Pb	0.015	mg/L	---	---	---
Dissolved Manganese, Mn		mg/L	---	---	---
Total Mercury, Hg	0.002	mg/L	---	---	---

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	Human Health Standards ARSD	Hydro ID	DC-3	DC-3	DC-3
Sample Collection Date	74:54:01:04	Units	7/23/2012	8/20/2012	9/10/2012
Dissolved Molybdenum, Mo		mg/L	---	---	---
Dissolved Nickel, Ni		mg/L	---	---	---
Dissolved Selenium, Se	0.05	mg/L	---	---	---
Dissolved Silver, Ag	0.1	mg/L	---	---	---
Dissolved Uranium, U	0.03	mg/L	---	---	---
Dissolved Vanadium, V		mg/L	---	---	---
Dissolved Zinc, Zn		mg/L	---	---	---
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	15	pCi/L	---	---	---
Precision (±)		pCi/L			
MDC		pCi/L			
Dissolved Gross Beta	4 mrem/yr <sup>1</sup>	pCi/L	---	---	---
Precision (±)		pCi/L			
MDC		pCi/L			
Dissolved Radium 228	5 <sup>2</sup>	pCi/L	---	---	---
Precision (±)		pCi/L			
MDC		pCi/L			
Dissolved Radium 226	5 <sup>2</sup>	pCi/L	---	---	---
Precision (±)		pCi/L			
MDC		pCi/L			
Total Radon 222	300	pCi/L	---	---	---
Precision (±)		pCi/L			
MDC		pCi/L			



Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-3	DC-3	DC-3	DC-3	DC-3
Sample Collection Date	10/2/2012	11/6/2012	12/11/2012	1/8/2013	2/12/2013
<b>Field Measurements</b>					
Water Level Below Top of Casing	24.70	24.35	24.35	24.30	24.27
Water Level Elevation (NGVD 29)	3598.60	3598.95	3598.95	3599.00	3599.03
Well Volume	Insufficient Volume to Sample	Purged Approx. 1 c. Sample Vol. Approx. 1/2 c.	Purged Approx. 1 c. Sample Vol. Approx. 1/2 c.	Purged Approx. 1 c. Sample Vol. Approx. 1/2 c.	Purged Approx. 1 c. Sample Vol. Approx. 1/2 c.
Volume Purged Before Sampling					
Field pH					
Field Temperature					
Field Conductivity					
Clarity					
Color					
Odor					
<b>Physical Properties</b>					
Lab pH	---	---	---	---	---
Total Dissolved Solids	---	11300	10900	11400	11100
Lab Conductivity	---	---	---	---	---
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	---	---	---	---	---
Bicarbonate as HCO <sub>3</sub>	---	---	---	---	---
Calcium, Ca	---	404	475	442	456
Carbonate as CO <sub>3</sub>	---	---	---	---	---
Chloride, Cl	---	1320	1400	1360	1480
Magnesium, Mg	---	701	771	770	768
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	---	1.7	3.2	3.6	5.8
Potassium, K	---	55	50	46	40
Sodium, Na	---	1780	1590	1940	1870
Sulfate, SO <sub>4</sub>	---	6330	5940	6060	6150
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	---	---	---	---	---
Dissolved Barium, Ba	---	---	---	---	---
Dissolved Boron, B	---	---	---	---	---
Dissolved Cadmium, Cd	---	---	---	---	---
Dissolved Chromium, Cr	---	---	---	---	---
Dissolved Copper, Cu	---	---	---	---	---
Dissolved Fluoride, F	---	< 0.1	3.1	4.4	3.0
Dissolved Iron, Fe	---	---	---	---	---
Dissolved Lead, Pb	---	---	---	---	---
Dissolved Manganese, Mn	---	---	---	---	---
Total Mercury, Hg	---	---	---	---	---

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-3	DC-3	DC-3	DC-3	DC-3
Sample Collection Date	10/2/2012	11/6/2012	12/11/2012	1/8/2013	2/12/2013
Dissolved Molybdenum, Mo	---	---	---	---	---
Dissolved Nickel, Ni	---	---	---	---	---
Dissolved Selenium, Se	---	---	---	---	---
Dissolved Silver, Ag	---	---	---	---	---
Dissolved Uranium, U	---	---	---	---	---
Dissolved Vanadium, V	---	---	---	---	---
Dissolved Zinc, Zn	---	---	---	---	---
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	---	---	---	---	---
Precision (±)					
MDC					
Dissolved Gross Beta	---	---	---	---	---
Precision (±)					
MDC					
Dissolved Radium 228	---	---	---	---	---
Precision (±)					
MDC					
Dissolved Radium 226	---	---	---	---	---
Precision (±)					
MDC					
Total Radon 222	---	---	---	---	---
Precision (±)					
MDC					

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-3	DC-3	DC-3	DC-3	DC-3
Sample Collection Date	3/5/2013	4/24/2013	5/21/2013	6/3/2013	9/2/2013
<b>Field Measurements</b>					
Water Level Below Top of Casing	24.43	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Water Level Elevation (NGVD 29)	3598.87				
Well Volume	Purged Approx. 1 1/2 c. Sample Vol. Approx. < 1/2 c.				
Volume Purged Before Sampling					
Field pH					
Field Temperature					
Field Conductivity					
Clarity					
Color					
Odor					
<b>Physical Properties</b>					
Lab pH	---	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Total Dissolved Solids	11300				
Lab Conductivity	---				
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	---	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Bicarbonate as HCO <sub>3</sub>	---				
Calcium, Ca	422				
Carbonate as CO <sub>3</sub>	---				
Chloride, Cl	1450				
Magnesium, Mg	715				
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	7.9				
Potassium, K	36				
Sodium, Na	1640				
Sulfate, SO <sub>4</sub>	6080				
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	---	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Dissolved Barium, Ba	---				
Dissolved Boron, B	---				
Dissolved Cadmium, Cd	---				
Dissolved Chromium, Cr	---				
Dissolved Copper, Cu	---				
Dissolved Fluoride, F	3.4				
Dissolved Iron, Fe	---				
Dissolved Lead, Pb	---				
Dissolved Manganese, Mn	---				
Total Mercury, Hg	---				

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-3	DC-3	DC-3	DC-3	DC-3
Sample Collection Date	3/5/2013	4/24/2013	5/21/2013	6/3/2013	9/2/2013
Dissolved Molybdenum, Mo	---	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Dissolved Nickel, Ni	---				
Dissolved Selenium, Se	---				
Dissolved Silver, Ag	---				
Dissolved Uranium, U	---				
Dissolved Vanadium, V	---				
Dissolved Zinc, Zn	---				
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	---	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Precision (±)					
MDC					
Dissolved Gross Beta	---				
Precision (±)					
MDC					
Dissolved Radium 228	---				
Precision (±)					
MDC					
Dissolved Radium 226	---				
Precision (±)					
MDC					
Total Radon 222	---				
Precision (±)					
MDC					

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-3	DC-3	DC-3	DC-3
Sample Collection Date	12/16/2013	3/10/2014	6/24/2013	9/3/2014
<b>Field Measurements</b>				
Water Level Below Top of Casing	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Water Level Elevation (NGVD 29)				
Well Volume				
Volume Purged Before Sampling				
Field pH				
Field Temperature				
Field Conductivity				
Clarity				
Color				
Odor				
<b>Physical Properties</b>				
Lab pH	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Total Dissolved Solids				
Lab Conductivity				
<b>Common Elements and Ions</b>				
Alkalinity, Total as CaCO <sub>3</sub>	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Bicarbonate as HCO <sub>3</sub>				
Calcium, Ca				
Carbonate as CO <sub>3</sub>				
Chloride, Cl				
Magnesium, Mg				
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)				
Potassium, K				
Sodium, Na				
Sulfate, SO <sub>4</sub>				
<b>Trace and Minor Elements</b>				
Dissolved Arsenic, As	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Dissolved Barium, Ba				
Dissolved Boron, B				
Dissolved Cadmium, Cd				
Dissolved Chromium, Cr				
Dissolved Copper, Cu				
Dissolved Fluoride, F				
Dissolved Iron, Fe				
Dissolved Lead, Pb				
Dissolved Manganese, Mn				
Total Mercury, Hg				

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-3	DC-3	DC-3	DC-3
Sample Collection Date	12/16/2013	3/10/2014	6/24/2013	9/3/2014
Dissolved Molybdenum, Mo	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Dissolved Nickel, Ni				
Dissolved Selenium, Se				
Dissolved Silver, Ag				
Dissolved Uranium, U				
Dissolved Vanadium, V				
Dissolved Zinc, Zn				
<b>Radiological Parameters</b>				
Dissolved Gross Alpha	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Precision (±)				
MDC				
Dissolved Gross Beta				
Precision (±)				
MDC				
Dissolved Radium 228				
Precision (±)				
MDC				
Dissolved Radium 226				
Precision (±)				
MDC				
Total Radon 222				
Precision (±)				
MDC				

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	Human Health Standards ARSD	Hydro ID	DC-4	DC-4	DC-4
Sample Collection Date	74:54:01:04	Units	7/24/2012	8/20/2012	9/10/2012

#### Field Measurements

Water Level Below Top of Casing		feet	19.92	19.98	19.99
Water Level Elevation (NGVD 29)		feet AMSL	3598.42	3598.36	3598.35
Well Volume		gal	0.8	0.8	0.8
Volume Purged Before Sampling		gal	4	3	4
Field pH		s.u.	7.44	7.43	7.48
Field Temperature		°C	11.8	12.2	12.5
Field Conductivity		mS/cm	8.9	8.3	10.52
Clarity		observed	clear	clear	clear
Color		observed	clear	clear	clear
Odor		observed	none	none	none

#### Physical Properties

Lab pH	6.5 - 8.5	s.u.	7.42	7.44	7.47
Total Dissolved Solids	1000	mg/L	10600	11400	10600
Lab Conductivity		umhos/cm	9270	10400	10400

#### Common Elements and Ions

Alkalinity, Total as CaCO <sub>3</sub>		mg/L	334	346	348
Bicarbonate as HCO <sub>3</sub>		mg/L	407	422	424
Calcium, Ca		mg/L	388	389	398
Carbonate as CO <sub>3</sub>		mg/L	< 5	< 5	< 5
Chloride, Cl	250	mg/L	116	114	117
Magnesium, Mg		mg/L	620	604	630
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	10	mg/L	1.7	1.6	1.7
Potassium, K		mg/L	10	10	11
Sodium, Na		mg/L	2080	1820	1820
Sulfate, SO <sub>4</sub>	500	mg/L	7450	6920	7330

#### Trace and Minor Elements

Dissolved Arsenic, As	0.01	mg/L	< 0.001	< 0.001	0.001
Dissolved Barium, Ba	2	mg/L	< 0.05	< 0.05	< 0.05
Dissolved Boron, B		mg/L	1.8	2.0	2.3
Dissolved Cadmium, Cd	0.005	mg/L	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	0.1	mg/L	< 0.005	< 0.005	0.008
Dissolved Copper, Cu	1.0	mg/L	< 0.005	< 0.005	0.008
Dissolved Fluoride, F	4	mg/L	2.9	2.5	2.6
Dissolved Iron, Fe		mg/L	< 0.03	< 0.03	< 0.03
Dissolved Lead, Pb	0.015	mg/L	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn		mg/L	0.013	0.004	0.002
Total Mercury, Hg	0.002	mg/L	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	Human Health Standards ARSD	Hydro ID	DC-4	DC-4	DC-4
Sample Collection Date	74:54:01:04	Units	7/24/2012	8/20/2012	9/10/2012
Dissolved Molybdenum, Mo		mg/L	0.003	0.002	0.003
Dissolved Nickel, Ni		mg/L	< 0.005	< 0.005	0.008
Dissolved Selenium, Se	0.05	mg/L	0.032	0.034	0.042
Dissolved Silver, Ag	0.1	mg/L	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.03	mg/L	0.0157	0.0159	0.0171
Dissolved Vanadium, V		mg/L	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn		mg/L	0.02	0.02	< 0.01
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	15	pCi/L	-5	16.5	-10
Precision (±)		pCi/L	18.5	22.4	21.1
MDC		pCi/L	31.8	36.2	36.6
Dissolved Gross Beta	4 mrem/yr <sup>1</sup>	pCi/L	-9	-20	-100
Precision (±)		pCi/L	24.4	29.4	44.4
MDC		pCi/L	41.2	49.8	77.7
Dissolved Radium 228	5 <sup>2</sup>	pCi/L	-0.5	0.04	0.4
Precision (±)		pCi/L	0.7	0.7	0.6
MDC		pCi/L	1.2	1.2	0.9
Dissolved Radium 226	5 <sup>2</sup>	pCi/L	0.4	0.2	0.2
Precision (±)		pCi/L	0.2	0.1	0.1
MDC		pCi/L	0.2	0.1	0.1
Total Radon 222	300	pCi/L	---	---	---
Precision (±)		pCi/L	---	---	---
MDC		pCi/L	---	---	---



Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-4	DC-4	DC-4	DC-4	DC-4
Sample Collection Date	10/2/2012	11/5/2012	12/10/2012	1/7/2013	2/11/2013
<b>Field Measurements</b>					
Water Level Below Top of Casing	19.98	19.95	19.98	19.96	19.97
Water Level Elevation (NGVD 29)	3598.36	3598.39	3598.36	3598.38	3598.37
Well Volume	0.8	0.8	0.8	0.8	0.8
Volume Purged Before Sampling	3	3	3	3	2.52
Field pH	7.50	7.4	7.6	7.5	7.6
Field Temperature	13.0	12.4	11.1	11.3	10.3
Field Conductivity	10.37	10.77	10.70	10.76	10.79
Clarity	clear	clear	clear	clear	clear
Color	clear	clear	clear	clear	clear
Odor	none	none	none	none	none
<b>Physical Properties</b>					
Lab pH	7.42	7.36	7.29	7.35	7.47
Total Dissolved Solids	11400	10700	10800	11300	11100
Lab Conductivity	10300	11200	10200	11700	11100
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	358	346	346	340	344
Bicarbonate as HCO <sub>3</sub>	436	422	422	414	419
Calcium, Ca	414	380	394	430	353
Carbonate as CO <sub>3</sub>	< 5	< 5	< 5	< 5	< 5
Chloride, Cl	123	128	129	131	136
Magnesium, Mg	651	635	661	715	644
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	1.8	1.8	1.7	1.8	1.9
Potassium, K	11	11	10	12	9
Sodium, Na	2010	1780	1820	2080	2220
Sulfate, SO <sub>4</sub>	7570	7230	7470	7450	7970
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Barium, Ba	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	2.4	2.28	2.27	2.5	2.10
Dissolved Cadmium, Cd	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	0.005	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Copper, Cu	0.012	< 0.005	0.011	< 0.005	0.008
Dissolved Fluoride, F	2.7	2.2	2.2	2.2	1.8
Dissolved Iron, Fe	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dissolved Lead, Pb	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	0.002	0.002	0.002	0.001	< 0.001
Total Mercury, Hg	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-4	DC-4	DC-4	DC-4	DC-4
Sample Collection Date	10/2/2012	11/5/2012	12/10/2012	1/7/2013	2/11/2013
Dissolved Molybdenum, Mo	0.003	0.002	0.009	< 0.001	0.003
Dissolved Nickel, Ni	0.016	0.009	< 0.005	< 0.005	0.007
Dissolved Selenium, Se	0.037	0.036	0.036	0.035	0.038
Dissolved Silver, Ag	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.0153	0.0160	0.0158	0.0149	0.0160
Dissolved Vanadium, V	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	0.02	< 0.01	0.02	< 0.01	0.02
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	29.6	-2	13.3	17.7	-20
Precision (±)	24.0	20.5	21.4	21.7	26.5
MDC	37.8	34.8	34.9	35.2	46.2
Dissolved Gross Beta	-10	-10	-7	-20	-20
Precision (±)	31.0	26.9	27.0	25.0	26.8
MDC	52.3	45.6	45.5	42.6	45.7
Dissolved Radium 228	0.6	1.9	0.4	2.4	0.6
Precision (±)	0.7	1.1	0.9	0.8	1.2
MDC	1.1	1.7	1.6	1.1	2.0
Dissolved Radium 226	0.2	-0.06	0.2	0.05	0.007
Precision (±)	0.1	0.06	0.2	0.1	0.1
MDC	0.1	0.1	0.2	0.2	0.2
Total Radon 222	---	---	---	---	---
Precision (±)	---	---	---	---	---
MDC	---	---	---	---	---

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-4	DC-4	DC-4	DC-4	DC-4
Sample Collection Date	3/5/2013	4/24/2013	5/21/2013	6/3/2013	9/2/2013
<b>Field Measurements</b>					
Water Level Below Top of Casing	19.92	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Water Level Elevation (NGVD 29)	3598.42				
Well Volume	0.8				
Volume Purged Before Sampling	2.52				
Field pH	7.6				
Field Temperature	10.4				
Field Conductivity	10.58				
Clarity	clear				
Color	clear				
Odor	none				
<b>Physical Properties</b>					
Lab pH	7.36	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Total Dissolved Solids	11400				
Lab Conductivity	10800				
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	358	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Bicarbonate as HCO <sub>3</sub>	436				
Calcium, Ca	402				
Carbonate as CO <sub>3</sub>	< 5				
Chloride, Cl	138				
Magnesium, Mg	708				
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	1.9				
Potassium, K	11				
Sodium, Na	2000				
Sulfate, SO <sub>4</sub>	7650				
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	0.002	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Dissolved Barium, Ba	< 0.05				
Dissolved Boron, B	2.26				
Dissolved Cadmium, Cd	< 0.001				
Dissolved Chromium, Cr	0.009				
Dissolved Copper, Cu	0.009				
Dissolved Fluoride, F	1.6				
Dissolved Iron, Fe	< 0.03				
Dissolved Lead, Pb	< 0.001				
Dissolved Manganese, Mn	0.001				
Total Mercury, Hg	< 0.0001				

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-4	DC-4	DC-4	DC-4	DC-4
Sample Collection Date	3/5/2013	4/24/2013	5/21/2013	6/3/2013	9/2/2013
Dissolved Molybdenum, Mo	0.003	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Dissolved Nickel, Ni	0.007				
Dissolved Selenium, Se	0.040				
Dissolved Silver, Ag	< 0.001				
Dissolved Uranium, U	0.0160				
Dissolved Vanadium, V	< 0.01				
Dissolved Zinc, Zn	0.02				
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	3.7	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Precision (±)	22.9				
MDC	38.3				
Dissolved Gross Beta	8.7				
Precision (±)	27.3				
MDC	45.6				
Dissolved Radium 228	0.02				
Precision (±)	0.9				
MDC	1.6				
Dissolved Radium 226	0.3				
Precision (±)	0.2				
MDC	0.2				
Total Radon 222	---				
Precision (±)	---				
MDC	---				

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-4	DC-4	DC-4	DC-4
Sample Collection Date	12/16/2013	3/10/2014	6/24/2013	9/3/2014
<b>Field Measurements</b>				
Water Level Below Top of Casing	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Water Level Elevation (NGVD 29)				
Well Volume				
Volume Purged Before Sampling				
Field pH				
Field Temperature				
Field Conductivity				
Clarity				
Color				
Odor				
<b>Physical Properties</b>				
Lab pH	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Total Dissolved Solids				
Lab Conductivity				
<b>Common Elements and Ions</b>				
Alkalinity, Total as CaCO <sub>3</sub>	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Bicarbonate as HCO <sub>3</sub>				
Calcium, Ca				
Carbonate as CO <sub>3</sub>				
Chloride, Cl				
Magnesium, Mg				
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)				
Potassium, K				
Sodium, Na				
Sulfate, SO <sub>4</sub>				
<b>Trace and Minor Elements</b>				
Dissolved Arsenic, As	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Dissolved Barium, Ba				
Dissolved Boron, B				
Dissolved Cadmium, Cd				
Dissolved Chromium, Cr				
Dissolved Copper, Cu				
Dissolved Fluoride, F				
Dissolved Iron, Fe				
Dissolved Lead, Pb				
Dissolved Manganese, Mn				
Total Mercury, Hg				

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	DC-4	DC-4	DC-4	DC-4
Sample Collection Date	12/16/2013	3/10/2014	6/24/2013	9/3/2014
Dissolved Molybdenum, Mo	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Dissolved Nickel, Ni				
Dissolved Selenium, Se				
Dissolved Silver, Ag				
Dissolved Uranium, U				
Dissolved Vanadium, V				
Dissolved Zinc, Zn				
<b>Radiological Parameters</b>				
Dissolved Gross Alpha	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle	Not Sampled Due to Eagle
Precision ( $\pm$ )				
MDC				
Dissolved Gross Beta				
Precision ( $\pm$ )				
MDC				
Dissolved Radium 228				
Precision ( $\pm$ )				
MDC				
Dissolved Radium 226				
Precision ( $\pm$ )				
MDC				
Total Radon 222				
Precision ( $\pm$ )				
MDC				

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	Human Health Standards ARSD	Hydro ID	BC-1	BC-1	BC-1
Sample Collection Date	74:54:01:04	Units	7/23/2012	8/20/2012	9/10/2012
<b>Field Measurements</b>		Y			
Water Level Below Top of Casing		feet	15.23	15.60	15.87
Water Level Elevation (NGVD 29)		feet AMSL	3624.61	3624.24	3623.97
Well Volume		gal	2.7	2.7	2.6
Volume Purged Before Sampling		gal	11	9	9
Field pH		s.u.	7.05	7.03	7.18
Field Temperature		°C	11.9	12.7	12.2
Field Conductivity		mS/cm	3.5	3.3	3.64
Clarity		observed	clear	clear	clear
Color		observed	clear	clear	clear
Odor		observed	none	none	none
<b>Physical Properties</b>					
Lab pH	6.5 - 8.5	s.u.	7.08	7.09	7.17
Total Dissolved Solids	1000	mg/L	3640	3720	3660
Lab Conductivity		umhos/cm	3200	3630	3610
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>		mg/L	288	290	300
Bicarbonate as HCO <sub>3</sub>		mg/L	351	354	366
Calcium, Ca		mg/L	515	525	513
Carbonate as CO <sub>3</sub>		mg/L	< 5	< 5	< 5
Chloride, Cl	250	mg/L	28	25	25
Magnesium, Mg		mg/L	236	238	234
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	10	mg/L	< 0.1	0.2	0.3
Potassium, K		mg/L	13	12	13
Sodium, Na		mg/L	206	175	185
Sulfate, SO <sub>4</sub>	500	mg/L	2360	2170	2160
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	0.01	mg/L	< 0.001	< 0.001	< 0.001
Dissolved Barium, Ba	2	mg/L	< 0.05	< 0.05	< 0.05
Dissolved Boron, B		mg/L	0.65	0.66	0.72
Dissolved Cadmium, Cd	0.005	mg/L	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	0.1	mg/L	< 0.005	0.005	< 0.005
Dissolved Copper, Cu	1.0	mg/L	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	4	mg/L	0.6	0.6	0.6
Dissolved Iron, Fe		mg/L	0.06	< 0.03	0.08
Dissolved Lead, Pb	0.015	mg/L	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn		mg/L	0.110	0.061	0.057
Total Mercury, Hg	0.002	mg/L	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	Human Health Standards ARSD	Hydro ID	BC-1	BC-1	BC-1
Sample Collection Date	74:54:01:04	Units	7/23/2012	8/20/2012	9/10/2012
Dissolved Molybdenum, Mo		mg/L	0.005	0.005	0.005
Dissolved Nickel, Ni		mg/L	< 0.005	< 0.005	0.013
Dissolved Selenium, Se	0.05	mg/L	0.001	0.001	0.002
Dissolved Silver, Ag	0.1	mg/L	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.03	mg/L	0.0757	0.0842	0.0854
Dissolved Vanadium, V		mg/L	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn		mg/L	< 0.01	< 0.01	< 0.01
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	15	pCi/L	65.9	71.1	78.7
Precision (±)		pCi/L	9.1	10.8	10.8
MDC		pCi/L	10.5	12.8	12.7
Dissolved Gross Beta	4 mrem/yr <sup>1</sup>	pCi/L	4.4	-4	0.3
Precision (±)		pCi/L	6.2	10.6	11.0
MDC		pCi/L	10.2	17.7	18.3
Dissolved Radium 228	5 <sup>2</sup>	pCi/L	0.5	0.7	1.1
Precision (±)		pCi/L	0.7	0.7	0.6
MDC		pCi/L	1.1	1.1	0.9
Dissolved Radium 226	5 <sup>2</sup>	pCi/L	0.4	0.1	0.3
Precision (±)		pCi/L	0.2	0.1	0.1
MDC		pCi/L	0.2	0.1	0.1
Total Radon 222	300	pCi/L	---	---	---
Precision (±)		pCi/L	---	---	---
MDC		pCi/L	---	---	---



Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	BC-1	BC-1	BC-1	BC-1	BC-1
Sample Collection Date	10/2/2012	11/5/2012	12/10/2012	1/7/2013	2/11/2013
<b>Field Measurements</b>					
Water Level Below Top of Casing	16.01	15.96	15.86	15.72	15.59
Water Level Elevation (NGVD 29)	3623.83	3623.88	3623.98	3624.12	3624.25
Well Volume	2.6	2.6	2.6	2.7	2.7
Volume Purged Before Sampling	9	7.8	8.25	8.25	8.1
Field pH	7.10	7.1	7.3	7.2	7.30
Field Temperature	12.4	12.2	11.0	11.5	10.6
Field Conductivity	3.75	3.79	3.77	3.76	3.73
Clarity	clear	clear	clear	clear	clear
Color	clear	clear	clear	clear	clear
Odor	none	none	none	none	none
<b>Physical Properties</b>					
Lab pH	7.15	7.20	7.10	7.06	7.25
Total Dissolved Solids	3480	3670	3660	3800	3730
Lab Conductivity	3550	3580	3500	4050	3740
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	292	294	294	294	292
Bicarbonate as HCO <sub>3</sub>	356	358	358	358	356
Calcium, Ca	517	505	442	516	464
Carbonate as CO <sub>3</sub>	< 5	< 5	< 5	< 5	< 5
Chloride, Cl	26	26	25	25	27
Magnesium, Mg	240	234	225	251	230
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	< 0.1	0.2	0.2	0.2	0.2
Potassium, K	13	12	10	12	11
Sodium, Na	197	194	174	194	198
Sulfate, SO <sub>4</sub>	2300	2230	2220	2190	2210
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Barium, Ba	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	0.73	0.71	0.72	0.77	0.70
Dissolved Cadmium, Cd	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Copper, Cu	0.006	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	0.7	0.6	0.6	0.7	0.6
Dissolved Iron, Fe	0.06	0.13	0.17	0.08	0.05
Dissolved Lead, Pb	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	0.056	0.049	0.042	0.034	0.040
Total Mercury, Hg	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	BC-1	BC-1	BC-1	BC-1	BC-1
Sample Collection Date	10/2/2012	11/5/2012	12/10/2012	1/7/2013	2/11/2013
Dissolved Molybdenum, Mo	0.006	0.012	0.006	0.004	0.006
Dissolved Nickel, Ni	0.022	0.005	< 0.005	< 0.005	0.006
Dissolved Selenium, Se	0.003	0.003	0.001	< 0.001	< 0.001
Dissolved Silver, Ag	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.0802	0.0822	0.0818	0.0877	0.111
Dissolved Vanadium, V	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	< 0.01	0.02	< 0.01	< 0.01	< 0.01
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	68.9	50.1	78.0	69.6	108
Precision (±)	10.8	10.7	11.3	10	13.0
MDC	12.9	14.0	13.1	11.6	15.9
Dissolved Gross Beta	7.8	19.8	27.0	15.7	22.8
Precision (±)	10.4	10.6	11.8	10.9	10.3
MDC	17.0	17.0	18.8	17.7	16.3
Dissolved Radium 228	4.3	1.7	0.7	1.5	0.8
Precision (±)	0.9	1	0.9	0.7	1.0
MDC	1.1	1.5	1.5	1.1	1.7
Dissolved Radium 226	0.8	0.1	0.3	0.2	0.1
Precision (±)	0.1	0.08	0.2	0.1	0.1
MDC	0.09	0.1	0.2	0.2	0.2
Total Radon 222	---	---	---	---	---
Precision (±)	---	---	---	---	---
MDC	---	---	---	---	---

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	BC-1	BC-1	BC-1	BC-1	BC-1
Sample Collection Date	3/5/2013	4/24/2013	5/21/2013	6/3/2013	9/2/2013
<b>Field Measurements</b>					
Water Level Below Top of Casing	15.45	15.26	15.15	15.14	14.95
Water Level Elevation (NGVD 29)	3624.39	3624.58	3624.69	3624.70	3624.89
Well Volume	2.7	2.7	2.8	2.8	2.8
Volume Purged Before Sampling	8.25	8.25	6.3	6.3	8.4
Field pH	7.3	7.3	7.2	7.2	7.2
Field Temperature	10.6	9.4	10.0	10.9	12.1
Field Conductivity	3.68	3.69	3.68	3.73	3.69
Clarity	clear	clear	clear	clear	clear
Color	clear	clear	clear	clear	clear
Odor	none	none	none	none	none
<b>Physical Properties</b>					
Lab pH	7.09	7.11	7.11	7.08	7.05
Total Dissolved Solids	3740	3790	2770	3810	3760
Lab Conductivity	3710	3600	3840	3680	3700
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	300	292	292	312	300
Bicarbonate as HCO <sub>3</sub>	366	356	356	380	366
Calcium, Ca	500	505	518	513	518
Carbonate as CO <sub>3</sub>	< 5	< 5	< 5	< 5	< 5
Chloride, Cl	26	26	25	26	25
Magnesium, Mg	243	225	249	250	247
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	0.3	0.3	0.3	0.3	0.3
Potassium, K	11	11	11	12	12
Sodium, Na	190	194	197	198	199
Sulfate, SO <sub>4</sub>	2290	2220	2300	2190	2330
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	0.002	< 0.001	< 0.001	0.003	< 0.001
Dissolved Barium, Ba	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	0.67	0.56	0.64	0.75	0.73
Dissolved Cadmium, Cd	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	0.007	0.005	< 0.005	< 0.005	0.008
Dissolved Copper, Cu	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	0.5	0.7	0.6	0.8	0.5
Dissolved Iron, Fe	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dissolved Lead, Pb	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	0.031	0.030	0.027	0.029	0.034
Total Mercury, Hg	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	BC-1	BC-1	BC-1	BC-1	BC-1
Sample Collection Date	3/5/2013	4/24/2013	5/21/2013	6/3/2013	9/2/2013
Dissolved Molybdenum, Mo	0.006	0.005	0.005	0.005	0.005
Dissolved Nickel, Ni	0.009	0.011	0.007	0.010	0.009
Dissolved Selenium, Se	0.008	0.002	0.002	0.002	0.004
Dissolved Silver, Ag	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.0891	0.100	0.0977	0.101	0.108
Dissolved Vanadium, V	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	0.02	< 0.01	< 0.01	0.01	< 0.01
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	72.1	91.4	83.3	78.0	80.5
Precision (±)	10.2	10.8	10.6	13.8	10.5
MDC	12.3	10.3	12.0	18.6	11.4
Dissolved Gross Beta	17.4	16.0	13.1	2.6	19.8
Precision (±)	9.7	9.4	8.8	13.5	12.1
MDC	15.5	15.2	14.2	22.3	19.5
Dissolved Radium 228	-0.5	0.2	0.8	1.5	1.3
Precision (±)	1.1	0.8	0.7	0.7	0.8
MDC	1.8	1.3	1.1	1.0	1.3
Dissolved Radium 226	0.2	0.2	0.4	0.2	0.1
Precision (±)	0.2	0.1	0.1	0.1	0.1
MDC	0.2	0.2	0.1	0.2	0.2
Total Radon 222	---	---	---	---	854
Precision (±)	---	---	---	---	51.2
MDC	---	---	---	---	70.0

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	BC-1	BC-1	BC-1	BC-1
Sample Collection Date	12/16/2013	3/10/2014	6/24/2014	9/3/2014
<b>Field Measurements</b>				
Water Level Below Top of Casing	14.2	13.49	12.72	13.29
Water Level Elevation (NGVD 29)	3625.64	3626.35	3627.12	3626.55
Well Volume	2.92	3.03	3.20	3.07
Volume Purged Before Sampling	8.76	9.09	9.60	9.21
Field pH	7.3	7.2	7.3	7.2
Field Temperature	11.5	10.6	10.5	11.9
Field Conductivity	3.74	3.68	3.64	3.53
Clarity	clear	clear	clear	clear
Color	clear	clear	clear	clear
Odor	none	none	none	none
<b>Physical Properties</b>				
Lab pH	7.01	7.11	7.06	7.23
Total Dissolved Solids	3700	3430	3500	3590
Lab Conductivity	3730	3690	3400	3170
<b>Common Elements and Ions</b>				
Alkalinity, Total as CaCO <sub>3</sub>	304	294	288	296
Bicarbonate as HCO <sub>3</sub>	371	358	351	361
Calcium, Ca	527	496	493	521
Carbonate as CO <sub>3</sub>	< 5	< 5	< 5	< 5
Chloride, Cl	22	22	24	23
Magnesium, Mg	223	230	188	213
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	< 0.1	< 0.1	< 0.1	< 0.1
Potassium, K	12	11	11	12
Sodium, Na	177	186	175	173
Sulfate, SO <sub>4</sub>	2160	2170	2250	2060
<b>Trace and Minor Elements</b>				
Dissolved Arsenic, As	0.002	< 0.001	0.002	0.002
Dissolved Barium, Ba	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	0.66	0.66	0.58	0.7
Dissolved Cadmium, Cd	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Copper, Cu	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	0.8	0.6	0.5	0.4
Dissolved Iron, Fe	0.06	< 0.03	0.05	0.10
Dissolved Lead, Pb	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	0.027	0.033	0.077	0.075
Total Mercury, Hg	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	BC-1	BC-1	BC-1	BC-1
Sample Collection Date	12/16/2013	3/10/2014	6/24/2014	9/3/2014
Dissolved Molybdenum, Mo	0.006	0.005	0.004	0.005
Dissolved Nickel, Ni	0.005	0.009	0.010	0.005
Dissolved Selenium, Se	0.003	0.003	0.002	0.002
Dissolved Silver, Ag	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.0956	0.0829	0.0660	0.0686
Dissolved Vanadium, V	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	< 0.01	< 0.01	< 0.01	< 0.01
<b>Radiological Parameters</b>				
Dissolved Gross Alpha	99.7	98.4	89.4	68.3
Precision (±)	12.1	12.0	11.3	12.0
MDC	10.5	10.6	9.3	14.9
Dissolved Gross Beta	22.6	21.2	19.7	20.8
Precision (±)	8.7	9.1	9.0	12.0
MDC	13.6	14.3	14.3	19.3
Dissolved Radium 228	0.9	1	1.1	1.8
Precision (±)	0.7	0.6	0.7	0.7
MDC	1.1	1.0	1.1	1.0
Dissolved Radium 226	0.3	0.3	0.6	0.64
Precision (±)	0.1	0.1	0.2	0.17
MDC	0.1	0.2	0.2	0.17
Total Radon 222	955	934	800	782
Precision (±)	63.2	61.3	59.5	50.3
MDC	89.0	86.0	85.0	70.0

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	Human Health Standards ARSD	Hydro ID	BC-2	BC-2	BC-2
Sample Collection Date	74:54:01:04	Units	7/23/2012	8/20/2012	9/10/2012

#### Field Measurements

Water Level Below Top of Casing		feet	5.91	6.29	6.47
Water Level Elevation (NGVD 29)		feet AMSL	3630.42	3630.04	3629.86
Well Volume		gal	3.6	3.5	3.5
Volume Purged Before Sampling		gal	10.8	10.5	10.5
Field pH		s.u.	7.12	7.10	7.19
Field Temperature		°C	10.3	10.1	10.3
Field Conductivity		mS/cm	3.7	3.6	3.87
Clarity		observed	clear	clear	clear
Color		observed	clear	clear	clear
Odor		observed	none	none	none

#### Physical Properties

Lab pH	6.5 - 8.5	s.u.	7.07	7.11	7.22
Total Dissolved Solids	1000	mg/L	3840	3910	3870
Lab Conductivity		umhos/cm	3430	3860	3850

#### Common Elements and Ions

Alkalinity, Total as CaCO <sub>3</sub>		mg/L	230	234	234
Bicarbonate as HCO <sub>3</sub>		mg/L	280	285	285
Calcium, Ca		mg/L	544	516	521
Carbonate as CO <sub>3</sub>		mg/L	< 5	< 5	< 5
Chloride, Cl	250	mg/L	21	21	21
Magnesium, Mg		mg/L	200	218	220
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	10	mg/L	< 0.1	0.2	0.2
Potassium, K		mg/L	12	13	13
Sodium, Na		mg/L	278	258	278
Sulfate, SO <sub>4</sub>	500	mg/L	2350	2390	2400

#### Trace and Minor Elements

Dissolved Arsenic, As	0.01	mg/L	< 0.001	< 0.001	< 0.001
Dissolved Barium, Ba	2	mg/L	< 0.05	< 0.05	< 0.05
Dissolved Boron, B		mg/L	0.44	0.46	0.51
Dissolved Cadmium, Cd	0.005	mg/L	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	0.1	mg/L	< 0.005	< 0.005	< 0.005
Dissolved Copper, Cu	1.0	mg/L	0.006	< 0.005	< 0.005
Dissolved Fluoride, F	4	mg/L	0.8	0.7	0.7
Dissolved Iron, Fe		mg/L	< 0.03	< 0.03	< 0.03
Dissolved Lead, Pb	0.015	mg/L	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn		mg/L	0.042	0.045	0.039
Total Mercury, Hg	0.002	mg/L	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	Human Health Standards ARSD	Hydro ID	BC-2	BC-2	BC-2
Sample Collection Date	74:54:01:04	Units	7/23/2012	8/20/2012	9/10/2012
Dissolved Molybdenum, Mo		mg/L	0.012	0.012	0.013
Dissolved Nickel, Ni		mg/L	< 0.005	< 0.005	0.011
Dissolved Selenium, Se	0.05	mg/L	< 0.001	< 0.001	0.002
Dissolved Silver, Ag	0.1	mg/L	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.03	mg/L	0.0228	0.0240	0.0241
Dissolved Vanadium, V		mg/L	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn		mg/L	< 0.01	< 0.01	< 0.01
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	15	pCi/L	20.0	3.5	1.8
Precision (±)		pCi/L	7.8	9.7	7.0
MDC		pCi/L	11.5	16.1	11.6
Dissolved Gross Beta	4 mrem/yr <sup>1</sup>	pCi/L	4.5	0.5	-10
Precision (±)		pCi/L	6.5	11.6	11.8
MDC		pCi/L	10.7	19.5	20.1
Dissolved Radium 228	5 <sup>2</sup>	pCi/L	0.1	-0.1	0.3
Precision (±)		pCi/L	0.6	0.6	0.6
MDC		pCi/L	1	1.1	0.9
Dissolved Radium 226	5 <sup>2</sup>	pCi/L	0.07	0.3	0.3
Precision (±)		pCi/L	0.1	0.1	0.1
MDC		pCi/L	0.2	0.1	0.1
Total Radon 222	300	pCi/L	---	---	---
Precision (±)		pCi/L	---	---	---
MDC		pCi/L	---	---	---



Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	BC-2	BC-2	BC-2	BC-2	BC-2
Sample Collection Date	10/2/2012	11/5/2012	12/10/2012	1/7/2013	2/11/2013
<b>Field Measurements</b>					
Water Level Below Top of Casing	6.23	5.60	5.27	5.12	4.95
Water Level Elevation (NGVD 29)	3630.1	3630.73	3631.06	3631.21	3631.38
Well Volume	3.6	3.7	3.7	3.7	3.77
Volume Purged Before Sampling	12	15	11.25	11.25	11.31
Field pH	7.10	7.3	7.3	7.2	7.3
Field Temperature	10.1	9.9	9.1	9.40	9.2
Field Conductivity	4.06	4.07	4.03	4.03	3.99
Clarity	clear	clear	clear	clear	clear
Color	clear	clear	clear	clear	clear
Odor	none	none	none	none	none
<b>Physical Properties</b>					
Lab pH	7.25	7.20	7.10	7.08	7.19
Total Dissolved Solids	3880	3910	3790	3880	3900
Lab Conductivity	3810	3870	3700	4200	3910
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	232	230	234	230	230
Bicarbonate as HCO <sub>3</sub>	283	280	285	280	280
Calcium, Ca	525	515	469	540	449
Carbonate as CO <sub>3</sub>	< 5	< 5	< 5	< 5	< 5
Chloride, Cl	23	22	22	22	23
Magnesium, Mg	216	223	212	230	212
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	< 0.1	0.2	0.2	0.2	0.3
Potassium, K	13	12	11	13	11
Sodium, Na	290	294	256	282	291
Sulfate, SO <sub>4</sub>	2520	2380	2340	2360	2360
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Barium, Ba	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	0.51	0.51	0.50	0.5	0.47
Dissolved Cadmium, Cd	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Copper, Cu	0.006	< 0.005	0.008	< 0.005	< 0.005
Dissolved Fluoride, F	0.8	0.7	0.7	0.8	0.7
Dissolved Iron, Fe	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dissolved Lead, Pb	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	0.040	0.040	0.038	0.040	0.044
Total Mercury, Hg	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	BC-2	BC-2	BC-2	BC-2	BC-2
Sample Collection Date	10/2/2012	11/5/2012	12/10/2012	1/7/2013	2/11/2013
Dissolved Molybdenum, Mo	0.013	0.013	0.014	0.012	0.014
Dissolved Nickel, Ni	0.022	0.006	< 0.005	< 0.005	0.007
Dissolved Selenium, Se	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Silver, Ag	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.0230	0.0256	0.0230	0.0259	0.0297
Dissolved Vanadium, V	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	< 0.01	0.01	< 0.01	< 0.01	< 0.01
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	25.9	12.6	23.4	25.2	25.8
Precision (±)	9.3	8.6	9.3	8.6	8.9
MDC	13.5	13.4	13.7	12.4	13.1
Dissolved Gross Beta	-10	9.2	7.8	-2	7.3
Precision (±)	11.2	10.2	11.5	9.4	9.2
MDC	19.1	16.8	19.1	15.8	15.1
Dissolved Radium 228	-0.1	0.5	0.7	0.8	0.7
Precision (±)	0.6	1.2	0.9	0.7	1.1
MDC	1	2.1	1.4	1.0	1.7
Dissolved Radium 226	0.5	0.02	0.2	0.2	0.08
Precision (±)	0.1	0.07	0.1	0.1	0.1
MDC	0.08	0.1	0.2	0.2	0.2
Total Radon 222	---	---	---	---	---
Precision (±)	---	---	---	---	---
MDC	---	---	---	---	---

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	BC-2	BC-2	BC-2	BC-2	BC-2
Sample Collection Date	3/5/2013	4/24/2013	5/21/2013	6/3/2013	9/2/2013
<b>Field Measurements</b>					
Water Level Below Top of Casing	4.81	4.34	4.37	4.21	6.55
Water Level Elevation (NGVD 29)	3631.52	3631.99	3631.96	3632.12	3629.78
Well Volume	3.8	3.9	3.9	3.9	3.5
Volume Purged Before Sampling	11.40	11.7	13.5	13.65	10.5
Field pH	7.3	7.3	7.3	7.30	7.3
Field Temperature	9.0	8.8	9.0	9.9	10.4
Field Conductivity	3.92	3.92	3.91	3.95	3.93
Clarity	clear	clear	clear	clear	clear
Color	clear	clear	clear	clear	clear
Odor	none	none	none	none	none
<b>Physical Properties</b>					
Lab pH	7.07	7.18	7.15	7.11	7.12
Total Dissolved Solids	3900	3820	3880	3970	3920
Lab Conductivity	3920	3850	4000	3850	3860
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	232	228	228	230	232
Bicarbonate as HCO <sub>3</sub>	283	278	278	280	283
Calcium, Ca	520	523	516	517	518
Carbonate as CO <sub>3</sub>	< 5	< 5	< 5	< 5	< 5
Chloride, Cl	22	22	22	22	21
Magnesium, Mg	220	214	221	225	224
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	0.3	0.3	0.3	0.3	0.3
Potassium, K	12	12	12	13	12
Sodium, Na	272	279	274	284	266
Sulfate, SO <sub>4</sub>	2530	2490	2330	2470	2290
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	< 0.001	< 0.001	< 0.001	0.003	< 0.001
Dissolved Barium, Ba	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	0.52	0.54	0.49	0.48	0.56
Dissolved Cadmium, Cd	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	< 0.005	0.009	< 0.005	< 0.005	0.005
Dissolved Copper, Cu	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	0.6	0.8	0.7	0.9	0.6
Dissolved Iron, Fe	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dissolved Lead, Pb	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	0.038	0.036	0.036	0.041	0.032
Total Mercury, Hg	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	BC-2	BC-2	BC-2	BC-2	BC-2
Sample Collection Date	3/5/2013	4/24/2013	5/21/2013	6/3/2013	9/2/2013
Dissolved Molybdenum, Mo	0.014	0.013	0.013	0.012	0.014
Dissolved Nickel, Ni	0.006	0.011	0.007	0.012	0.009
Dissolved Selenium, Se	0.001	0.001	< 0.001	0.001	0.002
Dissolved Silver, Ag	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.0246	0.0270	0.0254	0.0258	0.0292
Dissolved Vanadium, V	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	< 0.01	< 0.01	< 0.01	0.03	< 0.01
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	32.5	38.9	24.8	24.5	20.9
Precision (±)	8.9	9.4	8.6	8.6	8.3
MDC	12.7	12.3	12.5	12.7	12.1
Dissolved Gross Beta	12.0	-3	11.3	-0.5	7.4
Precision (±)	8.8	9.9	9.1	8.6	11.4
MDC	14.3	16.7	14.9	14.3	18.8
Dissolved Radium 228	0.5	0.01	1.2	2.1	1
Precision (±)	1.1	0.8	0.7	0.7	0.8
MDC	1.9	1.3	1.1	1.1	1.3
Dissolved Radium 226	0.4	0.2	0.3	0.3	0.05
Precision (±)	0.2	0.1	0.1	0.1	0.1
MDC	0.2	0.2	0.1	0.2	0.2
Total Radon 222	---	---	---	---	972
Precision (±)	---	---	---	---	52.1
MDC	---	---	---	---	69.0

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	BC-2	BC-2	BC-2	BC-2
Sample Collection Date	12/16/2013	3/10/2014	6/24/2014	9/3/2014
<b>Field Measurements</b>				
Water Level Below Top of Casing	4.76	4.19	3.50	5.30
Water Level Elevation (NGVD 29)	3631.57	3632.14	3632.83	3631.03
Well Volume	3.8	3.9	4.0	3.71
Volume Purged Before Sampling	11.4	11.70	12	11.13
Field pH	7.3	7.3	7.3	7.2
Field Temperature	9.7	9.6	9.5	10.1
Field Conductivity	3.93	3.94	3.89	3.76
Clarity	clear	clear	clear	clear
Color	clear	clear	clear	clear
Odor	none	none	none	none
<b>Physical Properties</b>				
Lab pH	7.11	7.14	7.03	7.35
Total Dissolved Solids	3830	3690	3740	3880
Lab Conductivity	3850	3910	3680	3790
<b>Common Elements and Ions</b>				
Alkalinity, Total as CaCO <sub>3</sub>	238	234	236	234
Bicarbonate as HCO <sub>3</sub>	290	285	288	285
Calcium, Ca	527	499	515	505
Carbonate as CO <sub>3</sub>	< 5	< 5	< 5	< 5
Chloride, Cl	19	19	21	20
Magnesium, Mg	205	218	204	216
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	< 0.1	< 0.1	0.1	< 0.1
Potassium, K	13	12	12	12
Sodium, Na	250	267	277	270
Sulfate, SO <sub>4</sub>	2270	2420	2450	2280
<b>Trace and Minor Elements</b>				
Dissolved Arsenic, As	0.002	< 0.001	0.002	0.002
Dissolved Barium, Ba	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	0.47	0.48	0.45	0.5
Dissolved Cadmium, Cd	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Copper, Cu	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	1.0	0.7	0.6	0.4
Dissolved Iron, Fe	< 0.03	< 0.03	0.03	< 0.03
Dissolved Lead, Pb	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	0.039	0.031	0.036	0.03
Total Mercury, Hg	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	BC-2	BC-2	BC-2	BC-2
Sample Collection Date	12/16/2013	3/10/2014	6/24/2014	9/3/2014
Dissolved Molybdenum, Mo	0.014	0.012	0.012	0.012
Dissolved Nickel, Ni	< 0.005	0.008	0.010	0.007
Dissolved Selenium, Se	< 0.001	0.002	0.001	< 0.001
Dissolved Silver, Ag	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.0255	0.0235	0.0240	0.0238
Dissolved Vanadium, V	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	< 0.01	< 0.01	< 0.01	< 0.01
<b>Radiological Parameters</b>				
Dissolved Gross Alpha	40.2	39.2	42.2	14.2
Precision (±)	8.6	8.9	9.2	11.2
MDC	9.4	9.9	10.7	17.7
Dissolved Gross Beta	14.9	17.6	10	14
Precision (±)	7.8	9.0	9.2	11.8
MDC	12.5	14.4	15.0	19.4
Dissolved Radium 228	0.5	0.6	0.2	1.1
Precision (±)	0.7	0.6	0.7	0.7
MDC	1.1	1	1.1	1.0
Dissolved Radium 226	0.05	0.1	0.3	0.43
Precision (±)	0.09	0.1	0.1	0.15
MDC	0.1	0.2	0.2	0.17
Total Radon 222	1050	1150	1080	1010
Precision (±)	64.7	64.4	63.4	53.4
MDC	89.0	87.0	86.0	71.0

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	Human Health Standards ARSD	Hydro ID	BC-3	BC-3	BC-3
Sample Collection Date	74:54:01:04	Units	7/23/2012	8/20/2012	9/10/2012

#### Field Measurements

Water Level Below Top of Casing		feet	12.25	12.73	13.05
Water Level Elevation (NGVD 29)		feet AMSL	3642.7	3642.22	3641.9
Well Volume		gal	2.5	2.4	2.4
Volume Purged Before Sampling		gal	7.5	7.5	7.5
Field pH		s.u.	7.16	7.12	7.33
Field Temperature		°C	10.3	10.8	10.8
Field Conductivity		mS/cm	3.1	3.0	3.20
Clarity		observed	clear	clear	clear
Color		observed	clear	clear	clear
Odor		observed	none	none	none

#### Physical Properties

Lab pH	6.5 - 8.5	s.u.	7.15	7.17	7.22
Total Dissolved Solids	1000	mg/L	3160	3130	3140
Lab Conductivity		umhos/cm	2870	3200	3200

#### Common Elements and Ions

Alkalinity, Total as CaCO <sub>3</sub>		mg/L	254	256	256
Bicarbonate as HCO <sub>3</sub>		mg/L	310	312	312
Calcium, Ca		mg/L	532	531	535
Carbonate as CO <sub>3</sub>		mg/L	< 5	< 5	< 5
Chloride, Cl	250	mg/L	20	19	19
Magnesium, Mg		mg/L	150	148	152
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	10	mg/L	0.3	0.3	0.3
Potassium, K		mg/L	11	11	12
Sodium, Na		mg/L	174	158	157
Sulfate, SO <sub>4</sub>	500	mg/L	2010	1850	1820

#### Trace and Minor Elements

Dissolved Arsenic, As	0.01	mg/L	< 0.001	< 0.001	< 0.001
Dissolved Barium, Ba	2	mg/L	< 0.05	< 0.05	< 0.05
Dissolved Boron, B		mg/L	0.44	0.45	0.49
Dissolved Cadmium, Cd	0.005	mg/L	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	0.1	mg/L	< 0.005	< 0.005	< 0.005
Dissolved Copper, Cu	1.0	mg/L	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	4	mg/L	0.6	0.6	0.6
Dissolved Iron, Fe		mg/L	0.05	< 0.03	< 0.03
Dissolved Lead, Pb	0.015	mg/L	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn		mg/L	0.498	0.461	0.447
Total Mercury, Hg	0.002	mg/L	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	Human Health Standards ARSD	Hydro ID	BC-3	BC-3	BC-3
Sample Collection Date	74:54:01:04	Units	7/23/2012	8/20/2012	9/10/2012
Dissolved Molybdenum, Mo		mg/L	0.006	0.006	0.007
Dissolved Nickel, Ni		mg/L	< 0.005	< 0.005	0.012
Dissolved Selenium, Se	0.05	mg/L	0.002	0.003	0.005
Dissolved Silver, Ag	0.1	mg/L	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.03	mg/L	0.0208	0.0214	0.0226
Dissolved Vanadium, V		mg/L	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn		mg/L	0.02	< 0.01	< 0.01
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	15	pCi/L	29.9	10.3	11.4
Precision (±)		pCi/L	7.0	7.1	6.0
MDC		pCi/L	9.5	11.1	9.2
Dissolved Gross Beta	4 mrem/yr <sup>1</sup>	pCi/L	4.7	2.0	-1
Precision (±)		pCi/L	5.6	9.4	10
MDC		pCi/L	9.2	15.8	16.8
Dissolved Radium 228	5 <sup>2</sup>	pCi/L	-0.1	-0.1	0.8
Precision (±)		pCi/L	0.6	0.7	0.6
MDC		pCi/L	1	1.1	0.9
Dissolved Radium 226	5 <sup>2</sup>	pCi/L	0.08	0.1	0.1
Precision (±)		pCi/L	0.1	0.1	0.09
MDC		pCi/L	0.2	0.1	0.1
Total Radon 222	300	pCi/L	---	---	---
Precision (±)		pCi/L	---	---	---
MDC		pCi/L	---	---	---



Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	BC-3	BC-3	BC-3	BC-3	BC-3
Sample Collection Date	10/2/2012	11/5/2012	12/10/2012	1/7/2013	2/11/2013
<b>Field Measurements</b>					
Water Level Below Top of Casing	12.96	11.99	11.51	11.23	10.90
Water Level Elevation (NGVD 29)	3641.99	3642.96	3643.44	3643.72	3644.05
Well Volume	2.4	2.5	2.6	2.7	2.72
Volume Purged Before Sampling	7.5	7.5	8.25	8.25	8.16
Field pH	7.10	7.2	7.2	7.2	7.2
Field Temperature	10.9	10.6	9.7	10.3	9.1
Field Conductivity	3.35	3.33	3.34	3.32	3.29
Clarity	clear	clear	clear	clear	clear
Color	clear	clear	clear	clear	clear
Odor	none	none	none	none	none
<b>Physical Properties</b>					
Lab pH	7.16	7.21	7.12	7.11	7.17
Total Dissolved Solids	3180	3170	3160	3100	3180
Lab Conductivity	3140	3110	3070	3550	3250
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	248	248	250	246	248
Bicarbonate as HCO <sub>3</sub>	302	302	305	300	302
Calcium, Ca	525	520	488	552	475
Carbonate as CO <sub>3</sub>	< 5	< 5	< 5	< 5	< 5
Chloride, Cl	20	19	19	19	20
Magnesium, Mg	150	150	144	159	139
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	0.2	0.3	0.2	0.2	0.2
Potassium, K	11	11	10	11	10
Sodium, Na	164	172	153	160	157
Sulfate, SO <sub>4</sub>	1980	1860	1910	1890	1870
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Barium, Ba	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	0.51	0.52	0.50	0.54	0.47
Dissolved Cadmium, Cd	< 0.001	< 0.001	0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Copper, Cu	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	0.6	0.5	0.6	0.6	0.6
Dissolved Iron, Fe	< 0.03	< 0.03	< 0.03	0.06	0.05
Dissolved Lead, Pb	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	0.436	0.456	0.451	0.528	0.557
Total Mercury, Hg	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	BC-3	BC-3	BC-3	BC-3	BC-3
Sample Collection Date	10/2/2012	11/5/2012	12/10/2012	1/7/2013	2/11/2013
Dissolved Molybdenum, Mo	0.007	0.006	0.008	0.005	0.006
Dissolved Nickel, Ni	0.022	0.006	< 0.005	< 0.005	< 0.005
Dissolved Selenium, Se	0.004	0.003	0.003	< 0.001	0.002
Dissolved Silver, Ag	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.0206	0.0212	0.0201	0.0197	0.0251
Dissolved Vanadium, V	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	< 0.01	0.01	< 0.01	< 0.01	< 0.01
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	28.6	14.2	26.4	25.9	19.3
Precision (±)	7.6	8.6	7.7	6.8	6.3
MDC	10.2	13.4	10.7	9.4	9.0
Dissolved Gross Beta	4.1	8.6	5.0	0.6	6.4
Precision (±)	9.1	8.6	9.2	7.7	7.6
MDC	15.0	14.2	15.3	12.9	12.5
Dissolved Radium 228	1.9	2.0	-0.4	1.5	1.2
Precision (±)	0.8	0.8	0.7	0.7	1.0
MDC	1.2	1.2	1.2	1.1	1.7
Dissolved Radium 226	0.4	0.09	0.07	0.3	0.3
Precision (±)	0.1	0.06	0.1	0.1	0.1
MDC	0.09	0.09	0.2	0.2	0.2
Total Radon 222	---	---	---	---	---
Precision (±)	---	---	---	---	---
MDC	---	---	---	---	---

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	BC-3	BC-3	BC-3	BC-3	BC-3
Sample Collection Date	3/5/2013	4/24/2013	5/21/2013	6/3/2013	9/2/2013
<b>Field Measurements</b>					
Water Level Below Top of Casing	10.77	10.36	10.34	10.42	10.51
Water Level Elevation (NGVD 29)	3644.18	3644.59	3644.61	3644.53	3644.44
Well Volume	2.7	2.8	2.8	2.8	2.78
Volume Purged Before Sampling	8.25	8.4	8.43	8.40	8.34
Field pH	7.4	7.3	7.4	7.3	7.3
Field Temperature	8.8	8.3	8.4	9.2	11.1
Field Conductivity	3.26	3.24	3.23	3.25	3.24
Clarity	clear	clear	clear	clear	clear
Color	clear	clear	clear	clear	clear
Odor	none	none	none	none	none
<b>Physical Properties</b>					
Lab pH	7.13	7.17	7.17	7.20	7.12
Total Dissolved Solids	3160	3160	3090	3210	3070
Lab Conductivity	3200	3180	3340	3210	3230
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	242	242	242	260	254
Bicarbonate as HCO <sub>3</sub>	295	295	295	317	310
Calcium, Ca	541	529	539	532	538
Carbonate as CO <sub>3</sub>	< 5	< 5	< 5	< 5	< 5
Chloride, Cl	19	19	18	19	18
Magnesium, Mg	151	149	154	153	158
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	0.2	< 0.1	0.3	< 0.1	< 0.1
Potassium, K	12	11	10	11	11
Sodium, Na	163	162	164	162	162
Sulfate, SO <sub>4</sub>	1830	1870	1850	1840	1960
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	0.002	< 0.001	< 0.001	0.003	< 0.001
Dissolved Barium, Ba	< 0.05	< 0.05	0.09	< 0.05	< 0.05
Dissolved Boron, B	0.49	0.75	0.44	0.48	0.60
Dissolved Cadmium, Cd	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	0.007	0.010	< 0.005	< 0.005	0.007
Dissolved Copper, Cu	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	0.5	0.6	0.6	0.7	0.5
Dissolved Iron, Fe	0.20	0.59	< 0.03	0.12	0.27
Dissolved Lead, Pb	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	0.594	0.565	0.576	0.575	0.60
Total Mercury, Hg	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	BC-3	BC-3	BC-3	BC-3	BC-3
Sample Collection Date	3/5/2013	4/24/2013	5/21/2013	6/3/2013	9/2/2013
Dissolved Molybdenum, Mo	0.007	0.006	0.006	0.006	0.007
Dissolved Nickel, Ni	0.010	0.011	0.007	0.014	0.011
Dissolved Selenium, Se	0.003	0.001	< 0.001	0.001	0.002
Dissolved Silver, Ag	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.0204	0.0224	0.0208	0.0207	0.0225
Dissolved Vanadium, V	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	0.02	< 0.01	< 0.01	0.01	< 0.01
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	22.4	43.5	19.9	4.9	12.2
Precision (±)	8.5	7.6	7.2	8.1	7.4
MDC	12.9	8.8	10.5	13.3	11.4
Dissolved Gross Beta	12.0	-1	11.1	3.6	-2
Precision (±)	8.0	7.5	7.4	10.3	10.3
MDC	13.1	12.5	12.0	17.2	17.3
Dissolved Radium 228	1.7	-0.2	0.3	0.5	0.4
Precision (±)	1.2	0.7	0.7	0.7	0.7
MDC	1.9	1.3	1.1	1.1	1.1
Dissolved Radium 226	0.2	0.2	1.6	0.2	0.2
Precision (±)	0.2	0.1	0.2	0.1	0.1
MDC	0.2	0.2	0.1	0.2	0.2
Total Radon 222	---	---	---	---	636
Precision (±)	---	---	---	---	49.0
MDC	---	---	---	---	70.0

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	BC-3	BC-3	BC-3	BC-3
Sample Collection Date	12/16/2013	3/10/2014	6/24/2014	9/3/2014
<b>Field Measurements</b>				
Water Level Below Top of Casing	9.02	8.02	8.39	10.31
Water Level Elevation (NGVD 29)	3645.93	3646.93	3646.56	3644.64
Well Volume	3.03	3.20	3.15	2.82
Volume Purged Before Sampling	9.09	9.60	9.45	8.46
Field pH	7.4	7.2	7.4	7.2
Field Temperature	9.9	8.8	8.9	9.9
Field Conductivity	3.33	3.18	3.22	3.15
Clarity	clear	clear	clear	clear
Color	clear	clear	clear	clear
Odor	none	none	none	none
<b>Physical Properties</b>				
Lab pH	7.08	7.13	7.09	7.41
Total Dissolved Solids	3150	3070	3060	3060
Lab Conductivity	3240	3170	3000	3130
<b>Common Elements and Ions</b>				
Alkalinity, Total as CaCO <sub>3</sub>	240	220	220	216
Bicarbonate as HCO <sub>3</sub>	293	268	268	263
Calcium, Ca	530	504	530	517
Carbonate as CO <sub>3</sub>	< 5	< 5	< 5	< 5
Chloride, Cl	15	14	15	15
Magnesium, Mg	140	141	134	140
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	< 0.1	< 0.1	< 0.1	< 0.1
Potassium, K	11	10	10	10
Sodium, Na	141	151	141	150
Sulfate, SO <sub>4</sub>	1790	1750	1980	1960
<b>Trace and Minor Elements</b>				
Dissolved Arsenic, As	0.002	< 0.001	0.002	0.002
Dissolved Barium, Ba	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	0.45	0.44	0.40	0.4
Dissolved Cadmium, Cd	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Copper, Cu	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	0.7	0.5	0.5	0.4
Dissolved Iron, Fe	0.30	0.09	0.28	0.13
Dissolved Lead, Pb	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	0.614	0.54	0.573	0.54
Total Mercury, Hg	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Wells Sampling Results	BC-3	BC-3	BC-3	BC-3
Sample Collection Date	12/16/2013	3/10/2014	6/24/2014	9/3/2014
Dissolved Molybdenum, Mo	0.007	0.005	0.005	0.005
Dissolved Nickel, Ni	< 0.005	0.009	0.011	0.007
Dissolved Selenium, Se	< 0.001	0.001	< 0.001	< 0.001
Dissolved Silver, Ag	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	0.0188	0.0163	0.0154	0.0157
Dissolved Vanadium, V	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	< 0.01	< 0.01	< 0.01	< 0.01
<b>Radiological Parameters</b>				
Dissolved Gross Alpha	37.8	49.2	29.9	19.8
Precision (±)	8.7	7.7	8.4	8.6
MDC	11.2	7.2	11.4	12.8
Dissolved Gross Beta	10.4	10.2	10.4	20.6
Precision (±)	8.3	7.7	8.6	10.1
MDC	13.5	12.6	14.0	16.2
Dissolved Radium 228	0.5	0.7	0.3	1
Precision (±)	0.7	0.7	0.7	0.7
MDC	1.1	1.0	1.1	1.0
Dissolved Radium 226	0.09	0.1	0.3	0.27
Precision (±)	0.1	0.1	0.1	0.14
MDC	0.1	0.2	0.2	0.17
Total Radon 222	583	631	618	642
Precision (±)	58.3	57.2	56.9	48.2
MDC	88.0	85.0	84.0	69.0

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Duplicate Sampling Results		Well BC-3	Well BC-3 Duplicate	Well BC-1	Well BC-1 Duplicate
Sample Collection Date		7/23/2012	7/23/2012	8/20/2012	8/20/2012
<b>Physical Properties</b>					
Lab pH	s.u.	7.15	7.09	7.09	7.10
Total Dissolved Solids	mg/L	3160	3170	3720	3500
Lab Conductivity	umhos/cm	2870	2860	3630	3630
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	254	256	290	290
Bicarbonate as HCO <sub>3</sub>	mg/L	310	312	354	354
Calcium, Ca	mg/L	532	518	525	515
Carbonate as CO <sub>3</sub>	mg/L	< 5	< 5	< 5	< 5
Chloride, Cl	mg/L	20	20	25	25
Magnesium, Mg	mg/L	150	147	238	231
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	mg/L	0.3	0.3	0.2	0.2
Potassium, K	mg/L	11	11	12	12
Sodium, Na	mg/L	174	175	175	179
Sulfate, SO <sub>4</sub>	mg/L	2010	2020	2170	2180
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	mg/L	0.44	0.44	0.66	0.67
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	mg/L	< 0.005	< 0.005	0.005	< 0.005
Dissolved Copper, Cu	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	mg/L	0.6	0.6	0.6	0.6
Dissolved Iron, Fe	mg/L	0.05	0.05	< 0.03	0.04
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	mg/L	0.498	0.494	0.061	0.059
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dissolved Molybdenum, Mo	mg/L	0.006	0.006	0.005	0.005
Dissolved Nickel, Ni	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Selenium, Se	mg/L	0.002	0.002	0.001	0.001
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	mg/L	0.0208	0.0208	0.0842	0.0861
Dissolved Vanadium, V	mg/L	< 0.01	< 0.01	< 0.01	0.04
Dissolved Zinc, Zn	mg/L	0.02	0.02	< 0.01	< 0.01
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	pCi/L	29.9	23.4	71.1	89.2
Precision (±)	pCi/L	7.0	5.5	10.8	11.6
MDC	pCi/L	9.5	7.2	12.8	13.2

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Duplicate Sampling Results		Well BC-3	Well BC-3 Duplicate	Well BC-1	Well BC-1 Duplicate
Sample Collection Date		7/23/2012	7/23/2012	8/20/2012	8/20/2012
Dissolved Gross Beta	pCi/L	4.7	7.1	-4	8.4
Precision (±)	pCi/L	5.6	5.3	10.6	10.9
MDC	pCi/L	9.2	8.6	17.7	17.8
Dissolved Radium 228	pCi/L	-0.1	0.4	0.7	0.9
Precision (±)	pCi/L	0.6	0.7	0.7	0.7
MDC	pCi/L	1	1.1	1.1	1.1
Dissolved Radium 226	pCi/L	0.08	0.06	0.1	0.2
Precision (±)	pCi/L	0.1	0.1	0.1	0.1
MDC	pCi/L	0.2	0.2	0.1	0.1
Total Radon 222	pCi/L	---	---	---	---
Precision (±)	pCi/L	---	---	---	---
MDC	pCi/L	---	---	---	---



Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Duplicate Sampling Results		Well DC-4	Well DC-4 Duplicate	Well DC-2	Well DC-2 Duplicate
Sample Collection Date		9/10/2012	9/10/2012	10/2/2012	10/2/2012
<b>Physical Properties</b>					
Lab pH	s.u.	7.47	7.48	7.09	7.10
Total Dissolved Solids	mg/L	10600	10600	4630	4630
Lab Conductivity	umhos/cm	10400	10300	5530	5510
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	348	342	264	268
Bicarbonate as HCO <sub>3</sub>	mg/L	424	417	322	327
Calcium, Ca	mg/L	398	401	518	528
Carbonate as CO <sub>3</sub>	mg/L	< 5	< 5	< 5	< 5
Chloride, Cl	mg/L	117	118	824	822
Magnesium, Mg	mg/L	630	620	147	146
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	mg/L	1.7	1.7	0.2	< 0.1
Potassium, K	mg/L	11	11	7	7
Sodium, Na	mg/L	1820	1910	768	764
Sulfate, SO <sub>4</sub>	mg/L	7330	7550	2080	2060
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	mg/L	0.001	0.002	0.001	0.002
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	mg/L	2.3	2.3	0.2	0.4
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	mg/L	0.008	0.008	< 0.005	< 0.005
Dissolved Copper, Cu	mg/L	0.008	0.011	0.006	0.006
Dissolved Fluoride, F	mg/L	2.6	2.7	0.7	0.7
Dissolved Iron, Fe	mg/L	< 0.03	< 0.03	0.80	0.57
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	mg/L	0.002	0.002	3.05	3.04
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dissolved Molybdenum, Mo	mg/L	0.003	0.003	0.005	0.005
Dissolved Nickel, Ni	mg/L	0.008	0.009	0.022	0.021
Dissolved Selenium, Se	mg/L	0.042	0.042	0.004	0.003
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	mg/L	0.0171	0.0175	0.0087	0.0083
Dissolved Vanadium, V	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	mg/L	< 0.01	< 0.01	0.01	0.01
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	pCi/L	-10	16.4	20.7	10.4
Precision (±)	pCi/L	21.1	23.3	15.6	13.4
MDC	pCi/L	36.6	37.9	24.7	21.6

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Duplicate Sampling Results		Well DC-4	Well DC-4 Duplicate	Well DC-2	Well DC-2 Duplicate
Sample Collection Date		9/10/2012	9/10/2012	10/2/2012	10/2/2012
Dissolved Gross Beta	pCi/L	-100	-4	-2	12.1
Precision (±)	pCi/L	44.4	31.1	21.9	24.3
MDC	pCi/L	77.7	52.3	36.8	40.4
Dissolved Radium 228	pCi/L	0.4	0.3	0.8	1.2
Precision (±)	pCi/L	0.6	0.6	0.7	0.7
MDC	pCi/L	0.9	0.9	1.1	1.1
Dissolved Radium 226	pCi/L	0.2	0.2	0.7	0.7
Precision (±)	pCi/L	0.1	0.1	0.1	0.1
MDC	pCi/L	0.1	0.1	0.09	0.08
Total Radon 222	pCi/L	---	---	---	---
Precision (±)	pCi/L	---	---	---	---
MDC	pCi/L	---	---	---	---

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Duplicate Sampling Results		Well DC-2 Split	Well BC-2	Well BC-2 Duplicate	Well BC-3
Sample Collection Date		10/2/2012	11/5/2012	11/5/2012	12/10/2012
<b>Physical Properties</b>					
Lab pH	s.u.	8.1	7.20	7.27	7.12
Total Dissolved Solids	mg/L	5080	3910	3870	3160
Lab Conductivity	umhos/cm	5090	3870	3870	3070
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	286	230	230	250
Bicarbonate as HCO <sub>3</sub>	mg/L	349	280	280	305
Calcium, Ca	mg/L	481	515	517	488
Carbonate as CO <sub>3</sub>	mg/L	< 5	< 5	< 5	< 5
Chloride, Cl	mg/L	926	22	22	19
Magnesium, Mg	mg/L	135	223	221	144
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	mg/L	< 0.1	0.2	0.2	0.2
Potassium, K	mg/L	11	12	12	10
Sodium, Na	mg/L	832	294	288	153
Sulfate, SO <sub>4</sub>	mg/L	2070	2380	2370	1910
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	mg/L	0.001	< 0.001	< 0.001	< 0.001
Dissolved Barium, Ba	mg/L	0.018	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	mg/L	0.3	0.51	0.49	0.50
Dissolved Cadmium, Cd	mg/L	< 0.002	< 0.001	< 0.001	0.001
Dissolved Chromium, Cr	mg/L	< 0.01	< 0.005	< 0.005	< 0.005
Dissolved Copper, Cu	mg/L	0.006	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	mg/L	0.4	0.7	0.7	0.6
Dissolved Iron, Fe	mg/L	3.49	< 0.03	< 0.03	< 0.03
Dissolved Lead, Pb	mg/L	<0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	mg/L	2.93	0.040	0.039	0.451
Total Mercury, Hg	mg/L	< 0.001	< 0.0001	< 0.0001	< 0.0001
Dissolved Molybdenum, Mo	mg/L	0.004	0.013	0.013	0.008
Dissolved Nickel, Ni	mg/L	< 0.01	0.006	< 0.005	< 0.005
Dissolved Selenium, Se	mg/L	0.002	< 0.001	< 0.001	0.003
Dissolved Silver, Ag	mg/L	< 0.003	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	mg/L	0.0077	0.0256	0.0253	0.0201
Dissolved Vanadium, V	mg/L	< 0.02	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	mg/L	< 0.01	0.01	0.01	< 0.01
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	pCi/L	22.2	12.6	2.0	26.4
Precision (±)	pCi/L	8.0	8.6	8.5	7.7
MDC	pCi/L	11	13.4	14.1	10.7

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Duplicate Sampling Results		Well DC-2 Split	Well BC-2	Well BC-2 Duplicate	Well BC-3
Sample Collection Date		10/2/2012	11/5/2012	11/5/2012	12/10/2012
Dissolved Gross Beta	pCi/L	< 19	9.2	1.1	5.0
Precision (±)	pCi/L	NA	10.2	8.9	9.2
MDC	pCi/L	19	16.8	14.9	15.3
Dissolved Radium 228	pCi/L	< 1	0.5	1.7	-0.4
Precision (±)	pCi/L	NA	1.2	1.5	0.7
MDC	pCi/L	1	2.1	2.3	1.2
Dissolved Radium 226	pCi/L	0.3	0.02	0.06	0.07
Precision (±)	pCi/L	0.1	0.07	0.09	0.1
MDC	pCi/L	0.2	0.1	0.1	0.2
Total Radon 222	pCi/L	---	---	---	---
Precision (±)	pCi/L	---	---	---	---
MDC	pCi/L	---	---	---	---

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Duplicate Sampling Results		Well BC-3 Duplicate	Well BC-1	Well BC-1 Duplicate	Well DC-4
Sample Collection Date		12/10/2012	1/7/2013	1/7/2013	2/11/2013
<b>Physical Properties</b>					
Lab pH	s.u.	7.12	7.06	7.08	7.47
Total Dissolved Solids	mg/L	3120	3800	3730	11100
Lab Conductivity	umhos/cm	3040	4050	4060	11100
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	246	294	294	344
Bicarbonate as HCO <sub>3</sub>	mg/L	300	358	358	419
Calcium, Ca	mg/L	469	516	539	353
Carbonate as CO <sub>3</sub>	mg/L	< 5	< 5	< 5	< 5
Chloride, Cl	mg/L	19	25	25	136
Magnesium, Mg	mg/L	140	251	256	644
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	mg/L	0.2	0.2	< 0.1	1.9
Potassium, K	mg/L	9	12	13	9
Sodium, Na	mg/L	147	194	196	2220
Sulfate, SO <sub>4</sub>	mg/L	1880	2190	2210	7970
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	mg/L	0.50	0.77	0.78	2.10
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Copper, Cu	mg/L	< 0.005	< 0.005	< 0.005	0.008
Dissolved Fluoride, F	mg/L	0.6	0.7	0.7	1.8
Dissolved Iron, Fe	mg/L	< 0.03	0.08	0.11	< 0.03
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	mg/L	0.439	0.034	0.040	< 0.001
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dissolved Molybdenum, Mo	mg/L	0.007	0.004	0.004	0.003
Dissolved Nickel, Ni	mg/L	< 0.005	< 0.005	< 0.005	0.007
Dissolved Selenium, Se	mg/L	0.003	< 0.001	< 0.001	0.038
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	mg/L	0.0199	0.0877	0.0921	0.0160
Dissolved Vanadium, V	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	mg/L	< 0.01	< 0.01	< 0.01	0.02
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	pCi/L	30.7	69.6	112	-20
Precision (±)	pCi/L	8.1	10	11.5	26.5
MDC	pCi/L	10.9	11.6	11.2	46.2

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Duplicate Sampling Results		Well BC-3 Duplicate	Well BC-1	Well BC-1 Duplicate	Well DC-4
Sample Collection Date		12/10/2012	1/7/2013	1/7/2013	2/11/2013
Dissolved Gross Beta	pCi/L	-20	15.7	21.7	-20
Precision (±)	pCi/L	10.2	10.9	10.1	26.8
MDC	pCi/L	17.8	17.7	16.0	45.7
Dissolved Radium 228	pCi/L	-0.2	1.5	2.5	0.6
Precision (±)	pCi/L	0.9	0.7	0.8	1.2
MDC	pCi/L	1.6	1.1	1.1	2.0
Dissolved Radium 226	pCi/L	0.08	0.2	0.2	0.007
Precision (±)	pCi/L	0.1	0.1	0.1	0.1
MDC	pCi/L	0.2	0.2	0.2	0.2
Total Radon 222	pCi/L	---	---	---	---
Precision (±)	pCi/L	---	---	---	---
MDC	pCi/L	---	---	---	---

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Duplicate Sampling Results		Well DC-4 Duplicate	Well BC-3	Well BC-3 Duplicate	Well BC-3 DENR Split
Sample Collection Date		2/11/2013	3/5/2013	3/5/2013	3/5/2013
<b>Physical Properties</b>					
Lab pH	s.u.	7.42	7.13	7.06	7.49
Total Dissolved Solids	mg/L	11300	3160	3180	3000
Lab Conductivity	umhos/cm	11000	3200	3250	3170
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	350	242	250	250
Bicarbonate as HCO <sub>3</sub>	mg/L	427	295	305	305
Calcium, Ca	mg/L	353	541	565	502
Carbonate as CO <sub>3</sub>	mg/L	< 5	< 5	< 5	0.00
Chloride, Cl	mg/L	137	19	20	19.3
Magnesium, Mg	mg/L	641	151	147	148
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	mg/L	1.9	0.2	0.2	< 0.050
Potassium, K	mg/L	9	12	11	10.1
Sodium, Na	mg/L	2200	163	160	140
Sulfate, SO <sub>4</sub>	mg/L	7870	1830	2190	1790
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	mg/L	< 0.001	0.002	0.002	< 0.005
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05	< 0.05	0.012
Dissolved Boron, B	mg/L	2.14	0.49	0.50	0.537
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	mg/L	< 0.005	0.007	0.006	< 0.001
Dissolved Copper, Cu	mg/L	0.008	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	mg/L	1.9	0.5	0.5	0.475
Dissolved Iron, Fe	mg/L	< 0.03	0.20	0.11	0.496
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	mg/L	< 0.001	0.594	0.595	0.521
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0002
Dissolved Molybdenum, Mo	mg/L	0.003	0.007	0.007	0.007
Dissolved Nickel, Ni	mg/L	0.007	0.010	0.011	0.021
Dissolved Selenium, Se	mg/L	0.037	0.003	0.005	< 0.005
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	mg/L	0.0157	0.0204	0.0203	0.019
Dissolved Vanadium, V	mg/L	< 0.01	< 0.01	< 0.01	< 0.005
Dissolved Zinc, Zn	mg/L	0.02	0.02	0.02	< 0.050
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	pCi/L	-10	22.4	17.7	11.9
Precision (±)	pCi/L	20.6	8.5	5.9	3.70
MDC	pCi/L	35.7	12.9	8.3	11.2

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Duplicate Sampling Results		Well DC-4 Duplicate	Well BC-3	Well BC-3 Duplicate	Well BC-3 DENR Split
Sample Collection Date		2/11/2013	3/5/2013	3/5/2013	3/5/2013
Dissolved Gross Beta	pCi/L	-30	12.0	11.5	15.6
Precision (±)	pCi/L	27.1	8.0	7.6	5.50
MDC	pCi/L	46.3	13.1	12.4	17.6
Dissolved Radium 228	pCi/L	-0.1	1.7	0.6	0.932
Precision (±)	pCi/L	1.2	1.2	1.1	0.422
MDC	pCi/L	1.9	1.9	1.9	0.852
Dissolved Radium 226	pCi/L	0.06	0.2	0.2	0.279
Precision (±)	pCi/L	0.1	0.2	0.2	0.103
MDC	pCi/L	0.2	0.2	0.2	0.216
Total Radon 222	pCi/L	---	---	---	---
Precision (±)	pCi/L	---	---	---	---
MDC	pCi/L	---	---	---	---



Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Duplicate Sampling Results		Well DC-2	Well DC-2 Duplicate	Well BC-1	Well BC-1 Duplicate
Sample Collection Date		4/24/2013	4/24/2013	5/21/2013	5/21/2013
<b>Physical Properties</b>					
Lab pH	s.u.	7.25	7.11	7.11	7.09
Total Dissolved Solids	mg/L	4680	4600	2770	3800
Lab Conductivity	umhos/cm	5650	5670	3840	3840
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	262	260	292	290
Bicarbonate as HCO <sub>3</sub>	mg/L	319	317	356	354
Calcium, Ca	mg/L	513	508	518	513
Carbonate as CO <sub>3</sub>	mg/L	< 5	< 5	< 5	< 5
Chloride, Cl	mg/L	870	830	25	26
Magnesium, Mg	mg/L	143	145	249	245
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	mg/L	0.9	0.8	0.3	0.3
Potassium, K	mg/L	6	6	11	11
Sodium, Na	mg/L	715	704	197	195
Sulfate, SO <sub>4</sub>	mg/L	2070	1960	2300	2300
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	mg/L	0.002	0.002	< 0.001	< 0.001
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	mg/L	0.32	0.29	0.64	0.68
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	mg/L	0.011	0.012	< 0.005	< 0.005
Dissolved Copper, Cu	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	mg/L	0.7	0.7	0.6	0.7
Dissolved Iron, Fe	mg/L	4.09	4.21	< 0.03	< 0.03
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	mg/L	2.78	2.88	0.027	0.027
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dissolved Molybdenum, Mo	mg/L	0.004	0.005	0.005	0.005
Dissolved Nickel, Ni	mg/L	0.010	0.008	0.007	0.008
Dissolved Selenium, Se	mg/L	0.001	0.002	0.002	0.002
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	mg/L	0.0098	0.0093	0.0977	0.0970
Dissolved Vanadium, V	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	pCi/L	41.7	34.6	83.3	84.0
Precision (±)	pCi/L	10.4	9.8	10.6	11.0
MDC	pCi/L	13.5	11.9	12.0	12.8

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Duplicate Sampling Results		Well DC-2	Well DC-2 Duplicate	Well BC-1	Well BC-1 Duplicate
Sample Collection Date		4/24/2013	4/24/2013	5/21/2013	5/21/2013
Dissolved Gross Beta	pCi/L	-6	23.0	13.1	19.2
Precision (±)	pCi/L	10	11.2	8.8	8.9
MDC	pCi/L	16.9	18.1	14.2	14.1
Dissolved Radium 228	pCi/L	0.3	-0.3	0.8	0.6
Precision (±)	pCi/L	0.8	0.8	0.7	0.7
MDC	pCi/L	1.4	1.4	1.1	1.1
Dissolved Radium 226	pCi/L	0.3	0.5	0.4	0.3
Precision (±)	pCi/L	0.1	0.2	0.1	0.1
MDC	pCi/L	0.2	0.2	0.1	0.1
Total Radon 222	pCi/L	---	---	---	---
Precision (±)	pCi/L	---	---	---	---
MDC	pCi/L	---	---	---	---

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Duplicate Sampling Results		Well BC-1	Well BC-1 Duplicate	Well DC-2	Well DC-2 Duplicate
Sample Collection Date		6/3/2013	6/3/2013	9/2/2013	9/2/2013
<b>Physical Properties</b>					
Lab pH	s.u.	7.08	7.06	7.26	7.25
Total Dissolved Solids	mg/L	3810	3810	4560	4600
Lab Conductivity	umhos/cm	3680	3680	5750	5760
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	312	294	266	266
Bicarbonate as HCO <sub>3</sub>	mg/L	380	358	324	324
Calcium, Ca	mg/L	513	513	516	517
Carbonate as CO <sub>3</sub>	mg/L	< 5	< 5	< 5	< 5
Chloride, Cl	mg/L	26	26	776	787
Magnesium, Mg	mg/L	250	250	147	148
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	mg/L	0.3	0.3	< 0.1	< 0.1
Potassium, K	mg/L	12	12	7	7
Sodium, Na	mg/L	198	201	716	723
Sulfate, SO <sub>4</sub>	mg/L	2190	2210	1950	1970
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	mg/L	0.003	0.003	0.001	0.001
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	mg/L	0.75	0.73	0.33	0.30
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	mg/L	< 0.005	< 0.005	0.006	< 0.005
Dissolved Copper, Cu	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	mg/L	0.8	0.8	0.4	0.4
Dissolved Iron, Fe	mg/L	< 0.03	0.03	0.32	0.48
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	mg/L	0.029	0.030	2.80	2.74
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dissolved Molybdenum, Mo	mg/L	0.005	0.005	0.005	0.005
Dissolved Nickel, Ni	mg/L	0.010	0.015	0.010	0.009
Dissolved Selenium, Se	mg/L	0.002	0.002	0.001	0.002
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	mg/L	0.101	0.103	0.0104	0.0106
Dissolved Vanadium, V	mg/L	< 0.01	< 0.01	0.02	< 0.01
Dissolved Zinc, Zn	mg/L	0.01	0.02	< 0.01	< 0.01
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	pCi/L	78.0	82.3	-4	10.9
Precision (±)	pCi/L	13.8	11.4	13.2	11.1
MDC	pCi/L	18.6	13.6	22.5	17.9

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Duplicate Sampling Results		Well BC-1	Well BC-1 Duplicate	Well DC-2	Well DC-2 Duplicate
Sample Collection Date		6/3/2013	6/3/2013	9/2/2013	9/2/2013
Dissolved Gross Beta	pCi/L	2.6	8.6	5.1	0.3
Precision (±)	pCi/L	13.5	11.3	14.9	12.8
MDC	pCi/L	22.3	18.5	24.9	21.4
Dissolved Radium 228	pCi/L	1.5	0.7	1.0	0.8
Precision (±)	pCi/L	0.7	0.7	0.8	0.8
MDC	pCi/L	1.0	1.0	1.3	1.3
Dissolved Radium 226	pCi/L	0.2	0.2	0.2	0.02
Precision (±)	pCi/L	0.1	0.1	0.1	0.09
MDC	pCi/L	0.2	0.2	0.2	0.2
Total Radon 222	pCi/L	---	---	738	749
Precision (±)	pCi/L	---	---	50.8	51.0
MDC	pCi/L	---	---	71.0	72.0

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Duplicate Sampling Results		Well DC-2	Well DC-2 Duplicate	Well BC-2	Well BC-2 Duplicate
Sample Collection Date		12/16/2013	12/16/2013	3/10/2013	3/10/2013
<b>Physical Properties</b>					
Lab pH	s.u.	7.16	7.03	7.14	7.15
Total Dissolved Solids	mg/L	4740	4740	3690	3680
Lab Conductivity	umhos/cm	5870	5840	3910	3890
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	268	270	234	228
Bicarbonate as HCO <sub>3</sub>	mg/L	327	329	285	278
Calcium, Ca	mg/L	540	541	499	495
Carbonate as CO <sub>3</sub>	mg/L	< 5	< 5	< 5	< 5
Chloride, Cl	mg/L	792	793	19	19
Magnesium, Mg	mg/L	143	143	218	216
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Potassium, K	mg/L	7	7	12	12
Sodium, Na	mg/L	793	795	267	264
Sulfate, SO <sub>4</sub>	mg/L	2120	2110	2420	2350
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	mg/L	0.003	0.003	< 0.001	< 0.001
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	mg/L	0.30	0.30	0.48	0.47
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Copper, Cu	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	mg/L	1.0	1.0	0.7	0.7
Dissolved Iron, Fe	mg/L	1.87	0.89	< 0.03	< 0.03
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	mg/L	2.93	2.91	0.031	0.031
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dissolved Molybdenum, Mo	mg/L	0.005	0.005	0.012	0.012
Dissolved Nickel, Ni	mg/L	< 0.005	< 0.005	0.008	0.008
Dissolved Selenium, Se	mg/L	< 0.001	< 0.001	0.002	0.002
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	mg/L	0.0100	0.0099	0.0235	0.0232
Dissolved Vanadium, V	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	pCi/L	33.3	39.5	39.2	43.6
Precision (±)	pCi/L	10.2	10.8	8.9	9.4
MDC	pCi/L	12.9	13.8	9.9	11.1

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Duplicate Sampling Results		Well DC-2	Well DC-2 Duplicate	Well BC-2	Well BC-2 Duplicate
Sample Collection Date		12/16/2013	12/16/2013	3/10/2013	3/10/2013
Dissolved Gross Beta	pCi/L	5.7	0.5	17.6	11.8
Precision (±)	pCi/L	10.7	11.6	9.0	8.7
MDC	pCi/L	17.6	19.4	14.4	14.1
Dissolved Radium 228	pCi/L	0.6	0.6	0.6	0.8
Precision (±)	pCi/L	0.7	0.7	0.6	0.7
MDC	pCi/L	1.2	1.2	1.0	1.0
Dissolved Radium 226	pCi/L	0.1	0.2	0.1	0.2
Precision (±)	pCi/L	0.1	0.1	0.1	0.1
MDC	pCi/L	0.2	0.2	0.2	0.2
Total Radon 222	pCi/L	780	732	1150	1080
Precision (±)	pCi/L	62.3	61.7	64.4	63.6
MDC	pCi/L	91.0	91.0	87.0	87.0

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Duplicate Sampling Results		Well BC-3	Well BC-3 Duplicate	Well BC-1	Well BC-1 Duplicate
Sample Collection Date		6/24/2014	6/24/2014	9/3/2014	9/3/2014
<b>Physical Properties</b>					
Lab pH	s.u.	7.09	7.11	7.23	7.26
Total Dissolved Solids	mg/L	3060	3040	3590	3510
Lab Conductivity	umhos/cm	3000	3000	3170	3530
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	220	216	296	290
Bicarbonate as HCO <sub>3</sub>	mg/L	268	263	361	354
Calcium, Ca	mg/L	530	518	521	528
Carbonate as CO <sub>3</sub>	mg/L	< 5	< 5	< 5	< 5
Chloride, Cl	mg/L	15	15	23	23
Magnesium, Mg	mg/L	134	136	213	212
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Potassium, K	mg/L	10	10	12	12
Sodium, Na	mg/L	141	144	173	176
Sulfate, SO <sub>4</sub>	mg/L	1980	2070	2060	2070
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	mg/L	0.002	0.002	0.002	0.002
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
Dissolved Boron, B	mg/L	0.40	0.41	0.7	0.70
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Copper, Cu	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dissolved Fluoride, F	mg/L	0.5	0.5	0.4	0.3
Dissolved Iron, Fe	mg/L	0.28	0.70	0.10	0.06
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	mg/L	0.573	0.565	0.075	0.07
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dissolved Molybdenum, Mo	mg/L	0.005	0.006	0.005	0.005
Dissolved Nickel, Ni	mg/L	0.011	0.012	0.005	0.006
Dissolved Selenium, Se	mg/L	< 0.001	< 0.001	0.002	0.002
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	mg/L	0.0154	0.0148	0.0686	0.0641
Dissolved Vanadium, V	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Dissolved Zinc, Zn	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	pCi/L	29.9	39.9	68.3	64.6
Precision (±)	pCi/L	8.4	8.4	12.0	12.1
MDC	pCi/L	11.4	9.8	14.9	15.7

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Duplicate Sampling Results		Well BC-3	Well BC-3 Duplicate	Well BC-1	Well BC-1 Duplicate
Sample Collection Date		6/24/2014	6/24/2014	9/3/2014	9/3/2014
Dissolved Gross Beta	pCi/L	10.4	6.4	20.8	20.3
Precision (±)	pCi/L	8.6	8.1	12.0	10.3
MDC	pCi/L	14.0	13.4	19.3	16.4
Dissolved Radium 228	pCi/L	0.3	3.7	1.8	1.1
Precision (±)	pCi/L	0.7	1	0.7	0.7
MDC	pCi/L	1.1	1.4	1.0	1.0
Dissolved Radium 226	pCi/L	0.3	0.3	0.64	0.54
Precision (±)	pCi/L	0.1	0.1	0.17	0.16
MDC	pCi/L	0.2	0.2	0.17	0.17
Total Radon 222	pCi/L	618	729	782	770
Precision (±)	pCi/L	56.9	58.3	50.3	50.2
MDC	pCi/L	84.0	84.0	70.0	70.0



Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Split Sampling Results		Well DC-2 ELI	Well DC-2 SPLIT MID	Well BC-1 ELI	Well BC-1 SPLIT MID
Sample Collection Date		12/16/2013	12/16/2013	12/16/2013	12/16/2013
<b>Physical Properties</b>					
Lab pH	s.u.	7.16	7.12	7.01	7.00
Total Dissolved Solids	mg/L	4740	4550	3700	3550
Lab Conductivity	umhos/cm	5870	5760	3730	3560
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	268	272	304	291
Bicarbonate as HCO <sub>3</sub>	mg/L	327	332	371	355
Calcium, Ca	mg/L	540	610	527	551
Carbonate as CO <sub>3</sub>	mg/L	< 5	0	< 5	0
Chloride, Cl	mg/L	792	857	22	20.3
Magnesium, Mg	mg/L	143	152	223	241
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	mg/L	< 0.1	< 0.050	< 0.1	0.057
Potassium, K	mg/L	7	7.13	12	11.5
Sodium, Na	mg/L	793	707	177	178
Sulfate, SO <sub>4</sub>	mg/L	2120	2020	2160	2350
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	mg/L	0.003	< 0.005	0.002	< 0.005
Dissolved Barium, Ba	mg/L	< 0.05	0.013	< 0.05	0.008
Dissolved Boron, B	mg/L	0.30	0.355	0.66	0.745
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	mg/L	< 0.005	< 0.001	< 0.005	< 0.001
Dissolved Copper, Cu	mg/L	< 0.005	0.016	< 0.005	< 0.005
Dissolved Fluoride, F	mg/L	1.0	0.510	0.8	0.478
Dissolved Iron, Fe	mg/L	1.87	3.73	0.06	0.130
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	mg/L	2.93	2.23	0.027	0.025
Total Mercury, Hg	mg/L	< 0.0001	0.0003	< 0.0001	< 0.0002
Dissolved Molybdenum, Mo	mg/L	0.005	0.005	0.006	0.006
Dissolved Nickel, Ni	mg/L	< 0.005	0.016	0.005	0.016
Dissolved Selenium, Se	mg/L	< 0.001	< 0.005	0.003	< 0.005
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	mg/L	0.0100	0.011	0.0956	0.0970
Dissolved Vanadium, V	mg/L	< 0.01	< 0.005	< 0.01	< 0.005
Dissolved Zinc, Zn	mg/L	< 0.01	< 0.050	< 0.01	< 0.050
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	pCi/L	33.3	7.60	99.7	66.6
Precision (±)	pCi/L	10.2	3.45	12.1	5.89
MDC	pCi/L	12.9	10.9	10.5	12.8

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Split Sampling Results		Well DC-2 ELI	Well DC-2 SPLIT MID	Well BC-1 ELI	Well BC-1 SPLIT MID
Sample Collection Date		12/16/2013	12/16/2013	12/16/2013	12/16/2013
Dissolved Gross Beta	pCi/L	5.7	17.4	22.6	57.8
Precision (±)	pCi/L	10.7	5.82	8.7	6.50
MDC	pCi/L	17.6	18.6	13.6	17.6
Dissolved Radium 228	pCi/L	0.6	1.84	0.9	0.723
Precision (±)	pCi/L	0.7	0.490	0.7	0.229
MDC	pCi/L	1.2	0.998	1.1	0.485
Dissolved Radium 226	pCi/L	0.1	< 1.00	0.3	0.254
Precision (±)	pCi/L	0.1	0	0.1	0.143
MDC	pCi/L	0.2	0.012	0.1	0.292
Total Radon 222	pCi/L	780	644	955	817
Precision (±)	pCi/L	62.3	174	63.2	201
MDC	pCi/L	91.0	164	89.0	161

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Split Sampling Results		Well BC-2 ELI	Well BC-2 SPLIT MID	Well BC-3 ELI	Well BC-3 SPLIT MID
Sample Collection Date		3/10/2014	3/10/2014	3/10/2014	3/10/2014
<b>Physical Properties</b>					
Lab pH	s.u.	7.14	7.36	7.13	7.30
Total Dissolved Solids	mg/L	3690	3650	3070	3000
Lab Conductivity	umhos/cm	3910	3710	3170	3020
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	234	228	220	221
Bicarbonate as HCO <sub>3</sub>	mg/L	285	278	268	269
Calcium, Ca	mg/L	499	550	504	536
Carbonate as CO <sub>3</sub>	mg/L	< 5	0	< 5	0
Chloride, Cl	mg/L	19	19.3	14	17.2
Magnesium, Mg	mg/L	218	220	141	143
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	mg/L	< 0.1	0.083	< 0.1	< 0.050
Potassium, K	mg/L	12	13.8	10	10.7
Sodium, Na	mg/L	267	272	151	152
Sulfate, SO <sub>4</sub>	mg/L	2420	2530	1750	1950
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	mg/L	< 0.001	< 0.005	< 0.001	< 0.005
Dissolved Barium, Ba	mg/L	< 0.05	0.008	< 0.05	0.014
Dissolved Boron, B	mg/L	0.48	0.584	0.44	0.584
Dissolved Cadmium, Cd	mg/L	< 0.001	0.003	< 0.001	0.001
Dissolved Chromium, Cr	mg/L	< 0.005	0.003	< 0.005	< 0.001
Dissolved Copper, Cu	mg/L	< 0.005	0.011	< 0.005	0.007
Dissolved Fluoride, F	mg/L	0.7	0.610	0.5	0.477
Dissolved Iron, Fe	mg/L	< 0.03	0.055	0.09	0.591
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	mg/L	0.031	0.034	0.54	0.535
Total Mercury, Hg	mg/L	< 0.0001	< 0.0002	< 0.0001	< 0.0002
Dissolved Molybdenum, Mo	mg/L	0.012	0.016	0.005	0.007
Dissolved Nickel, Ni	mg/L	0.008	0.023	0.009	0.024
Dissolved Selenium, Se	mg/L	0.002	< 0.005	0.001	< 0.005
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	mg/L	0.0235	0.027	0.0163	0.017
Dissolved Vanadium, V	mg/L	< 0.01	< 0.005	< 0.01	< 0.005
Dissolved Zinc, Zn	mg/L	< 0.01	< 0.050	< 0.01	0.051
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	pCi/L	39.2	21.4	49.2	15.7
Precision (±)	pCi/L	8.9	4.38	7.7	4.12
MDC	pCi/L	9.9	12.4	7.2	12.2

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Split Sampling Results		Well BC-2 ELI	Well BC-2 SPLIT MID	Well BC-3 ELI	Well BC-3 SPLIT MID
Sample Collection Date		3/10/2014	3/10/2014	3/10/2014	3/10/2014
Dissolved Gross Beta	pCi/L	17.6	33.9	10.2	21.8
Precision (±)	pCi/L	9.0	6.09	7.7	5.81
MDC	pCi/L	14.4	18.5	12.6	18.3
Dissolved Radium 228	pCi/L	0.6	0.784	0.7	< 1.00
Precision (±)	pCi/L	0.6	0.325	0.7	0.00
MDC	pCi/L	1	0.662	1.0	0.030
Dissolved Radium 226	pCi/L	0.1	0.208	0.1	0.275
Precision (±)	pCi/L	0.1	0.124	0.1	0.157
MDC	pCi/L	0.2	0.254	0.2	0.318
Total Radon 222	pCi/L	1150	971	631	590
Precision (±)	pCi/L	64.4	188	57.2	121
MDC	pCi/L	87.0	66.7	85.0	65.5

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Split Sampling Results		Well BC-2 ELI	Well BC-2 SPLIT MID	Well BC-3 ELI	Well BC-3 SPLIT MID
Sample Collection Date		6/24/2014	6/24/2014	6/24/2014	6/24/2014
<b>Physical Properties</b>					
Lab pH	s.u.	7.03	7.19	7.09	7.17
Total Dissolved Solids	mg/L	3740	3640	3060	2840
Lab Conductivity	umhos/cm	3680	3750	3000	3060
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	236	228	220	214
Bicarbonate as HCO <sub>3</sub>	mg/L	288	279	268	261
Calcium, Ca	mg/L	515	539	530	514
Carbonate as CO <sub>3</sub>	mg/L	< 5	0	< 5	0
Chloride, Cl	mg/L	21	20.5	15	15.7
Magnesium, Mg	mg/L	204	225	134	151
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	mg/L	0.1	0.083	< 0.1	< 0.050
Potassium, K	mg/L	12	12.3	10	10.0
Sodium, Na	mg/L	277	248	141	149
Sulfate, SO <sub>4</sub>	mg/L	2450	2450	1980	1890
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	mg/L	0.002	< 0.005	0.002	< 0.005
Dissolved Barium, Ba	mg/L	< 0.05	0.008	< 0.05	0.012
Dissolved Boron, B	mg/L	0.45	0.485	0.40	0.447
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	mg/L	< 0.005	< 0.001	< 0.005	< 0.001
Dissolved Copper, Cu	mg/L	< 0.005	0.005	< 0.005	< 0.005
Dissolved Fluoride, F	mg/L	0.6	0.616	0.5	0.478
Dissolved Iron, Fe	mg/L	0.03	< 0.050	0.28	0.397
Dissolved Lead, Pb	mg/L	< 0.001	0.003	< 0.001	< 0.001
Dissolved Manganese, Mn	mg/L	0.036	0.039	0.573	0.490
Total Mercury, Hg	mg/L	< 0.0001	< 0.0002	< 0.0001	< 0.0002
Dissolved Molybdenum, Mo	mg/L	0.012	0.015	0.005	0.006
Dissolved Nickel, Ni	mg/L	0.010	0.017	0.011	0.017
Dissolved Selenium, Se	mg/L	0.001	< 0.005	< 0.001	0.005
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	mg/L	0.0240	0.025	0.0154	0.015
Dissolved Vanadium, V	mg/L	< 0.01	< 0.005	< 0.01	< 0.005
Dissolved Zinc, Zn	mg/L	< 0.01	< 0.050	< 0.01	< 0.050
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	pCi/L	42.2	12.6	29.9	12.0
Precision (±)	pCi/L	9.2	2.20	8.4	1.93
MDC	pCi/L	10.7	5.14	11.4	4.92

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Split Sampling Results		Well BC-2 ELI	Well BC-2 SPLIT MID	Well BC-3 ELI	Well BC-3 SPLIT MID
Sample Collection Date		6/24/2014	6/24/2014	6/24/2014	6/24/2014
Dissolved Gross Beta	pCi/L	10	16.0	10.4	12.8
Precision (±)	pCi/L	9.2	3.00	8.6	2.86
MDC	pCi/L	15.0	8.97	14.0	8.81
Dissolved Radium 228	pCi/L	0.2	< 1.00	0.3	< 1.00
Precision (±)	pCi/L	0.7	0.00	0.7	0.00
MDC	pCi/L	1.1	0.030	1.1	0.030
Dissolved Radium 226	pCi/L	0.3	< 1.000	0.3	0.2950
Precision (±)	pCi/L	0.1	0.000	0.1	0.1050
MDC	pCi/L	0.2	0.0120	0.2	0.2200
Total Radon 222	pCi/L	1080	924	618	493
Precision (±)	pCi/L	63.4	190	56.9	118
MDC	pCi/L	86.0	103	84.0	102.0


Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Split Sampling Results		Well DC-2 ELI	Well DC-2 SPLIT MID	Well BC-1 ELI	Well BC-1 SPLIT MID
Sample Collection Date		9/3/2014	9/3/2014	9/3/2014	9/3/2014
<b>Physical Properties</b>					
Lab pH	s.u.	7.27	7.15	7.23	7.22
Total Dissolved Solids	mg/L	4580	4460	3590	3420
Lab Conductivity	umhos/cm	5510	5600	3170	3390
<b>Common Elements and Ions</b>					
Alkalinity, Total as CaCO <sub>3</sub>	mg/L	264	261	296	290
Bicarbonate as HCO <sub>3</sub>	mg/L	322	318	361	353
Calcium, Ca	mg/L	516	584	521	545
Carbonate as CO <sub>3</sub>	mg/L	< 5	0.00	< 5	0.00
Chloride, Cl	mg/L	795	935	23	23.8
Magnesium, Mg	mg/L	143	149	213	214
Nitrate, NO <sub>3</sub> <sup>-</sup> (as Nitrogen)	mg/L	< 0.1	< 0.50	< 0.1	< 0.50
Potassium, K	mg/L	7	7.73	12	12.1
Sodium, Na	mg/L	725	722	173	173
Sulfate, SO <sub>4</sub>	mg/L	1990	2100	2060	2280
<b>Trace and Minor Elements</b>					
Dissolved Arsenic, As	mg/L	0.003	< 0.005	0.002	< 0.005
Dissolved Barium, Ba	mg/L	< 0.05	0.012	< 0.05	0.008
Dissolved Boron, B	mg/L	0.3	0.288	0.7	0.541
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Chromium, Cr	mg/L	< 0.05	0.001	< 0.005	< 0.001
Dissolved Copper, Cu	mg/L	< 0.005	0.016	< 0.005	< 0.005
Dissolved Fluoride, F	mg/L	0.2	0.497	0.4	0.492
Dissolved Iron, Fe	mg/L	0.29	3.49	0.10	0.568
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Manganese, Mn	mg/L	2.74	2.36	0.075	0.079
Total Mercury, Hg	mg/L	< 0.0001	< 0.0002	< 0.0001	< 0.001
Dissolved Molybdenum, Mo	mg/L	0.004	0.005	0.005	0.005
Dissolved Nickel, Ni	mg/L	0.008	0.017	0.005	0.017
Dissolved Selenium, Se	mg/L	< 0.001	< 0.005	0.002	< 0.005
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dissolved Uranium, U	mg/L	0.0082	0.008	0.0686	0.060
Dissolved Vanadium, V	mg/L	< 0.01	< 0.005	< 0.01	< 0.005
Dissolved Zinc, Zn	mg/L	< 0.01	< 0.050	< 0.01	< 0.050
<b>Radiological Parameters</b>					
Dissolved Gross Alpha	pCi/L	23.3	6.25	68.3	45.8
Precision (±)	pCi/L	15.9	1.72	12.0	3.10
MDC	pCi/L	25.1	5.03	14.9	5.15

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Split Sampling Results		Well DC-2 ELI	Well DC-2 SPLIT MID	Well BC-1 ELI	Well BC-1 SPLIT MID
Sample Collection Date		9/3/2014	9/3/2014	9/3/2014	9/3/2014
Dissolved Gross Beta	pCi/L	7.3	13.8	20.8	41.2
Precision (±)	pCi/L	14.8	2.88	12.0	3.69
MDC	pCi/L	24.5	8.71	19.3	8.90
Dissolved Radium 228	pCi/L	1.8	< 1.00	1.8	0.583
Precision (±)	pCi/L	0.7	0.00	0.7	0.399
MDC	pCi/L	1.1	0.033	1.0	0.685
Dissolved Radium 226	pCi/L	0.56	0.9363	0.64	1.168
Precision (±)	pCi/L	0.17	0.2240	0.17	0.2110
MDC	pCi/L	0.17	0.4580	0.17	0.4370
Total Radon 222	pCi/L	639	559	782	587
Precision (±)	pCi/L	49.7	111	50.3	116
MDC	pCi/L	72.3	49.9	70.0	49.0



Well Locations, Elevations and Construction Details									
	DC-1	DC-2	DC-3	DC-4	BC-1	BC-2	BC-3		
Northing State Plane SD S NAD 27 <sup>3</sup>	447093.13	444788.27	444037.97	443942.11	436026.65	434253.95	438165.90		
Easting State Plane SD S NAD 27 <sup>3</sup>	1013760.44	1014726.19	1016403.16	1018562.17	1029474.73	1030548.07	1029035.98		
Latitude NAD 83 <sup>4</sup>	43.499431056	43.493232021	43.491380990	43.491382328	43.471011532	43.466282015	43.476822344		
Longitude NAD 83 <sup>4</sup>	104.052110489	104.048085721	104.041645784	104.033501308	103.991102852	103.986769497	103.993109146		
Top of Casing Elevation NGVD 29 <sup>3</sup>	3645.45	3616.28	3623.30	3618.34	3639.84	3636.33	3654.95		
Casing and Screen Diameter	2	2	2	2	2	2	2		
Screen Length	10	20	10	10	15	10	15		
Well Pickup Above Surface	2.73	2.84	2.26	2.15	2.50	2.43	2.29		
Total Well Depth Below Top of Casing	27.60	32.94	25.10	25.09	32.08	28.03	27.56		
Dedicated Tubing Intake Below Top of Casing	none	23	none	22	24	23	20		

NOTES:

 Highlighted value exceeds ARSD 74:54:01:04.

1: A screening level of 50 pCi/L is used to estimate whether the ambient gross beta concentration is less than the Human Health Standard of 4 mrem/yr.

2: Health standard is for radium 228 + radium 226.

3: Coordinates and elevations surveyed by Andersen Engineers, August 2012.

4: Surveyed coordinates converted to latitude and longitude using CORPSCON 6.0.1 downloaded from <http://www.agc.army.mil/corpscon/>.

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ENERGY LABORATORIES, INC.  
SAMPLE ANALYSIS REPORTS



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# ANALYTICAL SUMMARY REPORT

October 30, 2013

Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Workorder No.: R13090030      Quote ID: R411

Project Name: Alluvial Wells Dewey Burdock

Energy Laboratories Inc. Rapid City SD received the following 6 samples for Powertech USA Inc on 9/3/2013 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R13090030-001	DC-2	09/02/13 10:27	09/03/13	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 Lead 210, Dissolved Radium 226, Dissolved Radium 228, Dissolved Radon 222 Thorium, Isotopic Solids, Total Dissolved
R13090030-002	BC-3	09/02/13 12:16	09/03/13	Aqueous	Same As Above
R13090030-003	BC-1	09/02/13 13:26	09/03/13	Aqueous	Same As Above
R13090030-004	BC-2	09/02/13 14:38	09/03/13	Aqueous	Same As Above
R13090030-005	DC-1	09/03/13 9:35	09/03/13	Aqueous	Same As Above
R13090030-006	DC-2 Dup	09/02/13 10:27	09/03/13	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:** R13090030

**Report Date:** 10/30/13

## 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.

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

Comments imported for SUBBED Workorder: C13090078

### TH230 ANALYSIS

USNRC Regulatory Guide 4.14 provides guidance on Minimum Detectable Concentrations (MDC) that should be achieved in samples for this radionuclide. The sample-specific MDC for this sample could not be achieved due to significant matrix interferences. Please consult with your local regulatory agency prior to using these results for compliance purposes.

End of comments imported for SUBBED Workorder: C13090078



### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13090030-001  
**Client Sample ID:** DC-2

**Report Date:** 10/30/13  
**Collection Date:** 09/02/13 10:27  
**Date Received:** 09/03/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>PHYSICAL PARAMETERS</b>								
Conductivity @ 25 C	5750	umhos/cm		5.0		1	A2510 B	09/04/13 14:47/tb
pH	7.26	su		0.01		1	A4500-H B	09/04/13 11:41/tb
Solids, Total Dissolved TDS @ 180 C	4560	mg/L		100		1	A2540 C	09/04/13 09:35/jmh
Alkalinity, Total as CaCO3	266	mg/L		5		1	A2320 B	09/13/13 11:06/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B	09/13/13 11:06/ch
Bicarbonate as HCO3	324	mg/L		5		1	A2320 B	09/13/13 11:06/ch
<b>INORGANIC PARAMETERS</b>								
Chloride	776	mg/L	D	20		20	E300.0	09/13/13 00:01/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0	09/04/13 00:56/jmh
Sulfate	1950	mg/L	D	20		20	E300.0	09/13/13 00:01/jmh
<b>DATA QUALITY PARAMETERS</b>								
Anions	67.9	meq/L		1.00		1	A1030 E	10/25/13 00:00/lkl
Cations	69.2	meq/L		1.00		1	A1030 E	10/25/13 00:00/lkl
Conductivity, Calculated	5380	umhos/cm		1.00		1	A1030 E	10/25/13 00:00/lkl
TDS Ratio	1.07			0.0100		1	A1030 E	10/25/13 00:00/lkl
A/C Balance	0.920	%				1	A1030 E	10/25/13 00:00/lkl
<b>NUTRIENT PARAMETERS</b>								
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	09/04/13 00:56/jmh
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	-4	pCi/L	U			1	E900.0	09/20/13 18:53/eli-ca
Gross Alpha precision (±)	13.2	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Alpha MDC	22.5	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Beta	5.1	pCi/L	U			1	E900.0	09/20/13 18:53/eli-ca
Gross Beta precision (±)	14.9	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Beta MDC	24.9	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Lead 210	0.3	pCi/L	U			1	E909.0	09/12/13 09:41/eli-cs
Lead 210 precision (±)	0.6	pCi/L				1	E909.0	09/12/13 09:41/eli-cs
Lead 210 MDC	1.0	pCi/L				1	E909.0	09/12/13 09:41/eli-cs
Radium 228	1.0	pCi/L	U			1	RA-05	09/19/13 09:53/eli-ca
Radium 228 precision (±)	0.8	pCi/L				1	RA-05	09/19/13 09:53/eli-ca
Radium 228 MDC	1.3	pCi/L				1	RA-05	09/19/13 09:53/eli-ca
Radium 226	0.2	pCi/L				1	E903.0	09/24/13 17:14/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	09/24/13 17:14/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13090030-001  
**Client Sample ID:** DC-2

**Report Date:** 10/30/13  
**Collection Date:** 09/02/13 10:27  
**Date Received:** 09/03/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 MDC	0.2	pCi/L				1	E903.0	09/24/13 17:14/eli-ca
Thorium 230	0.09	pCi/L	U			1	E908.0	09/19/13 17:17/eli-ca
Thorium 230 precision (±)	0.1	pCi/L				1	E908.0	09/19/13 17:17/eli-ca
Thorium 230 MDC	0.2	pCi/L				1	E908.0	09/19/13 17:17/eli-ca
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	738	pCi/L				1	D5072-92	09/04/13 20:55/eli-ca
Radon 222 precision (±)	50.8	pCi/L				1	D5072-92	09/04/13 20:55/eli-ca
Radon 222 MDC	71.0	pCi/L				1	D5072-92	09/04/13 20:55/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	09/10/13 14:56/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	0.001	mg/L		0.001		1	E200.8	09/10/13 16:01/eli-ca
Barium	ND	mg/L		0.05		10	E200.7	09/09/13 14:53/eli-ca
Boron	0.33	mg/L		0.05		10	E200.7	09/09/13 14:53/eli-ca
Cadmium	ND	mg/L		0.001		1	E200.8	09/10/13 16:01/eli-ca
Chromium	0.006	mg/L		0.005		1	E200.8	09/10/13 16:01/eli-ca
Copper	ND	mg/L		0.005		2	E200.8	09/11/13 14:40/eli-ca
Iron	0.32	mg/L		0.03		10	E200.7	09/09/13 14:53/eli-ca
Lead	ND	mg/L		0.001		1	E200.8	09/10/13 16:01/eli-ca
Manganese	2.80	mg/L	D	0.01		10	E200.7	09/09/13 14:53/eli-ca
Molybdenum	0.005	mg/L		0.001		1	E200.8	09/10/13 16:01/eli-ca
Nickel	0.010	mg/L		0.005		2	E200.8	09/11/13 14:40/eli-ca
Selenium	0.001	mg/L		0.001		1	E200.8	09/10/13 16:01/eli-ca
Silver	ND	mg/L		0.001		1	E200.8	09/10/13 16:01/eli-ca
Uranium	0.0104	mg/L		0.0003		1	E200.8	09/10/13 16:01/eli-ca
Vanadium	0.02	mg/L		0.01		10	E200.7	09/09/13 14:53/eli-ca
Zinc	ND	mg/L		0.01		1	E200.8	09/10/13 16:01/eli-ca
Calcium	516	mg/L		1		10	E200.7	09/09/13 14:53/eli-ca
Magnesium	147	mg/L		1		10	E200.7	09/09/13 14:53/eli-ca
Potassium	7	mg/L		1		10	E200.7	09/09/13 14:53/eli-ca
Sodium	716	mg/L	D	2		10	E200.7	09/09/13 14:53/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13090030-002  
**Client Sample ID:** BC-3

**Report Date:** 10/30/13  
**Collection Date:** 09/02/13 12:16  
**Date Received:** 09/03/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>PHYSICAL PARAMETERS</b>								
Conductivity @ 25 C	3230	umhos/cm		5.0		1	A2510 B	09/04/13 14:49/tb
pH	7.12	su		0.01		1	A4500-H B	09/04/13 11:46/tb
Solids, Total Dissolved TDS @ 180 C	3070	mg/L		100		1	A2540 C	09/04/13 09:36/jmh
Alkalinity, Total as CaCO3	254	mg/L		5		1	A2320 B	09/13/13 11:24/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B	09/13/13 11:24/ch
Bicarbonate as HCO3	310	mg/L		5		1	A2320 B	09/13/13 11:24/ch
<b>INORGANIC PARAMETERS</b>								
Chloride	18	mg/L		1		1	E300.0	09/04/13 01:14/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	09/04/13 01:14/jmh
Sulfate	1960	mg/L	D	20		20	E300.0	09/13/13 00:55/jmh
<b>DATA QUALITY PARAMETERS</b>								
Anions	46.5	meq/L		1.00		1	A1030 E	10/25/13 00:00/lkl
Cations	47.2	meq/L		1.00		1	A1030 E	10/25/13 00:00/lkl
Conductivity, Calculated	3860	umhos/cm		1.00		1	A1030 E	10/25/13 00:00/lkl
TDS Ratio	1.02			0.0100		1	A1030 E	10/25/13 00:00/lkl
A/C Balance	0.690	%				1	A1030 E	10/25/13 00:00/lkl
<b>NUTRIENT PARAMETERS</b>								
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	09/04/13 01:14/jmh
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	12.2	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Alpha precision (±)	7.4	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Alpha MDC	11.4	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Beta	-2	pCi/L	U			1	E900.0	09/20/13 18:53/eli-ca
Gross Beta precision (±)	10.3	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Beta MDC	17.3	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Lead 210	0.1	pCi/L	U			1	E909.0	09/12/13 10:51/eli-cs
Lead 210 precision (±)	0.6	pCi/L				1	E909.0	09/12/13 10:51/eli-cs
Lead 210 MDC	1.0	pCi/L				1	E909.0	09/12/13 10:51/eli-cs
Radium 228	0.4	pCi/L	U			1	RA-05	09/19/13 08:16/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05	09/19/13 08:16/eli-ca
Radium 228 MDC	1.1	pCi/L				1	RA-05	09/19/13 08:16/eli-ca
Radium 226	0.2	pCi/L				1	E903.0	09/24/13 17:14/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	09/24/13 17:14/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13090030-002  
**Client Sample ID:** BC-3

**Report Date:** 10/30/13  
**Collection Date:** 09/02/13 12:16  
**Date Received:** 09/03/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 MDC	0.2	pCi/L				1	E903.0	09/24/13 17:14/eli-ca
Thorium 230	0.09	pCi/L	U			1	E908.0	09/19/13 17:17/eli-ca
Thorium 230 precision (±)	0.1	pCi/L				1	E908.0	09/19/13 17:17/eli-ca
Thorium 230 MDC	0.2	pCi/L				1	E908.0	09/19/13 17:17/eli-ca
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	636	pCi/L				1	D5072-92	09/04/13 21:48/eli-ca
Radon 222 precision (±)	49.0	pCi/L				1	D5072-92	09/04/13 21:48/eli-ca
Radon 222 MDC	70.0	pCi/L				1	D5072-92	09/04/13 21:48/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	09/10/13 14:58/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	ND	mg/L		0.001		1	E200.8	09/10/13 16:17/eli-ca
Barium	ND	mg/L		0.05		10	E200.7	09/09/13 15:11/eli-ca
Boron	0.60	mg/L		0.05		10	E200.7	09/09/13 15:11/eli-ca
Cadmium	ND	mg/L		0.001		1	E200.8	09/10/13 16:17/eli-ca
Chromium	0.007	mg/L		0.005		1	E200.8	09/10/13 16:17/eli-ca
Copper	ND	mg/L		0.005		2	E200.8	09/11/13 14:43/eli-ca
Iron	0.27	mg/L		0.03		10	E200.7	09/09/13 15:11/eli-ca
Lead	ND	mg/L		0.001		1	E200.8	09/10/13 16:17/eli-ca
Manganese	0.60	mg/L	D	0.01		10	E200.7	09/09/13 15:11/eli-ca
Molybdenum	0.007	mg/L		0.001		1	E200.8	09/10/13 16:17/eli-ca
Nickel	0.011	mg/L		0.005		2	E200.8	09/11/13 14:43/eli-ca
Selenium	0.002	mg/L		0.001		1	E200.8	09/10/13 16:17/eli-ca
Silver	ND	mg/L		0.001		1	E200.8	09/10/13 16:17/eli-ca
Uranium	0.0225	mg/L		0.0003		1	E200.8	09/10/13 16:17/eli-ca
Vanadium	ND	mg/L		0.01		1	E200.8	09/10/13 16:17/eli-ca
Zinc	ND	mg/L		0.01		1	E200.8	09/10/13 16:17/eli-ca
Calcium	538	mg/L		1		10	E200.7	09/09/13 15:11/eli-ca
Magnesium	158	mg/L		1		10	E200.7	09/09/13 15:11/eli-ca
Potassium	11	mg/L		1		10	E200.7	09/09/13 15:11/eli-ca
Sodium	162	mg/L	D	2		10	E200.7	09/09/13 15:11/eli-ca

**Report Definitions:**  
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 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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13090030-003  
**Client Sample ID:** BC-1

**Report Date:** 10/30/13  
**Collection Date:** 09/02/13 13:26  
**Date Received:** 09/03/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>PHYSICAL PARAMETERS</b>								
Conductivity @ 25 C	3700	umhos/cm		5.0		1	A2510 B	09/04/13 14:50/tb
pH	7.05	su		0.01		1	A4500-H B	09/04/13 11:48/tb
Solids, Total Dissolved TDS @ 180 C	3760	mg/L		100		1	A2540 C	09/04/13 09:36/jmh
Alkalinity, Total as CaCO3	300	mg/L		5		1	A2320 B	09/13/13 12:03/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B	09/13/13 12:03/ch
Bicarbonate as HCO3	366	mg/L		5		1	A2320 B	09/13/13 12:03/ch
<b>INORGANIC PARAMETERS</b>								
Chloride	25	mg/L		1		1	E300.0	09/04/13 01:32/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	09/04/13 01:32/jmh
Sulfate	2330	mg/L	D	20		20	E300.0	09/13/13 01:49/jmh
<b>DATA QUALITY PARAMETERS</b>								
Anions	55.3	meq/L		1.00		1	A1030 E	10/25/13 00:00/lkl
Cations	55.1	meq/L		1.00		1	A1030 E	10/25/13 00:00/lkl
Conductivity, Calculated	4430	umhos/cm		1.00		1	A1030 E	10/25/13 00:00/lkl
TDS Ratio	1.07			0.0100		1	A1030 E	10/25/13 00:00/lkl
A/C Balance	-0.160	%				1	A1030 E	10/25/13 00:00/lkl
<b>NUTRIENT PARAMETERS</b>								
Nitrogen, Nitrate as N	0.3	mg/L		0.1		1	E300.0	09/04/13 01:32/jmh
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	80.5	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Alpha precision (±)	10.5	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Alpha MDC	11.4	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Beta	19.8	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Beta precision (±)	12.1	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Beta MDC	19.5	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Lead 210	0.1	pCi/L	U			1	E909.0	09/12/13 12:00/eli-cs
Lead 210 precision (±)	0.6	pCi/L				1	E909.0	09/12/13 12:00/eli-cs
Lead 210 MDC	1.0	pCi/L				1	E909.0	09/12/13 12:00/eli-cs
Radium 228	1.3	pCi/L				1	RA-05	09/19/13 09:53/eli-ca
Radium 228 precision (±)	0.8	pCi/L				1	RA-05	09/19/13 09:53/eli-ca
Radium 228 MDC	1.3	pCi/L				1	RA-05	09/19/13 09:53/eli-ca
Radium 226	0.1	pCi/L	U			1	E903.0	09/24/13 17:14/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	09/24/13 17:14/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13090030-003  
**Client Sample ID:** BC-1

**Report Date:** 10/30/13  
**Collection Date:** 09/02/13 13:26  
**Date Received:** 09/03/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 MDC	0.2	pCi/L				1	E903.0	09/24/13 17:14/eli-ca
Thorium 230	0.1	pCi/L	U			1	E908.0	09/19/13 17:17/eli-ca
Thorium 230 precision (±)	0.2	pCi/L				1	E908.0	09/19/13 17:17/eli-ca
Thorium 230 MDC	0.3	pCi/L				1	E908.0	09/19/13 17:17/eli-ca
- See Case Narrative regarding Th230 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	854	pCi/L				1	D5072-92	09/04/13 22:41/eli-ca
Radon 222 precision (±)	51.2	pCi/L				1	D5072-92	09/04/13 22:41/eli-ca
Radon 222 MDC	70.0	pCi/L				1	D5072-92	09/04/13 22:41/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	09/10/13 15:02/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	ND	mg/L		0.001		1	E200.8	09/10/13 16:20/eli-ca
Barium	ND	mg/L		0.05		10	E200.7	09/09/13 15:15/eli-ca
Boron	0.73	mg/L		0.05		10	E200.7	09/09/13 15:15/eli-ca
Cadmium	ND	mg/L		0.001		1	E200.8	09/10/13 16:20/eli-ca
Chromium	0.008	mg/L		0.005		1	E200.8	09/10/13 16:20/eli-ca
Copper	ND	mg/L		0.005		2	E200.8	09/11/13 14:46/eli-ca
Iron	ND	mg/L		0.03		10	E200.7	09/09/13 15:15/eli-ca
Lead	ND	mg/L		0.001		1	E200.8	09/10/13 16:20/eli-ca
Manganese	0.034	mg/L	D	0.004		10	E200.7	09/09/13 15:15/eli-ca
Molybdenum	0.005	mg/L		0.001		1	E200.8	09/10/13 16:20/eli-ca
Nickel	0.009	mg/L		0.005		2	E200.8	09/11/13 14:46/eli-ca
Selenium	0.004	mg/L		0.001		1	E200.8	09/10/13 16:20/eli-ca
Silver	ND	mg/L		0.001		1	E200.8	09/10/13 16:20/eli-ca
Uranium	0.108	mg/L		0.0003		1	E200.8	09/10/13 16:20/eli-ca
Vanadium	ND	mg/L		0.01		1	E200.8	09/10/13 16:20/eli-ca
Zinc	ND	mg/L		0.01		1	E200.8	09/10/13 16:20/eli-ca
Calcium	518	mg/L		1		10	E200.7	09/09/13 15:15/eli-ca
Magnesium	247	mg/L		1		10	E200.7	09/09/13 15:15/eli-ca
Potassium	12	mg/L		1		10	E200.7	09/09/13 15:15/eli-ca
Sodium	199	mg/L	D	2		10	E200.7	09/09/13 15:15/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13090030-004  
**Client Sample ID:** BC-2

**Report Date:** 10/30/13  
**Collection Date:** 09/02/13 14:38  
**Date Received:** 09/03/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>PHYSICAL PARAMETERS</b>								
Conductivity @ 25 C	3860	umhos/cm		5.0		1	A2510 B	09/04/13 14:52/tb
pH	7.12	su		0.01		1	A4500-H B	09/04/13 11:50/tb
Solids, Total Dissolved TDS @ 180 C	3920	mg/L		100		1	A2540 C	09/04/13 09:36/jmh
Alkalinity, Total as CaCO3	232	mg/L		5		1	A2320 B	09/13/13 12:19/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B	09/13/13 12:19/ch
Bicarbonate as HCO3	283	mg/L		5		1	A2320 B	09/13/13 12:19/ch
<b>INORGANIC PARAMETERS</b>								
Chloride	21	mg/L		1		1	E300.0	09/04/13 02:25/jmh
Fluoride	0.6	mg/L		0.1		1	E300.0	09/04/13 02:25/jmh
Sulfate	2290	mg/L	D	50		50	E300.0	09/13/13 02:07/jmh
<b>DATA QUALITY PARAMETERS</b>								
Anions	53.0	meq/L		1.00		1	A1030 E	10/25/13 00:00/lkl
Cations	56.2	meq/L		1.00		1	A1030 E	10/25/13 00:00/lkl
Conductivity, Calculated	4390	umhos/cm		1.00		1	A1030 E	10/25/13 00:00/lkl
TDS Ratio	1.12			0.0100		1	A1030 E	10/25/13 00:00/lkl
A/C Balance	2.89	%				1	A1030 E	10/25/13 00:00/lkl
<b>NUTRIENT PARAMETERS</b>								
Nitrogen, Nitrate as N	0.3	mg/L		0.1		1	E300.0	09/04/13 02:25/jmh
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	20.9	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Alpha precision (±)	8.3	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Alpha MDC	12.1	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Beta	7.4	pCi/L	U			1	E900.0	09/20/13 18:53/eli-ca
Gross Beta precision (±)	11.4	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Beta MDC	18.8	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Lead 210	-0.3	pCi/L	U			1	E909.0	09/12/13 13:09/eli-cs
Lead 210 precision (±)	0.6	pCi/L				1	E909.0	09/12/13 13:09/eli-cs
Lead 210 MDC	1.0	pCi/L				1	E909.0	09/12/13 13:09/eli-cs
Radium 228	1	pCi/L	U			1	RA-05	09/19/13 09:53/eli-ca
Radium 228 precision (±)	0.8	pCi/L				1	RA-05	09/19/13 09:53/eli-ca
Radium 228 MDC	1.3	pCi/L				1	RA-05	09/19/13 09:53/eli-ca
Radium 226	0.05	pCi/L	U			1	E903.0	09/24/13 17:14/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	09/24/13 17:14/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13090030-004  
**Client Sample ID:** BC-2

**Report Date:** 10/30/13  
**Collection Date:** 09/02/13 14:38  
**Date Received:** 09/03/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 MDC	0.2	pCi/L				1	E903.0	09/24/13 17:14/eli-ca
Thorium 230	0.01	pCi/L	U			1	E908.0	09/19/13 17:17/eli-ca
Thorium 230 precision (±)	0.1	pCi/L				1	E908.0	09/19/13 17:17/eli-ca
Thorium 230 MDC	0.4	pCi/L				1	E908.0	09/19/13 17:17/eli-ca
- See Case Narrative regarding Th230 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	972	pCi/L				1	D5072-92	09/04/13 23:35/eli-ca
Radon 222 precision (±)	52.1	pCi/L				1	D5072-92	09/04/13 23:35/eli-ca
Radon 222 MDC	69.0	pCi/L				1	D5072-92	09/04/13 23:35/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	09/10/13 15:04/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	ND	mg/L		0.001		1	E200.8	09/10/13 16:24/eli-ca
Barium	ND	mg/L		0.05		10	E200.7	09/09/13 15:18/eli-ca
Boron	0.56	mg/L		0.05		10	E200.7	09/09/13 15:18/eli-ca
Cadmium	ND	mg/L		0.001		1	E200.8	09/10/13 16:24/eli-ca
Chromium	0.005	mg/L		0.005		1	E200.8	09/10/13 16:24/eli-ca
Copper	ND	mg/L		0.005		5	E200.8	09/12/13 15:52/eli-ca
Iron	ND	mg/L		0.03		10	E200.7	09/09/13 15:18/eli-ca
Lead	ND	mg/L		0.001		1	E200.8	09/10/13 16:24/eli-ca
Manganese	0.032	mg/L		0.001		1	E200.8	09/10/13 16:24/eli-ca
Molybdenum	0.014	mg/L		0.001		1	E200.8	09/10/13 16:24/eli-ca
Nickel	0.009	mg/L		0.005		5	E200.8	09/12/13 15:52/eli-ca
Selenium	0.002	mg/L		0.001		1	E200.8	09/10/13 16:24/eli-ca
Silver	ND	mg/L		0.001		1	E200.8	09/10/13 16:24/eli-ca
Uranium	0.0292	mg/L		0.0003		1	E200.8	09/10/13 16:24/eli-ca
Vanadium	ND	mg/L		0.01		1	E200.8	09/10/13 16:24/eli-ca
Zinc	ND	mg/L		0.01		1	E200.8	09/10/13 16:24/eli-ca
Calcium	518	mg/L		1		10	E200.7	09/09/13 15:18/eli-ca
Magnesium	224	mg/L		1		10	E200.7	09/09/13 15:18/eli-ca
Potassium	12	mg/L		1		10	E200.7	09/09/13 15:18/eli-ca
Sodium	266	mg/L		1		5	E200.7	09/11/13 16:15/eli-ca

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

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





### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13090030-005  
**Client Sample ID:** DC-1

**Report Date:** 10/30/13  
**Collection Date:** 09/03/13 09:35  
**Date Received:** 09/03/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>PHYSICAL PARAMETERS</b>								
Conductivity @ 25 C	6490	umhos/cm		5.0		1	A2510 B	09/04/13 14:54/tb
pH	6.97	su		0.01		1	A4500-H B	09/04/13 11:52/tb
Solids, Total Dissolved TDS @ 180 C	6250	mg/L		100		1	A2540 C	09/04/13 09:37/jmh
Alkalinity, Total as CaCO3	378	mg/L		5		1	A2320 B	09/13/13 12:22/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B	09/13/13 12:22/ch
Bicarbonate as HCO3	461	mg/L		5		1	A2320 B	09/13/13 12:22/ch
<b>INORGANIC PARAMETERS</b>								
Chloride	83	mg/L		1		1	E300.0	09/04/13 03:19/jmh
Fluoride	0.8	mg/L		0.1		1	E300.0	09/04/13 03:19/jmh
Sulfate	3790	mg/L	D	50		50	E300.0	09/13/13 02:24/jmh
<b>DATA QUALITY PARAMETERS</b>								
Anions	89.5	meq/L		1.00		1	A1030 E	10/25/13 00:00/lkl
Cations	91.7	meq/L		1.00		1	A1030 E	10/25/13 00:00/lkl
Conductivity, Calculated	6750	umhos/cm		1.00		1	A1030 E	10/25/13 00:00/lkl
TDS Ratio	1.06			0.0100		1	A1030 E	10/25/13 00:00/lkl
A/C Balance	1.22	%				1	A1030 E	10/25/13 00:00/lkl
<b>NUTRIENT PARAMETERS</b>								
Nitrogen, Nitrate as N	8.6	mg/L		0.1		1	E300.0	09/04/13 03:19/jmh
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	3.2	pCi/L	U			1	E900.0	09/20/13 18:53/eli-ca
Gross Alpha precision (±)	10.5	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Alpha MDC	17.4	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Beta	-10	pCi/L	U			1	E900.0	09/20/13 18:53/eli-ca
Gross Beta precision (±)	17.1	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Beta MDC	29.0	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Lead 210	0.2	pCi/L	U			1	E909.0	09/12/13 14:19/eli-cs
Lead 210 precision (±)	0.7	pCi/L				1	E909.0	09/12/13 14:19/eli-cs
Lead 210 MDC	1.1	pCi/L				1	E909.0	09/12/13 14:19/eli-cs
Radium 228	1.8	pCi/L				1	RA-05	09/19/13 09:53/eli-ca
Radium 228 precision (±)	1.1	pCi/L				1	RA-05	09/19/13 09:53/eli-ca
Radium 228 MDC	1.6	pCi/L				1	RA-05	09/19/13 09:53/eli-ca
Radium 226	0.3	pCi/L				1	E903.0	09/24/13 17:14/eli-ca
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	09/24/13 17:14/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13090030-005  
**Client Sample ID:** DC-1

**Report Date:** 10/30/13  
**Collection Date:** 09/03/13 09:35  
**Date Received:** 09/03/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226 MDC	0.2	pCi/L				1 E903.0	09/24/13 17:14/eli-ca
Thorium 230	0.09	pCi/L	U			1 E908.0	09/19/13 17:17/eli-ca
Thorium 230 precision (±)	0.1	pCi/L				1 E908.0	09/19/13 17:17/eli-ca
Thorium 230 MDC	0.2	pCi/L				1 E908.0	09/19/13 17:17/eli-ca
<b>RADIONUCLIDES - TOTAL</b>							
Radon 222	510	pCi/L				1 D5072-92	09/05/13 00:28/eli-ca
Radon 222 precision (±)	41.1	pCi/L				1 D5072-92	09/05/13 00:28/eli-ca
Radon 222 MDC	60.0	pCi/L				1 D5072-92	09/05/13 00:28/eli-ca
<b>TOTAL METALS ANALYSES</b>							
Mercury	ND	mg/L		0.0001		1 E245.1	09/10/13 15:05/eli-ca
<b>DISSOLVED METALS ANALYSES</b>							
Arsenic	0.001	mg/L		0.001		1 E200.8	09/10/13 16:28/eli-ca
Barium	ND	mg/L		0.05		10 E200.7	09/09/13 15:22/eli-ca
Boron	1.38	mg/L		0.05		10 E200.7	09/09/13 15:22/eli-ca
Cadmium	ND	mg/L		0.001		1 E200.8	09/10/13 16:28/eli-ca
Chromium	0.014	mg/L		0.005		1 E200.8	09/10/13 16:28/eli-ca
Copper	ND	mg/L		0.005		2 E200.8	09/11/13 14:53/eli-ca
Iron	ND	mg/L		0.03		10 E200.7	09/09/13 15:22/eli-ca
Lead	ND	mg/L		0.001		1 E200.8	09/10/13 16:28/eli-ca
Manganese	0.14	mg/L	D	0.01		10 E200.7	09/09/13 15:22/eli-ca
Molybdenum	0.001	mg/L		0.001		1 E200.8	09/10/13 16:28/eli-ca
Nickel	0.035	mg/L		0.005		2 E200.8	09/11/13 14:53/eli-ca
Selenium	0.034	mg/L		0.001		1 E200.8	09/10/13 16:28/eli-ca
Silver	ND	mg/L		0.001		1 E200.8	09/10/13 16:28/eli-ca
Uranium	0.0173	mg/L		0.0003		1 E200.8	09/10/13 16:28/eli-ca
Vanadium	ND	mg/L		0.01		1 E200.8	09/10/13 16:28/eli-ca
Zinc	0.05	mg/L		0.01		1 E200.8	09/10/13 16:28/eli-ca
Calcium	399	mg/L		1		10 E200.7	09/09/13 15:22/eli-ca
Magnesium	351	mg/L		1		10 E200.7	09/09/13 15:22/eli-ca
Potassium	8	mg/L		1		10 E200.7	09/09/13 15:22/eli-ca
Sodium	980	mg/L	D	2		10 E200.7	09/09/13 15:22/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13090030-006  
**Client Sample ID:** DC-2 Dup

**Report Date:** 10/30/13  
**Collection Date:** 09/02/13 10:27  
**Date Received:** 09/03/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>PHYSICAL PARAMETERS</b>								
Conductivity @ 25 C	5760	umhos/cm		5.0		1	A2510 B	09/04/13 14:56/tb
pH	7.25	su		0.01		1	A4500-H B	09/04/13 11:57/tb
Solids, Total Dissolved TDS @ 180 C	4600	mg/L		100		1	A2540 C	09/04/13 09:37/jmh
Alkalinity, Total as CaCO3	266	mg/L		5		1	A2320 B	09/13/13 12:25/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B	09/13/13 12:25/ch
Bicarbonate as HCO3	324	mg/L		5		1	A2320 B	09/13/13 12:25/ch
<b>INORGANIC PARAMETERS</b>								
Chloride	787	mg/L	D	20		20	E300.0	09/13/13 02:42/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0	09/04/13 03:37/jmh
Sulfate	1970	mg/L	D	20		20	E300.0	09/13/13 02:42/jmh
<b>DATA QUALITY PARAMETERS</b>								
Anions	68.6	meq/L		1.00		1	A1030 E	10/25/13 00:00/lkl
Cations	69.6	meq/L		1.00		1	A1030 E	10/25/13 00:00/lkl
Conductivity, Calculated	5420	umhos/cm		1.00		1	A1030 E	10/25/13 00:00/lkl
TDS Ratio	1.06			0.0100		1	A1030 E	10/25/13 00:00/lkl
A/C Balance	0.680	%				1	A1030 E	10/25/13 00:00/lkl
<b>NUTRIENT PARAMETERS</b>								
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	09/04/13 03:37/jmh
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	10.9	pCi/L	U			1	E900.0	09/20/13 18:53/eli-ca
Gross Alpha precision (±)	11.1	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Alpha MDC	17.9	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Beta	0.3	pCi/L	U			1	E900.0	09/20/13 18:53/eli-ca
Gross Beta precision (±)	12.8	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Gross Beta MDC	21.4	pCi/L				1	E900.0	09/20/13 18:53/eli-ca
Lead 210	-0.1	pCi/L	U			1	E909.0	09/12/13 15:28/eli-cs
Lead 210 precision (±)	0.7	pCi/L				1	E909.0	09/12/13 15:28/eli-cs
Lead 210 MDC	1.2	pCi/L				1	E909.0	09/12/13 15:28/eli-cs
Radium 228	0.8	pCi/L	U			1	RA-05	09/19/13 09:53/eli-ca
Radium 228 precision (±)	0.8	pCi/L				1	RA-05	09/19/13 09:53/eli-ca
Radium 228 MDC	1.3	pCi/L				1	RA-05	09/19/13 09:53/eli-ca
Radium 226	0.02	pCi/L	U			1	E903.0	09/24/13 17:14/eli-ca
Radium 226 precision (±)	0.09	pCi/L				1	E903.0	09/24/13 17:14/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13090030-006  
**Client Sample ID:** DC-2 Dup

**Report Date:** 10/30/13  
**Collection Date:** 09/02/13 10:27  
**Date Received:** 09/03/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 MDC	0.2	pCi/L				1	E903.0	09/24/13 17:14/eli-ca
Thorium 230	0.03	pCi/L	U			1	E908.0	09/19/13 17:17/eli-ca
Thorium 230 precision (±)	0.08	pCi/L				1	E908.0	09/19/13 17:17/eli-ca
Thorium 230 MDC	0.2	pCi/L				1	E908.0	09/19/13 17:17/eli-ca
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	749	pCi/L				1	D5072-92	09/05/13 01:21/eli-ca
Radon 222 precision (±)	51.0	pCi/L				1	D5072-92	09/05/13 01:21/eli-ca
Radon 222 MDC	72.0	pCi/L				1	D5072-92	09/05/13 01:21/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	09/10/13 15:07/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	0.001	mg/L		0.001		1	E200.8	09/10/13 16:31/eli-ca
Barium	ND	mg/L		0.05		10	E200.7	09/09/13 15:26/eli-ca
Boron	0.30	mg/L		0.05		10	E200.7	09/09/13 15:26/eli-ca
Cadmium	ND	mg/L		0.001		1	E200.8	09/10/13 16:31/eli-ca
Chromium	ND	mg/L		0.005		1	E200.8	09/10/13 16:31/eli-ca
Copper	ND	mg/L		0.005		2	E200.8	09/11/13 15:09/eli-ca
Iron	0.48	mg/L		0.03		10	E200.7	09/09/13 15:26/eli-ca
Lead	ND	mg/L		0.001		1	E200.8	09/10/13 16:31/eli-ca
Manganese	2.74	mg/L	D	0.01		10	E200.7	09/09/13 15:26/eli-ca
Molybdenum	0.005	mg/L		0.001		1	E200.8	09/10/13 16:31/eli-ca
Nickel	0.009	mg/L		0.005		2	E200.8	09/11/13 15:09/eli-ca
Selenium	0.002	mg/L		0.001		1	E200.8	09/10/13 16:31/eli-ca
Silver	ND	mg/L		0.001		1	E200.8	09/10/13 16:31/eli-ca
Uranium	0.0106	mg/L		0.0003		1	E200.8	09/10/13 16:31/eli-ca
Vanadium	ND	mg/L		0.01		1	E200.8	09/10/13 16:31/eli-ca
Zinc	ND	mg/L		0.01		1	E200.8	09/10/13 16:31/eli-ca
Calcium	517	mg/L		1		10	E200.7	09/09/13 15:26/eli-ca
Magnesium	148	mg/L		1		10	E200.7	09/09/13 15:26/eli-ca
Potassium	7	mg/L		1		10	E200.7	09/09/13 15:26/eli-ca
Sodium	723	mg/L	D	2		10	E200.7	09/09/13 15:26/eli-ca

**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.



# QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 10/30/13

**Project:** Alluvial Wells Dewey Burdock

**Work Order:** R13090030

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2320 B</b>										
Batch: 130913A-ALK-SEL-W										
<b>Sample ID: LCS1_130913A</b>		Laboratory Control Sample				Run: PH_COND1-R_130913A				09/13/13 10:58
Alkalinity, Total as CaCO3		948	mg/L	5.0	95	90	110			
<b>Sample ID: MBLK1_130913A</b>		Method Blank				Run: PH_COND1-R_130913A				09/13/13 11:02
Alkalinity, Total as CaCO3		ND	mg/L	3						
<b>Sample ID: R13090030-001ADUP</b>	3	Sample Duplicate				Run: PH_COND1-R_130913A				09/13/13 11:14
Alkalinity, Total as CaCO3		266	mg/L	5.0				0.0	10	
Carbonate as CO3		ND	mg/L	5.0					10	
Bicarbonate as HCO3		324	mg/L	5.0				0.0	10	
<b>Sample ID: R13090030-002AMS</b>		Sample Matrix Spike				Run: PH_COND1-R_130913A				09/13/13 11:32
Alkalinity, Total as CaCO3		368	mg/L	5.0	94	80	120			

**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

**Report Date:** 10/30/13  
**Work Order:** R13090030

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A2510 B										Batch: 130904_1_COND-PROBE-W
<b>Sample ID:</b> MBLK-1_130904		Method Blank								Run: PH_COND2-R_130904B
Conductivity @ 25 C		ND	umhos/cm	5						09/04/13 14:39

**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

**Report Date:** 10/30/13  
**Work Order:** R13090030

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2540 C</b>										
Batch: TDS130904A										
<b>Sample ID: MB-1_130904A</b>		Method Blank								
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	2						Run: BAL-TDS_130904A 09/04/13 09:28
<b>Sample ID: LCS-2_130904A</b>		Laboratory Control Sample								
Solids, Total Dissolved TDS @ 180 C		500	mg/L	10	100	90	110			Run: BAL-TDS_130904A 09/04/13 09:28
<b>Sample ID: R13090041-002A MS</b>		Sample Matrix Spike								
Solids, Total Dissolved TDS @ 180 C		30000	mg/L	500	101	90	110			Run: BAL-TDS_130904A 09/04/13 09:30

**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

**Report Date:** 10/30/13  
**Work Order:** R13090030

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A4500-H B								Analytical Run: PH_COND2-R_130904A		
<b>Sample ID:</b> ICV-1_130904		Initial Calibration Verification Standard								09/04/13 11:35
pH		7.42	su	0.010	100	98	102			
<b>Method:</b> A4500-H B								Batch: 130904_1_PH-W		
<b>Sample ID:</b> ICV1-1_130904		Initial Calibration Verification Standard								09/04/13 11:34
pH		12.0	su	0.010	100	99	101			
<b>Sample ID:</b> R13090030-001ADUP		Sample Duplicate								09/04/13 11:44
pH		7.21	su	0.010				0.7	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

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

**Report Date:** 10/30/13  
**Work Order:** R13090030

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: D5072-92</b>										
Batch: C_R177986										
<b>Sample ID: C13090044-001GDUP</b>	3	Sample Duplicate					Run: SUB-C177986			09/04/13 13:49
Radon 222		21900	pCi/L					2.4	20	
Radon 222 precision (±)		242	pCi/L							
Radon 222 MDC		142	pCi/L							
<b>Sample ID: R13090030-005D</b>	3	Sample Duplicate					Run: SUB-C177986			09/05/13 02:15
Radon 222		544	pCi/L					6.6	20	
Radon 222 precision (±)		41.5	pCi/L							
Radon 222 MDC		60.0	pCi/L							
<b>Sample ID: MB-R177986</b>	3	Method Blank					Run: SUB-C177986			09/04/13 13:49
Radon 222		9	pCi/L							U
Radon 222 precision (±)		30	pCi/L							
Radon 222 MDC		50	pCi/L							
<b>Sample ID: LCS-R177986</b>		Laboratory Control Sample					Run: SUB-C177986			09/04/13 13:49
Radon 222		1110	pCi/L	97		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

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

**Report Date:** 10/30/13  
**Work Order:** R13090030

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
<b>Method: E200.7</b>										Analytical Run: SUB-C178085	
<b>Sample ID: ICV</b>	9	Initial Calibration Verification Standard									09/09/13 13:47
Barium		1.0	mg/L	0.10	100	95	105				
Boron		0.98	mg/L	0.10	98	95	105				
Calcium		50	mg/L	0.50	101	95	105				
Iron		5.0	mg/L	0.030	101	95	105				
Magnesium		50	mg/L	0.50	101	95	105				
Manganese		4.9	mg/L	0.010	97	95	105				
Potassium		51	mg/L	0.50	103	95	105				
Sodium		51	mg/L	0.50	102	95	105				
Vanadium		0.98	mg/L	0.10	98	95	105				
<b>Sample ID: ICSA</b>	9	Interference Check Sample A									09/09/13 14:01
Barium		0.00067	mg/L	0.10							
Boron		0.013	mg/L	0.10							
Calcium		470	mg/L	0.50	93	80	120				
Iron		180	mg/L	0.030	89	80	120				
Magnesium		500	mg/L	0.50	100	80	120				
Manganese		-0.014	mg/L	0.010							
Potassium		-0.016	mg/L	0.50							
Sodium		-0.084	mg/L	0.50							
Vanadium		0.0058	mg/L	0.10							
<b>Sample ID: ICSAB</b>	9	Interference Check Sample AB									09/09/13 14:05
Barium		0.47	mg/L	0.10	93	80	120				
Boron		0.015	mg/L	0.10							
Calcium		470	mg/L	0.50	93	80	120				
Iron		180	mg/L	0.030	89	80	120				
Magnesium		500	mg/L	0.50	101	80	120				
Manganese		0.43	mg/L	0.010	85	80	120				
Potassium		0.0042	mg/L	0.50							
Sodium		-0.16	mg/L	0.50							
Vanadium		0.45	mg/L	0.10	91	80	120				
<b>Method: E200.7</b>									Batch: C_R178085		
<b>Sample ID: MB-130909A</b>	9	Method Blank							Run: SUB-C178085		09/09/13 14:24
Barium		0.0004	mg/L	0.0002							
Boron		ND	mg/L	0.002							
Calcium		ND	mg/L	0.02							
Iron		ND	mg/L	0.002							
Magnesium		0.04	mg/L	0.01							
Manganese		ND	mg/L	0.0010							
Potassium		ND	mg/L	0.04							
Sodium		ND	mg/L	0.2							
Vanadium		0.002	mg/L	0.001							

**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

**Report Date:** 10/30/13

**Project:** Alluvial Wells Dewey Burdock

**Work Order:** R13090030

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E200.7										
<b>Sample ID:</b> LFB-130909A      9 Laboratory Fortified Blank      Run: SUB-C178085      09/09/13 14:27										
Barium		0.95	mg/L	0.10	95	85	115			
Boron		0.94	mg/L	0.10	94	85	115			
Calcium		48	mg/L	0.50	96	85	115			
Iron		0.96	mg/L	0.030	96	85	115			
Magnesium		48	mg/L	0.50	95	85	115			
Manganese		0.93	mg/L	0.010	93	85	115			
Potassium		48	mg/L	0.50	96	85	115			
Sodium		48	mg/L	0.50	96	85	115			
Vanadium		0.94	mg/L	0.10	94	85	115			
<b>Sample ID:</b> C13080587-001BMS2      9 Sample Matrix Spike      Run: SUB-C178085      09/09/13 14:42										
Barium		1.96	mg/L	0.050	96	70	130			
Boron		2.40	mg/L	0.050	95	70	130			
Iron		2.00	mg/L	0.030	98	70	130			
Manganese		1.91	mg/L	0.0020	94	70	130			
Vanadium		1.96	mg/L	0.010	95	70	130			
Calcium		176	mg/L	1.0	94	70	130			
Magnesium		106	mg/L	1.0	96	70	130			
Potassium		123	mg/L	1.0	95	70	130			
Sodium		391	mg/L	1.0	90	70	130			
<b>Sample ID:</b> C13080587-001BMSD2      9 Sample Matrix Spike Duplicate      Run: SUB-C178085      09/09/13 14:46										
Barium		1.94	mg/L	0.050	95	70	130	0.9	20	
Boron		2.40	mg/L	0.050	95	70	130	0.1	20	
Iron		1.98	mg/L	0.030	97	70	130	1.1	20	
Manganese		1.91	mg/L	0.0020	94	70	130	0.1	20	
Vanadium		1.97	mg/L	0.010	96	70	130	0.8	20	
Calcium		176	mg/L	1.0	94	70	130	0.2	20	
Magnesium		106	mg/L	1.0	96	70	130	0.0	20	
Potassium		122	mg/L	1.0	94	70	130	0.5	20	
Sodium		390	mg/L	1.0	89	70	130	0.2	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

**Client:** Powertech USA Inc

**Report Date:** 10/30/13

**Project:** Alluvial Wells Dewey Burdock

**Work Order:** R13090030

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E200.7										Analytical Run: SUB-C178186
<b>Sample ID:</b> ICV		Initial Calibration Verification Standard								09/11/13 14:43
Sodium		49	mg/L	0.50	98	95	105			
<b>Sample ID:</b> ICSA		Interference Check Sample A								09/11/13 14:58
Sodium		-0.11	mg/L	0.50						
<b>Sample ID:</b> ICSAB		Interference Check Sample AB								09/11/13 15:02
Sodium		-0.20	mg/L	0.50						
<b>Method:</b> E200.7										Batch: C_R178186
<b>Sample ID:</b> MB-130911A		Method Blank								09/11/13 15:20
Sodium		ND	mg/L	0.2				Run: SUB-C178186		
<b>Sample ID:</b> LFB-130911A		Laboratory Fortified Blank								09/11/13 15:23
Sodium		46	mg/L	0.50	92	85	115	Run: SUB-C178186		
<b>Sample ID:</b> C13090314-005BMS2		Sample Matrix Spike								09/11/13 16:37
Sodium		241	mg/L	1.0	88	70	130	Run: SUB-C178186		
<b>Sample ID:</b> C13090314-005BMSD2		Sample Matrix Spike Duplicate								09/11/13 16:55
Sodium		243	mg/L	1.0	91	70	130	1.0	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

**Client:** Powertech USA Inc

**Report Date:** 10/30/13

**Project:** Alluvial Wells Dewey Burdock

**Work Order:** R13090030

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>								Analytical Run: SUB-C178116		
<b>Sample ID: ICV</b>	11	Initial Calibration Verification Standard								09/10/13 14:05
Arsenic		0.0504	mg/L	0.0010	101	90	110			
Cadmium		0.0500	mg/L	0.0010	100	90	110			
Chromium		0.0507	mg/L	0.0010	101	90	110			
Lead		0.0501	mg/L	0.0010	100	90	110			
Manganese		0.0501	mg/L	0.0010	100	90	110			
Molybdenum		0.0506	mg/L	0.0010	101	90	110			
Selenium		0.0498	mg/L	0.0010	100	90	110			
Silver		0.0203	mg/L	0.0010	102	90	110			
Uranium		0.0514	mg/L	0.00030	103	90	110			
Vanadium		0.0509	mg/L	0.0010	102	90	110			
Zinc		0.0506	mg/L	0.0010	101	90	110			
<b>Method: E200.8</b>								Batch: C_R178116		
<b>Sample ID: LRB</b>	11	Method Blank						Run: SUB-C178116		09/10/13 14:31
Arsenic		ND	mg/L	0.00010						
Cadmium		ND	mg/L	2E-05						
Chromium		7E-05	mg/L	6E-05						
Lead		ND	mg/L	3E-05						
Manganese		ND	mg/L	2E-05						
Molybdenum		ND	mg/L	4E-05						
Selenium		ND	mg/L	0.0002						
Silver		ND	mg/L	5E-05						
Uranium		ND	mg/L	1E-05						
Vanadium		ND	mg/L	3E-05						
Zinc		0.002	mg/L	0.0006						
<b>Sample ID: LFB</b>	11	Laboratory Fortified Blank						Run: SUB-C178116		09/10/13 14:34
Arsenic		0.0478	mg/L	0.0010	96	85	115			
Cadmium		0.0473	mg/L	0.0010	95	85	115			
Chromium		0.0484	mg/L	0.0010	97	85	115			
Lead		0.0468	mg/L	0.0010	94	85	115			
Manganese		0.0478	mg/L	0.0010	96	85	115			
Molybdenum		0.0474	mg/L	0.0010	95	85	115			
Selenium		0.0473	mg/L	0.0010	95	85	115			
Silver		0.0186	mg/L	0.0010	93	85	115			
Uranium		0.0473	mg/L	0.00030	95	85	115			
Vanadium		0.0477	mg/L	0.0010	95	85	115			
Zinc		0.0496	mg/L	0.0010	96	85	115			
<b>Sample ID: R13090030-006C</b>	11	Post Digestion Spike						Run: SUB-C178116		09/10/13 16:34
Arsenic		0.0543	mg/L	0.0010	106	70	130			
Cadmium		0.0396	mg/L	0.0010	79	70	130			
Chromium		0.0502	mg/L	0.0050	92	70	130			
Lead		0.0572	mg/L	0.0010	114	70	130			
Manganese		2.40	mg/L	0.0010		70	130			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

**Client:** Powertech USA Inc

**Report Date:** 10/30/13

**Project:** Alluvial Wells Dewey Burdock

**Work Order:** R13090030

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										
Batch: C_R178116										
<b>Sample ID: R13090030-006C</b>	11	Post Digestion Spike				Run: SUB-C178116				09/10/13 16:34
Molybdenum		0.0582	mg/L	0.0010	107	70	130			
Selenium		0.0512	mg/L	0.0010	99	70	130			
Silver		0.0151	mg/L	0.0010	76	70	130			
Uranium		0.0804	mg/L	0.00030	140	70	130			S
Vanadium		0.0517	mg/L	0.010	101	70	130			
Zinc		0.0392	mg/L	0.010	69	70	130			S
<b>Sample ID: R13090030-006C</b>	11	Post Digestion Spike Duplicate				Run: SUB-C178116				09/10/13 16:37
Arsenic		0.0536	mg/L	0.0010	105	70	130	1.3	20	
Cadmium		0.0398	mg/L	0.0010	80	70	130	0.6	20	
Chromium		0.0503	mg/L	0.0050	92	70	130	0.2	20	
Lead		0.0579	mg/L	0.0010	116	70	130	1.1	20	
Manganese		2.44	mg/L	0.0010		70	130	1.5	20	A
Molybdenum		0.0576	mg/L	0.0010	106	70	130	1.1	20	
Selenium		0.0512	mg/L	0.0010	99	70	130	0.1	20	
Silver		0.0153	mg/L	0.0010	77	70	130	1.1	20	
Uranium		0.0795	mg/L	0.00030	138	70	130	1.2	20	S
Vanadium		0.0512	mg/L	0.010	100	70	130	1.0	20	
Zinc		0.0385	mg/L	0.010	67	70	130	2.0	20	S
<b>Method: E200.8</b>										
Analytical Run: SUB-C178166										
<b>Sample ID: ICV</b>	2	Initial Calibration Verification Standard								09/11/13 14:01
Copper		0.0508	mg/L	0.0010	102	90	110			
Nickel		0.0515	mg/L	0.0010	103	90	110			
<b>Method: E200.8</b>										
Batch: C_R178166										
<b>Sample ID: LRB</b>	2	Method Blank				Run: SUB-C178166				09/11/13 14:27
Copper		ND	mg/L	0.0001						
Nickel		ND	mg/L	3E-05						
<b>Sample ID: LFB</b>	2	Laboratory Fortified Blank				Run: SUB-C178166				09/11/13 14:30
Copper		0.0507	mg/L	0.0010	101	85	115			
Nickel		0.0512	mg/L	0.0010	102	85	115			
<b>Sample ID: R13090030-006C</b>	2	Post Digestion Spike				Run: SUB-C178166				09/11/13 15:12
Copper		0.0782	mg/L	0.0050	76	70	130			
Nickel		0.0896	mg/L	0.0050	81	70	130			
<b>Sample ID: R13090030-006C</b>	2	Post Digestion Spike Duplicate				Run: SUB-C178166				09/11/13 15:15
Copper		0.0774	mg/L	0.0050	75	70	130	1.1	20	
Nickel		0.0902	mg/L	0.0050	81	70	130	0.6	20	

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

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

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

**Report Date:** 10/30/13  
**Work Order:** R13090030

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>								Analytical Run: SUB-C178229		
<b>Sample ID: ICV</b>	2	Initial Calibration Verification Standard								09/12/13 14:27
Copper		0.0497	mg/L	0.0010	99	90	110			
Nickel		0.0500	mg/L	0.0010	100	90	110			
<b>Method: E200.8</b>								Batch: C_R178229		
<b>Sample ID: LRB</b>	2	Method Blank					Run: SUB-C178229			09/12/13 14:55
Copper		ND	mg/L	0.0001						
Nickel		ND	mg/L	3E-05						
<b>Sample ID: LFB</b>	2	Laboratory Fortified Blank					Run: SUB-C178229			09/12/13 14:58
Copper		0.0504	mg/L	0.0010	101	85	115			
Nickel		0.0506	mg/L	0.0010	101	85	115			
<b>Sample ID: R13090030-004C</b>	2	Post Digestion Spike					Run: SUB-C178229			09/12/13 15:55
Copper		0.233	mg/L	0.0050	92	70	130			
Nickel		0.245	mg/L	0.0050	94	70	130			
<b>Sample ID: R13090030-004C</b>	2	Post Digestion Spike Duplicate					Run: SUB-C178229			09/12/13 15:58
Copper		0.232	mg/L	0.0050	91	70	130	0.8	20	
Nickel		0.242	mg/L	0.0050	93	70	130	1.1	20	

**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

**Report Date:** 10/30/13  
**Work Order:** R13090030

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E245.1										Analytical Run: SUB-C178104
<b>Sample ID:</b> ICV		Initial Calibration Verification Standard								09/10/13 15:51
Mercury		0.0051	mg/L	0.00010	102	90	110			
<b>Method:</b> E245.1										Batch: C_130910a
<b>Sample ID:</b> IPC		Instrument Performance Check Sample								09/10/13 15:54
Mercury		0.0052	mg/L	0.00010	105	95	105			Run: SUB-C178104
<b>Method:</b> E245.1										Batch: C_38950
<b>Sample ID:</b> MB-38950		Method Blank								09/10/13 14:20
Mercury		ND	mg/L	7E-05						Run: SUB-C178104
<b>Sample ID:</b> LCS-38950		Laboratory Control Sample								09/10/13 14:21
Mercury		0.0053	mg/L	0.00010	105	85	115			Run: SUB-C178104
<b>Sample ID:</b> R13090030-002B		Sample Matrix Spike								09/10/13 14:59
Mercury		0.0045	mg/L	0.00010	89	70	130			Run: SUB-C178104
<b>Sample ID:</b> R13090030-002B		Sample Matrix Spike Duplicate								09/10/13 15:01
Mercury		0.0045	mg/L	0.00010	90	70	130	1.0	10	Run: SUB-C178104

**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

**Report Date:** 10/30/13  
**Work Order:** R13090030

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E300.0</b>										
Analytical Run: DIONEX_130903A										
<b>Sample ID: CCV090313-28</b>	3	Continuing Calibration Verification Standard								09/04/13 01:50
Chloride		74.5	mg/L	1.0	99	90	110			
Fluoride		7.36	mg/L	0.10	98	90	110			
Nitrogen, Nitrate as N		7.15	mg/L	0.10	95	90	110			
<b>Method: E300.0</b>										
Batch: R62638										
<b>Sample ID: LFB090313-14</b>	3	Laboratory Fortified Blank								09/03/13 21:57
Run: DIONEX_130903A										
Chloride		40.5	mg/L	1.0	101	90	110			
Fluoride		4.14	mg/L	0.10	104	90	110			
Nitrogen, Nitrate as N		3.97	mg/L	0.10	99	90	110			
<b>Sample ID: R13090030-004AMS</b>	3	Sample Matrix Spike								09/04/13 02:43
Run: DIONEX_130903A										
Chloride		59.6	mg/L	1.0	95	90	110			
Fluoride		4.12	mg/L	0.10	88	90	110			S
Nitrogen, Nitrate as N		3.91	mg/L	0.10	91	90	110			
<b>Sample ID: R13090030-004AMSD</b>	3	Sample Matrix Spike Duplicate								09/04/13 03:01
Run: DIONEX_130903A										
Chloride		59.7	mg/L	1.0	96	90	110	0.2	10	
Fluoride		4.14	mg/L	0.10	88	90	110	0.4	10	S
Nitrogen, Nitrate as N		3.90	mg/L	0.10	91	90	110	0.1	10	
<b>Method: E300.0</b>										
Analytical Run: DIONEX_130912A										
<b>Sample ID: CCV091213-28</b>	2	Continuing Calibration Verification Standard								09/13/13 00:19
Chloride		73.0	mg/L	1.0	97	90	110			
Sulfate		71.8	mg/L	1.0	96	90	110			
<b>Method: E300.0</b>										
Batch: R62799										
<b>Sample ID: LFB091213-14</b>	2	Laboratory Fortified Blank								09/12/13 20:26
Run: DIONEX_130912A										
Chloride		37.6	mg/L	1.0	94	90	110			
Sulfate		37.6	mg/L	1.0	94	90	110			
<b>Sample ID: R13090030-002AMS</b>	2	Sample Matrix Spike								09/13/13 01:13
Run: DIONEX_130912A										
Chloride		806	mg/L	20	92	90	110			
Sulfate		2860	mg/L	20	112	90	110			S
<b>Sample ID: R13090030-002AMSD</b>	2	Sample Matrix Spike Duplicate								09/13/13 01:31
Run: DIONEX_130912A										
Chloride		811	mg/L	20	92	90	110	0.6	10	
Sulfate		2870	mg/L	20	113	90	110	0.4	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

**Report Date:** 10/30/13  
**Work Order:** R13090030

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E900.0</b>								Batch: C_GrAB-1624		
<b>Sample ID: Th230-GrAB-1624</b>	Laboratory Control Sample			Run: SUB-C178606			09/20/13 18:53			
Gross Alpha		116	pCi/L	111		80	120			
<b>Sample ID: Sr90-GrAB-1624</b>	Laboratory Control Sample			Run: SUB-C178606			09/20/13 18:53			
Gross Beta		173	pCi/L	96		80	120			
<b>Sample ID: MB-GrAB-1624</b>	6	Method Blank		Run: SUB-C178606			09/20/13 18:53			
Gross Alpha		-0.6	pCi/L							U
Gross Alpha precision (±)		0.7	pCi/L							
Gross Alpha MDC		1	pCi/L							
Gross Beta		-0.7	pCi/L							U
Gross Beta precision (±)		2	pCi/L							
Gross Beta MDC		3	pCi/L							
<b>Sample ID: C13090392-001HMS</b>	Sample Matrix Spike			Run: SUB-C178606			09/20/13 18:53			
Gross Alpha		102	pCi/L	85		70	130			
<b>Sample ID: C13090392-001HMSD</b>	Sample Matrix Spike Duplicate			Run: SUB-C178606			09/20/13 18:53			
Gross Alpha		97.6	pCi/L	81		70	130	4.0	16.7	
<b>Sample ID: C13090392-001HMS</b>	Sample Matrix Spike			Run: SUB-C178606			09/20/13 18:53			
Gross Beta		196	pCi/L	106		70	130			
<b>Sample ID: C13090392-001HMSD</b>	Sample Matrix Spike Duplicate			Run: SUB-C178606			09/20/13 18:53			
Gross Beta		198	pCi/L	107		70	130	1.1	13.7	
<b>Sample ID: C13090530-005EDUP</b>	6	Sample Duplicate		Run: SUB-C178606			09/21/13 08:05			
Gross Alpha		65	pCi/L					1.0	22	
Gross Alpha precision (±)		3.8	pCi/L							
Gross Alpha MDC		2.7	pCi/L							
Gross Beta		28	pCi/L					11	32.6	
Gross Beta precision (±)		3.0	pCi/L							
Gross Beta MDC		4.0	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

**Report Date:** 10/30/13  
**Work Order:** R13090030

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E903.0										Batch: C_RA226-6843
<b>Sample ID:</b> R13090030-001E		Sample Matrix Spike					Run: SUB-C178791			09/24/13 17:14
Radium 226		22	pCi/L		96	70	130			
<b>Sample ID:</b> R13090030-001E		Sample Matrix Spike Duplicate					Run: SUB-C178791			09/24/13 17:14
Radium 226		24	pCi/L		106	70	130	10	21.7	
<b>Sample ID:</b> MB-RA226-6843	3	Method Blank					Run: SUB-C178791			09/24/13 22:00
Radium 226		-0.02	pCi/L							U
Radium 226 precision (±)		0.09	pCi/L							
Radium 226 MDC		0.2	pCi/L							
<b>Sample ID:</b> LCS-RA226-6843		Laboratory Control Sample					Run: SUB-C178791			09/24/13 22:00
Radium 226		12	pCi/L		105	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

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

**Report Date:** 10/30/13  
**Work Order:** R13090030

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E908.0</b>								Batch: C_RA-TH-ISO-1911		
<b>Sample ID: LCS-RA-TH-ISO-1911</b>	Laboratory Control Sample					Run: SUB-C178694			09/19/13 17:17	
Thorium 230		5.7	pCi/L		87	80	120			
<b>Sample ID: R13090030-003E</b>	Sample Matrix Spike					Run: SUB-C178694			09/19/13 17:17	
Thorium 230		13	pCi/L		99	70	130			
<b>Sample ID: R13090030-003E</b>	Sample Matrix Spike Duplicate					Run: SUB-C178694			09/19/13 17:17	
Thorium 230		13	pCi/L		99	70	130	0.1	41.5	
<b>Sample ID: MB-RA-TH-ISO-1911</b>	3	Method Blank				Run: SUB-C178694			09/19/13 17:17	
Thorium 230		0.1	pCi/L							U
Thorium 230 precision (±)		0.1	pCi/L							
Thorium 230 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

**Report Date:** 10/30/13  
**Work Order:** R13090030

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E909.0</b>										
Batch: T_PB-210-0404										
<b>Sample ID: MB-PB-210-0404</b>	3	Method Blank					Run: SUB-T52853			09/11/13 17:30
Lead 210		0.04	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		0.9	pCi/L							
<b>Sample ID: LCS-PB-210-0404</b>		Laboratory Control Sample					Run: SUB-T52853			09/11/13 18:40
Lead 210		20	pCi/L	98		80	120			
<b>Sample ID: T13080067-008GMS</b>		Sample Matrix Spike					Run: SUB-T52853			09/11/13 20:58
Lead 210		49	pCi/L	94		70	130			
<b>Sample ID: T13080067-008GMSD</b>		Sample Matrix Spike Duplicate					Run: SUB-T52853			09/11/13 22:08
Lead 210		46	pCi/L	89		70	130	5.5	21.4	

**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

**Report Date:** 10/30/13  
**Work Order:** R13090030

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: RA-05</b>										
Batch: C_RA228-4508										
<b>Sample ID: LCS-228-RA226-6843</b>	Laboratory Control Sample									
Radium 228		8.5	pCi/L		110	80	120			09/19/13 08:16
<b>Sample ID: MB-RA226-6843</b>	3	Method Blank								09/19/13 08:16
Radium 228		0.1	pCi/L							U
Radium 228 precision (±)		0.7	pCi/L							
Radium 228 MDC		1	pCi/L							
<b>Sample ID: R13090030-002E</b>	Sample Matrix Spike									
Radium 228		15	pCi/L		94	70	130			09/19/13 08:16
<b>Sample ID: R13090030-002E</b>	Sample Matrix Spike Duplicate									
Radium 228		18	pCi/L		114	70	130	20	33.7	09/19/13 08:16

**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 Env. / Powertech</i>	Project Name, PWS, Permit, Etc. <i>Powertech alluvial wells</i>	Sample Origin State:	EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>
Report Mail Address (Required): <i>Powertech</i>	Contact Name: <i>Lisa Schinost / Allen Scott</i>	Phone/Fax:	Cell:
<input type="checkbox"/> No Hard Copy Email:	Invoice Contact & Phone:	Purchase Order:	Quote/Bottle Order:

Invoice Address (Required):

No Hard Copy Email:

Special Report/Formats:

DW                       EDD/EDT (Electronic Data)  
 POTW/WWTP                      **Format:** \_\_\_\_\_  
 State: \_\_\_\_\_                       LEVEL IV  
 Other: \_\_\_\_\_                       NELAC

Number of Containers Sample Type: A W S V B O DW Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water	ANALYSIS REQUESTED										SEE ATTACHED	Standard Turnaround (TAT)	R U S H	Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page	Shipped by: Cooler ID(s):				
	MATRIX																Receipt Temp 5.0 °C	On Ice: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	Custody Seal On Bottle Y N On Cooler Y N
	1	DC-2	9-2-13	10:27	Water														
	2	BC-3	9-2-13	12:16	LI														
	3	BC-1	9-2-13	13:26	LI														
	4	BC-2	9-2-13	14:38	LI														
	5	DC-1	9-3-13	9:35	LI														
	6	DC-2 Dup.	9-2-13	10:27	LI														
	7																		
	8																		
	9																		
	10																		

<b>Custody Record MUST be Signed</b>	Relinquished by (print): <i>Allen Scott</i>	Date/Time: <i>9-3-13 13:49</i>	Signature: <i>[Signature]</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 Froiland</i>	Date/Time: <i>9-3-13 13:49</i>	Signature: <i>[Signature]</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](http://www.energylab.com) for additional information, downloadable fee schedule, forms, and links.

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# ANALYTICAL SUMMARY REPORT

October 25, 2013

Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Workorder No.: R13100054                      Quote ID: R411

Project Name: Alluvial Wells Dewey Burdock

Energy Laboratories Inc. Rapid City SD received the following 6 samples for Powertech USA Inc on 10/2/2013 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R13100054-001	DC-1	10/01/13 15:35	10/02/13	Aqueous	Radon 222
R13100054-002	DC-2	10/01/13 11:25	10/02/13	Aqueous	Same As Above
R13100054-003	BC-3	10/01/13 12:45	10/02/13	Aqueous	Same As Above
R13100054-004	BC-3 Dup	10/01/13 12:45	10/02/13	Aqueous	Same As Above
R13100054-005	BC-1	10/01/13 13:12	10/02/13	Aqueous	Same As Above
R13100054-006	BC-2	10/01/13 14:58	10/02/13	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:** R13100054

**Report Date:** 10/25/13

## **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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13100054-001  
**Client Sample ID:** DC-1

**Report Date:** 10/25/13  
**Collection Date:** 10/01/13 15:35  
**Date Received:** 10/02/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	498	pCi/L				1	D5072-92	10/03/13 16:47/eli-ca
Radon 222 precision (±)	47.6	pCi/L				1	D5072-92	10/03/13 16:47/eli-ca
Radon 222 MDC	71.0	pCi/L				1	D5072-92	10/03/13 16:47/eli-ca

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

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





**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13100054-002  
**Client Sample ID:** DC-2

**Report Date:** 10/25/13  
**Collection Date:** 10/01/13 11:25  
**Date Received:** 10/02/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	711	pCi/L				1	D5072-92	10/03/13 16:47/eli-ca
Radon 222 precision (±)	51.6	pCi/L				1	D5072-92	10/03/13 16:47/eli-ca
Radon 222 MDC	74.0	pCi/L				1	D5072-92	10/03/13 16:47/eli-ca

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

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



### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13100054-003  
**Client Sample ID:** BC-3

**Report Date:** 10/25/13  
**Collection Date:** 10/01/13 12:45  
**Date Received:** 10/02/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	684	pCi/L				1	D5072-92	10/03/13 16:47/eli-ca
Radon 222 precision (±)	50.8	pCi/L				1	D5072-92	10/03/13 16:47/eli-ca
Radon 222 MDC	73.0	pCi/L				1	D5072-92	10/03/13 16:47/eli-ca

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

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



**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13100054-004  
**Client Sample ID:** BC-3 Dup

**Report Date:** 10/25/13  
**Collection Date:** 10/01/13 12:45  
**Date Received:** 10/02/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	673	pCi/L				1	D5072-92	10/03/13 16:47/eli-ca
Radon 222 precision (±)	50.7	pCi/L				1	D5072-92	10/03/13 16:47/eli-ca
Radon 222 MDC	73.0	pCi/L				1	D5072-92	10/03/13 16:47/eli-ca

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

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



### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13100054-005  
**Client Sample ID:** BC-1

**Report Date:** 10/25/13  
**Collection Date:** 10/01/13 13:12  
**Date Received:** 10/02/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	966	pCi/L				1	D5072-92	10/03/13 16:47/eli-ca
Radon 222 precision (±)	53.9	pCi/L				1	D5072-92	10/03/13 16:47/eli-ca
Radon 222 MDC	73.0	pCi/L				1	D5072-92	10/03/13 16:47/eli-ca

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

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



**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13100054-006  
**Client Sample ID:** BC-2

**Report Date:** 10/25/13  
**Collection Date:** 10/01/13 14:58  
**Date Received:** 10/02/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	1050	pCi/L				1	D5072-92	10/03/13 16:47/eli-ca
Radon 222 precision (±)	54.2	pCi/L				1	D5072-92	10/03/13 16:47/eli-ca
Radon 222 MDC	72.0	pCi/L				1	D5072-92	10/03/13 16:47/eli-ca

**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.



# QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 10/25/13

**Project:** Alluvial Wells Dewey Burdock

**Work Order:** R13100054

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> D5072-92										Batch: C_R179178
<b>Sample ID:</b> R13100054-006A	3	Sample Duplicate					Run: SUB-C179178			10/03/13 16:47
Radon 222		1060	pCi/L					1.3	20	
Radon 222 precision (±)		54.4	pCi/L							
Radon 222 MDC		72.0	pCi/L							
<b>Sample ID:</b> MB-R179178	3	Method Blank					Run: SUB-C179178			10/03/13 16:47
Radon 222		20	pCi/L							U
Radon 222 precision (±)		30	pCi/L							
Radon 222 MDC		50	pCi/L							
<b>Sample ID:</b> LCS-R179178		Laboratory Control Sample					Run: SUB-C179178			10/03/13 16:47
Radon 222		553	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

**PLEASE PRINT (Provide as much information as possible.)**

Company Name: <b>Powertech</b>	Project Name, PWS, Permit, Etc. <b>Powertech alluvial wells</b>	Sample Origin State:	EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>
Report Mail Address (Required): <b>Powertech</b>	Contact Name: <b>alla Scott / Lisa Schenest</b>	Phone/Fax:	Cell:
<input type="checkbox"/> No Hard Copy Email:	Invoice Contact & Phone:	Purchase Order:	Quote/Bottle Order:

Invoice Address (Required):  
**Powertech**

No Hard Copy Email:

Special Report/Formats:

<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: AW S V B O DW Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water <b>As per order</b>	ANALYSIS REQUESTED										SEE ATTACHED Standard Turnaround (TAT) <b>RUSH</b>	Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page Comments:	Shipped by:																																																																																																																																																																			
	<table border="1" style="width:100%"> <thead> <tr> <th>SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)</th> <th>Collection Date</th> <th>Collection Time</th> <th>MATRIX</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr><td>1 DC-1</td><td>10-1-13</td><td>15:35</td><td>Water</td><td>✓</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>2 DC-2</td><td>10-1-13</td><td>11:25</td><td>"</td><td>✓</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>3 BC-3</td><td>10-1-13</td><td>12:45</td><td>"</td><td>✓</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4 BC-3 Dup</td><td>10-1-13</td><td>12:45</td><td>"</td><td>✓</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5 BC-1</td><td>10-1-13</td><td>13:12</td><td>"</td><td>✓</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>6 BC-2</td><td>10-1-13</td><td>14:58</td><td>"</td><td>✓</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>												SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX												1 DC-1	10-1-13	15:35	Water	✓											2 DC-2	10-1-13	11:25	"	✓											3 BC-3	10-1-13	12:45	"	✓											4 BC-3 Dup	10-1-13	12:45	"	✓											5 BC-1	10-1-13	13:12	"	✓											6 BC-2	10-1-13	14:58	"	✓											7															8															9															10													
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX																																																																																																																																																																													
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<b>Custody Record MUST be Signed</b>	Relinquished by (print): <b>alla Scott</b>	Date/Time: <b>9:52</b>	Signature: <b>[Signature]</b>	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: <b>Steve Fairland</b> 10-2-13 9:52			

Page 10 of 10



# ANALYTICAL SUMMARY REPORT

December 09, 2013

Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Workorder No.: R13110256                      Quote ID: R411

Project Name: Alluvial Wells Dewey Burdock

Energy Laboratories Inc. Rapid City SD received the following 6 samples for Powertech USA Inc on 11/20/2013 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R13110256-001	DC-2	11/19/13 11:18	11/20/13	Aqueous	Radon 222
R13110256-002	BC-3	11/19/13 12:27	11/20/13	Aqueous	Same As Above
R13110256-003	BC-1	11/19/13 13:32	11/20/13	Aqueous	Same As Above
R13110256-004	BC-2	11/19/13 14:28	11/20/13	Aqueous	Same As Above
R13110256-005	DC-1	11/19/13 15:15	11/20/13	Aqueous	Same As Above
R13110256-006	DC-1 Dup	11/19/13 15:15	11/20/13	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:** R13110256

**Report Date:** 12/09/13

## **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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13110256-001  
**Client Sample ID:** DC-2

**Report Date:** 12/09/13  
**Collection Date:** 11/19/13 11:18  
**Date Received:** 11/20/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	686	pCi/L				1	D5072-92	11/21/13 14:30/eli-ca
Radon 222 precision (±)	50.2	pCi/L				1	D5072-92	11/21/13 14:30/eli-ca
Radon 222 MDC	72.0	pCi/L				1	D5072-92	11/21/13 14:30/eli-ca

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

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



### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13110256-002  
**Client Sample ID:** BC-3

**Report Date:** 12/09/13  
**Collection Date:** 11/19/13 12:27  
**Date Received:** 11/20/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	670	pCi/L				1	D5072-92	11/21/13 14:30/eli-ca
Radon 222 precision (±)	49.6	pCi/L				1	D5072-92	11/21/13 14:30/eli-ca
Radon 222 MDC	71.0	pCi/L				1	D5072-92	11/21/13 14:30/eli-ca

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

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



### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13110256-003  
**Client Sample ID:** BC-1

**Report Date:** 12/09/13  
**Collection Date:** 11/19/13 13:32  
**Date Received:** 11/20/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	898	pCi/L				1	D5072-92	11/21/13 14:30/eli-ca
Radon 222 precision (±)	51.9	pCi/L				1	D5072-92	11/21/13 14:30/eli-ca
Radon 222 MDC	70.0	pCi/L				1	D5072-92	11/21/13 14:30/eli-ca

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

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



**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13110256-004  
**Client Sample ID:** BC-2

**Report Date:** 12/09/13  
**Collection Date:** 11/19/13 14:28  
**Date Received:** 11/20/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	1050	pCi/L				1	D5072-92	11/21/13 14:30/eli-ca
Radon 222 precision (±)	53.4	pCi/L				1	D5072-92	11/21/13 14:30/eli-ca
Radon 222 MDC	70.0	pCi/L				1	D5072-92	11/21/13 14:30/eli-ca

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

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



**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13110256-005  
**Client Sample ID:** DC-1

**Report Date:** 12/09/13  
**Collection Date:** 11/19/13 15:15  
**Date Received:** 11/20/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	470	pCi/L				1	D5072-92	11/21/13 14:30/eli-ca
Radon 222 precision (±)	46.3	pCi/L				1	D5072-92	11/21/13 14:30/eli-ca
Radon 222 MDC	69.0	pCi/L				1	D5072-92	11/21/13 14:30/eli-ca

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

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



**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13110256-006  
**Client Sample ID:** DC-1 Dup

**Report Date:** 12/09/13  
**Collection Date:** 11/19/13 15:15  
**Date Received:** 11/20/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	472	pCi/L				1	D5072-92	11/21/13 14:30/eli-ca
Radon 222 precision (±)	46.4	pCi/L				1	D5072-92	11/21/13 14:30/eli-ca
Radon 222 MDC	69.0	pCi/L				1	D5072-92	11/21/13 14:30/eli-ca

**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.



# QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 12/09/13

**Project:** Alluvial Wells Dewey Burdock

**Work Order:** R13110256

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> D5072-92										Batch: C_R181116
<b>Sample ID:</b> R13110256-006A	3	Sample Duplicate					Run: SUB-C181116			11/21/13 14:30
Radon 222		493	pCi/L					4.4	20	
Radon 222 precision (±)		46.6	pCi/L							
Radon 222 MDC		69.0	pCi/L							
<b>Sample ID:</b> MB-R181116	3	Method Blank					Run: SUB-C181116			11/21/13 14:30
Radon 222		10	pCi/L							U
Radon 222 precision (±)		30	pCi/L							
Radon 222 MDC		50	pCi/L							
<b>Sample ID:</b> LCS-R181116		Laboratory Control Sample					Run: SUB-C181116			11/21/13 14:30
Radon 222		551	pCi/L	95		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





# Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: <i>Scott Env / Powertech</i>	Project Name, PWS, Permit, Etc. <i>Powertech alluvial wells</i>	Sample Origin State:	EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>
Report Mail Address (Required): <i>Powertech</i>	Contact Name: <i>Allen Scott / Lisa Scheinost</i>	Phone/Fax:	Cell:
<input type="checkbox"/> No Hard Copy Email:	Invoice Contact & Phone:	Purchase Order:	Quote/Bottle Order:

Invoice Address (Required): <i>Powertech</i>	ANALYSIS REQUESTED SEE ATTACHED Standard Turnaround (TAT) <b>RUSH</b>	Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page	Shipped by: Cooler ID(s):
<input type="checkbox"/> No Hard Copy Email:		Comments:	Receipt Temp <i>4.4</i> °C On Ice: <input checked="" type="checkbox"/> N
Special Report/Formats: <input type="checkbox"/> DW <input type="checkbox"/> POTW/WWTP <input type="checkbox"/> State: _____ <input type="checkbox"/> Other: _____	<input type="checkbox"/> EDD/EDT (Electronic Data) Format: _____ <input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC	Custody Seal On Bottle Y N On Cooler Y N Intact Y N Signature Match Y N	

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX													
<i>DC-2</i>	<i>11-19-13</i>	<i>11:18</i>	<i>Water</i>	<input checked="" type="checkbox"/>												
<i>BC-3</i>	<i>11-19-13</i>	<i>12:27</i>	<i>"</i>	<input checked="" type="checkbox"/>												
<i>BC-1</i>	<i>11-19-13</i>	<i>13:32</i>	<i>"</i>	<input checked="" type="checkbox"/>												
<i>BC-2</i>	<i>11-19-13</i>	<i>14:28</i>	<i>"</i>	<input checked="" type="checkbox"/>												
<del><i>BC-2 Extra</i></del>	<del><i>11-19-13</i></del>	<del><i>14:28</i></del>	<del><i>"</i></del>	<del><input checked="" type="checkbox"/></del>												
<i>DC-1</i>	<i>11-19-13</i>	<i>15:15</i>	<i>"</i>	<input checked="" type="checkbox"/>												
<i>DC-1 Dup.</i>	<i>11-19-13</i>	<i>15:15</i>	<i>"</i>	<input checked="" type="checkbox"/>												

<b>Custody Record MUST be Signed</b>	Relinquished by (print): <i>Allen Scott</i>	Date/Time: <i>11-20-13 13:10</i>	Signature: <i>[Signature]</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>Linde Larsen</i>	Date/Time: <i>11/20/13 2:10</i>	Signature: <i>[Signature]</i>

LABORATORY USE ONLY  
B13110256-001A  
002A  
003A  
004A  
205A  
206A

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](http://www.energylab.com) for additional information, downloadable fee schedule, forms, and links.



# ANALYTICAL SUMMARY REPORT

January 31, 2014

Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Workorder No.: R13120233                      Quote ID: R411

Project Name: Alluvial Wells Dewey Burdock

Energy Laboratories Inc. Rapid City SD received the following 6 samples for Powertech USA Inc on 12/17/2013 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R13120233-001	DC-2	12/16/13 13:51	12/17/13	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 Lead 210, Dissolved Radium 226, Dissolved Radium 228, Dissolved Radon 222 Thorium, Isotopic Solids, Total Dissolved
R13120233-002	DC-2 Dup	12/16/13 13:51	12/17/13	Aqueous	Same As Above
R13120233-003	BC-2	12/16/13 15:38	12/17/13	Aqueous	Same As Above
R13120233-004	BC-1	12/16/13 16:39	12/17/13	Aqueous	Same As Above
R13120233-005	BC-3	12/16/13 18:00	12/17/13	Aqueous	Same As Above
R13120233-006	DC-1	12/17/13 11:40	12/17/13	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:** R13120233

**Report Date:** 01/31/14

## **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.

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.



**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13120233-001  
**Client Sample ID:** DC-2

**Report Date:** 01/31/14  
**Collection Date:** 12/16/13 13:51  
**Date Received:** 12/17/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>PHYSICAL PARAMETERS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	268	mg/L		5		1	A2320 B	12/20/13 15:12/ch
Bicarbonate as HCO <sub>3</sub>	327	mg/L		5		1	A2320 B	12/20/13 15:12/ch
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	12/20/13 15:12/ch
Conductivity @ 25 C	5870	umhos/cm		5.0		1	A2510 B	12/18/13 10:27/tb
pH	7.16	su		0.01		1	A4500-H B	12/18/13 09:58/tb
Solids, Total Dissolved TDS @ 180 C	4740	mg/L		40		1	A2540 C	12/18/13 11:21/jmh
<b>INORGANIC PARAMETERS</b>								
Chloride	792	mg/L	D	20		20	E300.0	12/28/13 00:48/jmh
Fluoride	1.0	mg/L		0.1		1	E300.0	12/18/13 04:19/jmh
Sulfate	2120	mg/L	D	20		20	E300.0	12/28/13 00:48/jmh
<b>DATA QUALITY PARAMETERS</b>								
Anions	71.8	meq/L		1.00		1	A1030 E	01/31/14 00:00/lkl
Cations	73.4	meq/L		1.00		1	A1030 E	01/31/14 00:00/lkl
Conductivity, Calculated	5650	umhos/cm		1.00		1	A1030 E	01/31/14 00:00/lkl
TDS Ratio	1.04			0.0100		1	A1030 E	01/31/14 00:00/lkl
A/C Balance	-1.28	%				1	A1030 E	01/31/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>								
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	12/18/13 04:19/jmh
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	33.3	pCi/L				1	E900.0	01/07/14 18:34/eli-ca
Gross Alpha precision (±)	10.2	pCi/L				1	E900.0	01/07/14 18:34/eli-ca
Gross Alpha MDC	12.9	pCi/L				1	E900.0	01/07/14 18:34/eli-ca
Gross Beta	5.7	pCi/L	U			1	E900.0	01/07/14 18:34/eli-ca
Gross Beta precision (±)	10.7	pCi/L				1	E900.0	01/07/14 18:34/eli-ca
Gross Beta MDC	17.6	pCi/L				1	E900.0	01/07/14 18:34/eli-ca
Lead 210	0.2	pCi/L	U			1	E909.0	01/11/14 18:50/eli-cs
Lead 210 precision (±)	0.7	pCi/L				1	E909.0	01/11/14 18:50/eli-cs
Lead 210 MDC	1.1	pCi/L				1	E909.0	01/11/14 18:50/eli-cs
Radium 228	0.6	pCi/L	U			1	RA-05	01/02/14 12:53/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05	01/02/14 12:53/eli-ca
Radium 228 MDC	1.2	pCi/L				1	RA-05	01/02/14 12:53/eli-ca
Radium 226	0.1	pCi/L	U			1	E903.0	01/07/14 11:10/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	01/07/14 11:10/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13120233-001  
**Client Sample ID:** DC-2

**Report Date:** 01/31/14  
**Collection Date:** 12/16/13 13:51  
**Date Received:** 12/17/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 MDC	0.2	pCi/L				1	E903.0	01/07/14 11:10/eli-ca
Thorium 230	0.02	pCi/L	U			1	E908.0	01/07/14 11:31/eli-ca
Thorium 230 precision (±)	0.05	pCi/L				1	E908.0	01/07/14 11:31/eli-ca
Thorium 230 MDC	0.1	pCi/L				1	E908.0	01/07/14 11:31/eli-ca
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	780	pCi/L				1	D5072-92	12/19/13 18:36/eli-ca
Radon 222 precision (±)	62.3	pCi/L				1	D5072-92	12/19/13 18:36/eli-ca
Radon 222 MDC	91.0	pCi/L				1	D5072-92	12/19/13 18:36/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	12/24/13 10:30/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	0.003	mg/L		0.001		2	E200.8	12/21/13 05:24/eli-ca
Barium	ND	mg/L		0.05		1	E200.8	12/30/13 17:31/eli-ca
Boron	0.30	mg/L		0.05		2	E200.8	12/21/13 05:24/eli-ca
Cadmium	ND	mg/L		0.001		2	E200.8	12/21/13 05:24/eli-ca
Chromium	ND	mg/L		0.005		2	E200.8	12/21/13 05:24/eli-ca
Copper	ND	mg/L		0.005		2	E200.8	12/21/13 05:24/eli-ca
Iron	1.87	mg/L		0.03		2	E200.8	12/21/13 05:24/eli-ca
Lead	ND	mg/L		0.001		2	E200.8	12/21/13 05:24/eli-ca
Manganese	2.93	mg/L		0.001		2	E200.8	12/21/13 05:24/eli-ca
Molybdenum	0.005	mg/L		0.001		2	E200.8	12/21/13 05:24/eli-ca
Nickel	ND	mg/L		0.005		2	E200.8	12/21/13 05:24/eli-ca
Selenium	ND	mg/L		0.001		2	E200.8	12/21/13 05:24/eli-ca
Silver	ND	mg/L		0.001		2	E200.8	12/21/13 05:24/eli-ca
Uranium	0.0100	mg/L		0.0003		2	E200.8	12/21/13 05:24/eli-ca
Vanadium	ND	mg/L		0.01		2	E200.8	12/21/13 05:24/eli-ca
Zinc	ND	mg/L		0.01		2	E200.8	12/21/13 05:24/eli-ca
Calcium	540	mg/L		1		2	E200.8	12/21/13 05:24/eli-ca
Magnesium	143	mg/L		1		2	E200.8	12/21/13 05:24/eli-ca
Potassium	7	mg/L		1		2	E200.8	12/21/13 05:24/eli-ca
Sodium	793	mg/L	D	3		10	E200.7	12/23/13 14:41/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13120233-002  
**Client Sample ID:** DC-2 Dup

**Report Date:** 01/31/14  
**Collection Date:** 12/16/13 13:51  
**Date Received:** 12/17/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>PHYSICAL PARAMETERS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	270	mg/L		5		1	A2320 B	12/20/13 15:19/ch
Bicarbonate as HCO <sub>3</sub>	329	mg/L		5		1	A2320 B	12/20/13 15:19/ch
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	12/20/13 15:19/ch
Conductivity @ 25 C	5840	umhos/cm		5.0		1	A2510 B	12/18/13 10:31/tb
pH	7.03	su		0.01		1	A4500-H B	12/18/13 10:03/tb
Solids, Total Dissolved TDS @ 180 C	4740	mg/L		40		1	A2540 C	12/18/13 11:22/jmh
<b>INORGANIC PARAMETERS</b>								
Chloride	793	mg/L	D	20		20	E300.0	12/28/13 01:06/jmh
Fluoride	1.0	mg/L		0.1		1	E300.0	12/18/13 04:36/jmh
Sulfate	2110	mg/L	D	20		20	E300.0	12/28/13 01:06/jmh
<b>DATA QUALITY PARAMETERS</b>								
Anions	71.6	meq/L		1.00		1	A1030 E	01/31/14 00:00/lkl
Cations	73.5	meq/L		1.00		1	A1030 E	01/31/14 00:00/lkl
Conductivity, Calculated	5650	umhos/cm		1.00		1	A1030 E	01/31/14 00:00/lkl
TDS Ratio	1.04			0.0100		1	A1030 E	01/31/14 00:00/lkl
A/C Balance	-1.52	%				1	A1030 E	01/31/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>								
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	12/18/13 04:36/jmh
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	39.5	pCi/L				1	E900.0	01/07/14 18:35/eli-ca
Gross Alpha precision (±)	10.8	pCi/L				1	E900.0	01/07/14 18:35/eli-ca
Gross Alpha MDC	13.8	pCi/L				1	E900.0	01/07/14 18:35/eli-ca
Gross Beta	0.5	pCi/L	U			1	E900.0	01/07/14 18:35/eli-ca
Gross Beta precision (±)	11.6	pCi/L				1	E900.0	01/07/14 18:35/eli-ca
Gross Beta MDC	19.4	pCi/L				1	E900.0	01/07/14 18:35/eli-ca
Lead 210	0.2	pCi/L	U			1	E909.0	01/11/14 20:00/eli-cs
Lead 210 precision (±)	0.7	pCi/L				1	E909.0	01/11/14 20:00/eli-cs
Lead 210 MDC	1.1	pCi/L				1	E909.0	01/11/14 20:00/eli-cs
Radium 228	0.6	pCi/L	U			1	RA-05	01/02/14 12:53/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05	01/02/14 12:53/eli-ca
Radium 228 MDC	1.2	pCi/L				1	RA-05	01/02/14 12:53/eli-ca
Radium 226	0.2	pCi/L				1	E903.0	01/07/14 11:10/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	01/07/14 11:10/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13120233-002  
**Client Sample ID:** DC-2 Dup

**Report Date:** 01/31/14  
**Collection Date:** 12/16/13 13:51  
**Date Received:** 12/17/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 MDC	0.2	pCi/L				1	E903.0	01/07/14 11:10/eli-ca
Thorium 230	0.07	pCi/L	U			1	E908.0	01/07/14 11:31/eli-ca
Thorium 230 precision (±)	0.06	pCi/L				1	E908.0	01/07/14 11:31/eli-ca
Thorium 230 MDC	0.09	pCi/L				1	E908.0	01/07/14 11:31/eli-ca
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	732	pCi/L				1	D5072-92	12/19/13 18:36/eli-ca
Radon 222 precision (±)	61.7	pCi/L				1	D5072-92	12/19/13 18:36/eli-ca
Radon 222 MDC	91.0	pCi/L				1	D5072-92	12/19/13 18:36/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	12/24/13 10:39/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	0.003	mg/L		0.001		2	E200.8	12/21/13 05:29/eli-ca
Barium	ND	mg/L		0.05		1	E200.8	12/30/13 17:57/eli-ca
Boron	0.30	mg/L		0.05		2	E200.8	12/21/13 05:29/eli-ca
Cadmium	ND	mg/L		0.001		2	E200.8	12/21/13 05:29/eli-ca
Chromium	ND	mg/L		0.005		2	E200.8	12/21/13 05:29/eli-ca
Copper	ND	mg/L		0.005		2	E200.8	12/21/13 05:29/eli-ca
Iron	0.89	mg/L		0.03		2	E200.8	12/21/13 05:29/eli-ca
Lead	ND	mg/L		0.001		2	E200.8	12/21/13 05:29/eli-ca
Manganese	2.91	mg/L		0.001		2	E200.8	12/21/13 05:29/eli-ca
Molybdenum	0.005	mg/L		0.001		2	E200.8	12/21/13 05:29/eli-ca
Nickel	ND	mg/L		0.005		2	E200.8	12/21/13 05:29/eli-ca
Selenium	ND	mg/L		0.001		2	E200.8	12/21/13 05:29/eli-ca
Silver	ND	mg/L		0.001		2	E200.8	12/21/13 05:29/eli-ca
Uranium	0.0099	mg/L		0.0003		2	E200.8	12/21/13 05:29/eli-ca
Vanadium	ND	mg/L		0.01		2	E200.8	12/21/13 05:29/eli-ca
Zinc	ND	mg/L		0.01		2	E200.8	12/21/13 05:29/eli-ca
Calcium	541	mg/L		1		2	E200.8	12/21/13 05:29/eli-ca
Magnesium	143	mg/L		1		2	E200.8	12/21/13 05:29/eli-ca
Potassium	7	mg/L		1		2	E200.8	12/21/13 05:29/eli-ca
Sodium	795	mg/L	D	3		10	E200.7	12/23/13 14:45/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13120233-003  
**Client Sample ID:** BC-2

**Report Date:** 01/31/14  
**Collection Date:** 12/16/13 15:38  
**Date Received:** 12/17/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>PHYSICAL PARAMETERS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	238	mg/L		5		1	A2320 B	12/20/13 15:24/ch
Bicarbonate as HCO <sub>3</sub>	290	mg/L		5		1	A2320 B	12/20/13 15:24/ch
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	12/20/13 15:24/ch
Conductivity @ 25 C	3850	umhos/cm		5.0		1	A2510 B	12/18/13 10:32/tb
pH	7.11	su		0.01		1	A4500-H B	12/18/13 10:04/tb
Solids, Total Dissolved TDS @ 180 C	3830	mg/L		40		1	A2540 C	12/18/13 11:23/jmh
<b>INORGANIC PARAMETERS</b>								
Chloride	19	mg/L		1		1	E300.0	12/18/13 04:54/jmh
Fluoride	1.0	mg/L		0.1		1	E300.0	12/18/13 04:54/jmh
Sulfate	2270	mg/L	D	50		50	E300.0	12/28/13 01:58/jmh
<b>DATA QUALITY PARAMETERS</b>								
Anions	52.5	meq/L		1.00		1	A1030 E	01/31/14 00:00/lkl
Cations	54.4	meq/L		1.00		1	A1030 E	01/31/14 00:00/lkl
Conductivity, Calculated	4320	umhos/cm		1.00		1	A1030 E	01/31/14 00:00/lkl
TDS Ratio	1.12			0.0100		1	A1030 E	01/31/14 00:00/lkl
A/C Balance	-2.04	%				1	A1030 E	01/31/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>								
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	12/18/13 04:54/jmh
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	40.2	pCi/L				1	E900.0	01/07/14 18:35/eli-ca
Gross Alpha precision (±)	8.6	pCi/L				1	E900.0	01/07/14 18:35/eli-ca
Gross Alpha MDC	9.4	pCi/L				1	E900.0	01/07/14 18:35/eli-ca
Gross Beta	14.9	pCi/L				1	E900.0	01/07/14 18:35/eli-ca
Gross Beta precision (±)	7.8	pCi/L				1	E900.0	01/07/14 18:35/eli-ca
Gross Beta MDC	12.5	pCi/L				1	E900.0	01/07/14 18:35/eli-ca
Lead 210	0.5	pCi/L	U			1	E909.0	01/11/14 21:09/eli-cs
Lead 210 precision (±)	0.7	pCi/L				1	E909.0	01/11/14 21:09/eli-cs
Lead 210 MDC	1.1	pCi/L				1	E909.0	01/11/14 21:09/eli-cs
Radium 228	0.5	pCi/L	U			1	RA-05	01/02/14 12:53/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05	01/02/14 12:53/eli-ca
Radium 228 MDC	1.1	pCi/L				1	RA-05	01/02/14 12:53/eli-ca
Radium 226	0.05	pCi/L	U			1	E903.0	01/07/14 11:10/eli-ca
Radium 226 precision (±)	0.09	pCi/L				1	E903.0	01/07/14 11:10/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13120233-003  
**Client Sample ID:** BC-2

**Report Date:** 01/31/14  
**Collection Date:** 12/16/13 15:38  
**Date Received:** 12/17/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 MDC	0.1	pCi/L				1	E903.0	01/07/14 11:10/eli-ca
Thorium 230	0.04	pCi/L	U			1	E908.0	01/07/14 11:31/eli-ca
Thorium 230 precision (±)	0.1	pCi/L				1	E908.0	01/07/14 11:31/eli-ca
Thorium 230 MDC	0.2	pCi/L				1	E908.0	01/07/14 11:31/eli-ca
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	1050	pCi/L				1	D5072-92	12/19/13 18:36/eli-ca
Radon 222 precision (±)	64.7	pCi/L				1	D5072-92	12/19/13 18:36/eli-ca
Radon 222 MDC	89.0	pCi/L				1	D5072-92	12/19/13 18:36/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	12/24/13 10:41/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	0.002	mg/L		0.001		2	E200.8	12/21/13 05:33/eli-ca
Barium	ND	mg/L		0.05		2	E200.8	12/21/13 05:33/eli-ca
Boron	0.47	mg/L		0.05		2	E200.8	12/21/13 05:33/eli-ca
Cadmium	ND	mg/L		0.001		2	E200.8	12/21/13 05:33/eli-ca
Chromium	ND	mg/L		0.005		2	E200.8	12/21/13 05:33/eli-ca
Copper	ND	mg/L		0.005		2	E200.8	12/21/13 05:33/eli-ca
Iron	ND	mg/L		0.03		2	E200.8	12/21/13 05:33/eli-ca
Lead	ND	mg/L		0.001		2	E200.8	12/21/13 05:33/eli-ca
Manganese	0.039	mg/L		0.001		2	E200.8	12/21/13 05:33/eli-ca
Molybdenum	0.014	mg/L		0.001		2	E200.8	12/21/13 05:33/eli-ca
Nickel	ND	mg/L		0.005		2	E200.8	12/21/13 05:33/eli-ca
Selenium	ND	mg/L		0.001		2	E200.8	12/21/13 05:33/eli-ca
Silver	ND	mg/L		0.001		2	E200.8	12/21/13 05:33/eli-ca
Uranium	0.0255	mg/L		0.0003		2	E200.8	12/21/13 05:33/eli-ca
Vanadium	ND	mg/L		0.01		2	E200.8	12/21/13 05:33/eli-ca
Zinc	ND	mg/L		0.01		2	E200.8	12/21/13 05:33/eli-ca
Calcium	527	mg/L		1		2	E200.8	12/21/13 05:33/eli-ca
Magnesium	205	mg/L		1		2	E200.8	12/21/13 05:33/eli-ca
Potassium	13	mg/L		1		2	E200.8	12/21/13 05:33/eli-ca
Sodium	250	mg/L		1		2	E200.8	12/21/13 05:33/eli-ca

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

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



### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13120233-004  
**Client Sample ID:** BC-1

**Report Date:** 01/31/14  
**Collection Date:** 12/16/13 16:39  
**Date Received:** 12/17/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>PHYSICAL PARAMETERS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	304	mg/L		5		1	A2320 B	12/20/13 15:31/ch
Bicarbonate as HCO <sub>3</sub>	371	mg/L		5		1	A2320 B	12/20/13 15:31/ch
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	12/20/13 15:31/ch
Conductivity @ 25 C	3730	umhos/cm		5.0		1	A2510 B	12/18/13 10:33/tb
pH	7.01	su		0.01		1	A4500-H B	12/18/13 10:06/tb
Solids, Total Dissolved TDS @ 180 C	3700	mg/L		40		1	A2540 C	12/18/13 11:23/jmh
<b>INORGANIC PARAMETERS</b>								
Chloride	22	mg/L		1		1	E300.0	12/18/13 05:11/jmh
Fluoride	0.8	mg/L		0.1		1	E300.0	12/18/13 05:11/jmh
Sulfate	2160	mg/L	D	50		50	E300.0	12/28/13 02:50/jmh
<b>DATA QUALITY PARAMETERS</b>								
Anions	51.8	meq/L		1.00		1	A1030 E	01/31/14 00:00/lkl
Cations	52.7	meq/L		1.00		1	A1030 E	01/31/14 00:00/lkl
Conductivity, Calculated	4210	umhos/cm		1.00		1	A1030 E	01/31/14 00:00/lkl
TDS Ratio	1.12			0.0100		1	A1030 E	01/31/14 00:00/lkl
A/C Balance	-0.950	%				1	A1030 E	01/31/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>								
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	12/18/13 05:11/jmh
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	99.7	pCi/L				1	E900.0	01/07/14 18:35/eli-ca
Gross Alpha precision (±)	12.1	pCi/L				1	E900.0	01/07/14 18:35/eli-ca
Gross Alpha MDC	10.5	pCi/L				1	E900.0	01/07/14 18:35/eli-ca
Gross Beta	22.6	pCi/L				1	E900.0	01/07/14 18:35/eli-ca
Gross Beta precision (±)	8.7	pCi/L				1	E900.0	01/07/14 18:35/eli-ca
Gross Beta MDC	13.6	pCi/L				1	E900.0	01/07/14 18:35/eli-ca
Lead 210	0.3	pCi/L	U			1	E909.0	01/11/14 22:19/eli-cs
Lead 210 precision (±)	0.6	pCi/L				1	E909.0	01/11/14 22:19/eli-cs
Lead 210 MDC	1.0	pCi/L				1	E909.0	01/11/14 22:19/eli-cs
Radium 228	0.9	pCi/L	U			1	RA-05	01/02/14 12:53/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05	01/02/14 12:53/eli-ca
Radium 228 MDC	1.1	pCi/L				1	RA-05	01/02/14 12:53/eli-ca
Radium 226	0.3	pCi/L				1	E903.0	01/07/14 11:10/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	01/07/14 11:10/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13120233-004  
**Client Sample ID:** BC-1

**Report Date:** 01/31/14  
**Collection Date:** 12/16/13 16:39  
**Date Received:** 12/17/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 MDC	0.1	pCi/L				1	E903.0	01/07/14 11:10/eli-ca
Thorium 230	0.2	pCi/L	U			1	E908.0	01/07/14 11:31/eli-ca
Thorium 230 precision (±)	0.1	pCi/L				1	E908.0	01/07/14 11:31/eli-ca
Thorium 230 MDC	0.2	pCi/L				1	E908.0	01/07/14 11:31/eli-ca
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	955	pCi/L				1	D5072-92	12/19/13 18:36/eli-ca
Radon 222 precision (±)	63.2	pCi/L				1	D5072-92	12/19/13 18:36/eli-ca
Radon 222 MDC	89.0	pCi/L				1	D5072-92	12/19/13 18:36/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	12/24/13 10:43/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	0.002	mg/L		0.001		2	E200.8	12/21/13 05:37/eli-ca
Barium	ND	mg/L		0.05		2	E200.8	12/21/13 05:37/eli-ca
Boron	0.66	mg/L		0.05		2	E200.8	12/21/13 05:37/eli-ca
Cadmium	ND	mg/L		0.001		2	E200.8	12/21/13 05:37/eli-ca
Chromium	ND	mg/L		0.005		2	E200.8	12/21/13 05:37/eli-ca
Copper	ND	mg/L		0.005		2	E200.8	12/21/13 05:37/eli-ca
Iron	0.06	mg/L		0.03		2	E200.8	12/21/13 05:37/eli-ca
Lead	ND	mg/L		0.001		2	E200.8	12/21/13 05:37/eli-ca
Manganese	0.027	mg/L		0.001		2	E200.8	12/21/13 05:37/eli-ca
Molybdenum	0.006	mg/L		0.001		2	E200.8	12/21/13 05:37/eli-ca
Nickel	0.005	mg/L		0.005		2	E200.8	12/21/13 05:37/eli-ca
Selenium	0.003	mg/L		0.001		2	E200.8	12/21/13 05:37/eli-ca
Silver	ND	mg/L		0.001		2	E200.8	12/21/13 05:37/eli-ca
Uranium	0.0956	mg/L		0.0003		2	E200.8	12/21/13 05:37/eli-ca
Vanadium	ND	mg/L		0.01		2	E200.8	12/21/13 05:37/eli-ca
Zinc	ND	mg/L		0.01		2	E200.8	12/21/13 05:37/eli-ca
Calcium	527	mg/L		1		2	E200.8	12/21/13 05:37/eli-ca
Magnesium	223	mg/L		1		2	E200.8	12/21/13 05:37/eli-ca
Potassium	12	mg/L		1		2	E200.8	12/21/13 05:37/eli-ca
Sodium	177	mg/L		1		2	E200.8	12/21/13 05:37/eli-ca

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

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



**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13120233-005  
**Client Sample ID:** BC-3

**Report Date:** 01/31/14  
**Collection Date:** 12/16/13 18:00  
**Date Received:** 12/17/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>PHYSICAL PARAMETERS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	240	mg/L		5		1	A2320 B	12/20/13 15:35/ch
Bicarbonate as HCO <sub>3</sub>	293	mg/L		5		1	A2320 B	12/20/13 15:35/ch
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	12/20/13 15:35/ch
Conductivity @ 25 C	3240	umhos/cm		5.0		1	A2510 B	12/18/13 10:35/tb
pH	7.08	su		0.01		1	A4500-H B	12/18/13 10:07/tb
Solids, Total Dissolved TDS @ 180 C	3150	mg/L		20		1	A2540 C	12/18/13 11:24/jmh
<b>INORGANIC PARAMETERS</b>								
Chloride	15	mg/L		1		1	E300.0	12/18/13 06:21/jmh
Fluoride	0.7	mg/L		0.1		1	E300.0	12/18/13 06:21/jmh
Sulfate	1790	mg/L	D	50		50	E300.0	12/28/13 03:08/jmh
<b>DATA QUALITY PARAMETERS</b>								
Anions	42.6	meq/L		1.00		1	A1030 E	01/31/14 00:00/lkl
Cations	44.4	meq/L		1.00		1	A1030 E	01/31/14 00:00/lkl
Conductivity, Calculated	3610	umhos/cm		1.00		1	A1030 E	01/31/14 00:00/lkl
TDS Ratio	1.14			0.0100		1	A1030 E	01/31/14 00:00/lkl
A/C Balance	-2.38	%				1	A1030 E	01/31/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>								
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	12/18/13 06:21/jmh
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	37.8	pCi/L				1	E900.0	01/07/14 18:34/eli-ca
Gross Alpha precision (±)	8.7	pCi/L				1	E900.0	01/07/14 18:34/eli-ca
Gross Alpha MDC	11.2	pCi/L				1	E900.0	01/07/14 18:34/eli-ca
Gross Beta	10.4	pCi/L	U			1	E900.0	01/07/14 18:34/eli-ca
Gross Beta precision (±)	8.3	pCi/L				1	E900.0	01/07/14 18:34/eli-ca
Gross Beta MDC	13.5	pCi/L				1	E900.0	01/07/14 18:34/eli-ca
Lead 210	0.3	pCi/L	U			1	E909.0	01/11/14 23:28/eli-cs
Lead 210 precision (±)	0.6	pCi/L				1	E909.0	01/11/14 23:28/eli-cs
Lead 210 MDC	1.0	pCi/L				1	E909.0	01/11/14 23:28/eli-cs
Radium 228	0.5	pCi/L	U			1	RA-05	01/02/14 12:53/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05	01/02/14 12:53/eli-ca
Radium 228 MDC	1.1	pCi/L				1	RA-05	01/02/14 12:53/eli-ca
Radium 226	0.09	pCi/L	U			1	E903.0	01/07/14 11:10/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	01/07/14 11:10/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13120233-005  
**Client Sample ID:** BC-3

**Report Date:** 01/31/14  
**Collection Date:** 12/16/13 18:00  
**Date Received:** 12/17/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 MDC	0.1	pCi/L				1	E903.0	01/07/14 11:10/eli-ca
Thorium 230	0.04	pCi/L	U			1	E908.0	01/07/14 11:31/eli-ca
Thorium 230 precision (±)	0.06	pCi/L				1	E908.0	01/07/14 11:31/eli-ca
Thorium 230 MDC	0.1	pCi/L				1	E908.0	01/07/14 11:31/eli-ca
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	583	pCi/L				1	D5072-92	12/19/13 18:36/eli-ca
Radon 222 precision (±)	58.3	pCi/L				1	D5072-92	12/19/13 18:36/eli-ca
Radon 222 MDC	88.0	pCi/L				1	D5072-92	12/19/13 18:36/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	12/24/13 10:45/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	0.002	mg/L		0.001		2	E200.8	12/21/13 05:42/eli-ca
Barium	ND	mg/L		0.05		2	E200.8	12/21/13 05:42/eli-ca
Boron	0.45	mg/L		0.05		2	E200.8	12/21/13 05:42/eli-ca
Cadmium	ND	mg/L		0.001		2	E200.8	12/21/13 05:42/eli-ca
Chromium	ND	mg/L		0.005		2	E200.8	12/21/13 05:42/eli-ca
Copper	ND	mg/L		0.005		2	E200.8	12/21/13 05:42/eli-ca
Iron	0.30	mg/L		0.03		2	E200.8	12/21/13 05:42/eli-ca
Lead	ND	mg/L		0.001		2	E200.8	12/21/13 05:42/eli-ca
Manganese	0.614	mg/L		0.001		2	E200.8	12/21/13 05:42/eli-ca
Molybdenum	0.007	mg/L		0.001		2	E200.8	12/21/13 05:42/eli-ca
Nickel	ND	mg/L		0.005		2	E200.8	12/21/13 05:42/eli-ca
Selenium	ND	mg/L		0.001		2	E200.8	12/21/13 05:42/eli-ca
Silver	ND	mg/L		0.001		2	E200.8	12/21/13 05:42/eli-ca
Uranium	0.0188	mg/L		0.0003		2	E200.8	12/21/13 05:42/eli-ca
Vanadium	ND	mg/L		0.01		2	E200.8	12/21/13 05:42/eli-ca
Zinc	ND	mg/L		0.01		2	E200.8	12/21/13 05:42/eli-ca
Calcium	530	mg/L		1		2	E200.8	12/21/13 05:42/eli-ca
Magnesium	140	mg/L		1		2	E200.8	12/21/13 05:42/eli-ca
Potassium	11	mg/L		1		2	E200.8	12/21/13 05:42/eli-ca
Sodium	141	mg/L		1		2	E200.8	12/21/13 05:42/eli-ca

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

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



**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13120233-006  
**Client Sample ID:** DC-1

**Report Date:** 01/31/14  
**Collection Date:** 12/17/13 11:40  
**Date Received:** 12/17/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>PHYSICAL PARAMETERS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	396	mg/L		5		1	A2320 B	12/20/13 15:41/ch
Bicarbonate as HCO <sub>3</sub>	483	mg/L		5		1	A2320 B	12/20/13 15:41/ch
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	12/20/13 15:41/ch
Conductivity @ 25 C	6410	umhos/cm		5.0		1	A2510 B	12/18/13 10:36/tb
pH	7.01	su		0.01		1	A4500-H B	12/18/13 10:10/tb
Solids, Total Dissolved TDS @ 180 C	5940	mg/L		100		1	A2540 C	12/18/13 11:24/jmh
<b>INORGANIC PARAMETERS</b>								
Chloride	68	mg/L		1		1	E300.0	12/18/13 07:13/jmh
Fluoride	1.6	mg/L		0.1		1	E300.0	12/18/13 07:13/jmh
Sulfate	3780	mg/L	D	50		50	E300.0	12/28/13 03:25/jmh
<b>DATA QUALITY PARAMETERS</b>								
Anions	89.0	meq/L		1.00		1	A1030 E	01/31/14 00:00/lkl
Cations	94.3	meq/L		1.00		1	A1030 E	01/31/14 00:00/lkl
Conductivity, Calculated	6790	umhos/cm		1.00		1	A1030 E	01/31/14 00:00/lkl
TDS Ratio	1.00			0.0100		1	A1030 E	01/31/14 00:00/lkl
A/C Balance	-3.57	%				1	A1030 E	01/31/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>								
Nitrogen, Nitrate as N	6.0	mg/L		0.1		1	E300.0	12/18/13 07:13/jmh
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	61.1	pCi/L				1	E900.0	01/07/14 18:34/eli-ca
Gross Alpha precision (±)	13.9	pCi/L				1	E900.0	01/07/14 18:34/eli-ca
Gross Alpha MDC	15.9	pCi/L				1	E900.0	01/07/14 18:34/eli-ca
Gross Beta	0.2	pCi/L	U			1	E900.0	01/07/14 18:34/eli-ca
Gross Beta precision (±)	15.2	pCi/L				1	E900.0	01/07/14 18:34/eli-ca
Gross Beta MDC	25.4	pCi/L				1	E900.0	01/07/14 18:34/eli-ca
Lead 210	-0.4	pCi/L	U			1	E909.0	01/12/14 00:38/eli-cs
Lead 210 precision (±)	0.6	pCi/L				1	E909.0	01/12/14 00:38/eli-cs
Lead 210 MDC	1.1	pCi/L				1	E909.0	01/12/14 00:38/eli-cs
Radium 228	0.9	pCi/L	U			1	RA-05	01/02/14 12:53/eli-ca
Radium 228 precision (±)	0.9	pCi/L				1	RA-05	01/02/14 12:53/eli-ca
Radium 228 MDC	1.4	pCi/L				1	RA-05	01/02/14 12:53/eli-ca
Radium 226	0.3	pCi/L				1	E903.0	01/07/14 11:10/eli-ca
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	01/07/14 11:10/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R13120233-006  
**Client Sample ID:** DC-1

**Report Date:** 01/31/14  
**Collection Date:** 12/17/13 11:40  
**Date Received:** 12/17/13  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 MDC	0.2	pCi/L				1	E903.0	01/07/14 11:10/eli-ca
Thorium 230	0.01	pCi/L	U			1	E908.0	01/07/14 11:31/eli-ca
Thorium 230 precision (±)	0.09	pCi/L				1	E908.0	01/07/14 11:31/eli-ca
Thorium 230 MDC	0.3	pCi/L				1	E908.0	01/07/14 11:31/eli-ca
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	451	pCi/L				1	D5072-92	12/19/13 18:36/eli-ca
Radon 222 precision (±)	59.3	pCi/L				1	D5072-92	12/19/13 18:36/eli-ca
Radon 222 MDC	92.0	pCi/L				1	D5072-92	12/19/13 18:36/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	12/24/13 10:47/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	0.002	mg/L		0.001		2	E200.8	12/21/13 05:46/eli-ca
Barium	ND	mg/L		0.05		2	E200.8	12/21/13 05:46/eli-ca
Boron	1.26	mg/L		0.05		2	E200.8	12/21/13 05:46/eli-ca
Cadmium	ND	mg/L		0.001		2	E200.8	12/21/13 05:46/eli-ca
Chromium	ND	mg/L		0.005		2	E200.8	12/21/13 05:46/eli-ca
Copper	ND	mg/L		0.005		2	E200.8	12/21/13 05:46/eli-ca
Iron	0.03	mg/L		0.03		2	E200.8	12/21/13 05:46/eli-ca
Lead	ND	mg/L		0.001		2	E200.8	12/21/13 05:46/eli-ca
Manganese	0.167	mg/L		0.001		2	E200.8	12/21/13 05:46/eli-ca
Molybdenum	0.001	mg/L		0.001		2	E200.8	12/21/13 05:46/eli-ca
Nickel	0.036	mg/L		0.005		2	E200.8	12/21/13 05:46/eli-ca
Selenium	0.026	mg/L		0.001		2	E200.8	12/21/13 05:46/eli-ca
Silver	ND	mg/L		0.001		2	E200.8	12/21/13 05:46/eli-ca
Uranium	0.0138	mg/L		0.0003		2	E200.8	12/21/13 05:46/eli-ca
Vanadium	ND	mg/L		0.01		2	E200.8	12/21/13 05:46/eli-ca
Zinc	0.06	mg/L		0.01		2	E200.8	12/21/13 05:46/eli-ca
Calcium	420	mg/L		1		2	E200.8	12/21/13 05:46/eli-ca
Magnesium	314	mg/L		1		2	E200.8	12/21/13 05:46/eli-ca
Potassium	9	mg/L		1		2	E200.8	12/21/13 05:46/eli-ca
Sodium	1090	mg/L	D	3		10	E200.7	12/23/13 14:49/eli-ca

**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.



# QA/QC Summary Report

Prepared by Rapid City, SD Branch

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

**Report Date:** 01/31/14  
**Work Order:** R13120233

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2320 B</b>										
Batch: 131220A-ALK-W										
<b>Sample ID: LCS1_131220A</b>	Laboratory Control Sample						Run: PH_COND1-R_131220A			12/20/13 11:54
Alkalinity, Total as CaCO3		912	mg/L	5.0	91	90	110			
<b>Sample ID: MBLK1_131220A</b>	3	Method Blank					Run: PH_COND1-R_131220A			12/20/13 12:07
Alkalinity, Total as CaCO3		ND	mg/L	3						
Bicarbonate as HCO3		ND	mg/L	3						
Carbonate as CO3		ND	mg/L	3						
<b>Sample ID: R13120203-002AMS</b>	Sample Matrix Spike						Run: PH_COND1-R_131220A			12/20/13 14:17
Alkalinity, Total as CaCO3		276	mg/L	5.0	98	80	120			
<b>Sample ID: R13120233-003ADUP</b>	3	Sample Duplicate					Run: PH_COND1-R_131220A			12/20/13 15:27
Alkalinity, Total as CaCO3		232	mg/L	5.0				2.6	10	
Bicarbonate as HCO3		283	mg/L	5.0						
Carbonate as CO3		ND	mg/L	5.0						

**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

**Report Date:** 01/31/14  
**Work Order:** R13120233

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A2510 B										Batch: 131218_1_COND-PROBE-W
<b>Sample ID:</b> MBLK-1_131218		Method Blank					Run: PH_COND2-R_131218B			12/18/13 10:26
Conductivity @ 25 C		ND	umhos/cm	5						
<b>Sample ID:</b> R13120233-001ADUP		Sample Duplicate					Run: PH_COND2-R_131218B			12/18/13 10:29
Conductivity @ 25 C		5860	umhos/cm	5.0				0.2	10	

**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

**Report Date:** 01/31/14  
**Work Order:** R13120233

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2540 C</b>										
Batch: TDS131217A										
<b>Sample ID: MB-1_131217A</b>		Method Blank								
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	2						Run: BAL-TDS_131219A 12/17/13 15:16
<b>Sample ID: LCS-2_131217A</b>		Laboratory Control Sample								
Solids, Total Dissolved TDS @ 180 C		500	mg/L	10	99	90	110			Run: BAL-TDS_131219A 12/17/13 15:18
<b>Sample ID: R13120166-005A MS</b>		Sample Matrix Spike								
Solids, Total Dissolved TDS @ 180 C		7600	mg/L	100	95	90	110			Run: BAL-TDS_131219A 12/17/13 15:23

**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

**Report Date:** 01/31/14  
**Work Order:** R13120233

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A4500-H B								Analytical Run: PH_COND2-R_131218A		
<b>Sample ID:</b> ICV-1_131218		Initial Calibration Verification Standard								12/18/13 09:53
pH		7.33	su	0.010	99	98	102			
<b>Method:</b> A4500-H B								Batch: 131218_1_PH-W		
<b>Sample ID:</b> ICV1-1_131218		Initial Calibration Verification Standard								12/18/13 09:51
pH		12.0	su	0.010	100	99	101			
<b>Sample ID:</b> R13120233-001ADUP		Sample Duplicate								12/18/13 10:01
pH		7.14	su	0.010				0.3	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

**Client:** Powertech USA Inc

**Report Date:** 01/31/14

**Project:** Alluvial Wells Dewey Burdock

**Work Order:** R13120233

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> D5072-92										Batch: C_R181965
<b>Sample ID:</b> R13120233-006D	3	Sample Duplicate					Run: SUB-C181965			12/19/13 18:36
Radon 222		464	pCi/L					2.9	20	
Radon 222 precision (±)		59.4	pCi/L							
Radon 222 MDC		92.0	pCi/L							
<b>Sample ID:</b> MB-R181965	3	Method Blank					Run: SUB-C181965			12/19/13 18:36
Radon 222		10	pCi/L							U
Radon 222 precision (±)		30	pCi/L							
Radon 222 MDC		50	pCi/L							
<b>Sample ID:</b> LCS-R181965		Laboratory Control Sample					Run: SUB-C181965			12/19/13 18:36
Radon 222		550	pCi/L	95		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

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

**Report Date:** 01/31/14  
**Work Order:** R13120233

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
<b>Method:</b> E200.7										Analytical Run: SUB-C181984	
<b>Sample ID:</b> ICV		Initial Calibration Verification Standard								12/23/13 11:51	
Sodium		51	mg/L	0.50	103	95	105				
<b>Sample ID:</b> ICSA		Interference Check Sample A								12/23/13 12:40	
Sodium		0.54	mg/L	0.50							
<b>Sample ID:</b> ICSAB		Interference Check Sample AB								12/23/13 12:44	
Sodium		0.72	mg/L	0.50							
<b>Method:</b> E200.7										Batch: C_R181984	
<b>Sample ID:</b> MB-131223A		Method Blank								Run: SUB-C181984	12/23/13 13:09
Sodium		0.6	mg/L	0.3							
<b>Sample ID:</b> LFB-131223A		Laboratory Fortified Blank								Run: SUB-C181984	12/23/13 13:13
Sodium		48	mg/L	0.50	95	85	115				
<b>Sample ID:</b> C13120639-003BMS2		Sample Matrix Spike								Run: SUB-C181984	12/23/13 14:29
Sodium		1690	mg/L	1.6		70	130			A	
<b>Sample ID:</b> C13120639-003BMSD2		Sample Matrix Spike Duplicate								Run: SUB-C181984	12/23/13 14:33
Sodium		1720	mg/L	1.6		70	130	1.7	20	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

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

**Report Date:** 01/31/14  
**Work Order:** R13120233

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										
Analytical Run: SUB-C181937										
<b>Sample ID: ICV</b>										
20 Initial Calibration Verification Standard										
Arsenic		0.0504	mg/L	0.0010	101	90	110			
Barium		0.0491	mg/L	0.0010	98	90	110			
Boron		0.0510	mg/L	0.0010	102	90	110			
Cadmium		0.0501	mg/L	0.0010	100	90	110			
Calcium		9.74	mg/L	0.0066	97	90	110			
Chromium		0.0502	mg/L	0.0010	100	90	110			
Copper		0.0494	mg/L	0.0010	99	90	110			
Iron		0.988	mg/L	0.0010	99	90	110			
Lead		0.0497	mg/L	0.0010	99	90	110			
Magnesium		9.73	mg/L	0.0027	97	90	110			
Manganese		0.0504	mg/L	0.0010	101	90	110			
Molybdenum		0.0483	mg/L	0.0010	97	90	110			
Nickel		0.0506	mg/L	0.0010	101	90	110			
Potassium		9.81	mg/L	0.0041	98	90	110			
Selenium		0.0513	mg/L	0.0010	103	90	110			
Silver		0.0209	mg/L	0.0010	104	90	110			
Sodium		9.74	mg/L	0.0043	97	90	110			
Uranium		0.0496	mg/L	0.00030	99	90	110			
Vanadium		0.0501	mg/L	0.0010	100	90	110			
Zinc		0.0522	mg/L	0.0010	104	90	110			

12/20/13 12:35

<b>Method: E200.8</b>										
Batch: C_R181937										
<b>Sample ID: LRB</b>										
20 Method Blank										
Run: SUB-C181937										
12/20/13 13:35										
Arsenic		ND	mg/L	5E-05						
Barium		ND	mg/L	7E-05						
Boron		ND	mg/L	0.0004						
Cadmium		ND	mg/L	3E-05						
Calcium		ND	mg/L	0.007						
Chromium		ND	mg/L	4E-05						
Copper		ND	mg/L	3E-05						
Iron		ND	mg/L	0.0006						
Lead		ND	mg/L	2E-05						
Magnesium		ND	mg/L	0.003						
Manganese		ND	mg/L	3E-05						
Molybdenum		5E-05	mg/L	3E-05						
Nickel		ND	mg/L	9E-05						
Potassium		ND	mg/L	0.004						
Selenium		ND	mg/L	7E-05						
Silver		ND	mg/L	6E-05						
Sodium		ND	mg/L	0.004						
Uranium		ND	mg/L	9E-06						
Vanadium		ND	mg/L	4E-05						
Zinc		ND	mg/L	0.0002						

**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

**Report Date:** 01/31/14

**Project:** Alluvial Wells Dewey Burdock

**Work Order:** R13120233

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
<b>Method:</b> E200.8											
<b>Sample ID:</b> LFB		20 Laboratory Fortified Blank				Run: SUB-C181937			Batch: C_R181937 12/20/13 13:39		
Arsenic		0.0506	mg/L	0.0010	101	85	115				
Barium		0.0518	mg/L	0.0010	104	85	115				
Boron		0.0519	mg/L	0.0010	104	85	115				
Cadmium		0.0514	mg/L	0.0010	103	85	115				
Calcium		12.7	mg/L	0.0066	101	85	115				
Chromium		0.0534	mg/L	0.0010	107	85	115				
Copper		0.0523	mg/L	0.0010	105	85	115				
Iron		1.27	mg/L	0.0010	102	85	115				
Lead		0.0524	mg/L	0.0010	105	85	115				
Magnesium		13.0	mg/L	0.0027	104	85	115				
Manganese		0.0534	mg/L	0.0010	107	85	115				
Molybdenum		0.0520	mg/L	0.0010	104	85	115				
Nickel		0.0539	mg/L	0.0010	108	85	115				
Potassium		12.5	mg/L	0.0041	100	85	115				
Selenium		0.0516	mg/L	0.0010	103	85	115				
Silver		0.0219	mg/L	0.0010	109	85	115				
Sodium		12.8	mg/L	0.0043	102	85	115				
Uranium		0.0526	mg/L	0.00030	105	85	115				
Vanadium		0.0515	mg/L	0.0010	103	85	115				
Zinc		0.0538	mg/L	0.0010	108	85	115				
<b>Sample ID:</b> C13120626-001BMS4	20	Post Digestion Spike			Run: SUB-C181937			12/21/13 05:12			
Arsenic		0.262	mg/L	0.0010	104	70	130				
Barium		0.278	mg/L	0.050	106	70	130				
Boron		0.840	mg/L	0.050	92	70	130				
Cadmium		0.252	mg/L	0.0010	100	70	130				
Chromium		0.263	mg/L	0.0050	105	70	130				
Copper		0.251	mg/L	0.0050	99	70	130				
Iron		5.91	mg/L	0.030	94	70	130				
Lead		0.270	mg/L	0.0010	108	70	130				
Manganese		0.278	mg/L	0.0010	107	70	130				
Molybdenum		2.43	mg/L	0.0010		70	130			A	
Nickel		0.258	mg/L	0.0050	102	70	130				
Selenium		0.365	mg/L	0.0010	92	70	130				
Silver		0.0927	mg/L	0.0010	93	70	130				
Uranium		2.58	mg/L	0.00030		70	130			A	
Vanadium		0.271	mg/L	0.010	107	70	130				
Zinc		0.250	mg/L	0.010	97	70	130				
Calcium		372	mg/L	1.0		70	130			A	
Magnesium		142	mg/L	1.0	91	70	130				
Potassium		69.0	mg/L	1.0	101	70	130				
Sodium		510	mg/L	1.0		70	130			A	
<b>Sample ID:</b> C13120626-001BMSD4	20	Post Digestion Spike Duplicate			Run: SUB-C181937			12/21/13 05:16			
Arsenic		0.266	mg/L	0.0010	106	70	130	1.4	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

**Client:** Powertech USA Inc

**Report Date:** 01/31/14

**Project:** Alluvial Wells Dewey Burdock

**Work Order:** R13120233

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										
Batch: C_R181937										
<b>Sample ID:</b>	<b>C13120626-001BMSD4</b>	20	Post Digestion Spike Duplicate							
Barium		0.274	mg/L	0.050	105	70	130	1.5	20	
Boron		0.811	mg/L	0.050	80	70	130	3.5	20	
Cadmium		0.248	mg/L	0.0010	99	70	130	1.4	20	
Chromium		0.267	mg/L	0.0050	106	70	130	1.2	20	
Copper		0.254	mg/L	0.0050	101	70	130	1.3	20	
Iron		6.34	mg/L	0.030	101	70	130	7.1	20	
Lead		0.265	mg/L	0.0010	106	70	130	2.1	20	
Manganese		0.274	mg/L	0.0010	105	70	130	1.7	20	
Molybdenum		2.35	mg/L	0.0010		70	130	3.1	20	A
Nickel		0.260	mg/L	0.0050	103	70	130	0.7	20	
Selenium		0.392	mg/L	0.0010	103	70	130	7.3	20	
Silver		0.0949	mg/L	0.0010	95	70	130	2.3	20	
Uranium		2.51	mg/L	0.00030		70	130	2.6	20	A
Vanadium		0.275	mg/L	0.010	109	70	130	1.4	20	
Zinc		0.255	mg/L	0.010	99	70	130	1.9	20	
Calcium		374	mg/L	1.0		70	130	0.5	20	A
Magnesium		145	mg/L	1.0	96	70	130	2.3	20	
Potassium		69.6	mg/L	1.0	102	70	130	0.9	20	
Sodium		520	mg/L	1.0		70	130	1.9	20	A
<b>Method: E200.8</b>										
Analytical Run: SUB-C182145										
<b>Sample ID:</b>	<b>ICV</b>		Initial Calibration Verification Standard							
Barium		0.0493	mg/L	0.0010	99	90	110			
<b>Method: E200.8</b>										
Batch: C_R182145										
<b>Sample ID:</b>	<b>LRB</b>		Method Blank							
Barium		ND	mg/L	3E-05						
<b>Sample ID:</b>	<b>LFB</b>		Laboratory Fortified Blank							
Barium		0.0506	mg/L	0.0010	101	85	115			
<b>Sample ID:</b>	<b>R13120233-001C</b>		Post Digestion Spike							
Barium		0.0636	mg/L	0.050	103	70	130			
<b>Sample ID:</b>	<b>C13120771-001BMS4</b>		Post Digestion Spike							
Barium		0.0611	mg/L	0.10	103	70	130			
<b>Sample ID:</b>	<b>C13120771-001BMSD4</b>		Post Digestion Spike Duplicate							
Barium		0.0606	mg/L	0.10	101	70	130		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

**Client:** Powertech USA Inc

**Report Date:** 01/31/14

**Project:** Alluvial Wells Dewey Burdock

**Work Order:** R13120233

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E245.1										Analytical Run: SUB-C182014
<b>Sample ID:</b> ICV		Initial Calibration Verification Standard								12/24/13 10:07
Mercury		0.0048	mg/L	0.00010	96	90	110			
<b>Sample ID:</b> CCV		Continuing Calibration Verification Standard								12/24/13 10:33
Mercury		0.0051	mg/L	0.00010	103	90	110			
<b>Method:</b> E245.1										Batch: C_40146
<b>Sample ID:</b> MB-40146		Method Blank								12/24/13 10:14
Mercury		ND	mg/L	7E-05				Run: SUB-C182014		
<b>Sample ID:</b> LCS-40146		Laboratory Control Sample								12/24/13 10:16
Mercury		0.0052	mg/L	0.00010	103	85	115	Run: SUB-C182014		
<b>Sample ID:</b> R13120233-001B		Sample Matrix Spike								12/24/13 10:31
Mercury		0.0049	mg/L	0.00010	97	70	130	Run: SUB-C182014		
<b>Sample ID:</b> R13120233-001B		Sample Matrix Spike Duplicate								12/24/13 10:37
Mercury		0.0049	mg/L	0.00010	97	70	130	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

**Client:** Powertech USA Inc

**Report Date:** 01/31/14

**Project:** Alluvial Wells Dewey Burdock

**Work Order:** R13120233

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E300.0</b>								Analytical Run: DIONEX_131217A		
<b>Sample ID: ICV</b>	3	Initial Calibration Verification Standard								12/17/13 21:04
Chloride		38.1	mg/L	1.0	95	90	110			
Fluoride		3.94	mg/L	0.10	99	90	110			
Nitrogen, Nitrate as N		3.75	mg/L	0.10	94	90	110			
<b>Sample ID: CCV121713-1</b>	3	Continuing Calibration Verification Standard								12/18/13 01:25
Chloride		72.5	mg/L	1.0	97	90	110			
Fluoride		7.25	mg/L	0.10	97	90	110			
Nitrogen, Nitrate as N		7.00	mg/L	0.10	93	90	110			
<b>Sample ID: CCV121713-2</b>	3	Continuing Calibration Verification Standard								12/18/13 05:46
Chloride		72.0	mg/L	1.0	96	90	110			
Fluoride		7.21	mg/L	0.10	96	90	110			
Nitrogen, Nitrate as N		6.98	mg/L	0.10	93	90	110			
<b>Method: E300.0</b>								Batch: R63991		
<b>Sample ID: LFB</b>	3	Laboratory Fortified Blank						Run: DIONEX_131217A		12/17/13 21:38
Chloride		38.3	mg/L	1.0	96	90	110			
Fluoride		3.94	mg/L	0.10	98	90	110			
Nitrogen, Nitrate as N		3.76	mg/L	0.10	94	90	110			
<b>Sample ID: R13120219-001CMS</b>	3	Sample Matrix Spike						Run: DIONEX_131217A		12/18/13 02:17
Chloride		39.5	mg/L	1.0	92	90	110			
Fluoride		4.11	mg/L	0.10	92	90	110			
Nitrogen, Nitrate as N		5.28	mg/L	0.10	94	90	110			
<b>Sample ID: R13120219-001CMSD</b>	3	Sample Matrix Spike Duplicate						Run: DIONEX_131217A		12/18/13 02:35
Chloride		39.5	mg/L	1.0	92	90	110	0.1	10	
Fluoride		4.12	mg/L	0.10	93	90	110	0.3	10	
Nitrogen, Nitrate as N		5.28	mg/L	0.10	94	90	110	0.0	10	
<b>Sample ID: R13120233-005AMS</b>	3	Sample Matrix Spike						Run: DIONEX_131217A		12/18/13 06:38
Chloride		54.8	mg/L	1.0	100	90	110			
Fluoride		4.29	mg/L	0.10	89	90	110			S
Nitrogen, Nitrate as N		3.57	mg/L	0.10	89	90	110			S
<b>Sample ID: R13120233-005AMSD</b>	3	Sample Matrix Spike Duplicate						Run: DIONEX_131217A		12/18/13 06:56
Chloride		54.8	mg/L	1.0	100	90	110	0.0	10	
Fluoride		4.30	mg/L	0.10	89	90	110	0.3	10	S
Nitrogen, Nitrate as N		3.52	mg/L	0.10	88	90	110	1.4	10	S

**Qualifiers:**

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

S - Spike recovery outside of advisory limits.



# QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 01/31/14

**Project:** Alluvial Wells Dewey Burdock

**Work Order:** R13120233

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
<b>Method: E300.0</b>								Analytical Run: DIONEX_131227A			
<b>Sample ID: ICV</b>	2	Initial Calibration Verification Standard								12/27/13 20:44	
Chloride		37.4	mg/L	1.0	94	90	110				
Sulfate		36.8	mg/L	1.0	92	90	110				
<b>Sample ID: CCV122713-1</b>	2	Continuing Calibration Verification Standard								12/28/13 01:23	
Chloride		72.5	mg/L	1.0	97	90	110				
Sulfate		71.1	mg/L	1.0	95	90	110				
<b>Method: E300.0</b>								Batch: R64084			
<b>Sample ID: LFB</b>	2	Laboratory Fortified Blank				Run: DIONEX_131227A				12/27/13 21:19	
Chloride		37.3	mg/L	1.0	93	90	110				
Sulfate		36.6	mg/L	1.0	91	90	110				
<b>Sample ID: R13120233-003AMS</b>	2	Sample Matrix Spike				Run: DIONEX_131227A				12/28/13 02:15	
Chloride		1940	mg/L	50	95	90	110				
Sulfate		4510	mg/L	50	112	90	110			S	
<b>Sample ID: R13120233-003AMSD</b>	2	Sample Matrix Spike Duplicate				Run: DIONEX_131227A				12/28/13 02:33	
Chloride		1920	mg/L	50	94	90	110	1.0	10		
Sulfate		4490	mg/L	50	111	90	110	0.4	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

**Report Date:** 01/31/14

**Project:** Alluvial Wells Dewey Burdock

**Work Order:** R13120233

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E900.0</b>										
Batch: C_GrAB-1677										
<b>Sample ID: Th230-GrAB-1677</b>	Laboratory Control Sample					Run: SUB-C182356				01/07/14 18:34
Gross Alpha		132	pCi/L	114		80	120			
<b>Sample ID: Sr90-GrAB-1677</b>	Laboratory Control Sample					Run: SUB-C182356				01/07/14 18:34
Gross Beta		164	pCi/L	92		80	120			
<b>Sample ID: MB-GrAB-1677</b>	6	Method Blank				Run: SUB-C182356				01/07/14 18:34
Gross Alpha		0.9	pCi/L							U
Gross Alpha precision (±)		0.7	pCi/L							
Gross Alpha MDC		1.0	pCi/L							
Gross Beta		-0.8	pCi/L							U
Gross Beta precision (±)		1	pCi/L							
Gross Beta MDC		2	pCi/L							
<b>Sample ID: R13120233-003E</b>	6	Sample Duplicate				Run: SUB-C182356				01/07/14 18:35
Gross Alpha		44	pCi/L					8.0	20	
Gross Alpha precision (±)		9.2	pCi/L							
Gross Alpha MDC		11	pCi/L							
Gross Beta		15	pCi/L					1.2	20	
Gross Beta precision (±)		7.7	pCi/L							
Gross Beta MDC		12	pCi/L							
<b>Sample ID: TAP WATER-MS</b>	Sample Matrix Spike					Run: SUB-C182356				01/07/14 18:34
Gross Alpha		140	pCi/L	106		70	130			
<b>Sample ID: TAP WATER-MSD</b>	Sample Matrix Spike Duplicate					Run: SUB-C182356				01/07/14 18:35
Gross Alpha		130	pCi/L	99		70	130	6.3	20	
<b>Sample ID: TAP WATER-MS</b>	Sample Matrix Spike					Run: SUB-C182356				01/07/14 18:35
Gross Beta		200	pCi/L	108		70	130			
<b>Sample ID: TAP WATER-MSD</b>	Sample Matrix Spike Duplicate					Run: SUB-C182356				01/07/14 18:35
Gross Beta		200	pCi/L	110		70	130	2.3	20	

**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

**Report Date:** 01/31/14  
**Work Order:** R13120233

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E903.0										Batch: C_RA226-7009
<b>Sample ID:</b> C13120866-001AMS		Sample Matrix Spike					Run: SUB-C182364			01/07/14 12:49
Radium 226	21	pCi/L		92		70	130			
<b>Sample ID:</b> C13120866-001AMSD		Sample Matrix Spike Duplicate					Run: SUB-C182364			01/07/14 12:49
Radium 226	21	pCi/L		92		70	130	0.1	22	
<b>Sample ID:</b> MB-RA226-7009	3	Method Blank					Run: SUB-C182364			01/07/14 12:49
Radium 226		-0.1	pCi/L							U
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.3	pCi/L							
<b>Sample ID:</b> LCS-RA226-7009		Laboratory Control Sample					Run: SUB-C182364			01/07/14 12:49
Radium 226	11	pCi/L		102		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

**Client:** Powertech USA Inc

**Report Date:** 01/31/14

**Project:** Alluvial Wells Dewey Burdock

**Work Order:** R13120233

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E908.0										Batch: C_RA-TH-ISO-1983
<b>Sample ID:</b> LCS-RA-TH-ISO-1977		Laboratory Control Sample					Run: SUB-C182429			01/07/14 11:31
Thorium 230		5.7	pCi/L		86	80	120			
<b>Sample ID:</b> R13120233-004E		Sample Matrix Spike					Run: SUB-C182429			01/07/14 11:31
Thorium 230		12	pCi/L		90	70	130			
<b>Sample ID:</b> R13120233-004E		Sample Matrix Spike Duplicate					Run: SUB-C182429			01/07/14 11:31
Thorium 230		11	pCi/L		83	70	130	8.3	32.7	
<b>Sample ID:</b> MB-RA-TH-ISO-1977	3	Method Blank					Run: SUB-C182429			01/07/14 11:31
Thorium 230		0.1	pCi/L							
Thorium 230 precision (±)		0.08	pCi/L							
Thorium 230 MDC		0.1	pCi/L							

**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

**Report Date:** 01/31/14  
**Work Order:** R13120233

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E909.0</b>								Batch: T_PB-210-0440		
<b>Sample ID: MB-PB-210-0440</b>	3	Method Blank				Run: SUB-T54871				01/11/14 16:31
Lead 210		-0.03	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		1.0	pCi/L							
<b>Sample ID: LCS-PB-210-0440</b>		Laboratory Control Sample				Run: SUB-T54871				01/11/14 17:40
Lead 210		22	pCi/L	109		80	120			
<b>Sample ID: T13120130-002BMS</b>		Sample Matrix Spike				Run: SUB-T54871				01/12/14 06:26
Lead 210		87	pCi/L	71		70	130			
<b>Sample ID: T13120130-002BMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-T54871				01/12/14 07:36
Lead 210		93	pCi/L	83		70	130	6.2		17.4

**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

**Report Date:** 01/31/14  
**Work Order:** R13120233

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: RA-05</b>										
Batch: C_RA228-4583										
<b>Sample ID: LCS-228-RA226-7009</b>	Laboratory Control Sample									
Radium 228		9.0	pCi/L		108	80	120			01/02/14 12:53
Run: SUB-C182259										
<b>Sample ID: MB-RA226-7009</b>	3	Method Blank								
Radium 228		1	pCi/L							01/02/14 12:53
Radium 228 precision (±)		1	pCi/L							U
Radium 228 MDC		2	pCi/L							
Run: SUB-C182259										
<b>Sample ID: R13120233-003E</b>	Sample Matrix Spike									
Radium 228		17.4	pCi/L		115	70	130			01/02/14 12:53
Run: SUB-C182259										
<b>Sample ID: R13120233-003E</b>	Sample Matrix Spike Duplicate									
Radium 228		15.5	pCi/L		102	70	130	11	36.3	01/02/14 12:53
Run: SUB-C182259										

**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>PowerTech</i>	Project Name, PWS, Permit, Etc. <i>PowerTech Alluvial wells</i>	Sample Origin State:	EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>
Report Mail Address (Required): <i>PowerTech</i>	Contact Name: <i>Allen Scott / Lisa Scheinost</i>	Phone/Fax:	Cell:
<input type="checkbox"/> No Hard Copy Email:	Invoice Contact & Phone:	Purchase Order:	Quote/Bottle Order:

Invoice Address (Required):  
*PowerTech*

No Hard Copy Email:

Special Report/Formats:

DW                       EDD/EDT (Electronic Data)  
 POTW/WWTP                      **Format:** \_\_\_\_\_  
 State: \_\_\_\_\_                       LEVEL IV  
 Other: \_\_\_\_\_                       NELAC

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)				Collection Date	Collection Time	MATRIX	ANALYSIS REQUESTED										Standard Turnaround (TAT)	R U S H	Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page	Comments:	Shipped by:	
Number of Containers		Sample Type: A W S V B O D W		Air Water Soils/Solids		Vegetation Bioassay Other		DW - Drinking Water		SEE ATTACHED		Receipt Temp		Cooler ID(s):								
1	PC-2	12-16-13	13:51	Water	✓													4.8 °C	Y N			
2	PC-2 Dup.	12-16-13	13:51	"	✓														Y N			
3	PC-2	12-16-13	15:38	"	✓														Y N			
4	BC-1	12-16-13	16:39	"	✓														Y N			
5	BC-3	12-16-13	18:00	"	✓														Y N			
6	PC-1	12-17-13	11:40	"	✓														Y N			
7																						
8																						
9																						
10																						

<b>Custody Record MUST be Signed</b>	Relinquished by (print): <i>Allen Scott</i>	Date/Time: <i>12-17-13</i>	Signature: <i>Allen Scott</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 Fraire</i>	Date/Time: <i>12-17-13 1545</i>	Signature: <i>Steve Fraire</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](http://www.energylab.com) for additional information, downloadable fee schedule, forms, and links.



# ANALYTICAL SUMMARY REPORT

February 20, 2014

Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Workorder No.: R14010276                      Quote ID: R411

Project Name: Alluvial Wells Dewey Burdock

Energy Laboratories Inc. Rapid City SD received the following 6 samples for Powertech USA Inc on 1/30/2014 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R14010276-001	DC-2	01/29/14 11:58	01/30/14	Aqueous	Radon 222
R14010276-002	BC-3	01/29/14 12:58	01/30/14	Aqueous	Same As Above
R14010276-003	BC-1	01/29/14 13:47	01/30/14	Aqueous	Same As Above
R14010276-004	BC-2	01/29/14 14:46	01/30/14	Aqueous	Same As Above
R14010276-005	DC-1	01/29/14 15:18	01/30/14	Aqueous	Same As Above
R14010276-006	BC-1 Dup	01/29/14 13:47	01/30/14	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:** R14010276

**Report Date:** 02/20/14

## **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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14010276-001  
**Client Sample ID:** DC-2

**Report Date:** 02/20/14  
**Collection Date:** 01/29/14 11:58  
**Date Received:** 01/30/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	391	pCi/L				1	D5072-92	01/31/14 13:20/eli-ca
Radon 222 precision (±)	47.3	pCi/L				1	D5072-92	01/31/14 13:20/eli-ca
Radon 222 MDC	73.0	pCi/L				1	D5072-92	01/31/14 13:20/eli-ca

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

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



### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14010276-002  
**Client Sample ID:** BC-3

**Report Date:** 02/20/14  
**Collection Date:** 01/29/14 12:58  
**Date Received:** 01/30/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	517	pCi/L				1	D5072-92	01/31/14 13:20/eli-ca
Radon 222 precision (±)	48.5	pCi/L				1	D5072-92	01/31/14 13:20/eli-ca
Radon 222 MDC	72.0	pCi/L				1	D5072-92	01/31/14 13:20/eli-ca

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

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



**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14010276-003  
**Client Sample ID:** BC-1

**Report Date:** 02/20/14  
**Collection Date:** 01/29/14 13:47  
**Date Received:** 01/30/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	738	pCi/L				1	D5072-92	01/31/14 13:20/eli-ca
Radon 222 precision (±)	50.9	pCi/L				1	D5072-92	01/31/14 13:20/eli-ca
Radon 222 MDC	72.0	pCi/L				1	D5072-92	01/31/14 13:20/eli-ca

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

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



**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14010276-004  
**Client Sample ID:** BC-2

**Report Date:** 02/20/14  
**Collection Date:** 01/29/14 14:46  
**Date Received:** 01/30/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	932	pCi/L				1	D5072-92	01/31/14 13:20/eli-ca
Radon 222 precision (±)	52.7	pCi/L				1	D5072-92	01/31/14 13:20/eli-ca
Radon 222 MDC	72.0	pCi/L				1	D5072-92	01/31/14 13:20/eli-ca

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

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



### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14010276-005  
**Client Sample ID:** DC-1

**Report Date:** 02/20/14  
**Collection Date:** 01/29/14 15:18  
**Date Received:** 01/30/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	310	pCi/L				1	D5072-92	01/31/14 13:20/eli-ca
Radon 222 precision (±)	45.2	pCi/L				1	D5072-92	01/31/14 13:20/eli-ca
Radon 222 MDC	71.0	pCi/L				1	D5072-92	01/31/14 13:20/eli-ca

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

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





**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14010276-006  
**Client Sample ID:** BC-1 Dup

**Report Date:** 02/20/14  
**Collection Date:** 01/29/14 13:47  
**Date Received:** 01/30/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	680	pCi/L				1	D5072-92	01/31/14 13:20/eli-ca
Radon 222 precision (±)	50.2	pCi/L				1	D5072-92	01/31/14 13:20/eli-ca
Radon 222 MDC	72.0	pCi/L				1	D5072-92	01/31/14 13:20/eli-ca

**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.



# QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 02/20/14

**Project:** Alluvial Wells Dewey Burdock

**Work Order:** R14010276

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> D5072-92										Batch: C_R183251
<b>Sample ID:</b> C14010866-003GDUP	3	Sample Duplicate					Run: SUB-C183251			01/31/14 13:20
Radon 222		1420	pCi/L					0.4	20	
Radon 222 precision (±)		68.2	pCi/L							
Radon 222 MDC		89.0	pCi/L							
<b>Sample ID:</b> MB-R183251	3	Method Blank					Run: SUB-C183251			01/31/14 13:20
Radon 222		20	pCi/L							U
Radon 222 precision (±)		30	pCi/L							
Radon 222 MDC		50	pCi/L							
<b>Sample ID:</b> LCS-R183251		Laboratory Control Sample					Run: SUB-C183251			01/31/14 13:20
Radon 222		1110	pCi/L	96		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



# Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: <i>Powertech</i>	Project Name, PWS, Permit, Etc. <i>Powertech Alluvial wells</i>	Sample Origin State:	EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>
Report Mail Address (Required): <i>Powertech</i>	Contact Name: <i>Alan Scott Lisa Scheinost</i>	Phone/Fax:	Cell: Sampler: (Please Print)
<input type="checkbox"/> No Hard Copy Email:	Invoice Contact & Phone:	Purchase Order:	Quote/Bottle Order:

Invoice Address (Required):  
*Powertech*

No Hard Copy Email:

Special Report/Formats:

DW       EDD/EDT (Electronic Data)  
 POTW/WWTP      **Format:** \_\_\_\_\_  
 State: \_\_\_\_\_       LEVEL IV  
 Other: \_\_\_\_\_       NELAC

Number of Containers Sample Type: A W S V B O D W Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water	ANALYSIS REQUESTED									

SEE ATTACHED

Standard Turnaround (TAT)

**RUSH**

Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page

Comments:

Shipped by:  
*Hand Deliv.*

Cooler ID(s):

Receipt Temp  
*4.8 °C*

On Ice:  Y  N

Custody Seal  
On Bottle Y N  
On Cooler Y N

Intact Y N

Signature Match Y N

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX												
<i>DC-2</i>	<i>1-29-14</i>	<i>11:58</i>	<i>Water</i>	<i>✓</i>											
<i>BC-3</i>	<i>1-29-14</i>	<i>12:58</i>	<i>ll</i>	<i>✓</i>											
<i>BC-1</i>	<i>1-29-14</i>	<i>13:47</i>	<i>ll</i>	<i>✓</i>											
<i>BC-2</i>	<i>1-29-14</i>	<i>14:46</i>	<i>ll</i>	<i>✓</i>											
<i>PC-1</i>	<i>1-29-14</i>	<i>15:18</i>	<i>ll</i>	<i>✓</i>											
<i>BC-1 Dup.</i>	<i>1-29-14</i>	<i>13:47</i>	<i>ll</i>	<i>✓</i>											
7															
8															
9															
10															

LABORATORY USE ONLY

*R4010276-001A*

*002A*

*003A*

*004A*

*005A*

*006A*

<b>Custody Record MUST be Signed</b>	Relinquished by (print): <i>Alan Scott</i>	Date/Time: <i>1-30-14 13:52</i>	Signature: <i>[Signature]</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>SLENTZ</i>	Date/Time: <i>1-30-2014 13:54</i>	Signature: <i>[Signature]</i>

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested.



# ANALYTICAL SUMMARY REPORT

March 12, 2014

Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Workorder No.: R14020278

Project Name: Alluvial Wells Dewey Burdock

Energy Laboratories Inc. Rapid City SD received the following 6 samples for Powertech USA Inc on 2/27/2014 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R14020278-001	DC-1	02/26/14 16:35	02/27/14	Aqueous	Radon 222
R14020278-002	DC-2	02/26/14 12:19	02/27/14	Aqueous	Same As Above
R14020278-003	BC-1	02/26/14 14:55	02/27/14	Aqueous	Same As Above
R14020278-004	BC-2	02/26/14 13:53	02/27/14	Aqueous	Same As Above
R14020278-005	BC-2 Dup	02/26/14 13:53	02/27/14	Aqueous	Same As Above
R14020278-006	BC-3	02/26/14 15:58	02/27/14	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: 2014.03.12 17:51:14 -06:00



**CLIENT:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Sample Delivery Group:** R14020278

**Report Date:** 03/12/14

## **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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14020278-001  
**Client Sample ID:** DC-1

**Report Date:** 03/12/14  
**Collection Date:** 02/26/14 16:35  
**Date Received:** 02/27/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	457	pCi/L				1	D5072-92	02/28/14 14:45/eli-ca
Radon 222 precision (±)	46.2	pCi/L				1	D5072-92	02/28/14 14:45/eli-ca
Radon 222 MDC	69.0	pCi/L				1	D5072-92	02/28/14 14:45/eli-ca

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

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



**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14020278-002  
**Client Sample ID:** DC-2

**Report Date:** 03/12/14  
**Collection Date:** 02/26/14 12:19  
**Date Received:** 02/27/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	511	pCi/L				1	D5072-92	02/28/14 14:45/eli-ca
Radon 222 precision (±)	48.2	pCi/L				1	D5072-92	02/28/14 14:45/eli-ca
Radon 222 MDC	72.0	pCi/L				1	D5072-92	02/28/14 14:45/eli-ca

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

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



**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14020278-003  
**Client Sample ID:** BC-1

**Report Date:** 03/12/14  
**Collection Date:** 02/26/14 14:55  
**Date Received:** 02/27/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	922	pCi/L				1	D5072-92	02/28/14 14:45/eli-ca
Radon 222 precision (±)	52.2	pCi/L				1	D5072-92	02/28/14 14:45/eli-ca
Radon 222 MDC	70.0	pCi/L				1	D5072-92	02/28/14 14:45/eli-ca

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

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





**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14020278-004  
**Client Sample ID:** BC-2

**Report Date:** 03/12/14  
**Collection Date:** 02/26/14 13:53  
**Date Received:** 02/27/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	1040	pCi/L				1	D5072-92	02/28/14 14:45/eli-ca
Radon 222 precision (±)	53.9	pCi/L				1	D5072-92	02/28/14 14:45/eli-ca
Radon 222 MDC	71.0	pCi/L				1	D5072-92	02/28/14 14:45/eli-ca

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

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



### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14020278-005  
**Client Sample ID:** BC-2 Dup

**Report Date:** 03/12/14  
**Collection Date:** 02/26/14 13:53  
**Date Received:** 02/27/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	972	pCi/L				1	D5072-92	02/28/14 14:45/eli-ca
Radon 222 precision (±)	53.1	pCi/L				1	D5072-92	02/28/14 14:45/eli-ca
Radon 222 MDC	71.0	pCi/L				1	D5072-92	02/28/14 14:45/eli-ca

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

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



**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14020278-006  
**Client Sample ID:** BC-3

**Report Date:** 03/12/14  
**Collection Date:** 02/26/14 15:58  
**Date Received:** 02/27/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	641	pCi/L				1	D5072-92	02/28/14 14:45/eli-ca
Radon 222 precision (±)	48.7	pCi/L				1	D5072-92	02/28/14 14:45/eli-ca
Radon 222 MDC	70.0	pCi/L				1	D5072-92	02/28/14 14:45/eli-ca

**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.



# QA/QC Summary Report

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc

**Report Date:** 03/12/14

**Project:** Alluvial Wells Dewey Burdock

**Work Order:** R14020278

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> D5072-92										Batch: C_R184135
<b>Sample ID:</b> R14020278-006A	3	Sample Duplicate					Run: SUB-C184135			02/28/14 14:45
Radon 222		616	pCi/L					4.0	20	
Radon 222 precision (±)		48.4	pCi/L							
Radon 222 MDC		70.0	pCi/L							
<b>Sample ID:</b> MB-R184135	3	Method Blank					Run: SUB-C184135			02/28/14 14:45
Radon 222		20	pCi/L							U
Radon 222 precision (±)		30	pCi/L							
Radon 222 MDC		50	pCi/L							
<b>Sample ID:</b> LCS-R184135		Laboratory Control Sample					Run: SUB-C184135			02/28/14 14:45
Radon 222		550	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



# Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: <i>PowerTech/Scott Env.</i>	Project Name, PWS, Permit, Etc. <i>PowerTech alluvial wells</i>	Sample Origin State:	EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>
Report Mail Address: <i>PowerTech</i>	Contact Name: <i>Allen Scott / Lisa Scheinost</i>	Phone/Fax:	Sampler: (Please Print)
Invoice Address: <i>PowerTech</i>	Invoice Contact & Phone: <i>Lisa Scheinost</i>	Purchase Order:	Quote/Bottle Order:

Special Report/Formats:  <input type="checkbox"/> DW <input type="checkbox"/> EDD/EDT (Electronic Data) <input type="checkbox"/> POTW/WWTP <b>Format:</b> _____ <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	<b>ANALYSIS REQUESTED</b>										Contact ELI prior to <b>RUSH</b> sample submittal for charges and scheduling - See Instruction Page  Comments:	Shipped by: <i>Hand Del</i>																																																																																																																																															
		SEE ATTACHED Standard Turnaround (TAT) <b>R U S H</b>											Cooler ID(s):  Receipt Temp: <i>3.0°C</i>																																																																																																																																															
On Ice: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	Custody Seal On Bottle    Y N On Cooler    Y N Intact        Y N Signature Match    Y N										Receipt Temp: <i>3.0°C</i>																																																																																																																																																	
<table border="1"> <thead> <tr> <th>SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)</th> <th>Collection Date</th> <th>Collection Time</th> <th>MATRIX</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td><i>DC-1</i></td> <td><i>2-26-14</i></td> <td><i>16:35</i></td> <td><i>Water</i></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><i>DC-2</i></td> <td><i>2-26-14</i></td> <td><i>12:19</i></td> <td><i>Water</i></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><i>BC-1</i></td> <td><i>2-26-14</i></td> <td><i>14:55</i></td> <td><i>Water</i></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><i>BC-2</i></td> <td><i>2-26-14</i></td> <td><i>13:53</i></td> <td><i>Water</i></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><i>BC-2 Dup.</i></td> <td><i>2-26-14</i></td> <td><i>13:53</i></td> <td><i>Water</i></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><i>BC-3</i></td> <td><i>2-26-14</i></td> <td><i>15:58</i></td> <td><i>Water</i></td> <td><input checked="" type="checkbox"/></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>												SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX									<i>DC-1</i>	<i>2-26-14</i>	<i>16:35</i>	<i>Water</i>	<input checked="" type="checkbox"/>								<i>DC-2</i>	<i>2-26-14</i>	<i>12:19</i>	<i>Water</i>	<input checked="" type="checkbox"/>								<i>BC-1</i>	<i>2-26-14</i>	<i>14:55</i>	<i>Water</i>	<input checked="" type="checkbox"/>								<i>BC-2</i>	<i>2-26-14</i>	<i>13:53</i>	<i>Water</i>	<input checked="" type="checkbox"/>								<i>BC-2 Dup.</i>	<i>2-26-14</i>	<i>13:53</i>	<i>Water</i>	<input checked="" type="checkbox"/>								<i>BC-3</i>	<i>2-26-14</i>	<i>15:58</i>	<i>Water</i>	<input checked="" type="checkbox"/>																																																																				Laboratory ID: <i>14020278</i>
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX																																																																																																																																																									
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<b>Custody Record MUST be Signed</b>	Relinquished by (print): <i>Allen Scott</i>	Date/Time: <i>2-27-14 14:38</i>	Signature: <i>[Signature]</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>Linda Larson</i>	Date/Time: <i>2/27/14 1438</i>	Signature: <i>[Signature]</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](http://www.energylab.com) for additional information, downloadable fee schedule, forms, and links.



# ANALYTICAL SUMMARY REPORT

April 23, 2014

Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Work Order: R14030132

Project Name: Alluvial Wells Dewey Burdock

Energy Laboratories Inc. Rapid City SD received the following 6 samples for Powertech USA Inc on 3/11/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R14030132-001	DC-2	03/10/14 13:18	03/11/14	Aqueous	Metals by ICP/ICPMS, Dissolved Alkalinity Anion - Cation Balance Conductivity Mercury, Total Mercury Analysis Prep Anions by Ion Chromatography pH Dissolved Filtration Gross Alpha, Gross Beta Lead 210, Dissolved Radium 226, Dissolved Radium 228, Dissolved Radon 222 Thorium, Isotopic Solids, Total Dissolved
R14030132-002	BC-2	03/10/14 15:19	03/11/14	Aqueous	Same As Above
R14030132-003	BC-2 Dup	03/10/14 15:19	03/11/14	Aqueous	Same As Above
R14030132-004	BC-1	03/10/14 16:58	03/11/14	Aqueous	Same As Above
R14030132-005	BC-3	03/10/14 18:11	03/11/14	Aqueous	Same As Above
R14030132-006	DC-1	03/11/14 12:01	03/11/14	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  
**Work Order:** R14030132

**Report Date:** 04/23/14

## **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.

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.





**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14030132-001  
**Client Sample ID:** DC-2

**Report Date:** 04/23/14  
**Collection Date:** 03/10/14 13:18  
**Date Received:** 03/11/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>PHYSICAL PARAMETERS</b>							
Alkalinity, Total as CaCO3	254	mg/L		5		1	A2320 B 03/14/14 07:38/srb
Bicarbonate as HCO3	310	mg/L		5		1	A2320 B 03/14/14 07:38/srb
Carbonate as CO3	ND	mg/L		5		1	A2320 B 03/14/14 07:38/srb
Conductivity @ 25 C	5690	umhos/cm		5.0		1	A2510 B 03/12/14 12:05/srb
pH	7.13	su	H	0.01		1	A4500-H B 03/12/14 14:11/srb
Solids, Total Dissolved TDS @ 180 C	4310	mg/L		10		1	A2540 C 03/17/14 11:30/ch
<b>INORGANIC PARAMETERS</b>							
Chloride	740	mg/L	D	20		20	E300.0 03/15/14 05:48/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0 03/12/14 06:23/jmh
Sulfate	1890	mg/L	D	20		20	E300.0 03/15/14 05:48/jmh
<b>DATA QUALITY PARAMETERS</b>							
Anions	65.4	meq/L		1.00		1	A1030 E 04/21/14 00:00/lkl
Cations	67.9	meq/L		1.00		1	A1030 E 04/21/14 00:00/lkl
Conductivity, Calculated	5240	umhos/cm		1.00		1	A1030 E 04/21/14 00:00/lkl
TDS Ratio	1.04			0.0100		1	A1030 E 04/21/14 00:00/lkl
A/C Balance	1.87	%				1	A1030 E 04/21/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>							
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0 03/12/14 06:23/jmh
<b>RADIONUCLIDES - DISSOLVED</b>							
Gross Alpha	55.9	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Gross Alpha precision (±)	11.2	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Gross Alpha MDC	12.4	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Gross Beta	6.4	pCi/L	U			1	E900.0 03/26/14 00:51/eli-ca
Gross Beta precision (±)	10.6	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Gross Beta MDC	17.5	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Lead 210	0.3	pCi/L	U			1	E909.0 04/05/14 21:20/eli-cs
Lead 210 precision (±)	0.7	pCi/L				1	E909.0 04/05/14 21:20/eli-cs
Lead 210 MDC	1.1	pCi/L				1	E909.0 04/05/14 21:20/eli-cs
Radium 228	0.6	pCi/L	U			1	RA-05 03/26/14 12:15/eli-ca
Radium 228 precision (±)	0.6	pCi/L				1	RA-05 03/26/14 12:15/eli-ca
Radium 228 MDC	1.0	pCi/L				1	RA-05 03/26/14 12:15/eli-ca
Radium 226	0.2	pCi/L				1	E903.0 03/31/14 12:16/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0 03/31/14 12:16/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14030132-001  
**Client Sample ID:** DC-2

**Report Date:** 04/23/14  
**Collection Date:** 03/10/14 13:18  
**Date Received:** 03/11/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 MDC	0.2	pCi/L				1	E903.0	03/31/14 12:16/eli-ca
Thorium 230	0.03	pCi/L	U			1	E908.0	03/19/14 08:48/eli-ca
Thorium 230 precision (±)	0.05	pCi/L				1	E908.0	03/19/14 08:48/eli-ca
Thorium 230 MDC	0.1	pCi/L				1	E908.0	03/19/14 08:48/eli-ca
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	613	pCi/L				1	D5072-92	03/13/14 17:09/eli-ca
Radon 222 precision (±)	58.9	pCi/L				1	D5072-92	03/13/14 17:09/eli-ca
Radon 222 MDC	88.0	pCi/L				1	D5072-92	03/13/14 17:09/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	03/18/14 13:31/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	ND	mg/L		0.001		1	E200.8	03/25/14 11:31/eli-ca
Barium	ND	mg/L		0.05		10	E200.7	03/18/14 18:11/eli-ca
Boron	0.29	mg/L		0.05		10	E200.7	03/18/14 18:11/eli-ca
Cadmium	ND	mg/L		0.001		1	E200.8	03/25/14 11:31/eli-ca
Chromium	ND	mg/L		0.005		1	E200.8	03/25/14 11:31/eli-ca
Copper	ND	mg/L		0.005		1	E200.8	03/25/14 11:31/eli-ca
Iron	0.41	mg/L		0.03		10	E200.7	03/18/14 18:11/eli-ca
Lead	ND	mg/L		0.001		1	E200.8	03/25/14 11:31/eli-ca
Manganese	2.93	mg/L	D	0.01		10	E200.7	03/18/14 18:11/eli-ca
Molybdenum	0.004	mg/L		0.001		1	E200.8	03/25/14 11:31/eli-ca
Nickel	0.009	mg/L		0.005		1	E200.8	03/25/14 11:31/eli-ca
Selenium	0.001	mg/L		0.001		1	E200.8	03/25/14 11:31/eli-ca
Silver	ND	mg/L		0.001		1	E200.8	03/25/14 11:31/eli-ca
Uranium	0.0080	mg/L		0.0003		1	E200.8	03/25/14 11:31/eli-ca
Vanadium	ND	mg/L		0.01		1	E200.8	03/25/14 11:31/eli-ca
Zinc	ND	mg/L		0.01		1	E200.8	03/25/14 11:31/eli-ca
Calcium	510	mg/L		1		10	E200.7	03/18/14 18:11/eli-ca
Magnesium	143	mg/L		1		10	E200.7	03/18/14 18:11/eli-ca
Potassium	6	mg/L		1		10	E200.7	03/18/14 18:11/eli-ca
Sodium	702	mg/L	D	2		10	E200.7	03/18/14 18:11/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14030132-002  
**Client Sample ID:** BC-2

**Report Date:** 04/23/14  
**Collection Date:** 03/10/14 15:19  
**Date Received:** 03/11/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>PHYSICAL PARAMETERS</b>							
Alkalinity, Total as CaCO3	234	mg/L		5		1	A2320 B 03/14/14 07:55/srb
Bicarbonate as HCO3	285	mg/L		5		1	A2320 B 03/14/14 07:55/srb
Carbonate as CO3	ND	mg/L		5		1	A2320 B 03/14/14 07:55/srb
Conductivity @ 25 C	3910	umhos/cm		5.0		1	A2510 B 03/12/14 12:07/srb
pH	7.14	su	H	0.01		1	A4500-H B 03/12/14 14:12/srb
Solids, Total Dissolved TDS @ 180 C	3690	mg/L		10		1	A2540 C 03/17/14 11:33/ch
<b>INORGANIC PARAMETERS</b>							
Chloride	19	mg/L		1		1	E300.0 03/12/14 07:21/jmh
Fluoride	0.7	mg/L		0.1		1	E300.0 03/12/14 07:21/jmh
Sulfate	2420	mg/L	D	50		50	E300.0 03/15/14 06:07/jmh
<b>DATA QUALITY PARAMETERS</b>							
Anions	55.6	meq/L		1.00		1	A1030 E 04/21/14 00:00/lkl
Cations	54.8	meq/L		1.00		1	A1030 E 04/21/14 00:00/lkl
Conductivity, Calculated	4450	umhos/cm		1.00		1	A1030 E 04/21/14 00:00/lkl
TDS Ratio	1.03			0.0100		1	A1030 E 04/21/14 00:00/lkl
A/C Balance	-0.810	%				1	A1030 E 04/21/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>							
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0 03/12/14 07:21/jmh
<b>RADIONUCLIDES - DISSOLVED</b>							
Gross Alpha	39.2	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Gross Alpha precision (±)	8.9	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Gross Alpha MDC	9.9	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Gross Beta	17.6	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Gross Beta precision (±)	9.0	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Gross Beta MDC	14.4	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Lead 210	0.6	pCi/L	U			1	E909.0 04/05/14 22:40/eli-cs
Lead 210 precision (±)	0.7	pCi/L				1	E909.0 04/05/14 22:40/eli-cs
Lead 210 MDC	1.1	pCi/L				1	E909.0 04/05/14 22:40/eli-cs
Radium 228	0.6	pCi/L	U			1	RA-05 03/26/14 12:15/eli-ca
Radium 228 precision (±)	0.6	pCi/L				1	RA-05 03/26/14 12:15/eli-ca
Radium 228 MDC	1	pCi/L				1	RA-05 03/26/14 12:15/eli-ca
Radium 226	0.1	pCi/L	U			1	E903.0 03/31/14 12:16/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0 03/31/14 12:16/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14030132-002  
**Client Sample ID:** BC-2

**Report Date:** 04/23/14  
**Collection Date:** 03/10/14 15:19  
**Date Received:** 03/11/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226 MDC	0.2	pCi/L				1 E903.0	03/31/14 12:16/eli-ca
Thorium 230	0.03	pCi/L	U			1 E908.0	03/19/14 08:48/eli-ca
Thorium 230 precision (±)	0.06	pCi/L				1 E908.0	03/19/14 08:48/eli-ca
Thorium 230 MDC	0.1	pCi/L				1 E908.0	03/19/14 08:48/eli-ca
<b>RADIONUCLIDES - TOTAL</b>							
Radon 222	1150	pCi/L				1 D5072-92	03/13/14 17:09/eli-ca
Radon 222 precision (±)	64.4	pCi/L				1 D5072-92	03/13/14 17:09/eli-ca
Radon 222 MDC	87.0	pCi/L				1 D5072-92	03/13/14 17:09/eli-ca
<b>TOTAL METALS ANALYSES</b>							
Mercury	ND	mg/L		0.0001		1 E245.1	03/18/14 13:37/eli-ca
<b>DISSOLVED METALS ANALYSES</b>							
Arsenic	ND	mg/L		0.001		1 E200.8	03/25/14 11:34/eli-ca
Barium	ND	mg/L		0.05		10 E200.7	03/18/14 18:15/eli-ca
Boron	0.48	mg/L		0.05		10 E200.7	03/18/14 18:15/eli-ca
Cadmium	ND	mg/L		0.001		1 E200.8	03/25/14 11:34/eli-ca
Chromium	ND	mg/L		0.005		1 E200.8	03/25/14 11:34/eli-ca
Copper	ND	mg/L		0.005		1 E200.8	03/25/14 11:34/eli-ca
Iron	ND	mg/L		0.03		10 E200.7	03/18/14 18:15/eli-ca
Lead	ND	mg/L		0.001		1 E200.8	03/25/14 11:34/eli-ca
Manganese	0.031	mg/L		0.001		1 E200.8	03/25/14 11:34/eli-ca
Molybdenum	0.012	mg/L		0.001		1 E200.8	03/25/14 11:34/eli-ca
Nickel	0.008	mg/L		0.005		1 E200.8	03/25/14 11:34/eli-ca
Selenium	0.002	mg/L		0.001		1 E200.8	03/25/14 11:34/eli-ca
Silver	ND	mg/L		0.001		1 E200.8	03/25/14 11:34/eli-ca
Uranium	0.0235	mg/L		0.0003		1 E200.8	03/25/14 11:34/eli-ca
Vanadium	ND	mg/L		0.01		1 E200.8	03/25/14 11:34/eli-ca
Zinc	ND	mg/L		0.01		1 E200.8	03/25/14 11:34/eli-ca
Calcium	499	mg/L		1		10 E200.7	03/18/14 18:15/eli-ca
Magnesium	218	mg/L		1		10 E200.7	03/18/14 18:15/eli-ca
Potassium	12	mg/L		1		10 E200.7	03/18/14 18:15/eli-ca
Sodium	267	mg/L	D	2		10 E200.7	03/18/14 18:15/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14030132-003  
**Client Sample ID:** BC-2 Dup

**Report Date:** 04/23/14  
**Collection Date:** 03/10/14 15:19  
**Date Received:** 03/11/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>PHYSICAL PARAMETERS</b>							
Alkalinity, Total as CaCO3	228	mg/L		5		1	A2320 B 03/14/14 08:06/srb
Bicarbonate as HCO3	278	mg/L		5		1	A2320 B 03/14/14 08:06/srb
Carbonate as CO3	ND	mg/L		5		1	A2320 B 03/14/14 08:06/srb
Conductivity @ 25 C	3890	umhos/cm		5.0		1	A2510 B 03/12/14 12:08/srb
pH	7.15	su	H	0.01		1	A4500-H B 03/12/14 14:13/srb
Solids, Total Dissolved TDS @ 180 C	3680	mg/L		10		1	A2540 C 03/17/14 11:34/ch
<b>INORGANIC PARAMETERS</b>							
Chloride	19	mg/L		1		1	E300.0 03/12/14 07:41/jmh
Fluoride	0.7	mg/L		0.1		1	E300.0 03/12/14 07:41/jmh
Sulfate	2350	mg/L	D	50		50	E300.0 03/15/14 06:27/jmh
<b>DATA QUALITY PARAMETERS</b>							
Anions	54.1	meq/L		1.00		1	A1030 E 04/21/14 00:00/lkl
Cations	54.3	meq/L		1.00		1	A1030 E 04/21/14 00:00/lkl
Conductivity, Calculated	4380	umhos/cm		1.00		1	A1030 E 04/21/14 00:00/lkl
TDS Ratio	1.05			0.0100		1	A1030 E 04/21/14 00:00/lkl
A/C Balance	0.150	%				1	A1030 E 04/21/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>							
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0 03/12/14 07:41/jmh
<b>RADIONUCLIDES - DISSOLVED</b>							
Gross Alpha	43.6	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Gross Alpha precision (±)	9.4	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Gross Alpha MDC	11.1	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Gross Beta	11.8	pCi/L	U			1	E900.0 03/26/14 00:51/eli-ca
Gross Beta precision (±)	8.7	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Gross Beta MDC	14.1	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Lead 210	0.6	pCi/L	U			1	E909.0 04/06/14 00:01/eli-cs
Lead 210 precision (±)	0.7	pCi/L				1	E909.0 04/06/14 00:01/eli-cs
Lead 210 MDC	1.1	pCi/L				1	E909.0 04/06/14 00:01/eli-cs
Radium 228	0.8	pCi/L	U			1	RA-05 03/26/14 12:15/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05 03/26/14 12:15/eli-ca
Radium 228 MDC	1.0	pCi/L				1	RA-05 03/26/14 12:15/eli-ca
Radium 226	0.2	pCi/L				1	E903.0 03/31/14 12:16/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0 03/31/14 12:16/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14030132-003  
**Client Sample ID:** BC-2 Dup

**Report Date:** 04/23/14  
**Collection Date:** 03/10/14 15:19  
**Date Received:** 03/11/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 MDC	0.2	pCi/L				1	E903.0	03/31/14 12:16/eli-ca
Thorium 230	0.08	pCi/L	U			1	E908.0	03/19/14 08:48/eli-ca
Thorium 230 precision (±)	0.07	pCi/L				1	E908.0	03/19/14 08:48/eli-ca
Thorium 230 MDC	0.1	pCi/L				1	E908.0	03/19/14 08:48/eli-ca
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	1080	pCi/L				1	D5072-92	03/13/14 17:09/eli-ca
Radon 222 precision (±)	63.6	pCi/L				1	D5072-92	03/13/14 17:09/eli-ca
Radon 222 MDC	87.0	pCi/L				1	D5072-92	03/13/14 17:09/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	03/18/14 13:39/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	ND	mg/L		0.001		1	E200.8	03/25/14 11:37/eli-ca
Barium	ND	mg/L		0.05		10	E200.7	03/18/14 18:18/eli-ca
Boron	0.47	mg/L		0.05		10	E200.7	03/18/14 18:18/eli-ca
Cadmium	ND	mg/L		0.001		1	E200.8	03/25/14 11:37/eli-ca
Chromium	ND	mg/L		0.005		1	E200.8	03/25/14 11:37/eli-ca
Copper	ND	mg/L		0.005		1	E200.8	03/25/14 11:37/eli-ca
Iron	ND	mg/L		0.03		10	E200.7	03/18/14 18:18/eli-ca
Lead	ND	mg/L		0.001		1	E200.8	03/25/14 11:37/eli-ca
Manganese	0.031	mg/L		0.001		1	E200.8	03/25/14 11:37/eli-ca
Molybdenum	0.012	mg/L		0.001		1	E200.8	03/25/14 11:37/eli-ca
Nickel	0.008	mg/L		0.005		1	E200.8	03/25/14 11:37/eli-ca
Selenium	0.002	mg/L		0.001		1	E200.8	03/25/14 11:37/eli-ca
Silver	ND	mg/L		0.001		1	E200.8	03/25/14 11:37/eli-ca
Uranium	0.0232	mg/L		0.0003		1	E200.8	03/25/14 11:37/eli-ca
Vanadium	ND	mg/L		0.01		1	E200.8	03/25/14 11:37/eli-ca
Zinc	ND	mg/L		0.01		1	E200.8	03/25/14 11:37/eli-ca
Calcium	495	mg/L		1		10	E200.7	03/18/14 18:18/eli-ca
Magnesium	216	mg/L		1		10	E200.7	03/18/14 18:18/eli-ca
Potassium	12	mg/L		1		10	E200.7	03/18/14 18:18/eli-ca
Sodium	264	mg/L	D	2		10	E200.7	03/18/14 18:18/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14030132-004  
**Client Sample ID:** BC-1

**Report Date:** 04/23/14  
**Collection Date:** 03/10/14 16:58  
**Date Received:** 03/11/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>PHYSICAL PARAMETERS</b>							
Alkalinity, Total as CaCO3	294	mg/L		5		1	A2320 B 03/14/14 08:10/srb
Bicarbonate as HCO3	358	mg/L		5		1	A2320 B 03/14/14 08:10/srb
Carbonate as CO3	ND	mg/L		5		1	A2320 B 03/14/14 08:10/srb
Conductivity @ 25 C	3690	umhos/cm		5.0		1	A2510 B 03/12/14 12:10/srb
pH	7.11	su	H	0.01		1	A4500-H B 03/12/14 14:14/srb
Solids, Total Dissolved TDS @ 180 C	3430	mg/L		10		1	A2540 C 03/17/14 11:35/ch
<b>INORGANIC PARAMETERS</b>							
Chloride	22	mg/L		1		1	E300.0 03/12/14 08:00/jmh
Fluoride	0.6	mg/L		0.1		1	E300.0 03/12/14 08:00/jmh
Sulfate	2170	mg/L	D	50		50	E300.0 03/15/14 06:46/jmh
<b>DATA QUALITY PARAMETERS</b>							
Anions	51.8	meq/L		1.00		1	A1030 E 04/21/14 00:00/lkl
Cations	52.1	meq/L		1.00		1	A1030 E 04/21/14 00:00/lkl
Conductivity, Calculated	4190	umhos/cm		1.00		1	A1030 E 04/21/14 00:00/lkl
TDS Ratio	1.04			0.0100		1	A1030 E 04/21/14 00:00/lkl
A/C Balance	0.280	%				1	A1030 E 04/21/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>							
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0 03/12/14 08:00/jmh
<b>RADIONUCLIDES - DISSOLVED</b>							
Gross Alpha	98.4	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Gross Alpha precision (±)	12.0	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Gross Alpha MDC	10.6	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Gross Beta	21.2	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Gross Beta precision (±)	9.1	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Gross Beta MDC	14.3	pCi/L				1	E900.0 03/26/14 00:51/eli-ca
Lead 210	-0.1	pCi/L	U			1	E909.0 04/06/14 01:21/eli-cs
Lead 210 precision (±)	0.7	pCi/L				1	E909.0 04/06/14 01:21/eli-cs
Lead 210 MDC	1.1	pCi/L				1	E909.0 04/06/14 01:21/eli-cs
Radium 228	1	pCi/L	U			1	RA-05 03/26/14 12:15/eli-ca
Radium 228 precision (±)	0.6	pCi/L				1	RA-05 03/26/14 12:15/eli-ca
Radium 228 MDC	1.0	pCi/L				1	RA-05 03/26/14 12:15/eli-ca
Radium 226	0.3	pCi/L				1	E903.0 03/31/14 12:16/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0 03/31/14 12:16/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14030132-004  
**Client Sample ID:** BC-1

**Report Date:** 04/23/14  
**Collection Date:** 03/10/14 16:58  
**Date Received:** 03/11/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 MDC	0.2	pCi/L				1	E903.0	03/31/14 12:16/eli-ca
Thorium 230	0.03	pCi/L	U			1	E908.0	03/19/14 08:48/eli-ca
Thorium 230 precision (±)	0.07	pCi/L				1	E908.0	03/19/14 08:48/eli-ca
Thorium 230 MDC	0.1	pCi/L				1	E908.0	03/19/14 08:48/eli-ca
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	934	pCi/L				1	D5072-92	03/13/14 17:09/eli-ca
Radon 222 precision (±)	61.3	pCi/L				1	D5072-92	03/13/14 17:09/eli-ca
Radon 222 MDC	86.0	pCi/L				1	D5072-92	03/13/14 17:09/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	03/18/14 13:41/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	ND	mg/L		0.001		1	E200.8	03/25/14 11:41/eli-ca
Barium	ND	mg/L		0.05		10	E200.7	03/18/14 18:22/eli-ca
Boron	0.66	mg/L		0.05		10	E200.7	03/18/14 18:22/eli-ca
Cadmium	ND	mg/L		0.001		1	E200.8	03/25/14 11:41/eli-ca
Chromium	ND	mg/L		0.005		1	E200.8	03/25/14 11:41/eli-ca
Copper	ND	mg/L		0.005		1	E200.8	03/25/14 11:41/eli-ca
Iron	ND	mg/L		0.03		10	E200.7	03/18/14 18:22/eli-ca
Lead	ND	mg/L		0.001		1	E200.8	03/25/14 11:41/eli-ca
Manganese	0.033	mg/L		0.001		1	E200.8	03/25/14 11:41/eli-ca
Molybdenum	0.005	mg/L		0.001		1	E200.8	03/25/14 11:41/eli-ca
Nickel	0.009	mg/L		0.005		1	E200.8	03/25/14 11:41/eli-ca
Selenium	0.003	mg/L		0.001		1	E200.8	03/25/14 11:41/eli-ca
Silver	ND	mg/L		0.001		1	E200.8	03/25/14 11:41/eli-ca
Uranium	0.0829	mg/L		0.0003		1	E200.8	03/25/14 11:41/eli-ca
Vanadium	ND	mg/L		0.01		1	E200.8	03/25/14 11:41/eli-ca
Zinc	ND	mg/L		0.01		1	E200.8	03/25/14 11:41/eli-ca
Calcium	496	mg/L		1		10	E200.7	03/18/14 18:22/eli-ca
Magnesium	230	mg/L		1		10	E200.7	03/18/14 18:22/eli-ca
Potassium	11	mg/L		1		10	E200.7	03/18/14 18:22/eli-ca
Sodium	186	mg/L	D	2		10	E200.7	03/18/14 18:22/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14030132-005  
**Client Sample ID:** BC-3

**Report Date:** 04/23/14  
**Collection Date:** 03/10/14 18:11  
**Date Received:** 03/11/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>PHYSICAL PARAMETERS</b>								
Alkalinity, Total as CaCO3	220	mg/L		5		1	A2320 B	03/14/14 08:14/srb
Bicarbonate as HCO3	268	mg/L		5		1	A2320 B	03/14/14 08:14/srb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	03/14/14 08:14/srb
Conductivity @ 25 C	3170	umhos/cm		5.0		1	A2510 B	03/12/14 12:12/srb
pH	7.13	su	H	0.01		1	A4500-H B	03/12/14 14:14/srb
Solids, Total Dissolved TDS @ 180 C	3070	mg/L	*H	20		1	A2540 C	03/19/14 16:18/ch
*Sample was originally run within hold time, but the Conductivity/TDS ratio did not match up. Reran sample out of hold and ratio was within normal limits, so used this result instead.								
<b>INORGANIC PARAMETERS</b>								
Chloride	14	mg/L		1		1	E300.0	03/12/14 08:20/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0	03/12/14 08:20/jmh
Sulfate	1750	mg/L	D	50		50	E300.0	03/15/14 07:06/jmh
<b>DATA QUALITY PARAMETERS</b>								
Anions	41.2	meq/L		1.00		1	A1030 E	04/21/14 00:00/lkl
Cations	43.6	meq/L		1.00		1	A1030 E	04/21/14 00:00/lkl
Conductivity, Calculated	3540	umhos/cm		1.00		1	A1030 E	04/21/14 00:00/lkl
TDS Ratio	1.14			0.0100		1	A1030 E	04/21/14 00:00/lkl
A/C Balance	2.73	%				1	A1030 E	04/21/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>								
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	03/12/14 08:20/jmh
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	49.2	pCi/L				1	E900.0	03/26/14 00:50/eli-ca
Gross Alpha precision (±)	7.7	pCi/L				1	E900.0	03/26/14 00:50/eli-ca
Gross Alpha MDC	7.2	pCi/L				1	E900.0	03/26/14 00:50/eli-ca
Gross Beta	10.2	pCi/L	U			1	E900.0	03/26/14 00:50/eli-ca
Gross Beta precision (±)	7.7	pCi/L				1	E900.0	03/26/14 00:50/eli-ca
Gross Beta MDC	12.6	pCi/L				1	E900.0	03/26/14 00:50/eli-ca
Lead 210	0.5	pCi/L	U			1	E909.0	04/06/14 02:41/eli-cs
Lead 210 precision (±)	0.7	pCi/L				1	E909.0	04/06/14 02:41/eli-cs
Lead 210 MDC	1.1	pCi/L				1	E909.0	04/06/14 02:41/eli-cs
Radium 228	0.7	pCi/L	U			1	RA-05	03/26/14 12:15/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05	03/26/14 12:15/eli-ca
Radium 228 MDC	1.0	pCi/L				1	RA-05	03/26/14 12:15/eli-ca
Radium 226	0.1	pCi/L	U			1	E903.0	03/31/14 12:16/eli-ca

**Report Definitions:**  
 RL - Analyte reporting limit.  
 QCL - Quality control limit.  
 MDC - Minimum detectable concentration  
 D - RL increased due to sample matrix.  
 U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.  
 ND - Not detected at the reporting limit.  
 \* - The result exceeds the MCL.  
 H - Analysis performed past recommended holding time.





**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14030132-005  
**Client Sample ID:** BC-3

**Report Date:** 04/23/14  
**Collection Date:** 03/10/14 18:11  
**Date Received:** 03/11/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	03/31/14 12:16/eli-ca
Radium 226 MDC	0.2	pCi/L				1	E903.0	03/31/14 12:16/eli-ca
Thorium 230	0.03	pCi/L	U			1	E908.0	03/19/14 08:48/eli-ca
Thorium 230 precision (±)	0.04	pCi/L				1	E908.0	03/19/14 08:48/eli-ca
Thorium 230 MDC	0.07	pCi/L				1	E908.0	03/19/14 08:48/eli-ca
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	631	pCi/L				1	D5072-92	03/13/14 17:09/eli-ca
Radon 222 precision (±)	57.2	pCi/L				1	D5072-92	03/13/14 17:09/eli-ca
Radon 222 MDC	85.0	pCi/L				1	D5072-92	03/13/14 17:09/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	03/18/14 13:43/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	ND	mg/L		0.001		1	E200.8	03/25/14 11:53/eli-ca
Barium	ND	mg/L		0.05		10	E200.7	03/18/14 18:26/eli-ca
Boron	0.44	mg/L		0.05		10	E200.7	03/18/14 18:26/eli-ca
Cadmium	ND	mg/L		0.001		1	E200.8	03/25/14 11:53/eli-ca
Chromium	ND	mg/L		0.005		1	E200.8	03/25/14 11:53/eli-ca
Copper	ND	mg/L		0.005		1	E200.8	03/25/14 11:53/eli-ca
Iron	0.09	mg/L		0.03		10	E200.7	03/18/14 18:26/eli-ca
Lead	ND	mg/L		0.001		1	E200.8	03/25/14 11:53/eli-ca
Manganese	0.54	mg/L	D	0.01		10	E200.7	03/18/14 18:26/eli-ca
Molybdenum	0.005	mg/L		0.001		1	E200.8	03/25/14 11:53/eli-ca
Nickel	0.009	mg/L		0.005		1	E200.8	03/25/14 11:53/eli-ca
Selenium	0.001	mg/L		0.001		1	E200.8	03/25/14 11:53/eli-ca
Silver	ND	mg/L		0.001		1	E200.8	03/25/14 11:53/eli-ca
Uranium	0.0163	mg/L		0.0003		1	E200.8	03/25/14 11:53/eli-ca
Vanadium	ND	mg/L		0.01		1	E200.8	03/25/14 11:53/eli-ca
Zinc	ND	mg/L		0.01		1	E200.8	03/25/14 11:53/eli-ca
Calcium	504	mg/L		1		10	E200.7	03/18/14 18:26/eli-ca
Magnesium	141	mg/L		1		10	E200.7	03/18/14 18:26/eli-ca
Potassium	10	mg/L		1		10	E200.7	03/18/14 18:26/eli-ca
Sodium	151	mg/L	D	2		10	E200.7	03/18/14 18:26/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14030132-006  
**Client Sample ID:** DC-1

**Report Date:** 04/23/14  
**Collection Date:** 03/11/14 12:01  
**Date Received:** 03/11/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>PHYSICAL PARAMETERS</b>							
Alkalinity, Total as CaCO3	372	mg/L		5		1	A2320 B 03/14/14 08:21/srb
Bicarbonate as HCO3	454	mg/L		5		1	A2320 B 03/14/14 08:21/srb
Carbonate as CO3	ND	mg/L		5		1	A2320 B 03/14/14 08:21/srb
Conductivity @ 25 C	6180	umhos/cm		5.0		1	A2510 B 03/12/14 12:15/srb
pH	7.07	su	H	0.01		1	A4500-H B 03/12/14 14:15/srb
Solids, Total Dissolved TDS @ 180 C	5590	mg/L		10		1	A2540 C 03/17/14 11:37/ch
<b>INORGANIC PARAMETERS</b>							
Chloride	70	mg/L		1		1	E300.0 03/12/14 08:39/jmh
Fluoride	0.9	mg/L		0.1		1	E300.0 03/12/14 08:39/jmh
Sulfate	3600	mg/L	D	50		50	E300.0 03/15/14 07:25/jmh
<b>DATA QUALITY PARAMETERS</b>							
Anions	85.0	meq/L		1.00		1	A1030 E 04/21/14 00:00/lkl
Cations	88.1	meq/L		1.00		1	A1030 E 04/21/14 00:00/lkl
Conductivity, Calculated	6470	umhos/cm		1.00		1	A1030 E 04/21/14 00:00/lkl
TDS Ratio	1.00			0.0100		1	A1030 E 04/21/14 00:00/lkl
A/C Balance	1.80	%				1	A1030 E 04/21/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>							
Nitrogen, Nitrate as N	7.3	mg/L		0.1		1	E300.0 03/12/14 08:39/jmh
<b>RADIONUCLIDES - DISSOLVED</b>							
Gross Alpha	78.8	pCi/L				1	E900.0 03/26/14 00:50/eli-ca
Gross Alpha precision (±)	16.1	pCi/L				1	E900.0 03/26/14 00:50/eli-ca
Gross Alpha MDC	18.1	pCi/L				1	E900.0 03/26/14 00:50/eli-ca
Gross Beta	-3	pCi/L	U			1	E900.0 03/26/14 00:50/eli-ca
Gross Beta precision (±)	17.1	pCi/L				1	E900.0 03/26/14 00:50/eli-ca
Gross Beta MDC	28.6	pCi/L				1	E900.0 03/26/14 00:50/eli-ca
Lead 210	0.9	pCi/L	U			1	E909.0 04/06/14 04:02/eli-cs
Lead 210 precision (±)	0.7	pCi/L				1	E909.0 04/06/14 04:02/eli-cs
Lead 210 MDC	1.1	pCi/L				1	E909.0 04/06/14 04:02/eli-cs
Radium 228	0.7	pCi/L	U			1	RA-05 03/26/14 12:15/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05 03/26/14 12:15/eli-ca
Radium 228 MDC	1.2	pCi/L				1	RA-05 03/26/14 12:15/eli-ca
Radium 226	0.3	pCi/L				1	E903.0 03/31/14 12:16/eli-ca
Radium 226 precision (±)	0.2	pCi/L				1	E903.0 03/31/14 12:16/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14030132-006  
**Client Sample ID:** DC-1

**Report Date:** 04/23/14  
**Collection Date:** 03/11/14 12:01  
**Date Received:** 03/11/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 MDC	0.2	pCi/L				1	E903.0	03/31/14 12:16/eli-ca
Thorium 230	0.04	pCi/L	U			1	E908.0	03/19/14 08:48/eli-ca
Thorium 230 precision (±)	0.06	pCi/L				1	E908.0	03/19/14 08:48/eli-ca
Thorium 230 MDC	0.1	pCi/L				1	E908.0	03/19/14 08:48/eli-ca
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	637	pCi/L				1	D5072-92	03/13/14 17:09/eli-ca
Radon 222 precision (±)	50.8	pCi/L				1	D5072-92	03/13/14 17:09/eli-ca
Radon 222 MDC	74.0	pCi/L				1	D5072-92	03/13/14 17:09/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	03/18/14 13:45/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	ND	mg/L		0.001		1	E200.8	03/25/14 11:57/eli-ca
Barium	ND	mg/L		0.05		10	E200.7	03/18/14 18:29/eli-ca
Boron	1.27	mg/L		0.05		10	E200.7	03/18/14 18:29/eli-ca
Cadmium	0.001	mg/L		0.001		1	E200.8	03/25/14 11:57/eli-ca
Chromium	ND	mg/L		0.005		1	E200.8	03/25/14 11:57/eli-ca
Copper	0.007	mg/L		0.005		1	E200.8	03/25/14 11:57/eli-ca
Iron	ND	mg/L		0.03		10	E200.7	03/18/14 18:29/eli-ca
Lead	ND	mg/L		0.001		1	E200.8	03/25/14 11:57/eli-ca
Manganese	0.19	mg/L	D	0.01		10	E200.7	03/18/14 18:29/eli-ca
Molybdenum	ND	mg/L		0.001		1	E200.8	03/25/14 11:57/eli-ca
Nickel	0.051	mg/L		0.005		1	E200.8	03/25/14 11:57/eli-ca
Selenium	0.032	mg/L		0.001		1	E200.8	03/25/14 11:57/eli-ca
Silver	ND	mg/L		0.001		1	E200.8	03/25/14 11:57/eli-ca
Uranium	0.0102	mg/L		0.0003		1	E200.8	03/25/14 11:57/eli-ca
Vanadium	ND	mg/L		0.01		1	E200.8	03/25/14 11:57/eli-ca
Zinc	0.13	mg/L		0.01		10	E200.7	03/18/14 18:29/eli-ca
Calcium	372	mg/L		1		10	E200.7	03/18/14 18:29/eli-ca
Magnesium	336	mg/L		1		10	E200.7	03/18/14 18:29/eli-ca
Potassium	8	mg/L		1		10	E200.7	03/18/14 18:29/eli-ca
Sodium	958	mg/L	D	2		10	E200.7	03/18/14 18:29/eli-ca

**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.



# QA/QC Summary Report

Prepared by Rapid City, SD Branch

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

**Report Date:** 04/23/14  
**Work Order:** R14030132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2320 B</b>								Batch: 140314A-ALK-W		
<b>Lab ID: LCS1_140314A</b>	Laboratory Control Sample					Run: PH_COND1-R_140314A		03/14/14 07:30		
Alkalinity, Total as CaCO3		924	mg/L	5.0	92	90	110			
<b>Lab ID: MBLK1_140314A</b>	3	Method Blank				Run: PH_COND1-R_140314A		03/14/14 07:30		
Alkalinity, Total as CaCO3		ND	mg/L	3						
Bicarbonate as HCO3		ND	mg/L	3						
Carbonate as CO3		ND	mg/L	3						
<b>Lab ID: R14030132-001ADUP</b>	3	Sample Duplicate				Run: PH_COND1-R_140314A		03/14/14 07:46		
Alkalinity, Total as CaCO3		264	mg/L	5.0				3.9	10	
Bicarbonate as HCO3		322	mg/L	5.0						
Carbonate as CO3		ND	mg/L	5.0						
<b>Lab ID: R14030132-002AMS</b>		Sample Matrix Spike				Run: PH_COND1-R_140314A		03/14/14 07:59		
Alkalinity, Total as CaCO3		348	mg/L	5.0	94	80	120			

**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

**Report Date:** 04/23/14  
**Work Order:** R14030132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A2510 B										Batch: 140312_3_COND-PROBE-W
<b>Lab ID:</b> MBLK-1_140312		Method Blank					Run: PH_COND2-R_140312A			03/12/14 11:59
Conductivity @ 25 C		ND	umhos/cm	5						
<b>Lab ID:</b> R14020228-012ADUP		Sample Duplicate					Run: PH_COND2-R_140312A			03/12/14 12:02
Conductivity @ 25 C		518	umhos/cm	5.0				0.2	10	

**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

**Report Date:** 04/23/14  
**Work Order:** R14030132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2540 C</b>										
<b>Lab ID: MB-1_140317A</b>		Method Blank								Batch: TDS140317A
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	2			Run: BAL-TDS_140317A			03/17/14 11:14
<b>Lab ID: LCS-2_140317A</b>		Laboratory Control Sample								03/17/14 11:16
Solids, Total Dissolved TDS @ 180 C		480	mg/L	10	97	90	110			
<b>Lab ID: R14030132-001A DUP</b>		Sample Duplicate								03/17/14 11:32
Solids, Total Dissolved TDS @ 180 C		4300	mg/L	10			Run: BAL-TDS_140317A	0.6	5	
<b>Lab ID: R14030132-002A MS</b>		Sample Matrix Spike								03/17/14 11:34
Solids, Total Dissolved TDS @ 180 C		5600	mg/L	10	96	90	110			
<b>Method: A2540 C</b>										
<b>Lab ID: MB-1_140319A</b>		Method Blank								Batch: TDS140319A
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	2			Run: BAL-TDS_140319A			03/19/14 15:29
<b>Lab ID: LCS-2_140319A</b>		Laboratory Control Sample								03/19/14 15:30
Solids, Total Dissolved TDS @ 180 C		490	mg/L	10	97	90	110			
<b>Lab ID: R14030132-004A DUP</b>		Sample Duplicate								03/19/14 16:14
Solids, Total Dissolved TDS @ 180 C		3500	mg/L	40			Run: BAL-TDS_140319A	2.1	5	
<b>Lab ID: R14030132-003A MS</b>		Sample Matrix Spike								03/19/14 16:16
Solids, Total Dissolved TDS @ 180 C		5600	mg/L	40	97	90	110			

**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

**Report Date:** 04/23/14  
**Work Order:** R14030132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
<b>Method:</b> A4500-H B										Analytical Run: PH_COND2-R_140312B	
<b>Lab ID:</b> ICV-1_140312		Initial Calibration Verification Standard								03/12/14 14:08	
pH		7.37	su	0.010	99	98	102				
<b>Method:</b> A4500-H B										Batch: 140312_1_PH-W	
<b>Lab ID:</b> R14030132-001ADUP		Sample Duplicate								Run: PH_COND2-R_140312B	03/12/14 14:10
pH		7.13	su	0.010							

**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

**Report Date:** 04/23/14  
**Work Order:** R14030132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: D5072-92</b> <span style="float: right;">Batch: C_R184538</span>										
<b>Lab ID: R14030132-006D</b>	3	Sample Duplicate				Run: SUB-C184538				03/13/14 17:09
Radon 222		647	pCi/L					1.5	20	
Radon 222 precision (±)		50.9	pCi/L							
Radon 222 MDC		74.0	pCi/L							
<b>Lab ID: MB-R184538</b> <span style="float: right;">03/13/14 17:09</span>										
	3	Method Blank				Run: SUB-C184538				U
Radon 222		7	pCi/L							
Radon 222 precision (±)		30	pCi/L							
Radon 222 MDC		50	pCi/L							
<b>Lab ID: LCS-R184538</b> <span style="float: right;">03/13/14 17:09</span>										
		Laboratory Control Sample				Run: SUB-C184538				
Radon 222		1100	pCi/L	97		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

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

**Report Date:** 04/23/14  
**Work Order:** R14030132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
<b>Method: E200.7</b>								Analytical Run: SUB-C184585			
<b>Lab ID: ICV</b>	9	Initial Calibration Verification Standard									03/18/14 13:11
Barium		1.0	mg/L	0.10	100	95	105				
Boron		0.98	mg/L	0.10	98	95	105				
Calcium		50	mg/L	0.50	100	95	105				
Iron		5.0	mg/L	0.030	99	95	105				
Magnesium		49	mg/L	0.50	99	95	105				
Manganese		4.9	mg/L	0.010	98	95	105				
Potassium		49	mg/L	0.50	97	95	105				
Sodium		50	mg/L	0.50	100	95	105				
Zinc		0.96	mg/L	0.010	96	95	105				
<b>Lab ID: ICSA</b>	9	Interference Check Sample A									03/18/14 13:25
Barium		0.00083	mg/L	0.10							
Boron		0.015	mg/L	0.10							
Calcium		460	mg/L	0.50	93	80	120				
Iron		180	mg/L	0.030	89	80	120				
Magnesium		490	mg/L	0.50	98	80	120				
Manganese		-0.0098	mg/L	0.010							
Potassium		0.016	mg/L	0.50							
Sodium		-0.22	mg/L	0.50							
Zinc		-0.0037	mg/L	0.010							
<b>Lab ID: ICSAB</b>	9	Interference Check Sample AB									03/18/14 13:29
Barium		0.47	mg/L	0.10	95	80	120				
Boron		0.014	mg/L	0.10							
Calcium		470	mg/L	0.50	93	80	120				
Iron		180	mg/L	0.030	89	80	120				
Magnesium		490	mg/L	0.50	99	80	120				
Manganese		0.44	mg/L	0.010	89	80	120				
Potassium		0.025	mg/L	0.50							
Sodium		-0.16	mg/L	0.50							
Zinc		0.85	mg/L	0.010	85	80	120				
<b>Method: E200.7</b>								Batch: C_R184585			
<b>Lab ID: MB-140318A</b>	9	Method Blank									03/18/14 13:47
				Run: SUB-C184585							
Barium		0.0002	mg/L	0.0002							
Boron		ND	mg/L	0.002							
Calcium		ND	mg/L	0.02							
Iron		ND	mg/L	0.002							
Magnesium		ND	mg/L	0.02							
Manganese		ND	mg/L	0.0010							
Potassium		ND	mg/L	0.04							
Sodium		ND	mg/L	0.2							
Zinc		ND	mg/L	0.001							

**Qualifiers:**

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MDC - Minimum detectable concentration



# QA/QC Summary Report

Prepared by Rapid City, SD Branch

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

**Report Date:** 04/23/14  
**Work Order:** R14030132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>										
Batch: C_R184585										
<b>Lab ID: LFB-140318A</b>	9	Laboratory Fortified Blank			Run: SUB-C184585			03/18/14 13:51		
Barium		0.93	mg/L	0.10	93	85	115			
Boron		0.94	mg/L	0.10	94	85	115			
Calcium		47	mg/L	0.50	94	85	115			
Iron		0.93	mg/L	0.030	93	85	115			
Magnesium		47	mg/L	0.50	94	85	115			
Manganese		0.94	mg/L	0.010	94	85	115			
Potassium		47	mg/L	0.50	93	85	115			
Sodium		47	mg/L	0.50	94	85	115			
Zinc		0.92	mg/L	0.010	92	85	115			
<b>Lab ID: C14030178-001BMS2</b>	9	Sample Matrix Spike			Run: SUB-C184585			03/18/14 16:39		
Barium		5.14	mg/L	0.050	98	70	130			
Boron		4.83	mg/L	0.050	94	70	130			
Iron		5.07	mg/L	0.030	95	70	130			
Manganese		4.88	mg/L	0.0050	93	70	130			
Zinc		4.64	mg/L	0.010	91	70	130			
Calcium		282	mg/L	1.0	94	70	130			
Magnesium		257	mg/L	1.0	94	70	130			
Potassium		263	mg/L	1.0	97	70	130			
Sodium		257	mg/L	1.0	95	70	130			
<b>Lab ID: C14030178-001BMSD</b>	9	Sample Matrix Spike Duplicate			Run: SUB-C184585			03/18/14 16:43		
Barium		5.17	mg/L	0.050	98	70	130	0.5	20	
Boron		4.86	mg/L	0.050	94	70	130	0.5	20	
Iron		5.07	mg/L	0.030	95	70	130	0.0	20	
Manganese		4.90	mg/L	0.0050	94	70	130	0.4	20	
Zinc		4.65	mg/L	0.010	91	70	130	0.1	20	
Calcium		284	mg/L	1.0	95	70	130	0.6	20	
Magnesium		259	mg/L	1.0	95	70	130	0.7	20	
Potassium		266	mg/L	1.0	98	70	130	0.9	20	
Sodium		259	mg/L	1.0	96	70	130	0.7	20	

**Qualifiers:**

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# QA/QC Summary Report

Prepared by Rapid City, SD Branch

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

**Report Date:** 04/23/14  
**Work Order:** R14030132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										
Analytical Run: SUB-C184778										
<b>Lab ID: ICV</b>	13 Initial Calibration Verification Standard									03/24/14 15:02
Arsenic		0.0498	mg/L	0.0010	100	90	110			
Cadmium		0.0500	mg/L	0.0010	100	90	110			
Chromium		0.0506	mg/L	0.0010	101	90	110			
Copper		0.0504	mg/L	0.0010	101	90	110			
Lead		0.0516	mg/L	0.0010	103	90	110			
Manganese		0.0496	mg/L	0.0010	99	90	110			
Molybdenum		0.0504	mg/L	0.0010	101	90	110			
Nickel		0.0495	mg/L	0.0010	99	90	110			
Selenium		0.0500	mg/L	0.0010	100	90	110			
Silver		0.0196	mg/L	0.0010	98	90	110			
Uranium		0.0508	mg/L	0.00030	102	90	110			
Vanadium		0.0503	mg/L	0.0010	101	90	110			
Zinc		0.0499	mg/L	0.0010	100	90	110			
<b>Method: E200.8</b>										
Batch: C_R184778										
<b>Lab ID: LRB</b>	13 Method Blank									03/24/14 15:37
Run: SUB-C184778										
Arsenic		ND	mg/L	0.00010						
Cadmium		ND	mg/L	2E-05						
Chromium		ND	mg/L	6E-05						
Copper		ND	mg/L	0.0001						
Lead		ND	mg/L	3E-05						
Manganese		2E-05	mg/L	2E-05						
Molybdenum		ND	mg/L	4E-05						
Nickel		ND	mg/L	3E-05						
Selenium		ND	mg/L	0.0002						
Silver		ND	mg/L	5E-05						
Uranium		ND	mg/L	1E-05						
Vanadium		ND	mg/L	3E-05						
Zinc		0.001	mg/L	0.0006						
<b>Lab ID: LFB</b>	13 Laboratory Fortified Blank									03/24/14 15:41
Run: SUB-C184778										
Arsenic		0.0511	mg/L	0.0010	102	85	115			
Cadmium		0.0508	mg/L	0.0010	102	85	115			
Chromium		0.0526	mg/L	0.0010	105	85	115			
Copper		0.0524	mg/L	0.0010	105	85	115			
Lead		0.0528	mg/L	0.0010	106	85	115			
Manganese		0.0511	mg/L	0.0010	102	85	115			
Molybdenum		0.0530	mg/L	0.0010	106	85	115			
Nickel		0.0518	mg/L	0.0010	104	85	115			
Selenium		0.0503	mg/L	0.0010	101	85	115			
Silver		0.0200	mg/L	0.0010	100	85	115			
Uranium		0.0523	mg/L	0.00030	105	85	115			
Vanadium		0.0515	mg/L	0.0010	103	85	115			
Zinc		0.0541	mg/L	0.0010	106	85	115			

**Qualifiers:**

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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

**Report Date:** 04/23/14  
**Work Order:** R14030132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
<b>Method: E200.8</b>											
Batch: C_R184778											
<b>Lab ID:</b>	<b>C14030646-001BMS4</b>	13 Post Digestion Spike			Run: SUB-C184778			03/25/14 11:02			
Arsenic		0.0532	mg/L	0.0010	104	70	130				
Cadmium		0.0481	mg/L	0.0010	96	70	130				
Chromium		0.0488	mg/L	0.0050	96	70	130				
Copper		0.0463	mg/L	0.0050	91	70	130				
Lead		0.0528	mg/L	0.0010	106	70	130				
Manganese		0.0752	mg/L	0.0010	89	70	130				
Molybdenum		0.0530	mg/L	0.0010	103	70	130				
Nickel		0.0476	mg/L	0.0050	91	70	130				
Selenium		0.0500	mg/L	0.0010	99	70	130				
Silver		0.0158	mg/L	0.0010	79	70	130				
Uranium		0.0847	mg/L	0.00030	108	70	130				
Vanadium		0.0518	mg/L	0.010	101	70	130				
Zinc		0.0470	mg/L	0.010	91	70	130				
<b>Lab ID:</b>	<b>C14030646-001BMSD</b>	13 Post Digestion Spike Duplicate			Run: SUB-C184778			03/25/14 11:15			
Arsenic		0.0531	mg/L	0.0010	104	70	130	0.3	20		
Cadmium		0.0484	mg/L	0.0010	97	70	130	0.7	20		
Chromium		0.0494	mg/L	0.0050	97	70	130	1.2	20		
Copper		0.0464	mg/L	0.0050	92	70	130	0.3	20		
Lead		0.0536	mg/L	0.0010	107	70	130	1.4	20		
Manganese		0.0768	mg/L	0.0010	92	70	130	2.1	20		
Molybdenum		0.0533	mg/L	0.0010	104	70	130	0.7	20		
Nickel		0.0469	mg/L	0.0050	90	70	130	1.5	20		
Selenium		0.0488	mg/L	0.0010	97	70	130	2.3	20		
Silver		0.0164	mg/L	0.0010	82	70	130	3.4	20		
Uranium		0.0861	mg/L	0.00030	110	70	130	1.7	20		
Vanadium		0.0522	mg/L	0.010	101	70	130	0.8	20		
Zinc		0.0469	mg/L	0.010	91	70	130	0.2	20		

**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

**Report Date:** 04/23/14  
**Work Order:** R14030132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E245.1								Analytical Run: SUB-C184565		
<b>Lab ID:</b> ICV		Initial Calibration Verification Standard								03/18/14 13:20
Mercury		0.0054	mg/L	0.00010	107	90	110			
<b>Lab ID:</b> CCV		Continuing Calibration Verification Standard								03/18/14 13:46
Mercury		0.0050	mg/L	0.00010	101	90	110			
<b>Method:</b> E245.1								Batch: C_40873		
<b>Lab ID:</b> MB-40873		Method Blank								03/18/14 13:28
Mercury		ND	mg/L	7E-05				Run: SUB-C184565		
<b>Lab ID:</b> LCS-40873		Laboratory Control Sample								03/18/14 13:29
Mercury		0.0056	mg/L	0.00010	111	85	115			
<b>Lab ID:</b> R14030132-001B		Sample Matrix Spike								03/18/14 13:33
Mercury		0.0048	mg/L	0.00010	95	70	130			
<b>Lab ID:</b> R14030132-001B		Sample Matrix Spike Duplicate								03/18/14 13:35
Mercury		0.0050	mg/L	0.00010	100	70	130	4.8	10	
<b>Method:</b> E245.1								Batch: C_R184565		
<b>Lab ID:</b> IPC		Instrument Performance Check Sample								03/18/14 13:24
Mercury		0.0052	mg/L	0.00010	103	95	105			

**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

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

**Report Date:** 04/23/14  
**Work Order:** R14030132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
<b>Method: E300.0</b>								Analytical Run: DIONEX_140311A			
<b>Lab ID: ICV</b>	3	Initial Calibration Verification Standard									03/11/14 20:21
Chloride		39.6	mg/L	1.0	99	90	110				
Fluoride		4.18	mg/L	0.10	105	90	110				
Nitrogen, Nitrate as N		4.03	mg/L	0.10	101	90	110				
<b>Lab ID: CCV031114-2</b>	3	Continuing Calibration Verification Standard									03/12/14 05:44
Chloride		73.2	mg/L	1.0	98	90	110				
Fluoride		7.32	mg/L	0.10	98	90	110				
Nitrogen, Nitrate as N		7.17	mg/L	0.10	96	90	110				
<b>Method: E300.0</b>								Batch: R64753			
<b>Lab ID: LFB</b>	3	Laboratory Fortified Blank									03/11/14 21:00
						Run: DIONEX_140311A					
Chloride		39.4	mg/L	1.0	98	90	110				
Fluoride		4.14	mg/L	0.10	104	90	110				
Nitrogen, Nitrate as N		4.02	mg/L	0.10	101	90	110				
<b>Lab ID: R14030132-001AMS</b>	3	Sample Matrix Spike									03/12/14 06:43
						Run: DIONEX_140311A					
Chloride		992	mg/L	1.0		90	110			A	
Fluoride		4.19	mg/L	0.10	92	90	110				
Nitrogen, Nitrate as N		3.80	mg/L	0.10	95	90	110				
<b>Lab ID: R14030132-001AMSD</b>	3	Sample Matrix Spike Duplicate									03/12/14 07:02
						Run: DIONEX_140311A					
Chloride		992	mg/L	1.0		90	110	0.1	10	A	
Fluoride		4.16	mg/L	0.10	91	90	110	0.7	10		
Nitrogen, Nitrate as N		3.79	mg/L	0.10	95	90	110	0.3	10		

**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

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

**Report Date:** 04/23/14  
**Work Order:** R14030132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E300.0</b>								Analytical Run: DIONEX_140314A		
<b>Lab ID: ICV</b>	2	Initial Calibration Verification Standard								03/14/14 18:09
Chloride		38.7	mg/L	1.0	97	90	110			
Sulfate		38.8	mg/L	1.0	97	90	110			
<b>Lab ID: CCV031414-2</b>	2	Continuing Calibration Verification Standard								03/15/14 03:32
Chloride		73.0	mg/L	1.0	97	90	110			
Sulfate		71.9	mg/L	1.0	96	90	110			
<b>Method: E300.0</b>								Batch: R64775		
<b>Lab ID: LFB</b>	2	Laboratory Fortified Blank						Run: DIONEX_140314A		03/14/14 18:48
Chloride		38.7	mg/L	1.0	97	90	110			
Sulfate		38.8	mg/L	1.0	96	90	110			
<b>Lab ID: R14030078-009CMS</b>	2	Sample Matrix Spike						Run: DIONEX_140314A		03/15/14 04:30
Chloride		78.7	mg/L	1.0	110	90	110			
Sulfate		1010	mg/L	1.0		90	110			A
<b>Lab ID: R14030078-009CMSD</b>	2	Sample Matrix Spike Duplicate						Run: DIONEX_140314A		03/15/14 04:50
Chloride		78.6	mg/L	1.0	109	90	110	0.1	10	
Sulfate		1010	mg/L	1.0		90	110	0.2	10	A
<b>Lab ID: R14030148-003AMS</b>	2	Sample Matrix Spike						Run: DIONEX_140314A		03/15/14 09:02
Chloride		814	mg/L	20	94	90	110			
Sulfate		1880	mg/L	20	105	90	110			
<b>Lab ID: R14030148-003AMSD</b>	2	Sample Matrix Spike Duplicate						Run: DIONEX_140314A		03/15/14 09:22
Chloride		789	mg/L	20	91	90	110	3.2	10	
Sulfate		1860	mg/L	20	102	90	110	1.3	10	

**Qualifiers:**

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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

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

**Report Date:** 04/23/14  
**Work Order:** R14030132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E900.0</b>								Batch: C_GrAB-1703		
<b>Lab ID: Th230-GrAB-1703</b>	Laboratory Control Sample			Run: SUB-C184802			03/26/14 00:51			
Gross Alpha		118	pCi/L	101		80	120			
<b>Lab ID: Sr90-GrAB-1703</b>	Laboratory Control Sample			Run: SUB-C184802			03/26/14 00:51			
Gross Beta		166	pCi/L	94		80	120			
<b>Lab ID: MB-GrAB-1703</b>	6 Method Blank			Run: SUB-C184802			03/26/14 00:51			
Gross Alpha		2	pCi/L							
Gross Alpha precision (±)		0.7	pCi/L							
Gross Alpha MDC		1.0	pCi/L							
Gross Beta		-1	pCi/L							U
Gross Beta precision (±)		1	pCi/L							
Gross Beta MDC		2	pCi/L							
<b>Lab ID: R14030132-001E</b>	6 Sample Duplicate			Run: SUB-C184802			03/26/14 00:51			
Gross Alpha		57	pCi/L					1.3	50.7	
Gross Alpha precision (±)		12	pCi/L							
Gross Alpha MDC		13	pCi/L							
Gross Beta		3.4	pCi/L					62	448.9	U
Gross Beta precision (±)		12	pCi/L							
Gross Beta MDC		19	pCi/L							
<b>Lab ID: C14030430-001FMS</b>	Sample Matrix Spike			Run: SUB-C184802			03/26/14 00:51			
Gross Alpha		5080	pCi/L	127		70	130			
<b>Lab ID: C14030430-001FMSD</b>	Sample Matrix Spike Duplicate			Run: SUB-C184802			03/26/14 00:51			
Gross Alpha		5070	pCi/L	125		70	130	0.1	11.7	
<b>Lab ID: C14030430-001FMS</b>	Sample Matrix Spike			Run: SUB-C184802			03/26/14 00:51			
Gross Beta		943	pCi/L	98		70	130			
<b>Lab ID: C14030430-001FMSD</b>	Sample Matrix Spike Duplicate			Run: SUB-C184802			03/26/14 00:51			
Gross Beta		958	pCi/L	102		70	130	1.5	12.8	

**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

**Report Date:** 04/23/14  
**Work Order:** R14030132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E903.0</b>										
Batch: C_RA226-7104										
<b>Lab ID: C14030408-001GMS</b>		Sample Matrix Spike					Run: SUB-C184973			03/31/14 14:09
Radium 226		22	pCi/L	98		70	130			
<b>Lab ID: C14030408-001GMSD</b>		Sample Matrix Spike Duplicate					Run: SUB-C184973			03/31/14 14:09
Radium 226		24	pCi/L	105		70	130	7.0	22.1	
<b>Lab ID: MB-RA226-7104</b>	3	Method Blank					Run: SUB-C184973			03/31/14 14:09
Radium 226		0.10	pCi/L							U
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.2	pCi/L							
<b>Lab ID: LCS-RA226-7104</b>		Laboratory Control Sample					Run: SUB-C184973			03/31/14 15:42
Radium 226		11	pCi/L	97		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

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

**Report Date:** 04/23/14  
**Work Order:** R14030132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E908.0										Batch: C_RA-TH-ISO-2013
<b>Lab ID:</b> LCS-RA-TH-ISO-2013		Laboratory Control Sample					Run: SUB-C184726			03/19/14 08:48
Thorium 230		6.1	pCi/L		93	80	120			
<b>Lab ID:</b> R14030132-006E		Sample Matrix Spike					Run: SUB-C184726			03/19/14 08:48
Thorium 230		13	pCi/L		98	70	130			
<b>Lab ID:</b> R14030132-006E		Sample Matrix Spike Duplicate					Run: SUB-C184726			03/19/14 08:48
Thorium 230		14	pCi/L		108	70	130	9.4	35.4	
<b>Lab ID:</b> MB-RA-TH-ISO-2013	3	Method Blank					Run: SUB-C184726			03/19/14 15:39
Thorium 230		0.07	pCi/L							U
Thorium 230 precision (±)		0.08	pCi/L							
Thorium 230 MDC		0.1	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

**Report Date:** 04/23/14  
**Work Order:** R14030132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E909.0</b>								Batch: T_PB-210-0454		
<b>Lab ID: MB-PB-210-0454</b>	3	Method Blank				Run: SUB-T56203				04/05/14 18:39
Lead 210		0.6	pCi/L							U
Lead 210 precision (±)		0.7	pCi/L							
Lead 210 MDC		1	pCi/L							
<b>Lab ID: LCS-PB-210-0454</b>		Laboratory Control Sample				Run: SUB-T56203				04/05/14 20:00
Lead 210		22	pCi/L	103		80	120			
<b>Lab ID: T14040013-002BMS</b>		Sample Matrix Spike				Run: SUB-T56203				04/07/14 00:09
Lead 210		53	pCi/L	97		70	130			
<b>Lab ID: T14040013-002BMSD</b>		Sample Matrix Spike Duplicate				Run: SUB-T56203				04/07/14 01:29
Lead 210		0.68	pCi/L			70	130	190	23.8	USR

The REC (& thus RPD) for the MSD fails due to loss of sample during prep. The MS spike recovery was within range, the MB is acceptable, and the LCS is within range, therefore the batch is approved.

### Qualifiers:

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration  
S - Spike recovery outside of advisory limits.

ND - Not detected at the reporting limit.  
R - RPD exceeds advisory 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

**Report Date:** 04/23/14  
**Work Order:** R14030132

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: RA-05</b>										
Batch: C_RA228-4622										
<b>Lab ID:</b> LCS-228-RA226-7104	Laboratory Control Sample									
Radium 228		8.7	pCi/L	109		80	120			03/26/14 12:15
<b>Lab ID:</b> MB-RA226-7104	3	Method Blank								03/26/14 12:15
Radium 228		0.9	pCi/L							U
Radium 228 precision (±)		0.7	pCi/L							
Radium 228 MDC		1	pCi/L							
<b>Lab ID:</b> C14030440-001EMS	Sample Matrix Spike									03/26/14 12:15
Radium 228		19	pCi/L	119		70	130			
<b>Lab ID:</b> C14030440-001EMSD	Sample Matrix Spike Duplicate									03/26/14 12:15
Radium 228		17	pCi/L	107		70	130	10		34

**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>Powertech / Scott Env.</i>	Project Name, PWS, Permit, Etc. <i>Powertech Alluvial Wells</i>	Sample Origin State:	EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>
Report Mail Address (Required): <i>Powertech</i>	Contact Name: <i>Lisa Scheinost / Allen Scott</i>	Phone/Fax:	Cell:
<input type="checkbox"/> No Hard Copy Email:	Invoice Contact & Phone:	Purchase Order:	Quote/Bottle Order:

Invoice Address (Required):  
*Powertech*

No Hard Copy Email:

Special Report/Formats:

DW       EDD/EDT (Electronic Data)  
 POTW/WWTP      **Format:** \_\_\_\_\_  
 State: \_\_\_\_\_       LEVEL IV  
 Other: \_\_\_\_\_       NELAC

Number of Containers Sample Type: A W S V B O D W Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water	ANALYSIS REQUESTED										SEE ATTACHED	Standard Turnaround (TAT)	R U S H	Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page	Comments:	Shipped by:		
																Cooler ID(s):	Receipt Temp	
																2.2 °C	On Ice: <input checked="" type="radio"/> Y <input type="radio"/> N	Custody Seal On Bottle Y N On Cooler Y N
																		Intact Y N Signature Match Y N

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	
1 DC-2	3-10-14	13:18	Water	✓
2 BC-2	3-10-14	15:19	"	✓
3 BC-2 Dup.	3-10-14	15:19	"	✓
4 BC-7	3-10-14	16:58	"	✓
5 BC-3	3-10-14	18:11	"	✓
6 DC-1	3-11-14	12:01	"	✓
7				
8				
9				
10				

<b>Custody Record MUST be Signed</b>	Relinquished by (print): <i>Allen Scott</i>	Date/Time: <i>3-11-14 16:31</i>	Signature: <i>[Signature]</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 [Signature]</i>	Date/Time: <i>3-11-14 16:31</i>	Signature: <i>[Signature]</i>	

LABORATORY USE ONLY

R14030132-001  
002  
003  
004  
005  
006

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 noted on your analytical report. Visit our web site at [www.energylab.com](http://www.energylab.com) for additional information, downloadable fee schedule, forms, and links.



# ANALYTICAL SUMMARY REPORT

April 23, 2014

Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Work Order: R14040143                      Quote ID: R411

Project Name: Alluvial Wells Dewey Burdock

Energy Laboratories Inc. Rapid City SD received the following 6 samples for Powertech USA Inc on 4/10/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R14040143-001	BC-1 Dup	04/09/14 12:35	04/10/14	Aqueous	Radon 222
R14040143-002	DC-2	04/09/14 9:21	04/10/14	Aqueous	Same As Above
R14040143-003	DC-1	04/09/14 13:05	04/10/14	Aqueous	Same As Above
R14040143-004	BC-1	04/09/14 12:35	04/10/14	Aqueous	Same As Above
R14040143-005	BC-2	04/09/14 11:40	04/10/14	Aqueous	Same As Above
R14040143-006	BC-3	04/09/14 10:40	04/10/14	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  
**Work Order:** R14040143

**Report Date:** 04/23/14

## **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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14040143-001  
**Client Sample ID:** BC-1 Dup

**Report Date:** 04/23/14  
**Collection Date:** 04/09/14 12:35  
**Date Received:** 04/10/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	976	pCi/L				1	D5072-92	04/11/14 16:26/eli-ca
Radon 222 precision (±)	54.4	pCi/L				1	D5072-92	04/11/14 16:26/eli-ca
Radon 222 MDC	73.0	pCi/L				1	D5072-92	04/11/14 16:26/eli-ca

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

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





**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14040143-002  
**Client Sample ID:** DC-2

**Report Date:** 04/23/14  
**Collection Date:** 04/09/14 09:21  
**Date Received:** 04/10/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	738	pCi/L				1	D5072-92	04/11/14 16:26/eli-ca
Radon 222 precision (±)	52.8	pCi/L				1	D5072-92	04/11/14 16:26/eli-ca
Radon 222 MDC	75.0	pCi/L				1	D5072-92	04/11/14 16:26/eli-ca

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

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



**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14040143-003  
**Client Sample ID:** DC-1

**Report Date:** 04/23/14  
**Collection Date:** 04/09/14 13:05  
**Date Received:** 04/10/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	579	pCi/L				1	D5072-92	04/11/14 16:26/eli-ca
Radon 222 precision (±)	49.6	pCi/L				1	D5072-92	04/11/14 16:26/eli-ca
Radon 222 MDC	73.0	pCi/L				1	D5072-92	04/11/14 16:26/eli-ca

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

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



### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14040143-004  
**Client Sample ID:** BC-1

**Report Date:** 04/23/14  
**Collection Date:** 04/09/14 12:35  
**Date Received:** 04/10/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	928	pCi/L				1	D5072-92	04/11/14 16:26/eli-ca
Radon 222 precision (±)	53.9	pCi/L				1	D5072-92	04/11/14 16:26/eli-ca
Radon 222 MDC	73.0	pCi/L				1	D5072-92	04/11/14 16:26/eli-ca

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

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



### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14040143-005  
**Client Sample ID:** BC-2

**Report Date:** 04/23/14  
**Collection Date:** 04/09/14 11:40  
**Date Received:** 04/10/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	1160	pCi/L				1	D5072-92	04/11/14 16:26/eli-ca
Radon 222 precision (±)	56.7	pCi/L				1	D5072-92	04/11/14 16:26/eli-ca
Radon 222 MDC	74.0	pCi/L				1	D5072-92	04/11/14 16:26/eli-ca

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

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



### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14040143-006  
**Client Sample ID:** BC-3

**Report Date:** 04/23/14  
**Collection Date:** 04/09/14 10:40  
**Date Received:** 04/10/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	732	pCi/L				1	D5072-92	04/11/14 16:26/eli-ca
Radon 222 precision (±)	52.3	pCi/L				1	D5072-92	04/11/14 16:26/eli-ca
Radon 222 MDC	74.0	pCi/L				1	D5072-92	04/11/14 16:26/eli-ca

**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.



# QA/QC Summary Report

Prepared by Rapid City, SD Branch

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

**Report Date:** 04/23/14  
**Work Order:** R14040143

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: D5072-92</b> <span style="float: right;">Batch: C_R185428</span>										
<b>Lab ID: R14040143-006A</b> <span style="float: right;">Run: SUB-C185428</span>										
Radon 222	3	Sample Duplicate						15	20	04/11/14 16:26
Radon 222		632	pCi/L							
Radon 222 precision (±)		51.1	pCi/L							
Radon 222 MDC		74.0	pCi/L							
<b>Lab ID: MB-R185428</b> <span style="float: right;">Run: SUB-C185428</span>										
Radon 222	3	Method Blank								04/11/14 16:26
Radon 222		8	pCi/L							U
Radon 222 precision (±)		30	pCi/L							
Radon 222 MDC		50	pCi/L							
<b>Lab ID: LCS-R185428</b> <span style="float: right;">Run: SUB-C185428</span>										
Radon 222		Laboratory Control Sample								04/11/14 16:26
Radon 222		1100	pCi/L	97		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

# Chain of Custody and Analytical Request Record

**PLEASE PRINT (Provide as much information as possible.)**

Company Name: <i>Powertech / Scott Env.</i>	Project Name, PWS, Permit, Etc. <i>Powertech 911/initial wells</i>	Sample Origin State:	EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>
Report Mail Address (Required): <i>Powertech / Scott Env.</i>	Contact Name: <i>Allen Scott / Lisa Scheinost</i>	Phone/Fax: Cell:	Sampler: (Please Print)
<input type="checkbox"/> No Hard Copy Email:	Invoice Contact & Phone:	Purchase Order:	Quote/Bottle Order:

Invoice Address (Required):  
*Powertech*

No Hard Copy Email:

Special Report/Formats:

<input type="checkbox"/> DW	<input type="checkbox"/> EDD/EDT (Electronic Data)
<input type="checkbox"/> POTM/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 Soils/Solids Vegetation Bioassay Other DW - Drinking Water	ANALYSIS REQUESTED										Standard Turnaround (TAT)	R U S H	Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page	Shipped by: Cooler ID(s): Receipt Temp On Ice: <input checked="" type="radio"/> Y <input type="radio"/> N	Custody Seal On Bottle Y N On Cooler Y N Intact Y N Signature Match Y N
	SEE ATTACHED														
<i>Radar as per quote</i>															
	<i>BC-1 Dup.</i>	<i>4-9-14</i>	<i>12:35</i>	<i>Water</i>	<input checked="" type="checkbox"/>										
	<i>BC-2</i>	<i>4-9-14</i>	<i>9:21</i>	<i>"</i>	<input checked="" type="checkbox"/>										
	<i>BC-1</i>	<i>4-9-14</i>	<i>13:05</i>	<i>"</i>	<input checked="" type="checkbox"/>										
	<i>BC-1</i>	<i>4-9-14</i>	<i>12:35</i>	<i>"</i>	<input checked="" type="checkbox"/>										
	<i>BC-2</i>	<i>4-9-14</i>	<i>11:40</i>	<i>"</i>	<input checked="" type="checkbox"/>										
	<i>BC-3</i>	<i>4-9-14</i>	<i>10:40</i>	<i>"</i>	<input checked="" type="checkbox"/>										

<b>Custody Record MUST be Signed</b>	Relinquished by (print): <i>Allen Scott</i>	Date/Time: <i>10.53</i>	Signature: <i>[Signature]</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 Fairland</i> <i>4-10-14 10:54</i> <i>[Signature]</i>		

LABORATORY USE ONLY

*844040143-001A*  
*002A*  
*003A*  
*004A*  
*005A*  
*006A*

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](http://www.energylab.com) for additional information, downloadable fee schedule, forms, and links.



# ANALYTICAL SUMMARY REPORT

May 30, 2014

Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Work Order: R14050256                      Quote ID: R411

Project Name: Alluvial Wells Dewey Burdock

Energy Laboratories Inc. Rapid City SD received the following 6 samples for Powertech USA Inc on 5/19/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R14050256-001	DC-1	05/18/14 11:14	05/19/14	Aqueous	Radon 222
R14050256-002	DC-2	05/18/14 7:50	05/19/14	Aqueous	Same As Above
R14050256-003	BC-1	05/18/14 9:55	05/19/14	Aqueous	Same As Above
R14050256-004	BC-2	05/18/14 10:53	05/19/14	Aqueous	Same As Above
R14050256-005	BC-3	05/18/14 8:56	05/19/14	Aqueous	Same As Above
R14050256-006	BC-2 Dup	05/18/14 10:53	05/19/14	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  
**Work Order:** R14050256

**Report Date:** 05/30/14

## **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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14050256-001  
**Client Sample ID:** DC-1

**Report Date:** 05/30/14  
**Collection Date:** 05/18/14 11:14  
**Date Received:** 05/19/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	496	pCi/L				1	D5072-92	05/20/14 13:00/eli-ca
Radon 222 precision (±)	48.3	pCi/L				1	D5072-92	05/20/14 13:00/eli-ca
Radon 222 MDC	72.0	pCi/L				1	D5072-92	05/20/14 13:00/eli-ca

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

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



**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14050256-002  
**Client Sample ID:** DC-2

**Report Date:** 05/30/14  
**Collection Date:** 05/18/14 07:50  
**Date Received:** 05/19/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	661	pCi/L				1	D5072-92	05/20/14 13:00/eli-ca
Radon 222 precision (±)	51.4	pCi/L				1	D5072-92	05/20/14 13:00/eli-ca
Radon 222 MDC	74.0	pCi/L				1	D5072-92	05/20/14 13:00/eli-ca

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

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



### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14050256-003  
**Client Sample ID:** BC-1

**Report Date:** 05/30/14  
**Collection Date:** 05/18/14 09:55  
**Date Received:** 05/19/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	851	pCi/L				1	D5072-92	05/20/14 13:00/eli-ca
Radon 222 precision (±)	52.9	pCi/L				1	D5072-92	05/20/14 13:00/eli-ca
Radon 222 MDC	73.0	pCi/L				1	D5072-92	05/20/14 13:00/eli-ca

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

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



### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14050256-004  
**Client Sample ID:** BC-2

**Report Date:** 05/30/14  
**Collection Date:** 05/18/14 10:53  
**Date Received:** 05/19/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	982	pCi/L				1	D5072-92	05/20/14 13:00/eli-ca
Radon 222 precision (±)	54.1	pCi/L				1	D5072-92	05/20/14 13:00/eli-ca
Radon 222 MDC	72.0	pCi/L				1	D5072-92	05/20/14 13:00/eli-ca

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

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



### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14050256-005  
**Client Sample ID:** BC-3

**Report Date:** 05/30/14  
**Collection Date:** 05/18/14 08:56  
**Date Received:** 05/19/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	612	pCi/L				1	D5072-92	05/20/14 13:00/eli-ca
Radon 222 precision (±)	50.5	pCi/L				1	D5072-92	05/20/14 13:00/eli-ca
Radon 222 MDC	74.0	pCi/L				1	D5072-92	05/20/14 13:00/eli-ca

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

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



### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14050256-006  
**Client Sample ID:** BC-2 Dup

**Report Date:** 05/30/14  
**Collection Date:** 05/18/14 10:53  
**Date Received:** 05/19/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	1020	pCi/L				1	D5072-92	05/20/14 13:00/eli-ca
Radon 222 precision (±)	54.6	pCi/L				1	D5072-92	05/20/14 13:00/eli-ca
Radon 222 MDC	73.0	pCi/L				1	D5072-92	05/20/14 13:00/eli-ca

**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.



# QA/QC Summary Report

Prepared by Rapid City, SD Branch

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

**Report Date:** 05/30/14  
**Work Order:** R14050256

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: D5072-92</b> <span style="float: right;">Batch: C_R186849</span>										
<b>Lab ID: R14050256-006A</b>	3	Sample Duplicate				Run: SUB-C186849				05/20/14 13:00
Radon 222		1050	pCi/L					2.4	20	
Radon 222 precision (±)		54.9	pCi/L							
Radon 222 MDC		73.0	pCi/L							
<b>Lab ID: MB-R186849</b> <span style="float: right;">Run: SUB-C186849</span>										
Radon 222	3	Method Blank								05/20/14 13:00
Radon 222		9	pCi/L							U
Radon 222 precision (±)		30	pCi/L							
Radon 222 MDC		50	pCi/L							
<b>Lab ID: LCS-R186849</b> <span style="float: right;">Run: SUB-C186849</span>										
Radon 222		Laboratory Control Sample				Run: SUB-C186849				05/20/14 13:00
Radon 222		1110	pCi/L	97		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





# Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: <i>Power Tech</i>	Project Name, PWS, Permit, Etc. <i>Power Tech alluvial wells</i>	Sample Origin State:	EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>
Report Mail Address (Required): <i>Power Tech</i>	Contact Name: <i>Lisa Scheinost / Allan Smith</i>	Phone/Fax:	Cell:
<input type="checkbox"/> No Hard Copy Email:	Invoice Contact & Phone:	Purchase Order:	Quote/Bottle Order:

Invoice Address (Required): <i>Power Tech</i>	ANALYSIS REQUESTED Number of Containers Sample Type: A W S V B O DW Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water <i>Radiation as requested</i>	SEE ATTACHED	Standard Turnaround (TAT)	R U S H	Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page	Shipped by:
<input type="checkbox"/> No Hard Copy Email:					Comments:	Receipt Temp <i>1.8</i> °C
Special Report/Formats: <input type="checkbox"/> DW <input type="checkbox"/> POTW/WWTP <input type="checkbox"/> State: _____ <input type="checkbox"/> Other: _____	<input type="checkbox"/> EDD/EDT (Electronic Data) Format: _____ <input type="checkbox"/> LEVEL IV <input type="checkbox"/> NELAC					On Ice: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX			Custody Seal On Bottle Y N On Cooler Y N Intact Y N Signature Match Y N
1 <i>PC-1</i>	<i>5-18-14</i>	<i>11:14</i>	<i>Water</i>			LABORATORY USE ONLY <i>R14050256-001A</i> <i>002A</i> <i>003A</i> <i>004A</i> <i>005A</i> <i>006A</i>
2 <i>PC-2</i>	<i>5-18-14</i>	<i>7:50</i>	<i>"</i>			
3 <i>BC-1</i>	<i>5-18-14</i>	<i>9:55</i>	<i>"</i>			
4 <i>BC-2</i>	<i>5-18-14</i>	<i>10:53</i>	<i>"</i>			
5 <i>BC-3</i>	<i>5-18-14</i>	<i>8:56</i>	<i>"</i>			
6 <i>BC-2 Dup.</i>	<i>5-18-14</i>	<i>10:53</i>	<i>"</i>			
7						
8						
9						
10						

<b>Custody Record MUST be Signed</b>	Relinquished by (print): <i>Allan Smith</i>	Date/Time: <i>5-19-14 10:25</i>	Signature: <i>Allan Smith</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 Froiland</i>	Date/Time: <i>5-19-14 10:25</i>	Signature: <i>Steve Froiland</i>	



# ANALYTICAL SUMMARY REPORT

July 24, 2014

Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Work Order: R14060404      Quote ID: R411

Project Name: Alluvial Wells Dewey Burdock

Energy Laboratories Inc. Rapid City SD received the following 6 samples for Powertech USA Inc on 6/25/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R14060404-001	DC-2	06/24/14 11:23	06/25/14	Aqueous	Metals by ICP/ICPMS, Dissolved Alkalinity Anion - Cation Balance Conductivity Mercury, Total Mercury Analysis Prep Anions by Ion Chromatography pH Dissolved Filtration Gross Alpha, Gross Beta Lead 210, Dissolved Radium 226, Dissolved Radium 228, Dissolved Radon 222 Thorium, Isotopic Solids, Total Dissolved
R14060404-002	BC-2	06/24/14 12:50	06/25/14	Aqueous	Same As Above
R14060404-003	BC-1	06/24/14 14:27	06/25/14	Aqueous	Same As Above
R14060404-004	BC-3	06/24/14 15:35	06/25/14	Aqueous	Same As Above
R14060404-005	DC-1	06/25/14 10:47	06/25/14	Aqueous	Same As Above
R14060404-006	BC-3 Dup	06/24/14 15:35	06/25/14	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: 2014.07.24 13:28:07 -06:00



**CLIENT:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Work Order:** R14060404

**Report Date:** 07/24/14

## **CASE NARRATIVE**

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14060404-001  
**Client Sample ID:** DC-2

**Report Date:** 07/24/14  
**Collection Date:** 06/24/14 11:23  
**Date Received:** 06/25/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>PHYSICAL PARAMETERS</b>								
Alkalinity, Total as CaCO3	262	mg/L		5		1	A2320 B	07/01/14 08:29/srb
Bicarbonate as HCO3	319	mg/L		5		1	A2320 B	07/01/14 08:29/srb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	07/01/14 08:29/srb
Conductivity @ 25 C	5370	umhos/cm		5.0		1	A2510 B	06/27/14 14:00/srb
pH	6.98	su	H	0.01		1	A4500-H B	06/27/14 13:24/srb
Solids, Total Dissolved TDS @ 180 C	4440	mg/L		40		1	A2540 C	06/30/14 11:38/ch
Sample unable to be analyzed within hold time due to receiving sample after 4 hr hold time.								
<b>INORGANIC PARAMETERS</b>								
Chloride	823	mg/L	D	20		20	E300.0	06/26/14 20:02/tb
Fluoride	0.4	mg/L		0.1		1	E300.0	06/25/14 23:59/tb
Sulfate	2100	mg/L	D	20		20	E300.0	06/26/14 20:02/tb
<b>DATA QUALITY PARAMETERS</b>								
Anions	72.1	meq/L		1.00		1	A1030 E	07/11/14 00:00/lkl
Cations	70.0	meq/L		1.00		1	A1030 E	07/11/14 00:00/lkl
Conductivity, Calculated	5580	umhos/cm		1.00		1	A1030 E	07/11/14 00:00/lkl
TDS Ratio	0.990			0.0100		1	A1030 E	07/11/14 00:00/lkl
A/C Balance	-1.54	%				1	A1030 E	07/11/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>								
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	06/25/14 23:59/tb
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	37.3	pCi/L				1	E900.0	07/10/14 06:12/eli-ca
Gross Alpha precision (±)	12.4	pCi/L				1	E900.0	07/10/14 06:12/eli-ca
Gross Alpha MDC	16.6	pCi/L				1	E900.0	07/10/14 06:12/eli-ca
Gross Beta	4.2	pCi/L	U			1	E900.0	07/10/14 06:12/eli-ca
Gross Beta precision (±)	15.3	pCi/L				1	E900.0	07/10/14 06:12/eli-ca
Gross Beta MDC	25.5	pCi/L				1	E900.0	07/10/14 06:12/eli-ca
Lead 210	0.1	pCi/L	U			1	E909.0	07/09/14 08:06/eli-cs
Lead 210 precision (±)	0.7	pCi/L				1	E909.0	07/09/14 08:06/eli-cs
Lead 210 MDC	1.1	pCi/L				1	E909.0	07/09/14 08:06/eli-cs
Radium 228	0.8	pCi/L	U			1	RA-05	07/09/14 13:47/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05	07/09/14 13:47/eli-ca
Radium 228 MDC	1.1	pCi/L				1	RA-05	07/09/14 13:47/eli-ca
Radium 226	0.4	pCi/L				1	E903.0	07/14/14 12:55/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	07/14/14 12:55/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14060404-001  
**Client Sample ID:** DC-2

**Report Date:** 07/24/14  
**Collection Date:** 06/24/14 11:23  
**Date Received:** 06/25/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226 MDC	0.2	pCi/L				1 E903.0	07/14/14 12:55/eli-ca
Thorium 230	0.03	pCi/L	U			1 E908.0	07/07/14 10:39/eli-ca
Thorium 230 precision (±)	0.04	pCi/L				1 E908.0	07/07/14 10:39/eli-ca
Thorium 230 MDC	0.08	pCi/L				1 E908.0	07/07/14 10:39/eli-ca
<b>RADIONUCLIDES - TOTAL</b>							
Radon 222	640	pCi/L				1 D5072-92	06/27/14 15:06/eli-ca
Radon 222 precision (±)	58.7	pCi/L				1 D5072-92	06/27/14 15:06/eli-ca
Radon 222 MDC	87.0	pCi/L				1 D5072-92	06/27/14 15:06/eli-ca
<b>TOTAL METALS ANALYSES</b>							
Mercury	ND	mg/L		0.0001		1 E245.1	07/01/14 15:40/eli-ca
<b>DISSOLVED METALS ANALYSES</b>							
Arsenic	0.003	mg/L		0.001		2 E200.8	06/30/14 22:45/eli-ca
Barium	ND	mg/L		0.05		2 E200.8	06/30/14 22:45/eli-ca
Boron	0.27	mg/L		0.05		2 E200.8	06/30/14 22:45/eli-ca
Cadmium	ND	mg/L		0.001		2 E200.8	06/30/14 22:45/eli-ca
Chromium	ND	mg/L		0.005		2 E200.8	06/30/14 22:45/eli-ca
Copper	ND	mg/L		0.005		2 E200.8	06/30/14 22:45/eli-ca
Iron	0.71	mg/L		0.03		2 E200.8	06/30/14 22:45/eli-ca
Lead	ND	mg/L		0.001		2 E200.8	06/30/14 22:45/eli-ca
Manganese	2.99	mg/L		0.001		2 E200.8	06/30/14 22:45/eli-ca
Molybdenum	0.004	mg/L		0.001		2 E200.8	06/30/14 22:45/eli-ca
Nickel	0.011	mg/L		0.005		5 E200.8	07/09/14 19:29/eli-ca
Selenium	ND	mg/L		0.001		2 E200.8	06/30/14 22:45/eli-ca
Silver	ND	mg/L		0.001		2 E200.8	06/30/14 22:45/eli-ca
Uranium	0.0076	mg/L		0.0003		2 E200.8	06/30/14 22:45/eli-ca
Vanadium	ND	mg/L		0.01		2 E200.8	06/30/14 22:45/eli-ca
Zinc	ND	mg/L		0.01		2 E200.8	06/30/14 22:45/eli-ca
Calcium	532	mg/L		1		2 E200.8	06/30/14 22:45/eli-ca
Magnesium	134	mg/L		1		2 E200.8	06/30/14 22:45/eli-ca
Potassium	7	mg/L		1		2 E200.8	06/30/14 22:45/eli-ca
Sodium	740	mg/L	D	2		5 E200.7	06/30/14 15:05/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14060404-002  
**Client Sample ID:** BC-2

**Report Date:** 07/24/14  
**Collection Date:** 06/24/14 12:50  
**Date Received:** 06/25/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>PHYSICAL PARAMETERS</b>							
Alkalinity, Total as CaCO3	236	mg/L		5		1	A2320 B 07/01/14 08:34/srb
Bicarbonate as HCO3	288	mg/L		5		1	A2320 B 07/01/14 08:34/srb
Carbonate as CO3	ND	mg/L		5		1	A2320 B 07/01/14 08:34/srb
Conductivity @ 25 C	3680	umhos/cm		5.0		1	A2510 B 06/27/14 14:05/srb
pH	7.03	su	H	0.01		1	A4500-H B 06/27/14 13:28/srb
Solids, Total Dissolved TDS @ 180 C	3740	mg/L		40		1	A2540 C 06/30/14 11:39/ch
Sample unable to be analyzed within hold time due to receiving sample after 4 hr hold time.							
<b>INORGANIC PARAMETERS</b>							
Chloride	21	mg/L		1		1	E300.0 06/26/14 00:57/tb
Fluoride	0.6	mg/L		0.1		1	E300.0 06/26/14 00:57/tb
Sulfate	2450	mg/L	D	50		50	E300.0 06/26/14 20:22/tb
<b>DATA QUALITY PARAMETERS</b>							
Anions	56.5	meq/L		1.00		1	A1030 E 07/11/14 00:00/lkl
Cations	54.8	meq/L		1.00		1	A1030 E 07/11/14 00:00/lkl
Conductivity, Calculated	4490	umhos/cm		1.00		1	A1030 E 07/11/14 00:00/lkl
TDS Ratio	1.03			0.0100		1	A1030 E 07/11/14 00:00/lkl
A/C Balance	-1.50	%				1	A1030 E 07/11/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>							
Nitrogen, Nitrate as N	0.1	mg/L		0.1		1	E300.0 06/26/14 00:57/tb
<b>RADIONUCLIDES - DISSOLVED</b>							
Gross Alpha	42.2	pCi/L				1	E900.0 07/10/14 06:12/eli-ca
Gross Alpha precision (±)	9.2	pCi/L				1	E900.0 07/10/14 06:12/eli-ca
Gross Alpha MDC	10.7	pCi/L				1	E900.0 07/10/14 06:12/eli-ca
Gross Beta	10	pCi/L	U			1	E900.0 07/10/14 06:12/eli-ca
Gross Beta precision (±)	9.2	pCi/L				1	E900.0 07/10/14 06:12/eli-ca
Gross Beta MDC	15.0	pCi/L				1	E900.0 07/10/14 06:12/eli-ca
Lead 210	0.08	pCi/L	U			1	E909.0 07/09/14 09:15/eli-cs
Lead 210 precision (±)	0.7	pCi/L				1	E909.0 07/09/14 09:15/eli-cs
Lead 210 MDC	1.1	pCi/L				1	E909.0 07/09/14 09:15/eli-cs
Radium 228	0.2	pCi/L	U			1	RA-05 07/09/14 13:47/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05 07/09/14 13:47/eli-ca
Radium 228 MDC	1.1	pCi/L				1	RA-05 07/09/14 13:47/eli-ca
Radium 226	0.3	pCi/L				1	E903.0 07/14/14 12:55/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0 07/14/14 12:55/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14060404-002  
**Client Sample ID:** BC-2

**Report Date:** 07/24/14  
**Collection Date:** 06/24/14 12:50  
**Date Received:** 06/25/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226 MDC	0.2	pCi/L				1 E903.0	07/14/14 12:55/eli-ca
Thorium 230	0.05	pCi/L	U			1 E908.0	07/07/14 10:39/eli-ca
Thorium 230 precision (±)	0.05	pCi/L				1 E908.0	07/07/14 10:39/eli-ca
Thorium 230 MDC	0.08	pCi/L				1 E908.0	07/07/14 10:39/eli-ca
<b>RADIONUCLIDES - TOTAL</b>							
Radon 222	1080	pCi/L				1 D5072-92	06/27/14 15:06/eli-ca
Radon 222 precision (±)	63.4	pCi/L				1 D5072-92	06/27/14 15:06/eli-ca
Radon 222 MDC	86.0	pCi/L				1 D5072-92	06/27/14 15:06/eli-ca
<b>TOTAL METALS ANALYSES</b>							
Mercury	ND	mg/L		0.0001		1 E245.1	07/01/14 15:43/eli-ca
<b>DISSOLVED METALS ANALYSES</b>							
Arsenic	0.002	mg/L		0.001		2 E200.8	06/30/14 22:49/eli-ca
Barium	ND	mg/L		0.05		2 E200.8	06/30/14 22:49/eli-ca
Boron	0.45	mg/L		0.05		2 E200.8	06/30/14 22:49/eli-ca
Cadmium	ND	mg/L		0.001		2 E200.8	06/30/14 22:49/eli-ca
Chromium	ND	mg/L		0.005		2 E200.8	06/30/14 22:49/eli-ca
Copper	ND	mg/L		0.005		2 E200.8	06/30/14 22:49/eli-ca
Iron	0.03	mg/L		0.03		2 E200.8	06/30/14 22:49/eli-ca
Lead	ND	mg/L		0.001		2 E200.8	06/30/14 22:49/eli-ca
Manganese	0.036	mg/L		0.001		2 E200.8	06/30/14 22:49/eli-ca
Molybdenum	0.012	mg/L		0.001		2 E200.8	06/30/14 22:49/eli-ca
Nickel	0.010	mg/L		0.005		2 E200.8	07/09/14 19:33/eli-ca
Selenium	0.001	mg/L		0.001		2 E200.8	06/30/14 22:49/eli-ca
Silver	ND	mg/L		0.001		2 E200.8	06/30/14 22:49/eli-ca
Uranium	0.0240	mg/L		0.0003		2 E200.8	06/30/14 22:49/eli-ca
Vanadium	ND	mg/L		0.01		2 E200.8	06/30/14 22:49/eli-ca
Zinc	ND	mg/L		0.01		2 E200.8	06/30/14 22:49/eli-ca
Calcium	515	mg/L		1		2 E200.8	06/30/14 22:49/eli-ca
Magnesium	204	mg/L		1		2 E200.8	06/30/14 22:49/eli-ca
Potassium	12	mg/L		1		2 E200.8	06/30/14 22:49/eli-ca
Sodium	277	mg/L	D	2		5 E200.7	06/30/14 15:58/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14060404-003  
**Client Sample ID:** BC-1

**Report Date:** 07/24/14  
**Collection Date:** 06/24/14 14:27  
**Date Received:** 06/25/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>PHYSICAL PARAMETERS</b>								
Alkalinity, Total as CaCO <sub>3</sub>	288	mg/L		5		1	A2320 B	07/01/14 08:39/srb
Bicarbonate as HCO <sub>3</sub>	351	mg/L		5		1	A2320 B	07/01/14 08:39/srb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B	07/01/14 08:39/srb
Conductivity @ 25 C	3400	umhos/cm		5.0		1	A2510 B	06/27/14 14:07/srb
pH	7.06	su	H	0.01		1	A4500-H B	06/27/14 13:29/srb
Solids, Total Dissolved TDS @ 180 C	3500	mg/L		20		1	A2540 C	06/30/14 11:40/ch
Sample unable to be analyzed within hold time due to receiving sample after 4 hr hold time.								
<b>INORGANIC PARAMETERS</b>								
Chloride	24	mg/L		1		1	E300.0	06/26/14 01:17/tb
Fluoride	0.5	mg/L		0.1		1	E300.0	06/26/14 01:17/tb
Sulfate	2250	mg/L	D	20		20	E300.0	07/15/14 00:55/jmh
<b>DATA QUALITY PARAMETERS</b>								
Anions	53.4	meq/L		1.00		1	A1030 E	07/15/14 00:00/lkl
Cations	48.0	meq/L		1.00		1	A1030 E	07/15/14 00:00/lkl
Conductivity, Calculated	4160	umhos/cm		1.00		1	A1030 E	07/15/14 00:00/lkl
TDS Ratio	1.05			0.0100		1	A1030 E	07/15/14 00:00/lkl
A/C Balance	-5.35	%				1	A1030 E	07/15/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>								
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	06/26/14 01:17/tb
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	89.4	pCi/L				1	E900.0	07/10/14 06:12/eli-ca
Gross Alpha precision (±)	11.3	pCi/L				1	E900.0	07/10/14 06:12/eli-ca
Gross Alpha MDC	9.3	pCi/L				1	E900.0	07/10/14 06:12/eli-ca
Gross Beta	19.7	pCi/L				1	E900.0	07/10/14 06:12/eli-ca
Gross Beta precision (±)	9.0	pCi/L				1	E900.0	07/10/14 06:12/eli-ca
Gross Beta MDC	14.3	pCi/L				1	E900.0	07/10/14 06:12/eli-ca
Lead 210	0.09	pCi/L	U			1	E909.0	07/09/14 10:25/eli-cs
Lead 210 precision (±)	0.7	pCi/L				1	E909.0	07/09/14 10:25/eli-cs
Lead 210 MDC	1.1	pCi/L				1	E909.0	07/09/14 10:25/eli-cs
Radium 228	1.1	pCi/L				1	RA-05	07/09/14 13:47/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05	07/09/14 13:47/eli-ca
Radium 228 MDC	1.1	pCi/L				1	RA-05	07/09/14 13:47/eli-ca
Radium 226	0.6	pCi/L				1	E903.0	07/14/14 12:55/eli-ca
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	07/14/14 12:55/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14060404-003  
**Client Sample ID:** BC-1

**Report Date:** 07/24/14  
**Collection Date:** 06/24/14 14:27  
**Date Received:** 06/25/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 MDC	0.2	pCi/L				1	E903.0	07/14/14 12:55/eli-ca
Thorium 230	0.09	pCi/L	U			1	E908.0	07/18/14 11:07/eli-ca
Thorium 230 precision (±)	0.06	pCi/L				1	E908.0	07/18/14 11:07/eli-ca
Thorium 230 MDC	0.09	pCi/L				1	E908.0	07/18/14 11:07/eli-ca
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	800	pCi/L				1	D5072-92	06/27/14 15:06/eli-ca
Radon 222 precision (±)	59.5	pCi/L				1	D5072-92	06/27/14 15:06/eli-ca
Radon 222 MDC	85.0	pCi/L				1	D5072-92	06/27/14 15:06/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	07/01/14 15:45/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	0.002	mg/L		0.001		2	E200.8	06/30/14 22:53/eli-ca
Barium	ND	mg/L		0.05		2	E200.8	06/30/14 22:53/eli-ca
Boron	0.58	mg/L		0.05		2	E200.8	06/30/14 22:53/eli-ca
Cadmium	ND	mg/L		0.001		2	E200.8	06/30/14 22:53/eli-ca
Chromium	ND	mg/L		0.005		2	E200.8	06/30/14 22:53/eli-ca
Copper	ND	mg/L		0.005		2	E200.8	06/30/14 22:53/eli-ca
Iron	0.05	mg/L		0.03		2	E200.8	06/30/14 22:53/eli-ca
Lead	ND	mg/L		0.001		2	E200.8	06/30/14 22:53/eli-ca
Manganese	0.077	mg/L		0.001		2	E200.8	06/30/14 22:53/eli-ca
Molybdenum	0.004	mg/L		0.001		2	E200.8	06/30/14 22:53/eli-ca
Nickel	0.010	mg/L		0.005		2	E200.8	07/09/14 19:45/eli-ca
Selenium	0.002	mg/L		0.001		2	E200.8	06/30/14 22:53/eli-ca
Silver	ND	mg/L		0.001		2	E200.8	06/30/14 22:53/eli-ca
Uranium	0.0660	mg/L		0.0003		2	E200.8	06/30/14 22:53/eli-ca
Vanadium	ND	mg/L		0.01		2	E200.8	06/30/14 22:53/eli-ca
Zinc	ND	mg/L		0.01		2	E200.8	06/30/14 22:53/eli-ca
Calcium	493	mg/L		1		2	E200.8	06/30/14 22:53/eli-ca
Magnesium	188	mg/L		1		2	E200.8	06/30/14 22:53/eli-ca
Potassium	11	mg/L		1		2	E200.8	06/30/14 22:53/eli-ca
Sodium	175	mg/L	D	2		5	E200.7	06/30/14 16:17/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14060404-004  
**Client Sample ID:** BC-3

**Report Date:** 07/24/14  
**Collection Date:** 06/24/14 15:35  
**Date Received:** 06/25/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>PHYSICAL PARAMETERS</b>								
Alkalinity, Total as CaCO3	220	mg/L		5		1	A2320 B	07/01/14 08:44/srb
Bicarbonate as HCO3	268	mg/L		5		1	A2320 B	07/01/14 08:44/srb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	07/01/14 08:44/srb
Conductivity @ 25 C	3000	umhos/cm		5.0		1	A2510 B	06/27/14 14:09/srb
pH	7.09	su	H	0.01		1	A4500-H B	06/27/14 13:30/srb
Solids, Total Dissolved TDS @ 180 C	3060	mg/L		20		1	A2540 C	06/30/14 11:40/ch
Sample unable to be analyzed within hold time due to receiving sample after 4 hr hold time.								
<b>INORGANIC PARAMETERS</b>								
Chloride	15	mg/L		1		1	E300.0	06/26/14 01:36/tb
Fluoride	0.5	mg/L		0.1		1	E300.0	06/26/14 01:36/tb
Sulfate	1980	mg/L	D	50		50	E300.0	06/26/14 22:18/tb
<b>DATA QUALITY PARAMETERS</b>								
Anions	46.0	meq/L		1.00		1	A1030 E	07/11/14 00:00/lkl
Cations	43.9	meq/L		1.00		1	A1030 E	07/11/14 00:00/lkl
Conductivity, Calculated	3760	umhos/cm		1.00		1	A1030 E	07/11/14 00:00/lkl
TDS Ratio	1.03			0.0100		1	A1030 E	07/11/14 00:00/lkl
A/C Balance	-2.43	%				1	A1030 E	07/11/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>								
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0	06/26/14 01:36/tb
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	29.9	pCi/L				1	E900.0	07/10/14 06:11/eli-ca
Gross Alpha precision (±)	8.4	pCi/L				1	E900.0	07/10/14 06:11/eli-ca
Gross Alpha MDC	11.4	pCi/L				1	E900.0	07/10/14 06:11/eli-ca
Gross Beta	10.4	pCi/L	U			1	E900.0	07/10/14 06:11/eli-ca
Gross Beta precision (±)	8.6	pCi/L				1	E900.0	07/10/14 06:11/eli-ca
Gross Beta MDC	14.0	pCi/L				1	E900.0	07/10/14 06:11/eli-ca
Lead 210	-0.1	pCi/L	U			1	E909.0	07/09/14 11:34/eli-cs
Lead 210 precision (±)	0.7	pCi/L				1	E909.0	07/09/14 11:34/eli-cs
Lead 210 MDC	1.1	pCi/L				1	E909.0	07/09/14 11:34/eli-cs
Radium 228	0.3	pCi/L	U			1	RA-05	07/09/14 13:47/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05	07/09/14 13:47/eli-ca
Radium 228 MDC	1.1	pCi/L				1	RA-05	07/09/14 13:47/eli-ca
Radium 226	0.3	pCi/L				1	E903.0	07/14/14 12:55/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	07/14/14 12:55/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14060404-004  
**Client Sample ID:** BC-3

**Report Date:** 07/24/14  
**Collection Date:** 06/24/14 15:35  
**Date Received:** 06/25/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 MDC	0.2	pCi/L				1	E903.0	07/14/14 12:55/eli-ca
Thorium 230	0.1	pCi/L				1	E908.0	07/18/14 11:07/eli-ca
Thorium 230 precision (±)	0.06	pCi/L				1	E908.0	07/18/14 11:07/eli-ca
Thorium 230 MDC	0.07	pCi/L				1	E908.0	07/18/14 11:07/eli-ca
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	618	pCi/L				1	D5072-92	06/27/14 15:06/eli-ca
Radon 222 precision (±)	56.9	pCi/L				1	D5072-92	06/27/14 15:06/eli-ca
Radon 222 MDC	84.0	pCi/L				1	D5072-92	06/27/14 15:06/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	07/01/14 15:48/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	0.002	mg/L		0.001		2	E200.8	06/30/14 22:58/eli-ca
Barium	ND	mg/L		0.05		2	E200.8	06/30/14 22:58/eli-ca
Boron	0.40	mg/L		0.05		2	E200.8	06/30/14 22:58/eli-ca
Cadmium	ND	mg/L		0.001		2	E200.8	06/30/14 22:58/eli-ca
Chromium	ND	mg/L		0.005		2	E200.8	06/30/14 22:58/eli-ca
Copper	ND	mg/L		0.005		2	E200.8	06/30/14 22:58/eli-ca
Iron	0.28	mg/L		0.03		2	E200.8	06/30/14 22:58/eli-ca
Lead	ND	mg/L		0.001		2	E200.8	06/30/14 22:58/eli-ca
Manganese	0.573	mg/L		0.001		2	E200.8	06/30/14 22:58/eli-ca
Molybdenum	0.005	mg/L		0.001		2	E200.8	06/30/14 22:58/eli-ca
Nickel	0.011	mg/L		0.005		2	E200.8	07/09/14 19:48/eli-ca
Selenium	ND	mg/L		0.001		2	E200.8	06/30/14 22:58/eli-ca
Silver	ND	mg/L		0.001		2	E200.8	06/30/14 22:58/eli-ca
Uranium	0.0154	mg/L		0.0003		2	E200.8	06/30/14 22:58/eli-ca
Vanadium	ND	mg/L		0.01		2	E200.8	06/30/14 22:58/eli-ca
Zinc	ND	mg/L		0.01		2	E200.8	06/30/14 22:58/eli-ca
Calcium	530	mg/L		1		2	E200.8	06/30/14 22:58/eli-ca
Magnesium	134	mg/L		1		2	E200.8	06/30/14 22:58/eli-ca
Potassium	10	mg/L		1		2	E200.8	06/30/14 22:58/eli-ca
Sodium	141	mg/L		1		2	E200.8	06/30/14 22:58/eli-ca

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

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



### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14060404-005  
**Client Sample ID:** DC-1

**Report Date:** 07/24/14  
**Collection Date:** 06/25/14 10:47  
**Date Received:** 06/25/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
<b>PHYSICAL PARAMETERS</b>								
Alkalinity, Total as CaCO3	398	mg/L		5		1	A2320 B	07/01/14 08:46/srb
Bicarbonate as HCO3	485	mg/L		5		1	A2320 B	07/01/14 08:46/srb
Carbonate as CO3	ND	mg/L		5		1	A2320 B	07/01/14 08:46/srb
Conductivity @ 25 C	6670	umhos/cm		5.0		1	A2510 B	06/27/14 14:11/srb
pH	6.75	su	H	0.01		1	A4500-H B	06/27/14 13:32/srb
Solids, Total Dissolved TDS @ 180 C	6260	mg/L		100		1	A2540 C	06/30/14 11:41/ch
Sample unable to be analyzed within hold time due to receiving sample after 4 hr hold time.								
<b>INORGANIC PARAMETERS</b>								
Chloride	89	mg/L		1		1	E300.0	06/26/14 01:55/tb
Fluoride	0.8	mg/L		0.1		1	E300.0	06/26/14 01:55/tb
Sulfate	4340	mg/L	D	50		50	E300.0	07/15/14 08:49/jmh
<b>DATA QUALITY PARAMETERS</b>								
Anions	101	meq/L		1.00		1	A1030 E	07/15/14 00:00/lkl
Cations	89.1	meq/L		1.00		1	A1030 E	07/15/14 00:00/lkl
Conductivity, Calculated	7140	umhos/cm		1.00		1	A1030 E	07/15/14 00:00/lkl
TDS Ratio	0.980			0.0100		1	A1030 E	07/15/14 00:00/lkl
A/C Balance	-6.29	%				1	A1030 E	07/15/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>								
Nitrogen, Nitrate as N	3.8	mg/L		0.1		1	E300.0	06/26/14 01:55/tb
<b>RADIONUCLIDES - DISSOLVED</b>								
Gross Alpha	45.4	pCi/L				1	E900.0	07/10/14 06:11/eli-ca
Gross Alpha precision (±)	10	pCi/L				1	E900.0	07/10/14 06:11/eli-ca
Gross Alpha MDC	11.3	pCi/L				1	E900.0	07/10/14 06:11/eli-ca
Gross Beta	0.3	pCi/L	U			1	E900.0	07/10/14 06:11/eli-ca
Gross Beta precision (±)	13.2	pCi/L				1	E900.0	07/10/14 06:11/eli-ca
Gross Beta MDC	22.0	pCi/L				1	E900.0	07/10/14 06:11/eli-ca
Lead 210	-0.04	pCi/L	U			1	E909.0	07/09/14 12:43/eli-cs
Lead 210 precision (±)	0.7	pCi/L				1	E909.0	07/09/14 12:43/eli-cs
Lead 210 MDC	1.1	pCi/L				1	E909.0	07/09/14 12:43/eli-cs
Radium 228	0.7	pCi/L	U			1	RA-05	07/09/14 15:20/eli-ca
Radium 228 precision (±)	0.8	pCi/L				1	RA-05	07/09/14 15:20/eli-ca
Radium 228 MDC	1.3	pCi/L				1	RA-05	07/09/14 15:20/eli-ca
Radium 226	0.5	pCi/L				1	E903.0	07/14/14 12:55/eli-ca
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	07/14/14 12:55/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14060404-005  
**Client Sample ID:** DC-1

**Report Date:** 07/24/14  
**Collection Date:** 06/25/14 10:47  
**Date Received:** 06/25/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226 MDC	0.2	pCi/L				1 E903.0	07/14/14 12:55/eli-ca
Thorium 230	-0.002	pCi/L	U			1 E908.0	07/07/14 10:39/eli-ca
Thorium 230 precision (±)	0.02	pCi/L				1 E908.0	07/07/14 10:39/eli-ca
Thorium 230 MDC	0.06	pCi/L				1 E908.0	07/07/14 10:39/eli-ca
<b>RADIONUCLIDES - TOTAL</b>							
Radon 222	413	pCi/L				1 D5072-92	06/27/14 15:06/eli-ca
Radon 222 precision (±)	47.4	pCi/L				1 D5072-92	06/27/14 15:06/eli-ca
Radon 222 MDC	72.0	pCi/L				1 D5072-92	06/27/14 15:06/eli-ca
<b>TOTAL METALS ANALYSES</b>							
Mercury	ND	mg/L		0.0001		1 E245.1	07/01/14 15:50/eli-ca
<b>DISSOLVED METALS ANALYSES</b>							
Arsenic	0.002	mg/L		0.001		2 E200.8	06/30/14 23:02/eli-ca
Barium	ND	mg/L		0.05		2 E200.8	06/30/14 23:02/eli-ca
Boron	1.20	mg/L		0.05		2 E200.8	06/30/14 23:02/eli-ca
Cadmium	ND	mg/L		0.001		2 E200.8	06/30/14 23:02/eli-ca
Chromium	ND	mg/L		0.005		2 E200.8	06/30/14 23:02/eli-ca
Copper	ND	mg/L		0.005		2 E200.8	06/30/14 23:02/eli-ca
Iron	ND	mg/L		0.03		2 E200.8	06/30/14 23:02/eli-ca
Lead	ND	mg/L		0.001		2 E200.8	06/30/14 23:02/eli-ca
Manganese	0.131	mg/L		0.001		2 E200.8	06/30/14 23:02/eli-ca
Molybdenum	ND	mg/L		0.001		2 E200.8	06/30/14 23:02/eli-ca
Nickel	0.040	mg/L		0.005		5 E200.8	07/09/14 19:52/eli-ca
Selenium	0.027	mg/L		0.001		2 E200.8	06/30/14 23:02/eli-ca
Silver	ND	mg/L		0.001		2 E200.8	06/30/14 23:02/eli-ca
Uranium	0.0122	mg/L		0.0003		2 E200.8	06/30/14 23:02/eli-ca
Vanadium	ND	mg/L		0.01		2 E200.8	06/30/14 23:02/eli-ca
Zinc	0.08	mg/L		0.01		2 E200.8	06/30/14 23:02/eli-ca
Calcium	371	mg/L		1		2 E200.8	06/30/14 23:02/eli-ca
Magnesium	347	mg/L		1		5 E200.7	06/30/14 16:29/eli-ca
Potassium	7	mg/L		1		2 E200.8	06/30/14 23:02/eli-ca
Sodium	962	mg/L	D	2		5 E200.7	06/30/14 16:29/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14060404-006  
**Client Sample ID:** BC-3 Dup

**Report Date:** 07/24/14  
**Collection Date:** 06/24/14 15:35  
**Date Received:** 06/25/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>PHYSICAL PARAMETERS</b>							
Alkalinity, Total as CaCO <sub>3</sub>	216	mg/L		5		1	A2320 B 07/01/14 08:54/srb
Bicarbonate as HCO <sub>3</sub>	263	mg/L		5		1	A2320 B 07/01/14 08:54/srb
Carbonate as CO <sub>3</sub>	ND	mg/L		5		1	A2320 B 07/01/14 08:54/srb
Conductivity @ 25 C	3000	umhos/cm		5.0		1	A2510 B 06/27/14 14:15/srb
pH	7.11	su	H	0.01		1	A4500-H B 06/27/14 13:34/srb
Solids, Total Dissolved TDS @ 180 C	3040	mg/L		20		1	A2540 C 06/30/14 11:41/ch
Sample unable to be analyzed within hold time due to receiving sample after 4 hr hold time.							
<b>INORGANIC PARAMETERS</b>							
Chloride	15	mg/L		1		1	E300.0 06/26/14 02:15/tb
Fluoride	0.5	mg/L		0.1		1	E300.0 06/26/14 02:15/tb
Sulfate	2070	mg/L	D	50		50	E300.0 06/26/14 22:57/tb
<b>DATA QUALITY PARAMETERS</b>							
Anions	47.9	meq/L		1.00		1	A1030 E 07/11/14 00:00/lkl
Cations	43.5	meq/L		1.00		1	A1030 E 07/11/14 00:00/lkl
Conductivity, Calculated	3830	umhos/cm		1.00		1	A1030 E 07/11/14 00:00/lkl
TDS Ratio	1.00			0.0100		1	A1030 E 07/11/14 00:00/lkl
A/C Balance	-4.80	%				1	A1030 E 07/11/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>							
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0 06/26/14 02:15/tb
<b>RADIONUCLIDES - DISSOLVED</b>							
Gross Alpha	39.9	pCi/L				1	E900.0 07/10/14 06:11/eli-ca
Gross Alpha precision (±)	8.4	pCi/L				1	E900.0 07/10/14 06:11/eli-ca
Gross Alpha MDC	9.8	pCi/L				1	E900.0 07/10/14 06:11/eli-ca
Gross Beta	6.4	pCi/L	U			1	E900.0 07/10/14 06:11/eli-ca
Gross Beta precision (±)	8.1	pCi/L				1	E900.0 07/10/14 06:11/eli-ca
Gross Beta MDC	13.4	pCi/L				1	E900.0 07/10/14 06:11/eli-ca
Lead 210	-0.06	pCi/L	U			1	E909.0 07/09/14 13:53/eli-cs
Lead 210 precision (±)	0.7	pCi/L				1	E909.0 07/09/14 13:53/eli-cs
Lead 210 MDC	1.1	pCi/L				1	E909.0 07/09/14 13:53/eli-cs
Radium 228	3.7	pCi/L				1	RA-05 07/09/14 15:20/eli-ca
Radium 228 precision (±)	1	pCi/L				1	RA-05 07/09/14 15:20/eli-ca
Radium 228 MDC	1.4	pCi/L				1	RA-05 07/09/14 15:20/eli-ca
Radium 226	0.3	pCi/L				1	E903.0 07/14/14 12:55/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0 07/14/14 12:55/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14060404-006  
**Client Sample ID:** BC-3 Dup

**Report Date:** 07/24/14  
**Collection Date:** 06/24/14 15:35  
**Date Received:** 06/25/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226 MDC	0.2	pCi/L				1 E903.0	07/14/14 12:55/eli-ca
Thorium 230	0.03	pCi/L	U			1 E908.0	07/07/14 10:39/eli-ca
Thorium 230 precision (±)	0.03	pCi/L				1 E908.0	07/07/14 10:39/eli-ca
Thorium 230 MDC	0.06	pCi/L				1 E908.0	07/07/14 10:39/eli-ca
<b>RADIONUCLIDES - TOTAL</b>							
Radon 222	729	pCi/L				1 D5072-92	06/27/14 15:06/eli-ca
Radon 222 precision (±)	58.3	pCi/L				1 D5072-92	06/27/14 15:06/eli-ca
Radon 222 MDC	84.0	pCi/L				1 D5072-92	06/27/14 15:06/eli-ca
<b>TOTAL METALS ANALYSES</b>							
Mercury	ND	mg/L		0.0001		1 E245.1	07/01/14 15:53/eli-ca
<b>DISSOLVED METALS ANALYSES</b>							
Arsenic	0.002	mg/L		0.001		2 E200.8	07/01/14 01:46/eli-ca
Barium	ND	mg/L		0.05		2 E200.8	07/01/14 01:46/eli-ca
Boron	0.41	mg/L		0.05		5 E200.8	07/08/14 00:10/eli-ca
Cadmium	ND	mg/L		0.001		2 E200.8	07/01/14 01:46/eli-ca
Chromium	ND	mg/L		0.005		2 E200.8	07/01/14 01:46/eli-ca
Copper	ND	mg/L		0.005		2 E200.8	07/01/14 01:46/eli-ca
Iron	0.70	mg/L		0.03		2 E200.8	07/01/14 01:46/eli-ca
Lead	ND	mg/L		0.001		2 E200.8	07/01/14 01:46/eli-ca
Manganese	0.565	mg/L		0.001		2 E200.8	07/01/14 01:46/eli-ca
Molybdenum	0.006	mg/L		0.001		2 E200.8	07/01/14 01:46/eli-ca
Nickel	0.012	mg/L		0.005		2 E200.8	07/09/14 19:55/eli-ca
Selenium	ND	mg/L		0.001		2 E200.8	07/01/14 01:46/eli-ca
Silver	ND	mg/L		0.001		2 E200.8	07/01/14 01:46/eli-ca
Uranium	0.0148	mg/L		0.0003		2 E200.8	07/01/14 01:46/eli-ca
Vanadium	ND	mg/L		0.01		2 E200.8	07/01/14 01:46/eli-ca
Zinc	ND	mg/L		0.01		2 E200.8	07/01/14 01:46/eli-ca
Calcium	518	mg/L		1		2 E200.8	07/01/14 01:46/eli-ca
Magnesium	136	mg/L		1		2 E200.8	07/01/14 01:46/eli-ca
Potassium	10	mg/L		1		2 E200.8	07/01/14 01:46/eli-ca
Sodium	144	mg/L		1		2 E200.8	07/01/14 01:46/eli-ca

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

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



# QA/QC Summary Report

Prepared by Rapid City, SD Branch

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

**Report Date:** 07/24/14  
**Work Order:** R14060404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2320 B</b>										
Batch: 140701A-ALK-W										
<b>Lab ID: LCS1_140701A</b>	Laboratory Control Sample					Run: PH_COND1-R_140701A			07/01/14 08:29	
Alkalinity, Total as CaCO3		948	mg/L	5.0	94	90	110			
<b>Lab ID: MBLK1_140701A</b>	3	Method Blank				Run: PH_COND1-R_140701A			07/01/14 08:29	
Alkalinity, Total as CaCO3		6	mg/L	4						
Bicarbonate as HCO3		7	mg/L	3						
Carbonate as CO3		ND	mg/L	3						
<b>Lab ID: R14060404-001ADUP</b>	3	Sample Duplicate				Run: PH_COND1-R_140701A			07/01/14 08:31	
Alkalinity, Total as CaCO3		258	mg/L	5.0				1.5	10	
Bicarbonate as HCO3		314	mg/L	5.0						
Carbonate as CO3		ND	mg/L	5.0						
<b>Lab ID: R14060404-002AMS</b>		Sample Matrix Spike				Run: PH_COND1-R_140701A			07/01/14 08:37	
Alkalinity, Total as CaCO3		356	mg/L	5.0	99	80	120			

**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

**Report Date:** 07/24/14  
**Work Order:** R14060404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2540 C</b>										
Batch: TDS140630A										
<b>Lab ID: MB-1_140630A</b>		Method Blank								
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	4						Run: BAL-TDS_140630A 06/30/14 11:31
<b>Lab ID: LCS-2_140630A</b>		Laboratory Control Sample								
Solids, Total Dissolved TDS @ 180 C		490	mg/L	10	98	90	110			Run: BAL-TDS_140630A 06/30/14 11:33
<b>Lab ID: R14060361-002A MS</b>		Sample Matrix Spike								
Solids, Total Dissolved TDS @ 180 C		700	mg/L	10	96	90	110			Run: BAL-TDS_140630A 06/30/14 11:36

**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

**Report Date:** 07/24/14  
**Work Order:** R14060404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
<b>Method:</b> A4500-H B										Analytical Run: PH_COND2-R_140627B	
<b>Lab ID:</b> ICV-1_140627		Initial Calibration Verification Standard								06/27/14 13:23	
pH		7.39	su	0.010	100	98	102				
<b>Method:</b> A4500-H B										Batch: 140627_B_PH-W	
<b>Lab ID:</b> R14060404-001ADUP		Sample Duplicate								Run: PH_COND2-R_140627B	06/27/14 13:27
pH		7.00	su	0.010				0.3	3		
Sample unable to be analyzed within hold time due to receiving sample after 4 hr hold time.											

**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

**Report Date:** 07/24/14  
**Work Order:** R14060404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: D5072-92</b> <span style="float: right;">Batch: C_R188094</span>										
<b>Lab ID: R14060404-006D</b>	3	Sample Duplicate				Run: SUB-C188094				06/27/14 15:06
Radon 222		643	pCi/L					13	20	
Radon 222 precision (±)		57.2	pCi/L							
Radon 222 MDC		84.0	pCi/L							
<b>Lab ID: MB-R188094</b> <span style="float: right;">06/27/14 15:06</span>										
	3	Method Blank				Run: SUB-C188094				U
Radon 222		10	pCi/L							
Radon 222 precision (±)		30	pCi/L							
Radon 222 MDC		50	pCi/L							
<b>Lab ID: LCS-R188094</b> <span style="float: right;">06/27/14 15:06</span>										
		Laboratory Control Sample				Run: SUB-C188094				
Radon 222		554	pCi/L	95		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

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

**Report Date:** 07/24/14  
**Work Order:** R14060404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>								Analytical Run: SUB-C188138		
<b>Lab ID: ICV</b>	2	Initial Calibration Verification Standard								06/30/14 12:08
Magnesium		47	mg/L	0.50	95	95	105			
Sodium		52	mg/L	0.50	105	95	105			
<b>Lab ID: ICSA</b>	2	Interference Check Sample A								06/30/14 12:40
Magnesium		470	mg/L	0.50	93	80	120			
Sodium		0.15	mg/L	0.50						
<b>Lab ID: ICSAB</b>	2	Interference Check Sample AB								06/30/14 12:44
Magnesium		470	mg/L	0.50	93	80	120			
Sodium		0.089	mg/L	0.50						
<b>Method: E200.7</b>								Batch: C_R188138		
<b>Lab ID: MB-140630A</b>	2	Method Blank						Run: SUB-C188138		06/30/14 13:08
Magnesium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.5						
<b>Lab ID: LFB-140630A</b>	2	Laboratory Fortified Blank						Run: SUB-C188138		06/30/14 13:12
Magnesium		45	mg/L	0.50	90	85	115			
Sodium		49	mg/L	0.50	98	85	115			
<b>Lab ID: R14060404-002C</b>	2	Sample Matrix Spike						Run: SUB-C188138		06/30/14 16:02
Magnesium		478	mg/L	1.0	101	70	130			
Sodium		532	mg/L	1.6	100	70	130			
<b>Lab ID: R14060404-002C</b>	2	Sample Matrix Spike Duplicate						Run: SUB-C188138		06/30/14 16:09
Magnesium		469	mg/L	1.0	97	70	130	1.9	20	
Sodium		527	mg/L	1.6	98	70	130	1.0	20	

**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

**Report Date:** 07/24/14

**Project:** Alluvial Wells Dewey Burdock

**Work Order:** R14060404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
<b>Method: E200.8</b>								Analytical Run: SUB-C188120			
<b>Lab ID: ICV</b>	19	Initial Calibration Verification Standard							06/30/14 14:48		
Arsenic		0.0488	mg/L	0.0010	98	90	110				
Barium		0.0474	mg/L	0.0010	95	90	110				
Boron		0.0532	mg/L	0.0010	106	90	110				
Cadmium		0.0503	mg/L	0.0010	101	90	110				
Calcium		9.83	mg/L	0.0066	98	90	110				
Chromium		0.0496	mg/L	0.0010	99	90	110				
Copper		0.0503	mg/L	0.0010	101	90	110				
Iron		1.00	mg/L	0.0010	100	90	110				
Lead		0.0498	mg/L	0.0010	100	90	110				
Magnesium		10.1	mg/L	0.0027	101	90	110				
Manganese		0.0496	mg/L	0.0010	99	90	110				
Molybdenum		0.0480	mg/L	0.0010	96	90	110				
Potassium		9.88	mg/L	0.0041	99	90	110				
Selenium		0.0509	mg/L	0.0010	102	90	110				
Silver		0.0188	mg/L	0.0010	94	90	110				
Sodium		10.1	mg/L	0.0043	101	90	110				
Uranium		0.0502	mg/L	0.00030	100	90	110				
Vanadium		0.0489	mg/L	0.0010	98	90	110				
Zinc		0.0516	mg/L	0.0010	103	90	110				
<b>Method: E200.8</b>								Batch: C_R188120			
<b>Lab ID: LRB</b>	19	Method Blank							Run: SUB-C188120		06/30/14 15:47
Arsenic		ND	mg/L	5E-05							
Barium		ND	mg/L	7E-05							
Boron		ND	mg/L	0.0003							
Cadmium		ND	mg/L	3E-05							
Calcium		0.03	mg/L	0.007							
Chromium		ND	mg/L	4E-05							
Copper		ND	mg/L	3E-05							
Iron		0.0007	mg/L	0.0006							
Lead		ND	mg/L	2E-05							
Magnesium		ND	mg/L	0.003							
Manganese		ND	mg/L	3E-05							
Molybdenum		0.0002	mg/L	3E-05							
Potassium		ND	mg/L	0.004							
Selenium		ND	mg/L	7E-05							
Silver		ND	mg/L	6E-05							
Sodium		0.01	mg/L	0.004							
Uranium		1E-05	mg/L	9E-06							
Vanadium		ND	mg/L	4E-05							
Zinc		ND	mg/L	0.0002							
<b>Lab ID: LFB - non filtered</b>	19	Laboratory Fortified Blank							Run: SUB-C188120		06/30/14 16:17
Arsenic		0.0482	mg/L	0.0010	96	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

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

**Report Date:** 07/24/14  
**Work Order:** R14060404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
<b>Method: E200.8</b>											
Batch: C_R188120											
<b>Lab ID:</b>	<b>LFB - non filtered</b>	19 Laboratory Fortified Blank			Run: SUB-C188120			06/30/14 16:17			
Barium		0.0499	mg/L	0.0010	100	85	115				
Boron		0.0504	mg/L	0.0010	101	85	115				
Cadmium		0.0520	mg/L	0.0010	104	85	115				
Calcium		12.5	mg/L	0.0066	100	85	115				
Chromium		0.0530	mg/L	0.0010	106	85	115				
Copper		0.0562	mg/L	0.0010	112	85	115				
Iron		1.29	mg/L	0.0010	103	85	115				
Lead		0.0534	mg/L	0.0010	107	85	115				
Magnesium		13.4	mg/L	0.0027	107	85	115				
Manganese		0.0529	mg/L	0.0010	106	85	115				
Molybdenum		0.0535	mg/L	0.0010	107	85	115				
Potassium		12.7	mg/L	0.0041	101	85	115				
Selenium		0.0509	mg/L	0.0010	102	85	115				
Silver		0.0187	mg/L	0.0010	94	85	115				
Sodium		13.3	mg/L	0.0043	106	85	115				
Uranium		0.0528	mg/L	0.00030	106	85	115				
Vanadium		0.0487	mg/L	0.0010	97	85	115				
Zinc		0.0536	mg/L	0.0010	107	85	115				
<b>Lab ID:</b>	<b>R14060404-006C</b>	19 Post Digestion Spike			Run: SUB-C188120			07/01/14 01:51			
Arsenic		0.107	mg/L	0.0010	105	70	130				
Barium		0.115	mg/L	0.050	104	70	130				
Boron		0.547	mg/L	0.050		70	130			A	
Cadmium		0.0991	mg/L	0.0010	99	70	130				
Chromium		0.104	mg/L	0.0050	104	70	130				
Copper		0.0993	mg/L	0.0050	99	70	130				
Iron		3.27	mg/L	0.030	103	70	130				
Lead		0.108	mg/L	0.0010	108	70	130				
Manganese		0.677	mg/L	0.0010		70	130			A	
Molybdenum		0.110	mg/L	0.0010	104	70	130				
Nickel		0.101	mg/L	0.0050	97	70	130				
Selenium		0.105	mg/L	0.0010	105	70	130				
Silver		0.0364	mg/L	0.0010	91	70	130				
Uranium		0.128	mg/L	0.00030	113	70	130				
Vanadium		0.105	mg/L	0.010	105	70	130				
Zinc		0.0975	mg/L	0.010	95	70	130				
Calcium		529	mg/L	1.0		70	130			A	
Magnesium		153	mg/L	1.0		70	130			A	
Potassium		34.1	mg/L	1.0	96	70	130				
<b>Lab ID:</b>	<b>R14060404-006C</b>	19 Post Digestion Spike Duplicate			Run: SUB-C188120			07/01/14 01:55			
Arsenic		0.109	mg/L	0.0010	107	70	130	1.6	20		
Barium		0.119	mg/L	0.050	107	70	130	3.1	20		
Boron		0.553	mg/L	0.050		70	130	1.1	20	A	
Cadmium		0.102	mg/L	0.0010	102	70	130	3.1	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

**Client:** Powertech USA Inc

**Report Date:** 07/24/14

**Project:** Alluvial Wells Dewey Burdock

**Work Order:** R14060404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.8</b>										
Batch: C_R188120										
<b>Lab ID: R14060404-006C</b>	19	Post Digestion Spike Duplicate				Run: SUB-C188120				07/01/14 01:55
Chromium		0.106	mg/L	0.0050	106	70	130	1.3	20	
Copper		0.0997	mg/L	0.0050	100	70	130	0.4	20	
Iron		3.33	mg/L	0.030	105	70	130	1.6	20	
Lead		0.111	mg/L	0.0010	111	70	130	2.9	20	
Manganese		0.689	mg/L	0.0010		70	130	1.8	20	A
Molybdenum		0.115	mg/L	0.0010	110	70	130	4.9	20	
Nickel		0.102	mg/L	0.0050	98	70	130	0.7	20	
Selenium		0.107	mg/L	0.0010	107	70	130	1.6	20	
Silver		0.0374	mg/L	0.0010	94	70	130	2.9	20	
Uranium		0.130	mg/L	0.00030	115	70	130	1.6	20	
Vanadium		0.107	mg/L	0.010	107	70	130	1.2	20	
Zinc		0.0994	mg/L	0.010	97	70	130	1.9	20	
Calcium		529	mg/L	1.0		70	130	0.0	20	A
Magnesium		154	mg/L	1.0		70	130	0.4	20	A
Potassium		34.1	mg/L	1.0	97	70	130	0.1	20	
<b>Method: E200.8</b>										
Analytical Run: SUB-C188312										
<b>Lab ID: ICV</b>		Initial Calibration Verification Standard								07/07/14 15:42
Boron		0.0549	mg/L	0.0010	110	90	110			
<b>Method: E200.8</b>										
Batch: C_R188312										
<b>Lab ID: LRB</b>		Method Blank				Run: SUB-C188312				07/07/14 16:16
Boron		ND	mg/L	0.0003						
<b>Lab ID: LFB - filtered</b>		Laboratory Fortified Blank				Run: SUB-C188312				07/07/14 16:20
Boron		0.0573	mg/L	0.0010	115	85	115			
<b>Lab ID: R14060404-006C</b>		Post Digestion Spike				Run: SUB-C188312				07/08/14 00:15
Boron		0.690	mg/L	0.050	112	70	130			
<b>Lab ID: R14060404-006C</b>		Post Digestion Spike Duplicate				Run: SUB-C188312				07/08/14 00:18
Boron		0.682	mg/L	0.050	109	70	130	1.0	20	

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ND - Not detected at the reporting limit.

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MDC - Minimum detectable concentration



# QA/QC Summary Report

Prepared by Rapid City, SD Branch

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

**Report Date:** 07/24/14  
**Work Order:** R14060404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E200.8										Analytical Run: SUB-C188421
<b>Lab ID:</b> ICV		Initial Calibration Verification Standard								07/09/14 12:36
Nickel		0.0489	mg/L	0.0010	98	90	110			
<b>Method:</b> E200.8										Batch: C_R188421
<b>Lab ID:</b> LRB		Method Blank								07/09/14 13:10
Nickel		ND	mg/L	3E-05						Run: SUB-C188421
<b>Lab ID:</b> LFB - NON FILTERED		Laboratory Fortified Blank								07/09/14 14:05
Nickel		0.0498	mg/L	0.0010	100	85	115			Run: SUB-C188421
<b>Lab ID:</b> R14060404-006C		Post Digestion Spike								07/09/14 19:58
Nickel		0.111	mg/L	0.0050	99	70	130			Run: SUB-C188421
<b>Lab ID:</b> R14060404-006C		Post Digestion Spike Duplicate								07/09/14 20:01
Nickel		0.110	mg/L	0.0050	98	70	130	0.4	20	

**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

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

**Report Date:** 07/24/14  
**Work Order:** R14060404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E245.1										Analytical Run: SUB-C188158
<b>Lab ID:</b> ICV		Initial Calibration Verification Standard								07/01/14 14:53
Mercury		0.0052	mg/L	0.00010	104	90	110			
<b>Lab ID:</b> CCV		Continuing Calibration Verification Standard								07/01/14 15:58
Mercury		0.0047	mg/L	0.00010	93	90	110			
<b>Method:</b> E245.1										Batch: C_41836
<b>Lab ID:</b> MB-41836		Method Blank								07/01/14 15:01
Mercury		ND	mg/L	7E-05				Run: SUB-C188158		
<b>Lab ID:</b> LCS-41836		Laboratory Control Sample								07/01/14 15:04
Mercury		0.0053	mg/L	0.00010	107	85	115	Run: SUB-C188158		
<b>Lab ID:</b> R14060404-006B		Sample Matrix Spike								07/01/14 15:55
Mercury		0.0048	mg/L	0.00010	95	75	125	Run: SUB-C188158		
<b>Lab ID:</b> R14060404-006B		Sample Matrix Spike Duplicate								07/01/14 16:03
Mercury		0.0046	mg/L	0.00010	93	75	125	2.9	20	
<b>Method:</b> E245.1										Batch: C_R188158
<b>Lab ID:</b> IPC		Instrument Performance Check Sample								07/01/14 14:59
Mercury		0.0050	mg/L	0.00010	101	95	105			

**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

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

**Report Date:** 07/24/14  
**Work Order:** R14060404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E300.0</b>								Analytical Run: DIONEX_140625A		
<b>Lab ID: ICV</b>	3	Initial Calibration Verification Standard								06/25/14 23:01
Chloride		37.2	mg/L	1.0	93	90	110			
Fluoride		4.00	mg/L	0.10	100	90	110			
Nitrogen, Nitrate as N		3.88	mg/L	0.10	97	90	110			
<b>Method: E300.0</b>								Batch: R66054		
<b>Lab ID: LFB</b>	3	Laboratory Fortified Blank						Run: DIONEX_140625A		06/25/14 23:39
Chloride		37.5	mg/L	1.0	94	90	110			
Fluoride		3.99	mg/L	0.10	100	90	110			
Nitrogen, Nitrate as N		3.90	mg/L	0.10	98	90	110			
<b>Lab ID: R14060404-001AMS</b>	3	Sample Matrix Spike						Run: DIONEX_140625A		06/26/14 00:18
Chloride		1120	mg/L	1.0		90	110			A
Fluoride		4.15	mg/L	0.10	93	90	110			
Nitrogen, Nitrate as N		4.02	mg/L	0.10	100	90	110			
<b>Lab ID: R14060404-001AMSD</b>	3	Sample Matrix Spike Duplicate						Run: DIONEX_140625A		06/26/14 00:38
Chloride		1130	mg/L	1.0		90	110	0.7	10	A
Fluoride		4.19	mg/L	0.10	94	90	110	1.0	10	
Nitrogen, Nitrate as N		4.05	mg/L	0.10	101	90	110	0.8	10	
<b>Method: E300.0</b>								Analytical Run: DIONEX_140626A		
<b>Lab ID: ICV</b>	2	Initial Calibration Verification Standard								06/26/14 16:09
Chloride		38.3	mg/L	1.0	96	90	110			
Sulfate		39.1	mg/L	1.0	98	90	110			
<b>Lab ID: CCV062614-1</b>	2	Continuing Calibration Verification Standard								06/26/14 21:01
Chloride		79.2	mg/L	1.0	106	90	110			
Sulfate		77.2	mg/L	1.0	103	90	110			
<b>Method: E300.0</b>								Batch: R66071		
<b>Lab ID: LFB</b>	2	Laboratory Fortified Blank						Run: DIONEX_140626A		06/26/14 16:48
Chloride		39.0	mg/L	1.0	97	90	110			
Sulfate		39.6	mg/L	1.0	99	90	110			
<b>Lab ID: R14060404-002AMS</b>	2	Sample Matrix Spike						Run: DIONEX_140626A		06/26/14 20:41
Chloride		2020	mg/L	50	99	90	110			
Sulfate		4830	mg/L	50	119	90	110			S
<b>Lab ID: R14060404-002AMSD</b>	2	Sample Matrix Spike Duplicate						Run: DIONEX_140626A		06/26/14 21:39
Chloride		2030	mg/L	50	99	90	110	0.2	10	
Sulfate		4880	mg/L	50	121	90	110	0.9	10	S

**Qualifiers:**

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ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

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

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

**Report Date:** 07/24/14  
**Work Order:** R14060404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E300.0								Analytical Run: DIONEX_140714A		
<b>Lab ID:</b> ICV		Initial Calibration Verification Standard								07/14/14 20:58
Sulfate		38.9	mg/L	1.0	97	90	110			
<b>Lab ID:</b> CCV071414-2		Continuing Calibration Verification Standard								07/15/14 05:09
Sulfate		72.8	mg/L	1.0	97	90	110			
<b>Method:</b> E300.0										Batch: R66299
<b>Lab ID:</b> LFB		Laboratory Fortified Blank								07/14/14 21:32
Sulfate		39.3	mg/L	1.0	98	90	110			Run: DIONEX_140714A
<b>Lab ID:</b> R14070175-001CMS		Sample Matrix Spike								07/15/14 02:03
Sulfate		963	mg/L	1.0		90	110			A
<b>Lab ID:</b> R14070175-001CMSD		Sample Matrix Spike Duplicate								07/15/14 02:20
Sulfate		963	mg/L	1.0		90	110	0.0	10	A
<b>Lab ID:</b> R14070214-001CMS		Sample Matrix Spike								07/15/14 06:00
Sulfate		7160	mg/L	1.0		90	110			A
<b>Lab ID:</b> R14070214-001CMSD		Sample Matrix Spike Duplicate								07/15/14 06:17
Sulfate		7190	mg/L	1.0		90	110	0.4	10	A

**Qualifiers:**

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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

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

**Report Date:** 07/24/14  
**Work Order:** R14060404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E900.0</b>										
Batch: C_GrAB-1789R										
<b>Lab ID: Th230-GrAB-1789</b>	Laboratory Control Sample			Run: SUB-C188456			07/10/14 06:11			
Gross Alpha		129	pCi/L	110		80	120			
<b>Lab ID: Sr90-GrAB-1789</b>	Laboratory Control Sample			Run: SUB-C188456			07/10/14 06:11			
Gross Beta		190	pCi/L	95		80	120			
<b>Lab ID: MB-GrAB-1789</b>	6 Method Blank			Run: SUB-C188456			07/10/14 06:11			
Gross Alpha		3	pCi/L							
Gross Alpha precision (±)		0.8	pCi/L							
Gross Alpha MDC		1	pCi/L							
Gross Beta		-1	pCi/L							U
Gross Beta precision (±)		1	pCi/L							
Gross Beta MDC		2	pCi/L							
<b>Lab ID: C14060936-001FDUP</b>	6 Sample Duplicate			Run: SUB-C188456			07/10/14 06:12			
Gross Alpha		4060	pCi/L					1.9	12.7	
Gross Alpha precision (±)		55.3	pCi/L							
Gross Alpha MDC		7.48	pCi/L							
Gross Beta		1090	pCi/L					0.1	13.6	
Gross Beta precision (±)		19.5	pCi/L							
Gross Beta MDC		10.7	pCi/L							
<b>Lab ID: R14060404-006E</b>	Sample Matrix Spike			Run: SUB-C188456			07/10/14 06:11			
Gross Alpha		320	pCi/L	50		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.										
<b>Lab ID: R14060404-006E</b>	Sample Matrix Spike Duplicate			Run: SUB-C188456			07/10/14 06:12			
Gross Alpha		290	pCi/L	46		70	130	7.3	21.3	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.										
<b>Lab ID: R14060404-006E</b>	Sample Matrix Spike			Run: SUB-C188456			07/10/14 06:12			
Gross Beta		1000	pCi/L	103		70	130			
<b>Lab ID: R14060404-006E</b>	Sample Matrix Spike Duplicate			Run: SUB-C188456			07/10/14 06:12			
Gross Beta		1000	pCi/L	104		70	130	0.2	13.8	

**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

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

**Report Date:** 07/24/14  
**Work Order:** R14060404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E903.0</b>										
Batch: C_RA226-7250										
<b>Lab ID: C14061020-003BMS</b>		Sample Matrix Spike					Run: SUB-C188559			07/14/14 15:32
Radium 226		27	pCi/L	89		70	130			
<b>Lab ID: C14061020-003BMSD</b>		Sample Matrix Spike Duplicate					Run: SUB-C188559			07/14/14 15:32
Radium 226		28	pCi/L	93		70	130	3.3	20.3	
<b>Lab ID: MB-RA226-7250</b>	3	Method Blank					Run: SUB-C188559			07/14/14 15:32
Radium 226		0.1	pCi/L							U
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.2	pCi/L							
<b>Lab ID: LCS-RA226-7250</b>		Laboratory Control Sample					Run: SUB-C188559			07/14/14 15:32
Radium 226		12	pCi/L	100		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

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

**Report Date:** 07/24/14  
**Work Order:** R14060404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E908.0</b>								Batch: C_RA-TH-ISO-2060		
<b>Lab ID:</b> LCS-RA-TH-ISO-2060		Laboratory Control Sample				Run: SUB-C188523			07/07/14 10:39	
Thorium 230		6.6	pCi/L		99	80	120			
<b>Lab ID:</b> C14060776-003EMS		Sample Matrix Spike				Run: SUB-C188523			07/07/14 10:39	
Thorium 230		13	pCi/L		100	70	130			
<b>Lab ID:</b> C14060776-003EMSD		Sample Matrix Spike Duplicate				Run: SUB-C188523			07/07/14 10:39	
Thorium 230		12	pCi/L		91	70	130	10	28.5	
<b>Lab ID:</b> MB-RA-TH-ISO-2060	3	Method Blank				Run: SUB-C188523			07/07/14 10:39	
Thorium 230		0.07	pCi/L							
Thorium 230 precision (±)		0.04	pCi/L							
Thorium 230 MDC		0.05	pCi/L							
<b>Method: E908.0</b>								Batch: C_RA-TH-ISO-2064		
<b>Lab ID:</b> LCS-RA-TH-ISO-2064		Laboratory Control Sample				Run: SUB-C188904			07/17/14 17:03	
Thorium 230		6.6	pCi/L		102	80	120			
<b>Lab ID:</b> C14070320-001EMS		Sample Matrix Spike				Run: SUB-C188904			07/17/14 17:03	
Thorium 230		13	pCi/L		99	70	130			
<b>Lab ID:</b> C14070320-001EMSD		Sample Matrix Spike Duplicate				Run: SUB-C188904			07/17/14 17:04	
Thorium 230		15	pCi/L		108	70	130	8.9	33.2	
<b>Lab ID:</b> MB-RA-TH-ISO-2064	3	Method Blank				Run: SUB-C188904			07/18/14 11:07	
Thorium 230		0.09	pCi/L							
Thorium 230 precision (±)		0.06	pCi/L							
Thorium 230 MDC		0.09	pCi/L							

**Qualifiers:**

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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

**Report Date:** 07/24/14  
**Work Order:** R14060404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E909.0</b>										
Batch: T_PB-210-0470										
<b>Lab ID: MB-PB-210-0470</b>	3	Method Blank				Run: SUB-T57698				07/08/14 18:14
Lead 210		-0.03	pCi/L							U
Lead 210 precision (±)		0.6	pCi/L							
Lead 210 MDC		1	pCi/L							
<b>Lab ID: LCS-PB-210-0470</b>		Laboratory Control Sample				Run: SUB-T57698				07/08/14 19:23
Lead 210		22	pCi/L	110		80	120			
<b>Lab ID: R14060404-006F</b>		Sample Matrix Spike				Run: SUB-T57698				07/09/14 15:02
Lead 210		47	pCi/L	110		70	130			
<b>Lab ID: R14060404-006F</b>		Sample Matrix Spike Duplicate				Run: SUB-T57698				07/09/14 16:11
Lead 210		47	pCi/L	109		70	130	1.3		21.4

**Qualifiers:**

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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

**Report Date:** 07/24/14  
**Work Order:** R14060404

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: RA-05</b> <span style="float: right;">Batch: C_RA228-4702</span>										
<b>Lab ID: LCS-228-RA226-7250</b>	Laboratory Control Sample									
Radium 228		7.5	pCi/L	96		80	120			07/09/14 13:47
<b>Lab ID: MB-RA226-7250</b>	3	Method Blank								07/09/14 13:47
Radium 228		0.8	pCi/L							U
Radium 228 precision (±)		0.8	pCi/L							
Radium 228 MDC		1	pCi/L							
<b>Lab ID: C14061020-004BMS</b>	Sample Matrix Spike									
Radium 228		27	pCi/L	122		70	130			07/09/14 13:47
<b>Lab ID: C14061020-004BMSD</b>	Sample Matrix Spike Duplicate									
Radium 228		23	pCi/L	97		70	130	14		07/09/14 13:47 28.8

**Qualifiers:**

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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>Powertech / Scott Env.</i>	Project Name, PWS, Permit, Etc. <i>Powertech alluvial wells</i>	Sample Origin State:	EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>
Report Mail Address (Required): <i>Powertech alluvial wells</i>	Contact Name: <i>Lisa Schenost / Allen Salt</i>	Phone/Fax:	Cell:
<input type="checkbox"/> No Hard Copy Email:	Invoice Contact & Phone:	Purchase Order:	Quote/Bottle Order:

Invoice Address (Required):  
*Powertech*

No Hard Copy Email:

Special Report/Formats:

DW       EDD/EDT (Electronic Data)  
 POTW/WWTP       Format: \_\_\_\_\_  
 State: \_\_\_\_\_       LEVEL IV  
 Other: \_\_\_\_\_       NELAC

Number of Containers/ Sample Type: A W S V B O DW Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water	ANALYSIS REQUESTED										SEE ATTACHED	Standard Turnaround (TAT)	R U S H	Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page	Shipped by:	
<i>Aggr. Droke</i>																

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX
<i>DC-2</i>	<i>6-24-14</i>	<i>11:23</i>	<i>Water</i>
<i>BC-2</i>	<i>6-24-14</i>	<i>12:50</i>	<i>"</i>
<i>BC-1</i>	<i>6-24-14</i>	<i>14:27</i>	<i>"</i>
<i>BC-3</i>	<i>6-24-14</i>	<i>15:35</i>	<i>"</i>
<i>DC-1</i>	<i>6-25-14</i>	<i>10:47</i>	<i>"</i>
<i>BC-3 Dup</i>	<i>6-24-14</i>	<i>15:35</i>	<i>"</i>

Receipt Temp  
*3.6* °C

On Ice:  Y  N

Custody Seal  
On Bottle Y N  
On Cooler Y N

Intact Y N  
Signature Match Y N

*R14060404-001*  
*002*  
*003*  
*004*  
*005*  
*006*

LABORATORY USE ONLY

<b>Custody Record MUST be Signed</b>	Relinquished by (print): <i>Allen Salt</i>	Date/Time: <i>6-25-14 15:00</i>	Signature: <i>[Signature]</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 Franland</i>	Date/Time: <i>6-25-14 15:20</i>	Signature: <i>[Signature]</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.



# ANALYTICAL SUMMARY REPORT

July 22, 2014

Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Work Order: R14070195      Quote ID: R411

Project Name: Alluvial Wells Dewey Burdock

Energy Laboratories Inc. Rapid City SD received the following 6 samples for Powertech USA Inc on 7/10/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R14070195-001	DC-1	07/10/14 12:27	07/10/14	Aqueous	Radon 222
R14070195-002	DC-2	07/10/14 9:06	07/10/14	Aqueous	Same As Above
R14070195-003	DC-1 Dup	07/10/14 12:27	07/10/14	Aqueous	Same As Above
R14070195-004	BC-1	07/10/14 11:16	07/10/14	Aqueous	Same As Above
R14070195-005	BC-2	07/10/14 10:32	07/10/14	Aqueous	Same As Above
R14070195-006	BC-3	07/10/14 12:06	07/10/14	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  
**Work Order:** R14070195

**Report Date:** 07/22/14

## **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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14070195-001  
**Client Sample ID:** DC-1

**Report Date:** 07/22/14  
**Collection Date:** 07/10/14 12:27  
**Date Received:** 07/10/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	434	pCi/L				1	D5072-92	07/11/14 15:11/eli-ca
Radon 222 precision (±)	39.7	pCi/L				1	D5072-92	07/11/14 15:11/eli-ca
Radon 222 MDC	59.0	pCi/L				1	D5072-92	07/11/14 15:11/eli-ca

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

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



### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14070195-002  
**Client Sample ID:** DC-2

**Report Date:** 07/22/14  
**Collection Date:** 07/10/14 09:06  
**Date Received:** 07/10/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	598	pCi/L				1	D5072-92	07/11/14 15:11/eli-ca
Radon 222 precision (±)	42.6	pCi/L				1	D5072-92	07/11/14 15:11/eli-ca
Radon 222 MDC	60.0	pCi/L				1	D5072-92	07/11/14 15:11/eli-ca

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

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



**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14070195-003  
**Client Sample ID:** DC-1 Dup

**Report Date:** 07/22/14  
**Collection Date:** 07/10/14 12:27  
**Date Received:** 07/10/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	463	pCi/L				1	D5072-92	07/11/14 15:11/eli-ca
Radon 222 precision (±)	40.1	pCi/L				1	D5072-92	07/11/14 15:11/eli-ca
Radon 222 MDC	59.0	pCi/L				1	D5072-92	07/11/14 15:11/eli-ca

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

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



### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14070195-004  
**Client Sample ID:** BC-1

**Report Date:** 07/22/14  
**Collection Date:** 07/10/14 11:16  
**Date Received:** 07/10/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	872	pCi/L				1	D5072-92	07/11/14 15:11/eli-ca
Radon 222 precision (±)	45.2	pCi/L				1	D5072-92	07/11/14 15:11/eli-ca
Radon 222 MDC	59.0	pCi/L				1	D5072-92	07/11/14 15:11/eli-ca

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

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



### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14070195-005  
**Client Sample ID:** BC-2

**Report Date:** 07/22/14  
**Collection Date:** 07/10/14 10:32  
**Date Received:** 07/10/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	1040	pCi/L				1	D5072-92	07/11/14 15:11/eli-ca
Radon 222 precision (±)	47.2	pCi/L				1	D5072-92	07/11/14 15:11/eli-ca
Radon 222 MDC	60.0	pCi/L				1	D5072-92	07/11/14 15:11/eli-ca

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

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





### LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14070195-006  
**Client Sample ID:** BC-3

**Report Date:** 07/22/14  
**Collection Date:** 07/10/14 12:06  
**Date Received:** 07/10/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/	DF	Method	Analysis Date / By
					QCL			
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	586	pCi/L				1	D5072-92	07/11/14 15:11/eli-ca
Radon 222 precision (±)	41.7	pCi/L				1	D5072-92	07/11/14 15:11/eli-ca
Radon 222 MDC	59.0	pCi/L				1	D5072-92	07/11/14 15:11/eli-ca

**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.



# QA/QC Summary Report

Prepared by Rapid City, SD Branch

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

**Report Date:** 07/22/14  
**Work Order:** R14070195

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: D5072-92</b> <span style="float: right;">Batch: C_R188558</span>										
<b>Lab ID: R14070195-006A</b>	3	Sample Duplicate				Run: SUB-C188558				07/11/14 15:11
Radon 222		583	pCi/L					0.5	20	
Radon 222 precision (±)		41.7	pCi/L							
Radon 222 MDC		59.0	pCi/L							
<b>Lab ID: MB-R188558</b> <span style="float: right;">07/11/14 15:11</span>										
	3	Method Blank				Run: SUB-C188558				
Radon 222		10	pCi/L							
Radon 222 precision (±)		30	pCi/L							
Radon 222 MDC		50	pCi/L							
<b>Lab ID: LCS-R188558</b> <span style="float: right;">07/11/14 15:11</span>										
		Laboratory Control Sample				Run: SUB-C188558				
Radon 222		550	pCi/L	97		80	120			

**Qualifiers:**

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

**PLEASE PRINT (Provide as much information as possible.)**

Company Name: Powertech / Scott Env. Project Name, PWS, Permit, Etc.: Powertech alluvial wells Sample Origin: \_\_\_\_\_ State: \_\_\_\_\_ EPA/State Compliance: Yes  No

Report Mail Address (Required): Powertech Contact Name: Lisa Scheinost / Allen Scott Phone/Fax: \_\_\_\_\_ Cell: \_\_\_\_\_ Sampler: (Please Print) \_\_\_\_\_

No Hard Copy Email: \_\_\_\_\_ Invoice Contact & Phone: \_\_\_\_\_ Purchase Order: \_\_\_\_\_ Quote/Bottle Order: \_\_\_\_\_

Invoice Address (Required): Powertech

No Hard Copy Email: \_\_\_\_\_

Special Report/Formats:  
 DW  EDD/EDT (Electronic Data)  
 POTW/WWTP  Format: \_\_\_\_\_  
 State: \_\_\_\_\_  LEVEL IV  
 Other: \_\_\_\_\_  NELAC

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)				Collection Date	Collection Time	MATRIX	ANALYSIS REQUESTED				SEE ATTACHED	Standard Turnaround (TAT)	RUSH	Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page Comments:	Shipped by:		
							Number of Containers Sample Type: A W S V B O DW Air Water Solids/Solids Vegetation Bioassay Other DW - Drinking Water								Cooler ID(s):	Receipt Temp	
1	DC-1	7-10-14	12:27	Water	✓	✓											3.2 °C
2	DC-2	7-10-14	09:06	"	✓	✓											On Ice: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
3	PC-1 Dup.	7-10-14	12:27	"	✓	✓											Custody Seal
4	BC-1	7-10-14	11:16	"	✓	✓											On Bottle Y <input type="checkbox"/> N On Cooler Y <input type="checkbox"/> N
5	BC-2	7-10-14	10:32	"	✓	✓											Intact Y <input type="checkbox"/> N
6	BC-3	7-10-14	12:06	"	✓	✓											Signature Match Y <input type="checkbox"/> N
7																	
8																	
9																	
10																	

LABORATORY USE ONLY

R14070195-001A  
002A  
003A  
004A  
005A  
006A

<b>Custody Record MUST be Signed</b>	Relinquished by (print): <u>Allen Scott</u> Date/Time: <u>7-10-14 15:58</u> Signature: <u>[Signature]</u>	Received by (print): _____ Date/Time: _____ Signature: _____
	Relinquished by (print): _____ Date/Time: _____ Signature: _____	Received by (print): _____ Date/Time: _____ Signature: _____
	Relinquished by (print): _____ Date/Time: _____ Signature: _____	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: \_\_\_\_\_ Blue Froidland 7-10-14 1558 [Signature]

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](http://www.energylab.com) for additional information, downloadable fee schedule, forms, and links.



# ANALYTICAL SUMMARY REPORT

October 23, 2014

Powertech USA Inc  
PO Box 812  
Edgemont, SD 57735

Work Order: R14090086      Quote ID: R411

Project Name: Alluvial Wells Dewey Burdock

Energy Laboratories Inc. Rapid City SD received the following 6 samples for Powertech USA Inc on 9/4/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R14090086-001	DC-2	09/03/14 12:59	09/04/14	Aqueous	Metals by ICP/ICPMS, Dissolved Alkalinity Anion - Cation Balance Conductivity Mercury, Total Mercury Analysis Prep Anions by Ion Chromatography pH Dissolved Filtration Gross Alpha, Gross Beta Lead 210, Dissolved Radium 226, Dissolved Radium 228, Dissolved Radon 222 Thorium, Isotopic Solids, Total Dissolved
R14090086-002	BC-2	09/03/14 14:52	09/04/14	Aqueous	Same As Above
R14090086-003	BC-1	09/03/14 16:12	09/04/14	Aqueous	Same As Above
R14090086-004	BC-1 Dup	09/03/14 16:12	09/04/14	Aqueous	Same As Above
R14090086-005	BC-3	09/03/14 17:46	09/04/14	Aqueous	Same As Above
R14090086-006	DC-1	09/04/14 10:10	09/04/14	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  
**Work Order:** R14090086

**Report Date:** 10/23/14

## 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.

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

Comments imported for SUBBED Workorder: C14090196

### TH230 ANALYSIS

USNRC Regulatory Guide 4.14 provides guidance on Minimum Detectable Concentrations (MDC) that should be achieved in samples for this radionuclide. The sample-specific MDC for this sample could not be achieved due to significant matrix interferences, restricting the volume of sample to be used in the analysis. Please consult with your local regulatory agency prior to using these results for compliance purposes.

End of comments imported for SUBBED Workorder: C14090196



**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14090086-001  
**Client Sample ID:** DC-2

**Report Date:** 10/23/14  
**Collection Date:** 09/03/14 12:59  
**Date Received:** 09/04/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>PHYSICAL PARAMETERS</b>							
Alkalinity, Total as CaCO3	264	mg/L		5		1	A2320 B 09/12/14 10:53/ch
Bicarbonate as HCO3	322	mg/L		5		1	A2320 B 09/12/14 10:53/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B 09/12/14 10:53/ch
Conductivity @ 25 C	5510	umhos/cm		5.0		1	A2510 B 09/09/14 15:54/des
pH	7.27	su	H	0.01		1	A4500-H B 09/11/14 11:43/des
Solids, Total Dissolved TDS @ 180 C	4580	mg/L		20		1	A2540 C 09/08/14 10:05/ch
<b>INORGANIC PARAMETERS</b>							
Chloride	795	mg/L	D	20		20	E300.0 09/10/14 21:51/jmh
Fluoride	0.2	mg/L		0.1		1	E300.0 09/05/14 00:34/jmh
Sulfate	1990	mg/L	D	20		20	E300.0 09/10/14 21:51/jmh
<b>DATA QUALITY PARAMETERS</b>							
Anions	69.1	meq/L		1.00		1	A1030 E 10/16/14 00:00/lkl
Cations	69.2	meq/L		1.00		1	A1030 E 10/16/14 00:00/lkl
Conductivity, Calculated	5430	umhos/cm		1.00		1	A1030 E 10/16/14 00:00/lkl
TDS Ratio	1.05			0.0100		1	A1030 E 10/16/14 00:00/lkl
A/C Balance	0.0600	%				1	A1030 E 10/16/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>							
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0 09/05/14 00:34/jmh
<b>RADIONUCLIDES - DISSOLVED</b>							
Gross Alpha	23.3	pCi/L	U			1	E900.0 09/18/14 19:07/eli-ca
Gross Alpha precision (±)	15.9	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Gross Alpha MDC	25.1	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Lead 210	0.4	pCi/L	U			1	E909.0 09/24/14 09:52/eli-cs
Lead 210 precision (±)	0.6	pCi/L				1	E909.0 09/24/14 09:52/eli-cs
Lead 210 MDC	1.0	pCi/L				1	E909.0 09/24/14 09:52/eli-cs
Radium 228	1.8	pCi/L				1	RA-05 09/19/14 09:04/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05 09/19/14 09:04/eli-ca
Radium 228 MDC	1.1	pCi/L				1	RA-05 09/19/14 09:04/eli-ca
Gross Beta	7.3	pCi/L	U			1	E900.0 09/18/14 19:07/eli-ca
Gross Beta precision (±)	14.8	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Gross Beta MDC	24.5	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Radium 226	0.56	pCi/L				1	E903.0 09/16/14 10:13/eli-ca
Radium 226 precision (±)	0.17	pCi/L				1	E903.0 09/16/14 10:13/eli-ca

**Report Definitions:**  
 RL - Analyte reporting limit. MCL - Maximum contaminant level.  
 QCL - Quality control limit. ND - Not detected at the reporting limit.  
 MDC - Minimum detectable concentration D - RL increased due to sample matrix.  
 H - Analysis performed past recommended holding time. U - Not detected at minimum detectable concentration



**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14090086-001  
**Client Sample ID:** DC-2

**Report Date:** 10/23/14  
**Collection Date:** 09/03/14 12:59  
**Date Received:** 09/04/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 MDC	0.17	pCi/L				1	E903.0	09/16/14 10:13/eli-ca
Thorium 230	0.2	pCi/L	U			1	E908.0	10/01/14 08:57/eli-ca
Thorium 230 precision (±)	0.2	pCi/L				1	E908.0	10/01/14 08:57/eli-ca
Thorium 230 MDC	0.4	pCi/L				1	E908.0	10/01/14 08:57/eli-ca
- See Case Narrative regarding Th230 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	639	pCi/L				1	D5072-92	09/05/14 16:15/eli-ca
Radon 222 precision (±)	49.7	pCi/L				1	D5072-92	09/05/14 16:15/eli-ca
Radon 222 MDC	72.3	pCi/L				1	D5072-92	09/05/14 16:15/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	09/11/14 15:00/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	0.003	mg/L		0.001		1	E200.8	09/29/14 15:44/eli-ca
Barium	ND	mg/L		0.05		10	E200.7	09/19/14 15:19/eli-ca
Boron	0.3	mg/L	D	0.2		10	E200.7	09/19/14 15:19/eli-ca
Cadmium	ND	mg/L		0.001		1	E200.8	09/29/14 15:44/eli-ca
Chromium	ND	mg/L		0.005		2	E200.8	10/04/14 04:41/eli-ca
Copper	ND	mg/L		0.005		1	E200.8	09/29/14 15:44/eli-ca
Iron	0.29	mg/L	D	0.05		10	E200.7	09/19/14 15:19/eli-ca
Lead	ND	mg/L		0.001		1	E200.8	09/29/14 15:44/eli-ca
Manganese	2.74	mg/L	D	0.02		10	E200.7	09/19/14 15:19/eli-ca
Molybdenum	0.004	mg/L		0.001		1	E200.8	09/29/14 15:44/eli-ca
Nickel	0.008	mg/L		0.005		1	E200.8	09/29/14 15:44/eli-ca
Selenium	ND	mg/L		0.001		1	E200.8	09/29/14 15:44/eli-ca
Silver	ND	mg/L		0.001		1	E200.8	09/29/14 15:44/eli-ca
Uranium	0.0082	mg/L		0.0003		2	E200.8	10/04/14 04:41/eli-ca
Vanadium	ND	mg/L		0.01		2	E200.7	09/22/14 14:58/eli-ca
Zinc	ND	mg/L		0.01		2	E200.7	09/22/14 14:58/eli-ca
Calcium	516	mg/L		1		10	E200.7	09/19/14 15:19/eli-ca
Magnesium	143	mg/L		1		10	E200.7	09/19/14 15:19/eli-ca
Potassium	7	mg/L		1		10	E200.7	09/19/14 15:19/eli-ca
Sodium	725	mg/L	D	2		10	E200.7	09/19/14 15:19/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14090086-002  
**Client Sample ID:** BC-2

**Report Date:** 10/23/14  
**Collection Date:** 09/03/14 14:52  
**Date Received:** 09/04/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>PHYSICAL PARAMETERS</b>							
Alkalinity, Total as CaCO3	234	mg/L		5		1	A2320 B 09/12/14 11:02/ch
Bicarbonate as HCO3	285	mg/L		5		1	A2320 B 09/12/14 11:02/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B 09/12/14 11:02/ch
Conductivity @ 25 C	3790	umhos/cm		5.0		1	A2510 B 09/09/14 15:58/des
pH	7.35	su	H	0.01		1	A4500-H B 09/11/14 11:45/des
Solids, Total Dissolved TDS @ 180 C	3880	mg/L		20		1	A2540 C 09/08/14 10:06/ch
<b>INORGANIC PARAMETERS</b>							
Chloride	20	mg/L		1		1	E300.0 09/05/14 00:51/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0 09/05/14 00:51/jmh
Sulfate	2280	mg/L	D	50		50	E300.0 09/10/14 22:42/jmh
<b>DATA QUALITY PARAMETERS</b>							
Anions	52.7	meq/L		1.00		1	A1030 E 10/16/14 00:00/lkl
Cations	55.1	meq/L		1.00		1	A1030 E 10/16/14 00:00/lkl
Conductivity, Calculated	4340	umhos/cm		1.00		1	A1030 E 10/16/14 00:00/lkl
TDS Ratio	1.12			0.0100		1	A1030 E 10/16/14 00:00/lkl
A/C Balance	2.18	%				1	A1030 E 10/16/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>							
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0 09/05/14 00:51/jmh
<b>RADIONUCLIDES - DISSOLVED</b>							
Gross Alpha	14.2	pCi/L	U			1	E900.0 09/18/14 19:07/eli-ca
Gross Alpha precision (±)	11.2	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Gross Alpha MDC	17.7	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Lead 210	0.4	pCi/L	U			1	E909.0 09/24/14 11:01/eli-cs
Lead 210 precision (±)	0.6	pCi/L				1	E909.0 09/24/14 11:01/eli-cs
Lead 210 MDC	1.0	pCi/L				1	E909.0 09/24/14 11:01/eli-cs
Radium 228	1.1	pCi/L				1	RA-05 09/19/14 09:04/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05 09/19/14 09:04/eli-ca
Radium 228 MDC	1.0	pCi/L				1	RA-05 09/19/14 09:04/eli-ca
Gross Beta	13.7	pCi/L	U			1	E900.0 09/18/14 19:07/eli-ca
Gross Beta precision (±)	11.8	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Gross Beta MDC	19.4	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Radium 226	0.43	pCi/L				1	E903.0 09/16/14 10:13/eli-ca
Radium 226 precision (±)	0.15	pCi/L				1	E903.0 09/16/14 10:13/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14090086-002  
**Client Sample ID:** BC-2

**Report Date:** 10/23/14  
**Collection Date:** 09/03/14 14:52  
**Date Received:** 09/04/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 MDC	0.17	pCi/L				1	E903.0	09/16/14 10:13/eli-ca
Thorium 230	0.1	pCi/L	U			1	E908.0	10/01/14 08:58/eli-ca
Thorium 230 precision (±)	0.2	pCi/L				1	E908.0	10/01/14 08:58/eli-ca
Thorium 230 MDC	0.3	pCi/L				1	E908.0	10/01/14 08:58/eli-ca
- See Case Narrative regarding Th230 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	1010	pCi/L				1	D5072-92	09/05/14 16:15/eli-ca
Radon 222 precision (±)	53.4	pCi/L				1	D5072-92	09/05/14 16:15/eli-ca
Radon 222 MDC	71.0	pCi/L				1	D5072-92	09/05/14 16:15/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	09/11/14 15:02/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	0.002	mg/L		0.001		1	E200.8	09/29/14 16:03/eli-ca
Barium	ND	mg/L		0.05		10	E200.7	09/19/14 15:23/eli-ca
Boron	0.5	mg/L	D	0.2		10	E200.7	09/19/14 15:23/eli-ca
Cadmium	ND	mg/L		0.001		1	E200.8	09/29/14 16:03/eli-ca
Chromium	ND	mg/L		0.005		2	E200.7	09/22/14 15:03/eli-ca
Copper	ND	mg/L		0.005		1	E200.8	09/29/14 16:03/eli-ca
Iron	ND	mg/L		0.03		2	E200.7	09/22/14 15:03/eli-ca
Lead	ND	mg/L		0.001		1	E200.8	09/29/14 16:03/eli-ca
Manganese	0.03	mg/L	D	0.02		10	E200.7	09/19/14 15:23/eli-ca
Molybdenum	0.012	mg/L		0.001		1	E200.8	09/29/14 16:03/eli-ca
Nickel	0.007	mg/L		0.005		1	E200.8	09/29/14 16:03/eli-ca
Selenium	ND	mg/L		0.001		1	E200.8	09/29/14 16:03/eli-ca
Silver	ND	mg/L		0.001		1	E200.8	09/29/14 16:03/eli-ca
Uranium	0.0238	mg/L		0.0003		2	E200.8	10/04/14 04:46/eli-ca
Vanadium	ND	mg/L		0.01		2	E200.7	09/22/14 15:03/eli-ca
Zinc	ND	mg/L		0.01		2	E200.7	09/22/14 15:03/eli-ca
Calcium	505	mg/L		1		10	E200.7	09/19/14 15:23/eli-ca
Magnesium	216	mg/L		1		10	E200.7	09/19/14 15:23/eli-ca
Potassium	12	mg/L		1		10	E200.7	09/19/14 15:23/eli-ca
Sodium	270	mg/L	D	2		10	E200.7	09/19/14 15:23/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14090086-003  
**Client Sample ID:** BC-1

**Report Date:** 10/23/14  
**Collection Date:** 09/03/14 16:12  
**Date Received:** 09/04/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>PHYSICAL PARAMETERS</b>							
Alkalinity, Total as CaCO3	296	mg/L		5		1	A2320 B 09/12/14 11:11/ch
Bicarbonate as HCO3	361	mg/L		5		1	A2320 B 09/12/14 11:11/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B 09/12/14 11:11/ch
Conductivity @ 25 C	3170	umhos/cm		5.0		1	A2510 B 09/09/14 16:00/des
pH	7.23	su	H	0.01		1	A4500-H B 09/11/14 11:46/des
Solids, Total Dissolved TDS @ 180 C	3590	mg/L		20		1	A2540 C 09/08/14 10:06/ch
<b>INORGANIC PARAMETERS</b>							
Chloride	23	mg/L		1		1	E300.0 09/05/14 01:08/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0 09/05/14 01:08/jmh
Sulfate	2060	mg/L	D	50		50	E300.0 09/10/14 23:32/jmh
<b>DATA QUALITY PARAMETERS</b>							
Anions	49.4	meq/L		1.00		1	A1030 E 10/16/14 00:00/lkl
Cations	51.3	meq/L		1.00		1	A1030 E 10/16/14 00:00/lkl
Conductivity, Calculated	4070	umhos/cm		1.00		1	A1030 E 10/16/14 00:00/lkl
TDS Ratio	1.13			0.0100		1	A1030 E 10/16/14 00:00/lkl
A/C Balance	1.93	%				1	A1030 E 10/16/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>							
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0 09/05/14 01:08/jmh
<b>RADIONUCLIDES - DISSOLVED</b>							
Gross Alpha	68.3	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Gross Alpha precision (±)	12.0	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Gross Alpha MDC	14.9	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Lead 210	-0.03	pCi/L	U			1	E909.0 09/24/14 12:11/eli-cs
Lead 210 precision (±)	0.6	pCi/L				1	E909.0 09/24/14 12:11/eli-cs
Lead 210 MDC	1.0	pCi/L				1	E909.0 09/24/14 12:11/eli-cs
Radium 228	1.8	pCi/L				1	RA-05 09/19/14 09:04/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05 09/19/14 09:04/eli-ca
Radium 228 MDC	1.0	pCi/L				1	RA-05 09/19/14 09:04/eli-ca
Gross Beta	20.8	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Gross Beta precision (±)	12.0	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Gross Beta MDC	19.3	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Radium 226	0.64	pCi/L				1	E903.0 09/16/14 10:13/eli-ca
Radium 226 precision (±)	0.17	pCi/L				1	E903.0 09/16/14 10:13/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14090086-003  
**Client Sample ID:** BC-1

**Report Date:** 10/23/14  
**Collection Date:** 09/03/14 16:12  
**Date Received:** 09/04/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226 MDC	0.17	pCi/L				1 E903.0	09/16/14 10:13/eli-ca
Thorium 230	0.05	pCi/L	U			1 E908.0	10/01/14 08:58/eli-ca
Thorium 230 precision (±)	0.2	pCi/L				1 E908.0	10/01/14 08:58/eli-ca
Thorium 230 MDC	0.4	pCi/L				1 E908.0	10/01/14 08:58/eli-ca
- See Case Narrative regarding Th230 analysis.							
<b>RADIONUCLIDES - TOTAL</b>							
Radon 222	782	pCi/L				1 D5072-92	09/05/14 16:15/eli-ca
Radon 222 precision (±)	50.3	pCi/L				1 D5072-92	09/05/14 16:15/eli-ca
Radon 222 MDC	70.0	pCi/L				1 D5072-92	09/05/14 16:15/eli-ca
<b>TOTAL METALS ANALYSES</b>							
Mercury	ND	mg/L		0.0001		1 E245.1	09/11/14 15:03/eli-ca
<b>DISSOLVED METALS ANALYSES</b>							
Arsenic	0.002	mg/L		0.001		1 E200.8	09/29/14 16:07/eli-ca
Barium	ND	mg/L		0.05		10 E200.7	09/19/14 15:26/eli-ca
Boron	0.7	mg/L	D	0.2		10 E200.7	09/19/14 15:26/eli-ca
Cadmium	ND	mg/L		0.001		1 E200.8	09/29/14 16:07/eli-ca
Chromium	ND	mg/L		0.005		1 E200.8	09/29/14 16:07/eli-ca
Copper	ND	mg/L		0.005		1 E200.8	09/29/14 16:07/eli-ca
Iron	0.10	mg/L	D	0.05		10 E200.7	09/19/14 15:26/eli-ca
Lead	ND	mg/L		0.001		1 E200.8	09/29/14 16:07/eli-ca
Manganese	0.075	mg/L		0.001		1 E200.8	09/29/14 16:07/eli-ca
Molybdenum	0.005	mg/L		0.001		1 E200.8	09/29/14 16:07/eli-ca
Nickel	0.005	mg/L		0.005		1 E200.8	09/29/14 16:07/eli-ca
Selenium	0.002	mg/L		0.001		1 E200.8	09/29/14 16:07/eli-ca
Silver	ND	mg/L		0.001		1 E200.8	09/29/14 16:07/eli-ca
Uranium	0.0686	mg/L		0.0003		2 E200.8	10/04/14 04:50/eli-ca
Vanadium	ND	mg/L		0.01		1 E200.8	09/29/14 16:07/eli-ca
Zinc	ND	mg/L		0.01		1 E200.8	09/29/14 16:07/eli-ca
Calcium	521	mg/L		1		10 E200.7	09/19/14 15:26/eli-ca
Magnesium	213	mg/L		1		10 E200.7	09/19/14 15:26/eli-ca
Potassium	12	mg/L		1		10 E200.7	09/19/14 15:26/eli-ca
Sodium	173	mg/L		1		10 E200.7	09/19/14 15:26/eli-ca

**Report Definitions:** RL - Analyte reporting limit. MCL - Maximum contaminant level.  
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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14090086-004  
**Client Sample ID:** BC-1 Dup

**Report Date:** 10/23/14  
**Collection Date:** 09/03/14 16:12  
**Date Received:** 09/04/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>PHYSICAL PARAMETERS</b>							
Alkalinity, Total as CaCO3	290	mg/L		5		1	A2320 B 09/12/14 11:18/ch
Bicarbonate as HCO3	354	mg/L		5		1	A2320 B 09/12/14 11:18/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B 09/12/14 11:18/ch
Conductivity @ 25 C	3530	umhos/cm		5.0		1	A2510 B 09/09/14 16:04/des
pH	7.26	su	H	0.01		1	A4500-H B 09/11/14 11:47/des
Solids, Total Dissolved TDS @ 180 C	3510	mg/L		20		1	A2540 C 09/08/14 10:07/ch
<b>INORGANIC PARAMETERS</b>							
Chloride	23	mg/L		1		1	E300.0 09/05/14 01:25/jmh
Fluoride	0.3	mg/L		0.1		1	E300.0 09/05/14 01:25/jmh
Sulfate	2070	mg/L	D	50		50	E300.0 09/10/14 23:49/jmh
<b>DATA QUALITY PARAMETERS</b>							
Anions	49.6	meq/L		1.00		1	A1030 E 10/16/14 00:00/lkl
Cations	51.8	meq/L		1.00		1	A1030 E 10/16/14 00:00/lkl
Conductivity, Calculated	4100	umhos/cm		1.00		1	A1030 E 10/16/14 00:00/lkl
TDS Ratio	1.09			0.0100		1	A1030 E 10/16/14 00:00/lkl
A/C Balance	2.07	%				1	A1030 E 10/16/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>							
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0 09/05/14 01:25/jmh
<b>RADIONUCLIDES - DISSOLVED</b>							
Gross Alpha	64.6	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Gross Alpha precision (±)	12.1	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Gross Alpha MDC	15.7	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Lead 210	0.1	pCi/L	U			1	E909.0 09/24/14 13:20/eli-cs
Lead 210 precision (±)	0.6	pCi/L				1	E909.0 09/24/14 13:20/eli-cs
Lead 210 MDC	1.1	pCi/L				1	E909.0 09/24/14 13:20/eli-cs
Radium 228	1.1	pCi/L				1	RA-05 09/19/14 09:04/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05 09/19/14 09:04/eli-ca
Radium 228 MDC	1.0	pCi/L				1	RA-05 09/19/14 09:04/eli-ca
Gross Beta	20.3	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Gross Beta precision (±)	10.3	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Gross Beta MDC	16.4	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Radium 226	0.54	pCi/L				1	E903.0 09/16/14 10:13/eli-ca
Radium 226 precision (±)	0.16	pCi/L				1	E903.0 09/16/14 10:13/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14090086-004  
**Client Sample ID:** BC-1 Dup

**Report Date:** 10/23/14  
**Collection Date:** 09/03/14 16:12  
**Date Received:** 09/04/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226 MDC	0.17	pCi/L				1 E903.0	09/16/14 10:13/eli-ca
Thorium 230	0.1	pCi/L	U			1 E908.0	10/01/14 08:58/eli-ca
Thorium 230 precision (±)	0.2	pCi/L				1 E908.0	10/01/14 08:58/eli-ca
Thorium 230 MDC	0.3	pCi/L				1 E908.0	10/01/14 08:58/eli-ca
- See Case Narrative regarding Th230 analysis.							
<b>RADIONUCLIDES - TOTAL</b>							
Radon 222	770	pCi/L				1 D5072-92	09/05/14 16:15/eli-ca
Radon 222 precision (±)	50.2	pCi/L				1 D5072-92	09/05/14 16:15/eli-ca
Radon 222 MDC	70.0	pCi/L				1 D5072-92	09/05/14 16:15/eli-ca
<b>TOTAL METALS ANALYSES</b>							
Mercury	ND	mg/L		0.0001		1 E245.1	09/11/14 15:05/eli-ca
<b>DISSOLVED METALS ANALYSES</b>							
Arsenic	0.002	mg/L		0.001		1 E200.8	09/29/14 16:12/eli-ca
Barium	ND	mg/L		0.05		10 E200.7	09/19/14 15:30/eli-ca
Boron	0.7	mg/L	D	0.2		10 E200.7	09/19/14 15:30/eli-ca
Cadmium	ND	mg/L		0.001		1 E200.8	09/29/14 16:12/eli-ca
Chromium	ND	mg/L		0.005		1 E200.8	09/29/14 16:12/eli-ca
Copper	ND	mg/L		0.005		1 E200.8	09/29/14 16:12/eli-ca
Iron	0.06	mg/L	D	0.05		10 E200.7	09/19/14 15:30/eli-ca
Lead	ND	mg/L		0.001		1 E200.8	09/29/14 16:12/eli-ca
Manganese	0.07	mg/L	D	0.02		10 E200.7	09/19/14 15:30/eli-ca
Molybdenum	0.005	mg/L		0.001		1 E200.8	09/29/14 16:12/eli-ca
Nickel	0.006	mg/L		0.005		1 E200.8	09/29/14 16:12/eli-ca
Selenium	0.002	mg/L		0.001		1 E200.8	09/29/14 16:12/eli-ca
Silver	ND	mg/L		0.001		1 E200.8	09/29/14 16:12/eli-ca
Uranium	0.0641	mg/L		0.0003		2 E200.8	10/04/14 04:54/eli-ca
Vanadium	ND	mg/L		0.01		2 E200.7	09/22/14 15:07/eli-ca
Zinc	ND	mg/L		0.01		2 E200.7	09/22/14 15:07/eli-ca
Calcium	528	mg/L		1		10 E200.7	09/19/14 15:30/eli-ca
Magnesium	212	mg/L		1		10 E200.7	09/19/14 15:30/eli-ca
Potassium	12	mg/L		1		10 E200.7	09/19/14 15:30/eli-ca
Sodium	176	mg/L		1		10 E200.7	09/19/14 15:30/eli-ca

**Report Definitions:**  
 RL - Analyte reporting limit. MCL - Maximum contaminant level.  
 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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14090086-005  
**Client Sample ID:** BC-3

**Report Date:** 10/23/14  
**Collection Date:** 09/03/14 17:46  
**Date Received:** 09/04/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>PHYSICAL PARAMETERS</b>							
Alkalinity, Total as CaCO3	216	mg/L		5		1	A2320 B 09/12/14 11:22/ch
Bicarbonate as HCO3	263	mg/L		5		1	A2320 B 09/12/14 11:22/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B 09/12/14 11:22/ch
Conductivity @ 25 C	3130	umhos/cm		5.0		1	A2510 B 09/09/14 16:06/des
pH	7.41	su	H	0.01		1	A4500-H B 09/11/14 11:49/des
Solids, Total Dissolved TDS @ 180 C	3060	mg/L		20		1	A2540 C 09/08/14 10:07/ch
<b>INORGANIC PARAMETERS</b>							
Chloride	15	mg/L		1		1	E300.0 09/05/14 01:42/jmh
Fluoride	0.4	mg/L		0.1		1	E300.0 09/05/14 01:42/jmh
Sulfate	1960	mg/L	D	20		20	E300.0 09/11/14 00:06/jmh
<b>DATA QUALITY PARAMETERS</b>							
Anions	45.5	meq/L		1.00		1	A1030 E 10/16/14 00:00/lkl
Cations	44.1	meq/L		1.00		1	A1030 E 10/16/14 00:00/lkl
Conductivity, Calculated	3740	umhos/cm		1.00		1	A1030 E 10/16/14 00:00/lkl
TDS Ratio	1.04			0.0100		1	A1030 E 10/16/14 00:00/lkl
A/C Balance	-1.51	%				1	A1030 E 10/16/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>							
Nitrogen, Nitrate as N	ND	mg/L		0.1		1	E300.0 09/05/14 01:42/jmh
<b>RADIONUCLIDES - DISSOLVED</b>							
Gross Alpha	19.8	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Gross Alpha precision (±)	8.6	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Gross Alpha MDC	12.8	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Lead 210	-0.2	pCi/L	U			1	E909.0 09/24/14 14:30/eli-cs
Lead 210 precision (±)	0.6	pCi/L				1	E909.0 09/24/14 14:30/eli-cs
Lead 210 MDC	1.1	pCi/L				1	E909.0 09/24/14 14:30/eli-cs
Radium 228	1	pCi/L	U			1	RA-05 09/19/14 09:04/eli-ca
Radium 228 precision (±)	0.7	pCi/L				1	RA-05 09/19/14 09:04/eli-ca
Radium 228 MDC	1.0	pCi/L				1	RA-05 09/19/14 09:04/eli-ca
Gross Beta	20.6	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Gross Beta precision (±)	10.1	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Gross Beta MDC	16.2	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Radium 226	0.27	pCi/L				1	E903.0 09/16/14 10:13/eli-ca
Radium 226 precision (±)	0.14	pCi/L				1	E903.0 09/16/14 10:13/eli-ca

**Report Definitions:**  
 RL - Analyte reporting limit. MCL - Maximum contaminant level.  
 QCL - Quality control limit. ND - Not detected at the reporting limit.  
 MDC - Minimum detectable concentration D - RL increased due to sample matrix.  
 H - Analysis performed past recommended holding time. U - Not detected at minimum detectable concentration





**LABORATORY ANALYTICAL REPORT**

Prepared by Rapid City, SD Branch

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14090086-005  
**Client Sample ID:** BC-3

**Report Date:** 10/23/14  
**Collection Date:** 09/03/14 17:46  
**Date Received:** 09/04/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>RADIONUCLIDES - DISSOLVED</b>							
Radium 226 MDC	0.17	pCi/L				1 E903.0	09/16/14 10:13/eli-ca
Thorium 230	0.1	pCi/L	U			1 E908.0	10/01/14 08:58/eli-ca
Thorium 230 precision (±)	0.2	pCi/L				1 E908.0	10/01/14 08:58/eli-ca
Thorium 230 MDC	0.3	pCi/L				1 E908.0	10/01/14 08:58/eli-ca
- See Case Narrative regarding Th230 analysis.							
<b>RADIONUCLIDES - TOTAL</b>							
Radon 222	642	pCi/L				1 D5072-92	09/05/14 16:15/eli-ca
Radon 222 precision (±)	48.2	pCi/L				1 D5072-92	09/05/14 16:15/eli-ca
Radon 222 MDC	69.0	pCi/L				1 D5072-92	09/05/14 16:15/eli-ca
<b>TOTAL METALS ANALYSES</b>							
Mercury	ND	mg/L		0.0001		1 E245.1	09/11/14 15:13/eli-ca
<b>DISSOLVED METALS ANALYSES</b>							
Arsenic	0.002	mg/L		0.001		1 E200.8	09/29/14 16:16/eli-ca
Barium	ND	mg/L		0.05		10 E200.7	09/19/14 15:34/eli-ca
Boron	0.4	mg/L	D	0.2		10 E200.7	09/19/14 15:34/eli-ca
Cadmium	ND	mg/L		0.001		1 E200.8	09/29/14 16:16/eli-ca
Chromium	ND	mg/L		0.005		1 E200.8	09/29/14 16:16/eli-ca
Copper	ND	mg/L		0.005		1 E200.8	09/29/14 16:16/eli-ca
Iron	0.13	mg/L	D	0.05		10 E200.7	09/19/14 15:34/eli-ca
Lead	ND	mg/L		0.001		1 E200.8	09/29/14 16:16/eli-ca
Manganese	0.54	mg/L	D	0.02		10 E200.7	09/19/14 15:34/eli-ca
Molybdenum	0.005	mg/L		0.001		1 E200.8	09/29/14 16:16/eli-ca
Nickel	0.007	mg/L		0.005		1 E200.8	09/29/14 16:16/eli-ca
Selenium	ND	mg/L		0.001		1 E200.8	09/29/14 16:16/eli-ca
Silver	ND	mg/L		0.001		1 E200.8	09/29/14 16:16/eli-ca
Uranium	0.0157	mg/L		0.0003		2 E200.8	10/04/14 04:59/eli-ca
Vanadium	ND	mg/L		0.01		2 E200.7	09/22/14 15:11/eli-ca
Zinc	ND	mg/L		0.01		2 E200.7	09/22/14 15:11/eli-ca
Calcium	517	mg/L		1		10 E200.7	09/19/14 15:34/eli-ca
Magnesium	140	mg/L		1		10 E200.7	09/19/14 15:34/eli-ca
Potassium	10	mg/L		1		10 E200.7	09/19/14 15:34/eli-ca
Sodium	150	mg/L		1		10 E200.7	09/19/14 15:34/eli-ca

**Report Definitions:** RL - Analyte reporting limit. MCL - Maximum contaminant level.  
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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14090086-006  
**Client Sample ID:** DC-1

**Report Date:** 10/23/14  
**Collection Date:** 09/04/14 10:10  
**Date Received:** 09/04/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
<b>PHYSICAL PARAMETERS</b>							
Alkalinity, Total as CaCO3	372	mg/L		5		1	A2320 B 09/12/14 11:26/ch
Bicarbonate as HCO3	454	mg/L		5		1	A2320 B 09/12/14 11:26/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B 09/12/14 11:26/ch
Conductivity @ 25 C	6100	umhos/cm		5.0		1	A2510 B 09/09/14 16:08/des
pH	7.12	su	H	0.01		1	A4500-H B 09/11/14 11:49/des
Solids, Total Dissolved TDS @ 180 C	5850	mg/L		20		1	A2540 C 09/08/14 10:08/ch
<b>INORGANIC PARAMETERS</b>							
Chloride	70	mg/L		1		1	E300.0 09/05/14 01:59/jmh
Fluoride	0.5	mg/L		0.1		1	E300.0 09/05/14 01:59/jmh
Sulfate	3750	mg/L	D	50		50	E300.0 09/11/14 00:23/jmh
<b>DATA QUALITY PARAMETERS</b>							
Anions	87.8	meq/L		1.00		1	A1030 E 10/16/14 00:00/lkl
Cations	105	meq/L		1.00		1	A1030 E 10/16/14 00:00/lkl
Conductivity, Calculated	7020	umhos/cm		1.00		1	A1030 E 10/16/14 00:00/lkl
TDS Ratio	0.960			0.0100		1	A1030 E 10/16/14 00:00/lkl
A/C Balance	8.76	%				1	A1030 E 10/16/14 00:00/lkl
<b>NUTRIENT PARAMETERS</b>							
Nitrogen, Nitrate as N	4.0	mg/L		0.1		1	E300.0 09/05/14 01:59/jmh
<b>RADIONUCLIDES - DISSOLVED</b>							
Gross Alpha	25.7	pCi/L	U			1	E900.0 09/18/14 19:07/eli-ca
Gross Alpha precision (±)	17.1	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Gross Alpha MDC	26.5	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Lead 210	0.2	pCi/L	U			1	E909.0 09/24/14 17:58/eli-cs
Lead 210 precision (±)	0.6	pCi/L				1	E909.0 09/24/14 17:58/eli-cs
Lead 210 MDC	1.0	pCi/L				1	E909.0 09/24/14 17:58/eli-cs
Radium 228	1.5	pCi/L				1	RA-05 09/19/14 09:04/eli-ca
Radium 228 precision (±)	0.8	pCi/L				1	RA-05 09/19/14 09:04/eli-ca
Radium 228 MDC	1.2	pCi/L				1	RA-05 09/19/14 09:04/eli-ca
Gross Beta	11.2	pCi/L	U			1	E900.0 09/18/14 19:07/eli-ca
Gross Beta precision (±)	21.6	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Gross Beta MDC	35.8	pCi/L				1	E900.0 09/18/14 19:07/eli-ca
Radium 226	1.2	pCi/L				1	E903.0 09/16/14 10:13/eli-ca
Radium 226 precision (±)	0.24	pCi/L				1	E903.0 09/16/14 10:13/eli-ca

**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

**Client:** Powertech USA Inc  
**Project:** Alluvial Wells Dewey Burdock  
**Lab ID:** R14090086-006  
**Client Sample ID:** DC-1

**Report Date:** 10/23/14  
**Collection Date:** 09/04/14 10:10  
**Date Received:** 09/04/14  
**Matrix:** AQUEOUS

Analyses	Result	Units	Qual	MCL/		DF	Method	Analysis Date / By
				RL	QCL			
<b>RADIONUCLIDES - DISSOLVED</b>								
Radium 226 MDC	0.19	pCi/L				1	E903.0	09/16/14 10:13/eli-ca
Thorium 230	0.08	pCi/L	U			1	E908.0	10/01/14 08:58/eli-ca
Thorium 230 precision (±)	0.2	pCi/L				1	E908.0	10/01/14 08:58/eli-ca
Thorium 230 MDC	0.4	pCi/L				1	E908.0	10/01/14 08:58/eli-ca
- See Case Narrative regarding Th230 analysis.								
<b>RADIONUCLIDES - TOTAL</b>								
Radon 222	279	pCi/L				1	D5072-92	09/05/14 16:15/eli-ca
Radon 222 precision (±)	38.8	pCi/L				1	D5072-92	09/05/14 16:15/eli-ca
Radon 222 MDC	61.0	pCi/L				1	D5072-92	09/05/14 16:15/eli-ca
<b>TOTAL METALS ANALYSES</b>								
Mercury	ND	mg/L		0.0001		1	E245.1	09/11/14 15:15/eli-ca
<b>DISSOLVED METALS ANALYSES</b>								
Arsenic	0.002	mg/L		0.001		1	E200.8	09/29/14 16:20/eli-ca
Barium	ND	mg/L		0.05		10	E200.7	09/19/14 15:38/eli-ca
Boron	1.3	mg/L	D	0.2		10	E200.7	09/19/14 15:38/eli-ca
Cadmium	0.002	mg/L		0.001		1	E200.8	09/29/14 16:20/eli-ca
Chromium	ND	mg/L		0.005		1	E200.8	09/29/14 16:20/eli-ca
Copper	ND	mg/L		0.005		1	E200.8	09/29/14 16:20/eli-ca
Iron	ND	mg/L		0.03		5	E200.7	09/22/14 15:26/eli-ca
Lead	ND	mg/L		0.001		1	E200.8	09/29/14 16:20/eli-ca
Manganese	0.44	mg/L	D	0.02		10	E200.7	09/19/14 15:38/eli-ca
Molybdenum	ND	mg/L		0.001		1	E200.8	09/29/14 16:20/eli-ca
Nickel	0.09	mg/L	D	0.04		5	E200.7	09/22/14 15:26/eli-ca
Selenium	0.043	mg/L		0.001		1	E200.8	09/29/14 16:20/eli-ca
Silver	ND	mg/L		0.001		1	E200.8	09/29/14 16:20/eli-ca
Uranium	0.0086	mg/L		0.0003		2	E200.8	10/04/14 05:03/eli-ca
Vanadium	ND	mg/L		0.01		1	E200.8	09/29/14 16:20/eli-ca
Zinc	0.25	mg/L	D	0.03		10	E200.7	09/19/14 15:38/eli-ca
Calcium	413	mg/L		1		10	E200.7	09/19/14 15:38/eli-ca
Magnesium	392	mg/L		1		10	E200.7	09/19/14 15:38/eli-ca
Potassium	8	mg/L		1		10	E200.7	09/19/14 15:38/eli-ca
Sodium	1190	mg/L	D	2		10	E200.7	09/19/14 15:38/eli-ca

**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.



# QA/QC Summary Report

Prepared by Rapid City, SD Branch

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

**Report Date:** 10/23/14  
**Work Order:** R14090086

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: A2320 B</b>							Batch: 140912A-ALK-W		
<b>Lab ID: LCS1_140912A</b>	Laboratory Control Sample								
Alkalinity, Total as CaCO3	964	mg/L	5.0	96	90	110			09/12/14 10:40
<b>Lab ID: MBLK1_140912A</b>	Method Blank								
Alkalinity, Total as CaCO3	ND	mg/L	4						09/12/14 10:42
Bicarbonate as HCO3	ND	mg/L	3						
Carbonate as CO3	ND	mg/L	3						
<b>Lab ID: R14090086-002ADUP</b>	Sample Duplicate								
Alkalinity, Total as CaCO3	232	mg/L	5.0				0.9	10	09/12/14 11:07
Bicarbonate as HCO3	283	mg/L	5.0						
Carbonate as CO3	ND	mg/L	5.0						
<b>Lab ID: R14090086-003AMS</b>	Sample Matrix Spike								
Alkalinity, Total as CaCO3	412	mg/L	5.0	96	80	120			09/12/14 11:15

**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

**Report Date:** 10/23/14  
**Work Order:** R14090086

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A2510 B	Batch: 140909_A_COND-PROBE-W								
<b>Lab ID:</b> MBLK-1_140909 Conductivity @ 25 C	Method Blank ND	umhos/cm	5			Run: PH_COND2-R_140909A		09/09/14 15:45	
<b>Lab ID:</b> R14090044-001ADUP Conductivity @ 25 C	Sample Duplicate 3950	umhos/cm	5.0			Run: PH_COND2-R_140909A	11	09/09/14 15:51 10	R
Rechecked duplicate, lots of fluctuation due to sample matrix.									

**Qualifiers:**

RL - Analyte reporting limit.  
MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.  
R - RPD exceeds advisory limit.



# QA/QC Summary Report

Prepared by Rapid City, SD Branch

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

**Report Date:** 10/23/14  
**Work Order:** R14090086

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> A2540 C									Batch: TDS140908A
<b>Lab ID:</b> MB-1_140908A Solids, Total Dissolved TDS @ 180 C	Method Blank ND	mg/L	4						Run: BAL-TDS_140908A 09/08/14 09:30
<b>Lab ID:</b> LCS-2_140908A Solids, Total Dissolved TDS @ 180 C	Laboratory Control Sample 510	mg/L	10	103	90	110			Run: BAL-TDS_140908A 09/08/14 09:31
<b>Lab ID:</b> R14090058-006A MS Solids, Total Dissolved TDS @ 180 C	Sample Matrix Spike 900	mg/L	10	104	90	110			Run: BAL-TDS_140908A 09/08/14 10:00
<b>Lab ID:</b> R14090086-006A DUP Solids, Total Dissolved TDS @ 180 C	Sample Duplicate 5900	mg/L	20				0.6	5	Run: BAL-TDS_140908A 09/08/14 10:09

**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

**Report Date:** 10/23/14  
**Work Order:** R14090086

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
<b>Method:</b> A4500-H B							Analytical Run: PH_COND2-R_140911A			
<b>Lab ID:</b> ICV-1_140911	Initial Calibration Verification Standard									
pH	7.35	su	0.010	99	98	102			09/11/14 11:40	
<b>Method:</b> A4500-H B							Batch: 140911_B_PH-W			
<b>Lab ID:</b> R14090086-001ADUP	Sample Duplicate									
pH	7.23	su	0.010				0.6	3	Run: PH_COND2-R_140911A 09/11/14 11:44	

**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

**Report Date:** 10/23/14  
**Work Order:** R14090086

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: D5072-92</b>							Batch: C_R190971		
<b>Lab ID: R14090086-006D</b>	Sample Duplicate				Run: SUB-C190971			09/05/14 16:15	
Radon 222	287	pCi/L					2.7	20	
Radon 222 precision (±)	38.9	pCi/L							
Radon 222 MDC	61.0	pCi/L							
<b>Lab ID: MB-R190971</b>	Method Blank				Run: SUB-C190971			09/05/14 16:15	
Radon 222	9	pCi/L							
Radon 222 precision (±)	30	pCi/L							
Radon 222 MDC	50	pCi/L							
<b>Lab ID: LCS-R190971</b>	Laboratory Control Sample				Run: SUB-C190971			09/05/14 16:15	
Radon 222	550	pCi/L	97		80	120			

**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

**Report Date:** 10/23/14  
**Work Order:** R14090086

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>							Analytical Run: SUB-C191366		
<b>Lab ID: ICV</b>	Initial Calibration Verification Standard							09/19/14 12:50	
Barium	0.97	mg/L	0.10	97	95	105			
Boron	0.98	mg/L	0.10	98	95	105			
Calcium	50	mg/L	0.50	99	95	105			
Chromium	0.95	mg/L	0.050	95	95	105			
Iron	5.0	mg/L	0.030	99	95	105			
Magnesium	50	mg/L	0.50	99	95	105			
Manganese	4.8	mg/L	0.010	96	95	105			
Potassium	49	mg/L	0.50	98	95	105			
Sodium	50	mg/L	0.50	99	95	105			
Zinc	0.95	mg/L	0.010	95	95	105			
<b>Lab ID: ICSA</b>	Interference Check Sample A							09/19/14 13:04	
Barium	0.00042	mg/L	0.10						
Boron	0.0034	mg/L	0.10						
Calcium	460	mg/L	0.50	92	80	120			
Chromium	0.027	mg/L	0.050						
Iron	180	mg/L	0.030	89	80	120			
Magnesium	500	mg/L	0.50	100	80	120			
Manganese	-2.0E-05	mg/L	0.010						
Potassium	-0.00033	mg/L	0.50						
Sodium	0.014	mg/L	0.50						
Zinc	-0.00099	mg/L	0.010						
<b>Lab ID: ICSAB</b>	Interference Check Sample AB							09/19/14 13:08	
Barium	0.46	mg/L	0.10	93	80	120			
Boron	0.0028	mg/L	0.10						
Calcium	460	mg/L	0.50	92	80	120			
Chromium	0.46	mg/L	0.050	91	80	120			
Iron	180	mg/L	0.030	88	80	120			
Magnesium	500	mg/L	0.50	100	80	120			
Manganese	0.44	mg/L	0.010	88	80	120			
Potassium	-0.0081	mg/L	0.50						
Sodium	-0.029	mg/L	0.50						
Zinc	0.91	mg/L	0.010	91	80	120			
<b>Method: E200.7</b>							Batch: C_R191366		
<b>Lab ID: MB-140919A</b>	Method Blank							Run: SUB-C191366	
Barium	ND	mg/L	0.0004						09/19/14 13:27
Boron	ND	mg/L	0.02						
Calcium	0.08	mg/L	0.01						
Chromium	ND	mg/L	0.005						
Iron	ND	mg/L	0.005						
Magnesium	ND	mg/L	0.01						

**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

**Report Date:** 10/23/14  
**Work Order:** R14090086

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b> <span style="float: right;">Batch: C_R191366</span>									
<b>Lab ID: MB-140919A</b>	Method Blank			Run: SUB-C191366			09/19/14 13:27		
Manganese	ND	mg/L	0.002						
Potassium	ND	mg/L	0.06						
Sodium	ND	mg/L	0.01						
Zinc	ND	mg/L	0.003						
<b>Lab ID: LFB-140919A</b>	Laboratory Fortified Blank			Run: SUB-C191366			09/19/14 13:31		
Barium	0.95	mg/L	0.10	95	85	115			
Boron	0.95	mg/L	0.10	95	85	115			
Calcium	48	mg/L	0.50	95	85	115			
Chromium	0.93	mg/L	0.050	93	85	115			
Iron	0.95	mg/L	0.030	95	85	115			
Magnesium	47	mg/L	0.50	94	85	115			
Manganese	0.92	mg/L	0.010	92	85	115			
Potassium	53	mg/L	0.50	106	85	115			
Sodium	50	mg/L	0.50	100	85	115			
Zinc	0.90	mg/L	0.010	90	85	115			
<b>Lab ID: C14090734-001BMS2</b>	Sample Matrix Spike			Run: SUB-C191366			09/19/14 15:12		
Barium	1.95	mg/L	0.050	93	70	130			
Boron	1.98	mg/L	0.050	94	70	130			
Chromium	1.88	mg/L	0.0050	92	70	130			
Iron	1.95	mg/L	0.030	95	70	130			
Manganese	1.87	mg/L	0.0031	92	70	130			
Zinc	2.20	mg/L	0.010	90	70	130			
Calcium	111	mg/L	1.0	94	70	130			
Magnesium	103	mg/L	1.0	94	70	130			
Potassium	102	mg/L	1.0	97	70	130			
Sodium	242	mg/L	1.0	101	70	130			
<b>Lab ID: C14090734-001BMSD2</b>	Sample Matrix Spike Duplicate			Run: SUB-C191366			09/19/14 15:15		
Barium	1.93	mg/L	0.050	93	70	130	0.6	20	
Boron	1.99	mg/L	0.050	94	70	130	0.5	20	
Chromium	1.90	mg/L	0.0050	93	70	130	0.6	20	
Iron	1.94	mg/L	0.030	95	70	130	0.3	20	
Manganese	1.87	mg/L	0.0031	92	70	130	0.2	20	
Zinc	2.21	mg/L	0.010	91	70	130	0.7	20	
Calcium	111	mg/L	1.0	95	70	130	0.1	20	
Magnesium	103	mg/L	1.0	94	70	130	0.2	20	
Potassium	98.3	mg/L	1.0	93	70	130	4.1	20	
Sodium	240	mg/L	1.0	99	70	130	1.1	20	

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# QA/QC Summary Report

Prepared by Rapid City, SD Branch

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

**Report Date:** 10/23/14  
**Work Order:** R14090086

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E200.7</b>							Analytical Run: SUB-C191433		
<b>Lab ID: ICV</b>	Initial Calibration Verification Standard						09/22/14 13:59		
Chromium	0.95	mg/L	0.050	95	95	105			
Iron	5.0	mg/L	0.030	99	95	105			
Nickel	0.95	mg/L	0.050	95	95	105			
Vanadium	0.97	mg/L	0.10	97	95	105			
Zinc	0.95	mg/L	0.010	95	95	105			
<b>Lab ID: ICSA</b>	Interference Check Sample A						09/22/14 14:14		
Chromium	0.026	mg/L	0.050						
Iron	180	mg/L	0.030	89	80	120			
Nickel	-0.0022	mg/L	0.050						
Vanadium	-0.00040	mg/L	0.10						
Zinc	-0.0033	mg/L	0.010						
<b>Lab ID: ICSAB</b>	Interference Check Sample AB						09/22/14 14:18		
Chromium	0.46	mg/L	0.050	92	80	120			
Iron	180	mg/L	0.030	88	80	120			
Nickel	0.83	mg/L	0.050	83	80	120			
Vanadium	0.51	mg/L	0.10	102	80	120			
Zinc	0.91	mg/L	0.010	91	80	120			
<b>Method: E200.7</b>							Batch: C_R191433		
<b>Lab ID: MB-140922A</b>	Method Blank						Run: SUB-C191433 09/22/14 14:37		
Chromium	ND	mg/L	0.002						
Iron	ND	mg/L	0.005						
Nickel	ND	mg/L	0.005						
Vanadium	ND	mg/L	0.004						
Zinc	ND	mg/L	0.003						
<b>Lab ID: LFB-140922A</b>	Laboratory Fortified Blank						Run: SUB-C191433 09/22/14 14:40		
Chromium	0.91	mg/L	0.050	91	85	115			
Iron	0.94	mg/L	0.030	94	85	115			
Nickel	0.89	mg/L	0.050	89	85	115			
Vanadium	0.92	mg/L	0.10	92	85	115			
Zinc	0.89	mg/L	0.010	89	85	115			
<b>Lab ID: C14090575-002BMS2</b>	Sample Matrix Spike						Run: SUB-C191433 09/22/14 14:51		
Chromium	1.85	mg/L	0.0050	91	70	130			
Iron	1.93	mg/L	0.030	94	70	130			
Nickel	1.81	mg/L	0.011	89	70	130			
Vanadium	1.90	mg/L	0.010	93	70	130			
Zinc	1.83	mg/L	0.010	89	70	130			
<b>Lab ID: C14090575-002BMSD2</b>	Sample Matrix Spike Duplicate						Run: SUB-C191433 09/22/14 14:55		
Chromium	1.86	mg/L	0.0050	91	70	130	0.5	20	

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# QA/QC Summary Report

Prepared by Rapid City, SD Branch

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

**Report Date:** 10/23/14  
**Work Order:** R14090086

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E200.7									Batch: C_R191433
<b>Lab ID:</b> C14090575-002BMSD2	Sample Matrix Spike Duplicate					Run: SUB-C191433			09/22/14 14:55
Iron	1.93	mg/L	0.030	95	70	130	0.1	20	
Nickel	1.81	mg/L	0.011	89	70	130	0.3	20	
Vanadium	1.91	mg/L	0.010	94	70	130	0.7	20	
Zinc	1.84	mg/L	0.010	90	70	130	0.6	20	

**Qualifiers:**

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# QA/QC Summary Report

Prepared by Rapid City, SD Branch

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

**Report Date:** 10/23/14  
**Work Order:** R14090086

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
<b>Method: E200.8</b>							Analytical Run: SUB-C191677			
<b>Lab ID: ICV</b>	Initial Calibration Verification Standard							09/29/14 12:44		
Arsenic	0.0521	mg/L	0.0010	104	90	110				
Cadmium	0.0508	mg/L	0.0010	102	90	110				
Chromium	0.0514	mg/L	0.0010	103	90	110				
Copper	0.0524	mg/L	0.0010	105	90	110				
Lead	0.0503	mg/L	0.0010	101	90	110				
Manganese	0.0506	mg/L	0.0010	101	90	110				
Molybdenum	0.0487	mg/L	0.0010	97	90	110				
Nickel	0.0528	mg/L	0.0010	106	90	110				
Selenium	0.0508	mg/L	0.0010	102	90	110				
Silver	0.0208	mg/L	0.0010	104	90	110				
Vanadium	0.0513	mg/L	0.0010	103	90	110				
Zinc	0.0534	mg/L	0.0010	107	90	110				
<b>Method: E200.8</b>							Batch: C_R191677			
<b>Lab ID: LRB</b>	Method Blank							Run: SUB-C191677		09/29/14 14:56
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	0.0001	mg/L	3E-05							
Nickel	ND	mg/L	0.0001							
Selenium	ND	mg/L	7E-05							
Silver	ND	mg/L	6E-05							
Vanadium	ND	mg/L	4E-05							
Zinc	ND	mg/L	0.0002							
<b>Lab ID: R14090086-001C</b>	Post Digestion Spike							Run: SUB-C191677		09/29/14 15:48
Arsenic	0.0572	mg/L	0.0010	108	70	130				
Cadmium	0.0494	mg/L	0.0010	99	70	130				
Chromium	0.0574	mg/L	0.0050	110	70	130				
Copper	0.0498	mg/L	0.0050	97	70	130				
Lead	0.0578	mg/L	0.0010	115	70	130				
Manganese	2.91	mg/L	0.0010		70	130			A	
Molybdenum	0.0580	mg/L	0.0010	108	70	130				
Nickel	0.0558	mg/L	0.0050	97	70	130				
Selenium	0.0495	mg/L	0.0010	98	70	130				
Silver	0.0214	mg/L	0.0010	107	70	130				
Vanadium	0.0551	mg/L	0.010	108	70	130				
Zinc	0.0500	mg/L	0.010	92	70	130				

**Qualifiers:**

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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

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

**Report Date:** 10/23/14  
**Work Order:** R14090086

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual		
<b>Method: E200.8</b>							Batch: C_R191677				
<b>Lab ID:</b>	<b>R14090086-001C</b>	Post Digestion Spike Duplicate			Run: SUB-C191677			09/29/14 15:52			
Arsenic	0.0566	mg/L	0.0010	107	70	130	1.1	20			
Cadmium	0.0481	mg/L	0.0010	96	70	130	2.6	20			
Chromium	0.0578	mg/L	0.0050	111	70	130	0.7	20			
Copper	0.0500	mg/L	0.0050	97	70	130	0.3	20			
Lead	0.0568	mg/L	0.0010	113	70	130	1.8	20			
Manganese	2.87	mg/L	0.0010		70	130	1.4	20	A		
Molybdenum	0.0586	mg/L	0.0010	109	70	130	0.9	20			
Nickel	0.0552	mg/L	0.0050	95	70	130	1.2	20			
Selenium	0.0488	mg/L	0.0010	97	70	130	1.4	20			
Silver	0.0206	mg/L	0.0010	103	70	130	3.9	20			
Vanadium	0.0564	mg/L	0.010	111	70	130	2.2	20			
Zinc	0.0509	mg/L	0.010	94	70	130	1.9	20			
<b>Lab ID: LFB</b>							Laboratory Fortified Blank			Run: SUB-C191677	09/29/14 19:09
Arsenic	0.0526	mg/L	0.0010	105	85	115					
Cadmium	0.0528	mg/L	0.0010	106	85	115					
Chromium	0.0520	mg/L	0.0010	104	85	115					
Copper	0.0533	mg/L	0.0010	107	85	115					
Lead	0.0522	mg/L	0.0010	104	85	115					
Manganese	0.0523	mg/L	0.0010	105	85	115					
Molybdenum	0.0520	mg/L	0.0010	104	85	115					
Nickel	0.0544	mg/L	0.0010	109	85	115					
Selenium	0.0549	mg/L	0.0010	110	85	115					
Silver	0.0194	mg/L	0.0010	97	85	115					
Vanadium	0.0522	mg/L	0.0010	104	85	115					
Zinc	0.0551	mg/L	0.0010	110	85	115					
<b>Method: E200.8</b>							Analytical Run: SUB-C191882				
<b>Lab ID:</b>	<b>ICV</b>	Initial Calibration Verification Standard			Run: SUB-C191882			10/03/14 14:53			
Uranium	0.0502	mg/L	0.00030	100	90	110					
<b>Method: E200.8</b>							Batch: C_R191882				
<b>Lab ID:</b>	<b>LRB</b>	Method Blank			Run: SUB-C191882			10/03/14 16:42			
Uranium	ND	mg/L	9E-06								
<b>Lab ID:</b>	<b>LFB</b>	Laboratory Fortified Blank			Run: SUB-C191882			10/03/14 16:46			
Uranium	0.0511	mg/L	0.00030	102	85	115					
<b>Lab ID:</b>	<b>C14090335-007CMS4</b>	Post Digestion Spike			Run: SUB-C191882			10/04/14 04:30			
Uranium	0.0546	mg/L	0.00030	108	70	130					
<b>Lab ID:</b>	<b>C14090335-007CMSD4</b>	Post Digestion Spike Duplicate			Run: SUB-C191882			10/04/14 04:33			
Uranium	0.0562	mg/L	0.00030	111	70	130	2.9	20			

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ND - Not detected at the reporting limit.

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MDC - Minimum detectable concentration



# QA/QC Summary Report

Prepared by Rapid City, SD Branch

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

**Report Date:** 10/23/14  
**Work Order:** R14090086

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E245.1									Analytical Run: SUB-C191003
<b>Lab ID:</b> ICV	Initial Calibration Verification Standard								09/11/14 14:43
Mercury	0.0055	mg/L	0.00010	110	90	110			
<b>Method:</b> E245.1									Batch: C_140911A
<b>Lab ID:</b> IPC	Instrument Performance Check Sample								09/11/14 14:48
Mercury	0.0048	mg/L	0.00010	95	95	105			Run: SUB-C191003
<b>Method:</b> E245.1									Batch: C_42576
<b>Lab ID:</b> MB-42576	Method Blank								09/11/14 14:50
Mercury	ND	mg/L	2E-05						Run: SUB-C191003
<b>Lab ID:</b> LCS-42576	Laboratory Control Sample								09/11/14 14:52
Mercury	0.0049	mg/L	0.00010	99	85	115			Run: SUB-C191003
<b>Lab ID:</b> C14090147-001DMS	Sample Matrix Spike								09/11/14 14:57
Mercury	0.0051	mg/L	0.00010	102	75	125			Run: SUB-C191003
<b>Lab ID:</b> C14090147-001DMSD	Sample Matrix Spike Duplicate								09/11/14 14:58
Mercury	0.0060	mg/L	0.00010	120	75	125	17	20	Run: SUB-C191003
<b>Lab ID:</b> C14090226-001DMS	Sample Matrix Spike								09/11/14 15:18
Mercury	0.0049	mg/L	0.00010	98	75	125			Run: SUB-C191003
<b>Lab ID:</b> C14090226-001DMSD	Sample Matrix Spike Duplicate								09/11/14 15:24
Mercury	0.0053	mg/L	0.00010	105	75	125	7.0	20	Run: SUB-C191003

**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

**Report Date:** 10/23/14  
**Work Order:** R14090086

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E300.0</b>							Analytical Run: DIONEX_140904A		
<b>Lab ID: ICV</b>	Initial Calibration Verification Standard						09/04/14 18:05		
Chloride	37.9	mg/L	1.0	95	90	110			
Fluoride	4.05	mg/L	0.10	101	90	110			
Nitrogen, Nitrate as N	3.84	mg/L	0.10	96	90	110			
<b>Lab ID: CCV090414-1</b>	Continuing Calibration Verification Standard						09/04/14 22:36		
Chloride	74.0	mg/L	1.0	99	90	110			
Fluoride	7.49	mg/L	0.10	100	90	110			
Nitrogen, Nitrate as N	7.25	mg/L	0.10	97	90	110			
<b>Method: E300.0</b>							Batch: R67091		
<b>Lab ID: LFB</b>	Laboratory Fortified Blank						Run: DIONEX_140904A 09/04/14 18:39		
Chloride	38.1	mg/L	1.0	95	90	110			
Fluoride	4.04	mg/L	0.10	101	90	110			
Nitrogen, Nitrate as N	3.86	mg/L	0.10	96	90	110			
<b>Lab ID: R14090070-002AMS</b>	Sample Matrix Spike						Run: DIONEX_140904A 09/04/14 23:26		
Chloride	44.8	mg/L	1.0	95	90	110			
Fluoride	4.21	mg/L	0.10	99	90	110			
Nitrogen, Nitrate as N	3.96	mg/L	0.10	95	90	110			
<b>Lab ID: R14090070-002AMSD</b>	Sample Matrix Spike Duplicate						Run: DIONEX_140904A 09/04/14 23:43		
Chloride	44.8	mg/L	1.0	95	90	110	0.1	10	
Fluoride	4.18	mg/L	0.10	98	90	110	0.8	10	
Nitrogen, Nitrate as N	3.94	mg/L	0.10	94	90	110	0.6	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

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

**Report Date:** 10/23/14  
**Work Order:** R14090086

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E300.0</b>							Analytical Run: DIONEX_140910A		
<b>Lab ID: ICV</b>	Initial Calibration Verification Standard								09/10/14 17:37
Chloride	38.9	mg/L	1.0	97	90	110			
Sulfate	39.1	mg/L	1.0	98	90	110			
<b>Lab ID: CCV091014</b>	Continuing Calibration Verification Standard								09/10/14 18:28
Chloride	72.8	mg/L	1.0	97	90	110			
Sulfate	71.7	mg/L	1.0	96	90	110			
<b>Lab ID: CCV091014-1</b>	Continuing Calibration Verification Standard								09/10/14 22:08
Chloride	73.2	mg/L	1.0	98	90	110			
Sulfate	72.3	mg/L	1.0	96	90	110			
<b>Method: E300.0</b>							Batch: R67174		
<b>Lab ID: LFB</b>	Laboratory Fortified Blank								09/10/14 18:11
Chloride	38.9	mg/L	1.0	97	90	110			
Sulfate	39.2	mg/L	1.0	98	90	110			
<b>Lab ID: R14090086-002AMS</b>	Sample Matrix Spike								09/10/14 22:59
Chloride	1890	mg/L	50	93	90	110			
Sulfate	4480	mg/L	50	110	90	110			
<b>Lab ID: R14090086-002AMSD</b>	Sample Matrix Spike Duplicate								09/10/14 23:16
Chloride	1900	mg/L	50	93	90	110	0.5	10	
Sulfate	4480	mg/L	50	110	90	110	0.1	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

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

**Report Date:** 10/23/14  
**Work Order:** R14090086

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E900.0</b>							Batch: C_GrAB-1848		
<b>Lab ID: Th230-GrAB-1848</b>	Laboratory Control Sample				Run: SUB-C191292		09/18/14 19:07		
Gross Alpha	135	pCi/L		117	80	120			
<b>Lab ID: Sr90-GrAB-1848</b>	Laboratory Control Sample				Run: SUB-C191292		09/18/14 19:07		
Gross Beta	187	pCi/L		93	80	120			
<b>Lab ID: MB-GrAB-1848</b>	Method Blank				Run: SUB-C191292		09/18/14 19:07		
Gross Alpha	0.6	pCi/L							U
Gross Alpha precision (±)	1.0	pCi/L							
Gross Alpha MDC	2	pCi/L							
Gross Beta	0.3	pCi/L							U
Gross Beta precision (±)	2	pCi/L							
Gross Beta MDC	3	pCi/L							
<b>Lab ID: R14090086-004E</b>	Sample Duplicate				Run: SUB-C191292		09/18/14 19:07		
Gross Alpha	45.5	pCi/L					35	50.5	
Gross Alpha precision (±)	10.5	pCi/L							
Gross Alpha MDC	14.0	pCi/L							
Gross Beta	18.9	pCi/L					7.4	117.9	
Gross Beta precision (±)	10.9	pCi/L							
Gross Beta MDC	17.5	pCi/L							
<b>Lab ID: C14090226-001FMS</b>	Sample Matrix Spike				Run: SUB-C191292		09/18/14 19:07		
Gross Alpha	140	pCi/L		91	70	130			
<b>Lab ID: C14090226-001FMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C191292		09/18/14 19:07		
Gross Alpha	145	pCi/L		96	70	130	3.8	16.6	
<b>Lab ID: C14090226-001FMS</b>	Sample Matrix Spike				Run: SUB-C191292		09/18/14 19:07		
Gross Beta	210	pCi/L		100	70	130			
<b>Lab ID: C14090226-001FMSD</b>	Sample Matrix Spike Duplicate				Run: SUB-C191292		09/18/14 19:07		
Gross Beta	210	pCi/L		100	70	130	0.3	14	

**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

**Report Date:** 10/23/14  
**Work Order:** R14090086

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E903.0									Batch: C_RA226-7365
<b>Lab ID:</b> R14090086-001E Radium 226	Sample Matrix Spike 24	pCi/L		102	70	130			09/16/14 10:13
<b>Lab ID:</b> R14090086-001E Radium 226	Sample Matrix Spike Duplicate 22	pCi/L		94	70	130	8.0	21.3	09/16/14 10:13
<b>Lab ID:</b> MB-RA226-7365 Radium 226	Method Blank 0.04	pCi/L							09/16/14 11:54 U
	Radium 226 precision (±) 0.1	pCi/L							
	Radium 226 MDC 0.2	pCi/L							
<b>Lab ID:</b> LCS-RA226-7365 Radium 226	Laboratory Control Sample 12	pCi/L		102	80	120			09/16/14 11:54

**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

**Report Date:** 10/23/14  
**Work Order:** R14090086

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method: E908.0</b>							Batch: C_RA-TH-ISO-2111		
<b>Lab ID: LCS-RA-TH-ISO-2111</b>	Laboratory Control Sample								
Thorium 230	12	pCi/L	107	80	120				10/01/14 08:57
<b>Lab ID: R14090086-005E</b>	Sample Duplicate								
Thorium 230	0.045	pCi/L					92	353.9	U
Thorium 230 precision (±)	0.15	pCi/L							
Thorium 230 MDC	0.37	pCi/L							
<b>Lab ID: R14090086-006E</b>	Sample Matrix Spike								
Thorium 230	39	pCi/L	101	70	130				10/01/14 08:58
<b>Lab ID: C14090678-002DDUP</b>	Sample Duplicate								
Thorium 230	1.4	pCi/L					150	322	U
Thorium 230 precision (±)	1.4	pCi/L							
Thorium 230 MDC	2.5	pCi/L							
<b>Lab ID: MB-RA-TH-ISO-2111</b>	Method Blank								
Thorium 230	0.03	pCi/L							10/01/14 08:58
Thorium 230 precision (±)	0.06	pCi/L							U
Thorium 230 MDC	0.1	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

**Report Date:** 10/23/14  
**Work Order:** R14090086

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> E909.0									Batch: T_PB-210-0489
<b>Lab ID:</b> MB-PB-210-0489	Method Blank								Run: SUB-T58993 09/23/14 18:50
Lead 210	-0.07	pCi/L							U
Lead 210 precision (±)	0.6	pCi/L							
Lead 210 MDC	1	pCi/L							
<b>Lab ID:</b> LCS-PB-210-0489	Laboratory Control Sample								Run: SUB-T58993 09/23/14 19:59
Lead 210	22	pCi/L	111		80	120			
<b>Lab ID:</b> R14090086-005F	Sample Matrix Spike								Run: SUB-T58993 09/24/14 15:39
Lead 210	47	pCi/L	108		70	130			
<b>Lab ID:</b> R14090086-005F	Sample Matrix Spike Duplicate								Run: SUB-T58993 09/24/14 16:48
Lead 210	44	pCi/L	101		70	130	6.8	21.4	

**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

**Report Date:** 10/23/14  
**Work Order:** R14090086

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
<b>Method:</b> RA-05									Batch: C_RA228-4764
<b>Lab ID:</b> LCS-228-RA226-7365	Laboratory Control Sample								Run: SUB-C191320 09/19/14 09:04
Radium 228	9.1	pCi/L		107	80	120			
<b>Lab ID:</b> MB-RA226-7365	Method Blank								Run: SUB-C191320 09/19/14 09:04
Radium 228	2	pCi/L							
Radium 228 precision (±)	0.8	pCi/L							
Radium 228 MDC	1	pCi/L							
<b>Lab ID:</b> C14090414-001DMS	Sample Matrix Spike								Run: SUB-C191320 09/19/14 09:04
Radium 228	21.0	pCi/L		124	70	130			
<b>Lab ID:</b> C14090414-001DMSD	Sample Matrix Spike Duplicate								Run: SUB-C191320 09/19/14 09:04
Radium 228	19.6	pCi/L		113	70	130	7.1	31.2	

**Qualifiers:**

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

# Workorder Receipt Checklist

Powertech USA Inc

R14090086

Login completed by: Steve Froiland

Date Received: 9/4/2014

Reviewed by: Linda Larson

Received by: sf

Reviewed Date: 10/23/2014

Carrier Hand Delivered name:

- |  |   |  |  |
|--|---|--|--|
| Shipping container/cooler in good condition?   | Yes <input type="checkbox"/>            | No <input type="checkbox"/>            | Not Present <input checked="" type="checkbox"/>            |
| Custody seals intact on all shipping container(s)/cooler(s)?   | Yes <input type="checkbox"/>            | No <input type="checkbox"/>            | Not Present <input checked="" type="checkbox"/>            |
| Custody seals intact on all sample bottles?  | Yes <input type="checkbox"/>            | No <input type="checkbox"/>            | Not Present <input checked="" type="checkbox"/>            |
| Chain of custody present?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
| Chain of custody signed when relinquished and received?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
| Chain of custody agrees with sample labels?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
| Samples in proper container/bottle?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
| Sample containers intact?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
| Sufficient sample volume for indicated test?   | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
| All samples received within holding time?<br>(Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.) | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            |  |
| Temp Blank received in all shipping container(s)/cooler(s)?  | Yes <input type="checkbox"/>            | No <input checked="" type="checkbox"/> | Not Applicable <input type="checkbox"/>                    |
| Container/Temp Blank temperature:  | 2.8°C On Ice                            |  |  |
| Water - VOA vials have zero headspace?   | Yes <input type="checkbox"/>            | No <input type="checkbox"/>            | No VOA vials submitted <input checked="" type="checkbox"/> |
| Water - pH acceptable upon receipt?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/>            | Not Applicable <input type="checkbox"/>                    |

## Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

## Contact and Corrective Action Comments:

None



# Chain of Custody and Analytical Request Record

**PLEASE PRINT (Provide as much information as possible.)**

Company Name: <i>PowerTech USA</i>	Project Name, PWS, Permit, Etc. <i>Powered Quarterly Alluvial Wells</i>	Sample Origin State:	EPA/State Compliance: Yes <input type="checkbox"/> No <input type="checkbox"/>
Report Mail Address (Required): <i>PowerTech USA</i>	Contact Name: <i>Allen Scott / Lisa Scheinost</i>	Phone/Fax: <i>wells</i>	Cell: <i></i>
<input type="checkbox"/> No Hard Copy Email:	Invoice Contact & Phone: <i>Lisa Scheinost</i>	Purchase Order:	Quote/Bottle Order:

Invoice Address (Required):  
*PowerTech USA*

No Hard Copy Email:

Special Report/Formats:

DW       EDD/EDT (Electronic Data)  
 POTW/WWTP      **Format:** \_\_\_\_\_  
 State: \_\_\_\_\_       LEVEL IV  
 Other: \_\_\_\_\_       NELAC

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	Number of Containers Sample Type: A W S V B O DW Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water	ANALYSIS REQUESTED												SEE ATTACHED	Standard Turnaround (TAT)	R U S H	Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page	Comments:	Shipped by:
					1	2	3	4	5	6	7	8	9	10	11	12						Cooler ID(s):
1 DC-2	9-3-14	12:59	Water	✓																Receipt Temp <i>2.8</i> °C		
2 BC-2	9-3-14	14:52	"	✓																On Ice: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N		
3 BC-1	9-3-14	16:12	"	✓																Custody Seal		
4 BC-1 Dup.	9-3-14	16:12	"	✓																On Bottle Y N		
5 BC-3	9-3-14	17:46	"	✓																On Cooler Y N		
6 DC-1	9-4-14	10:10	"	✓																Intact Y N		
7																				Signature Match Y N		
8																						
9																						
10																						

<b>Custody Record MUST be Signed</b>	Relinquished by (print): <i>Allen Scott</i>	Date/Time: <i>9-4-14 14:23</i>	Signature: <i>[Signature]</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 Feiland</i>	Date/Time: <i>9-4-14 14:23</i>	Signature: <i>[Signature]</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](http://www.energylab.com) for additional information, downloadable fee schedule, forms, and links.

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INTER-MOUNTAIN LABS  
SAMPLE ANALYSIS REPORTS



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**Inter-Mountain Labs**  
 Sheridan, WY and Gillette, WY

**- CHAIN OF CUSTODY RECORD -**

Page 1 of 1

All shaded fields must be completed.  
 This is a legal document: any misrepresentation may be construed as fraud.

# **151325**

Client Name <i>Powertech</i>		Project Identification <i>Powertech alluvial wells</i>		Sampler (Signature/Attestation of Authenticity) <i>Allen Scott</i>		Telephone # <i>605-673-4859</i>	
Report Address <i>Powertech</i>		Contact Name <i>Allen Scott</i>		ANALYSES / PARAMETERS			
Invoice Address <i>Powertech</i>		Email					
Phone <i>605-673-4859</i>		Purchase Order #					
Quote #		REMARKS					

ITEM	LAB ID (Lab Use Only)	DATE	TIME	SAMPLE IDENTIFICATION	Matrix	# of Containers	ANALYSES / PARAMETERS										REMARKS								
							As per quote																		
1	<i>S1310072-001</i>	<i>10-1-13</i>	<i>15:35</i>	<i>DC-1</i>	<i>Water</i>	<i>7</i>	✓																		
2	<i>002</i>	<i>10-1-13</i>	<i>11:25</i>	<i>DC-2</i>	<i>U</i>	<i>2</i>	✓																		
3	<i>003</i>	<i>10-1-13</i>	<i>12:45</i>	<i>BC-3</i>	<i>U</i>	<i>2</i>	✓																		
4	<i>004</i>	<i>10-1-13</i>	<i>13:52</i>	<i>BC-1</i>	<i>U</i>	<i>2</i>	✓																		
5	<i>005</i>	<i>10-1-13</i>	<i>14:58</i>	<i>BC-2</i>	<i>U</i>	<i>2</i>	✓																		
6																									
7																									
8																									
9																									
10																									
11																									
12																									
13																									
14																									

LAB COMMENTS	Relinquished By (Signature/Printed)	DATE	TIME	Received By (Signature/Printed)	DATE	TIME
<i>0.9°C</i>	<i>Allen Scott</i>	<i>10-2-13</i>	<i>12:00</i>	<i>Mark Amore</i>	<i>10/3/13</i>	<i>10:53</i>

SHIPPING INFO	MATRIX CODES	TURNAROUND TIMES	COMPLIANCE INFORMATION	ADDITIONAL REMARKS
<input type="checkbox"/> UPS <input type="checkbox"/> Fed Express <input type="checkbox"/> US Mail <input type="checkbox"/> Hand Carried <input type="checkbox"/> Other _____	Water WT Soil SL Solid SD Filter FT Other OT	<input type="checkbox"/> Check desired service <input type="checkbox"/> Standard turnaround <input type="checkbox"/> <b>RUSH - 5 Working Days</b> <input type="checkbox"/> <b>URGENT - &lt; 2 Working Days</b> <i>Rush &amp; Urgent Surcharges will be applied</i>	Compliance Monitoring? Y / N Program (SDWA, NPDES,...) PWSID / Permit # Chlorinated? Y / N Sample Disposal: Lab Client	



Inter-Mountain Labs

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Your Environmental Monitoring Partner

**Date:** 10/11/2013

**CLIENT:** Powertech Uranium USA Inc.  
**Project:** Powertech Alluvial Wells  
**Lab Order:** S1310072

**CASE NARRATIVE**  
**Report ID:** S1310072001

Samples BC-1, BC-2, BC-3, DC-1, and DC-2 were received on October 3, 2013.

All samples were received and analyzed within the EPA recommended holding times, except those noted below in this case narrative. Samples were analyzed using the methods outlined in the following references:

"Standard Methods For The Examination of Water and Wastewater", approved method versions  
Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition  
40 CFR Parts 136 and 141  
40 CFR Part 50, Appendices B, J, L, and O  
Methods indicated in the Methods Update Rule published in the Federal Register Friday, May 18, 2012  
ASTM approved and recognized standards

All Quality Control parameters met the acceptance criteria defined by EPA and Inter-Mountain Laboratories except as indicated in this case narrative.

Reviewed by:

Wade Nieuwsma, Assistant Laboratory Manager



### Sample Analysis Report

**Company:** Powertech Uranium USA Inc.  
P.O. Box 812  
Edgemont, SD 57735

**Date Reported:** 10/11/2013  
**Report ID:** S1310072001

**ProjectName:** Powertech Alluvial Wells  
**Lab ID:** S1310072-001  
**ClientSample ID:** DC-1  
**COC:** 151325

**WorkOrder:** S1310072  
**CollectionDate:** 10/1/2013 3:35:00 PM  
**DateReceived:** 10/3/2013 10:53:00 AM  
**FieldSampler:** AS  
**Matrix:** Water

**Comments**


Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
<b>Radionuclides - Total</b>							
Radon 222	346	pCi/L		80	ASTM D5072-09	10/03/2013 1811	WN
Radon-222 Precision (±)	16	pCi/L			ASTM D5072-09	10/03/2013 1811	WN

**These results apply only to the samples tested.**

- Qualifiers:**
- \* Value exceeds Maximum Contaminant Level
  - C Calculated Value
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - ND Not Detected at the Reporting Limit
  - S Spike Recovery outside accepted recovery limits

**RL - Reporting Limit**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- M Value exceeds Monthly Ave or MCL
- O Outside the Range of Dilutions

Reviewed by:   
Wade Nieuwsma, Assistant Laboratory Manager



### Sample Analysis Report

**Company:** Powertech Uranium USA Inc.  
P.O. Box 812  
Edgemont, SD 57735

**Date Reported:** 10/11/2013  
**Report ID:** S1310072001

**ProjectName:** Powertech Alluvial Wells  
**Lab ID:** S1310072-002  
**ClientSample ID:** DC-2  
**COC:** 151325

**WorkOrder:** S1310072  
**CollectionDate:** 10/1/2013 11:25:00 AM  
**DateReceived:** 10/3/2013 10:53:00 AM  
**FieldSampler:** AS  
**Matrix:** Water

#### Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
<b>Radionuclides - Total</b>							
Radon 222	630	pCi/L		80	ASTM D5072-09	10/03/2013 1922	WN
Radon-222 Precision (±)	23	pCi/L			ASTM D5072-09	10/03/2013 1922	WN

#### These results apply only to the samples tested.

- Qualifiers:**
- \* Value exceeds Maximum Contaminant Level
  - C Calculated Value
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - ND Not Detected at the Reporting Limit
  - S Spike Recovery outside accepted recovery limits

#### RL - Reporting Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- M Value exceeds Monthly Ave or MCL
- O Outside the Range of Dilutions

Reviewed by:

Wade Nieuwsma, Assistant Laboratory Manager



### Sample Analysis Report

**Company:** Powertech Uranium USA Inc.  
P.O. Box 812  
Edgemont, SD 57735

**Date Reported:** 10/11/2013  
**Report ID:** S1310072001

**ProjectName:** Powertech Alluvial Wells  
**Lab ID:** S1310072-003  
**ClientSample ID:** BC-3  
**COC:** 151325

**WorkOrder:** S1310072  
**CollectionDate:** 10/1/2013 12:45:00 PM  
**DateReceived:** 10/3/2013 10:53:00 AM  
**FieldSampler:** AS  
**Matrix:** Water

**Comments**


Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
<b>Radionuclides - Total</b>							
Radon 222	518	pCi/L		80	ASTM D5072-09	10/03/2013 2033	WN
Radon-222 Precision (±)	20	pCi/L			ASTM D5072-09	10/03/2013 2033	WN

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- \* Value exceeds Maximum Contaminant Level
  - C Calculated Value
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - ND Not Detected at the Reporting Limit
  - S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- M Value exceeds Monthly Ave or MCL
- O Outside the Range of Dilutions

Reviewed by:   
Wade Nieuwsma, Assistant Laboratory Manager



### Sample Analysis Report

**Company:** Powertech Uranium USA Inc.  
P.O. Box 812  
Edgemont, SD 57735

**Date Reported:** 10/11/2013  
**Report ID:** S1310072001

**ProjectName:** Powertech Alluvial Wells  
**Lab ID:** S1310072-004  
**ClientSample ID:** BC-1  
**COC:** 151325

**WorkOrder:** S1310072  
**CollectionDate:** 10/1/2013 1:52:00 PM  
**DateReceived:** 10/3/2013 10:53:00 AM  
**FieldSampler:** AS  
**Matrix:** Water

#### Comments


Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
<b>Radionuclides - Total</b>							
Radon 222	682	pCi/L		80	ASTM D5072-09	10/03/2013 2144	WN
Radon-222 Precision (±)	24	pCi/L			ASTM D5072-09	10/03/2013 2144	WN

#### These results apply only to the samples tested.

- Qualifiers:**
- \* Value exceeds Maximum Contaminant Level
  - C Calculated Value
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - ND Not Detected at the Reporting Limit
  - S Spike Recovery outside accepted recovery limits

#### RL - Reporting Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- M Value exceeds Monthly Ave or MCL
- O Outside the Range of Dilutions

Reviewed by:   
Wade Nieuwsma, Assistant Laboratory Manager



### Sample Analysis Report

**Company:** Powertech Uranium USA Inc.  
P.O. Box 812  
Edgemont, SD 57735

**Date Reported:** 10/11/2013  
**Report ID:** S1310072001

**ProjectName:** Powertech Alluvial Wells  
**Lab ID:** S1310072-005  
**ClientSample ID:** BC-2  
**COC:** 151325

**WorkOrder:** S1310072  
**CollectionDate:** 10/1/2013 2:58:00 PM  
**DateReceived:** 10/3/2013 10:53:00 AM  
**FieldSampler:** AS  
**Matrix:** Water

#### Comments


Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
<b>Radionuclides - Total</b>							
Radon 222	867	pCi/L		80	ASTM D5072-09	10/03/2013 2256	WN
Radon-222 Precision (±)	28	pCi/L			ASTM D5072-09	10/03/2013 2256	WN

#### These results apply only to the samples tested.

- Qualifiers:**
- \* Value exceeds Maximum Contaminant Level
  - C Calculated Value
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - ND Not Detected at the Reporting Limit
  - S Spike Recovery outside accepted recovery limits

#### RL - Reporting Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- M Value exceeds Monthly Ave or MCL
- O Outside the Range of Dilutions

Reviewed by:   
Wade Nieuwsma, Assistant Laboratory Manager





### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** Powertech Uranium USA Inc.  
**Work Order:** S1310072  
**Project:** Powertech Alluvial Wells

**Date:** 10/11/2013  
**Report ID:** S1310072001

**Radon 222 in Water ASTM D5072-09**

Sample Type	Units:									
Sample ID	RunNo:	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
MBL-7551	10/03/13 15:13	Radon-222	ND	80						

Sample Type	Units:									
Sample ID	RunNo:	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
LCS-7551	10/03/13 15:13	Radon-222	17900	80	18500		96.7	70 - 130		

Sample Type	Units:									
Sample ID	RunNo:	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
S1310072-001AD	10/03/13 18:46	Radon-222	330	80	350	5.33		20		
S1310072-002AD	10/03/13 19:57	Radon-222	580	80	630	8.84		20		
S1310072-003AD	10/03/13 21:09	Radon-222	570	80	520	10.8		20		
S1310072-004AD	10/03/13 22:20	Radon-222	760	80	680	11.7		20		
S1310072-005AD	10/03/13 23:31	Radon-222	820	80	870	5.15		20		

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - O Outside the Range of Dilutions
  - S Spike Recovery outside accepted recovery limits
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - ND Not Detected at the Reporting Limit
  - R RPD outside accepted recovery limits





**Inter-Mountain Labs**  
 Sheridan, WY and Gillette, WY

**- CHAIN OF CUSTODY RECORD -**

Page \_\_\_\_\_ of \_\_\_\_\_

All shaded fields must be completed.  
 This is a legal document: any misrepresentation may be construed as fraud.

# **151324**

Client Name <i>Scott Env / Powertech</i>		Project Identification <i>Powertech Annual Wells</i>		Sampler (Signature/Attestation of Authenticity) <i>[Signature]</i>		Telephone # <i>605 673 4889</i>	
Report Address <i>Powertech</i>		Contact Name <i>Allan Scott / Lisa Scheinost</i>		<b>ANALYSES / PARAMETERS</b>			
Invoice Address		Email					
Purchase Order #		Quote #					
Phone				<b>REMARKS</b>			

ITEM	LAB ID <i>(Lab Use Only)</i>	DATE	TIME	SAMPLE IDENTIFICATION	# of								
					Matrix	Containers							
1	<i>23 11352-001</i>	<i>11-19-13</i>	<i>11:18</i>	<i>DC-2</i>	<i>Water</i>	<i>2</i>							
2	<i>002</i>	<i>11-19-13</i>	<i>12:27</i>	<i>BC-3</i>	<i>W</i>	<i>1</i>							
3	<i>003</i>	<i>11-19-13</i>	<i>13:32</i>	<i>BC-1</i>	<i>W</i>	<i>1</i>							
4	<i>004</i>	<i>11-19-13</i>	<i>14:28</i>	<i>BC-2</i>	<i>W</i>	<i>1</i>							
5	<i>005</i>	<i>11-19-13</i>	<i>15:05</i>	<i>DC-1</i>	<i>W</i>	<i>1</i>							
6													
7													
8													
9													
10													
11													
12													
13													
14													

LAB COMMENTS	Relinquished By (Signature/Printed)	DATE	TIME	Received By (Signature/Printed)	DATE	TIME
<i>4.6°C</i> <i>RO1</i>	<i>[Signature] Allan Scott</i>	<i>11-19-13</i>	<i>19:00</i>	<i>Kathy Boyd</i>	<i>11-21-13</i>	<i>11:52</i>

SHIPPING INFO	MATRIX CODES	TURNAROUND TIMES	COMPLIANCE INFORMATION	ADDITIONAL REMARKS
<input type="checkbox"/> UPS <input type="checkbox"/> Fed Express <input type="checkbox"/> US Mail <input type="checkbox"/> Hand Carried <input type="checkbox"/> Other _____	Water WT Soil SL Solid SD Filter FT Other OT	<input type="checkbox"/> Check desired service <input type="checkbox"/> Standard turnaround <input type="checkbox"/> <b>RUSH - 5 Working Days</b> <input type="checkbox"/> <b>URGENT - &lt; 2 Working Days</b> <i>Rush &amp; Urgent Surcharges will be applied</i>	Compliance Monitoring? Y / N Program (SDWA, NPDES,...) PWSID / Permit # Chlorinated? Y / N Sample Disposal: Lab Client	



Inter-Mountain Labs

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Your Environmental Monitoring Partner

**Date:** 11/27/2013

**CLIENT:** Powertech Uranium USA Inc.  
**Project:** Powertech Alluvial Wells  
**Lab Order:** S1311352

**CASE NARRATIVE**  
**Report ID:** S1311352001

Samples BC-1, BC-2, BC-3, DC-1, and DC-2 were received on November 21, 2013.

All samples were received and analyzed within the EPA recommended holding times, except those noted below in this case narrative. Samples were analyzed using the methods outlined in the following references:

"Standard Methods For The Examination of Water and Wastewater", approved method versions  
Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition  
40 CFR Parts 136 and 141  
40 CFR Part 50, Appendices B, J, L, and O  
Methods indicated in the Methods Update Rule published in the Federal Register Friday, May 18, 2012  
ASTM approved and recognized standards

All Quality Control parameters met the acceptance criteria defined by EPA and Inter-Mountain Laboratories except as indicated in this case narrative.

Reviewed by:

Wade Nieuwsma, Assistant Laboratory Manager



### Sample Analysis Report

**Company:** Powertech Uranium USA Inc.  
P.O. Box 812  
Edgemont, SD 57735

**Date Reported:** 11/27/2013  
**Report ID:** S1311352001

**ProjectName:** Powertech Alluvial Wells  
**Lab ID:** S1311352-001  
**ClientSample ID:** DC-2  
**COC:** 151324

**WorkOrder:** S1311352  
**CollectionDate:** 11/19/2013 11:18:00 AM  
**DateReceived:** 11/21/2013 11:52:00 AM  
**FieldSampler:** AS  
**Matrix:** Water

#### Comments

Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
<b>Radionuclides - Total</b>							
Radon 222	674	pCi/L		50	ASTM D5072-09	11/21/2013 1925	WN
Radon-222 Precision (±)	24	pCi/L			ASTM D5072-09	11/21/2013 1925	WN

#### These results apply only to the samples tested.

- Qualifiers:**
- \* Value exceeds Maximum Contaminant Level
  - C Calculated Value
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - ND Not Detected at the Reporting Limit
  - S Spike Recovery outside accepted recovery limits

#### RL - Reporting Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- M Value exceeds Monthly Ave or MCL
- O Outside the Range of Dilutions

Reviewed by:

Wade Nieuwsma, Assistant Laboratory Manager



### Sample Analysis Report

**Company:** Powertech Uranium USA Inc.  
P.O. Box 812  
Edgemont, SD 57735

**Date Reported:** 11/27/2013  
**Report ID:** S1311352001

**ProjectName:** Powertech Alluvial Wells  
**Lab ID:** S1311352-002  
**ClientSample ID:** BC-3  
**COC:** 151324

**WorkOrder:** S1311352  
**CollectionDate:** 11/19/2013 12:27:00 PM  
**DateReceived:** 11/21/2013 11:52:00 AM  
**FieldSampler:** AS  
**Matrix:** Water

#### Comments


Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
<b>Radionuclides - Total</b>							
Radon 222	526	pCi/L		50	ASTM D5072-09	11/21/2013 2036	WN
Radon-222 Precision (±)	21	pCi/L			ASTM D5072-09	11/21/2013 2036	WN

#### These results apply only to the samples tested.

- Qualifiers:**
- \* Value exceeds Maximum Contaminant Level
  - C Calculated Value
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - ND Not Detected at the Reporting Limit
  - S Spike Recovery outside accepted recovery limits

#### RL - Reporting Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- M Value exceeds Monthly Ave or MCL
- O Outside the Range of Dilutions

Reviewed by:   
Wade Nieuwsma, Assistant Laboratory Manager



### Sample Analysis Report

**Company:** Powertech Uranium USA Inc.  
P.O. Box 812  
Edgemont, SD 57735

**Date Reported:** 11/27/2013  
**Report ID:** S1311352001

**ProjectName:** Powertech Alluvial Wells  
**Lab ID:** S1311352-003  
**ClientSample ID:** BC-1  
**COC:** 151324

**WorkOrder:** S1311352  
**CollectionDate:** 11/19/2013 1:32:00 PM  
**DateReceived:** 11/21/2013 11:52:00 AM  
**FieldSampler:** AS  
**Matrix:** Water

#### Comments


Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
<b>Radionuclides - Total</b>							
Radon 222	809	pCi/L		50	ASTM D5072-09	11/21/2013 2147	WN
Radon-222 Precision (±)	27	pCi/L			ASTM D5072-09	11/21/2013 2147	WN

#### These results apply only to the samples tested.

- Qualifiers:**
- \* Value exceeds Maximum Contaminant Level
  - C Calculated Value
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - ND Not Detected at the Reporting Limit
  - S Spike Recovery outside accepted recovery limits

#### RL - Reporting Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- M Value exceeds Monthly Ave or MCL
- O Outside the Range of Dilutions

Reviewed by:   
Wade Nieuwsma, Assistant Laboratory Manager



### Sample Analysis Report

**Company:** Powertech Uranium USA Inc.  
P.O. Box 812  
Edgemont, SD 57735

**Date Reported:** 11/27/2013  
**Report ID:** S1311352001

**ProjectName:** Powertech Alluvial Wells  
**Lab ID:** S1311352-004  
**ClientSample ID:** BC-2  
**COC:** 151324

**WorkOrder:** S1311352  
**CollectionDate:** 11/19/2013 2:28:00 PM  
**DateReceived:** 11/21/2013 11:52:00 AM  
**FieldSampler:** AS  
**Matrix:** Water

**Comments**


Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
<b>Radionuclides - Total</b>							
Radon 222	861	pCi/L		50	ASTM D5072-09	11/21/2013 2258	WN
Radon-222 Precision (±)	28	pCi/L			ASTM D5072-09	11/21/2013 2258	WN

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- \* Value exceeds Maximum Contaminant Level
  - C Calculated Value
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - ND Not Detected at the Reporting Limit
  - S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- M Value exceeds Monthly Ave or MCL
- O Outside the Range of Dilutions

Reviewed by:   
Wade Nieuwsma, Assistant Laboratory Manager





### Sample Analysis Report

**Company:** Powertech Uranium USA Inc.  
P.O. Box 812  
Edgemont, SD 57735

**Date Reported:** 11/27/2013  
**Report ID:** S1311352001

**ProjectName:** Powertech Alluvial Wells  
**Lab ID:** S1311352-005  
**ClientSample ID:** DC-1  
**COC:** 151324

**WorkOrder:** S1311352  
**CollectionDate:** 11/19/2013 3:15:00 PM  
**DateReceived:** 11/21/2013 11:52:00 AM  
**FieldSampler:** AS  
**Matrix:** Water

**Comments**


Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
<b>Radionuclides - Total</b>							
Radon 222	375	pCi/L		50	ASTM D5072-09	11/21/2013 2334	WN
Radon-222 Precision (±)	17	pCi/L			ASTM D5072-09	11/21/2013 2334	WN

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- \* Value exceeds Maximum Contaminant Level
  - C Calculated Value
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - ND Not Detected at the Reporting Limit
  - S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- M Value exceeds Monthly Ave or MCL
- O Outside the Range of Dilutions

Reviewed by:   
Wade Nieuwsma, Assistant Laboratory Manager



### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** Powertech Uranium USA Inc.  
**Work Order:** S1311352  
**Project:** Powertech Alluvial Wells

**Date:** 11/27/2013  
**Report ID:** S1311352001

**Radon 222 in Water ASTM D5072-09**

Sample Type	Units:										
<b>MBLK</b>	pCi/L	Sample ID	RunNo: 102432	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
		MB-7708	11/21/13 16:27	Radon-222	ND	50					

Sample Type	Units:										
<b>LCS</b>	pCi/L	Sample ID	RunNo: 102432	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual
		LCS-7708	11/21/13 16:27	Radon-222	17100	50	18500		92.4	70 - 130	

Sample Type	Units:										
<b>DUP</b>	pCi/L	Sample ID	RunNo: 102432	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual
		S1311352-001AD	11/21/13 20:00	Radon-222	730	50	670	7.56		20	
		S1311352-002AD	11/21/13 21:12	Radon-222	550	50	530	4.14		20	
		S1311352-003AD	11/21/13 22:23	Radon-222	800	50	810	1.28		20	
		S1311352-004AD	11/21/13 23:34	Radon-222	890	50	860	3.69		20	
		S1311352-005AD	11/22/13 0:10	Radon-222	350	50	380	7.31		20	

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - O Outside the Range of Dilutions
  - S Spike Recovery outside accepted recovery limits
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - ND Not Detected at the Reporting Limit
  - R RPD outside accepted recovery limits





**Inter-Mountain Labs**  
Sheridan, WY and Gillette, WY

**- CHAIN OF CUSTODY RECORD -**

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This is a legal document: any misrepresentation may be construed as fraud.

# **152075**

Client Name <i>Powertech / Scott Env.</i>	Project Identification <i>Powertech alluvial wells</i>	Sampler (Signature/Attestation of Authenticity) <i>[Signature]</i>	Telephone #
--	---	---	-------------

Report Address <i>Powertech</i>	Contact Name <i>Allen Scott / Lisa Scheinost</i>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th align="center" colspan="6">ANALYSES / PARAMETERS</th> </tr> <tr> <td style="width:16.6%;"><i>Radon as per quote</i></td> <td style="width:16.6%;"></td> <td style="width:16.6%;"></td> <td style="width:16.6%;"></td> <td style="width:16.6%;"></td> <td style="width:16.6%;"></td> </tr> </table>	ANALYSES / PARAMETERS						<i>Radon as per quote</i>						Invoice Address <i>Powertech</i>
ANALYSES / PARAMETERS															
<i>Radon as per quote</i>															
Email		Purchase Order #	Quote #												
Phone		REMARKS													

ITEM	LAB ID <small>(Lab Use Only)</small>	DATE	TIME	SAMPLE IDENTIFICATION	Matrix	# of Containers	ANALYSES / PARAMETERS						REMARKS
1	<i>B1312271</i>	<i>12-16-13</i>	<i>13:51</i>	<i>DC-2</i>	<i>Water</i>	<i>2</i>	<input checked="" type="checkbox"/>						
2	<i>002</i>	<i>12-16-13</i>	<i>16:39</i>	<i>BC-1</i>	<i>"</i>	<i>2</i>	<input checked="" type="checkbox"/>						
3	<i>003</i>	<i>12-16-13</i>	<i>18:00</i>	<i>BC-3</i>	<i>"</i>	<i>2</i>	<input checked="" type="checkbox"/>						
4	<i>004</i>	<i>12-19-13</i>	<i>11:40</i>	<i>DC-1</i>	<i>"</i>	<i>2</i>	<input checked="" type="checkbox"/>						
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													

LAB COMMENTS	Relinquished By (Signature/Printed)	DATE	TIME	Received By (Signature/Printed)	DATE	TIME
<i>4.4</i>	<i>[Signature]</i>	<i>12-17-13</i>	<i>2:45pm</i>	<i>[Signature]</i>	<i>12-19-13</i>	<i>11:53</i>

SHIPPING INFO	MATRIX CODES	TURNAROUND TIMES	COMPLIANCE INFORMATION	ADDITIONAL REMARKS
<input type="checkbox"/> UPS <input type="checkbox"/> Fed Express <input type="checkbox"/> US Mail <input type="checkbox"/> Hand Carried <input type="checkbox"/> Other _____	Water WT Soil SL Solid SD Filter FT Other OT	<input type="checkbox"/> Check desired service <input type="checkbox"/> Standard turnaround <input type="checkbox"/> <b>RUSH - 5 Working Days</b> <input type="checkbox"/> <b>URGENT - &lt; 2 Working Days</b> <i>Rush &amp; Urgent Surcharges will be applied</i>	Compliance Monitoring? Y/N Program (SDWA, NPDES,...) PWSID / Permit # Chlorinated? Y/N Sample Disposal: Lab Client	



Inter-Mountain Labs

1673 Terra Avenue, Sheridan, Wyoming 82801 ph: (307) 672-8945

Your Environmental Monitoring Partner

**Date:** 12/23/2013

**CLIENT:** Powertech Uranium USA Inc.  
**Project:** Powertech Alluvial Wells  
**Lab Order:** S1312271

**CASE NARRATIVE**  
**Report ID:** S1312271001

Samples BC-1, BC-3, DC-1, and DC-2 were received on December 19, 2013.

All samples were received and analyzed within the EPA recommended holding times, except those noted below in this case narrative. Samples were analyzed using the methods outlined in the following references:

"Standard Methods For The Examination of Water and Wastewater", approved method versions  
Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition  
40 CFR Parts 136 and 141  
40 CFR Part 50, Appendices B, J, L, and O  
Methods indicated in the Methods Update Rule published in the Federal Register Friday, May 18, 2012  
ASTM approved and recognized standards

All Quality Control parameters met the acceptance criteria defined by EPA and Inter-Mountain Laboratories except as indicated in this case narrative.

Reviewed by:

Wade Nieuwsma, Assistant Laboratory Manager



### Sample Analysis Report

**Company:** Powertech Uranium USA Inc.  
P.O. Box 812  
Edgemont, SD 57735

**Date Reported:** 12/23/2013  
**Report ID:** S1312271001

**ProjectName:** Powertech Alluvial Wells  
**Lab ID:** S1312271-001  
**ClientSample ID:** DC-2  
**COC:** 152075

**WorkOrder:** S1312271  
**CollectionDate:** 12/16/2013 1:51:00 PM  
**DateReceived:** 12/19/2013 11:53:00 AM  
**FieldSampler:** AS  
**Matrix:** Water

**Comments**


Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
<b>Radionuclides - Total</b>							
Radon 222	715	pCi/L		95	ASTM D5072-09	12/19/2013 1913	WN
Radon-222 Precision (±)	27	pCi/L			ASTM D5072-09	12/19/2013 1913	WN

**These results apply only to the samples tested.**

- Qualifiers:**
- \* Value exceeds Maximum Contaminant Level
  - C Calculated Value
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - ND Not Detected at the Reporting Limit
  - S Spike Recovery outside accepted recovery limits

**RL - Reporting Limit**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- M Value exceeds Monthly Ave or MCL
- O Outside the Range of Dilutions

Reviewed by:   
Wade Nieuwsma, Assistant Laboratory Manager



### Sample Analysis Report

**Company:** Powertech Uranium USA Inc.  
P.O. Box 812  
Edgemont, SD 57735

**Date Reported:** 12/23/2013  
**Report ID:** S1312271001

**ProjectName:** Powertech Alluvial Wells  
**Lab ID:** S1312271-002  
**ClientSample ID:** BC-1  
**COC:** 152075

**WorkOrder:** S1312271  
**CollectionDate:** 12/16/2013 4:39:00 PM  
**DateReceived:** 12/19/2013 11:53:00 AM  
**FieldSampler:** AS  
**Matrix:** Water

**Comments**


Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
<b>Radionuclides - Total</b>							
Radon 222	826	pCi/L		95	ASTM D5072-09	12/19/2013 2024	WN
Radon-222 Precision (±)	29	pCi/L			ASTM D5072-09	12/19/2013 2024	WN

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- \* Value exceeds Maximum Contaminant Level
  - C Calculated Value
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - ND Not Detected at the Reporting Limit
  - S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- M Value exceeds Monthly Ave or MCL
- O Outside the Range of Dilutions

Reviewed by:   
Wade Nieuwsma, Assistant Laboratory Manager



### Sample Analysis Report

**Company:** Powertech Uranium USA Inc.  
P.O. Box 812  
Edgemont, SD 57735

**Date Reported:** 12/23/2013  
**Report ID:** S1312271001

**ProjectName:** Powertech Alluvial Wells  
**Lab ID:** S1312271-003  
**ClientSample ID:** BC-3  
**COC:** 152075

**WorkOrder:** S1312271  
**CollectionDate:** 12/16/2013 6:00:00 PM  
**DateReceived:** 12/19/2013 11:53:00 AM  
**FieldSampler:** AS  
**Matrix:** Water

**Comments**


Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
<b>Radionuclides - Total</b>							
Radon 222	550	pCi/L		95	ASTM D5072-09	12/19/2013 2135	WN
Radon-222 Precision (±)	23	pCi/L			ASTM D5072-09	12/19/2013 2135	WN

**These results apply only to the samples tested.**

**RL - Reporting Limit**

- Qualifiers:**
- \* Value exceeds Maximum Contaminant Level
  - C Calculated Value
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - ND Not Detected at the Reporting Limit
  - S Spike Recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- M Value exceeds Monthly Ave or MCL
- O Outside the Range of Dilutions

Reviewed by:   
Wade Nieuwsma, Assistant Laboratory Manager



### Sample Analysis Report

**Company:** Powertech Uranium USA Inc.  
P.O. Box 812  
Edgemont, SD 57735

**Date Reported:** 12/23/2013  
**Report ID:** S1312271001

**ProjectName:** Powertech Alluvial Wells  
**Lab ID:** S1312271-004  
**ClientSample ID:** DC-1  
**COC:** 152075

**WorkOrder:** S1312271  
**CollectionDate:** 12/17/2013 11:40:00 AM  
**DateReceived:** 12/19/2013 11:53:00 AM  
**FieldSampler:** AS  
**Matrix:** Water

#### Comments


Analyses	Result	Units	Qual	RL	Method	Date Analyzed/Init	
<b>Radionuclides - Total</b>							
Radon 222	367	pCi/L		95	ASTM D5072-09	12/19/2013 2246	WN
Radon-222 Precision (±)	17	pCi/L			ASTM D5072-09	12/19/2013 2246	WN

#### These results apply only to the samples tested.

- Qualifiers:**
- \* Value exceeds Maximum Contaminant Level
  - C Calculated Value
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - ND Not Detected at the Reporting Limit
  - S Spike Recovery outside accepted recovery limits

#### RL - Reporting Limit

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- M Value exceeds Monthly Ave or MCL
- O Outside the Range of Dilutions

Reviewed by:   
Wade Nieuwsma, Assistant Laboratory Manager



### ANALYTICAL QC SUMMARY REPORT

**CLIENT:** Powertech Uranium USA Inc.  
**Work Order:** S1312271  
**Project:** Powertech Alluvial Wells

**Date:** 12/23/2013  
**Report ID:** S1312271001

**Radon 222 in Water ASTM D5072-09**

Sample Type <b>MBLK</b>		Units: pCi/L								
Sample ID	RunNo: 103182	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
MB-7775	12/19/13 16:16	Radon-222	ND	50						
Sample Type <b>LCS</b>		Units: pCi/L								
Sample ID	RunNo: 103182	Analyte	Result	RL	Spike	Ref Samp	%REC	% Rec Limits	Qual	
LCS-7775	12/19/13 16:16	Radon-222	16400	50	18500		88.4	70 - 130		
Sample Type <b>DUP</b>		Units: pCi/L								
Sample ID	RunNo: 103182	Analyte	Result	RL	Ref Samp	%RPD	%REC	% RPD Limits	Qual	
S1312271-001AD	12/19/13 19:49	Radon-222	690	50	720	3.87		20		
S1312271-002AD	12/19/13 21:00	Radon-222	840	50	830	1.60		20		
S1312271-003AD	12/19/13 22:11	Radon-222	580	50	550	5.22		20		
S1312271-004AD	12/19/13 23:22	Radon-222	390	50	370	5.56		20		

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - H Holding times for preparation or analysis exceeded
  - L Analyzed by a contract laboratory
  - O Outside the Range of Dilutions
  - S Spike Recovery outside accepted recovery limits
  - E Value above quantitation range
  - J Analyte detected below quantitation limits
  - ND Not Detected at the Reporting Limit
  - R RPD outside accepted recovery limits



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MIDCONTINENT TESTING LABORATORIES, INC.  
SAMPLE ANALYSIS REPORTS



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2381 South Plaza Drive P.O. Box 3388 Rapid City, SD 57709  
(605) 348-0111 -- www.thechemistrylab.com

Sample Site: DC-1  
Project Name: Powertech  
Sampled: 10/01/13 at 03:35 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20131002401  
Received: 10/02/13 at 10:10 AM  
by Dean Aurand  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	292	pCi/L	1	SM 7500Rn-B	SYS 10/03/13
<b>Precision Data</b>					
Radon-222 Precision	± 64.9	pCi/L	1	MC-Radon 222 precision	SYS 10/03/13
<b>MDA Data</b>					
Radon-222 MDA	47.0	pCi/L	1	MC - Radon 222 MDA	SYS 10/03/13

Approved By: 

Approved On: 10/7/2013 1:55:24 PM



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Sample Site: DC-2  
Project Name: Powertech  
Sampled: 10/01/13 at 11:25 AM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20131002402  
Received: 10/02/13 at 10:10 AM  
by Dean Aurand  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	601	pCi/L	1	SM 7500Rn-B	SYS 10/03/13
<b>Precision Data</b>					
Radon-222 Precision	± 118	pCi/L	1	MC-Radon 222 precision	SYS 10/03/13
<b>MDA Data</b>					
Radon-222 MDA	48.7	pCi/L	1	MC - Radon 222 MDA	SYS 10/03/13

Approved By: \_\_\_\_\_

Approved On: 10/7/2013 1:55:24 PM




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LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Sample Site: BC-3  
Project Name: Powertech  
Sampled: 10/01/13 at 12:45 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20131002403  
Received: 10/02/13 at 10:10 AM  
by Dean Aurand  
Account: w1552 - Powertech Uranium

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b> Radon-222	440	pCi/L	1	SM 7500Rn-B	SYS 10/03/13
<b>Precision Data</b> Radon-222 Precision	± 90.3	pCi/L	1	MC-Radon 222 precision	SYS 10/03/13
<b>MDA Data</b> Radon-222 MDA	48.4	pCi/L	1	MC - Radon 222 MDA	SYS 10/03/13

Approved By: 

Approved On: 10/7/2013 1:55:24 PM




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Sample Site: BC-1  
Project Name: Powertech  
Sampled: 10/01/13 at 01:52 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20131002404  
Received: 10/02/13 at 10:10 AM  
by Dean Aurand  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	721	pCi/L	1	SM 7500Rn-B	SYS 10/03/13
<b>Precision Data</b>					
Radon-222 Precision	± 139	pCi/L	1	MC-Radon 222 precision	SYS 10/03/13
<b>MDA Data</b>					
Radon-222 MDA	48.2	pCi/L	1	MC - Radon 222 MDA	SYS 10/03/13

Approved By: 

Approved On: 10/7/2013 1:55:24 PM




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Sample Site: BC-2  
Project Name: Powertech  
Sampled: 10/01/13 at 02:58 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20131002405  
Received: 10/02/13 at 10:10 AM  
by Dean Aurand  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	846	pCi/L	1	SM 7500Rn-B	SYS 10/03/13
<b>Precision Data</b>					
Radon-222 Precision	± 161	pCi/L	1	MC-Radon 222 precision	SYS 10/03/13
<b>MDA Data</b>					
Radon-222 MDA	48.0	pCi/L	1	MC - Radon 222 MDA	SYS 10/03/13

Approved By: 

Approved On: 10/7/2013 1:55:24 PM



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Lab Numbers: 20131002401 - 20131002405

## QC Sample Report

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method
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Approved By: \_\_\_\_\_

Printed On:10/07/2013 01:55 PM





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### CHAIN OF CUSTODY RECORD

Company	MidContinent Testing
Project Name / Mgr.	Eric Fuehrer
Project Number	
Sampled by	Signature
Sampled by	Print

PRESERVED WITH	None																			
FILTERED (Y/N)	N																			
REFRIGERATED (Y/N)	Y																			
ANALYSES REQUESTED	Radon 222																			

FOR LAB USE ONLY	
Seal Intact (Y/N)/Number	
Sample Condition	
Temperature of Container	

REQUESTED TURN AROUND	
STANDARD _____	RUSH _____

	SAMPLE NAME	DATE	TIME	MATRIX	NO. OF CONTAINERS															COMMENTS	LAB #
1	20131002401	10/1/13	1535	Water	2	X															
2	20131002402	10/1/13	1125	Water	2	X															
3	20131002403	10/1/13	1245	Water	2	X															
4	20131002404	10/1/13	1352	Water	2	X															
5	20131002405	10/1/13	1458	Water	2	X															
6																					
7																					
8																					
9																					
10																					
11																					
12																					

RELINQUISHED BY (Signature)	COMPANY NAME	DATE	TIME	RECEIVED BY (Signature)	COMPANY NAME	DATE	TIME
<i>Eric Fuehrer</i>	MCT	10/2/13	1145	<i>FedEx Overnight</i>	to Pace Aa. EF.		

## CHAIN OF CUSTODY RECORD

Company	Powertech		
Project Name / Mgr.	Allen Scott /		
Project Number			
Sampled by	Allen Scott		
Sampled by	Allen Scott		

PRESERVED WITH FILTERED (Y/N) REFRIGERATED (Y/N) ANALYSES REQUESTED	(Mason) AS per Batch
--	-------------------------

**FOR LAB USE ONLY**

Seal Intact (Y/N)/Number

Sample Condition  
 on ice  
 Temperature of Contain. 1.9°C

REQUESTED TURN AROUND

STANDARD \_\_\_\_\_ RUSH \_\_\_\_\_

	SAMPLE NAME	DATE	TIME	MATRIX	NO. OF CONTAINERS	COMMENTS	LAB #
1	PC-1 401	10-1-13	15:35	Water	3	X	
2	PC-2 402	10-1-13	11:25	"	"	X	
3	PC-3 403	10-1-13	12:45	"	"	X	
4	PC-1 404	10-1-13	13:52	"	"	X	
5	PC-2 405	10-1-13	14:58	"	"	X	
6							
7							
8	Batch 4						
9							
10							
11	10-2-13						
12							

RELINQUISHED BY (Signature)	COMPANY NAME	DATE	TIME	RECEIVED BY (Signature)	COMPANY NAME	DATE	TIME
Allen Scott	Sci Env.	10-2-13	10:10	Deane	MCI	10-2-13	10:10

### SAMPLE RECEIPT CHECKLIST

Company Name Power tech

Date/Time Received 10-2-13 1010

Project \_\_\_\_\_

Received by Dean Ainsworth

Lab Number(s) 401-405 10-2-13

Carrier Name Allen Scott

Yes No

#### UNPACKING

Initials

- 1. Shipping container in good condition? \_\_\_\_\_
- 2. Custody seals present on shipping container?  
Condition: Intact Broken \_\_\_\_\_
- 3. Ice / Blue Ice (circle one) present in shipping container?  
Container(s) Temp. 1. 19.2 2. \_\_\_\_\_ 3. \_\_\_\_\_ 4. \_\_\_\_\_
- 4. Bottles broken and/or leaking? (Photograph broken bottles.) \_\_\_\_\_
- 5. Custody seals on sample bottles?  
Condition: Intact Broken MS \_\_\_\_\_

Yes No

#### LABELING

Initials

- 6. Chain of custody Present? \_\_\_\_\_
- 7. Chain of custody includes signatures, dates, and times when relinquished and received? \_\_\_\_\_
- 8. Chain of custody agrees with bottle count? \_\_\_\_\_
- 9. Chain of custody agrees with labels? \_\_\_\_\_
- 10. Samples received within holding times? \_\_\_\_\_
- 11. Samples in proper container? \_\_\_\_\_
- 12. Sufficient sample volume for indicated tests? \_\_\_\_\_

#### PRESERVATIVE

Yes No

Initials

Yes No

Initials

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> <input type="checkbox"/> 13. Metals bottle(s) pH &lt; 2? _____</li> <li><input type="checkbox"/> <input type="checkbox"/> 14. Nutrient bottle(s) pH &lt; 2? _____</li> <li><input type="checkbox"/> <input type="checkbox"/> 15. Cyanide bottle(s) pH &gt; 12? _____</li> <li><input type="checkbox"/> <input type="checkbox"/> 16. Sulfide bottle(s) pH &gt; 9? _____</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> <input type="checkbox"/> 17. TOC bottle(s) pH &lt; 2? _____</li> <li><input type="checkbox"/> <input type="checkbox"/> 18. Oil &amp; Grease bottle(s) pH &lt; 2? _____</li> <li><input type="checkbox"/> <input type="checkbox"/> 19. Volatiles pH &lt; 2? _____</li> </ul> |
|---|---|

COMMENTS: Radon

\_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

\_\_\_\_\_




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Sample Site: DC-2  
Project Name: Powertech  
Sampled: 11/19/13 at 11:18 AM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20131120401  
Received: 11/20/13 at 01:31 PM  
by Greg McDougall  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	721	pCi/L	1	SM 7500Rn-B	SYS 11/23/13
<b>Precision Data</b>					
Radon-222 Precision	± 160	pCi/L	1	MC-Radon 222 precision	SYS 12/02/13
<b>MDA Data</b>					
Radon-222 MDA	105	pCi/L	1	MC - Radon 222 MDA	SYS 12/02/13

Approved By: 

Approved On: 12/2/2013 4:18:46 PM




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Sample Site: BC-3  
Project Name: Powertech  
Sampled: 11/19/13 at 12:27 PM  
by Allen Scott  
Sample Matrix: Water

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Lab ID#: 20131120402  
Received: 11/20/13 at 01:31 PM  
by Greg McDougall  
Account: w1552 - Powertech Uranium

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	553	pCi/L	1	SM 7500Rn-B	SYS 11/23/13
<b>Precision Data</b>					
Radon-222 Precision	± 132	pCi/L	1	MC-Radon 222 precision	SYS 12/02/13
<b>MDA Data</b>					
Radon-222 MDA	104	pCi/L	1	MC - Radon 222 MDA	SYS 12/02/13

Approved By: 

Approved On: 12/2/2013 4:18:46 PM




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Sample Site: BC-1  
Project Name: Powertech  
Sampled: 11/19/13 at 01:32 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20131120403  
Received: 11/20/13 at 01:31 PM  
by Greg McDougall  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	828	pCi/L	1	SM 7500Rn-B	SYS 11/23/13
<b>Precision Data</b>					
Radon-222 Precision	± 178	pCi/L	1	MC-Radon 222 precision	SYS 12/02/13
<b>MDA Data</b>					
Radon-222 MDA	104	pCi/L	1	MC - Radon 222 MDA	SYS 12/02/13

Approved By: 

Approved On: 12/2/2013 4:18:46 PM




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LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Sample Site: BC-2  
Project Name: Powertech  
Sampled: 11/19/13 at 02:28 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20131120404  
Received: 11/20/13 at 01:31 PM  
by Greg McDougall  
Account: w1552 - Powertech Uranium

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	881	pCi/L	1	SM 7500Rn-B	SYS 11/23/13
<b>Precision Data</b>					
Radon-222 Precision	± 188	pCi/L	1	MC-Radon 222 precision	SYS 12/02/13
<b>MDA Data</b>					
Radon-222 MDA	106	pCi/L	1	MC - Radon 222 MDA	SYS 12/02/13

Approved By: 

Approved On: 12/2/2013 4:18:46 PM




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(605) 348-0111 -- www.thechemistrylab.com

Sample Site: DC-1  
Project Name: Powertech  
Sampled: 11/19/13 at 03:15 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20131120405  
Received: 11/20/13 at 01:31 PM  
by Greg McDougall  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	335	pCi/L	1	SM 7500Rn-B	SYS 11/23/13
<b>Precision Data</b>					
Radon-222 Precision	± 103	pCi/L	1	MC-Radon 222 precision	SYS 12/02/13
<b>MDA Data</b>					
Radon-222 MDA	97.5	pCi/L	1	MC - Radon 222 MDA	SYS 12/02/13

Approved By: 

Approved On: 12/2/2013 4:18:46 PM





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(605) 348-0111 -- www.thechemistrylab.com

Lab Numbers: 20131120401 - 20131120405

## QC Sample Report

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method
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Approved By: \_\_\_\_\_

Printed On: 12/02/2013 04:18 PM



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**CHAIN OF CUSTODY RECORD**

PRESERVED WITH	
FILTERED (Y/N)	
REFRIGERATED (Y/N)	
ANALYSES REQUESTED	As per Order

**FOR LAB USE ONLY**

Seal Intact (Y/N) Number *yr*

Sample Condition *good on ice*

Temperature of Container *8.30r*

REQUESTED TURN AROUND

STANDARD \_\_\_\_\_ RUSH \_\_\_\_\_

Company	Scott Env. / Powertech		
Project Name / Mgr.	Allan Scott / Lisa Scheinart		
Project Number	Powertech all wood wells		
Sampled by	Signature	<i>AS</i>	
Sampled by	Print	Allan Scott	

	SAMPLE NAME	DATE	TIME	MATRIX	NO. OF CONTAINERS	COMMENTS	LAB #
1	DC-2 401	11:18	11-19-13	Water	3		
2	BC-3 402	12:27	11-19-13	II	4		
3	BC-1 403	13:32	11-19-13	II	2		
4	BC-2 404	14:28	11-19-13	7	2		
5	DC-1 405	15:15	11-19-13	II	4		
6							
7							
8	<b>Batch 4 11-20-13</b>						
9							
10							
11							
12							

RELINQUISHED BY (Signature)	COMPANY NAME	DATE	TIME	RECEIVED BY (Signature)	COMPANY NAME	DATE	TIME
<i>AS</i>	Scott Env.	11-20-13	13:31	<i>[Signature]</i>	MCT	11-20-13	13:31

### SAMPLE RECEIPT CHECKLIST

 Company Name PowerTech

 Date/Time Received 11-20-13 1331  
Date / Time

Project \_\_\_\_\_

 Received by Greg McDougall

 Lab Number(s) 401-405 11-20-13

 Carrier Name Allen South
**Yes No**

#### UNPACKING

**Initials**

- |                                     |                                     |  |       |
|-------------------------------------|-------------------------------------|--|-------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 1. Shipping container in good condition?   | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 2. Custody seals present on shipping container?<br>Condition: <u>Intact</u> Broken   | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 3. <u>Ice</u> / Blue Ice (circle one) present in shipping container?<br>Container(s) Temp. 1. <u>8.32</u> 2. _____ 3. _____ 4. _____ | _____ |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 4. Bottles broken and/or leaking? (Photograph broken bottles.)   | _____ |
| <input type="checkbox"/>            | <input type="checkbox"/>            | 5. Custody seals on sample bottles?<br>Condition: Intact Broken <u>MA</u>  | _____ |

**Yes No**

#### LABELING

**Initials**

- |                                     |                          |   |       |
|-------------------------------------|--------------------------|---|-------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 6. Chain of custody Present?  | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 7. Chain of custody includes signatures, dates, and times when relinquished and received? | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 8. Chain of custody agrees with bottle count?   | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 9. Chain of custody agrees with labels?   | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 10. Samples received within holding times?  | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 11. Samples in proper container?  | _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 12. Sufficient sample volume for indicated tests?   | _____ |

#### PRESERVATIVE

**Yes No**
**Initials**
**Yes No**
**Initials**

- |                          |                          |                                      |                          |                          |  |
|--------------------------|--------------------------|--------------------------------------|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | 13. Metals bottle(s) pH < 2? _____   | <input type="checkbox"/> | <input type="checkbox"/> | 17. TOC bottle(s) pH < 2? _____          |
| <input type="checkbox"/> | <input type="checkbox"/> | 14. Nutrient bottle(s) pH < 2? _____ | <input type="checkbox"/> | <input type="checkbox"/> | 18. Oil & Grease bottle(s) pH < 2? _____ |
| <input type="checkbox"/> | <input type="checkbox"/> | 15. Cyanide bottle(s) pH > 12? _____ | <input type="checkbox"/> | <input type="checkbox"/> | 19. Volatiles pH < 2? _____              |
| <input type="checkbox"/> | <input type="checkbox"/> | 16. Sulfide bottle(s) pH > 9? _____  |                          |                          |  |

**COMMENTS:** Radon -222



2381 South Plaza Drive P.O. Box 3388 Rapid City, SD 57709  
(605) 348-0111 -- www.thechemistrylab.com

Sample Site: DC-2  
Project Name: Powertech  
Sampled: 12/16/13 at 01:51 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20131218301  
Received: 12/17/13 at 04:00 PM  
by Greg McDougall  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst/Date
<b>Physical Properties</b>							
Electrical Conductivity	5760	µmhos/cm	1	0.299	5.00	SM 2510B	JAM 12/18/13
pH	7.12	SU	1			SM 4500-H+ B	JAM 12/18/13
Total Dissolved Solids	4550	mg/L	100ml	22.6	50.0	SM 2540 C	TMN 12/18/13
<b>Non-Metallics</b>							
Alkalinity (CaCO3)	272	mg/L	1	0.327	10.0	SM 2320 B	JAM 12/18/13
Bicarbonate	332	mg/L	1	0.399	10.0	SM 2320 B	JAM 12/18/13
Carbonate	0.00	mg/L	1	0.164	5.00	SM 2320 B	JAM 12/18/13
Chloride (Cl-)	857	mg/L	20	5.46	10.0	SM 4500-Cl E	BLL 12/18/13
Fluoride	0.510	mg/L	1	0.003	0.050	SM 4500 F-C	PAT 12/20/13
Nitrogen, Nitrate (NO3)	< 0.050	mg/L	1	0.010	0.050	SM 4500-NO3 F	BLL 12/18/13
Sulfate (SO4)	2020	mg/L	100	68.5	100	SM 4500-SO4 E	BLL 12/18/13
<b>Metals - Dissolved</b>							
Arsenic (As)	< 0.005	mg/L	10	0.0005	0.005	EPA 200.8	SAC 12/18/13
Barium (Ba)	0.013	mg/L	10	0.0002	0.005	EPA 200.8	SAC 12/18/13
Boron (B)	0.355	mg/L	10			EPA 200.8	SAC 12/27/13
Cadmium (Cd)	< 0.001	mg/L	10	0.0004	0.001	EPA 200.8	SAC 12/18/13
Calcium (Ca)	610	mg/L	22	1.05	22.0	SM 3111 B	GRT 12/20/13
Chromium (Cr)	< 0.001	mg/L	10	0.0005	0.001	EPA 200.8 DRC	SAC 12/18/13
Copper (Cu)	0.016	mg/L	10	0.000778	0.005	EPA 200.8	SAC 12/18/13
Iron (Fe)	3.73	mg/L	10	0.004	0.050	EPA 200.8	SAC 12/18/13
Lead (Pb)	< 0.001	mg/L	10	0.000086	0.001	EPA 200.8	SAC 12/18/13
Magnesium (Mg)	152	mg/L	3	0.097	1.50	SM 3111 B	GRT 12/18/13
Manganese (Mn)	2.23	mg/L	10	0.000086	0.010	EPA 200.8	SAC 12/18/13
Molybdenum (Mo)	0.005	mg/L	10	0.000098	0.001	EPA 200.8	SAC 12/18/13
Nickel (Ni)	0.016	mg/L	10	0.0003	0.005	EPA 200.8	SAC 12/18/13
Potassium (K)	7.13	mg/L	1	0.023	0.500	SM 3111 B	GRT 12/18/13
Selenium (Se)	< 0.005	mg/L	10	0.001	0.005	EPA 200.8	SAC 12/18/13
Silver (Ag)	< 0.001	mg/L	10	0.000067	0.001	EPA 200.8	SAC 12/18/13

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst/Date
<b>Metals - Dissolved</b>							
Sodium (Na)	707	mg/L	42	3.87	21.0	SM 3111 B	GRT 12/18/13
Uranium (U)	0.011	mg/L	10	0.000037	0.001	EPA 200.8	SAC 12/18/13
Vanadium (V)	< 0.005	mg/L	10	0.000085	0.005	EPA 200.8	SAC 12/18/13
Zinc (Zn)	< 0.050	mg/L	10	0.003	0.050	EPA 200.8	SAC 12/18/13
<b>Metals - Total</b>							
Mercury (Hg)	0.0003	mg/L	1	0.000035	0.0002	EPA 245.1	GRT 12/18/13
<b>Anion - Cation Balance</b>							
Anions	71.7	meq/L	1			Calculation	GAM 12/30/13
Anion - Cation Balance	1.54	%	1			Calculation	GAM 12/30/13
Cations	74.0	meq/L	1			Calculation	GAM 12/30/13
Electrical Conductivity - Calculated	8870	µS/cm	1			SM 1030	DVA 12/23/13
Total Dissolved Solids - Ratio	1.01	none	1			SM 1030	DVA 12/23/13
<b>Radiological</b>							
Gross Alpha	7.60	pCi/L	1			EPA 900.0	EJF 02/11/14
Gross Beta	17.4	pCi/L	1			EPA 900.0	EJF 02/10/14
Lead-210	0.727	pCi/g	1			EPA 901.1m	SYS 01/15/14
Radium-226	< 1.00	pCi/L	1			MC Radium-226	EJF 01/31/14
Radium-228	1.84	pCi/L	1			MC Radium-228	EJF 01/31/14
Radon-222	644	pCi/L	1			SM 7500Rn-B	SYS 12/23/13
Thorium-230	-0.008	pCi/L	1			HSL-300m	SYS 01/10/14
<b>Precision Data</b>							
Gross Alpha precision	± 3.45	pCi/L	1			MC - Gross Alpha precision	EJF 02/11/14
Gross Beta precision	± 5.82	pCi/L	1			MC - Gross Beta precision	EJF 02/10/14
Lead-210 Precision	± 0.348	pCi/L	1			MC-Lead 210 precision	SYS 01/15/14
Radium-226 precision	± 0.00	pCi/L	1			MC-Radium 226 precision	EJF 01/31/14
Radium-228 precision	± 0.490	pCi/L	1			MC-Radium 228 precision	EJF 01/31/14
Radon-222 Precision	± 174	pCi/L	1			MC-Radon 222 precision	SYS 12/23/13
Thorium-230 Precision	± 0.035	pCi/L	1			MC-Thorium 230 precision	SYS 01/10/14
<b>MDA Data</b>							
Gross Alpha MDA	10.9	pCi/L	1			MC - Gross Alpha MDA	EJF 02/11/14
Gross Beta MDA	18.6	pCi/L	1			MC - Gross Beta MDA	EJF 02/10/14
Lead-210 MDA	0.541	pCi/L	1			MC - Lead 210 MDA	SYS 01/15/14
Radium-226 MDA	0.012	pCi/L	1			MC - Radium 226 MDA	EJF 01/31/14
Radium-228 MDA	0.998	pCi/L	1			MC - Radium 228 MDA	EJF 01/31/14
Radon-222 MDA	164	pCi/L	1			MC - Radon 222 MDA	SYS 12/23/13
Thorium-230 MDA	0.056	pCi/L	1			MC - Thorium 230 MDA	SYS 01/10/14

Approved By: \_\_\_\_\_






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Sample Site: BC-2  
Project Name: Powertech  
Sampled: 12/16/13 at 03:38 PM  
by Allen Scott  
Sample Matrix: Water

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Lab ID#: 20131218302  
Received: 12/17/13 at 04:00 PM  
by Greg McDougall  
Account: w1552 - Powertech Uranium

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	868	pCi/L	1	SM 7500Rn-B	SYS 12/23/13
<b>Precision Data</b>					
Radon-222 Precision	± 209	pCi/L	1	MC-Radon 222 precision	SYS 12/23/13
<b>MDA Data</b>					
Radon-222 MDA	162	pCi/L	1	MC - Radon 222 MDA	SYS 12/23/13

Approved By: 

Approved On: 1/29/2014 11:33:31 AM



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Sample Site: BC-1  
Project Name: Powertech  
Sampled: 12/16/13 at 04:39 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20131218303  
Received: 12/17/13 at 04:00 PM  
by Greg McDougall  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst/Date
<b>Physical Properties</b>							
Electrical Conductivity	3560	µmhos/cm	1	0.299	5.00	SM 2510B	JAM 12/18/13
pH	7.00	SU	1			SM 4500-H+ B	JAM 12/18/13
Total Dissolved Solids	3550	mg/L	100ml	22.6	50.0	SM 2540 C	TMN 12/18/13
<b>Non-Metallics</b>							
Alkalinity (CaCO3)	291	mg/L	1	0.327	10.0	SM 2320 B	JAM 12/18/13
Bicarbonate	355	mg/L	1	0.399	10.0	SM 2320 B	JAM 12/18/13
Carbonate	0.00	mg/L	1	0.164	5.00	SM 2320 B	JAM 12/18/13
Chloride (Cl-)	20.3	mg/L	1	0.273	0.500	SM 4500-Cl E	BLL 12/18/13
Fluoride	0.478	mg/L	1	0.003	0.050	SM 4500 F-C	PAT 12/20/13
Nitrogen, Nitrate (NO3)	0.057	mg/L	1	0.010	0.050	SM 4500-NO3 F	BLL 12/18/13
Sulfate (SO4)	2350	mg/L	50	34.2	50.0	SM 4500-SO4 E	BLL 12/18/13
<b>Metals - Dissolved</b>							
Arsenic (As)	< 0.005	mg/L	10	0.0005	0.005	EPA 200.8	SAC 12/18/13
Barium (Ba)	0.008	mg/L	10	0.0002	0.005	EPA 200.8	SAC 12/18/13
Boron (B)	0.745	mg/L	10			EPA 200.8	SAC 12/27/13
Cadmium (Cd)	< 0.001	mg/L	10	0.0004	0.001	EPA 200.8	SAC 12/18/13
Calcium (Ca)	551	mg/L	20	0.958	20.0	SM 3111 B	GRT 12/18/13
Chromium (Cr)	< 0.001	mg/L	10	0.0005	0.001	EPA 200.8 DRC	SAC 12/18/13
Copper (Cu)	< 0.005	mg/L	10	0.000778	0.005	EPA 200.8	SAC 12/18/13
Iron (Fe)	0.130	mg/L	10	0.004	0.050	EPA 200.8	SAC 12/18/13
Lead (Pb)	< 0.001	mg/L	10	0.000086	0.001	EPA 200.8	SAC 12/18/13
Magnesium (Mg)	241	mg/L	8	0.258	4.00	SM 3111 B	GRT 12/18/13
Manganese (Mn)	0.025	mg/L	10	0.000086	0.010	EPA 200.8	SAC 12/18/13
Molybdenum (Mo)	0.006	mg/L	10	0.000098	0.001	EPA 200.8	SAC 12/18/13
Nickel (Ni)	0.016	mg/L	10	0.0003	0.005	EPA 200.8	SAC 12/18/13
Potassium (K)	11.5	mg/L	2	0.047	1.00	SM 3111 B	GRT 12/18/13
Selenium (Se)	< 0.005	mg/L	10	0.001	0.005	EPA 200.8	SAC 12/18/13
Silver (Ag)	< 0.001	mg/L	10	0.000067	0.001	EPA 200.8	SAC 12/18/13

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst/Date
<b>Metals - Dissolved</b>							
Sodium (Na)	178	mg/L	11	1.01	5.50	SM 3111 B	GRT 12/18/13
Uranium (U)	0.097	mg/L	10	0.000037	0.001	EPA 200.8	SAC 12/18/13
Vanadium (V)	< 0.005	mg/L	10	0.000085	0.005	EPA 200.8	SAC 12/18/13
Zinc (Zn)	< 0.050	mg/L	10	0.003	0.050	EPA 200.8	SAC 12/18/13
<b>Metals - Total</b>							
Mercury (Hg)	< 0.0002	mg/L	1	0.000035	0.0002	EPA 245.1	GRT 12/18/13
<b>Anion - Cation Balance</b>							
Anions	55.3	meq/L	1			Calculation	GAM 12/30/13
Anion - Cation Balance	0.022	%	1			Calculation	GAM 12/30/13
Cations	55.3	meq/L	1			Calculation	GAM 12/30/13
Electrical Conductivity - Calculated	6670	µS/cm	1			SM 1030	DVA 12/23/13
Total Dissolved Solids - Ratio	1.01	none	1			SM 1030	DVA 12/23/13
<b>Radiological</b>							
Gross Alpha	66.6	pCi/L	1			EPA 900.0	EJF 02/12/14
Gross Beta	57.8	pCi/L	1			EPA 900.0	EJF 02/10/14
Lead-210	0.353	pCi/g	1			EPA 901.1m	SYS 01/15/14
Radium-226	0.254	pCi/L	1			MC Radium-226	EJF 02/03/14
Radium-228	0.723	pCi/L	1			MC Radium-228	EJF 02/03/14
Radon-222	817	pCi/L	1			SM 7500Rn-B	SYS 12/23/13
Thorium-230	0.015	pCi/L	1			HSL-300m	SYS 01/10/14
<b>Precision Data</b>							
Gross Alpha precision	± 5.89	pCi/L	1			MC - Gross Alpha precision	EJF 02/12/14
Gross Beta precision	± 6.50	pCi/L	1			MC - Gross Beta precision	EJF 02/10/14
Lead-210 Precision	± 0.335	pCi/L	1			MC-Lead 210 precision	SYS 01/15/14
Radium-226 precision	± 0.143	pCi/L	1			MC-Radium 226 precision	EJF 02/03/14
Radium-228 precision	± 0.229	pCi/L	1			MC-Radium 228 precision	EJF 02/03/14
Radon-222 Precision	± 201	pCi/L	1			MC-Radon 222 precision	SYS 12/23/13
Thorium-230 Precision	± 0.055	pCi/L	1			MC-Thorium 230 precision	SYS 01/10/14
<b>MDA Data</b>							
Gross Alpha MDA	12.8	pCi/L	1			MC - Gross Alpha MDA	EJF 02/12/14
Gross Beta MDA	17.6	pCi/L	1			MC - Gross Beta MDA	EJF 02/10/14
Lead-210 MDA	0.554	pCi/L	1			MC - Lead 210 MDA	SYS 01/15/14
Radium-226 MDA	0.292	pCi/L	1			MC - Radium 226 MDA	EJF 02/03/14
Radium-228 MDA	0.485	pCi/L	1			MC - Radium 228 MDA	EJF 02/03/14
Radon-222 MDA	161	pCi/L	1			MC - Radon 222 MDA	SYS 12/23/13
Thorium-230 MDA	0.106	pCi/L	1			MC - Thorium 230 MDA	SYS 01/10/14

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Sample Site: BC-3  
Project Name: Powertech  
Sampled: 12/16/13 at 06:00 PM  
by Allen Scott  
Sample Matrix: Water

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Lab ID#: 20131218304  
Received: 12/17/13 at 04:00 PM  
by Greg McDougall  
Account: w1552 - Powertech Uranium

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	539	pCi/L	1	SM 7500Rn-B	SYS 12/23/13
<b>Precision Data</b>					
Radon-222 Precision	± 156	pCi/L	1	MC-Radon 222 precision	SYS 12/23/13
<b>MDA Data</b>					
Radon-222 MDA	160	pCi/L	1	MC - Radon 222 MDA	SYS 12/23/13

Approved By: 

Approved On: 1/29/2014 11:33:31 AM




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Sample Site: DC-1  
Project Name: Powertech  
Sampled: 12/17/13 at 11:40 AM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20131218305  
Received: 12/17/13 at 04:00 PM  
by Greg McDougall  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	474	pCi/L	1	SM 7500Rn-B	SYS 12/23/13
<b>Precision Data</b>					
Radon-222 Precision	± 137	pCi/L	1	MC-Radon 222 precision	SYS 12/23/13
<b>MDA Data</b>					
Radon-222 MDA	140	pCi/L	1	MC - Radon 222 MDA	SYS 12/23/13

Approved By: 

Approved On: 1/29/2014 11:33:31 AM



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Lab Numbers: 20131218301 - 20131218305

### QC Sample Report

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method	
<b>Spike</b>									
TDS	1217939	7230	6070	1000	100ml	116.8 %	(87.13) - (116.1)	SM 2540 C	X
- matrix interference.									
TDS	1219202	1720	742	1000	100ml	97.7 %	(85.03) - (120.0)	SM 2540 C	
TDS	1219212	2180	1130	1000	100ml	105.0 %	(85.03) - (120.0)	SM 2540 C	
Chloride	1218303	25.7	20.3	5.00	1	106.6 %	(92.38) - (107.5)	SM 4500-CI E	
Fluoride	1220201	5.00	3.98	1.00	1	102.0 %	(79.14) - (112.9)	SM 4500 F-C	
N, Nitrate	1218315	0.486	0.083	0.400	1	100.8 %	(87.41) - (110.0)	SM 4500-NO3 F	
N, Nitrate	1218108	28.5	21.1	0.400	20	93.5 %	(87.41) - (110.0)	SM 4500-NO3 F	
N, Nitrate	1218413	0.414	0.004	0.400	1	102.5 %	(87.41) - (110.0)	SM 4500-NO3 F	
N, Nitrate	1218308	2.48	1.69	0.400	2	97.8 %	(87.41) - (110.0)	SM 4500-NO3 F	
Sulfate	1218103	324	253	19.2	4	104.6 %	(88.39) - (114.9)	SM 4500-SO4 E	
Sulfate	1219105	32.5	12.5	19.2	1	106.8 %	(88.38) - (114.9)	SM 4500-SO4 E	
Arsenic - D	1218102	0.252	< 0.005	0.025	10	100.9 %	(88.34) - (113.5)	EPA 200.8	
Boron - D	0801301	0.259	0.036	0.025	10	89.1 %	(70.87) - (138.5)	EPA 200.8	
Cadmium - D	1218102	0.253	< 0.001	0.025	10	101.1 %	(91.25) - (108.5)	EPA 200.8	
Calcium - D	1218303	643	551	10.0	10	91.5 %	(83.23) - (119.8)	SM 3111 B	
Calcium - D	1219106	248	151	10.0	10	97.9 %	(83.63) - (121.1)	SM 3111 B	
Chromium - D	1218315	0.257	< 0.001	0.025	10	102.8 %	(86.12) - (108.4)	EPA 200.8 DRC	
Chromium - D	1218410	0.256	< 0.001	0.025	10	102.3 %	(86.12) - (108.4)	EPA 200.8 DRC	
Chromium - D	1218314	0.285	0.052	0.025	10	93.1 %	(86.12) - (108.4)	EPA 200.8 DRC	
Chromium - D	1218102	0.274	< 0.001	0.025	10	109.5 %	(86.12) - (108.4)	EPA 200.8 DRC	X
- Result is within QC guidelines of 90 - 110%									
Copper - D	1218102	0.254	< 0.005	0.025	10	101.7 %	(87.99) - (106.8)	EPA 200.8	
Iron - D	1218102	1.35	< 0.050	0.125	10	108.2 %	(83.87) - (108.0)	EPA 200.8	X
- Result is within QC guidelines of 90 - 110%									
Lead - D	1218102	0.254	< 0.001	0.025	10	101.4 %	(92.04) - (106.0)	EPA 200.8	
Magnesium - D	1218303	336	241	10.0	10	95.4 %	(80.46) - (115.3)	SM 3111 B	
Nickel - D	1218102	0.249	< 0.005	0.025	10	99.50%	(88.93) - (107.2)	EPA 200.8	
Potassium - D	1218303	14.7	11.5	3.00	1	106.7 %	(83.73) - (113.8)	SM 3111 B	
Potassium - D	1218303	41.9	11.5	3.00	10	101.4 %	(83.73) - (113.8)	SM 3111 B	
Selenium - D	1218102	1.20	< 0.005	0.125	10	96.1 %	(88.67) - (115.5)	EPA 200.8	
Silver - D	1218102	0.268	< 0.001	0.025	10	107.2 %	(90.38) - (105.7)	EPA 200.8	X
- Result is within QC guidelines of 90 - 110%									
Sodium - D	1218303	223	178	5.00	10	91.1 %	(84.89) - (118.6)	SM 3111 B	
Zinc - D	1218102	0.275	< 0.050	0.025	10	110.1 %	(90.65) - (123.0)	EPA 200.8	
Mercury - T	1218201	0.0018	< 0.0002	0.002	1	92.0 %	(85.87) - (115.4)	EPA 245.1	
Gross Alpha	1218303	77.1	66.6	10.0	1	104.6 %		EPA 900.0	
Gross Beta	1218303	67.2	57.8	10.0	1	93.9 %		EPA 900.0	

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method	
<b>Spike</b>									
Radium-226	1218301	9.07	< 1.00	10.0	1	90.7 %		MC Radium-226	
Radium-228	1218301	11.2	1.84	10.0	1	93.4 %		MC Radium-228	
<b>Matrix Spike Duplicate</b>									
Chloride	1218303	25.7	25.7		1	0.272%	(-4.646) - (5.436)	SM 4500-Cl E	
Fluoride	1220201	5.03	5.00		1	0.598%	(-5.556) - (5.181)	SM 4500 F-C	
N, Nitrate	1218413	0.390	0.414		1	-5.97%	(-5.767) - (4.819)	SM 4500-NO3 F X	
- Recovery was within 10% of expected value									
N, Nitrate	1218308	2.41	2.48		2	-2.54%	(-5.767) - (4.819)	SM 4500-NO3 F	
N, Nitrate	1218108	28.2	28.5		20	-1.09%	(-5.767) - (4.819)	SM 4500-NO3 F	
N, Nitrate	1218315	0.489	0.486		1	0.615%	(-5.767) - (4.819)	SM 4500-NO3 F	
Sulfate	1218103	324	324		4	0.154%	(-5.065) - (4.574)	SM 4500-SO4 E	
Sulfate	1219105	33.4	32.5		1	2.67%	(-5.062) - (4.534)	SM 4500-SO4 E	
Arsenic - D	1218102	0.263	0.252		10	4.33%	(-4.798) - (4.461)	EPA 200.8	
Boron - D	0801301	0.277	0.259		10	6.98%	(-7.205) - (9.775)	EPA 200.8	
Cadmium - D	1218102	0.257	0.253		10	1.56%	(-3.834) - (2.997)	EPA 200.8	
Calcium - D	1218303	637	643		10	-0.886%	(-11.40) - (15.93)	SM 3111 B	
Calcium - D	1219106	231	248		10	-7.21%	(-15.42) - (18.41)	SM 3111 B	
Chromium - D	1218410	0.259	0.256		10	1.24%	(-3.148) - (3.078)	EPA 200.8 DRC	
Chromium - D	1218314	0.284	0.285		10	-0.232%	(-3.148) - (3.078)	EPA 200.8 DRC	
Chromium - D	1218315	0.262	0.257		10	1.70%	(-3.148) - (3.078)	EPA 200.8 DRC	
Chromium - D	1218102	0.261	0.274		10	-4.76%	(-3.148) - (3.078)	EPA 200.8 DRC X	
- Recovery was within 10% of expected value									
Copper - D	1218102	0.258	0.254		10	1.62%	(-3.978) - (3.264)	EPA 200.8	
Iron - D	1218102	1.31	1.35		10	-3.12%	(-3.391) - (3.074)	EPA 200.8	
Lead - D	1218102	0.253	0.254		10	-0.269%	(-2.728) - (3.045)	EPA 200.8	
Magnesium - D	1218303	328	336		10	-2.49%	(-10.61) - (11.03)	SM 3111 B	
Nickel - D	1218102	0.254	0.249		10	1.90%	(-4.248) - (4.178)	EPA 200.8	
Potassium - D	1218303	41.8	41.9		10	-0.215%	(-8.811) - (7.592)	SM 3111 B	
Potassium - D	1218303	14.7	14.7		1	0.204%	(-8.811) - (7.592)	SM 3111 B	
Selenium - D	1218102	1.24	1.20		10	2.79%	(-4.325) - (5.119)	EPA 200.8	
Silver - D	1218102	0.273	0.268		10	1.90%	(-3.758) - (3.653)	EPA 200.8	
Sodium - D	1218303	227	223		10	1.69%	(-9.402) - (9.006)	SM 3111 B	
Zinc - D	1218102	0.284	0.275		10	3.14%	(-3.566) - (3.715)	EPA 200.8	
Mercury - T	1218201	0.0018	0.0018		1	-4.44%	(-17.90) - (14.87)	EPA 245.1	
<b>Duplicate</b>									
Conductivity	1218303	3570	3560		1	0.281%	(-0.8609) - (0.8327)	SM 2510B	
Conductivity	1217937	876	885		1	-1.02%	(-0.8609) - (0.8327)	SM 2510B X	
- Recovery was within 10% of expected value									
Conductivity	1218301	5780	5760		1	0.347%	(-0.8609) - (0.8327)	SM 2510B	
pH	1217938	7.75	7.76		1	-0.129%	(-3.131) - (2.905)	SM 4500-H+ B	
TDS	1218110	545	542	100ml		0.552%	(-7.708) - (10.02)	SM 2540 C	
TDS	1219207	863	852	100ml		1.28%	(-7.736) - (10.01)	SM 2540 C	
TDS	1219103	1520	1550	100ml		-1.76%	(-7.736) - (10.01)	SM 2540 C	
Alkalinity	1217938	331	330		1	0.303%	(-3.452) - (2.726)	SM 2320 B	

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method
<b>Duplicate</b>								
Bicarbonate	1217938	404	402		1	0.496%	(-3.620) - (2.721)	SM 2320 B
Carbonate	1217938	0.00	0.00		1	0.00%	(-12.32) - (11.58)	SM 2320 B
Chloride	1218303	20.9	20.3		1	2.86%	(-8.914) - (5.464)	SM 4500-CI E
N, Nitrate	1218413	< 0.050	< 0.050		1	0.00%	(-4.229) - (2.147)	SM 4500-NO3 F
N, Nitrate	1218315	0.083	0.088		1	-5.85%	(-4.229) - (2.147)	SM 4500-NO3 F X
- Recovery was within 10% of expected value								
N, Nitrate	1218108	21.1	21.3		20	-0.936%	(-4.229) - (2.147)	SM 4500-NO3 F
N, Nitrate	1218406	< 0.050	< 0.050		1	0.00%	(-4.229) - (2.147)	SM 4500-NO3 F
N, Nitrate	1218308	1.69	1.71		2	-0.824%	(-4.229) - (2.147)	SM 4500-NO3 F
Sulfate	1218103	252	253		4	-0.491%	(-2.447) - (2.142)	SM 4500-SO4 E
Sulfate	1219105	12.5	12.5		1	-0.480%	(-2.311) - (2.075)	SM 4500-SO4 E

**Initial Calibration Verification**

Conductivity		292	306		1	-4.58%	(-11.93) - (4.272)	SM 2510B
Chloride		25.5	25.0		1	2.16%	(-15.77) - (16.38)	SM 4500-CI E
Fluoride		0.395	0.400		1	-1.25%	(-5.463) - (3.738)	SM 4500 F-C
N, Nitrate		1.00	1.00		1	0.100%	(-7.482) - (6.562)	SM 4500-NO3 F
Sulfate		55.3	50.0		1	10.5 %	(-4.945) - (13.65)	SM 4500-SO4 E
Sulfate		51.2	50.0		1	2.40%	(-4.963) - (14.64)	SM 4500-SO4 E
Arsenic - D		0.052	0.050		1	4.86%	(-1.165) - (11.77)	EPA 200.8
Barium - D		0.051	0.050		1	2.46%	(-8.309) - (15.05)	EPA 200.8
Boron - D		0.049	0.050		1	-2.12%	(-16.78) - (25.61)	EPA 200.8
Cadmium - D		0.053	0.050		1	6.22%	(-2.145) - (12.35)	EPA 200.8
Chromium - D		0.053	0.050		1	5.48%	(-3.889) - (12.85)	EPA 200.8 DRC
Copper - D		0.053	0.050		1	5.92%	(-2.963) - (13.63)	EPA 200.8
Iron - D		0.254	0.250		1	1.43%	(-11.06) - (12.09)	EPA 200.8
Lead - D		0.054	0.050		1	7.04%	(-3.185) - (14.29)	EPA 200.8
Manganese - D		0.053	0.050		1	6.56%	(-3.042) - (12.53)	EPA 200.8
Molybdenum - D		0.053	0.050		1	5.92%	(-6.262) - (12.33)	EPA 200.8
Nickel - D		0.053	0.050		1	6.46%	(-3.577) - (14.25)	EPA 200.8
Selenium - D		0.266	0.250		1	6.37%	(-0.1039) - (12.43)	EPA 200.8
Silver - D		0.051	0.050		1	1.18%	(-6.717) - (13.10)	EPA 200.8
Uranium - D		0.055	0.050		1	9.64%	(-3.573) - (15.85)	EPA 200.8
Vanadium - D		0.053	0.050		1	6.82%	(-7.141) - (9.937)	EPA 200.8
Zinc - D		0.053	0.050		1	5.46%	(-1.940) - (11.24)	EPA 200.8
Mercury - T		0.0031	0.0030		1	2.67%	(-14.57) - (14.58)	EPA 245.1

**Continuing Calibration Verification**

Conductivity		474	483		1	-1.86%	(-8.257) - (3.811)	SM 2510B
pH		9.93	10.0		1	-0.700%	(-1.900) - (1.978)	SM 4500-H+ B
pH		4.06	4.00		1	1.50%	(-1.900) - (1.978)	SM 4500-H+ B
pH		6.98	7.00		1	-0.286%	(-1.900) - (1.978)	SM 4500-H+ B
TDS		990	1000	100ml		-1.00%	(-7.585) - (4.275)	SM 2540 C
TDS		978	1000	100ml		-2.20%	(-7.517) - (4.337)	SM 2540 C
Alkalinity		104	106		1	-2.21%	(-5.455) - (0.2043)	SM 2320 B
Alkalinity		103	106		1	-2.77%	(-5.455) - (0.2043)	SM 2320 B

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method
<b>Continuing Calibration Verification</b>								
Chloride		25.7	25.0		1	2.60%	(-6.679) - (14.26)	SM 4500-CI E
Chloride		25.7	25.0		1	2.76%	(-6.679) - (14.26)	SM 4500-CI E
Fluoride		4.81	5.00		1	-3.80%	(-8.922) - (3.742)	SM 4500 F-C
Fluoride		0.388	0.400		1	-3.00%	(-8.922) - (3.742)	SM 4500 F-C
Fluoride		4.99	5.00		1	-0.200%	(-8.922) - (3.742)	SM 4500 F-C
N, Nitrate		0.997	1.00		1	-0.300%	(-3.942) - (6.832)	SM 4500-NO3 F
N, Nitrate		1.01	1.00		1	1.30%	(-3.942) - (6.832)	SM 4500-NO3 F
N, Nitrate		1.01	1.00		1	1.10%	(-3.942) - (6.832)	SM 4500-NO3 F
N, Nitrate		1.01	1.00		1	1.00%	(-3.942) - (6.832)	SM 4500-NO3 F
N, Nitrate		1.03	1.00		1	2.70%	(-3.942) - (6.832)	SM 4500-NO3 F
Sulfate		52.0	50.0		1	3.96%	(-5.957) - (14.03)	SM 4500-SO4 E
Sulfate		51.4	50.0		1	2.70%	(-5.831) - (14.05)	SM 4500-SO4 E
Sulfate		51.6	50.0		1	3.18%	(-5.831) - (14.05)	SM 4500-SO4 E
Arsenic - D		0.049	0.050		1	-2.32%	(-12.79) - (5.418)	EPA 200.8
Arsenic - D		0.049	0.050		1	-2.94%	(-12.79) - (5.418)	EPA 200.8
Arsenic - D		0.049	0.050		1	-1.70%	(-12.79) - (5.418)	EPA 200.8
Barium - D		0.049	0.050		1	-2.08%	(-8.132) - (10.78)	EPA 200.8
Barium - D		0.051	0.050		1	1.60%	(-8.132) - (10.78)	EPA 200.8
Boron - D		0.051	0.050		1	1.80%	(-16.11) - (18.81)	EPA 200.8
Boron - D		0.052	0.050		1	3.20%	(-16.11) - (18.81)	EPA 200.8
Boron - D		0.052	0.050		1	3.80%	(-16.11) - (18.81)	EPA 200.8
Cadmium - D		0.049	0.050		1	-1.18%	(-11.88) - (8.763)	EPA 200.8
Cadmium - D		0.049	0.050		1	-1.96%	(-11.88) - (8.763)	EPA 200.8
Cadmium - D		0.049	0.050		1	-1.70%	(-11.88) - (8.763)	EPA 200.8
Calcium - D		24.7	25.0		1	-1.24%	(-9.177) - (12.08)	SM 3111 B
Calcium - D		25.0	25.0		1	-0.160%	(-9.177) - (12.08)	SM 3111 B
Calcium - D		24.4	25.0		1	-2.32%	(-9.177) - (12.08)	SM 3111 B
Calcium - D		24.8	25.0		1	-0.760%	(-9.177) - (12.08)	SM 3111 B
Calcium - D		24.5	25.0		1	-1.88%	(-5.234) - (7.282)	SM 3111 B
Calcium - D		23.7	25.0		1	-5.08%	(-5.234) - (7.282)	SM 3111 B
Chromium - D		0.047	0.050		1	-6.84%	(-11.02) - (16.47)	EPA 200.8 DRC
Chromium - D		0.051	0.050		1	1.78%	(-11.02) - (16.47)	EPA 200.8 DRC
Chromium - D		0.051	0.050		1	2.58%	(-11.02) - (16.47)	EPA 200.8 DRC
Chromium - D		0.049	0.050		1	-2.88%	(-11.02) - (16.47)	EPA 200.8 DRC
Chromium - D		0.052	0.050		1	3.08%	(-11.02) - (16.47)	EPA 200.8 DRC
Copper - D		0.051	0.050		1	1.72%	(-8.938) - (10.27)	EPA 200.8
Copper - D		0.049	0.050		1	-2.58%	(-8.938) - (10.27)	EPA 200.8
Copper - D		0.051	0.050		1	1.32%	(-8.938) - (10.27)	EPA 200.8
Iron - D		0.232	0.250		1	-7.00%	(-14.82) - (10.93)	EPA 200.8
Iron - D		0.248	0.250		1	-0.800%	(-14.82) - (10.93)	EPA 200.8
Iron - D		0.238	0.250		1	-4.63%	(-14.82) - (10.93)	EPA 200.8
Lead - D		0.049	0.050		1	-1.50%	(-9.252) - (6.692)	EPA 200.8
Lead - D		0.050	0.050		1	-0.840%	(-9.252) - (6.692)	EPA 200.8
Lead - D		0.049	0.050		1	-2.36%	(-9.252) - (6.692)	EPA 200.8
Magnesium - D		24.6	25.0		1	-1.76%	(-8.538) - (3.990)	SM 3111 B
Magnesium - D		24.7	25.0		1	-1.04%	(-8.538) - (3.990)	SM 3111 B

<b>Parameter</b>	<b>Lab#</b>	<b>QC Value</b>	<b>Smp Value</b>	<b>Spike</b>	<b>DF</b>	<b>Result</b>	<b>Limits</b>	<b>Method</b>	
<b>Continuing Calibration Verification</b>									
Magnesium - D		24.4	25.0		1	-2.52%	(-8.538) - (3.990)	SM 3111 B	
Magnesium - D		25.3	25.0		1	1.32%	(-8.538) - (3.990)	SM 3111 B	
Manganese - D		0.046	0.050		1	-7.28%	(-14.63) - (8.746)	EPA 200.8	
Manganese - D		0.049	0.050		1	-2.24%	(-14.63) - (8.746)	EPA 200.8	
Molybdenum - D		0.049	0.050		1	-2.20%	(-18.52) - (19.81)	EPA 200.8	
Molybdenum - D		0.049	0.050		1	-2.72%	(-18.52) - (19.81)	EPA 200.8	
Nickel - D		0.049	0.050		1	-1.16%	(-9.015) - (10.83)	EPA 200.8	
Nickel - D		0.049	0.050		1	-2.10%	(-9.015) - (10.83)	EPA 200.8	
Nickel - D		0.050	0.050		1	0.300%	(-9.015) - (10.83)	EPA 200.8	
Potassium - D		5.00	5.00		1	0.00%	(-13.99) - (5.293)	SM 3111 B	
Potassium - D		4.96	5.00		1	-0.800%	(-13.99) - (5.293)	SM 3111 B	
Potassium - D		5.09	5.00		1	1.80%	(-13.99) - (5.293)	SM 3111 B	
Selenium - D		0.233	0.250		1	-6.70%	(-16.03) - (6.044)	EPA 200.8	
Selenium - D		0.242	0.250		1	-3.40%	(-16.03) - (6.044)	EPA 200.8	
Selenium - D		0.245	0.250		1	-2.16%	(-16.03) - (6.044)	EPA 200.8	
Silver - D		0.049	0.050		1	-2.76%	(-12.84) - (11.57)	EPA 200.8	
Silver - D		0.055	0.050		1	9.54%	(-12.84) - (11.57)	EPA 200.8	
- Recovery was within 10% of expected value									
Silver - D		0.049	0.050		1	-1.46%	(-12.84) - (11.57)	EPA 200.8	
Sodium - D		14.5	15.0		1	-3.20%	(-7.792) - (3.859)	SM 3111 B	
Sodium - D		13.9	15.0		1	-7.60%	(-7.792) - (3.859)	SM 3111 B	
Sodium - D		13.8	15.0		1	-8.20%	(-7.792) - (3.859)	SM 3111 B	
- Recovery was within 10% of expected value									
Sodium - D		14.7	15.0		1	-1.93%	(-7.792) - (3.859)	SM 3111 B	
Uranium - D		0.049	0.050		1	-2.30%	(-15.53) - (11.39)	EPA 200.8	
Uranium - D		0.051	0.050		1	1.52%	(-15.53) - (11.39)	EPA 200.8	
Vanadium - D		0.048	0.050		1	-3.68%	(-14.10) - (7.512)	EPA 200.8	
Vanadium - D		0.049	0.050		1	-1.74%	(-14.10) - (7.512)	EPA 200.8	
Zinc - D		0.049	0.050		1	-2.22%	(-10.88) - (11.17)	EPA 200.8	
Zinc - D		0.049	0.050		1	-1.62%	(-10.88) - (11.17)	EPA 200.8	
Zinc - D		0.049	0.050		1	-1.26%	(-10.88) - (11.17)	EPA 200.8	
Mercury - T		0.0019	0.0020		1	-5.50%	(-15.48) - (8.979)	EPA 245.1	
Mercury - T		0.0048	0.0050		1	-4.60%	(-15.48) - (8.979)	EPA 245.1	
Mercury - T		0.0009	0.0010		1	-6.00%	(-15.48) - (8.979)	EPA 245.1	
Gross Alpha		495	500		1	-0.960%		EPA 900.0	
Gross Beta		12100	13600		1	-10.9 %		EPA 900.0	
Radium-226		9920	10200		1	-2.96%		MC Radium-226	
Radium-228		10200	10300		1	-0.660%		MC Radium-228	
<b>Lab Fortified Blank</b>									
Gross Alpha		9.54	0.00	10.0	1	95.4 %		EPA 900.0	
Gross Beta		10.3	0.00	10.0	1	102.7 %		EPA 900.0	
Radium-226		9.99	0.00	10.0	1	99.89%		MC Radium-226	
Radium-228		10.9	0.00	10.0	1	109.2 %		MC Radium-228	

X

<b>Parameter</b>	<b>Lab#</b>	<b>QC Value</b>	<b>Smp Value</b>	<b>Spike</b>	<b>DF</b>	<b>Result</b>	<b>Limits</b>	<b>Method</b>
<b><u>Initial Calibration Blank</u></b>								
Conductivity		0.700	0.00		1	0.7	(0.0360) - (1.104)	SM 2510B
Alkalinity		2.24	0.00		1	2.24	(0.6216) - (3.128)	SM 2320 B
Chloride		0.340	0.00		1	0.34	(-0.4704) - (1.021)	SM 4500-Cl E
Fluoride		0.008	0.00		1	0.008	(0.0024) - (0.0127)	SM 4500 F-C
N, Nitrate		-0.006	0.00		1	0.006	(-0.0122) - (0.0271)	SM 4500-NO3 F
Sulfate		2.32	0.00		1	2.32	(0.7541) - (2.993)	SM 4500-SO4 E
Sulfate		1.33	0.00		1	1.33	(0.8625) - (2.842)	SM 4500-SO4 E
Mercury - T		0.0000	0.000		1	-0.00004	(-0.0002) - (0.0002)	EPA 245.1
<b><u>Continuing Calibration Blank</u></b>								
Conductivity		0.700	0.00		1	0.7	(0.0654) - (1.005)	SM 2510B
TDS		-14.0	0.00		100ml	-14	(-36.23) - (29.53)	SM 2540 C
TDS		-14.0	0.00		100ml	-14	(-36.43) - (29.63)	SM 2540 C
Alkalinity		1.88	0.00		1	1.88	(1.171) - (2.545)	SM 2320 B
Chloride		0.310	0.00		1	0.31	(-0.5062) - (1.341)	SM 4500-Cl E
Chloride		0.350	0.00		1	0.35	(-0.5062) - (1.341)	SM 4500-Cl E
Fluoride		0.007	0.00		1	0.007	(-0.0006) - (0.0131)	SM 4500 F-C
N, Nitrate		-0.006	0.00		1	0.006	(-0.0053) - (0.0244)	SM 4500-NO3 F
N, Nitrate		-0.007	0.00		1	0.007	(-0.0053) - (0.0244)	SM 4500-NO3 F
N, Nitrate		0.00	0.00		1	0	(-0.0053) - (0.0244)	SM 4500-NO3 F
N, Nitrate		0.001	0.00		1	0.001	(-0.0053) - (0.0244)	SM 4500-NO3 F
N, Nitrate		0.006	0.00		1	0.006	(-0.0053) - (0.0244)	SM 4500-NO3 F
Sulfate		2.21	0.00		1	2.21	(0.8774) - (2.973)	SM 4500-SO4 E
Sulfate		1.73	0.00		1	1.73	(0.8720) - (3.001)	SM 4500-SO4 E
Sulfate		1.67	0.00		1	1.67	(0.8720) - (3.001)	SM 4500-SO4 E
Arsenic - D		0.000	0.00		1	0.00002	(-0.0005) - (0.0005)	EPA 200.8
Barium - D		0.000	0.00		1	0.00001	(-0.0001) - (0.0002)	EPA 200.8
Boron - D		0.001	0.00		1	0.00068	(-0.0003) - (0.0020)	EPA 200.8
Cadmium - D		0.000	0.00		1	0.00002	(-0.0005) - (0.0005)	EPA 200.8
Calcium - D		0.020	0.00		1	0.02	(-0.0595) - (0.1365)	SM 3111 B
Calcium - D		-0.010	0.00		1	-0.01	(-0.0595) - (0.1365)	SM 3111 B
Calcium - D		-0.020	0.00		1	-0.02	(-0.0595) - (0.1365)	SM 3111 B
Calcium - D		0.050	0.00		1	0.05	(-0.0667) - (0.0967)	SM 3111 B
Chromium - D		0.000	0.00		1	0.00001	(-0.0002) - (0.0002)	EPA 200.8 DRC
Copper - D		0.000	0.00		1	0.00002	(-0.0003) - (0.0003)	EPA 200.8
Iron - D		0.000	0.00		1	0.00023	(-0.0010) - (0.0013)	EPA 200.8
Lead - D		0.000	0.00		1	0.00002	(-0.0002) - (0.0003)	EPA 200.8
Magnesium - D		-0.010	0.00		1	-0.01	(-0.0596) - (0.0386)	SM 3111 B
Magnesium - D		-0.010	0.00		1	-0.01	(-0.0596) - (0.0386)	SM 3111 B
Magnesium - D		0.00	0.00		1	0	(-0.0596) - (0.0386)	SM 3111 B
Magnesium - D		0.00	0.00		1	0	(-0.0596) - (0.0386)	SM 3111 B
Manganese - D		0.000	0.00		1	0.00002	(-0.0001) - (0.0002)	EPA 200.8
Molybdenum - D		0.000	0.00		1	0.00005	(-0.0001) - (0.0003)	EPA 200.8
Nickel - D		0.000	0.00		1	0.00002	(-0.0009) - (0.0007)	EPA 200.8
Potassium - D		-0.010	0.00		1	-0.01	(-0.0400) - (0.0180)	SM 3111 B
Potassium - D		-0.010	0.00		1	-0.01	(-0.0400) - (0.0180)	SM 3111 B



<b>Parameter</b>	<b>Lab#</b>	<b>QC Value</b>	<b>Smp Value</b>	<b>Spike</b>	<b>DF</b>	<b>Result</b>	<b>Limits</b>	<b>Method</b>
<b><u>Continuing Calibration Blank</u></b>								
Selenium - D		0.000	0.00		1	0.00008	(-0.0007) - (0.0010)	EPA 200.8
Silver - D		0.000	0.00		1	0.00001	(-0.0002) - (0.0002)	EPA 200.8
Sodium - D		-0.030	0.00		1	-0.03	(-0.0834) - (0.0664)	SM 3111 B
Sodium - D		-0.010	0.00		1	-0.01	(-0.0834) - (0.0664)	SM 3111 B
Sodium - D		-0.040	0.00		1	-0.04	(-0.0834) - (0.0664)	SM 3111 B
Uranium - D		0.000	0.00		1	0.00003	(-0.0001) - (0.0003)	EPA 200.8
Vanadium - D		0.000	0.00		1	0.00002	(0.0000) - (0.0001)	EPA 200.8
Zinc - D		0.000	0.00		1	0.00001	(-0.0013) - (0.0010)	EPA 200.8
Radium-226		0.00	0.00		1	0		MC Radium-226
Radium-228		0.00	0.00		1	0		MC Radium-228
<b><u>Lab Reagent Blank</u></b>								
Gross Alpha		0.132	0.00		1	0.132		EPA 900.0
Gross Beta		0.374	0.00		1	0.374		EPA 900.0
Radium-226		0.475	0.00		1	0.475		MC Radium-226
Radium-228		0.736	0.00		1	0.736		MC Radium-228

Approved By: \_\_\_\_\_

Printed On:02/14/2014 03:27 PM



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**CHAIN OF CUSTODY RECORD**

PRESERVED WITH FILTERED (Y/N) REFRIGERATED (Y/N) ANALYSES REQUESTED <i>Radon only analysis per book</i>	NO. OF CONTAINERS ✓ ✓ ✓ ✓ ✓	COMMENTS <i>*see list</i>	LAB #
---	--	------------------------------	-------

**FOR LAB USE ONLY**  
 Serial Ingest (Y/N)/Number  
 Sample Contributor  
*on Ice*  
 Temperature of Container  
*4.6c*

REQUESTED TURN AROUND  
 STANDARD \_\_\_\_\_ RUSH \_\_\_\_\_

Company	<i>Powertech / Soft Env.</i>
Project Name / Mgr.	<i>alluvial wells /</i>
Project Number	
Sampled by	<i>all hst</i>
Sampled by	<i>allen south</i>

	SAMPLE NAME	DATE	TIME	MATRIX	NO. OF CONTAINERS	COMMENTS	LAB #
1	<i>OC-2 301</i>	<i>12-16-17</i>	<i>17:51</i>	<i>water</i>	✓		
2	<i>BC-2 302</i>	<i>12-16-17</i>	<i>15:38</i>	<i>"</i>	✓		
3	<i>BC-1 303</i>	<i>12-16-17</i>	<i>16:39</i>	<i>"</i>	✓		
4	<i>BC-3 304</i>	<i>12-16-18</i>	<i>18:00</i>	<i>"</i>	✓		
5	<i>OC-1 305</i>	<i>12-17-17</i>	<i>11:40</i>	<i>"</i>	✓		
6							
7	<i>Batch 3</i>						
8							
9							
10	<i>12-18-13</i>						
11							
12							

RELINQUISHED BY (Signature) <i>[Signature]</i>	COMPANY NAME <i>Soft Env.</i>	DATE <i>12-17-13</i>	TIME <i>16:00</i>	RECEIVED BY (Signature) <i>[Signature]</i>	COMPANY NAME <i>MCT</i>	DATE <i>12-17-13</i>	TIME <i>16:00</i>

Analyte Name	Units	Method	Matrix	Test Name	Price	Inorganic Tests
Conductivity @ 25 C	umhos/cm	A2510 B	Aqueous	Conductivity	5	
pH	su	A4500-H B	Aqueous	pH		
Solids, Total Dissolved TDS @ 180 C	mg/L	A2540 C	Aqueous	Solids, Total Dissolved		
Alkalinity, Total as CaCO3	mg/L	A2320 B	Aqueous	Alkalinity		
Carbonate as CO3	mg/L	A2320 B	Aqueous	Alkalinity		
Bicarbonate as HCO3	mg/L	A2320 B	Aqueous	Alkalinity		
Chloride	mg/L	E300.0	Aqueous	Anions by Ion Chromatography		
Fluoride	mg/L	E300.0	Aqueous	Anions by Ion Chromatography		
Sulfate	mg/L	E300.0	Aqueous	Anions by Ion Chromatography		
A/C Balance	%	A1030 E	Aqueous	Anion - Cation Balance		
Anions	meq/L	A1030 E	Aqueous	Anion - Cation Balance		
Cations	meq/L	A1030 E	Aqueous	Anion - Cation Balance		
Conductivity, Calculated	umhos/cm	A1030 E	Aqueous	Anion - Cation Balance		
TDS Ratio		A1030 E	Aqueous	Anion - Cation Balance		
Nitrogen, Nitrate as N	mg/L	E300.0	Aqueous	Anions by Ion Chromatography		
Gross Alpha	pCi/L	E900.0	Aqueous	Gross Alpha, Gross Beta		
Gross Alpha precision (±)	pCi/L	E900.0	Aqueous	Gross Alpha, Gross Beta		
Gross Alpha MDC	pCi/L	E900.0	Aqueous	Gross Alpha, Gross Beta		
Gross Beta	pCi/L	E900.0	Aqueous	Gross Alpha, Gross Beta		
Gross Beta precision (±)	pCi/L	E900.0	Aqueous	Gross Alpha, Gross Beta		
Gross Beta MDC	pCi/L	E900.0	Aqueous	Gross Alpha, Gross Beta		
Lead 210	pCi/L	E909.0	Aqueous	Lead 210, Dissolved		
Lead 210 precision (±)	pCi/L	E909.0	Aqueous	Lead 210, Dissolved		
Lead 210 MDC	pCi/L	E909.0	Aqueous	Lead 210, Dissolved		
Radium 228	pCi/L	RA-05	Aqueous	Radium 228, Dissolved		
Radium 228 precision (±)	pCi/L	RA-05	Aqueous	Radium 228, Dissolved		
Radium 228 MDC	pCi/L	RA-05	Aqueous	Radium 228, Dissolved		
Radium 226	pCi/L	E903.0	Aqueous	Radium 226, Dissolved		
Radium 226 precision (±)	pCi/L	E903.0	Aqueous	Radium 226, Dissolved		
Radium 226 MDC	pCi/L	E903.0	Aqueous	Radium 226, Dissolved		
Thorium 230	pCi/L	E908.0	Aqueous	Thorium, Isotopic		
Thorium 230 precision (±)	pCi/L	E908.0	Aqueous	Thorium, Isotopic		
Thorium 230 MDC	pCi/L	E908.0	Aqueous	Thorium, Isotopic		
Radon 222	pCi/L	D5072-92	Aqueous	Radon 222		
Radon 222 precision (±)	pCi/L	D5072-92	Aqueous	Radon 222		
Radon 222 MDC	pCi/L	D5072-92	Aqueous	Radon 222		
Mercury - Total	mg/L	E245.1	Aqueous	Mercury, Total		
Arsenic	mg/L	E200.8	Aqueous	Metals by ICP/ICPMS, Dissolved		
Barium	mg/L	E200.7	Aqueous	Metals by ICP/ICPMS, Dissolved		
Boron	mg/L	E200.7	Aqueous	Metals by ICP/ICPMS, Dissolved		
Cadmium	mg/L	E200.8	Aqueous	Metals by ICP/ICPMS, Dissolved		
Chromium	mg/L	E200.8	Aqueous	Metals by ICP/ICPMS, Dissolved		
Copper	mg/L	E200.8	Aqueous	Metals by ICP/ICPMS, Dissolved		
Iron	mg/L	E200.7	Aqueous	Metals by ICP/ICPMS, Dissolved		
Lead	mg/L	E200.8	Aqueous	Metals by ICP/ICPMS, Dissolved		
Manganese	mg/L	E200.7	Aqueous	Metals by ICP/ICPMS, Dissolved		
Molybdenum	mg/L	E200.8	Aqueous	Metals by ICP/ICPMS, Dissolved		
Nickel	mg/L	E200.8	Aqueous	Metals by ICP/ICPMS, Dissolved		
Selenium	mg/L	E200.8	Aqueous	Metals by ICP/ICPMS, Dissolved		
Silver	mg/L	E200.8	Aqueous	Metals by ICP/ICPMS, Dissolved		
Uranium	mg/L	E200.8	Aqueous	Metals by ICP/ICPMS, Dissolved		
Vanadium	mg/L	E200.7	Aqueous	Metals by ICP/ICPMS, Dissolved		
Zinc	mg/L	E200.7	Aqueous	Metals by ICP/ICPMS, Dissolved		
Calcium	mg/L	E200.7	Aqueous	Metals by ICP/ICPMS, Dissolved		
Magnesium	mg/L	E200.7	Aqueous	Metals by ICP/ICPMS, Dissolved		
Potassium	mg/L	E200.7	Aqueous	Metals by ICP/ICPMS, Dissolved		
Sodium	mg/L	E200.7	Aqueous	Metals by ICP/ICPMS, Dissolved		

Dissolved

301, 303  
B3  
12-1E-13

Sub T  
20% discount for 20+ inorganic  
10% discount for

**SAMPLE RECEIPT CHECKLIST**

Company Name PowerTech

Date/Time Received 12-17-13 1600

Project \_\_\_\_\_

Received by <sup>Date</sup> Greg McDaniel <sup>Time</sup>

Lab Number(s) 301-305 12-18-13

Carrier Name Allen Scott

Yes	No	<u>UNPACKING</u>		Initials
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1.	Shipping container in good condition?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2.	Custody seals present on shipping container? Condition: <u>Intact</u> Broken	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3.	<u>Ice</u> Blue Ice (circle one) present in shipping container? Container(s) Temp. 1. <u>4.6°C</u> 2. _____ 3. _____ 4. _____	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4.	Bottles broken and/or leaking? (Photograph broken bottles.)	_____
<input type="checkbox"/>	<input type="checkbox"/>	5.	Custody seals on sample bottles? Condition: Intact Broken <u>M</u>	_____

Yes	No	<u>LABELING</u>		Initials
<input type="checkbox"/>	<input type="checkbox"/>	6.	Chain of custody Present?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.	Chain of custody includes signatures, dates, and times when relinquished and received?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.	Chain of custody agrees with bottle count?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	9.	Chain of custody agrees with labels?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	10.	Samples received within holding times?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	11.	Samples in proper container?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	12.	Sufficient sample volume for indicated tests?	_____

<u>PRESERVATIVE</u>			
Yes	No	Initials	Initials
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	13. Metals bottle(s) pH < 2? _____	<input type="checkbox"/> <input type="checkbox"/> 17. TOC bottle(s) pH < 2? _____
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	14. Nutrient bottle(s) pH < 2? _____	<input type="checkbox"/> <input type="checkbox"/> 18. Oil & Grease bottle(s) pH < 2? _____
<input type="checkbox"/>	<input type="checkbox"/>	15. Cyanide bottle(s) pH > 12? _____	<input type="checkbox"/> <input type="checkbox"/> 19. Volatiles pH < 2? _____
<input type="checkbox"/>	<input type="checkbox"/>	16. Sulfide bottle(s) pH > 9? _____	

COMMENTS: Nutrient bottles ~~pres~~ preserved in Lab.  
Dissolved metals bottles filtered & preserved in Lab.




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Sample Site: BC-1  
Project Name: Powertech  
Sampled: 01/29/14 at 01:47 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20140130301  
Received: 01/30/14 at 02:00 PM  
by Patricia Tibbetts  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	868	pCi/L	1	SM 7500Rn-B	SYS 02/01/14
<b>Precision Data</b>					
Radon-222 Precision	166	pCi/L	1	MC-Radon 222 precision	SYS 02/01/14
<b>MDA Data</b>					
Radon-222 MDA	54.4	pCi/L	1	MC - Radon 222 MDA	SYS 02/01/14

Approved By: 

Approved On: 2/6/2014 7:58:27 AM




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Sample Site: BC-2  
Project Name: Powertech  
Sampled: 01/29/14 at 02:46 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20140130302  
Received: 01/30/14 at 02:00 PM  
by Patricia Tibbetts  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	970	pCi/L	1	SM 7500Rn-B	SYS 02/01/14
<b>Precision Data</b>					
Radon-222 Precision	184	pCi/L	1	MC-Radon 222 precision	SYS 02/01/14
<b>MDA Data</b>					
Radon-222 MDA	54 . 2	pCi/L	1	MC - Radon 222 MDA	SYS 02/01/14

Approved By: 

Approved On: 2/6/2014 7:58:27 AM



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Lab Numbers: 20140130301 - 20140130302

## QC Sample Report

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method
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Approved By: \_\_\_\_\_

Printed On: 02/06/2014 07:58 AM



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# CHAIN OF CUSTODY RECORD


Company	Powertech / Scott Env.		
Project Name / Mgr.	Powertech Annual Wells		
Project Number			
Sampled by	 Signature		
Sampled by	Allan Scott Print		

PRESERVED WITH FILTERED (Y/N) REFRIGERATED (Y/N) ANALYSES REQUESTED	<i>Randomly by block</i>									
--	--------------------------	--	--	--	--	--	--	--	--	--

FOR LAB USE ONLY	
Seal Intact (Y/N)/Number	<i>Y</i>
Sample Condition	<i>good as is</i>
Temperature of Container	<i>5.3L</i>

REQUESTED TURN AROUND	
STANDARD	RUSH

	SAMPLE NAME	DATE	TIME	MATRIX	NO. OF CONTAINERS	COMMENTS	LAB #
1	BC-1	1-20-14	13:47	Water	3		
2	BC-2	1-20-14	14:46	"	"		
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

RELINQUISHED BY (Signature)	COMPANY NAME	DATE	TIME	RECEIVED BY (Signature)	COMPANY NAME	DATE	TIME
	Scott Env.	1-30-14	14:00	Batty Tibbets	MCT	01-30-14	1400



**SAMPLE RECEIPT CHECKLIST**

Company Name PowerTech

Date/Time Received 1-30-14 1400

Project \_\_\_\_\_

Received by Patty Tibbitts  
Date 1 Time \_\_\_\_\_

Lab Number(s) 301-302 1-30-14

Carrier Name Allen Scott

Yes No

**UNPACKING**

Initials

- 1. Shipping container in good condition? \_\_\_\_\_
- 2. Custody seals present on shipping container?  
Condition: Intact Broken \_\_\_\_\_
- 3. Ice Blue ice (circle one) present in shipping container?  
Container(s) Temp. 1. 5-302 2. \_\_\_\_\_ 3. \_\_\_\_\_ 4. \_\_\_\_\_
- 4. Bottles broken and/or leaking? (Photograph broken bottles.) \_\_\_\_\_
- 5. Custody seals on sample bottles?  
Condition: Intact Broken MA \_\_\_\_\_

Yes No

**LABELING**

Initials

- 6. Chain of custody Present? \_\_\_\_\_
- 7. Chain of custody includes signatures, dates, and times when relinquished and received? \_\_\_\_\_
- 8. Chain of custody agrees with bottle count? \_\_\_\_\_
- 9. Chain of custody agrees with labels? \_\_\_\_\_
- 10. Samples received within holding times? \_\_\_\_\_
- 11. Samples in proper container? \_\_\_\_\_
- 12. Sufficient sample volume for indicated tests? \_\_\_\_\_

**PRESERVATIVE**

Yes No

Initials

Yes No

Initials

- 13. Metals bottle(s) pH < 2? \_\_\_\_\_   17. TOC bottle(s) pH < 2? \_\_\_\_\_
- 14. Nutrient bottle(s) pH < 2? \_\_\_\_\_   18. Oil & Grease bottle(s) pH < 2? \_\_\_\_\_
- 15. Cyanide bottle(s) pH > 12? \_\_\_\_\_   19. Volatiles pH < 2? \_\_\_\_\_
- 16. Sulfide bottle(s) pH > 9? \_\_\_\_\_

COMMENTS: Rejection



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# CHAIN OF CUSTODY RECORD

Company	MidContinent Testing Lab		
Project Name / Mgr.	/ C		
Project Number			
Sampled by	Signature		
Sampled by	Print		

PRESERVED WITH / M-40	
FILTERED (Y/N)	N
REFRIGERATED (Y/N)	Y
ANALYSES REQUESTED	2

**FOR LAB USE ONLY**

Seal Intact (Y/N) Number \_\_\_\_\_

Sample Condition \_\_\_\_\_

Temperature of Container \_\_\_\_\_

**REQUESTED TURN AROUND**

STANDARD \_\_\_\_\_ RUSH \_\_\_\_\_

	SAMPLE NAME	DATE	TIME	MATRIX	NO. OF CONTAINERS	COMMENTS	LAB #
1	20140130301	1/29	13:47	W	2	X	
2	20140130302	1/29	14:10	W	2	X	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

RELINQUISHED BY (Signature)	COMPANY NAME	DATE	TIME	RECEIVED BY (Signature)	COMPANY NAME	DATE	TIME
<i>Eric Fisher</i>	MCT	1/30/14	14:30	<i>Overnight to Pace, PA</i>	Pace, PA	1/30/14	14:30




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Sample Site: BC-2  
Project Name: Powertech  
Sampled: 02/26/14 at 01:53 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20140227501  
Received: 02/27/14 at 02:35 PM  
by Greg McDougall  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	783	pCi/L	1	SM 7500Rn-B	SYS 02/28/14
<b>Precision Data</b>					
Radon-222 Precision	± 150	pCi/L	1	MC-Radon 222 precision	SYS 02/28/14
<b>MDA Data</b>					
Radon-222 MDA	50.7	pCi/L	1	MC - Radon 222 MDA	SYS 02/28/14

Approved By: 

Approved On: 3/4/2014 3:38:58 PM




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Sample Site: BC-3  
Project Name: Powertech  
Sampled: 02/26/14 at 03:58 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20140227502  
Received: 02/27/14 at 02:35 PM  
by Greg McDougall  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	516	pCi/L	1	SM 7500Rn-B	SYS 02/28/14
<b>Precision Data</b>					
Radon-222 Precision	± 103	pCi/L	1	MC-Radon 222 precision	SYS 02/28/14
<b>MDA Data</b>					
Radon-222 MDA	50.1	pCi/L	1	MC - Radon 222 MDA	SYS 02/28/14

Approved By: 

Approved On: 3/4/2014 3:38:58 PM




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Lab Numbers: 20140227501 - 20140227502

### QC Sample Report

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method
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Approved By: 

Approved On: 03/03/2014 06:26 AM



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# CHAIN OF CUSTODY RECORD



Company	Scott Env / Powertech		
Project Name / Mgr.	Allen Scott / Lisa Sebastian		
Project Number			
Sampled by	 Signature		
Sampled by	Allen Scott Print		

PRESERVED WITH	
FILTERED (Y/N)	
REFRIGERATED (Y/N)	
ANALYSES REQUESTED	As per Request

FOR LAB USE ONLY	
Seal Intact (Y/N)/Number	
Sample Condition	
Temperature of Container	

REQUESTED TURN AROUND	
STANDARD	RUSH

	SAMPLE NAME	DATE	TIME	MATRIX	NO. OF CONTAINERS	COMMENTS	LAB #
1	BC-2	2-26-14	13:53	Water	3		20140227501
2	BC-3	2-26-14	15:58	"	3		502
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

RELINQUISHED BY (Signature)	COMPANY NAME	DATE	TIME	RECEIVED BY (Signature)	COMPANY NAME	DATE	TIME
	Scott Env.	2-27-14	14:35		MCT	2-27-14	14:35

**SAMPLE RECEIPT CHECKLIST**

Company Name Powertech

Date/Time Received 2/27/14 14:35  
Date / Time

Project \_\_\_\_\_

Received by Greg McDougall

Lab Number(s) 20140227 501-502

Carrier Name \_\_\_\_\_

Yes	No	<u>UNPACKING</u>		Initials
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1.	Shipping container in good condition?	<u>ET</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2.	Custody seals present on shipping container? Condition: Intact <input type="checkbox"/> Broken <input type="checkbox"/>	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3.	<u>(ice)</u> / Blue Ice (circle one) present in shipping container? Container(s) Temp. 1. _____ 2. _____ 3. _____ 4. _____	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4.	Bottles broken and/or leaking? (Photograph broken bottles.)	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	5.	Custody seals on sample bottles? Condition: Intact <input type="checkbox"/> Broken <input type="checkbox"/>	_____

Yes	No	<u>LABELING</u>		Initials
<input checked="" type="checkbox"/>	<input type="checkbox"/>	6.	Chain of custody Present?	<u>ET</u>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.	Chain of custody includes signatures, dates, and times when relinquished and received?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.	Chain of custody agrees with bottle count?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	9.	Chain of custody agrees with labels?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	10.	Samples received within holding times?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	11.	Samples in proper container?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	12.	Sufficient sample volume for indicated tests?	_____

<u>PRESERVATIVE</u>			
Yes	No	Initials	Yes No Initials
<input type="checkbox"/>	<input type="checkbox"/>	13. Metals bottle(s) pH < 2? _____	<input type="checkbox"/> <input type="checkbox"/> 17. TOC bottle(s) pH < 2? _____
<input type="checkbox"/>	<input type="checkbox"/>	14. Nutrient bottle(s) pH < 2? _____	<input type="checkbox"/> <input type="checkbox"/> 18. Oil & Grease bottle(s) pH < 2? _____
<input type="checkbox"/>	<input type="checkbox"/>	15. Cyanide bottle(s) pH > 12? _____	<input type="checkbox"/> <input type="checkbox"/> 19. Volatiles pH < 2? _____
<input type="checkbox"/>	<input type="checkbox"/>	16. Sulfide bottle(s) pH > 9? _____	

COMMENTS: Radon

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## CHAIN OF CUSTODY RECORD

PRESERVED WITH	None
FILTERED (Y/N)	N
REFRIGERATED (Y/N)	Y
ANALYSES REQUESTED	Radon 222

**FOR LAB USE ONLY**

Seal Intact (Y/N)/Number \_\_\_\_\_

Sample Condition \_\_\_\_\_

Temperature of Container \_\_\_\_\_

REQUESTED TURN AROUND

STANDARD \_\_\_\_\_ RUSH \_\_\_\_\_

Company	MidContinent Testing		
Project Name / Mgr.	Eric Fuehrer		
Project Number			
Sampled by	Signature		
Sampled by	Print		

	SAMPLE NAME	DATE	TIME	MATRIX	NO. OF CONTAINERS	COMMENTS	LAB #
1	20140227501	2/26/14	13:53	Water	2	X	
2	20140227502	2/26/14	15:58	I	2	X	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

RELINQUISHED BY (Signature)	COMPANY NAME	DATE	TIME	RECEIVED BY (Signature)	COMPANY NAME	DATE	TIME
<i>Eric Fuehrer</i>	MCT	2/27/14	14:50	<i>Overnight to Pace, PA</i>			





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Sample Site: BC-2  
Project Name: Powertech  
Sampled: 03/10/14 at 03:19 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20140312202  
Received: 03/11/14 at 04:22 PM  
by Kate Shreves  
Account: w1552 - Powertech Uranium


LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst/Date
<b>Physical Properties</b>							
Electrical Conductivity	3710	µmhos/cm	1	0.237	5.00	SM 2510B	JAM 03/12/14
pH	7.36	s.u.	1			SM 4500-H+ B	JAM 03/12/14
Total Dissolved Solids	3650	mg/L	100ml	22.6	50.0	SM 2540 C	TMN 03/13/14
<b>Non-Metallics</b>							
Alkalinity (CaCO3)	228	mg/L	1	0.421	10.0	SM 2320 B	JAM 03/12/14
Bicarbonate	278	mg/L	1	0.513	10.0	SM 2320 B	JAM 03/12/14
Carbonate	0.00	mg/L	1	0.210	5.00	SM 2320 B	JAM 03/12/14
Chloride (Cl-)	19.3	mg/L	4	1.02	2.00	SM 4500-Cl E	BLL 03/12/14
Fluoride	0.610	mg/L	1	0.004	0.050	SM 4500 F-C	PAT 03/12/14
Nitrogen, Nitrate (NO3)	0.083	mg/L	1	0.014	0.050	SM 4500-NO3 F	BLL 03/12/14
Sulfate (SO4)	2530	mg/L	50	13.2	50.0	SM 4500-SO4 E	BLL 03/12/14
<b>Metals - Dissolved</b>							
Arsenic (As)	< 0.005	mg/L	10	0.0006	0.005	EPA 200.8	TNA 03/12/14
Barium (Ba)	0.008	mg/L	10	0.0005	0.005	EPA 200.8	TNA 03/12/14
Boron (B)	0.584	mg/L	10	0.005	0.020	EPA 200.8	TNA 03/12/14
Cadmium (Cd)	0.003	mg/L	10	0.0001	0.001	EPA 200.8	TNA 03/12/14
Calcium (Ca)	550	mg/L	12	1.59	12.0	SM 3111 B	GRT 03/12/14
Chromium (Cr)	0.003	mg/L	10	0.0001	0.001	EPA 200.8 DRC	TNA 03/12/14
Copper (Cu)	0.011	mg/L	10	0.0009	0.005	EPA 200.8	TNA 03/12/14
Iron (Fe)	0.055	mg/L	10	0.004	0.050	EPA 200.8	TNA 03/12/14
Lead (Pb)	< 0.001	mg/L	10	0.000026	0.001	EPA 200.8	TNA 03/12/14
Magnesium (Mg)	220	mg/L	6	0.180	3.00	SM 3111 B	GRT 03/12/14
Manganese (Mn)	0.034	mg/L	10	0.0001	0.010	EPA 200.8	TNA 03/12/14
Molybdenum (Mo)	0.016	mg/L	10	0.0001	0.001	EPA 200.8	TNA 03/12/14
Nickel (Ni)	0.023	mg/L	10	0.0003	0.005	EPA 200.8	TNA 03/12/14
Potassium (K)	13.8	mg/L	3	0.075	1.50	SM 3111 B	GRT 03/12/14

<b>Parameter</b>	<b>Result</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Method</b>	<b>Analyst/Date</b>	
<b><u>Metals - Dissolved</u></b>								
Selenium (Se)	< 0.005	mg/L	10	0.001	0.005	EPA 200.8	TNA	03/12/14
Silver (Ag)	< 0.001	mg/L	10	0.0002	0.001	EPA 200.8	TNA	03/12/14
Sodium (Na)	272	mg/L	10	0.920	5.00	SM 3111 B	GRT	03/12/14
Uranium (U)	0.027	mg/L	10	0.000021	0.001	EPA 200.8	TNA	03/12/14
Vanadium (V)	< 0.005	mg/L	10	0.000073	0.005	EPA 200.8	TNA	03/12/14
Zinc (Zn)	< 0.050	mg/L	10	0.006	0.050	EPA 200.8	TNA	03/12/14
<b><u>Metals - Total</u></b>								
Mercury (Hg)	< 0.0002	mg/L	1	0.000035	0.0002	EPA 245.1	GRT	03/13/14
<b><u>Anion - Cation Balance</u></b>								
Anions	57.7	meq/L	1			Calculation	GAM	03/26/14
Anion - Cation Balance	0.064	%	1			Calculation	GAM	03/26/14
Cations	57.7	meq/L	1			Calculation	GAM	03/26/14
Electrical Conductivity - Calculated	7010	µS/cm	1			SM 1030	DVA	04/21/14
Total Dissolved Solids - Ratio	0.977	none	1			SM 1030	DVA	04/21/14
<b><u>Radiological</u></b>								
Gross Alpha	21.4	pCi/L	1			EPA 900.0	EJF	04/05/14
Gross Beta	33.9	pCi/L	1			EPA 900.0	EJF	04/05/14
Lead-210	0.849	pCi/L	1			RP280m DOE	SYS	04/04/14
Radium-226	0.208	pCi/L	1			MC Radium-226	EJF	05/05/14
Radium-228	0.784	pCi/L	1			MC Radium-228	EJF	05/05/14
Radon-222	971	pCi/L	1			SM 7500Rn-B	SYS	03/14/14
Thorium-230	0.005	pCi/L	1			HSL-300m	SYS	04/01/14
<b><u>Precision Data</u></b>								
Gross Alpha precision	± 4.38	pCi/L	1			MC - Gross Alpha precision	EJF	04/05/14
Gross Beta precision	± 6.09	pCi/L	1			MC - Gross Beta precision	EJF	04/05/14
Lead-210 Precision	± 0.432	pCi/L	1			MC-Lead 210 precision	SYS	04/04/14
Radium-226 precision	± 0.124	pCi/L	1			MC-Radium 226 precision	EJF	05/05/14
Radium-228 precision	± 0.325	pCi/L	1			MC-Radium 228 precision	EJF	05/05/14
Radon-222 Precision	± 188	pCi/L	1			MC-Radon 222 precision	SYS	03/14/14
Thorium-230 Precision	± 0.090	pCi/L	1			MC-Thorium 230 precision	SYS	04/01/14
<b><u>MDA Data</u></b>								
Gross Alpha MDA	12.4	pCi/L	1			MC - Gross Alpha MDA	EJF	04/05/14
Gross Beta MDA	18.5	pCi/L	1			MC - Gross Beta MDA	EJF	04/05/14
Lead-210 MDA	0.813	pCi/L	1			MC - Lead 210 MDA	EJF	04/04/14
Radium-226 MDA	0.254	pCi/L	1			MC - Radium 226 MDA	EJF	05/12/14
Radium-228 MDA	0.662	pCi/L	1			MC - Radium 228 MDA	EJF	05/05/14
Radon-222 MDA	66.7	pCi/L	1			MC - Radon 222 MDA	SYS	03/14/14

<b>Parameter</b>	<b>Result</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Method</b>	<b>Analyst/Date</b>
<b>MDA Data</b>							
Thorium-230 MDA	0.214	pCi/L	1			MC - Thorium 230 MDA	SYS 04/01/14

**Notes:**  
see chain

Approved By: 

Approved On: 5/13/2014 10:18:38 AM



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(605) 348-0111 -- www.thechemistrylab.com

Sample Site: BC-3  
Project Name: Powertech  
Sampled: 03/10/14 at 06:11 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20140312203  
Received: 03/11/14 at 04:22 PM  
by Kate Shreves  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst/Date
<b>Physical Properties</b>							
Electrical Conductivity	3020	µmhos/cm	1	0.237	5.00	SM 2510B	JAM 03/12/14
pH	7.30	s.u.	1			SM 4500-H+ B	JAM 03/12/14
Total Dissolved Solids	3000	mg/L	100ml	22.6	50.0	SM 2540 C	TMN 03/13/14
<b>Non-Metallics</b>							
Alkalinity (CaCO3)	221	mg/L	1	0.421	10.0	SM 2320 B	JAM 03/12/14
Bicarbonate	269	mg/L	1	0.513	10.0	SM 2320 B	JAM 03/12/14
Carbonate	0.00	mg/L	1	0.210	5.00	SM 2320 B	JAM 03/12/14
Chloride (Cl-)	17.2	mg/L	4	1.02	2.00	SM 4500-Cl E	BLL 03/12/14
Fluoride	0.477	mg/L	1	0.004	0.050	SM 4500 F-C	PAT 03/12/14
Nitrogen, Nitrate (NO3)	< 0.050	mg/L	1	0.014	0.050	SM 4500-NO3 F	BLL 03/12/14
Sulfate (SO4)	1950	mg/L	100	26.3	100	SM 4500-SO4 E	BLL 03/12/14
<b>Metals - Dissolved</b>							
Arsenic (As)	< 0.005	mg/L	10	0.0006	0.005	EPA 200.8	TNA 03/12/14
Barium (Ba)	0.014	mg/L	10	0.0005	0.005	EPA 200.8	TNA 03/12/14
Boron (B)	0.584	mg/L	10	0.005	0.020	EPA 200.8	TNA 03/12/14
Cadmium (Cd)	0.001	mg/L	10	0.0001	0.001	EPA 200.8	TNA 03/12/14
Calcium (Ca)	536	mg/L	12	1.59	12.0	SM 3111 B	GRT 03/12/14
Chromium (Cr)	< 0.001	mg/L	10	0.0001	0.001	EPA 200.8 DRC	TNA 03/12/14
Copper (Cu)	0.007	mg/L	10	0.0009	0.005	EPA 200.8	TNA 03/12/14
Iron (Fe)	0.591	mg/L	10	0.004	0.050	EPA 200.8	TNA 03/12/14
Lead (Pb)	< 0.001	mg/L	10	0.000026	0.001	EPA 200.8	TNA 03/12/14
Magnesium (Mg)	143	mg/L	5	0.150	2.50	SM 3111 B	GRT 03/12/14
Manganese (Mn)	0.535	mg/L	10	0.0001	0.010	EPA 200.8	TNA 03/12/14
Molybdenum (Mo)	0.007	mg/L	10	0.0001	0.001	EPA 200.8	TNA 03/12/14
Nickel (Ni)	0.024	mg/L	10	0.0003	0.005	EPA 200.8	TNA 03/12/14
Potassium (K)	10.7	mg/L	2	0.050	1.00	SM 3111 B	GRT 03/12/14

<b>Parameter</b>	<b>Result</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Method</b>	<b>Analyst/Date</b>	
<b><u>Metals - Dissolved</u></b>								
Selenium (Se)	< 0.005	mg/L	10	0.001	0.005	EPA 200.8	TNA	03/12/14
Silver (Ag)	< 0.001	mg/L	10	0.0002	0.001	EPA 200.8	TNA	03/12/14
Sodium (Na)	152	mg/L	8	0.736	4.00	SM 3111 B	GRT	03/12/14
Uranium (U)	0.017	mg/L	10	0.000021	0.001	EPA 200.8	TNA	03/12/14
Vanadium (V)	< 0.005	mg/L	10	0.000073	0.005	EPA 200.8	TNA	03/12/14
Zinc (Zn)	0.051	mg/L	10	0.006	0.050	EPA 200.8	TNA	03/12/14
<b><u>Metals - Total</u></b>								
Mercury (Hg)	< 0.0002	mg/L	1	0.000035	0.0002	EPA 245.1	GRT	03/13/14
<b><u>Anion - Cation Balance</u></b>								
Anions	45.5	meq/L	1			Calculation	GAM	03/26/14
Anion - Cation Balance	-0.101	%	1			Calculation	GAM	03/26/14
Cations	45.5	meq/L	1			Calculation	GAM	03/26/14
Electrical Conductivity - Calculated	5520	µS/cm	1			SM 1030	DVA	04/21/14
Total Dissolved Solids - Ratio	1.02	none	1			SM 1030	DVA	04/21/14
<b><u>Radiological</u></b>								
Gross Alpha	15.7	pCi/L	1			EPA 900.0	EJF	04/11/14
Gross Beta	21.8	pCi/L	1			EPA 900.0	EJF	04/11/14
Lead-210	0.558	pCi/L	1			RP280m DOE	SYS	04/04/14
Radium-226	0.275	pCi/L	1			MC Radium-226	EJF	05/06/14
Radium-228	< 1.00	pCi/L	1			MC Radium-228	EJF	05/06/14
Radon-222	590	pCi/L	1			SM 7500Rn-B	SYS	03/14/14
Thorium-230	0.034	pCi/L	1			HSL-300m	SYS	04/01/14
<b><u>Precision Data</u></b>								
Gross Alpha precision	± 4.12	pCi/L	1			MC - Gross Alpha precision	EJF	04/11/14
Gross Beta precision	± 5.81	pCi/L	1			MC - Gross Beta precision	EJF	04/11/14
Lead-210 Precision	± 0.403	pCi/L	1			MC-Lead 210 precision	SYS	04/04/14
Radium-226 precision	± 0.157	pCi/L	1			MC-Radium 226 precision	EJF	05/06/14
Radium-228 precision	± 0.00	pCi/L	1			MC-Radium 228 precision	EJF	05/06/14
Radon-222 Precision	± 121	pCi/L	1			MC-Radon 222 precision	SYS	03/14/14
Thorium-230 Precision	± 0.100	pCi/L	1			MC-Thorium 230 precision	SYS	04/01/14
<b><u>MDA Data</u></b>								
Gross Alpha MDA	12.2	pCi/L	1			MC - Gross Alpha MDA	EJF	04/11/14
Gross Beta MDA	18.3	pCi/L	1			MC - Gross Beta MDA	EJF	04/11/14
Lead-210 MDA	0.802	pCi/L	1			MC - Lead 210 MDA	SYS	04/04/14
Radium-226 MDA	0.318	pCi/L	1			MC - Radium 226 MDA	EJF	05/06/14
Radium-228 MDA	0.030	pCi/L	1			MC - Radium 228 MDA	EJF	05/06/14
Radon-222 MDA	65.5	pCi/L	1			MC - Radon 222 MDA	SYS	03/14/14

<b>Parameter</b>	<b>Result</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Method</b>	<b>Analyst/Date</b>
<b>MDA Data</b>							
Thorium-230 MDA	0.177	pCi/L	1			MC - Thorium 230 MDA	SYS 04/01/14

**Notes:**  
see chain

Approved By:  \_\_\_\_\_

Approved On: 5/13/2014 10:18:38 AM



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Lab Numbers: 20140312202 - 20140312203

### QC Sample Report

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method	
<b>Spike</b>									
TDS	0311932	1160	226	1000	100ml	93.7 %	(92.54) - (113.0)	SM 2540 C	
Alkalinity	0312203	322	221	106	1	95.3 %	(90.38) - (103.2)	SM 2320 B	
Chloride	0311101	9.00	4.05	5.00	1	99.0 %	(86.67) - (113.0)	SM 4500-Cl E	
Fluoride	0312203	0.848	0.477	0.400	1	92.8 %	(81.57) - (112.0)	SM 4500 F-C	
N, Nitrate	0310838	0.438	0.039	0.400	1	99.75%	(91.75) - (107.8)	SM 4500-NO3 F	
N, Nitrate	0312106	3.65	2.07	0.400	4	98.7 %	(93.39) - (106.8)	SM 4500-NO3 F	
N, Nitrate	0312202	0.481	0.079	0.400	1	100.5 %	(93.39) - (106.8)	SM 4500-NO3 F	
Sulfate	0311102	45.6	27.2	19.2	1	101.7 %	(88.63) - (111.3)	SM 4500-SO4 E	
Sulfate	0313106	597	433	19.2	10	94.2 %	(89.75) - (110.9)	SM 4500-SO4 E	
Arsenic - D	0312202	0.265	< 0.005	0.025	10	106.0 %	(83.53) - (117.6)	EPA 200.8	
Arsenic - D	0312105	0.280	0.010	0.025	10	108.1 %	(83.53) - (117.6)	EPA 200.8	
Barium - D	0312202	0.275	0.008	0.025	10	106.7 %	(83.77) - (108.6)	EPA 200.8	
Boron - D	0312202	0.823	0.584	0.025	10	95.5 %	(72.83) - (137.0)	EPA 200.8	
Cadmium - D	0312202	0.281	0.003	0.025	10	111.3 %	(88.90) - (106.9)	EPA 200.8 X	
- Result is within QC guidelines of 70 - 130%									
Calcium - D	0312202	657	550	10.0	10	107.5 %	(81.51) - (122.5)	SM 3111 B	
Chromium - D	0312202	0.256	0.003	0.025	10	101.1 %	(85.12) - (106.8)	EPA 200.8 DRC	
Copper - D	0312202	0.256	0.011	0.025	10	98.2 %	(80.18) - (112.3)	EPA 200.8	
Iron - D	0312202	1.29	0.055	0.125	10	99.0 %	(78.69) - (111.7)	EPA 200.8	
Lead - D	0312202	0.262	< 0.001	0.025	10	105.0 %	(89.62) - (106.5)	EPA 200.8	
Magnesium - D	0312202	312	220	10.0	10	91.3 %	(79.27) - (115.4)	SM 3111 B	
Manganese - D	0312202	0.272	0.034	0.025	10	95.4 %	(84.26) - (107.7)	EPA 200.8	
Molybdenum - D	0312202	0.311	0.016	0.025	10	118.0 %	(85.04) - (121.4)	EPA 200.8	
Nickel - D	0312202	0.272	0.023	0.025	10	99.66%	(82.00) - (109.5)	EPA 200.8	
Potassium - D	0312202	44.4	13.8	3.00	10	101.7 %	(81.27) - (114.8)	SM 3111 B	
Selenium - D	0312202	1.40	< 0.005	0.125	10	112.0 %	(83.16) - (118.7)	EPA 200.8	
Silver - D	0312202	0.244	< 0.001	0.025	10	97.4 %	(75.83) - (111.1)	EPA 200.8	
Sodium - D	0312202	324	272	5.00	10	103.7 %	(85.97) - (119.6)	SM 3111 B	
Uranium - D	0312202	0.315	0.027	0.025	10	115.4 %	(88.56) - (120.6)	EPA 200.8	
Vanadium - D	0312202	0.243	< 0.005	0.025	10	97.1 %	(88.19) - (111.1)	EPA 200.8	
Zinc - D	0312202	0.265	< 0.050	0.025	10	105.9 %	(80.32) - (127.8)	EPA 200.8	
Mercury - T	0313102	0.0020	< 0.0002	0.002	1	97.5 %	(88.07) - (115.0)	EPA 245.1	
Mercury - T	0312202	0.0019	< 0.0002	0.002	1	93.0 %	(88.07) - (115.0)	EPA 245.1	
Gross Alpha	0326935	15.7	5.38	10.0	1	102.9 %		EPA 900.0	
Gross Beta	0326935	19.9	10.9	10.0	1	89.4 %		EPA 900.0	
Radium-226	0312203	9.63	0.275	10.0	1	93.5 %		MC Radium-226	
Radium-228	0312203	10.4	< 1.00	10.0	1	104.4 %		MC Radium-228	

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method	
<b>Matrix Spike Duplicate</b>									
Chloride	0311101	9.10	9.00		1	1.10%	(-4.754) - (5.797)	SM 4500-CI E	
Fluoride	0312203	0.823	0.848		1	-2.99%	(-5.568) - (5.630)	SM 4500 F-C	
N, Nitrate	0310838	0.436	0.438		1	-0.458%	(-6.181) - (7.739)	SM 4500-NO3 F	
N, Nitrate	0312202	0.502	0.481		1	4.27%	(-6.272) - (7.543)	SM 4500-NO3 F	
N, Nitrate	0312106	3.58	3.65		4	-1.99%	(-6.272) - (7.543)	SM 4500-NO3 F	
Sulfate	0311102	45.3	45.6		1	-0.594%	(-6.368) - (7.056)	SM 4500-SO4 E	
Sulfate	0313106	620	597		10	3.87%	(-6.459) - (6.991)	SM 4500-SO4 E	
Arsenic - D	0312202	0.274	0.265		10	3.46%	(-6.451) - (4.987)	EPA 200.8	
Arsenic - D	0312105	0.270	0.280		10	-3.76%	(-6.451) - (4.987)	EPA 200.8	
Barium - D	0312202	0.287	0.275		10	4.11%	(-3.908) - (4.670)	EPA 200.8	
Boron - D	0312202	0.853	0.823		10	3.52%	(-7.726) - (10.88)	EPA 200.8	
Cadmium - D	0312202	0.290	0.281		10	3.19%	(-3.236) - (3.291)	EPA 200.8	
Calcium - D	0312202	666	657		10	1.30%	(-11.03) - (15.26)	SM 3111 B	
Chromium - D	0312202	0.267	0.256		10	4.39%	(-2.072) - (3.187)	EPA 200.8 DRC X	
- Recovery was within 10% of expected value									
Copper - D	0312202	0.272	0.256		10	5.81%	(-6.724) - (6.063)	EPA 200.8	
- Recovery was within 10% of expected value									
Iron - D	0312202	1.34	1.29		10	3.84%	(-5.007) - (5.846)	EPA 200.8	
Lead - D	0312202	0.267	0.262		10	1.59%	(-3.642) - (3.766)	EPA 200.8	
Magnesium - D	0312202	304	312		10	-2.53%	(-8.580) - (7.878)	SM 3111 B	
Manganese - D	0312202	0.282	0.272		10	3.47%	(-5.824) - (5.659)	EPA 200.8	
Molybdenum - D	0312202	0.317	0.311		10	2.06%	(-3.864) - (4.797)	EPA 200.8	
Nickel - D	0312202	0.285	0.272		10	4.62%	(-9.265) - (7.222)	EPA 200.8	
Potassium - D	0312202	44.0	44.4		10	-0.838%	(-14.03) - (11.14)	SM 3111 B	
Selenium - D	0312202	1.44	1.40		10	2.54%	(-6.952) - (6.484)	EPA 200.8	
Silver - D	0312202	0.244	0.244		10	0.148%	(-3.695) - (3.406)	EPA 200.8	
Sodium - D	0312202	311	324		10	-4.17%	(-9.150) - (11.29)	SM 3111 B	
Uranium - D	0312202	0.316	0.315		10	0.029%	(-3.069) - (3.076)	EPA 200.8	
Vanadium - D	0312202	0.245	0.243		10	1.00%	(-5.814) - (5.831)	EPA 200.8	
Mercury - T	0312202	0.0019	0.0019		1	1.07%	(-15.57) - (14.15)	EPA 245.1	
Mercury - T	0313102	0.0019	0.0020		1	-0.514%	(-15.57) - (14.15)	EPA 245.1	
<b>Duplicate</b>									
Conductivity	0312203	3030	3020		1	0.331%	(-1.404) - (1.099)	SM 2510B	
Conductivity	0312202	3700	3710		1	-0.270%	(-1.404) - (1.099)	SM 2510B	
pH	0312202	7.38	7.36		1	0.271%	(-2.131) - (3.051)	SM 4500-H+ B	
TDS	0312101	3290	3260	100ml		1.16%	(-4.852) - (8.529)	SM 2540 C	
Alkalinity	0312202	228	228		1	0.00%	(-5.111) - (4.985)	SM 2320 B	
Bicarbonate	0312202	278	278		1	0.00%	(-5.766) - (4.478)	SM 2320 B	
Carbonate	0312202	0.00	0.00		1	0.00%	(-12.60) - (12.24)	SM 2320 B	
Chloride	0311101	4.05	4.41		1	-8.51%	(-12.23) - (7.790)	SM 4500-CI E	
N, Nitrate	0310838	0.039	0.041		1	-5.00%	(-5.486) - (2.406)	SM 4500-NO3 F	
N, Nitrate	0312202	0.079	0.083		1	-4.94%	(-5.486) - (2.406)	SM 4500-NO3 F	
N, Nitrate	0312106	2.07	2.11		4	-1.96%	(-5.486) - (2.406)	SM 4500-NO3 F	
Sulfate	0311102	27.2	27.0		1	0.443%	(-7.536) - (6.100)	SM 4500-SO4 E	
Sulfate	0313106	438	433		10	1.14%	(-7.528) - (6.070)	SM 4500-SO4 E	



<b>Parameter</b>	<b>Lab#</b>	<b>QC Value</b>	<b>Smp Value</b>	<b>Spike</b>	<b>DF</b>	<b>Result</b>	<b>Limits</b>	<b>Method</b>
<b>Initial Calibration Verification</b>								
Conductivity		642	678		1	-5.31%	(-13.00) - (5.047)	SM 2510B
Chloride		4.73	5.00		1	-5.40%	(-9.353) - (10.37)	SM 4500-Cl E
Fluoride		0.406	0.400		1	1.50%	(-4.155) - (5.205)	SM 4500 F-C
N, Nitrate		1.01	1.00		1	0.800%	(-4.755) - (4.735)	SM 4500-NO3 F
Sulfate		53.7	50.0		1	7.42%	(-5.719) - (12.22)	SM 4500-SO4 E
Sulfate		52.6	50.0		1	5.26%	(-5.900) - (12.54)	SM 4500-SO4 E
Arsenic - D		0.051	0.050		1	1.56%	(-8.570) - (14.45)	EPA 200.8
Barium - D		0.048	0.050		1	-5.06%	(-12.68) - (10.50)	EPA 200.8
Boron - D		0.054	0.050		1	7.26%	(-18.42) - (26.55)	EPA 200.8
Cadmium - D		0.049	0.050		1	-1.50%	(-9.059) - (14.94)	EPA 200.8
Chromium - D		0.051	0.050		1	1.88%	(-11.41) - (14.34)	EPA 200.8 DRC
Copper - D		0.051	0.050		1	1.66%	(-9.635) - (15.44)	EPA 200.8
Iron - D		0.246	0.250		1	-1.64%	(-11.17) - (10.02)	EPA 200.8
Lead - D		0.049	0.050		1	-2.22%	(-8.308) - (15.70)	EPA 200.8
Manganese - D		0.050	0.050		1	-0.040%	(-7.686) - (13.14)	EPA 200.8
Molybdenum - D		0.048	0.050		1	-3.34%	(-8.606) - (15.11)	EPA 200.8
Nickel - D		0.050	0.050		1	-0.740%	(-10.89) - (15.56)	EPA 200.8
Selenium - D		0.253	0.250		1	1.26%	(-7.864) - (15.54)	EPA 200.8
Silver - D		0.048	0.050		1	-3.76%	(-11.17) - (7.668)	EPA 200.8
Uranium - D		0.054	0.050		1	7.10%	(-3.664) - (16.04)	EPA 200.8
Vanadium - D		0.050	0.050		1	0.440%	(-8.337) - (11.42)	EPA 200.8
Zinc - D		0.050	0.050		1	-1.08%	(-10.05) - (14.03)	EPA 200.8
Mercury - T		0.0032	0.0030		1	5.67%	(-17.79) - (13.52)	EPA 245.1


<b>Continuing Calibration Verification</b>								
Conductivity		641	678		1	-5.46%	(-12.48) - (6.609)	SM 2510B
pH		10.0	10.0		1	0.100%	(-2.649) - (3.181)	SM 4500-H+ B
pH		6.99	7.00		1	-0.143%	(-2.649) - (3.181)	SM 4500-H+ B
pH		3.99	4.00		1	-0.250%	(-2.649) - (3.181)	SM 4500-H+ B
TDS		990	1000		100ml	-1.00%	(-4.917) - (6.283)	SM 2540 C
Alkalinity		105	106		1	-0.811%	(-4.688) - (1.186)	SM 2320 B
Alkalinity		102	106		1	-3.89%	(-4.688) - (1.186)	SM 2320 B
Chloride		5.16	5.00		1	3.20%	(-11.81) - (15.00)	SM 4500-Cl E
Chloride		4.76	5.00		1	-4.80%	(-11.81) - (15.00)	SM 4500-Cl E
Fluoride		0.396	0.400		1	-1.00%	(-6.965) - (2.920)	SM 4500 F-C
Fluoride		4.92	5.00		1	-1.60%	(-6.965) - (2.920)	SM 4500 F-C
Fluoride		5.00	5.00		1	0.00%	(-6.965) - (2.920)	SM 4500 F-C
N, Nitrate		0.996	1.00		1	-0.400%	(-6.760) - (6.930)	SM 4500-NO3 F
N, Nitrate		1.01	1.00		1	1.40%	(-6.760) - (6.930)	SM 4500-NO3 F
N, Nitrate		1.02	1.00		1	2.40%	(-6.760) - (6.930)	SM 4500-NO3 F
Sulfate		53.8	50.0		1	7.62%	(-3.423) - (11.75)	SM 4500-SO4 E
Sulfate		52.0	50.0		1	3.92%	(-3.423) - (11.75)	SM 4500-SO4 E
Sulfate		52.4	50.0		1	4.76%	(-2.616) - (11.87)	SM 4500-SO4 E
Arsenic - D		0.050	0.050		1	-0.360%	(-10.98) - (4.577)	EPA 200.8
Arsenic - D		0.051	0.050		1	0.960%	(-10.98) - (4.577)	EPA 200.8
Arsenic - D		0.050	0.050		1	0.760%	(-10.98) - (4.577)	EPA 200.8

Parameter	QC Lab#	Smp Value	Value	Spike	DF	Result	Limits	Method	
<b>Continuing Calibration Verification</b>									
Arsenic - D		0.051	0.050		1	1.04%	(-10.98) - (4.577)	EPA 200.8	
Barium - D		0.052	0.050		1	3.58%	(-11.84) - (4.728)	EPA 200.8	
Barium - D		0.053	0.050		1	5.58%	(-11.84) - (4.728)	EPA 200.8	X
- Recovery was within 10% of expected value									
Barium - D		0.050	0.050		1	-0.200%	(-11.84) - (4.728)	EPA 200.8	
Boron - D		0.053	0.050		1	5.08%	(-13.25) - (15.12)	EPA 200.8	
Boron - D		0.054	0.050		1	7.70%	(-13.25) - (15.12)	EPA 200.8	
Boron - D		0.051	0.050		1	2.14%	(-13.25) - (15.12)	EPA 200.8	
Cadmium - D		0.050	0.050		1	0.180%	(-15.93) - (10.14)	EPA 200.8	
Cadmium - D		0.052	0.050		1	3.82%	(-15.93) - (10.14)	EPA 200.8	
Cadmium - D		0.050	0.050		1	-1.02%	(-15.93) - (10.14)	EPA 200.8	
Calcium - D		26.3	25.0		1	5.36%	(-12.25) - (13.36)	SM 3111 B	
Calcium - D		26.5	25.0		1	6.16%	(-12.25) - (13.36)	SM 3111 B	
Calcium - D		26.7	25.0		1	6.60%	(-12.25) - (13.36)	SM 3111 B	
- Recovery was within 10% of expected value									
Chromium - D		0.049	0.050		1	-2.56%	(-17.96) - (10.98)	EPA 200.8 DRC	
Chromium - D		0.049	0.050		1	-2.46%	(-17.96) - (10.98)	EPA 200.8 DRC	
Chromium - D		0.052	0.050		1	4.54%	(-17.96) - (10.98)	EPA 200.8 DRC	
Copper - D		0.051	0.050		1	2.46%	(-11.68) - (6.225)	EPA 200.8	
Copper - D		0.051	0.050		1	1.44%	(-11.68) - (6.225)	EPA 200.8	
Copper - D		0.051	0.050		1	2.44%	(-11.68) - (6.225)	EPA 200.8	
Iron - D		0.241	0.250		1	-3.58%	(-17.38) - (9.451)	EPA 200.8	
Iron - D		0.254	0.250		1	1.62%	(-17.38) - (9.451)	EPA 200.8	
Iron - D		0.243	0.250		1	-2.77%	(-17.38) - (9.451)	EPA 200.8	
Lead - D		0.050	0.050		1	-0.200%	(-16.66) - (10.30)	EPA 200.8	
Lead - D		0.049	0.050		1	-1.98%	(-16.66) - (10.30)	EPA 200.8	
Lead - D		0.050	0.050		1	-0.040%	(-16.66) - (10.30)	EPA 200.8	
Magnesium - D		24.9	25.0		1	-0.560%	(-7.683) - (12.98)	SM 3111 B	
Magnesium - D		23.5	25.0		1	-5.88%	(-7.683) - (12.98)	SM 3111 B	
Magnesium - D		25.5	25.0		1	2.16%	(-7.683) - (12.98)	SM 3111 B	
Manganese - D		0.051	0.050		1	1.74%	(-13.09) - (6.732)	EPA 200.8	
Manganese - D		0.053	0.050		1	5.28%	(-13.09) - (6.732)	EPA 200.8	
Manganese - D		0.049	0.050		1	-1.24%	(-13.09) - (6.732)	EPA 200.8	
Molybdenum - D		0.049	0.050		1	-2.96%	(-18.09) - (19.19)	EPA 200.8	
Molybdenum - D		0.052	0.050		1	4.82%	(-18.09) - (19.19)	EPA 200.8	
Molybdenum - D		0.050	0.050		1	0.740%	(-18.09) - (19.19)	EPA 200.8	
Nickel - D		0.050	0.050		1	0.380%	(-11.34) - (7.318)	EPA 200.8	
Nickel - D		0.049	0.050		1	-1.28%	(-11.34) - (7.318)	EPA 200.8	
Nickel - D		0.052	0.050		1	3.68%	(-11.34) - (7.318)	EPA 200.8	
Potassium - D		4.73	5.00		1	-5.40%	(-15.16) - (14.42)	SM 3111 B	
Potassium - D		5.02	5.00		1	0.400%	(-15.16) - (14.42)	SM 3111 B	
Potassium - D		4.79	5.00		1	-4.20%	(-15.16) - (14.42)	SM 3111 B	
Potassium - D		5.07	5.00		1	1.40%	(-15.16) - (14.42)	SM 3111 B	
Selenium - D		0.258	0.250		1	3.21%	(-13.58) - (5.469)	EPA 200.8	
Selenium - D		0.252	0.250		1	0.828%	(-13.58) - (5.469)	EPA 200.8	
Selenium - D		0.254	0.250		1	1.66%	(-13.58) - (5.469)	EPA 200.8	

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method
<b>Continuing Calibration Verification</b>								
Silver - D		0.050	0.050		1	0.600%	(-15.02) - (4.662)	EPA 200.8
Silver - D		0.050	0.050		1	-0.480%	(-15.02) - (4.662)	EPA 200.8
Silver - D		0.050	0.050		1	-0.540%	(-15.02) - (4.662)	EPA 200.8
Sodium - D		15.4	15.0		1	2.93%	(-10.36) - (10.97)	SM 3111 B
Sodium - D		15.4	15.0		1	2.53%	(-10.36) - (10.97)	SM 3111 B
Sodium - D		15.4	15.0		1	2.73%	(-10.36) - (10.97)	SM 3111 B
Uranium - D		0.052	0.050		1	3.12%	(-14.22) - (11.29)	EPA 200.8
Uranium - D		0.053	0.050		1	5.58%	(-14.22) - (11.29)	EPA 200.8
Uranium - D		0.052	0.050		1	3.74%	(-14.22) - (11.29)	EPA 200.8
Vanadium - D		0.052	0.050		1	3.18%	(-10.78) - (8.509)	EPA 200.8
Vanadium - D		0.050	0.050		1	-0.520%	(-10.78) - (8.509)	EPA 200.8
Vanadium - D		0.050	0.050		1	0.340%	(-10.78) - (8.509)	EPA 200.8
Zinc - D		0.050	0.050		1	-0.620%	(-13.30) - (7.559)	EPA 200.8
Zinc - D		0.051	0.050		1	1.08%	(-13.30) - (7.559)	EPA 200.8
Zinc - D		0.052	0.050		1	3.22%	(-13.30) - (7.559)	EPA 200.8
Mercury - T		0.0046	0.0050		1	-7.20%	(-12.46) - (7.196)	EPA 245.1
Mercury - T		0.0019	0.0020		1	-4.00%	(-12.46) - (7.196)	EPA 245.1
Mercury - T		0.0009	0.0010		1	-9.00%	(-12.46) - (7.196)	EPA 245.1
Gross Alpha		515	500		1	3.00%		EPA 900.0
Gross Beta		12100	13600		1	-11.0 %		EPA 900.0
Radium-226		9180	10200		1	-10.2 %		MC Radium-226
Radium-228		9410	10300		1	-8.64%		MC Radium-228
<b>Lab Fortified Blank</b>								
Gross Alpha		10.9	0.00	10.0	1	108.7 %		EPA 900.0
Gross Beta		10.9	0.00	10.0	1	109.0 %		EPA 900.0
Radium-226		9.62	0.00	10.0	1	96.2 %		MC Radium-226
Radium-228		8.54	0.00	10.0	1	85.4 %		MC Radium-228
<b>Initial Calibration Blank</b>								
Conductivity		0.600	0.00		1	0.6	(0.0854) - (1.045)	SM 2510B
Alkalinity		2.34	0.00		1	2.34	(0.6090) - (3.439)	SM 2320 B
Chloride		0.200	0.00		1	0.2	(-0.3046) - (0.9616)	SM 4500-CI E
Fluoride		0.004	0.00		1	0.004	(-0.0015) - (0.0174)	SM 4500 F-C
N, Nitrate		-0.013	0.00		1	0.013	(-0.0105) - (0.0266)	SM 4500-NO3 F
Sulfate		1.15	0.00		1	1.15	(-0.0404) - (3.513)	SM 4500-SO4 E
Sulfate		2.06	0.00		1	2.06	(-0.0541) - (3.387)	SM 4500-SO4 E
Mercury - T		0.0000	0.000		1	0.00001	(-0.0001) - (0.0001)	EPA 245.1
<b>Continuing Calibration Blank</b>								
Conductivity		0.400	0.00		1	0.4	(0.0037) - (0.9863)	SM 2510B
TDS		-2.00	0.00	100ml		-2	(-22.84) - (17.04)	SM 2540 C
Alkalinity		2.50	0.00		1	2.5	(0.5428) - (3.521)	SM 2320 B
Chloride		0.060	0.00		1	0.06	(-0.2055) - (0.7415)	SM 4500-CI E
Chloride		0.160	0.00		1	0.16	(-0.2055) - (0.7415)	SM 4500-CI E
Fluoride		0.008	0.00		1	0.008	(-0.0027) - (0.0174)	SM 4500 F-C

Parameter	Lab#	QC Value	Smp Value Spike	DF	Result	Limits	Method
<b>Continuing Calibration Blank</b>							
N, Nitrate		0.011	0.00	1	0.011	(-0.0085) - (0.0222)	SM 4500-NO3 F
N, Nitrate		-0.008	0.00	1	0.008	(-0.0085) - (0.0222)	SM 4500-NO3 F
N, Nitrate		-0.015	0.00	1	0.015	(-0.0085) - (0.0222)	SM 4500-NO3 F
Sulfate		1.21	0.00	1	1.21	(-0.1178) - (3.243)	SM 4500-SO4 E
Sulfate		1.27	0.00	1	1.27	(-0.1178) - (3.243)	SM 4500-SO4 E
Sulfate		2.10	0.00	1	2.1	(-0.1038) - (3.228)	SM 4500-SO4 E
Arsenic - D		0.000	0.00	1	0.00013	(-0.0002) - (0.0004)	EPA 200.8
Barium - D		0.000	0.00	1	0.00012	(-0.0002) - (0.0002)	EPA 200.8
- Blank value is less than half of the reporting limit							
Boron - D		0.001	0.00	1	0.00051	(-0.0002) - (0.0020)	EPA 200.8
Cadmium - D		0.000	0.00	1	0.00013	(-0.0003) - (0.0005)	EPA 200.8
Calcium - D		-0.070	0.00	1	-0.07	(-0.1578) - (0.1408)	SM 3111 B
Chromium - D		0.000	0.00	1	0.00001	(0.0000) - (0.0000)	EPA 200.8 DRC
Copper - D		0.000	0.00	1	0.00014	(-0.0002) - (0.0004)	EPA 200.8
Iron - D		0.000	0.00	1	0.00025	(-0.0005) - (0.0013)	EPA 200.8
Lead - D		0.000	0.00	1	0.00012	(-0.0002) - (0.0004)	EPA 200.8
Magnesium - D		0.00	0.00	1	0	(-0.2186) - (0.1886)	SM 3111 B
Magnesium - D		-0.010	0.00	1	-0.01	(-0.2186) - (0.1886)	SM 3111 B
Manganese - D		0.000	0.00	1	0.00013	(-0.0002) - (0.0003)	EPA 200.8
- Blank value is less than half of the reporting limit							
Molybdenum - D		0.000	0.00	1	0.00016	(-0.0001) - (0.0003)	EPA 200.8
Nickel - D		0.000	0.00	1	0.00014	(-0.0003) - (0.0005)	EPA 200.8
Potassium - D		0.00	0.00	1	0	(-0.0353) - (0.0143)	SM 3111 B
Potassium - D		0.00	0.00	1	0	(-0.0353) - (0.0143)	SM 3111 B
Potassium - D		0.00	0.00	1	0	(-0.0353) - (0.0143)	SM 3111 B
Selenium - D		0.001	0.00	1	0.00053	(-0.0008) - (0.0017)	EPA 200.8
Silver - D		0.000	0.00	1	0.00005	(-0.0027) - (0.0024)	EPA 200.8
Sodium - D		-0.030	0.00	1	-0.03	(-0.0365) - (0.0265)	SM 3111 B
Sodium - D		-0.010	0.00	1	-0.01	(-0.0365) - (0.0265)	SM 3111 B
Uranium - D		0.000	0.00	1	0.00019	(-0.0001) - (0.0003)	EPA 200.8
Vanadium - D		0.000	0.00	1	0.00015	(0.0000) - (0.0001)	EPA 200.8
- Blank value is less than half of the reporting limit							
Zinc - D		0.000	0.00	1	0.00012	(-0.0006) - (0.0007)	EPA 200.8
Radium-226		0.00	0.00	1	0		MC Radium-226
Radium-228		0.424	0.00	1	0.424		MC Radium-228
<b>Lab Reagent Blank</b>							
Gross Alpha		-0.255	0.00	1	-0.255		EPA 900.0
Gross Beta		0.120	0.00	1	0.12		EPA 900.0
Radium-226		0.383	0.00	1	0.383		MC Radium-226
Radium-228		0.00	0.00	1	0		MC Radium-228

X

Approved By: 

Approved On: 05/13/2014 10:20 AM



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# CHAIN OF CUSTODY RECORD

PRESERVED WITH	
FILTERED (V/N)	
REFRIGERATED (V/N)	
ANALYSES REQUESTED	As per bucket

**FOR LAB USE ONLY**

Seal Intact (Y/N) Number \_\_\_\_\_

Sample Condition on ice

Temperature of Container -0.4°C

REQUESTED TURN AROUND \_\_\_\_\_

STANDARD \_\_\_\_\_ RUSH \_\_\_\_\_

Company	Powertech / Scott Env.		
Project Name / Mgr.	Lisa Scheinost / Allen Scott		
Project Number	Alluvial wells		
Sampled by	Signature	[Signature]	
Sampled by	Print	Allen Scott	

	SAMPLE NAME	DATE	TIME	MATRIX	NO. OF CONTAINERS	COMMENTS	LAB #
1	BC-2 202	3-10-14	15:19	Water	✓	* Nutrient bottles preserved by JM at MCT.	
2	BC-3 203	3-10-14	18:11	LI	✓		
3							
4							
5						* Radium containers preserved by KS at MCT,	
6						* Pb 210 + Thon 230 bottles preserved by JM at MCT.	
7	Batch 2						
8	3-12-14					metals preserved 504 was not used	
9							
10							
11							
12							

RELINQUISHED BY (Signature)	COMPANY NAME	DATE	TIME	RECEIVED BY (Signature)	COMPANY NAME	DATE	TIME
[Signature]	Scott Env.	3-11-14	16:22	[Signature]	MUF	3/11/14	16:22



**MIDCONTINENT**  
TESTING LABORATORIES, INC.

Page 1 of 3

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(605) 348-0111 -- www.thechemistrylab.com

Sample Site: ~~BC~~  
Project Name: Powertech  
Sampled: 12/16/13 at 04:39 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: ~~20131218368~~  
Received: ~~12/17/13 at 04:00 PM~~  
by Greg McDougall  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

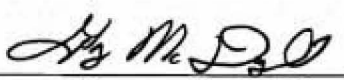
Parameter	Result	Units	DF	MDL	PQL	Method	Analyst/Date
<b>Physical Properties</b>							
Electrical Conductivity	3560	µmhos/cm	1	0.299	5.00	SM 2510B	JAM 12/18/13
pH	7.00	SU	1			SM 4500-H+ B	JAM 12/18/13
Total Dissolved Solids	3550	mg/L	100ml	22.6	50.0	SM 2540 C	TMN 12/18/13
<b>Non-Metallics</b>							
Alkalinity (CaCO3)	291	mg/L	1	0.327	10.0	SM 2320 B	JAM 12/18/13
Bicarbonate	355	mg/L	1	0.399	10.0	SM 2320 B	JAM 12/18/13
Carbonate	0.00	mg/L	1	0.164	5.00	SM 2320 B	JAM 12/18/13
Chloride (Cl-)	20.3	mg/L	1	0.273	0.500	SM 4500-Cl E	BLL 12/18/13
Fluoride	0.478	mg/L	1	0.003	0.050	SM 4500 F-C	PAT 12/20/13
Nitrogen, Nitrate (NO3)	0.057	mg/L	1	0.010	0.050	SM 4500-NO3 F	BLL 12/18/13
Sulfate (SO4)	2350	mg/L	50	34.2	50.0	SM 4500-SO4 E	BLL 12/18/13
<b>Metals - Dissolved</b>							
Arsenic (As)	< 0.005	mg/L	10	0.0005	0.005	EPA 200.8	SAC 12/18/13
Barium (Ba)	0.008	mg/L	10	0.0005	0.005	EPA 200.8	SAC 12/18/13
Boron (B)	0.745	mg/L	10	0.005	0.020	EPA 200.8	SAC 12/27/13
Cadmium (Cd)	< 0.001	mg/L	10	0.0001	0.001	EPA 200.8	SAC 12/18/13
Calcium (Ca)	551	mg/L	20	0.958	20.0	SM 3111 B	GRT 12/18/13
Chromium (Cr)	< 0.001	mg/L	10	0.0005	0.001	EPA 200.8 DRC	SAC 12/18/13
Copper (Cu)	< 0.005	mg/L	10	0.000778	0.005	EPA 200.8	SAC 12/18/13
Iron (Fe)	0.130	mg/L	10	0.004	0.050	EPA 200.8	SAC 12/18/13
Lead (Pb)	< 0.001	mg/L	10	0.000086	0.001	EPA 200.8	SAC 12/18/13
Magnesium (Mg)	241	mg/L	8	0.258	4.00	SM 3111 B	GRT 12/18/13
Manganese (Mn)	0.025	mg/L	10	0.0001	0.010	EPA 200.8	SAC 12/18/13
Molybdenum (Mo)	0.006	mg/L	10	0.0001	0.001	EPA 200.8	SAC 12/18/13
Nickel (Ni)	0.016	mg/L	10	0.0003	0.005	EPA 200.8	SAC 12/18/13
Potassium (K)	11.5	mg/L	2	0.047	1.00	SM 3111 B	GRT 12/18/13
Selenium (Se)	< 0.005	mg/L	10	0.001	0.005	EPA 200.8	SAC 12/18/13
Silver (Ag)	< 0.001	mg/L	10	0.000067	0.001	EPA 200.8	SAC 12/18/13
Sodium (Na)	178	mg/L	11	1.01	5.50	SM 3111 B	GRT 12/18/13

Report of Analysis for: **Powertech Uranium**Sample Site: **BC-1**

Page 3 of 3

**Quality Control Data**

<b>Parameter</b>	<b>Result</b>	<b>Limits</b>	<b>DF</b>	<b>Method</b>	<b>Analyst/Date</b>	
<b><u>Dissolved Metals - Internal Std</u></b>						
Bismuth (Bi)	100.2 %	(60.0 - 125.0) %	10	EPA 200.8	SAC	12/18/13
Germanium (Ge72)	85.8 %	(60.0 - 125.0) %	10	EPA 200.8	SAC	12/18/13
Germanium (Ge74)	70.2 %	(60.0 - 125.0) %	10	EPA 200.8 DRC	SAC	12/18/13
Indium (In)	86.7 %	(60.0 - 125.0) %	10	EPA 200.8	SAC	12/18/13
Lithium (Li)	60.0 %	(60.0 - 125.0) %	10	EPA 200.8	SAC	12/18/13
Scandium (Sc)	71.7 %	(60.0 - 125.0) %	10	EPA 200.8	SAC	12/18/13
Lithium (Li)	89.3 %	(60.0 - 125.0) %	10	EPA 200.8	SAC	12/27/13

Approved By: 

Approved On: 2/14/2014 3:27:31 PM

### SAMPLE RECEIPT CHECKLIST

 Company Name Powertech

 Date/Time Received 3-11-14 1622  
Date / Time

Project \_\_\_\_\_

 Received by Kate Shivers

 Lab Number(s) 202-203 3-12-14

 Carrier Name Allen Scott

Yes	No	<b><u>UNPACKING</u></b>	<i>Initials</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. Shipping container in good condition?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. Custody seals present on shipping container? Condition: <u>Intact</u> Broken	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. <u>Ice</u> Blue Ice (circle one) present in shipping container? Container(s) Temp. 1. <u>0.5°C</u> 2. _____ 3. _____ 4. _____	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. Bottles broken and/or leaking? (Photograph broken bottles.)	_____
<input type="checkbox"/>	<input type="checkbox"/>	5. Custody seals on sample bottles? Condition: Intact Broken <u>M</u>	_____

Yes	No	<b><u>LABELING</u></b>	<i>Initials</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	6. Chain of custody Present?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. Chain of custody includes signatures, dates, and times when relinquished and received?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. Chain of custody agrees with bottle count?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	9. Chain of custody agrees with labels?	_____
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	10. Samples received within holding times?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	11. Samples in proper container?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	12. Sufficient sample volume for indicated tests?	_____

<b><u>PRESERVATIVE</u></b>				
Yes	No	<i>Initials</i>	Yes No	<i>Initials</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	13. Metals bottle(s) pH < 2? _____	<input type="checkbox"/> <input type="checkbox"/>	17. TOC bottle(s) pH < 2? _____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	14. Nutrient bottle(s) pH < 2? _____	<input type="checkbox"/> <input type="checkbox"/>	18. Oil & Grease bottle(s) pH < 2? _____
<input type="checkbox"/>	<input type="checkbox"/>	15. Cyanide bottle(s) pH > 12? _____	<input type="checkbox"/> <input type="checkbox"/>	19. Volatiles pH < 2? _____
<input type="checkbox"/>	<input type="checkbox"/>	16. Sulfide bottle(s) pH > 9? _____		

**COMMENTS:** Nutrient + total metals preserved in Lab. Dissolved metals filtered + preserved in Lab. Radiological samples preserved in Lab.



Report of Analysis for: **Powertech Uranium**Sample Site: **BC-1**

Page 2 of 3

<b>Parameter</b>	<b>Result</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Method</b>	<b>Analyst/Date</b>
<b><u>Metals - Dissolved</u></b>							
Uranium (U)	0.097	mg/L	10	0.000021	0.001	EPA 200.8	SAC 12/18/13
Vanadium (V)	< 0.005	mg/L	10	0.000073	0.005	EPA 200.8	SAC 12/18/13
Zinc (Zn)	< 0.050	mg/L	10	0.006	0.050	EPA 200.8	SAC 12/18/13
<b><u>Metals - Total</u></b>							
Mercury (Hg)	< 0.0002	mg/L	1	0.000035	0.0002	EPA 245.1	GRT 12/18/13
<b><u>Anion - Cation Balance</u></b>							
Anions	55.3	meq/L	1			Calculation	GAM 12/30/13
Anion - Cation Balance	0.022	%	1			Calculation	GAM 12/30/13
Cations	55.3	meq/L	1			Calculation	GAM 12/30/13
Electrical Conductivity - Calculated	6670	µS/cm	1			SM 1030	DVA 12/23/13
Total Dissolved Solids - Ratio	1.01	none	1			SM 1030	DVA 12/23/13
<b><u>Radiological</u></b>							
Gross Alpha	66.6	pCi/L	1			EPA 900.0	EJF 02/12/14
Gross Beta	57.8	pCi/L	1			EPA 900.0	EJF 02/10/14
Lead-210	0.353	pCi/g	1			EPA 901.1m	SYS 01/15/14
Radium-226	0.254	pCi/L	1			MC Radium-226	EJF 02/03/14
Radium-228	0.723	pCi/L	1			MC Radium-228	EJF 02/03/14
Radon-222	817	pCi/L	1			SM 7500Rn-B	SYS 12/23/13
Thorium-230	0.015	pCi/L	1			HSL-300m	SYS 01/10/14
<b><u>Precision Data</u></b>							
Gross Alpha precision	± 5.89	pCi/L	1			MC - Gross Alpha precision	EJF 02/12/14
Gross Beta precision	± 6.50	pCi/L	1			MC - Gross Beta precision	EJF 02/10/14
Lead-210 Precision	± 0.335	pCi/L	1			MC-Lead 210 precision	SYS 01/15/14
Radium-226 precision	± 0.143	pCi/L	1			MC-Radium 226 precision	EJF 02/03/14
Radium-228 precision	± 0.229	pCi/L	1			MC-Radium 228 precision	EJF 02/03/14
Radon-222 Precision	± 201	pCi/L	1			MC-Radon 222 precision	SYS 12/23/13
Thorium-230 Precision	± 0.055	pCi/L	1			MC-Thorium 230 precision	SYS 01/10/14
<b><u>MDA Data</u></b>							
Gross Alpha MDA	12.8	pCi/L	1			MC - Gross Alpha MDA	EJF 02/12/14
Gross Beta MDA	17.6	pCi/L	1			MC - Gross Beta MDA	EJF 02/10/14
Lead-210 MDA	0.554	pCi/L	1			MC - Lead 210 MDA	SYS 01/15/14
Radium-226 MDA	0.292	pCi/L	1			MC - Radium 226 MDA	EJF 02/03/14
Radium-228 MDA	0.485	pCi/L	1			MC - Radium 228 MDA	EJF 02/03/14
Radon-222 MDA	161	pCi/L	1			MC - Radon 222 MDA	SYS 12/23/13
Thorium-230 MDA	0.106	pCi/L	1			MC - Thorium 230 MDA	SYS 01/10/14



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**CHAIN OF CUSTODY RECORD**

Company	MidContinent Testing		
Project Name / Mgr.	Eric Fuehrer		
Project Number			
Sampled by	Signature		
Sampled by	Print		

PREPARED WITH	None
FILTERED (Y/N)	N
REFRIGERATED (Y/N)	Y
ANALYSES REQUESTED	Radon 222

**FOR LAB USE ONLY**

Sample Ingest (1/6/2) Number \_\_\_\_\_

Sample Condition \_\_\_\_\_

Temperature of Container \_\_\_\_\_

REQUESTED TURN AROUND

STANDARD \_\_\_\_\_ RUSH \_\_\_\_\_

	SAMPLE NAME	DATE	TIME	MATRIX	NO. OF CONTAINERS	COMMENTS	LAB #
1	20140312202	03/10/14	1519	Water	2	X	
2	20140312203	03/10/14	1811	Water	2	X	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

RELINQUISHED BY (Signature)	COMPANY NAME	DATE	TIME	RECEIVED BY (Signature)	COMPANY NAME	DATE	TIME
<i>Eric Fuehrer</i>	MCT	3/12/14	1408		FedEx Overnight to Pace Analytical, PA		




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Sample Site: DC-2  
Project Name: Powertech  
Sampled: 04/09/14 at 09:21 AM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20140410581  
Received: 04/10/14 at 10:44 AM  
by Greg McDougall  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	624	pCi/L	1	SM 7500Rn-B	SYS 04/11/14
<b>Precision Data</b>					
Radon-222 Precision	± 123	pCi/L	1	MC-Radon 222 precision	SYS 04/11/14
<b>MDA Data</b>					
Radon-222 MDA	81.8	pCi/L	1	MC - Radon 222 MDA	SYS 04/11/14

Approved By: 

Approved On: 4/17/2014 9:58:31 AM




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Sample Site: BC-1  
Project Name: Powertech  
Sampled: 04/09/14 at 12:30 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20140410582  
Received: 04/10/14 at 10:44 AM  
by Greg McDougall  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	824	pCi/L	1	SM 7500Rn-B	SYS 04/12/14
<b>Precision Data</b>					
Radon-222 Precision	± 158	pCi/L	1	MC-Radon 222 precision	SYS 04/12/14
<b>MDA Data</b>					
Radon-222 MDA	50.8	pCi/L	1	MC - Radon 222 MDA	SYS 04/12/14

Approved By: 

Approved On: 4/17/2014 9:58:31 AM



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Lab Numbers: 20140410581 - 20140410582

### QC Sample Report

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method
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Approved By: \_\_\_\_\_

Printed On:04/17/2014 09:59 AM

## CHAIN OF CUSTODY RECORD

PRESERVED WITH	
FILTERED (Y/N)	
REFRIGERATED (Y/N)	
ANALYSES REQUESTED	Radon as per Disk

<b>FOR LAB USE ONLY</b>	
Seal Intact (Y/N)/Number	
Sample Collection	On Ice
Temperature of Container	0.3C

REQUESTED TURN AROUND	
STANDARD	RUSH

Company	Powertech / Scott Env.		
Project Name / Mgr.	Allan Scott / Lisa Scheinost		
Project Number			
Sampled by	Signature	Allan Scott	
Sampled by	Print	Allan Scott	

	SAMPLE NAME	DATE	TIME	MATRIX	NO. OF CONTAINERS	COMMENTS	LAB #
1	PC-2	4-9-14	9:24	water	3		20140410581
2	PC-1	4-9-14	<del>12:30</del>	water	3		↓ 582
3			12:30				
4							
5							
6							
7							
8							
9							
10							
11							
12							

REMOVED BY (Signature)	COMPANY NAME	DATE	TIME	RECEIVED BY (Signature)	COMPANY NAME	DATE	TIME
<i>Allan Scott</i>	Scott Env.	4-10-14	10:44	<i>[Signature]</i>	MCT	4-10-14	10:44

### SAMPLE RECEIPT CHECKLIST

Company Name Scott Environmental  
 Project Powertech  
 Lab Number(s) 20140410581-582

Date/Time Received 4/10/14 10:44  
Date Time  
 Received by Greg Mc Donald  
 Carrier Name Powertech / Scott Envi.

Yes	No	<b><u>UNPACKING</u></b>	<b>Initials</b>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. Shipping container in good condition?	<u>EM</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2. Custody seals present on shipping container? Condition: Intact <input type="checkbox"/> Broken <input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. <u>Ice</u> / Blue Ice (circle one) present in shipping container? Container(s) Temp. 1. <u>0.3°C</u> 2. _____ 3. _____ 4. _____	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. Bottles broken and/or leaking? (Photograph broken bottles.)	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. Custody seals on sample bottles? Condition: Intact <input type="checkbox"/> Broken <input type="checkbox"/>	

Yes	No	<b><u>LABELING</u></b>	<b>Initials</b>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	6. Chain of custody Present?	<u>EM</u>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. Chain of custody includes signatures, dates, and times when relinquished and received?	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. Chain of custody agrees with bottle count?	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	9. Chain of custody agrees with labels?	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	10. Samples received within holding times?	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	11. Samples in proper container?	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	12. Sufficient sample volume for indicated tests?	

<b><u>PRESERVATIVE</u></b>					
Yes	No	<b>Initials</b>	Yes No	<b>Initials</b>	
<input type="checkbox"/>	<input type="checkbox"/>	13. Metals bottle(s) pH < 2? _____	<input type="checkbox"/>	<input type="checkbox"/>	17. TOC bottle(s) pH < 2? _____
<input type="checkbox"/>	<input type="checkbox"/>	14. Nutrient bottle(s) pH < 2? _____	<input type="checkbox"/>	<input type="checkbox"/>	18. Oil & Grease bottle(s) pH < 2? _____
<input type="checkbox"/>	<input type="checkbox"/>	15. Cyanide bottle(s) pH > 12? _____	<input type="checkbox"/>	<input type="checkbox"/>	19. Volatiles pH < 2? _____
<input type="checkbox"/>	<input type="checkbox"/>	16. Sulfide bottle(s) pH > 9? _____			

**COMMENTS:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



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# CHAIN OF CUSTODY RECORD

PRESERVED WITH BUON	
FILTERED (N/A) N	
REFRIGERATED (N/A) Y	
ANALYSES REQUESTED	Radon 222

**FOR LAB USE ONLY**

Seal Intact (Y/N) \_\_\_\_\_

Sample Condition \_\_\_\_\_

Temperature of Container \_\_\_\_\_

REQUESTED TURN AROUND

STANDARD \_\_\_\_\_

RUSH \_\_\_\_\_

Company	MidContinent Testing		
Project Name / Mgr.	Eric Fuehrer		
Project Number			
Sampled by	Signature _____		
Sampled by	Print _____		

	SAMPLE NAME	DATE	TIME	MATRIX	NO. OF CONTAINERS	COMMENTS	LAB #
1	20140410581	04/09/14	0921	Water	2 X		
2	20140410582	04/09/14	1235	Water	2 X		
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

RELINQUISHED BY (Signature)	COMPANY NAME	DATE	TIME	RECEIVED BY (Signature)	COMPANY NAME	DATE	TIME
<i>Eric Fuehrer</i>	MCT	4/10/14	1315	FedEx Overnight to Pace Analytical, PA			






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Sample Site: BC-1  
Project Name: Powertech  
Sampled: 05/18/14 at 09:55 AM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20140519581  
Received: 05/19/14 at 10:19 AM  
by Kodee Click  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	675	pCi/L	1	SM 7500Rn-B	SYS 05/20/14
<b>Precision Data</b>					
Radon-222 Precision	± 132	pCi/L	1	MC-Radon 222 precision	SYS 05/20/14
<b>MDA Data</b>					
Radon-222 MDA	51.7	pCi/L	1	MC - Radon 222 MDA	SYS 05/20/14

Approved By: 

Approved On: 6/2/2014 7:40:38 AM




2381 South Plaza Drive P.O. Box 3388 Rapid City, SD 57709  
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Sample Site: BC-2  
Project Name: Powertech  
Sampled: 05/18/14 at 10:53 AM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20140519582  
Received: 05/19/14 at 10:19 AM  
by Kodee Click  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	991	pCi/L	1	SM 7500Rn-B	SYS 05/21/14
<b>Precision Data</b>					
Radon-222 Precision	± 188	pCi/L	1	MC-Radon 222 precision	SYS 05/21/14
<b>MDA Data</b>					
Radon-222 MDA	51.7	pCi/L	1	MC - Radon 222 MDA	SYS 05/21/14

Approved By: 

Approved On: 6/2/2014 7:40:38 AM




2381 South Plaza Drive P.O. Box 3388 Rapid City, SD 57709  
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Lab Numbers: 20140519581 - 20140519582

### QC Sample Report

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method
-----------	------	----------	-----------	-------	----	--------	--------	--------

Approved By: 

Approved On: 06/02/2014 07:40 AM



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**CHAIN OF CUSTODY RECORD**

PRESERVED WITH	
FILTERED (Y/N)	
REFRIGERATED (Y/N)	
ANALYSES REQUESTED	Major metals

**FOR LAB USE ONLY**

Seal intact (Y/N)/Number \_\_\_\_\_

Sample Condition \_\_\_\_\_

Temperature of Container 4.2°C

On Ice \_\_\_\_\_

REQUESTED TURN AROUND \_\_\_\_\_

STANDARD \_\_\_\_\_ RUSH \_\_\_\_\_

Company Powertech / South Env.

Project Name / Mgr. Lisa Schenost / Allen Scott

Project Number \_\_\_\_\_

Sampled by Signature all AS

Sampled by Print Allen Scott

	SAMPLE NAME	DATE	TIME	MATRIX	NO. OF CONTAINERS	ANALYSES REQUESTED	COMMENTS	LAB #
1	Be-1	5-18-14	9:05	Water	2	✓		20140519 581
2	Be-2	5-18-14	10:03	Water	2	✓		J J 582
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								

RELINQUISHED BY (Signature)	COMPANY NAME	DATE	TIME	RECEIVED BY (Signature)	COMPANY NAME	DATE	TIME
<u>all AS</u>	<u>South Env.</u>	<u>5-19-14</u>	<u>10:19</u>	<u>Kedra A. White</u>	<u>Misc Containment</u>	<u>5/19/14</u>	<u>10:19</u>

### SAMPLE RECEIPT CHECKLIST

Company Name Scott Environmental Date/Time Received 5/19/14 1019  
Date / Time  
 Project Powerdeck Received by Kodee Click  
 Lab Number(s) 20140519581-582 Carrier Name Allen Scott

Yes	No	<b>UNPACKING</b>	<i>Initials</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. Shipping container in good condition?	<u>ES</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2. Custody seals present on shipping container? Condition: Intact <input type="checkbox"/> Broken <input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. <u>Ice</u> Blue Ice (circle one) present in shipping container? Container(s) Temp. 1. <u>4.2°C</u> 2. _____ 3. _____ 4. _____	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. Bottles broken and/or leaking? (Photograph broken bottles.)	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	5. Custody seals on sample bottles? Condition: Intact <input type="checkbox"/> Broken <input type="checkbox"/>	<u>ES</u>

Yes	No	<b>LABELING</b>	<i>Initials</i>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	6. Chain of custody Present?	<u>ES</u>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. Chain of custody includes signatures, dates, and times when relinquished and received?	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. Chain of custody agrees with bottle count?	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	9. Chain of custody agrees with labels?	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	10. Samples received within holding times?	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	11. Samples in proper container?	
<input type="checkbox"/>	<input type="checkbox"/>	12. Sufficient sample volume for indicated tests?	<u>ES</u>

		<b>PRESERVATIVE</b>					
Yes	No	<i>Initials</i>	Yes	No	<i>Initials</i>		
<input type="checkbox"/>	<input type="checkbox"/>	13. Metals bottle(s) pH < 2? _____	<input type="checkbox"/>	<input type="checkbox"/>	17. TOC bottle(s) pH < 2? _____		
<input type="checkbox"/>	<input type="checkbox"/>	14. Nutrient bottle(s) pH < 2? _____	<input type="checkbox"/>	<input type="checkbox"/>	18. Oil & Grease bottle(s) pH < 2? _____		
<input type="checkbox"/>	<input type="checkbox"/>	15. Cyanide bottle(s) pH > 12? _____	<input type="checkbox"/>	<input type="checkbox"/>	19. Volatiles pH < 2? _____		
<input type="checkbox"/>	<input type="checkbox"/>	16. Sulfide bottle(s) pH > 9? _____					

**COMMENTS:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



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# CHAIN OF CUSTODY RECORD

Company	MidContinent Testing		
Project Name / Mgr.	/ Greg Mc Dougall		
Project Number			
Sampled by	Signature		
Sampled by	Print Allen Scott		

PRESERVED WITH	None
FILTERED (Y/N)	N
REFRIGERATED (Y/N)	N
ANALYSES REQUESTED	Polon 222

**FOR LAB USE ONLY**

Seal Intact (Y/N)/Number \_\_\_\_\_

Sample Condition \_\_\_\_\_

Temperature of Container \_\_\_\_\_

REQUESTED TURN AROUND

STANDARD \_\_\_\_\_ RUSH \_\_\_\_\_

	SAMPLE NAME	DATE	TIME	MATRIX	NO. OF CONTAINERS	COMMENTS	LAB #
1	20140519581	5/18/14	0955	Water	2	X	
2	20140519582	5/18/14	1053	J	1	X	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

RELINQUISHED BY (Signature)	COMPANY NAME	DATE	TIME	RECEIVED BY (Signature)	COMPANY NAME	DATE	TIME
<i>Eric Fisher</i>	MCT	5/19/14	1523	<i>Overnight to Pace</i>	PA via Fedex.		



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Sample Site: BC-2  
Project Name: Powertech  
Sampled: 06/24/14 at 01:51 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20140626108  
Received: 06/25/14 at 03:13 PM  
by Dean Aurand  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst/Date
<b>Physical Properties</b>							
Electrical Conductivity	3750	µmhos/cm	1	0.237	5.00	SM 2510B	EJF 06/26/14
pH	7.19	S.U.	1			SM 4500-H+ B	EJF 06/26/14
Total Dissolved Solids	3640	mg/L	100ml	17.6	50.0	SM 2540 C	TMN 06/26/14
<b>Non-Metallics</b>							
Alkalinity (CaCO3)	228	mg/L	1	0.421	10.0	SM 2320 B	EJF 06/26/14
Bicarbonate	279	mg/L	1	0.513	10.0	SM 2320 B	EJF 06/26/14
Carbonate	0.00	mg/L	1	0.210	5.00	SM 2320 B	EJF 06/26/14
Chloride (Cl-)	20.5	mg/L	4	1.02	2.00	SM 4500-Cl E	BLL 06/26/14
Fluoride	0.616	mg/L	1	0.004	0.050	SM 4500 F-C	KAC 06/26/14
Nitrogen, Nitrate (NO3)	0.083	mg/L	1	0.014	0.050	SM 4500-NO3 F	BLL 06/26/14
Sulfate (SO4)	2450	mg/L	40	10.5	40.0	SM 4500-SO4 E	BLL 06/27/14
<b>Metals - Dissolved</b>							
Arsenic (As)	< 0.005	mg/L	10	0.0006	0.005	EPA 200.8	TNA 06/26/14
Barium (Ba)	0.008	mg/L	10	0.0005	0.005	EPA 200.8	TNA 06/26/14
Boron (B)	0.485	mg/L	10	0.005	0.020	EPA 200.8	TNA 06/26/14
Cadmium (Cd)	< 0.001	mg/L	10	0.0001	0.001	EPA 200.8	TNA 06/26/14
Calcium (Ca)	539	mg/L	18	2.39	18.0	SM 3111 B	GRT 06/26/14
Chromium (Cr)	< 0.001	mg/L	10	0.0001	0.001	EPA 200.8 DRC	TNA 06/26/14
Copper (Cu)	0.005	mg/L	10	0.0009	0.005	EPA 200.8	TNA 06/26/14
Iron (Fe)	< 0.050	mg/L	10	0.004	0.050	EPA 200.8	TNA 06/26/14
Lead (Pb)	0.003	mg/L	10	0.000026	0.001	EPA 200.8	TNA 06/26/14
Magnesium (Mg)	225	mg/L	6	0.180	3.00	SM 3111 B	GRT 06/26/14
Manganese (Mn)	0.039	mg/L	10	0.0001	0.010	EPA 200.8	TNA 06/26/14
Molybdenum (Mo)	0.015	mg/L	10	0.0001	0.001	EPA 200.8	TNA 06/26/14
Nickel (Ni)	0.017	mg/L	10	0.0003	0.005	EPA 200.8	TNA 06/26/14
Potassium (K)	12.3	mg/L	2	0.050	1.00	SM 3111 B	GRT 06/26/14
Selenium (Se)	< 0.005	mg/L	10	0.001	0.005	EPA 200.8	TNA 06/26/14
Silver (Ag)	< 0.001	mg/L	10	0.0002	0.001	EPA 200.8	TNA 06/26/14

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst/Date
<b>Metals - Dissolved</b>							
Sodium (Na)	248	mg/L	8	0.736	4.00	SM 3111 B	GRT 06/26/14
Uranium (U)	0.025	mg/L	10	0.000021	0.001	EPA 200.8	TNA 06/26/14
Vanadium (V)	< 0.005	mg/L	10	0.000073	0.005	EPA 200.8	TNA 06/26/14
Zinc (Zn)	< 0.050	mg/L	10	0.006	0.050	EPA 200.8	TNA 06/26/14
<b>Metals - Total</b>							
Mercury (Hg)	< 0.0002	mg/L	1	0.000035	0.0002	EPA 245.1	GRT 06/26/14
<b>Anion - Cation Balance</b>							
Anions	56.2	meq/L	1			Calculation	GAM 06/27/14
Anion - Cation Balance	0.288	%	1			Calculation	GAM 06/27/14
Cations	56.5	meq/L	1			Calculation	GAM 06/27/14
Electrical Conductivity - Calculated	6830	µS/cm	1			SM 1030	DVA 07/25/14
Total Dissolved Solids - Ratio	1.00	none	1			SM 1030	DVA 07/25/14
<b>Radiological</b>							
Gross Alpha	12.6	pCi/L	1			EPA 900.0	EJF 07/09/14
Gross Beta	16.0	pCi/L	1			EPA 900.0	EJF 07/09/14
Lead-210	0.534	pCi/L	1			RP280m DOE	SYS 07/16/14
Radium-226	< 1.000	pCi/L	1			MC Radium-226	EJF 07/24/14
Radium-228	< 1.00	pCi/L	1			MC Radium-228	EJF 07/24/14
Radon-222	924	pCi/L	1			SM 7500Rn-B	SYS 06/30/14
Thorium-230	0.007	pCi/L	1			HSL-300m	SYS 07/14/14
<b>Precision Data</b>							
Gross Alpha precision	± 2.20	pCi/L	1			MC - Gross Alpha precision	EJF 07/09/14
Gross Beta precision	± 3.00	pCi/L	1			MC - Gross Beta precision	EJF 07/09/14
Lead-210 Precision	± 0.458	pCi/L	1			MC-Lead 210 precision	SYS 07/16/14
Radium-226 precision	± 0.000	pCi/L	1			MC-Radium 226 precision	EJF 07/24/14
Radium-228 precision	± 0.00	pCi/L	1			MC-Radium 228 precision	EJF 07/24/14
Radon-222 Precision	± 190	pCi/L	1			MC-Radon 222 precision	SYS 06/30/14
Thorium-230 Precision	± 0.032	pCi/L	1			MC-Thorium 230 precision	SYS 07/14/14
<b>MDA Data</b>							
Gross Alpha MDA	5.14	pCi/L	1			MC - Gross Alpha MDA	EJF 07/09/14
Gross Beta MDA	8.97	pCi/L	1			MC - Gross Beta MDA	EJF 07/09/14
Lead-210 MDA	0.864	pCi/L	1			MC - Lead 210 MDA	SYS 07/16/14
Radium-226 MDA	0.0120	pCi/L	1			MC - Radium 226 MDA	EJF 07/24/14
Radium-228 MDA	0.030	pCi/L	1			MC - Radium 228 MDA	EJF 07/24/14
Radon-222 MDA	103	pCi/L	1			MC - Radon 222 MDA	SYS 06/30/14
Thorium-230 MDA	0.052	pCi/L	1			MC - Thorium 230 MDA	SYS 07/14/14

Approved By: \_\_\_\_\_







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LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Sample Site: BC-3  
Project Name: Powertech  
Sampled: 06/24/14 at 04:17 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20140626109  
Received: 06/25/14 at 03:13 PM  
by Dean Aurand  
Account: w1552 - Powertech Uranium

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst/Date
<b>Physical Properties</b>							
Electrical Conductivity	3060	µmhos/cm	1	0.237	5.00	SM 2510B	EJF 06/26/14
pH	7.17	S.U.	1			SM 4500-H+ B	EJF 06/26/14
Total Dissolved Solids	2840	mg/L	100ml	17.6	50.0	SM 2540 C	TMN 06/26/14
<b>Non-Metallics</b>							
Alkalinity (CaCO3)	214	mg/L	1	0.421	10.0	SM 2320 B	EJF 06/26/14
Bicarbonate	261	mg/L	1	0.513	10.0	SM 2320 B	EJF 06/26/14
Carbonate	0.00	mg/L	1	0.210	5.00	SM 2320 B	EJF 06/26/14
Chloride (Cl-)	15.7	mg/L	4	1.02	2.00	SM 4500-Cl E	BLL 06/26/14
Fluoride	0.478	mg/L	1	0.004	0.050	SM 4500 F-C	KAC 06/26/14
Nitrogen, Nitrate (NO3)	< 0.050	mg/L	1	0.014	0.050	SM 4500-NO3 F	BLL 06/26/14
Sulfate (SO4)	1890	mg/L	40	10.5	40.0	SM 4500-SO4 E	BLL 06/27/14
<b>Metals - Dissolved</b>							
Arsenic (As)	< 0.005	mg/L	10	0.0006	0.005	EPA 200.8	TNA 06/26/14
Barium (Ba)	0.012	mg/L	10	0.0005	0.005	EPA 200.8	TNA 06/26/14
Boron (B)	0.447	mg/L	10	0.005	0.020	EPA 200.8	TNA 06/26/14
Cadmium (Cd)	< 0.001	mg/L	10	0.0001	0.001	EPA 200.8	TNA 06/26/14
Calcium (Ca)	514	mg/L	11	1.46	11.0	SM 3111 B	GRT 06/27/14
Chromium (Cr)	< 0.001	mg/L	10	0.0001	0.001	EPA 200.8 DRC	TNA 06/26/14
Copper (Cu)	< 0.005	mg/L	10	0.0009	0.005	EPA 200.8	TNA 06/26/14
Iron (Fe)	0.397	mg/L	10	0.004	0.050	EPA 200.8	TNA 06/26/14
Lead (Pb)	< 0.001	mg/L	10	0.000026	0.001	EPA 200.8	TNA 06/26/14
Magnesium (Mg)	151	mg/L	5	0.150	2.50	SM 3111 B	GRT 06/26/14
Manganese (Mn)	0.490	mg/L	10	0.0001	0.010	EPA 200.8	TNA 06/26/14
Molybdenum (Mo)	0.006	mg/L	10	0.0001	0.001	EPA 200.8	TNA 06/26/14
Nickel (Ni)	0.017	mg/L	10	0.0003	0.005	EPA 200.8	TNA 06/26/14
Potassium (K)	10.0	mg/L	1	0.025	0.500	SM 3111 B	GRT 06/26/14
Selenium (Se)	0.005	mg/L	10	0.001	0.005	EPA 200.8	TNA 06/26/14
Silver (Ag)	< 0.001	mg/L	10	0.0002	0.001	EPA 200.8	TNA 06/26/14

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst/Date
<b>Metals - Dissolved</b>							
Sodium (Na)	149	mg/L	7	0.644	3.50	SM 3111 B	GRT 06/26/14
Uranium (U)	0.015	mg/L	10	0.000021	0.001	EPA 200.8	TNA 06/26/14
Vanadium (V)	< 0.005	mg/L	10	0.000073	0.005	EPA 200.8	TNA 06/26/14
Zinc (Zn)	< 0.050	mg/L	10	0.006	0.050	EPA 200.8	TNA 06/26/14
<b>Metals - Total</b>							
Mercury (Hg)	< 0.0002	mg/L	1	0.000035	0.0002	EPA 245.1	GRT 06/26/14
<b>Anion - Cation Balance</b>							
Anions	44.0	meq/L	1			Calculation	GAM 06/27/14
Anion - Cation Balance	0.867	%	1			Calculation	GAM 06/27/14
Cations	44.8	meq/L	1			Calculation	GAM 06/27/14
Electrical Conductivity - Calculated	5380	µS/cm	1			SM 1030	DVA 07/25/14
Total Dissolved Solids - Ratio	0.993	none	1			SM 1030	DVA 07/25/14
<b>Radiological</b>							
Gross Alpha	12.0	pCi/L	1			EPA 900.0	EJF 07/08/14
Gross Beta	12.8	pCi/L	1			EPA 900.0	EJF 07/08/14
Lead-210	0.417	pCi/L	1			RP280m DOE	SYS 07/16/14
Radium-226	0.2950	pCi/L	1			MC Radium-226	EJF 07/25/14
Radium-228	< 1.00	pCi/L	1			MC Radium-228	EJF 07/25/14
Radon-222	493	pCi/L	1			SM 7500Rn-B	SYS 06/30/14
Thorium-230	0.019	pCi/L	1			HSL-300m	SYS 07/14/14
<b>Precision Data</b>							
Gross Alpha precision	± 1.93	pCi/L	1			MC - Gross Alpha precision	EJF 07/08/14
Gross Beta precision	± 2.86	pCi/L	1			MC - Gross Beta precision	EJF 07/08/14
Lead-210 Precision	± 0.373	pCi/L	1			MC-Lead 210 precision	SYS 07/16/14
Radium-226 precision	± 0.1050	pCi/L	1			MC-Radium 226 precision	EJF 07/25/14
Radium-228 precision	± 0.00	pCi/L	1			MC-Radium 228 precision	EJF 07/25/14
Radon-222 Precision	± 118	pCi/L	1			MC-Radon 222 precision	SYS 06/30/14
Thorium-230 Precision	± 0.032	pCi/L	1			MC-Thorium 230 precision	SYS 07/14/14
<b>MDA Data</b>							
Gross Alpha MDA	4.92	pCi/L	1			MC - Gross Alpha MDA	EJF 07/08/14
Gross Beta MDA	8.81	pCi/L	1			MC - Gross Beta MDA	EJF 07/08/14
Lead-210 MDA	0.705	pCi/L	1			MC - Lead 210 MDA	SYS 07/16/14
Radium-226 MDA	0.2200	pCi/L	1			MC - Radium 226 MDA	EJF 07/25/14
Radium-228 MDA	0.030	pCi/L	1			MC - Radium 228 MDA	EJF 07/25/14
Radon-222 MDA	102	pCi/L	1			MC - Radon 222 MDA	SYS 06/30/14
Thorium-230 MDA	0.052	pCi/L	1			MC - Thorium 230 MDA	SYS 07/14/14

Approved By: \_\_\_\_\_





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Lab Numbers: 20140626108 - 20140626109

### QC Sample Report

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method	
<b>Spike</b>									
TDS	0626209	1580	587	1000	100ml	99.4 %	(90.61) - (110.3)	SM 2540 C	
Alkalinity	0626101	123	72.0	53.0	1	96.2 %	(87.90) - (105.2)	SM 2320 B	
Chloride	0626109	35.9	15.8	5.00	4	100.3 %	(85.10) - (114.6)	SM 4500-Cl E	
Fluoride	0624881	1.37	0.977	0.400	1	97.3 %	(83.11) - (113.0)	SM 4500 F-C	
N, Nitrate	0626202	115	75.7	0.400	100	98.9 %	(87.64) - (111.6)	SM 4500-NO3 F	
N, Nitrate	0626102	0.868	0.467	0.400	1	100.3 %	(87.64) - (111.6)	SM 4500-NO3 F	
Arsenic - D	0626208	0.499	0.279	0.025	10	88.1 %	(87.80) - (109.8)	EPA 200.8	
Arsenic - D	0626104	0.299	< 0.005	0.025	10	119.6 %	(87.80) - (109.8)	EPA 200.8	X
- Result is within QC guidelines of 70 - 130%									
Arsenic - D	0626108	0.254	< 0.005	0.025	10	101.5 %	(87.80) - (109.8)	EPA 200.8	
Barium - D	0626108	0.254	0.008	0.025	10	98.3 %	(86.93) - (106.5)	EPA 200.8	
Boron - D	0626108	0.730	0.485	0.025	10	97.9 %	(72.50) - (137.3)	EPA 200.8	
Cadmium - D	0626104	0.292	< 0.001	0.025	10	116.9 %	(87.34) - (105.1)	EPA 200.8	X
- Result is within QC guidelines of 70 - 130%									
Cadmium - D	0626108	0.263	< 0.001	0.025	10	105.1 %	(87.34) - (105.1)	EPA 200.8	X
- Result is within QC guidelines of 70 - 130%									
Calcium - D	0626101	209	102	10.0	10	107.7 %	(88.56) - (117.6)	SM 3111 B	
Calcium - D	0627102	153	56.6	10.0	10	96.3 %	(88.43) - (118.1)	SM 3111 B	
Chromium - D	0626108	0.237	< 0.001	0.025	10	94.8 %	(76.28) - (112.5)	EPA 200.8 DRC	
Chromium - D	0626104	0.239	< 0.001	0.025	10	95.6 %	(76.28) - (112.5)	EPA 200.8 DRC	
Copper - D	0626104	0.259	< 0.005	0.025	10	103.8 %	(84.50) - (104.8)	EPA 200.8	
Copper - D	0626108	0.229	0.005	0.025	10	89.3 %	(84.50) - (104.8)	EPA 200.8	
Iron - D	0626108	1.21	< 0.050	0.125	10	96.4 %	(74.68) - (116.6)	EPA 200.8	
Iron - D	0626104	1.19	< 0.050	0.125	10	94.8 %	(74.68) - (116.6)	EPA 200.8	
Lead - D	0626104	0.272	< 0.001	0.025	10	108.9 %	(89.06) - (103.2)	EPA 200.8	X
- Result is within QC guidelines of 70 - 130%									
Lead - D	0626108	0.243	0.003	0.025	10	96.0 %	(89.06) - (103.2)	EPA 200.8	
Magnesium - D	0626101	317	216	10.0	10	101.0 %	(84.00) - (108.6)	SM 3111 B	
Manganese - D	0626108	0.262	0.039	0.025	10	89.2 %	(82.97) - (107.2)	EPA 200.8	
Molybdenum - D	0626108	0.296	0.015	0.025	10	112.7 %	(84.79) - (121.2)	EPA 200.8	
Nickel - D	0626104	0.259	0.008	0.025	10	100.3 %	(83.20) - (106.2)	EPA 200.8	
Nickel - D	0626108	0.243	0.017	0.025	10	90.4 %	(83.20) - (106.2)	EPA 200.8	
Potassium - D	0626101	38.6	7.11	3.00	10	104.8 %	(85.12) - (115.7)	SM 3111 B	
Selenium - D	0626108	1.38	< 0.005	0.125	10	110.4 %	(91.73) - (108.9)	EPA 200.8	X
- Result is within QC guidelines of 70 - 130%									
Selenium - D	0626208	1.21	0.032	0.125	10	94.0 %	(91.73) - (108.9)	EPA 200.8	
Selenium - D	0626104	1.52	0.008	0.125	10	121.0 %	(91.73) - (108.9)	EPA 200.8	X
- Result is within QC guidelines of 70 - 130%									

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method	
<b>Spike</b>									
Silver - D	0626108	0.268	< 0.001	0.025	10	107.3 %	(81.32) - (104.3)	EPA 200.8	X
- Result is within QC guidelines of 70 - 130%									
Silver - D	0626104	0.286	< 0.001	0.025	10	114.3 %	(81.32) - (104.3)	EPA 200.8	X
- Result is within QC guidelines of 70 - 130%									
Sodium - D	0626101	9.79	5.27	5.00	1	90.4 %	(85.67) - (117.0)	SM 3111 B	
Uranium - D	0626108	0.310	0.025	0.025	10	114.1 %	(89.26) - (120.7)	EPA 200.8	
Vanadium - D	0626108	0.228	< 0.005	0.025	10	91.0 %	(82.14) - (114.1)	EPA 200.8	
Zinc - D	0626108	0.249	< 0.050	0.025	10	99.62%	(83.14) - (125.3)	EPA 200.8	
Zinc - D	0626104	0.292	< 0.050	0.025	10	116.9 %	(83.14) - (125.3)	EPA 200.8	
Mercury - T	0626109	0.0020	< 0.0002	0.002	1	98.4 %	(83.37) - (113.5)	EPA 245.1	
Mercury - TCLP	0610709	0.0022	< 0.0002	0.002	1	109.5 %	(83.12) - (119.1)	EPA SW846 7471B	
Gross Alpha	0626108	22.3	12.6	10.0	1	97.0 %		EPA 900.0	
Gross Beta	0626108	26.2	16.0	10.0	1	101.2 %		EPA 900.0	
Radium-226	0620114	10.05	0.3950	10.0	1	96.5 %		MC Radium-226	
Radium-226	0626109	9.153	0.2950	10.0	1	88.6 %		MC Radium-226	
Radium-228	0620114	9.97	1.57	10.0	1	84.0 %		MC Radium-228	
Radium-228	0626109	9.41	< 1.00	10.0	1	94.1 %		MC Radium-228	

**Matrix Spike Duplicate**

Alkalinity	0626101	123	123		1	0.00%	(-3.060) - (3.518)	SM 2320 B	
Chloride	0626109	36.0	35.9		4	0.278%	(-6.470) - (6.152)	SM 4500-CI E	
Fluoride	0624881	1.39	1.37	0.400	1	1.45%	(-3.331) - (3.455)	SM 4500 F-C	
N, Nitrate	0626102	0.862	0.868		1	-0.694%	(-3.719) - (3.947)	SM 4500-NO3 F	
N, Nitrate	0626202	115	115		100	-0.348%	(-3.719) - (3.947)	SM 4500-NO3 F	
Arsenic - D	0626208	0.525	0.499		10	5.08%	(-8.933) - (8.876)	EPA 200.8	
Arsenic - D	0626108	0.259	0.254		10	2.15%	(-8.933) - (8.876)	EPA 200.8	
Arsenic - D	0626104	0.286	0.299		10	-4.56%	(-8.933) - (8.876)	EPA 200.8	
Barium - D	0626108	0.244	0.254		10	-3.98%	(-2.404) - (2.763)	EPA 200.8	X
- Recovery was within 10% of expected value									
Boron - D	0626108	0.715	0.730		10	-2.02%	(-7.099) - (10.88)	EPA 200.8	
Cadmium - D	0626108	0.252	0.263		10	-4.13%	(-1.782) - (2.522)	EPA 200.8	X
- Recovery was within 10% of expected value									
Cadmium - D	0626104	0.283	0.292		10	-3.22%	(-1.782) - (2.522)	EPA 200.8	X
- Recovery was within 10% of expected value									
Calcium - D	0626101	211	209		10	0.786%	(-6.110) - (7.254)	SM 3111 B	
Calcium - D	0627102	166	153		10	8.31%	(-5.835) - (7.207)	SM 3111 B	X
- Recovery was within 10% of expected value									
Chromium - D	0626108	0.234	0.237		10	-1.13%	(-6.168) - (5.330)	EPA 200.8 DRC	
Chromium - D	0626104	0.217	0.239		10	-9.65%	(-6.168) - (5.330)	EPA 200.8 DRC	X
- Recovery was within 10% of expected value									
Copper - D	0626104	0.244	0.259		10	-6.34%	(-8.290) - (6.739)	EPA 200.8	
Copper - D	0626108	0.227	0.229		10	-0.518%	(-8.290) - (6.739)	EPA 200.8	
Iron - D	0626104	1.08	1.19		10	-9.05%	(-2.988) - (4.034)	EPA 200.8	X
- Recovery was within 10% of expected value									
Iron - D	0626108	1.19	1.21		10	-1.52%	(-2.988) - (4.034)	EPA 200.8	
Lead - D	0626108	0.240	0.243		10	-1.36%	(-2.577) - (3.209)	EPA 200.8	

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method	
<b>Matrix Spike Duplicate</b>									
Lead - D	0626104	0.266	0.272		10	-2.46%	(-2.577) - (3.209)	EPA 200.8	
Magnesium - D	0626101	324	317		10	2.10%	(-5.547) - (5.023)	SM 3111 B	
Manganese - D	0626108	0.260	0.262		10	-0.821%	(-5.906) - (6.506)	EPA 200.8	
Molybdenum - D	0626108	0.282	0.296		10	-4.96%	(-5.603) - (5.408)	EPA 200.8	
Nickel - D	0626108	0.238	0.243		10	-2.29%	(-4.964) - (4.497)	EPA 200.8	
Nickel - D	0626104	0.247	0.259		10	-4.80%	(-4.964) - (4.497)	EPA 200.8	
Potassium - D	0626101	39.8	38.6		10	3.09%	(-7.673) - (5.975)	SM 3111 B	
Selenium - D	0626208	1.31	1.21		10	8.06%	(-6.800) - (5.771)	EPA 200.8	X
- Recovery was within 10% of expected value									
Selenium - D	0626104	1.44	1.52		10	-5.74%	(-6.800) - (5.771)	EPA 200.8	
Selenium - D	0626108	1.36	1.38		10	-1.36%	(-6.800) - (5.771)	EPA 200.8	
Silver - D	0626108	0.257	0.268		10	-4.38%	(-3.507) - (3.363)	EPA 200.8	X
- Recovery was within 10% of expected value									
Silver - D	0626104	0.272	0.286		10	-4.89%	(-3.507) - (3.363)	EPA 200.8	X
- Recovery was within 10% of expected value									
Sodium - D	0626101	10.6	9.79		1	7.47%	(-7.412) - (9.606)	SM 3111 B	
Uranium - D	0626108	0.302	0.310		10	-2.83%	(-2.763) - (3.089)	EPA 200.8	X
- Recovery was within 10% of expected value									
Vanadium - D	0626108	0.228	0.228		10	0.202%	(-8.179) - (5.917)	EPA 200.8	
Zinc - D	0626104	0.299	0.292		10	2.33%	(-6.794) - (5.425)	EPA 200.8	
Zinc - D	0626108	0.249	0.249		10	0.048%	(-6.794) - (5.425)	EPA 200.8	
Mercury - T	0626109	0.0018	0.0020		1	-6.67%	(-14.26) - (12.22)	EPA 245.1	
Mercury - TCLP	0610709	0.0020	0.0022		1	-9.07%	(-16.60) - (15.16)	EPA SW846 7471B	

**Duplicate**

Conductivity	0626209	905	905		1	0.00%	(-0.6834) - (0.7713)	SM 2510B
Conductivity	0626205	668	669		1	-0.150%	(-0.6834) - (0.7713)	SM 2510B
pH	0626101	7.43	7.38		1	0.675%	(-0.8683) - (1.040)	SM 4500-H+ B
TDS	0626107	3520	3510	100ml		0.171%	(-6.861) - (9.644)	SM 2540 C
Chloride	0626109	15.7	15.7		4	0.127%	(-4.398) - (2.611)	SM 4500-Cl E
N, Nitrate	0626202	75.7	75.7		100	-0.026%	(-4.004) - (0.9635)	SM 4500-NO3 F
N, Nitrate	0626102	0.467	0.482		1	-3.16%	(-4.004) - (0.9635)	SM 4500-NO3 F
Sulfate	0625939	561	564		10	-0.566%	(-7.643) - (7.620)	SM 4500-SO4 E
Sulfate	0626104	310	309		10	0.249%	(-7.531) - (7.605)	SM 4500-SO4 E

**Initial Calibration Verification**

Conductivity		307	311		1	-1.29%	(-8.523) - (7.004)	SM 2510B	
pH		7.01	7.00		1	0.143%	(-1.781) - (2.538)	SM 4500-H+ B	
Alkalinity		7.01	7.00		1	0.143%	(-6.329) - (4.911)	SM 2320 B	
Chloride		4.74	5.00		1	-5.20%	(-11.96) - (13.01)	SM 4500-Cl E	
Fluoride		0.400	0.400		1	0.00%	(-10.68) - (4.735)	SM 4500 F-C	
N, Nitrate		1.01	1.00		1	0.700%	(-6.016) - (5.666)	SM 4500-NO3 F	
Sulfate		52.1	50.0		1	4.10%	(-5.253) - (13.90)	SM 4500-SO4 E	
Arsenic - D		0.051	0.050		1	1.74%	(-4.877) - (6.231)	EPA 200.8	
Arsenic - D		0.054	0.050		1	8.64%	(-4.877) - (6.231)	EPA 200.8	X
- Recovery was within 10% of expected value									

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method	
<b>Initial Calibration Verification</b>									
Barium - D		0.049	0.050		1	-1.42%	(-7.292) - (5.584)	EPA 200.8	
Barium - D		0.048	0.050		1	-4.08%	(-7.292) - (5.584)	EPA 200.8	
Boron - D		0.047	0.050		1	-6.92%	(-19.51) - (25.05)	EPA 200.8	
Boron - D		0.046	0.050		1	-7.70%	(-19.51) - (25.05)	EPA 200.8	
Cadmium - D		0.054	0.050		1	7.86%	(-4.435) - (7.383)	EPA 200.8	
- Recovery was within 10% of expected value									
Cadmium - D		0.048	0.050		1	-3.84%	(-4.435) - (7.383)	EPA 200.8	
Chromium - D		0.048	0.050		1	-4.82%	(-6.308) - (11.23)	EPA 200.8 DRC	
Chromium - D		0.046	0.050		1	-7.46%	(-6.308) - (11.23)	EPA 200.8 DRC	
- Recovery was within 10% of expected value									
Copper - D		0.048	0.050		1	-3.96%	(-8.037) - (8.027)	EPA 200.8	
Copper - D		0.049	0.050		1	-1.36%	(-8.037) - (8.027)	EPA 200.8	
Iron - D		0.231	0.250		1	-7.72%	(-8.376) - (7.672)	EPA 200.8	
Lead - D		0.050	0.050		1	0.560%	(-2.507) - (5.423)	EPA 200.8	
Lead - D		0.049	0.050		1	-2.58%	(-2.507) - (5.423)	EPA 200.8	
- Recovery was within 10% of expected value									
Manganese - D		0.049	0.050		1	-1.68%	(-13.38) - (12.50)	EPA 200.8	
Manganese - D		0.049	0.050		1	-2.46%	(-13.38) - (12.50)	EPA 200.8	
Molybdenum - D		0.052	0.050		1	3.58%	(-13.11) - (15.61)	EPA 200.8	
Molybdenum - D		0.048	0.050		1	-4.64%	(-13.11) - (15.61)	EPA 200.8	
Nickel - D		0.048	0.050		1	-4.52%	(-10.12) - (8.175)	EPA 200.8	
Nickel - D		0.047	0.050		1	-6.48%	(-10.12) - (8.175)	EPA 200.8	
Selenium - D		0.255	0.250		1	2.04%	(-5.243) - (8.015)	EPA 200.8	
Silver - D		0.054	0.050		1	7.44%	(-4.301) - (4.737)	EPA 200.8	
- Recovery was within 10% of expected value									
Silver - D		0.049	0.050		1	-1.44%	(-4.301) - (4.737)	EPA 200.8	
Uranium - D		0.056	0.050		1	11.8 %	(-2.777) - (16.56)	EPA 200.8	
Uranium - D		0.054	0.050		1	8.78%	(-2.777) - (16.56)	EPA 200.8	
Vanadium - D		0.049	0.050		1	-2.36%	(-10.71) - (13.74)	EPA 200.8	
Vanadium - D		0.049	0.050		1	-2.22%	(-10.71) - (13.74)	EPA 200.8	
Zinc - D		0.050	0.050		1	0.380%	(-8.030) - (7.306)	EPA 200.8	
Zinc - D		0.050	0.050		1	0.180%	(-8.030) - (7.306)	EPA 200.8	
Mercury - T		0.0028	0.0030		1	-6.67%	(-12.13) - (9.029)	EPA 245.1	
Mercury - TCLP		0.0028	0.0030		1	-6.67%	(-12.18) - (10.82)	EPA SW846 7471B	
<b>Continuing Calibration Verification</b>									
Conductivity		645	678		1	-4.87%	(-10.47) - (6.124)	SM 2510B	
Conductivity		307	311		1	-1.29%	(-10.47) - (6.124)	SM 2510B	
pH		9.97	10.0		1	-0.300%	(-2.859) - (3.170)	SM 4500-H+ B	
pH		4.00	4.00		1	0.00%	(-2.859) - (3.170)	SM 4500-H+ B	
TDS		893	1000	100ml		-10.7 %	(-9.086) - (2.296)	SM 2540 C	
Alkalinity		106	106		1	0.00%	(-6.762) - (3.789)	SM 2320 B	
Alkalinity		106	106		1	0.00%	(-6.762) - (3.789)	SM 2320 B	
Chloride		5.04	5.00		1	0.800%	(-10.92) - (14.04)	SM 4500-Cl E	
Chloride		4.74	5.00		1	-5.20%	(-10.92) - (14.04)	SM 4500-Cl E	
Fluoride		5.00	5.00		1	0.00%	(-8.491) - (7.847)	SM 4500 F-C	


Parameter	QC Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method	
<b>Continuing Calibration Verification</b>									
Fluoride		5.13	5.00		1	2.60%	(-8.491) - (7.847)	SM 4500 F-C	
Fluoride		0.407	0.400		1	1.75%	(-8.491) - (7.847)	SM 4500 F-C	
N, Nitrate		1.02	1.00		1	1.90%	(-3.255) - (6.765)	SM 4500-NO3 F	
N, Nitrate		0.985	1.00		1	-1.50%	(-3.255) - (6.765)	SM 4500-NO3 F	
Sulfate		51.2	50.0		1	2.38%	(-7.229) - (16.16)	SM 4500-SO4 E	
Sulfate		48.4	50.0		1	-3.12%	(-7.229) - (16.16)	SM 4500-SO4 E	
Arsenic - D		0.049	0.050		1	-1.62%	(-17.28) - (8.727)	EPA 200.8	
Arsenic - D		0.048	0.050		1	-3.94%	(-17.28) - (8.727)	EPA 200.8	
Arsenic - D		0.050	0.050		1	-0.280%	(-17.28) - (8.727)	EPA 200.8	
Arsenic - D		0.054	0.050		1	8.60%	(-17.28) - (8.727)	EPA 200.8	
Arsenic - D		0.047	0.050		1	-6.28%	(-17.28) - (8.727)	EPA 200.8	
Barium - D		0.046	0.050		1	-8.26%	(-7.797) - (3.339)	EPA 200.8	
								X	
- Recovery was within 10% of expected value									
Barium - D		0.048	0.050		1	-4.84%	(-7.797) - (3.339)	EPA 200.8	
Boron - D		0.048	0.050		1	-4.76%	(-6.830) - (14.45)	EPA 200.8	
Boron - D		0.051	0.050		1	2.28%	(-6.830) - (14.45)	EPA 200.8	
Cadmium - D		0.048	0.050		1	-3.74%	(-16.17) - (9.217)	EPA 200.8	
Cadmium - D		0.054	0.050		1	7.42%	(-16.17) - (9.217)	EPA 200.8	
Cadmium - D		0.049	0.050		1	-1.58%	(-16.17) - (9.217)	EPA 200.8	
Calcium - D		25.9	25.0		1	3.40%	(-8.839) - (9.671)	SM 3111 B	
Calcium - D		24.9	25.0		1	-0.280%	(-8.839) - (9.671)	SM 3111 B	
Calcium - D		25.2	25.0		1	0.840%	(-8.839) - (9.671)	SM 3111 B	
Calcium - D		25.5	25.0		1	1.92%	(-8.876) - (9.392)	SM 3111 B	
Calcium - D		25.5	25.0		1	2.04%	(-8.876) - (9.392)	SM 3111 B	
Calcium - D		25.8	25.0		1	3.12%	(-8.876) - (9.392)	SM 3111 B	
Calcium - D		25.9	25.0		1	3.56%	(-8.876) - (9.392)	SM 3111 B	
Calcium - D		25.9	25.0		1	3.52%	(-8.876) - (9.392)	SM 3111 B	
Calcium - D		25.8	25.0		1	3.28%	(-8.876) - (9.392)	SM 3111 B	
Chromium - D		0.045	0.050		1	-9.86%	(-14.98) - (7.393)	EPA 200.8 DRC	
Chromium - D		0.048	0.050		1	-4.92%	(-14.98) - (7.393)	EPA 200.8 DRC	
Chromium - D		0.046	0.050		1	-8.46%	(-14.98) - (7.393)	EPA 200.8 DRC	
Copper - D		0.048	0.050		1	-4.16%	(-11.76) - (6.274)	EPA 200.8	
Copper - D		0.049	0.050		1	-2.14%	(-11.76) - (6.274)	EPA 200.8	
Iron - D		0.225	0.250		1	-9.84%	(-15.61) - (12.51)	EPA 200.8	
Iron - D		0.220	0.250		1	-11.8%	(-15.61) - (12.51)	EPA 200.8	
Iron - D		0.230	0.250		1	-7.87%	(-15.61) - (12.51)	EPA 200.8	
Lead - D		0.047	0.050		1	-5.42%	(-12.45) - (4.813)	EPA 200.8	
Lead - D		0.046	0.050		1	-8.82%	(-12.45) - (4.813)	EPA 200.8	
Lead - D		0.051	0.050		1	2.66%	(-12.45) - (4.813)	EPA 200.8	
Magnesium - D		26.2	25.0		1	4.96%	(-10.35) - (5.378)	SM 3111 B	
Magnesium - D		24.4	25.0		1	-2.52%	(-10.35) - (5.378)	SM 3111 B	
Magnesium - D		24.2	25.0		1	-3.04%	(-10.35) - (5.378)	SM 3111 B	
Magnesium - D		24.0	25.0		1	-3.96%	(-10.35) - (5.378)	SM 3111 B	
Magnesium - D		24.2	25.0		1	-3.40%	(-10.35) - (5.378)	SM 3111 B	
Magnesium - D		23.9	25.0		1	-4.24%	(-10.35) - (5.378)	SM 3111 B	
Magnesium - D		24.1	25.0		1	-3.48%	(-10.35) - (5.378)	SM 3111 B	

<b>Parameter</b>	<b>Lab#</b>	<b>QC Value</b>	<b>Smp Value</b>	<b>Spike</b>	<b>DF</b>	<b>Result</b>	<b>Limits</b>	<b>Method</b>
<b>Continuing Calibration Verification</b>								
Manganese - D		0.044	0.050		1	-12.5 %	(-14.44) - (8.642)	EPA 200.8
Manganese - D		0.048	0.050		1	-3.54%	(-14.44) - (8.642)	EPA 200.8
Molybdenum - D		0.048	0.050		1	-3.30%	(-10.64) - (6.888)	EPA 200.8
Molybdenum - D		0.046	0.050		1	-7.12%	(-10.64) - (6.888)	EPA 200.8
Nickel - D		0.048	0.050		1	-3.96%	(-12.84) - (5.684)	EPA 200.8
Nickel - D		0.047	0.050		1	-5.48%	(-12.84) - (5.684)	EPA 200.8
Potassium - D		4.92	5.00		1	-1.60%	(-8.090) - (8.450)	SM 3111 B
Potassium - D		5.15	5.00		1	3.00%	(-8.090) - (8.450)	SM 3111 B
Potassium - D		5.22	5.00		1	4.40%	(-8.090) - (8.450)	SM 3111 B
Potassium - D		5.08	5.00		1	1.60%	(-8.090) - (8.450)	SM 3111 B
Potassium - D		5.01	5.00		1	0.200%	(-8.090) - (8.450)	SM 3111 B
Selenium - D		0.254	0.250		1	1.48%	(-14.66) - (6.908)	EPA 200.8
Selenium - D		0.246	0.250		1	-1.78%	(-14.66) - (6.908)	EPA 200.8
Selenium - D		0.241	0.250		1	-3.59%	(-14.66) - (6.908)	EPA 200.8
Selenium - D		0.248	0.250		1	-0.668%	(-14.66) - (6.908)	EPA 200.8
Silver - D		0.049	0.050		1	-1.20%	(-12.36) - (6.833)	EPA 200.8
Silver - D		0.049	0.050		1	-3.06%	(-12.36) - (6.833)	EPA 200.8
Silver - D		0.053	0.050		1	5.74%	(-12.36) - (6.833)	EPA 200.8
Sodium - D		15.1	15.0		1	0.733%	(-7.133) - (8.667)	SM 3111 B
Sodium - D		14.8	15.0		1	-1.13%	(-7.133) - (8.667)	SM 3111 B
Sodium - D		14.7	15.0		1	-2.07%	(-7.133) - (8.667)	SM 3111 B
Uranium - D		0.052	0.050		1	2.90%	(-8.857) - (15.82)	EPA 200.8
Uranium - D		0.053	0.050		1	6.22%	(-8.857) - (15.82)	EPA 200.8
Vanadium - D		0.048	0.050		1	-4.46%	(-11.72) - (9.372)	EPA 200.8
Zinc - D		0.045	0.050		1	-9.68%	(-11.39) - (5.817)	EPA 200.8
Zinc - D		0.050	0.050		1	-0.380%	(-11.39) - (5.817)	EPA 200.8
Zinc - D		0.052	0.050		1	3.74%	(-11.39) - (5.817)	EPA 200.8
Mercury - T		0.0011	0.0010		1	5.00%	(-15.13) - (8.980)	EPA 245.1
Mercury - T		0.0020	0.0020		1	-1.00%	(-15.13) - (8.980)	EPA 245.1
Mercury - T		0.0049	0.0050		1	-2.60%	(-15.13) - (8.980)	EPA 245.1
Mercury - TCLP		0.0049	0.0050		1	-2.60%	(-14.34) - (6.015)	EPA SW846 7471B
Mercury - TCLP		0.0020	0.0020		1	-1.00%	(-14.34) - (6.015)	EPA SW846 7471B
Mercury - TCLP		0.0011	0.0010		1	5.00%	(-14.34) - (6.015)	EPA SW846 7471B
Gross Alpha		496	500		1	-0.800%		EPA 900.0
Gross Beta		12100	13600		1	-10.9 %		EPA 900.0
Radium-226		9924	10220		1	-2.90%		MC Radium-226
Radium-228		10100	10300		1	-2.34%		MC Radium-228
<b>Lab Fortified Blank</b>								
Gross Alpha		10.6	0.00	10.0	1	106.1 %		EPA 900.0
Gross Beta		10.5	0.00	10.0	1	104.9 %		EPA 900.0
Radium-226		9.396	0.000	10.0	1	94.0 %		MC Radium-226
Radium-228		8.01	0.00	10.0	1	80.1 %		MC Radium-228
<b>Initial Calibration Blank</b>								
Conductivity		0.500	0.00		1	0.5	(0.0234) - (0.8166)	SM 2510B



<b>Parameter</b>	<b>QC Lab#</b>	<b>QC Value</b>	<b>Smp Value Spike</b>	<b>DF</b>	<b>Result</b>	<b>Limits</b>	<b>Method</b>
<b>Initial Calibration Blank</b>							
Alkalinity		2.44	0.00	1	2.44	(0.7999) - (3.195)	SM 2320 B
Chloride		-0.100	0.00	1	0.1	(-0.4149) - (1.214)	SM 4500-Cl E
Fluoride		0.005	0.00	1	0.005	(0.0022) - (0.0078)	SM 4500 F-C
N, Nitrate		-0.007	0.00	1	0.007	(-0.0115) - (0.0249)	SM 4500-NO3 F
Sulfate		1.30	0.00	1	1.3	(-0.7601) - (4.292)	SM 4500-SO4 E
Mercury - T		-0.0001	0.000	1	-0.00007	(-0.0001) - (0.0001)	EPA 245.1
Mercury - TCLP		-0.0001	0.000	1	-0.00007	(-0.0001) - (0.0001)	EPA SW846 7471B
<b>Continuing Calibration Blank</b>							
Conductivity		0.500	0.00	1	0.5	(-0.0963) - (0.8963)	SM 2510B
Conductivity		0.400	0.00	1	0.4	(-0.0963) - (0.8963)	SM 2510B
TDS		4.00	0.00	100ml	4	(-21.18) - (21.58)	SM 2540 C
Alkalinity		1.92	0.00	1	1.92	(1.232) - (2.530)	SM 2320 B
Chloride		-0.410	0.00	1	0.41	(-0.5868) - (1.662)	SM 4500-Cl E
Fluoride		0.005	0.00	1	0.005	(0.0022) - (0.0078)	SM 4500 F-C
N, Nitrate		-0.001	0.00	1	0.001	(-0.0188) - (0.0361)	SM 4500-NO3 F
N, Nitrate		-0.002	0.00	1	0.002	(-0.0188) - (0.0361)	SM 4500-NO3 F
Sulfate		1.34	0.00	1	1.34	(-0.5510) - (4.521)	SM 4500-SO4 E
Sulfate		1.33	0.00	1	1.33	(-0.5510) - (4.521)	SM 4500-SO4 E
Arsenic - D		0.000	0.00	1	0.00006	(-0.0001) - (0.0001)	EPA 200.8
Barium - D		0.000	0.00	1	0.00004	(0.0000) - (0.0001)	EPA 200.8
Boron - D		0.000	0.00	1	0.0004	(-0.0005) - (0.0022)	EPA 200.8
Cadmium - D		0.000	0.00	1	0.00007	(0.0000) - (0.0001)	EPA 200.8
Calcium - D		0.010	0.00	1	0.01	(-0.1259) - (0.1689)	SM 3111 B
Calcium - D		-0.030	0.00	1	-0.03	(-0.1259) - (0.1689)	SM 3111 B
Calcium - D		0.00	0.00	1	0	(-0.1259) - (0.1689)	SM 3111 B
Calcium - D		0.050	0.00	1	0.05	(-0.1341) - (0.1681)	SM 3111 B
Calcium - D		0.110	0.00	1	0.11	(-0.1341) - (0.1681)	SM 3111 B
Calcium - D		0.040	0.00	1	0.04	(-0.1341) - (0.1681)	SM 3111 B
Calcium - D		0.040	0.00	1	0.04	(-0.1341) - (0.1681)	SM 3111 B
Calcium - D		0.040	0.00	1	0.04	(-0.1341) - (0.1681)	SM 3111 B
Chromium - D		0.000	0.00	1	0.00001	(0.0000) - (0.0000)	EPA 200.8 DRC
Copper - D		0.000	0.00	1	0.00005	(0.0000) - (0.0001)	EPA 200.8
Iron - D		0.000	0.00	1	0.00015	(-0.0003) - (0.0012)	EPA 200.8
Lead - D		0.000	0.00	1	0.00005	(0.0000) - (0.0001)	EPA 200.8
Magnesium - D		0.00	0.00	1	0	(-0.0378) - (0.0398)	SM 3111 B
Magnesium - D		-0.010	0.00	1	-0.01	(-0.0378) - (0.0398)	SM 3111 B
Magnesium - D		-0.020	0.00	1	-0.02	(-0.0378) - (0.0398)	SM 3111 B
Magnesium - D		-0.010	0.00	1	-0.01	(-0.0378) - (0.0398)	SM 3111 B
Magnesium - D		-0.010	0.00	1	-0.01	(-0.0378) - (0.0398)	SM 3111 B
Magnesium - D		0.00	0.00	1	0	(-0.0378) - (0.0398)	SM 3111 B
Manganese - D		0.000	0.00	1	0.00004	(0.0000) - (0.0001)	EPA 200.8
Molybdenum - D		0.000	0.00	1	0.00006	(-0.0001) - (0.0003)	EPA 200.8
Nickel - D		0.000	0.00	1	0.00005	(0.0000) - (0.0001)	EPA 200.8
Potassium - D		-0.010	0.00	1	-0.01	(-0.0645) - (0.0235)	SM 3111 B
Potassium - D		-0.020	0.00	1	-0.02	(-0.0645) - (0.0235)	SM 3111 B

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method	
<b>Continuing Calibration Blank</b>									
Potassium - D		-0.010	0.00		1	-0.01	(-0.0645) - (0.0235)	SM 3111 B	
Potassium - D		-0.010	0.00		1	-0.01	(-0.0645) - (0.0235)	SM 3111 B	
Potassium - D		0.00	0.00		1	0	(-0.0645) - (0.0235)	SM 3111 B	
Selenium - D		0.001	0.00		1	0.0005	(-0.0001) - (0.0004)	EPA 200.8	X
- Blank value is less than half of the reporting limit									
Silver - D		0.000	0.00		1	0.00007	(0.0000) - (0.0001)	EPA 200.8	X
- Blank value is less than half of the reporting limit									
Sodium - D		0.00	0.00		1	0	(-0.0466) - (0.0286)	SM 3111 B	
Sodium - D		-0.010	0.00		1	-0.01	(-0.0466) - (0.0286)	SM 3111 B	
Sodium - D		-0.010	0.00		1	-0.01	(-0.0466) - (0.0286)	SM 3111 B	
Uranium - D		0.000	0.00		1	0.00006	(-0.0002) - (0.0003)	EPA 200.8	
Vanadium - D		0.000	0.00		1	0.00005	(-0.0001) - (0.0002)	EPA 200.8	
Zinc - D		0.000	0.00		1	0.00005	(-0.0006) - (0.0006)	EPA 200.8	
Radium-226		0.000	0.000		1	0		MC Radium-226	
Radium-228		0.00	0.00		1	0		MC Radium-228	
<b>Lab Reagent Blank</b>									
Gross Alpha		0.050	0.00		1	0.05		EPA 900.0	
Gross Beta		0.084	0.00		1	0.084		EPA 900.0	
Radium-226		0.000	0.000		1	0		MC Radium-226	
Radium-228		0.694	0.00		1	0.694		MC Radium-228	

Approved By: 

Approved On: 06/30/2014 03:35 PM



**MIDCONTINENT**  
TESTING LABORATORIES, INC.

Page 1 of 3

2381 South Plaza Drive P.O. Box 3388 Rapid City, SD 57709  
(605) 348-0111 -- www.thechemistrylab.com

Sample Site: BC-2  
Project Name: Powertech  
Sampled: 03/10/14 at 03:19 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20140312202  
Received: 03/11/14 at 04:22 PM  
by Kate Shreves  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

108-109

B1

6-26-14

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst/Date
<b>Physical Properties</b>							
Electrical Conductivity	3710	µmhos/cm	1	0.237	5.00	SM 2510B	JAM 03/12/14
pH	7.36	S.U.	1			SM 4500-H+ B	JAM 03/12/14
Total Dissolved Solids	3650	mg/L	100ml	22.6	50.0	SM 2540 C	TMN 03/13/14
<b>Non-Metallics</b>							
Alkalinity (CaCO <sub>3</sub> )	228	mg/L	1	0.421	10.0	SM 2320 B	JAM 03/12/14
Bicarbonate	278	mg/L	1	0.513	10.0	SM 2320 B	JAM 03/12/14
Carbonate	0.00	mg/L	1	0.210	5.00	SM 2320 B	JAM 03/12/14
Chloride (Cl <sup>-</sup> )	19.3	mg/L	4	1.02	2.00	SM 4500-Cl E	BLL 03/12/14
Fluoride	0.610	mg/L	1	0.004	0.050	SM 4500 F-C	PAT 03/12/14
Nitrogen, Nitrate (NO <sub>3</sub> )	0.083	mg/L	1	0.014	0.050	SM 4500-NO3 F	BLL 03/12/14
Sulfate (SO <sub>4</sub> )	2530	mg/L	50	13.2	50.0	SM 4500-SO4 E	BLL 03/12/14
<b>Metals - Dissolved</b>							
Arsenic (As)	< 0.005	mg/L	10	0.0006	0.005	EPA 200.8	TNA 03/12/14
Barium (Ba)	0.008	mg/L	10	0.0005	0.005	EPA 200.8	TNA 03/12/14
Boron (B)	0.584	mg/L	10	0.005	0.020	EPA 200.8	TNA 03/12/14
Cadmium (Cd)	0.003	mg/L	10	0.0001	0.001	EPA 200.8	TNA 03/12/14
Calcium (Ca)	550	mg/L	12	1.59	12.0	SM 3111 B	GRT 03/12/14
Chromium (Cr)	0.003	mg/L	10	0.0001	0.001	EPA 200.8 DRC	TNA 03/12/14
Copper (Cu)	0.011	mg/L	10	0.0009	0.005	EPA 200.8	TNA 03/12/14
Iron (Fe)	0.055	mg/L	10	0.004	0.050	EPA 200.8	TNA 03/12/14
Lead (Pb)	< 0.001	mg/L	10	0.000026	0.001	EPA 200.8	TNA 03/12/14
Magnesium (Mg)	220	mg/L	6	0.180	3.00	SM 3111 B	GRT 03/12/14
Manganese (Mn)	0.034	mg/L	10	0.0001	0.010	EPA 200.8	TNA 03/12/14
Molybdenum (Mo)	0.016	mg/L	10	0.0001	0.001	EPA 200.8	TNA 03/12/14
Nickel (Ni)	0.023	mg/L	10	0.0003	0.005	EPA 200.8	TNA 03/12/14
Potassium (K)	13.8	mg/L	3	0.075	1.50	SM 3111 B	GRT 03/12/14
Selenium (Se)	< 0.005	mg/L	10	0.001	0.005	EPA 200.8	TNA 03/12/14
Silver (Ag)	< 0.001	mg/L	10	0.0002	0.001	EPA 200.8	TNA 03/12/14
Sodium (Na)	272	mg/L	10	0.920	5.00	SM 3111 B	GRT 03/12/14

Report of Analysis for: **Powertech Uranium**Sample Site: **BC-2**

Page 2 of 3

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst/Date
<b>Metals - Dissolved</b>							
Uranium (U)	0.027	mg/L	10	0.000021	0.001	EPA 200.8	TNA 03/12/14
Vanadium (V)	< 0.005	mg/L	10	0.000073	0.005	EPA 200.8	TNA 03/12/14
Zinc (Zn)	< 0.050	mg/L	10	0.006	0.050	EPA 200.8	TNA 03/12/14
<b>Metals - Total</b>							
Mercury (Hg)	< 0.0002	mg/L	1	0.000035	0.0002	EPA 245.1	GRT 03/13/14
<b>Anion - Cation Balance</b>							
Anions	57.7	meq/L	1			Calculation	GAM 03/26/14
Anion - Cation Balance	0.064	%	1			Calculation	GAM 03/26/14
Cations	57.7	meq/L	1			Calculation	GAM 03/26/14
Electrical Conductivity - Calculated	7010	µS/cm	1			SM 1030	DVA 04/21/14
Total Dissolved Solids - Ratio	0.977	none	1			SM 1030	DVA 04/21/14
<b>Radiological</b>							
Gross Alpha	21.4	pCi/L	1			EPA 900.0	EJF 04/05/14
Gross Beta	33.9	pCi/L	1			EPA 900.0	EJF 04/05/14
Lead-210	0.849	pCi/L	1			RP280m DOE	SYS 04/04/14
Radium-226	0.2080	pCi/L	1			MC Radium-226	EJF 05/05/14
Radium-228	0.784	pCi/L	1			MC Radium-228	EJF 05/05/14
Radon-222	971	pCi/L	1			SM 7500Rn-B	SYS 03/14/14
Thorium-230	0.005	pCi/L	1			HSL-300m	SYS 04/01/14
<b>Precision Data</b>							
Gross Alpha precision	± 4.38	pCi/L	1			MC - Gross Alpha precision	EJF 04/05/14
Gross Beta precision	± 6.09	pCi/L	1			MC - Gross Beta precision	EJF 04/05/14
Lead-210 Precision	± 0.432	pCi/L	1			MC-Lead 210 precision	SYS 04/04/14
Radium-226 precision	± 0.1240	pCi/L	1			MC-Radium 226 precision	EJF 05/05/14
Radium-228 precision	± 0.325	pCi/L	1			MC-Radium 228 precision	EJF 05/05/14
Radon-222 Precision	± 188	pCi/L	1			MC-Radon 222 precision	SYS 03/14/14
Thorium-230 Precision	± 0.090	pCi/L	1			MC-Thorium 230 precision	SYS 04/01/14
<b>MDA Data</b>							
Gross Alpha MDA	12.4	pCi/L	1			MC - Gross Alpha MDA	EJF 04/05/14
Gross Beta MDA	18.5	pCi/L	1			MC - Gross Beta MDA	EJF 04/05/14
Lead-210 MDA	0.813	pCi/L	1			MC - Lead 210 MDA	EJF 04/04/14
Radium-226 MDA	0.2540	pCi/L	1			MC - Radium 226 MDA	EJF 05/12/14
Radium-228 MDA	0.662	pCi/L	1			MC - Radium 228 MDA	EJF 05/05/14
Radon-222 MDA	66.7	pCi/L	1			MC - Radon 222 MDA	SYS 03/14/14
Thorium-230 MDA	0.214	pCi/L	1			MC - Thorium 230 MDA	SYS 04/01/14



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# CHAIN OF CUSTODY RECORD

PRESERVED WITH	
FILTERED (Y/N)	
REFRIGERATED (Y/N)	
ANALYSES REQUESTED	Aspe-Aspe

**FOR LAB USE ONLY**  
 (Seal Intact (Y/N)/Number)  
 Sample Condition: on Ice  
 Temperature of Container: 1.8°C

REQUESTED TURN AROUND  
 STANDARD: RUSH

Company: Power Tech / Soft Em.  
 Project Name / Migr.: Lisa Schriener / Allen Soft  
 Project Number:  
 Sampled by: All M  
 Signature: [Signature]  
 Printed by: Allen Soft

	SAMPLE NAME	DATE	TIME	MATRIX	NO. OF CONTAINERS	COMMENTS	LAB #
1	BC-3 1080	6-24-14	13:51	water	✓		
2	BC-3 109	6-24-14	16:17	water	✓		
3							
4	Beetle 1						
5	6-26-14						
6							
7							
8							
9							
0							
1							
2							

\*samples filtered + preserved in lab.

RELINQUISHED BY (Signature)	COMPANY NAME	DATE	TIME	RECEIVED BY (Signature)	COMPANY NAME	DATE	TIME
[Signature]	Soft Em.	6-25-14	15:13	[Signature]	MCT	6/25/14	15:13

**SAMPLE RECEIPT CHECKLIST**

Company Name Power tech

Date/Time Received 6-25-14 1513

Project \_\_\_\_\_

Received by Dean Arundel

Lab Number(s) 108-109 6-26-14

Carrier Name Allen Scott

Yes	No	<b><u>UNPACKING</u></b>		Initials
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1.	Shipping container in good condition?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2.	Custody seals present on shipping container? Condition: <u>Intact</u> Broken	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3.	<u>ice</u> / Blue ice (circle one) present in shipping container? Container(s) Temp. 1. <u>1.0</u> 2. _____ 3. _____ 4. _____	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4.	Bottles broken and/or leaking? (Photograph broken bottles.)	_____
<input type="checkbox"/>	<input type="checkbox"/>	5.	Custody seals on sample bottles? Condition: Intact Broken <u>MA</u>	_____

Yes	No	<b><u>LABELING</u></b>		Initials
<input checked="" type="checkbox"/>	<input type="checkbox"/>	6.	Chain of custody Present?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.	Chain of custody includes signatures, dates, and times when relinquished and received?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.	Chain of custody agrees with bottle count?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	9.	Chain of custody agrees with labels?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	10.	Samples received within holding times?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	11.	Samples in proper container?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	12.	Sufficient sample volume for indicated tests?	_____

<b><u>PRESERVATIVE</u></b>			
Yes	No	Initials	Yes No Initials
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	13. Metals bottle(s) pH < 2? _____	<input type="checkbox"/> <input type="checkbox"/> 17. TOC bottle(s) pH < 2? _____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	14. Nutrient bottle(s) pH < 2? _____	<input type="checkbox"/> <input type="checkbox"/> 18. Oil & Grease bottle(s) pH < 2? _____
<input type="checkbox"/>	<input type="checkbox"/>	15. Cyanide bottle(s) pH > 12? _____	<input type="checkbox"/> <input type="checkbox"/> 19. Volatiles pH < 2? _____
<input type="checkbox"/>	<input type="checkbox"/>	16. Sulfide bottle(s) pH > 9? _____	

COMMENTS: dissolved metals bottles filtered  
& preserved in lab.




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Sample Site: DC-1  
Project Name: Powertech  
Sampled: 07/10/14 at 12:27 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20140710401  
Received: 07/10/14 at 03:49 PM  
by Eric Fuehrer  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	102	pCi/L	1	SM 7500Rn-B	SYS 07/12/14
<b>Precision Data</b>					
Radon-222 Precision	± 34.3	pCi/L	1	MC-Radon 222 precision	SYS 07/12/14
<b>MDA Data</b>					
Radon-222 MDA	42.6	pCi/L	1	MC - Radon 222 MDA	SYS 07/12/14

Approved By: 

Approved On: 7/18/2014 4:14:29 PM




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Sample Site: DC-2  
Project Name: Powertech  
Sampled: 07/10/14 at 09:06 AM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20140710402  
Received: 07/10/14 at 03:49 PM  
by Eric Fuehrer  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	Method	Analyst/Date
<b>Radiological</b>					
Radon-222	565	pCi/L	1	SM 7500Rn-B	SYS 07/12/14
<b>Precision Data</b>					
Radon-222 Precision	± 111	pCi/L	1	MC-Radon 222 precision	SYS 07/12/14
<b>MDA Data</b>					
Radon-222 MDA	44.1	pCi/L	1	MC - Radon 222 MDA	SYS 07/12/14

Approved By: 

Approved On: 7/18/2014 4:14:29 PM






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Lab Numbers: 20140710401 - 20140710402

### QC Sample Report

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method
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Approved By: 

Approved On: 07/18/2014 04:14 PM



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# CHAIN OF CUSTODY RECORD

**FOR LAB USE ONLY**

Seal Intact (Y/N) Number None

Sample Condition Good

Temperature of Container 5.1°C  
on Ice

REQUESTED TURN AROUND

STANDARD \_\_\_\_\_ RUSH \_\_\_\_\_

PRESERVED WITH	
FILTERED (Y/N)	
REFRIGERATED (Y/N)	
ANALYSES REQUESTED	<u>Rock</u>

Company	<u>Powered / Scott Env.</u>		
Project Name / Mgr.	<u>Lisa Scheinost / Allan Scott</u>		
Project Number	<u>Alluvial Wells - Radon</u>		
Sampled by	Signature	<u>ALLM</u>	
Sampled by	Print	<u>Allan Scott</u>	

	SAMPLE NAME	DATE	TIME	MATRIX	NO. OF CONTAINERS	COMMENTS	LAB #
1	<u>DC-1</u>	<u>7-10-14</u>	<u>12:27</u>	<u>Water</u>	<u>2</u>		<u>20140710401</u>
2	<u>DC-2</u>	<u>7-10-14</u>	<u>9:06</u>	<u>1</u>	<u>1</u>		<u>J 402</u>
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

RELINQUISHED BY (Signature)	COMPANY NAME	DATE	TIME	RECEIVED BY (Signature)	COMPANY NAME	DATE	TIME
<u>ALLM</u>	<u>Scott Env.</u>	<u>7-10-14</u>	<u>15:49</u>	<u>Emi Fisher</u>	<u>MCT</u>	<u>7/10/14</u>	<u>15:49</u>

### SAMPLE RECEIPT CHECKLIST

 Company Name Powertech

 Date/Time Received 7/10/14 1549  
Date / Time

 Project Alluvial Wells

 Received by Eric Fuehrer

 Lab Number(s) 2014 0710 401 - 402

 Carrier Name Allan Scott
**Yes No**

#### UNPACKING

**Initials**

- |                                     |                                     |   |  |           |
|-------------------------------------|-------------------------------------|---|--|-----------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 1. Shipping container in good condition?  |  | <u>EF</u> |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 2. Custody seals present on shipping container?<br>Condition: Intact <input type="checkbox"/> Broken <input type="checkbox"/>       |  |           |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 3. <u>Ice</u> Blue Ice (circle one) present in shipping container?<br>Container(s) Temp. 1. <u>5.1°C</u> 2. _____ 3. _____ 4. _____ |  |           |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 4. Bottles broken and/or leaking? (Photograph broken bottles.)  |  |           |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 5. Custody seals on sample bottles?<br>Condition: Intact <input type="checkbox"/> Broken <input type="checkbox"/>                   |  |           |

**Yes No**

#### LABELING

**Initials**

- |                                     |                          |   |  |           |
|-------------------------------------|--------------------------|---|--|-----------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 6. Chain of custody Present?  |  | <u>EF</u> |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 7. Chain of custody includes signatures, dates, and times when relinquished and received? |  |           |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 8. Chain of custody agrees with bottle count?   |  |           |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 9. Chain of custody agrees with labels?   |  |           |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 10. Samples received within holding times?  |  |           |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 11. Samples in proper container?  |  |           |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | 12. Sufficient sample volume for indicated tests?   |  |           |

#### PRESERVATIVE

**Yes No**
**Initials**
**Yes No**
**Initials**

- |                          |                          |                                      |  |                          |                          |  |  |
|--------------------------|--------------------------|--------------------------------------|--|--------------------------|--------------------------|--|--|
| <input type="checkbox"/> | <input type="checkbox"/> | 13. Metals bottle(s) pH < 2? _____   |  | <input type="checkbox"/> | <input type="checkbox"/> | 17. TOC bottle(s) pH < 2? _____          |  |
| <input type="checkbox"/> | <input type="checkbox"/> | 14. Nutrient bottle(s) pH < 2? _____ |  | <input type="checkbox"/> | <input type="checkbox"/> | 18. Oil & Grease bottle(s) pH < 2? _____ |  |
| <input type="checkbox"/> | <input type="checkbox"/> | 15. Cyanide bottle(s) pH > 12? _____ |  | <input type="checkbox"/> | <input type="checkbox"/> | 19. Volatiles pH < 2? _____              |  |
| <input type="checkbox"/> | <input type="checkbox"/> | 16. Sulfide bottle(s) pH > 9? _____  |  |                          |                          |  |  |

**COMMENTS:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



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# CHAIN OF CUSTODY RECORD

PRESERVED WITH	Time
Filtered (Y/N)	N
Refrigerated (Y/N)	N
ANALYSES REQUESTED	Kodak 222

**FOR LAB USE ONLY**  
 Seal Intact (Y/N) Number  
 Sample Condition  
 Temperature of Container

REQUESTED TURN AROUND  
 STANDARD \_\_\_\_\_ RUSH \_\_\_\_\_

Company	MidContinent Testing
Project Name / Mgr.	/ Greg Mc Douglas
Project Number	
Sampled by	Signature
Sampled by	Print Allen Scott

	SAMPLE NAME	DATE	TIME	MATRIX	NO. OF CONTAINERS	COMMENTS	LAB #
1	20140710401	7/10/14	12:27	Water	2	X	
2	20140710402	7/10/14	9:06	J	2	X	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

RELINQUISHED BY (Signature)	COMPANY NAME	DATE	TIME	RECEIVED BY (Signature)	COMPANY NAME	DATE	TIME
<i>Allen Scott</i>	MCT	7/10/14	16:10	Fedex Overnight	To Price Analytical, PA		



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Sample Site: DC-2  
Project Name: Powertech  
Sampled: 09/03/14 at 12:59 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20140905201  
Received: 09/04/14 at 02:10 PM  
by Dean Aurand  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst/Date
<b>Physical Properties</b>							
Electrical Conductivity	5600	µmhos/cm	1	0.237	5.00	SM 2510B	JAM 09/05/14
pH	7.15	S.U.	1			SM 4500-H+ B	JAM 09/05/14
Total Dissolved Solids	4460	mg/L	100ml	17.6	50.0	SM 2540 C	TMN 09/05/14
<b>Non-Metallics</b>							
Alkalinity (CaCO3)	261	mg/L	1	0.421	10.0	SM 2320 B	JAM 09/05/14
Bicarbonate	318	mg/L	1	0.513	10.0	SM 2320 B	JAM 09/05/14
Carbonate	0.00	mg/L	1	0.210	5.00	SM 2320 B	JAM 09/05/14
Chloride (Cl-)	935	mg/L	20	5.09	10.0	SM 4500-Cl E	BLL 09/05/14
Fluoride	0.497	mg/L	1	0.004	0.050	SM 4500 F-C	TNA 09/05/14
Nitrogen, Nitrate (NO3)	< 0.050	mg/L	1	0.014	0.050	SM 4500-NO3 F	BLL 09/05/14
Sulfate (SO4)	2100	mg/L	40	10.5	40.0	SM 4500-SO4 E	BLL 09/05/14
<b>Metals - Dissolved</b>							
Arsenic (As)	< 0.005	mg/L	10	0.0006	0.005	EPA 200.8	TNA 09/05/14
Barium (Ba)	0.012	mg/L	10	0.0005	0.005	EPA 200.8	TNA 09/05/14
Boron (B)	0.288	mg/L	10	0.005	0.020	EPA 200.8	TNA 09/05/14
Cadmium (Cd)	< 0.001	mg/L	10	0.0001	0.001	EPA 200.8	TNA 09/05/14
Calcium (Ca)	584	mg/L	12	1.59	12.0	SM 3111 B	GRT 09/07/14
Chromium (Cr)	0.001	mg/L	10	0.0001	0.001	EPA 200.8 DRC	TNA 09/05/14
Copper (Cu)	0.016	mg/L	10	0.0009	0.005	EPA 200.8	TNA 09/05/14
Iron (Fe)	3.49	mg/L	10	0.004	0.050	EPA 200.8	TNA 09/05/14
Lead (Pb)	< 0.001	mg/L	10	0.000026	0.001	EPA 200.8	TNA 09/05/14
Magnesium (Mg)	149	mg/L	6	0.180	3.00	SM 3111 B	GRT 09/07/14
Manganese (Mn)	2.36	mg/L	10	0.0001	0.010	EPA 200.8	TNA 09/05/14
Molybdenum (Mo)	0.005	mg/L	10	0.0001	0.001	EPA 200.8	TNA 09/05/14
Nickel (Ni)	0.017	mg/L	10	0.0003	0.005	EPA 200.8	TNA 09/05/14
Potassium (K)	7.73	mg/L	1	0.025	0.500	SM 3111 B	GRT 09/07/14
Selenium (Se)	< 0.005	mg/L	10	0.001	0.005	EPA 200.8	TNA 09/05/14
Silver (Ag)	< 0.001	mg/L	10	0.0002	0.001	EPA 200.8	TNA 09/05/14
Sodium (Na)	722	mg/L	29	5.10	14.5	SM 3111 B	GRT 09/07/14

<b>Parameter</b>	<b>Result</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Method</b>	<b>Analyst/Date</b>	
<b><u>Metals - Dissolved</u></b>								
Uranium (U)	0.008	mg/L	10	0.000021	0.001	EPA 200.8	TNA	09/05/14
Vanadium (V)	< 0.005	mg/L	10	0.000073	0.005	EPA 200.8	TNA	09/05/14
Zinc (Zn)	< 0.050	mg/L	10	0.006	0.050	EPA 200.8	TNA	09/05/14
<b><u>Metals - Total</u></b>								
Mercury (Hg)	< 0.0002	mg/L	1	0.000035	0.0002	EPA 245.1	GRT	09/07/14
<b><u>Anion - Cation Balance</u></b>								
Anions	75.2	meq/L	1			Calculation	GAM	09/09/14
Anion - Cation Balance	-1.47	%	1			Calculation	GAM	09/09/14
Cations	73.1	meq/L	1			Calculation	GAM	09/09/14
Electrical Conductivity - Calculated	9100	µS/cm	1			SM 1030E	DVA	10/28/14
Total Dissolved Solids - Calculated	4650	mg/L	1			SM 1030E	DVA	10/29/14
Total Dissolved Solids - Ratio	0.960	none	1			SM 1030	DVA	10/29/14
<b><u>Radiological</u></b>								
Gross Alpha	6.25	pCi/L	1			EPA 900.0	EJF	10/16/14
Gross Beta	13.8	pCi/L	1			EPA 900.0	EJF	10/16/14
Lead-210	0.282	pCi/L	1			RP280m DOE	SYS	09/23/14
Radium-226	0.9363	pCi/L	1			MC Radium-226	EJF	10/26/14
Radium-228	< 1.00	pCi/L	1			MC Radium-228	EJF	10/26/14
Radon-222	559	pCi/L	1			SM 7500Rn-B	SYS	09/05/14
Thorium-230	0.075	pCi/L	1			HSL-300m	SYS	09/22/14
<b><u>Precision Data</u></b>								
Gross Alpha precision	± 1.72	pCi/L	1			MC - Gross Alpha precision	EJF	10/16/14
Gross Beta precision	± 2.88	pCi/L	1			MC - Gross Beta precision	EJF	10/16/14
Lead-210 Precision	± 0.350	pCi/L	1			MC-Lead 210 precision	SYS	09/23/14
Radium-226 precision	± 0.2240	pCi/L	1			MC-Radium 226 precision	EJF	10/26/14
Radium-228 precision	± 0.00	pCi/L	1			MC-Radium 228 precision	EJF	10/26/14
Radon-222 Precision	± 111	pCi/L	1			MC-Radon 222 precision	SYS	09/05/14
Thorium-230 Precision	± 0.160	pCi/L	1			MC-Thorium 230 precision	SYS	09/22/14
<b><u>MDA Data</u></b>								
Gross Alpha MDA	5.03	pCi/L	1			MC - Gross Alpha MDA	EJF	10/16/14
Gross Beta MDA	8.71	pCi/L	1			MC - Gross Beta MDA	EJF	10/16/14
Lead-210 MDA	0.585	pCi/L	1			MC - Lead 210 MDA	SYS	09/23/14
Radium-226 MDA	0.4580	pCi/L	1			MC - Radium 226 MDA	EJF	10/26/14
Radium-228 MDA	0.033	pCi/L	1			MC - Radium 228 MDA	EJF	10/26/14
Radon-222 MDA	49.9	pCi/L	1			MC - Radon 222 MDA	SYS	09/05/14
Thorium-230 MDA	0.251	pCi/L	1			MC - Thorium 230 MDA	SYS	09/22/14

**Quality Control Data**

<b>Parameter</b>	<b>Result</b>	<b>Limits</b>	<b>DF</b>	<b>Method</b>	<b>Analyst/Date</b>	
<b><u>Dissolved Metals - Internal Std</u></b>						
Bismuth (Bi)	85.0 %	(60.0 - 125.0) %	10	EPA 200.8	TNA	09/05/14
Germanium (Ge72)	94.1 %	(60.0 - 125.0) %	10	EPA 200.8	TNA	09/05/14
Germanium (Ge74)	85.5 %	(60.0 - 125.0) %	10	EPA 200.8 DRC	TNA	09/05/14
Indium (In)	88.3 %	(60.0 - 125.0) %	10	EPA 200.8	TNA	09/05/14
Lithium (Li)	102.0 %	(60.0 - 125.0) %	10	EPA 200.8	TNA	09/05/14
Scandium (Sc)	96.1 %	(60.0 - 125.0) %	10	EPA 200.8	TNA	09/05/14

**Notes:**

Dissolved metals bottle filtered and preserved in lab.

Approved By: \_\_\_\_\_



Approved On: 10/29/2014 12:37:52 PM



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(605) 348-0111 -- www.thechemistrylab.com

Sample Site: BC-1  
Project Name: Powertech  
Sampled: 09/03/14 at 04:12 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20140905202  
Received: 09/04/14 at 02:10 PM  
by Dean Aurand  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst/Date
<b>Physical Properties</b>							
Electrical Conductivity	3390	µmhos/cm	1	0.237	5.00	SM 2510B	JAM 09/05/14
pH	7.22	S.U.	1			SM 4500-H+ B	JAM 09/05/14
Total Dissolved Solids	3420	mg/L	100ml	17.6	50.0	SM 2540 C	TMN 09/05/14
<b>Non-Metallics</b>							
Alkalinity (CaCO3)	290	mg/L	1	0.421	10.0	SM 2320 B	JAM 09/05/14
Bicarbonate	353	mg/L	1	0.513	10.0	SM 2320 B	JAM 09/05/14
Carbonate	0.00	mg/L	1	0.210	5.00	SM 2320 B	JAM 09/05/14
Chloride (Cl-)	23.8	mg/L	1	0.254	0.500	SM 4500-Cl E	BLL 09/05/14
Fluoride	0.492	mg/L	1	0.004	0.050	SM 4500 F-C	TNA 09/05/14
Nitrogen, Nitrate (NO3)	< 0.050	mg/L	1	0.014	0.050	SM 4500-NO3 F	BLL 09/05/14
Sulfate (SO4)	2280	mg/L	40	10.5	40.0	SM 4500-SO4 E	BLL 09/05/14
<b>Metals - Dissolved</b>							
Arsenic (As)	< 0.005	mg/L	10	0.0006	0.005	EPA 200.8	TNA 09/05/14
Barium (Ba)	0.008	mg/L	10	0.0005	0.005	EPA 200.8	TNA 09/05/14
Boron (B)	0.541	mg/L	10	0.005	0.020	EPA 200.8	TNA 09/05/14
Cadmium (Cd)	< 0.001	mg/L	10	0.0001	0.001	EPA 200.8	TNA 09/05/14
Calcium (Ca)	545	mg/L	12	1.59	12.0	SM 3111 B	GRT 09/07/14
Chromium (Cr)	< 0.001	mg/L	10	0.0001	0.001	EPA 200.8 DRC	TNA 09/05/14
Copper (Cu)	< 0.005	mg/L	10	0.0009	0.005	EPA 200.8	TNA 09/05/14
Iron (Fe)	0.568	mg/L	10	0.004	0.050	EPA 200.8	TNA 09/05/14
Lead (Pb)	< 0.001	mg/L	10	0.000026	0.001	EPA 200.8	TNA 09/05/14
Magnesium (Mg)	214	mg/L	7	0.210	3.50	SM 3111 B	GRT 09/07/14
Manganese (Mn)	0.079	mg/L	10	0.0001	0.010	EPA 200.8	TNA 09/05/14
Molybdenum (Mo)	0.005	mg/L	10	0.0001	0.001	EPA 200.8	TNA 09/05/14
Nickel (Ni)	0.017	mg/L	10	0.0003	0.005	EPA 200.8	TNA 09/05/14
Potassium (K)	12.1	mg/L	2	0.050	1.00	SM 3111 B	GRT 09/07/14
Selenium (Se)	< 0.005	mg/L	10	0.001	0.005	EPA 200.8	TNA 09/05/14
Silver (Ag)	< 0.001	mg/L	10	0.0002	0.001	EPA 200.8	TNA 09/05/14
Sodium (Na)	173	mg/L	8	1.41	4.00	SM 3111 B	GRT 09/07/14



<b>Parameter</b>	<b>Result</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Method</b>	<b>Analyst/Date</b>	
<b><u>Metals - Dissolved</u></b>								
Uranium (U)	0.060	mg/L	10	0.000021	0.001	EPA 200.8	TNA	09/05/14
Vanadium (V)	< 0.005	mg/L	10	0.000073	0.005	EPA 200.8	TNA	09/05/14
Zinc (Zn)	< 0.050	mg/L	10	0.006	0.050	EPA 200.8	TNA	09/05/14
<b><u>Metals - Total</u></b>								
Mercury (Hg)	< 0.0002	mg/L	1	0.000035	0.0002	EPA 245.1	GRT	09/07/14
<b><u>Anion - Cation Balance</u></b>								
Anions	53.8	meq/L	1			Calculation	GAM	09/09/14
Anion - Cation Balance	-1.18	%	1			Calculation	GAM	09/09/14
Cations	52.6	meq/L	1			Calculation	GAM	09/09/14
Electrical Conductivity - Calculated	9130	µS/cm	1			SM 1030E	DVA	10/28/14
Total Dissolved Solids - Calculated	3420	mg/L	1			SM 1030E	DVA	10/29/14
Total Dissolved Solids - Ratio	1.00	none	1			SM 1030	DVA	10/29/14
<b><u>Radiological</u></b>								
Gross Alpha	45.8	pCi/L	1			EPA 900.0	EJF	10/22/14
Gross Beta	41.2	pCi/L	1			EPA 900.0	EJF	10/22/14
Lead-210	- 0.090	pCi/L	1			RP280m DOE	SYS	09/23/14
Radium-226	1.168	pCi/L	1			MC Radium-226	EJF	10/27/14
Radium-228	0.583	pCi/L	1			MC Radium-228	EJF	10/27/14
Radon-222	587	pCi/L	1			SM 7500Rn-B	SYS	09/05/14
Thorium-230	- 0.045	pCi/L	1			HSL-300m	SYS	09/22/14
<b><u>Precision Data</u></b>								
Gross Alpha precision	± 3.10	pCi/L	1			MC - Gross Alpha precision	EJF	10/22/14
Gross Beta precision	± 3.69	pCi/L	1			MC - Gross Beta precision	EJF	10/22/14
Lead-210 Precision	± 0.349	pCi/L	1			MC-Lead 210 precision	SYS	09/23/14
Radium-226 precision	± 0.2110	pCi/L	1			MC-Radium 226 precision	EJF	10/27/14
Radium-228 precision	± 0.399	pCi/L	1			MC-Radium 228 precision	EJF	10/27/14
Radon-222 Precision	± 116	pCi/L	1			MC-Radon 222 precision	SYS	09/05/14
Thorium-230 Precision	± 0.176	pCi/L	1			MC-Thorium 230 precision	SYS	09/22/14
<b><u>MDA Data</u></b>								
Gross Alpha MDA	5.15	pCi/L	1			MC - Gross Alpha MDA	EJF	10/22/14
Gross Beta MDA	8.90	pCi/L	1			MC - Gross Beta MDA	EJF	10/22/14
Lead-210 MDA	0.608	pCi/L	1			MC - Lead 210 MDA	SYS	09/23/14
Radium-226 MDA	0.4370	pCi/L	1			MC - Radium 226 MDA	EJF	10/27/14
Radium-228 MDA	0.685	pCi/L	1			MC - Radium 228 MDA	EJF	10/27/14
Radon-222 MDA	49.0	pCi/L	1			MC - Radon 222 MDA	SYS	09/05/14
Thorium-230 MDA	0.356	pCi/L	1			MC - Thorium 230 MDA	SYS	09/22/14

**Quality Control Data**

<b>Parameter</b>	<b>Result</b>	<b>Limits</b>	<b>DF</b>	<b>Method</b>	<b>Analyst/Date</b>	
<b><u>Dissolved Metals - Internal Std</u></b>						
Bismuth (Bi)	83.6 %	(60.0 - 125.0) %	10	EPA 200.8	TNA	09/05/14
Germanium (Ge72)	92.7 %	(60.0 - 125.0) %	10	EPA 200.8	TNA	09/05/14
Germanium (Ge74)	83.3 %	(60.0 - 125.0) %	10	EPA 200.8 DRC	TNA	09/05/14
Indium (In)	87.9 %	(60.0 - 125.0) %	10	EPA 200.8	TNA	09/05/14
Lithium (Li)	106.4 %	(60.0 - 125.0) %	10	EPA 200.8	TNA	09/05/14
Scandium (Sc)	95.2 %	(60.0 - 125.0) %	10	EPA 200.8	TNA	09/05/14

**Notes:**

Dissolved metals bottle filtered and preserved in lab.

Approved By: \_\_\_\_\_



Approved On: 10/28/2014 3:08:22 PM



2381 South Plaza Drive P.O. Box 3388 Rapid City, SD 57709  
(605) 348-0111 -- www.thechemistrylab.com

Lab Numbers: 20140905201 - 20140905202

### QC Sample Report

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method	
<b>Spike</b>									
TDS	0905306	1590	574	1000	100ml	101.6 %	(82.26) - (123.6)	SM 2540 C	
TDS	0905203	2510	1430	1000	100ml	108.7 %	(82.26) - (123.6)	SM 2540 C	
Alkalinity	0905203	170	68.1	106	1	96.1 %	(90.13) - (99.98)	SM 2320 B	
Chloride	0905202	28.7	23.8	5.00	1	99.80%	(84.12) - (115.2)	SM 4500-CI E	
Fluoride	0905207	2.90	1.90	1.00	1	99.70%	(81.09) - (114.9)	SM 4500 F-C	
Fluoride	0905308	0.653	0.276	0.400	1	94.3 %	(81.09) - (114.9)	SM 4500 F-C	
N, Nitrate	0904827	0.597	0.188	0.400	1	102.3 %	(86.66) - (111.0)	SM 4500-NO3 F	
N, Nitrate	0905303	19.8	15.6	0.400	10	107.0 %	(86.70) - (111.4)	SM 4500-NO3 F	
N, Nitrate	0905201	0.401	< 0.050	0.400	1	100.3 %	(86.70) - (111.4)	SM 4500-NO3 F	
N, Nitrate	0905207	256	173	0.400	200	103.4 %	(86.70) - (111.4)	SM 4500-NO3 F	
Sulfate	0904827	23.0	4.42	19.2	1	97.6 %	(86.35) - (109.0)	SM 4500-SO4 E	
Sulfate	0905203	1360	1030	19.2	20	95.2 %	(86.27) - (108.7)	SM 4500-SO4 E	
Sulfate	0905302	30.8	11.9	19.2	1	101.0 %	(86.27) - (108.7)	SM 4500-SO4 E	
Arsenic - D	0905107	0.305	0.037	0.025	10	107.6 %	(88.69) - (114.8)	EPA 200.8	
Arsenic - D	0905305	0.255	0.025	0.025	10	91.9 %	(88.69) - (114.8)	EPA 200.8	
Arsenic - D	0905201	0.259	< 0.005	0.025	10	103.5 %	(88.69) - (114.8)	EPA 200.8	
Barium - D	0905201	0.262	0.012	0.025	10	100.1 %	(89.43) - (105.1)	EPA 200.8	
Boron - D	0905201	0.490	0.288	0.025	10	80.8 %	(77.87) - (130.0)	EPA 200.8	
Cadmium - D	0905201	0.241	< 0.001	0.025	10	96.3 %	(93.23) - (105.0)	EPA 200.8	
Cadmium - D	0905107	0.249	< 0.001	0.025	10	99.54%	(93.23) - (105.0)	EPA 200.8	
Calcium - D	0905201	684	584	10.0	10	100.0 %	(90.73) - (117.6)	SM 3111 B	
Chromium - D	0905107	0.219	< 0.001	0.025	10	87.6 %	(87.26) - (106.8)	EPA 200.8 DRC	
Chromium - D	0905201	0.253	0.001	0.025	10	100.6 %	(87.26) - (106.8)	EPA 200.8 DRC	
Copper - D	0905201	0.261	0.016	0.025	10	97.8 %	(88.98) - (106.2)	EPA 200.8	
Copper - D	0905107	0.229	0.005	0.025	10	89.4 %	(88.98) - (106.2)	EPA 200.8	
Copper - D	0905305	0.237	< 0.005	0.025	10	94.7 %	(88.98) - (106.2)	EPA 200.8	
Iron - D	0905201	4.68	3.49	0.125	10	95.5 %	(86.32) - (108.2)	EPA 200.8	
Lead - D	0905201	0.251	< 0.001	0.025	10	100.4 %	(93.51) - (105.9)	EPA 200.8	
Lead - D	0905107	0.245	< 0.001	0.025	10	97.9 %	(93.51) - (105.9)	EPA 200.8	
Magnesium - D	0905201	247	149	10.0	10	98.0 %	(84.61) - (110.4)	SM 3111 B	
Manganese - D	0905201	2.58	2.36	0.025	10	88.6 %	(88.28) - (110.1)	EPA 200.8	
Molybdenum - D	0905201	0.260	0.005	0.025	10	102.1 %	(78.16) - (129.4)	EPA 200.8	
Nickel - D	0905201	0.265	0.017	0.025	10	99.3 %	(90.40) - (107.1)	EPA 200.8	
Potassium - D	0905201	39.0	7.73	3.00	10	104.3 %	(86.14) - (110.7)	SM 3111 B	
Selenium - D	0905305	1.15	< 0.005	0.125	10	92.3 %	(93.70) - (110.8)	EPA 200.8	X
Selenium - D	0905107	1.35	0.020	0.125	10	106.4 %	(93.70) - (110.8)	EPA 200.8	
Selenium - D	0905201	1.28	< 0.005	0.125	10	102.7 %	(93.70) - (110.8)	EPA 200.8	
Silver - D	0905201	0.223	< 0.001	0.025	10	89.0 %	(91.12) - (106.6)	EPA 200.8	X

Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method
<b>Spike</b>								
Sodium - D	0905303	13.6	8.48	5.00	1	102.4 %	(85.43) - (119.4)	SM 3111 B
Sodium - D	0905203	11.5	6.14	5.00	1	107.8 %	(85.43) - (119.4)	SM 3111 B
Uranium - D	0905201	0.276	0.008	0.025	10	107.1 %	(88.50) - (122.1)	EPA 200.8
Vanadium - D	0905201	0.268	< 0.005	0.025	10	107.0 %	(80.65) - (113.4)	EPA 200.8
Zinc - D	0905201	0.253	< 0.050	0.025	10	101.1 %	(91.07) - (122.3)	EPA 200.8
Mercury - T	0905308	0.0022	< 0.0002	0.002	1	109.5 %	(83.96) - (111.1)	EPA 245.1
Mercury - T	0905303	0.0019	< 0.0002	0.002	1	93.5 %	(83.96) - (111.1)	EPA 245.1
Arsenic - TR	0905102	0.258	0.011	0.025	10	98.8 %	(89.83) - (111.3)	EPA 200.8
Cadmium - TR	0905102	0.240	< 0.001	0.025	10	96.1 %	(90.43) - (105.4)	EPA 200.8
Chromium - TR	0905102	0.267	< 0.001	0.025	10	106.7 %	(82.71) - (108.6)	EPA 200.8 DRC
Copper - TR	0905102	0.249	< 0.005	0.025	10	99.60%	(85.63) - (107.4)	EPA 200.8
Lead - TR	0905102	0.246	< 0.001	0.025	10	98.4 %	(93.22) - (105.1)	EPA 200.8
Selenium - TR	0905102	1.24	< 0.005	0.125	10	99.0 %	(77.12) - (134.1)	EPA 200.8
Gross Alpha	0826940	38.9	26.6	10.0	1	122.5 %		EPA 900.0
Gross Beta	0826940	26.6	19.8	10.0	1	67.8 %		EPA 900.0
Radium-226	0826940	16.44	6.210	10.0	1	102.3 %		MC Radium-226
Radium-228	0826940	18.6	3.24	15.0	1	102.4 %		MC Radium-228

- Spiked by 3 mls instead of 2 mls

**Matrix Spike Duplicate**

Chloride	0905202	29.1	28.7		1	1.35%	(-7.561) - (5.429)	SM 4500-CI E
Fluoride	0905308	0.653	0.653		1	0.00%	(-8.222) - (7.770)	SM 4500 F-C
Fluoride	0905207	2.83	2.90		1	-2.59%	(-8.222) - (7.770)	SM 4500 F-C
N, Nitrate	0904827	0.607	0.597		1	1.66%	(-6.712) - (8.316)	SM 4500-NO3 F
N, Nitrate	0905303	19.0	19.8		10	-4.29%	(-6.442) - (8.337)	SM 4500-NO3 F
N, Nitrate	0905201	0.421	0.401		1	4.87%	(-6.442) - (8.337)	SM 4500-NO3 F
N, Nitrate	0905207	270	256		200	5.38%	(-6.442) - (8.337)	SM 4500-NO3 F
Sulfate	0904827	22.7	23.0		1	-1.40%	(-5.449) - (7.464)	SM 4500-SO4 E
Sulfate	0905203	1360	1360		20	0.116%	(-5.448) - (7.382)	SM 4500-SO4 E
Sulfate	0905302	30.9	30.8		1	0.162%	(-5.448) - (7.382)	SM 4500-SO4 E
Arsenic - D	0905107	0.315	0.305		10	3.21%	(-6.592) - (6.176)	EPA 200.8
Arsenic - D	0905201	0.253	0.259		10	-2.22%	(-6.592) - (6.176)	EPA 200.8
Arsenic - D	0905305	0.269	0.255		10	5.57%	(-6.592) - (6.176)	EPA 200.8
Barium - D	0905201	0.260	0.262		10	-0.662%	(-3.007) - (3.294)	EPA 200.8
Boron - D	0905201	0.484	0.490		10	-1.39%	(-8.282) - (11.08)	EPA 200.8
Cadmium - D	0905305	0.243	0.241		10	0.995%	(-4.473) - (4.390)	EPA 200.8
Cadmium - D	0905201	0.237	0.241		10	-1.62%	(-4.473) - (4.390)	EPA 200.8
Cadmium - D	0905107	0.250	0.249		10	0.489%	(-4.473) - (4.390)	EPA 200.8
Calcium - D	0905201	689	684		10	0.705%	(-6.005) - (8.511)	SM 3111 B
Chromium - D	0905107	0.220	0.219		10	0.533%	(-4.315) - (3.842)	EPA 200.8 DRC
Chromium - D	0905201	0.250	0.253		10	-1.20%	(-4.315) - (3.842)	EPA 200.8 DRC
Copper - D	0905201	0.254	0.261		10	-2.64%	(-6.768) - (5.822)	EPA 200.8
Copper - D	0905107	0.229	0.229		10	-0.044%	(-6.768) - (5.822)	EPA 200.8
Copper - D	0905305	0.244	0.237		10	2.98%	(-6.768) - (5.822)	EPA 200.8
Iron - D	0905201	4.62	4.68		10	-1.35%	(-3.165) - (3.671)	EPA 200.8
Lead - D	0905107	0.246	0.245		10	0.656%	(-3.220) - (4.299)	EPA 200.8

<b>Parameter</b>	<b>Lab#</b>	<b>QC Value</b>	<b>Smp Value</b>	<b>Spike</b>	<b>DF</b>	<b>Result</b>	<b>Limits</b>	<b>Method</b>
<b><u>Matrix Spike Duplicate</u></b>								
Lead - D	0905201	0.248	0.251		10	-1.08%	(-3.220) - (4.299)	EPA 200.8
Magnesium - D	0905201	251	247		10	1.62%	(-4.497) - (3.580)	SM 3111 B
Manganese - D	0905201	2.51	2.58		10	-2.71%	(-6.514) - (5.155)	EPA 200.8
Molybdenum - D	0905201	0.259	0.260		10	-0.293%	(-7.569) - (6.415)	EPA 200.8
Nickel - D	0905201	0.262	0.265		10	-1.26%	(-6.479) - (5.276)	EPA 200.8
Potassium - D	0905201	38.7	39.0		10	-0.695%	(-7.924) - (5.284)	SM 3111 B
Selenium - D	0905305	1.19	1.15		10	2.84%	(-5.433) - (4.777)	EPA 200.8
Selenium - D	0905201	1.23	1.28		10	-3.97%	(-5.433) - (4.777)	EPA 200.8
Selenium - D	0905107	1.35	1.35		10	0.283%	(-5.433) - (4.777)	EPA 200.8
Silver - D	0905201	0.222	0.223		10	-0.333%	(-3.447) - (3.244)	EPA 200.8
Sodium - D	0905203	11.7	11.5		1	1.38%	(-6.304) - (8.139)	SM 3111 B
Sodium - D	0905303	13.7	13.6		1	0.367%	(-6.304) - (8.139)	SM 3111 B
Uranium - D	0905201	0.278	0.276		10	0.704%	(-3.531) - (3.572)	EPA 200.8
Vanadium - D	0905201	0.261	0.268		10	-2.66%	(-10.15) - (8.147)	EPA 200.8
Zinc - D	0905201	0.247	0.253		10	-2.45%	(-5.707) - (5.090)	EPA 200.8
Mercury - T	0905308	0.0023	0.0022		1	3.15%	(-9.872) - (7.804)	EPA 245.1
Mercury - T	0905303	0.0018	0.0019		1	-6.06%	(-9.872) - (7.804)	EPA 245.1
Arsenic - TR	0905102	0.257	0.258		10	-0.198%	(-5.914) - (5.146)	EPA 200.8
Cadmium - TR	0905102	0.239	0.240		10	-0.681%	(-3.839) - (3.949)	EPA 200.8
Chromium - TR	0905102	0.277	0.267		10	3.70%	(-4.792) - (3.814)	EPA 200.8 DRC
Copper - TR	0905102	0.252	0.249		10	1.19%	(-5.032) - (5.993)	EPA 200.8
Lead - TR	0905102	0.250	0.246		10	1.52%	(-2.850) - (2.487)	EPA 200.8
Selenium - TR	0905102	1.24	1.24		10	0.033%	(-7.205) - (7.649)	EPA 200.8
<b><u>Duplicate</u></b>								
Conductivity	0904826	914	915		1	-0.109%	(-0.6369) - (0.8266)	SM 2510B
Conductivity	0905202	3390	3390		1	0.00%	(-0.6369) - (0.8266)	SM 2510B
Conductivity	0904827	425	425		1	0.00%	(-0.6369) - (0.8266)	SM 2510B
pH	0905302	6.56	6.51		1	0.765%	(-1.913) - (2.312)	SM 4500-H+ B
pH	0905203	7.19	7.13		1	0.838%	(-1.913) - (2.312)	SM 4500-H+ B
TDS	0905301	132	126		100ml	4.65%	(-5.054) - (9.217)	SM 2540 C
TDS	0905105	3640	3540		100ml	2.81%	(-5.054) - (9.217)	SM 2540 C
Alkalinity	0905302	58.9	59.1		1	-0.339%	(-4.933) - (4.065)	SM 2320 B
Bicarbonate	0905302	71.9	72.1		1	-0.278%	(-5.178) - (4.089)	SM 2320 B
Carbonate	0905302	0.00	0.00		1	0.00%	(-16.10) - (16.75)	SM 2320 B
Chloride	0905202	23.8	23.1		1	2.73%	(-7.847) - (6.659)	SM 4500-CI E
N, Nitrate	0905303	15.4	15.6		10	-0.852%	(-6.980) - (3.701)	SM 4500-NO3 F
N, Nitrate	0905207	167	173		200	-3.81%	(-6.980) - (3.701)	SM 4500-NO3 F
Sulfate	0904827	4.30	4.42		1	-2.75%	(-8.776) - (4.874)	SM 4500-SO4 E
Sulfate	0905203	1060	1030		20	2.33%	(-8.834) - (4.715)	SM 4500-SO4 E
Sulfate	0905302	11.4	11.9		1	-4.56%	(-8.834) - (4.715)	SM 4500-SO4 E
<b><u>Initial Calibration Verification</u></b>								
Conductivity		349	356		1	-1.97%	(-11.11) - (7.948)	SM 2510B
Chloride		24.8	25.0		1	-1.00%	(-10.23) - (11.07)	SM 4500-CI E
Fluoride		0.423	0.400		1	5.75%	(-9.587) - (10.37)	SM 4500 F-C

Parameter	QC Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method	
<b>Initial Calibration Verification</b>									
N, Nitrate		1.02	1.00		1	1.80%	(-6.367) - (6.897)	SM 4500-NO3 F	
Sulfate		52.4	50.0		1	4.86%	(-0.7389) - (9.323)	SM 4500-SO4 E	
Sulfate		53.1	50.0		1	6.20%	(-0.7383) - (9.314)	SM 4500-SO4 E	
Arsenic - D		0.052	0.050		1	3.88%	(-3.991) - (7.947)	EPA 200.8	
Barium - D		0.051	0.050		1	0.940%	(-8.408) - (7.436)	EPA 200.8	
Boron - D		0.053	0.050		1	6.46%	(-21.58) - (25.04)	EPA 200.8	
Cadmium - D		0.051	0.050		1	2.12%	(-4.825) - (7.809)	EPA 200.8	
Chromium - D		0.050	0.050		1	-0.460%	(-9.598) - (10.04)	EPA 200.8 DRC	
Copper - D		0.051	0.050		1	1.48%	(-7.984) - (12.77)	EPA 200.8	
Iron - D		0.254	0.250		1	1.41%	(-10.25) - (11.94)	EPA 200.8	
Lead - D		0.051	0.050		1	2.14%	(-4.410) - (9.248)	EPA 200.8	
Manganese - D		0.050	0.050		1	-0.540%	(-8.018) - (10.91)	EPA 200.8	
Molybdenum - D		0.053	0.050		1	5.94%	(-13.25) - (14.54)	EPA 200.8	
Nickel - D		0.051	0.050		1	1.78%	(-7.975) - (13.80)	EPA 200.8	
Selenium - D		0.256	0.250		1	2.28%	(-5.256) - (8.127)	EPA 200.8	
Silver - D		0.051	0.050		1	2.16%	(-6.606) - (5.968)	EPA 200.8	
Uranium - D		0.052	0.050		1	4.78%	(-3.226) - (16.95)	EPA 200.8	
Vanadium - D		0.051	0.050		1	2.34%	(-11.25) - (13.14)	EPA 200.8	
Zinc - D		0.051	0.050		1	2.26%	(-4.245) - (10.18)	EPA 200.8	
Mercury - T		0.0030	0.0030		1	-1.67%	(-13.93) - (9.265)	EPA 245.1	
<b>Continuing Calibration Verification</b>									
Conductivity		346	356		1	-2.81%	(-13.89) - (9.041)	SM 2510B	
pH		10.0	10.0		1	0.400%	(-1.607) - (2.351)	SM 4500-H+ B	
pH		4.07	4.00		1	1.75%	(-1.607) - (2.351)	SM 4500-H+ B	
pH		6.98	7.00		1	-0.286%	(-1.607) - (2.351)	SM 4500-H+ B	
TDS		1010	1000		100ml	1.20%	(-8.830) - (2.420)	SM 2540 C	
Alkalinity		101	106		1	-4.36%	(-8.923) - (1.377)	SM 2320 B	
Alkalinity		103	106		1	-3.19%	(-8.923) - (1.377)	SM 2320 B	
Chloride		26.7	25.0		1	6.72%	(-13.01) - (12.80)	SM 4500-Cl E	
Chloride		25.6	25.0		1	2.32%	(-13.01) - (12.80)	SM 4500-Cl E	
Fluoride		0.487	0.500		1	-2.60%	(-11.34) - (8.845)	SM 4500 F-C	
Fluoride		0.971	1.00		1	-2.90%	(-11.34) - (8.845)	SM 4500 F-C	
Fluoride		5.00	5.00		1	0.020%	(-11.34) - (8.845)	SM 4500 F-C	
N, Nitrate		1.05	1.00		1	4.50%	(-4.659) - (7.249)	SM 4500-NO3 F	
N, Nitrate		0.948	1.00		1	-5.20%	(-4.659) - (7.249)	SM 4500-NO3 F X	
- Recovery was within 10% of expected value									
N, Nitrate		1.06	1.00		1	5.60%	(-4.659) - (7.249)	SM 4500-NO3 F	
N, Nitrate		1.03	1.00		1	2.70%	(-4.659) - (7.249)	SM 4500-NO3 F	
Sulfate		54.1	50.0		1	8.12%	(1.955) - (8.221)	SM 4500-SO4 E	
Sulfate		52.4	50.0		1	4.86%	(1.955) - (8.221)	SM 4500-SO4 E	
Sulfate		51.9	50.0		1	3.82%	(1.955) - (8.221)	SM 4500-SO4 E	
Sulfate		53.5	50.0		1	7.02%	(1.955) - (8.221)	SM 4500-SO4 E	
Sulfate		53.8	50.0		1	7.58%	(1.439) - (8.695)	SM 4500-SO4 E	
Sulfate		53.6	50.0		1	7.12%	(1.439) - (8.695)	SM 4500-SO4 E	
Arsenic - D		0.048	0.050		1	-4.00%	(-11.69) - (1.810)	EPA 200.8	

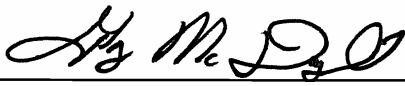
Parameter	QC Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method	
<b>Continuing Calibration Verification</b>									
Arsenic - D		0.049	0.050		1	-1.58%	(-11.69) - (1.810)	EPA 200.8	
Arsenic - D		0.047	0.050		1	-6.46%	(-11.69) - (1.810)	EPA 200.8	
Arsenic - D		0.050	0.050		1	-0.540%	(-11.69) - (1.810)	EPA 200.8	
Arsenic - D		0.048	0.050		1	-4.52%	(-11.69) - (1.810)	EPA 200.8	
Arsenic - D		0.053	0.050		1	6.72%	(-11.69) - (1.810)	EPA 200.8	X
Arsenic - D		0.049	0.050		1	-2.64%	(-11.69) - (1.810)	EPA 200.8	
Barium - D		0.049	0.050		1	-2.48%	(-8.353) - (3.565)	EPA 200.8	
Barium - D		0.049	0.050		1	-2.82%	(-8.353) - (3.565)	EPA 200.8	
Boron - D		0.052	0.050		1	4.86%	(-7.595) - (15.18)	EPA 200.8	
Boron - D		0.047	0.050		1	-6.80%	(-7.595) - (15.18)	EPA 200.8	
Cadmium - D		0.049	0.050		1	-1.58%	(-7.318) - (1.648)	EPA 200.8	
Cadmium - D		0.048	0.050		1	-5.00%	(-7.318) - (1.648)	EPA 200.8	
Cadmium - D		0.049	0.050		1	-3.00%	(-7.318) - (1.648)	EPA 200.8	
Cadmium - D		0.049	0.050		1	-2.42%	(-7.318) - (1.648)	EPA 200.8	
Cadmium - D		0.049	0.050		1	-2.70%	(-7.318) - (1.648)	EPA 200.8	
Cadmium - D		0.048	0.050		1	-3.36%	(-7.318) - (1.648)	EPA 200.8	
Cadmium - D		0.049	0.050		1	-2.34%	(-7.318) - (1.648)	EPA 200.8	
Calcium - D		25.6	25.0		1	2.52%	(-4.437) - (8.373)	SM 3111 B	
Calcium - D		25.7	25.0		1	2.80%	(-4.437) - (8.373)	SM 3111 B	
Calcium - D		25.7	25.0		1	2.60%	(-4.437) - (8.373)	SM 3111 B	
Calcium - D		26.1	25.0		1	4.20%	(-4.437) - (8.373)	SM 3111 B	
Chromium - D		0.049	0.050		1	-2.10%	(-14.41) - (5.945)	EPA 200.8 DRC	
Chromium - D		0.048	0.050		1	-3.70%	(-14.41) - (5.945)	EPA 200.8 DRC	
Chromium - D		0.045	0.050		1	-9.78%	(-14.41) - (5.945)	EPA 200.8 DRC	
Chromium - D		0.048	0.050		1	-4.26%	(-14.41) - (5.945)	EPA 200.8 DRC	
Copper - D		0.045	0.050		1	-9.96%	(-11.87) - (1.891)	EPA 200.8	
Copper - D		0.048	0.050		1	-4.12%	(-11.87) - (1.891)	EPA 200.8	
Copper - D		0.049	0.050		1	-2.52%	(-11.87) - (1.891)	EPA 200.8	
Copper - D		0.050	0.050		1	-0.900%	(-11.87) - (1.891)	EPA 200.8	
Copper - D		0.048	0.050		1	-3.58%	(-11.87) - (1.891)	EPA 200.8	
Copper - D		0.046	0.050		1	-8.00%	(-11.87) - (1.891)	EPA 200.8	
Copper - D		0.048	0.050		1	-3.62%	(-11.87) - (1.891)	EPA 200.8	
Iron - D		0.247	0.250		1	-1.25%	(-14.63) - (6.066)	EPA 200.8	
Iron - D		0.241	0.250		1	-3.57%	(-14.63) - (6.066)	EPA 200.8	
Iron - D		0.237	0.250		1	-5.34%	(-14.63) - (6.066)	EPA 200.8	
Lead - D		0.048	0.050		1	-4.76%	(-10.58) - (1.241)	EPA 200.8	
Lead - D		0.048	0.050		1	-5.10%	(-10.58) - (1.241)	EPA 200.8	
Lead - D		0.049	0.050		1	-2.38%	(-10.58) - (1.241)	EPA 200.8	
Lead - D		0.049	0.050		1	-2.38%	(-10.58) - (1.241)	EPA 200.8	
Lead - D		0.048	0.050		1	-4.96%	(-10.58) - (1.241)	EPA 200.8	
Magnesium - D		25.8	25.0		1	3.32%	(-4.796) - (7.044)	SM 3111 B	
Magnesium - D		25.3	25.0		1	1.16%	(-4.796) - (7.044)	SM 3111 B	
Magnesium - D		25.4	25.0		1	1.48%	(-4.796) - (7.044)	SM 3111 B	
Magnesium - D		25.4	25.0		1	1.56%	(-4.796) - (7.044)	SM 3111 B	
Manganese - D		0.047	0.050		1	-5.14%	(-13.18) - (6.421)	EPA 200.8	
Manganese - D		0.047	0.050		1	-5.18%	(-13.18) - (6.421)	EPA 200.8	

Parameter	QC Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method
<b>Continuing Calibration Verification</b>								
Molybdenum - D		0.049	0.050		1	-2.62%	(-11.40) - (6.956)	EPA 200.8
Molybdenum - D		0.048	0.050		1	-3.82%	(-11.40) - (6.956)	EPA 200.8
Nickel - D		0.048	0.050		1	-4.32%	(-10.38) - (3.584)	EPA 200.8
Nickel - D		0.050	0.050		1	-0.800%	(-10.38) - (3.584)	EPA 200.8
Nickel - D		0.048	0.050		1	-4.16%	(-10.38) - (3.584)	EPA 200.8
Potassium - D		4.77	5.00		1	-4.60%	(-10.76) - (7.564)	SM 3111 B
Potassium - D		4.72	5.00		1	-5.60%	(-10.76) - (7.564)	SM 3111 B
Potassium - D		5.02	5.00		1	0.400%	(-10.76) - (7.564)	SM 3111 B
Selenium - D		0.247	0.250		1	-1.33%	(-11.33) - (2.758)	EPA 200.8
Selenium - D		0.243	0.250		1	-2.79%	(-11.33) - (2.758)	EPA 200.8
Selenium - D		0.240	0.250		1	-4.02%	(-11.33) - (2.758)	EPA 200.8
Selenium - D		0.250	0.250		1	0.056%	(-11.33) - (2.758)	EPA 200.8
Selenium - D		0.234	0.250		1	-6.34%	(-11.33) - (2.758)	EPA 200.8
Selenium - D		0.254	0.250		1	1.46%	(-11.33) - (2.758)	EPA 200.8
Selenium - D		0.247	0.250		1	-1.08%	(-11.33) - (2.758)	EPA 200.8
Silver - D		0.048	0.050		1	-4.78%	(-7.331) - (6.019)	EPA 200.8
Silver - D		0.050	0.050		1	-0.360%	(-7.331) - (6.019)	EPA 200.8
Silver - D		0.049	0.050		1	-2.32%	(-7.331) - (6.019)	EPA 200.8
Sodium - D		15.6	15.0		1	4.20%	(-2.849) - (9.556)	SM 3111 B
Sodium - D		15.4	15.0		1	2.40%	(-2.849) - (9.556)	SM 3111 B
Sodium - D		15.6	15.0		1	3.73%	(-2.849) - (9.556)	SM 3111 B
Sodium - D		15.5	15.0		1	3.20%	(-2.849) - (9.556)	SM 3111 B
Sodium - D		15.5	15.0		1	3.27%	(-2.849) - (9.556)	SM 3111 B
Sodium - D		15.3	15.0		1	2.20%	(-2.849) - (9.556)	SM 3111 B
Uranium - D		0.050	0.050		1	-0.520%	(-7.451) - (18.66)	EPA 200.8
Uranium - D		0.048	0.050		1	-4.44%	(-7.451) - (18.66)	EPA 200.8
Vanadium - D		0.048	0.050		1	-3.56%	(-12.09) - (7.786)	EPA 200.8
Vanadium - D		0.048	0.050		1	-4.50%	(-12.09) - (7.786)	EPA 200.8
Zinc - D		0.049	0.050		1	-2.56%	(-12.22) - (3.834)	EPA 200.8
Zinc - D		0.050	0.050		1	0.720%	(-12.22) - (3.834)	EPA 200.8
Zinc - D		0.049	0.050		1	-2.82%	(-12.22) - (3.834)	EPA 200.8
Mercury - T		0.0020	0.0020		1	-1.00%	(-13.10) - (5.953)	EPA 245.1
Mercury - T		0.0010	0.0010		1	-3.00%	(-13.10) - (5.953)	EPA 245.1
Mercury - T		0.0050	0.0050		1	-0.200%	(-13.10) - (5.953)	EPA 245.1
Gross Alpha		502	500		1	0.400%		EPA 900.0
Gross Beta		12000	13600		1	-12.0 %		EPA 900.0
Radium-226		10090	10220		1	-1.29%		MC Radium-226
Radium-228		9680	10300		1	-6.03%		MC Radium-228
<b>Lab Fortified Blank</b>								
Gross Alpha		10.5	0.00	10.0	1	104.6 %		EPA 900.0
Gross Beta		10.8	0.00	10.0	1	108.0 %		EPA 900.0
Radium-226		11.30	0.000	10.0	1	113.0 %		MC Radium-226
Radium-228		9.62	0.00	10.0	1	96.2 %		MC Radium-228



Parameter	Lab#	QC Value	Smp Value	Spike	DF	Result	Limits	Method	
<b>Initial Calibration Blank</b>									
Conductivity		0.300	0.00		1	0.3	(-0.1241) - (0.9041)	SM 2510B	
Alkalinity		1.06	0.00		1	1.06	(-1.599) - (6.277)	SM 2320 B	
Chloride		0.670	0.00		1	0.67	(-0.4997) - (1.148)	SM 4500-Cl E	
Fluoride		0.006	0.00		1	0.006	(-0.0032) - (0.0131)	SM 4500 F-C	
N, Nitrate		0.001	0.00		1	0.001	(-0.0137) - (0.0293)	SM 4500-NO3 F	
Sulfate		1.73	0.00		1	1.73	(1.133) - (2.817)	SM 4500-SO4 E	
Sulfate		1.47	0.00		1	1.47	(1.105) - (2.821)	SM 4500-SO4 E	
Mercury - T		0.0000	0.000		1	0.00001	(-0.0001) - (0.0001)	EPA 245.1	
<b>Continuing Calibration Blank</b>									
Conductivity		0.200	0.00		1	0.2	(-0.0243) - (0.8243)	SM 2510B	
TDS		6.00	0.00	100ml		6	(-31.36) - (20.76)	SM 2540 C	
Alkalinity		1.58	0.00		1	1.58	(-0.1980) - (4.576)	SM 2320 B	
Chloride		0.610	0.00		1	0.61	(-0.2240) - (0.7710)	SM 4500-Cl E	
Chloride		0.550	0.00		1	0.55	(-0.2240) - (0.7710)	SM 4500-Cl E	
Fluoride		0.010	0.00		1	0.01	(-0.0049) - (0.0158)	SM 4500 F-C	
Fluoride		0.010	0.00		1	0.01	(-0.0049) - (0.0158)	SM 4500 F-C	
N, Nitrate		-0.026	0.00		1	0.026	(-0.0102) - (0.0247)	SM 4500-NO3 F X	
- Blank value is less than method detection limit									
N, Nitrate		-0.016	0.00		1	0.016	(-0.0102) - (0.0247)	SM 4500-NO3 F	
N, Nitrate		-0.033	0.00		1	0.033	(-0.0102) - (0.0247)	SM 4500-NO3 F X	
- Blank value is less than method detection limit									
N, Nitrate		-0.002	0.00		1	0.002	(-0.0102) - (0.0247)	SM 4500-NO3 F	
Sulfate		1.77	0.00		1	1.77	(1.576) - (2.736)	SM 4500-SO4 E	
Sulfate		1.52	0.00		1	1.52	(1.576) - (2.736)	SM 4500-SO4 E X	
- Blank value is less than half of the reporting limit									
Sulfate		1.67	0.00		1	1.67	(1.576) - (2.736)	SM 4500-SO4 E	
Sulfate		1.77	0.00		1	1.77	(1.576) - (2.736)	SM 4500-SO4 E	
Sulfate		1.40	0.00		1	1.4	(1.293) - (2.826)	SM 4500-SO4 E	
Sulfate		1.43	0.00		1	1.43	(1.293) - (2.826)	SM 4500-SO4 E	
Arsenic - D		0.000	0.00		1	0.00005	(-0.0001) - (0.0002)	EPA 200.8	
Barium - D		0.000	0.00		1	0.00008	(-0.0001) - (0.0002)	EPA 200.8	
Boron - D		0.001	0.00		1	0.00053	(-0.0005) - (0.0022)	EPA 200.8	
Cadmium - D		0.000	0.00		1	0.0001	(0.0000) - (0.0002)	EPA 200.8	
Calcium - D		0.030	0.00		1	0.03	(-0.1644) - (0.1584)	SM 3111 B	
Calcium - D		0.040	0.00		1	0.04	(-0.1644) - (0.1584)	SM 3111 B	
Calcium - D		0.020	0.00		1	0.02	(-0.1644) - (0.1584)	SM 3111 B	
Calcium - D		0.030	0.00		1	0.03	(-0.1644) - (0.1584)	SM 3111 B	
Chromium - D		0.000	0.00		1	0.00003	(0.0000) - (0.0000)	EPA 200.8 DR	
Copper - D		0.000	0.00		1	0.00009	(-0.0001) - (0.0001)	EPA 200.8	
Iron - D		0.000	0.00		1	0.00029	(-0.0007) - (0.0010)	EPA 200.8	
Lead - D		0.000	0.00		1	0.00008	(-0.0001) - (0.0002)	EPA 200.8	
Magnesium - D		0.010	0.00		1	0.01	(-0.1057) - (0.1017)	SM 3111 B	
Magnesium - D		0.010	0.00		1	0.01	(-0.1057) - (0.1017)	SM 3111 B	
Magnesium - D		0.00	0.00		1	0	(-0.1057) - (0.1017)	SM 3111 B	
Magnesium - D		0.00	0.00		1	0	(-0.1057) - (0.1017)	SM 3111 B	

<b>Parameter</b>	<b>Lab#</b>	<b>QC Value</b>	<b>Smp Value</b>	<b>Spike</b>	<b>DF</b>	<b>Result</b>	<b>Limits</b>	<b>Method</b>	
<b>Continuing Calibration Blank</b>									
Manganese - D		0.000	0.00		1	0.00008	(-0.0001) - (0.0003)	EPA 200.8	
Molybdenum - D		0.000	0.00		1	0.00009	(-0.0001) - (0.0003)	EPA 200.8	
Nickel - D		0.000	0.00		1	0.00009	(-0.0002) - (0.0003)	EPA 200.8	
Potassium - D		-0.010	0.00		1	-0.01	(-0.0261) - (0.0151)	SM 3111 B	
Potassium - D		-0.010	0.00		1	-0.01	(-0.0261) - (0.0151)	SM 3111 B	
Potassium - D		-0.010	0.00		1	-0.01	(-0.0261) - (0.0151)	SM 3111 B	
Selenium - D		0.000	0.00		1	0.00032	(-0.0003) - (0.0006)	EPA 200.8	
Silver - D		0.000	0.00		1	0.00005	(-0.0001) - (0.0002)	EPA 200.8	
Sodium - D		-0.020	0.00		1	-0.02	(-0.0286) - (0.0206)	SM 3111 B	
Sodium - D		-0.020	0.00		1	-0.02	(-0.0286) - (0.0206)	SM 3111 B	
Sodium - D		-0.010	0.00		1	-0.01	(-0.0286) - (0.0206)	SM 3111 B	
Sodium - D		-0.010	0.00		1	-0.01	(-0.0286) - (0.0206)	SM 3111 B	
Sodium - D		-0.020	0.00		1	-0.02	(-0.0286) - (0.0206)	SM 3111 B	
Uranium - D		0.000	0.00		1	0.00011	(-0.0002) - (0.0003)	EPA 200.8	
Vanadium - D		0.000	0.00		1	0.00008	(-0.0001) - (0.0002)	EPA 200.8	
Zinc - D		0.000	0.00		1	0.00013	(-0.0010) - (0.0008)	EPA 200.8	
Radium-226		0.000	0.000		1	0		MC Radium-226	
Radium-228		0.00	0.00		1	0		MC Radium-228	
<b>Lab Reagent Blank</b>									
Gross Alpha		0.638	0.00		1	0.638		EPA 900.0	X
- Blank value is less than half of the reporting limit									
Gross Beta		0.699	0.00		1	0.699		EPA 900.0	
Radium-226		0.000	0.000		1	0		MC Radium-226	
Radium-228		0.00	0.00		1	0		MC Radium-228	

Approved By: 

Approved On: 10/28/2014 01:53 PM



**MIDCONTINENT**  
TESTING LABORATORIES, INC.

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2381 South Plaza Drive P.O. Box 3388 Rapid City, SD 57709  
(605) 348-0111 -- www.thechemistrylab.com

Sample Site: BC-2  
Project Name: Powertech  
Sampled: 06/24/14 at 01:51 PM  
by Allen Scott  
Sample Matrix: Water

Lab ID#: 20140626108  
Received: 06/25/14 at 03:13 PM  
by Dean Aurand  
Account: w1552 - Powertech Uranium

LISA SCHEINOST  
POWERTECH URANIUM  
5575 DTC PARKWAY #140  
GREENWOOD VILLAGE, CO 80111

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst/Date
<b>Physical Properties</b>							
Electrical Conductivity	3750	µmhos/cm	1	0.237	5.00	SM 2510B	EJF 06/26/14
pH	7.19	S.U.	1			SM 4500-H+ B	EJF 06/26/14
Total Dissolved Solids	3640	mg/L	100ml	17.6	50.0	SM 2540 C	TMN 06/26/14
<b>Non-Metallics</b>							
Alkalinity (CaCO <sub>3</sub> )	228	mg/L	1	0.421	10.0	SM 2320 B	EJF 06/26/14
Bicarbonate	279	mg/L	1	0.513	10.0	SM 2320 B	EJF 06/26/14
Carbonate	0.00	mg/L	1	0.210	5.00	SM 2320 B	EJF 06/26/14
Chloride (Cl <sup>-</sup> )	20.5	mg/L	4	1.02	2.00	SM 4500-Cl E	BLL 06/26/14
Fluoride	0.616	mg/L	1	0.004	0.050	SM 4500 F-C	KAC 06/26/14
Nitrogen, Nitrate (NO <sub>3</sub> )	0.083	mg/L	1	0.014	0.050	SM 4500-NO <sub>3</sub> F	BLL 06/26/14
Sulfate (SO <sub>4</sub> )	2450	mg/L	40	10.5	40.0	SM 4500-SO <sub>4</sub> E	BLL 06/27/14
<b>Metals - Dissolved</b>							
Arsenic (As)	< 0.005	mg/L	10	0.0006	0.005	EPA 200.8	TNA 06/26/14
Barium (Ba)	0.008	mg/L	10	0.0005	0.005	EPA 200.8	TNA 06/26/14
Boron (B)	0.485	mg/L	10	0.005	0.020	EPA 200.8	TNA 06/26/14
Cadmium (Cd)	< 0.001	mg/L	10	0.0001	0.001	EPA 200.8	TNA 06/26/14
Calcium (Ca)	539	mg/L	18	2.39	18.0	SM 3111 B	GRT 06/26/14
Chromium (Cr)	< 0.001	mg/L	10	0.0001	0.001	EPA 200.8 DRC	TNA 06/26/14
Copper (Cu)	0.005	mg/L	10	0.0009	0.005	EPA 200.8	TNA 06/26/14
Iron (Fe)	< 0.050	mg/L	10	0.004	0.050	EPA 200.8	TNA 06/26/14
Lead (Pb)	0.003	mg/L	10	0.00026	0.001	EPA 200.8	TNA 06/26/14
Magnesium (Mg)	225	mg/L	6	0.180	3.00	SM 3111 B	GRT 06/26/14
Manganese (Mn)	0.039	mg/L	10	0.0001	0.010	EPA 200.8	TNA 06/26/14
Molybdenum (Mo)	0.015	mg/L	10	0.0001	0.001	EPA 200.8	TNA 06/26/14
Nickel (Ni)	0.017	mg/L	10	0.0003	0.005	EPA 200.8	TNA 06/26/14
Potassium (K)	12.3	mg/L	2	0.050	1.00	SM 3111 B	GRT 06/26/14
Selenium (Se)	< 0.005	mg/L	10	0.001	0.005	EPA 200.8	TNA 06/26/14
Silver (Ag)	< 0.001	mg/L	10	0.0002	0.001	EPA 200.8	TNA 06/26/14
Sodium (Na)	248	mg/L	8	0.736	4.00	SM 3111 B	GRT 06/26/14

→  
over

Report of Analysis for: **Powertech Uranium**Sample Site: **BC-2**

Page 2 of 3

Parameter	Result	Units	DF	MDL	PQL	Method	Analyst/Date
<b>Metals - Dissolved</b>							
Uranium (U)	0.025	mg/L	10	0.000021	0.001	EPA 200.8	TNA 06/26/14
Vanadium (V)	< 0.005	mg/L	10	0.000073	0.005	EPA 200.8	TNA 06/26/14
Zinc (Zn)	< 0.050	mg/L	10	0.008	0.050	EPA 200.8	TNA 06/26/14
<b>Metals - Total</b>							
Mercury (Hg)	< 0.0002	mg/L	1	0.000035	0.0002	EPA 245.1	GRT 06/26/14
<b>Anion - Cation Balance</b>							
Anions	56.2	meq/L	1			Calculation	GAM 06/27/14
Anion - Cation Balance	0.288	%	1			Calculation	GAM 06/27/14
Cations	56.5	meq/L	1			Calculation	GAM 06/27/14
Electrical Conductivity - Calculated	6830	µS/cm	1			SM 1030	DVA 07/25/14
Total Dissolved Solids - Ratio	1.00	none	1			SM 1030	DVA 07/25/14
<b>Radiological</b>							
Gross Alpha	12.6	pCi/L	1			EPA 900.0	EJF 07/09/14
Gross Beta	16.0	pCi/L	1			EPA 900.0	EJF 07/09/14
Lead-210	0.534	pCi/L	1			RP280m DOE	SYS 07/16/14
Radium-226	< 1.000	pCi/L	1			MC Radium-226	EJF 07/24/14
Radium-228	< 1.00	pCi/L	1			MC Radium-228	EJF 07/24/14
Radon-222	924	pCi/L	1			SM 7500Rn-B	SYS 06/30/14
Thorium-230	0.007	pCi/L	1			HSL-300m	SYS 07/14/14
<b>Precision Data</b>							
Gross Alpha precision	± 2.20	pCi/L	1			MC - Gross Alpha precision	EJF 07/09/14
Gross Beta precision	± 3.00	pCi/L	1			MC - Gross Beta precision	EJF 07/09/14
Lead-210 Precision	± 0.458	pCi/L	1			MC-Lead 210 precision	SYS 07/16/14
Radium-226 precision	± 0.000	pCi/L	1			MC-Radium 226 precision	EJF 07/24/14
Radium-228 precision	± 0.00	pCi/L	1			MC-Radium 228 precision	EJF 07/24/14
Radon-222 Precision	± 190	pCi/L	1			MC-Radon 222 precision	SYS 06/30/14
Thorium-230 Precision	± 0.032	pCi/L	1			MC-Thorium 230 precision	SYS 07/14/14
<b>MDA Data</b>							
Gross Alpha MDA	5.14	pCi/L	1			MC - Gross Alpha MDA	EJF 07/09/14
Gross Beta MDA	8.97	pCi/L	1			MC - Gross Beta MDA	EJF 07/09/14
Lead-210 MDA	0.864	pCi/L	1			MC - Lead 210 MDA	SYS 07/16/14
Radium-226 MDA	0.0120	pCi/L	1			MC - Radium 226 MDA	EJF 07/24/14
Radium-228 MDA	0.030	pCi/L	1			MC - Radium 228 MDA	EJF 07/24/14
Radon-222 MDA	103	pCi/L	1			MC - Radon 222 MDA	SYS 06/30/14
Thorium-230 MDA	0.052	pCi/L	1			MC - Thorium 230 MDA	SYS 07/14/14





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# CHAIN OF CUSTODY RECORD

**FOR LAB USE ONLY**

Seal Intact (Y/N)/Number \_\_\_\_\_

Sample Condition: on ice

Temperature of Container: 2,3°C

REQUESTED TURN AROUND \_\_\_\_\_ RUSH \_\_\_\_\_

STANDARD \_\_\_\_\_

PRESERVED WITH	
FILTERED (MIN)	
REFRIGERATED (MIN)	
ANALYSES REQUESTED	<u>As per Order</u>

Company: Power Tech USA

Project Name / Mgr.: Lita Schenck / Allan Sch

Project Number: Power Tech Groundwater Wells

Sampled by: AKH

Sampled by: Allan Sch

	SAMPLE NAME	DATE	TIME	MATRIX	NO. OF CONTAINERS	COMMENTS	LAB #
1	PC-2 201	9-2-14	12:59	Water	✓		
2	BC-1 202	9-2-14	16:12	Water	✓		
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

\* Dissolved metals bottles filtered and preserved in Lab.

RELINQUISHED BY (Signature)	COMPANY NAME	DATE	TIME	RECEIVED BY (Signature)	COMPANY NAME	DATE	TIME
<u>AKH</u>	<u>Soot Env.</u>	<u>9-4-14</u>	<u>14:00</u>	<u>[Signature]</u>	<u>MCT</u>	<u>9/4/14</u>	<u>14:10</u>

### SAMPLE RECEIPT CHECKLIST

 Company Name PowerTech

 Date/Time Received 9-4-14 1410

Project \_\_\_\_\_

 Received by Dean Aurand

 Lab Number(s) 201-202 9-5-14

 Carrier Name Allen Scott

Yes	No	<u>UNPACKING</u>	Initials
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1. Shipping container in good condition?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2. Custody seals present on shipping container? Condition: <u>Intact</u> Broken	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3. <u>Ice</u> Blue Ice (circle one) present in shipping container? Container(s) Temp. 1. <u>2-34</u> 2. _____ 3. _____ 4. _____	_____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4. Bottles broken and/or leaking? (Photograph broken bottles.)	_____
<input type="checkbox"/>	<input type="checkbox"/>	5. Custody seals on sample bottles? Condition: Intact Broken	_____

Yes	No	<u>LABELING</u>	Initials
<input checked="" type="checkbox"/>	<input type="checkbox"/>	6. Chain of custody Present?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	7. Chain of custody includes signatures, dates, and times when relinquished and received?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	8. Chain of custody agrees with bottle count?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	9. Chain of custody agrees with labels?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	10. Samples received within holding times?	_____
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	11. Samples in proper container?	_____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	12. Sufficient sample volume for indicated tests?	_____

<u>PRESERVATIVE</u>					
Yes	No	Initials	Yes	No	Initials
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	13. Metals bottle(s) pH < 2? _____	<input type="checkbox"/>	<input type="checkbox"/>	17. TOC bottle(s) pH < 2? _____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	14. Nutrient bottle(s) pH < 2? _____	<input type="checkbox"/>	<input type="checkbox"/>	18. Oil & Grease bottle(s) pH < 2? _____
<input type="checkbox"/>	<input type="checkbox"/>	15. Cyanide bottle(s) pH > 12? _____	<input type="checkbox"/>	<input type="checkbox"/>	19. Volatiles pH < 2? _____
<input type="checkbox"/>	<input type="checkbox"/>	16. Sulfide bottle(s) pH > 9? _____			

**COMMENTS:** 201 - Dissolved metals bottle filtered and preserved in lab. Total metals bottle preserved in lab. 202 - Dissolved metals filtered from Mineral bottle (both metals bottles preserved in field) and preserved in lab.



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# CHAIN OF CUSTODY RECORD

**FOR LAB USE ONLY**

Seal Intact (Y/N) \_\_\_\_\_ Number \_\_\_\_\_

Sample Condition \_\_\_\_\_

Temperature of Container \_\_\_\_\_

REQUESTED TURN AROUND

STANDARD \_\_\_\_\_ RUSH \_\_\_\_\_

PRESERVED WITH																				
FILTERED (Y/N)																				
REFRIGERATED (Y/N)																				
ANALYSES REQUESTED																				

*Radon*

Company	MidContinent Testing		
Project Name / Mgr.			
Project Number			
Sampled by	Signature		
Sampled by	Print		

	SAMPLE NAME	DATE	TIME	MATRIX	NO. OF CONTAINERS	COMMENTS	LAB #
1	20140705201	7/5/14	1359	H <sub>2</sub> O	2	X	
2	20140705202	7/5/14	1612	"	2	X	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

RELINQUISHED BY (Signature)	COMPANY NAME	DATE	TIME	RECEIVED BY (Signature)	COMPANY NAME	DATE	TIME
<i>[Signature]</i>	MCT	7/4/14	1450				