



POWERTECH (USA) INC.

October 26, 2012

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 Permit Application
September 2012 Analytical Results for Alluvial Compliance Wells**

Dear Mr. Hicks:

September 2012 analytical results for groundwater samples collected from Dewey-Burdock alluvial compliance wells are enclosed. These samples are part of the on-going monthly sampling program being conducted at the Dewey-Burdock Project to address ambient sampling requirements of ARSD 74:54:02:18. Please note that well DC-3 was dry and was not sampled. Laboratory results for future monthly samples will be forwarded as they become available.

Powertech (USA) Inc. appreciates the opportunity to provide the enclosed information. Please do not hesitate to contact me or John Mays, Vice President Engineering, at (303) 790-7528 with any questions.

Sincerely,

Richard Blubaugh
Vice President – Health, Safety and Environmental Resources

Encl. Data Summary Tables through September 2012
Laboratory Data Package R12090145

Cc: John Mays, Powertech (USA) Inc.
Mark Hollenbeck, Powertech (USA) Inc.
Jack Fritz, WWC Engineering
Mike Cepak, SD DENR
Ronald Burrows, NRC
Valois Shea, EPA
Marian Atkins, BLM
Max Main, Bennett, Main & Gubbrud, P.C.

DATA SUMMARY TABLES
THROUGH
SEPTEMBER 2012

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well Sampling Results		Well DC-1	Well DC-1	Well DC-1	Well DC-1	Well DC-1 Arithmetic Mean + 1 Standard Deviation*	Human Health Standards ARSD 74:54:01:04	Proposed PAL for Well DC-1
Sample Collection Date		7/24/2012	8/21/2012	9/11/2012	10/3/2012			
Well Location, Elevation and Construction Details								
Northing (State Plane SD S NAD 27) ¹	feet	447093.13						
Easting (State Plane SD S NAD 27) ¹	feet	1013760.44						
Latitude (NAD 83) ²	degrees	43.499431056						
Longitude (NAD 83) ²	degrees	104.052110489						
Top of Casing Elevation (NGVD 29) ¹	feet AMSL	3645.45						
Casing and Screen Diameter	inches	2						
Screen Length	feet	10						
Well Stickup Above Ground Surface	feet	2.73						
Total Well Depth (Below Top of Casing)	feet	27.60						
Dedicated Tubing Intake (Below Top of Casing)	feet	no tubing installed (well bailed)						
Field Measurements								
Water Level Below Top of Casing	feet	22.86	23.00	23.06	23.16			
Water Level Elevation (NGVD 29)	feet AMSL	3622.59	3622.45	3622.39	3622.29			
Well Volume	gal	0.8	0.8	0.7	0.7			
Volume Purged Prior to Sample Collection	gal	2.75	2.5	2.5	2.25			
Field pH	s.u.	7.04	7.05	6.93	7.00			
Field Temperature	°C	14.8	10.0	11.4	11.3			
Field Conductivity	mS/cm	5.7	6.3	7.61	6.97			
Clarity	observed	sl. cloudy	cloudy	cloudy	cloudy			
Color	observed	tan-yellow	tan	tan	tan			
Odor	observed	none	none	none	none			
Physical Properties								
Lab pH	s.u.	7.23	7.25	7.17		TBD	6.5 - 8.5	TBD
Total Dissolved Solids	mg/L	6400	5700	6100		TBD	1000	TBD
Lab Conductivity	umhos/cm	6080	5940	6350		TBD		TBD
Common Elements and Ions								
Alkalinity, Total as CaCO ₃	mg/L	404	366	392		TBD		TBD
Bicarbonate as HCO ₃	mg/L	492	446	478		TBD		TBD
Calcium, Ca	mg/L	424	438	442		TBD		TBD
Carbonate as CO ₃	mg/L	< 5	< 5	< 5		TBD		TBD
Chloride, Cl	mg/L	92	73	85		TBD	250	TBD
Magnesium, Mg	mg/L	348	353	400		TBD		TBD
Nitrate, NO ₃ ⁻ (as Nitrogen)	mg/L	5.5	7.5	7.7		TBD	10	TBD
Potassium, K	mg/L	15	13	14		TBD		TBD
Sodium, Na	mg/L	1030	896	1210		TBD		TBD
Sulfate, SO ₄	mg/L	4010	3520	3970		TBD	500	TBD
Trace and Minor Elements								
Dissolved Arsenic, As	mg/L	0.001	< 0.001	0.001		TBD	0.01	TBD
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05	< 0.05		TBD	2	TBD
Dissolved Boron, B	mg/L	1.2	1.3	1.4		TBD		TBD
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001	0.001		TBD	0.005	TBD
Dissolved Chromium, Cr	mg/L	< 0.005	< 0.005	0.010		TBD	0.1	TBD
Dissolved Copper, Cu	mg/L	0.038	< 0.005	0.009		TBD	1.0	TBD
Dissolved Fluoride, F	mg/L	1.1	1.2	1.1		TBD	4	TBD
Dissolved Iron, Fe	mg/L	0.04	< 0.03	< 0.03		TBD		TBD
Dissolved Lead, Pb	mg/L	0.001	< 0.001	< 0.001		TBD	0.015	TBD
Dissolved Manganese, Mn	mg/L	0.456	0.330	0.757		TBD		TBD
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001	< 0.0001		TBD	0.002	TBD
Dissolved Molybdenum, Mo	mg/L	0.003	0.003	0.002		TBD		TBD
Dissolved Nickel, Ni	mg/L	0.047	0.032	0.086		TBD		TBD
Dissolved Selenium, Se	mg/L	0.034	0.032	0.060		TBD	0.05	TBD
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001	< 0.001		TBD	0.1	TBD
Dissolved Uranium, U	mg/L	0.0225	0.0243	0.0184		TBD	0.03	TBD
Dissolved Vanadium, V	mg/L	< 0.01	< 0.01	< 0.01		TBD		TBD
Dissolved Zinc, Zn	mg/L	0.14	0.05	0.11		TBD		TBD
Radiological Parameters								
Dissolved Gross Alpha	pCi/L	29.2	13.3	-0.4		TBD	15	TBD
Dissolved Gross Beta	pCi/L	2.0	-9	5.7		TBD	4 mrem/year	TBD
Dissolved Radium 228	pCi/L	1.1	0.3	0.4		TBD	5 ³	TBD
Dissolved Radium 226	pCi/L	1.1	0.8	0.9		TBD	5 ³	TBD
Total Radon 222	pCi/L	1830	1440	1810		TBD	300	TBD

Highlighted value exceeds ARSD 74:54:01:04 Human Health Standard.

* For results below the reporting limit, 1/2 the reporting limit was used to calculate the arithmetic mean and the standard deviation.

Note 1: Coordinates and elevation surveyed by Andersen Engineers, August 2012.

Note 2: Surveyed coordinates converted to latitude and longitude using CORPSCON 6.0.1 downloaded from <http://www.agc.army.mil/corpscon/>.

Note 3: Health standard is for radium 228 + radium 226.

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well Sampling Results		Well DC-2	Well DC-2	Well DC-2	Well DC-2	Well DC-2 Arithmetic Mean + 1 Standard Deviation*	Human Health Standards ARSD 74:54:01:04	Proposed PAL for Well DC-2
Sample Collection Date		7/23/2012	8/20/2012	9/10/2012	10/2/2012			
Well Location, Elevation and Construction Details								
Northing (State Plane SD S NAD 27) ¹	feet	444788.27						
Easting (State Plane SD S NAD 27) ¹	feet	1014726.19						
Latitude (NAD 83) ²	degrees	43.493232021						
Longitude (NAD 83) ²	degrees	104.048085721						
Top of Casing Elevation (NGVD 29) ¹	feet AMSL	3616.28						
Casing and Screen Diameter	inches	2						
Screen Length	feet	20						
Well Stickup Above Ground Surface	feet	2.84						
Total Well Depth (Below Top of Casing)	feet	32.94						
Dedicated Tubing Intake (Below Top of Casing)	feet	23						
Field Measurements								
Water Level Below Top of Casing	feet	13.12	14.32	14.42	14.49			
Water Level Elevation (NGVD 29)	feet AMSL	3603.16	3601.96	3601.86	3601.79			
Well Volume	gal	3.2	3.0	3.0	3.0			
Volume Purged Prior to Sample Collection	gal	10.5	9	9	9			
Field pH	s.u.	7.24	7.32	7.22	7.20			
Field Temperature	°C	11.9	12.1	12.5	12.5			
Field Conductivity	mS/cm	4.9	4.7	5.63	5.45			
Clarity	observed	clear	clear	clear	clear			
Color	observed	clear	clear	clear	clear			
Odor	observed	none	none	none	none			
Physical Properties								
Lab pH	s.u.	7.17	7.13	7.19		TBD	6.5 - 8.5	TBD
Total Dissolved Solids	mg/L	4600	4600	4600		TBD	1000	TBD
Lab Conductivity	umhos/cm	5010	5710	5540		TBD		TBD
Common Elements and Ions								
Alkalinity, Total as CaCO ₃	mg/L	264	260	264		TBD		TBD
Bicarbonate as HCO ₃	mg/L	322	317	322		TBD		TBD
Calcium, Ca	mg/L	524	524	516		TBD		TBD
Carbonate as CO ₃	mg/L	< 5	< 5	< 5		TBD		TBD
Chloride, Cl	mg/L	854	756	753		TBD	250	TBD
Magnesium, Mg	mg/L	145	144	147		TBD		TBD
Nitrate, NO ₃ ⁻ (as Nitrogen)	mg/L	< 0.1	0.2	0.3		TBD	10	TBD
Potassium, K	mg/L	7	7	7		TBD		TBD
Sodium, Na	mg/L	799	715	714		TBD		TBD
Sulfate, SO ₄	mg/L	2140	1920	1890		TBD	500	TBD
Trace and Minor Elements								
Dissolved Arsenic, As	mg/L	< 0.001	< 0.001	0.002		TBD	0.01	TBD
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05	< 0.05		TBD	2	TBD
Dissolved Boron, B	mg/L	0.2	0.3	0.3		TBD		TBD
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001	< 0.001		TBD	0.005	TBD
Dissolved Chromium, Cr	mg/L	< 0.005	< 0.005	0.005		TBD	0.1	TBD
Dissolved Copper, Cu	mg/L	< 0.005	< 0.005	< 0.005		TBD	1.0	TBD
Dissolved Fluoride, F	mg/L	0.7	0.6	0.6		TBD	4	TBD
Dissolved Iron, Fe	mg/L	0.48	0.36	0.42		TBD		TBD
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001	< 0.001		TBD	0.015	TBD
Dissolved Manganese, Mn	mg/L	3.88	3.41	3.13		TBD		TBD
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001	< 0.0001		TBD	0.002	TBD
Dissolved Molybdenum, Mo	mg/L	0.005	0.005	0.004		TBD		TBD
Dissolved Nickel, Ni	mg/L	< 0.005	< 0.005	0.010		TBD		TBD
Dissolved Selenium, Se	mg/L	0.002	0.001	0.003		TBD	0.05	TBD
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001	< 0.001		TBD	0.1	TBD
Dissolved Uranium, U	mg/L	0.0089	0.0081	0.0091		TBD	0.03	TBD
Dissolved Vanadium, V	mg/L	< 0.01	0.09	< 0.01		TBD		TBD
Dissolved Zinc, Zn	mg/L	0.04	0.04	< 0.01		TBD		TBD
Radiological Parameters								
Dissolved Gross Alpha	pCi/L	-10	-5	9.9		TBD	15	TBD
Dissolved Gross Beta	pCi/L	-1	-10	2.2		TBD	4 mrem/year	TBD
Dissolved Radium 228	pCi/L	0.5	0.7	0.6		TBD	5 ³	TBD
Dissolved Radium 226	pCi/L	0.4	0.4	0.3		TBD	5 ³	TBD
Total Radon 222	pCi/L	1990	1850	2150		TBD	300	TBD

Highlighted value exceeds ARSD 74:54:01:04 Human Health Standard.

* For results below the reporting limit, 1/2 the reporting limit was used to calculate the arithmetic mean and the standard deviation.

Note 1: Coordinates and elevation surveyed by Andersen Engineers, August 2012.

Note 2: Surveyed coordinates converted to latitude and longitude using CORPSCON 6.0.1 downloaded from <http://www.agc.army.mil/corpscon/>.

Note 3: Health standard is for radium 228 + radium 226.

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well Sampling Results		Well DC-3	Well DC-3	Well DC-3	Well DC-3	Well DC-3 Arithmetic Mean + 1 Standard Deviation*	Human Health Standards ARSD 74:54:01:04	Proposed PAL for Well DC-3
Sample Collection Date		7/23/2012	8/20/2012	9/10/2012	10/2/2012			
Well Location, Elevation and Construction Details								
Northing (State Plane SD S NAD 27) ¹	feet	444037.97						
Easting (State Plane SD S NAD 27) ¹	feet	1016403.16						
Latitude (NAD 83) ²	degrees	43.491380990						
Longitude (NAD 83) ²	degrees	104.041645784						
Top of Casing Elevation (NGVD 29) ¹	feet AMSL	3623.30						
Casing and Screen Diameter	inches	2						
Screen Length	feet	10						
Well Stickup Above Ground Surface	feet	2.26						
Total Well Depth (Below Top of Casing)	feet	25.10						
Dedicated Tubing Intake (Below Top of Casing)	feet	no tubing installed (dry well)						
Field Measurements								
Water Level Below Top of Casing	feet	Dry	Dry	Dry	24.70			
Water Level Elevation (NGVD 29)	feet AMSL	Dry	Dry	Dry	3598.60			
Well Volume	gal	Dry	Dry	Dry		Insufficient Volume to Sample		
Volume Purged Prior to Sample Collection	gal	---	---	---				
Field pH	s.u.	---	---	---				
Field Temperature	°C	---	---	---				
Field Conductivity	mS/cm	---	---	---				
Clarity	observed	---	---	---				
Color	observed	---	---	---				
Odor	observed	---	---	---				
Physical Properties								
Lab pH	s.u.	---	---	---	---	TBD	6.5 - 8.5	TBD
Total Dissolved Solids	mg/L	---	---	---	---	TBD	1000	TBD
Lab Conductivity	umhos/cm	---	---	---	---	TBD		TBD
Common Elements and Ions								
Alkalinity, Total as CaCO ₃	mg/L	---	---	---	---	TBD		TBD
Bicarbonate as HCO ₃	mg/L	---	---	---	---	TBD		TBD
Calcium, Ca	mg/L	---	---	---	---	TBD		TBD
Carbonate as CO ₃	mg/L	---	---	---	---	TBD		TBD
Chloride, Cl	mg/L	---	---	---	---	TBD	250	TBD
Magnesium, Mg	mg/L	---	---	---	---	TBD		TBD
Nitrate, NO ₃ (as Nitrogen)	mg/L	---	---	---	---	TBD	10	TBD
Potassium, K	mg/L	---	---	---	---	TBD		TBD
Sodium, Na	mg/L	---	---	---	---	TBD		TBD
Sulfate, SO ₄	mg/L	---	---	---	---	TBD	500	TBD
Trace and Minor Elements								
Dissolved Arsenic, As	mg/L	---	---	---	---	TBD	0.01	TBD
Dissolved Barium, Ba	mg/L	---	---	---	---	TBD	2	TBD
Dissolved Boron, B	mg/L	---	---	---	---	TBD		TBD
Dissolved Cadmium, Cd	mg/L	---	---	---	---	TBD	0.005	TBD
Dissolved Chromium, Cr	mg/L	---	---	---	---	TBD	0.1	TBD
Dissolved Copper, Cu	mg/L	---	---	---	---	TBD	1.0	TBD
Dissolved Fluoride, F	mg/L	---	---	---	---	TBD	4	TBD
Dissolved Iron, Fe	mg/L	---	---	---	---	TBD		TBD
Dissolved Lead, Pb	mg/L	---	---	---	---	TBD	0.015	TBD
Dissolved Manganese, Mn	mg/L	---	---	---	---	TBD		TBD
Total Mercury, Hg	mg/L	---	---	---	---	TBD	0.002	TBD
Dissolved Molybdenum, Mo	mg/L	---	---	---	---	TBD		TBD
Dissolved Nickel, Ni	mg/L	---	---	---	---	TBD		TBD
Dissolved Selenium, Se	mg/L	---	---	---	---	TBD	0.05	TBD
Dissolved Silver, Ag	mg/L	---	---	---	---	TBD	0.1	TBD
Dissolved Uranium, U	mg/L	---	---	---	---	TBD	0.03	TBD
Dissolved Vanadium, V	mg/L	---	---	---	---	TBD		TBD
Dissolved Zinc, Zn	mg/L	---	---	---	---	TBD		TBD
Radiological Parameters								
Dissolved Gross Alpha	pCi/L	---	---	---	---	TBD	15	TBD
Dissolved Gross Beta	pCi/L	---	---	---	---	TBD	4 mrem/year	TBD
Dissolved Radium 228	pCi/L	---	---	---	---	TBD	5 ³	TBD
Dissolved Radium 226	pCi/L	---	---	---	---	TBD	5 ³	TBD
Total Radon 222	pCi/L	---	---	---	---	TBD	300	TBD

Highlighted value exceeds ARSD 74:54:01:04 Human Health Standard.

* For results below the reporting limit, 1/2 the reporting limit was used to calculate the arithmetic mean and the standard deviation.
 Note 1: Coordinates and elevation surveyed by Andersen Engineers, August 2012.
 Note 2: Surveyed coordinates converted to latitude and longitude using CORPSCON 6.0.1 downloaded from <http://www.agc.army.mil/corpscon/>.
 Note 3: Health standard is for radium 228 + radium 226.

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well Sampling Results		Well DC-4	Well DC-4	Well DC-4	Well DC-4	Well DC-4 Arithmetic Mean + 1 Standard Deviation*	Human Health Standards ARSD 74:54:01:04	Proposed PAL for Well DC-4
Sample Collection Date		7/24/2012	8/20/2012	9/10/2012	10/2/2012			
Well Location, Elevation and Construction Details								
Northing (State Plane SD S NAD 27) ¹	feet	443942.11						
Easting (State Plane SD S NAD 27) ¹	feet	1018562.17						
Latitude (NAD 83) ²	degrees	43.491382328						
Longitude (NAD 83) ²	degrees	104.033501308						
Top of Casing Elevation (NGVD 29) ¹	feet AMSL	3618.34						
Casing and Screen Diameter	inches	2						
Screen Length	feet	10						
Well Stickup Above Ground Surface	feet	2.15						
Total Well Depth (Below Top of Casing)	feet	25.09						
Dedicated Tubing Intake (Below Top of Casing)	feet	22						
Field Measurements								
Water Level Below Top of Casing	feet	19.92	19.98	19.99	19.98			
Water Level Elevation (NGVD 29)	feet AMSL	3598.42	3598.36	3598.35	3598.36			
Well Volume	gal	0.8	0.8	0.8	0.8			
Volume Purged Prior to Sample Collection	gal	4	3	4	3			
Field pH	s.u.	7.44	7.43	7.48	7.50			
Field Temperature	°C	11.8	12.2	12.5	13.0			
Field Conductivity	mS/cm	8.9	8.3	10.52	10.37			
Clarity	observed	clear	clear	clear	clear			
Color	observed	clear	clear	clear	clear			
Odor	observed	none	none	none	none			
Physical Properties								
Lab pH	s.u.	7.42	7.44	7.47		TBD	6.5 - 8.5	TBD
Total Dissolved Solids	mg/L	11000	11000	11000		TBD	1000	TBD
Lab Conductivity	umhos/cm	9270	10400	10400		TBD		TBD
Common Elements and Ions								
Alkalinity, Total as CaCO ₃	mg/L	334	346	348		TBD		TBD
Bicarbonate as HCO ₃	mg/L	407	422	424		TBD		TBD
Calcium, Ca	mg/L	388	389	398		TBD		TBD
Carbonate as CO ₃	mg/L	< 5	< 5	< 5		TBD		TBD
Chloride, Cl	mg/L	116	114	117		TBD	250	TBD
Magnesium, Mg	mg/L	620	604	630		TBD		TBD
Nitrate, NO ₃ ⁻ (as Nitrogen)	mg/L	1.7	1.6	1.7		TBD	10	TBD
Potassium, K	mg/L	10	10	11		TBD		TBD
Sodium, Na	mg/L	2080	1820	1820		TBD		TBD
Sulfate, SO ₄	mg/L	7450	6920	7330		TBD	500	TBD
Trace and Minor Elements								
Dissolved Arsenic, As	mg/L	< 0.001	< 0.001	0.001		TBD	0.01	TBD
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05	< 0.05		TBD	2	TBD
Dissolved Boron, B	mg/L	1.8	2.0	2.3		TBD		TBD
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001	< 0.001		TBD	0.005	TBD
Dissolved Chromium, Cr	mg/L	< 0.005	< 0.005	0.008		TBD	0.1	TBD
Dissolved Copper, Cu	mg/L	< 0.005	< 0.005	0.008		TBD	1.0	TBD
Dissolved Fluoride, F	mg/L	2.9	2.5	2.6		TBD	4	TBD
Dissolved Iron, Fe	mg/L	< 0.03	< 0.03	< 0.03		TBD		TBD
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001	< 0.001		TBD	0.015	TBD
Dissolved Manganese, Mn	mg/L	0.013	0.004	0.002		TBD		TBD
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001	< 0.0001		TBD	0.002	TBD
Dissolved Molybdenum, Mo	mg/L	0.003	0.002	0.003		TBD		TBD
Dissolved Nickel, Ni	mg/L	< 0.005	< 0.005	0.008		TBD		TBD
Dissolved Selenium, Se	mg/L	0.032	0.034	0.042		TBD	0.05	TBD
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001	< 0.001		TBD	0.1	TBD
Dissolved Uranium, U	mg/L	0.0157	0.0159	0.0171		TBD	0.03	TBD
Dissolved Vanadium, V	mg/L	< 0.01	< 0.01	< 0.01		TBD		TBD
Dissolved Zinc, Zn	mg/L	0.02	0.02	< 0.01		TBD		TBD
Radiological Parameters								
Dissolved Gross Alpha	pCi/L	-5	16.5	-10		TBD	15	TBD
Dissolved Gross Beta	pCi/L	-9	-20	-100		TBD	4 mrem/year	TBD
Dissolved Radium 228	pCi/L	-0.5	0.04	0.4		TBD	5 ³	TBD
Dissolved Radium 226	pCi/L	0.4	0.2	0.2		TBD	5 ³	TBD
Total Radon 222	pCi/L	4820	4530	4140		TBD	300	TBD

Highlighted value exceeds ARSD 74:54:01:04 Human Health Standard.

* For results below the reporting limit, 1/2 the reporting limit was used to calculate the arithmetic mean and the standard deviation.

Note 1: Coordinates and elevation surveyed by Andersen Engineers, August 2012.

Note 2: Surveyed coordinates converted to latitude and longitude using CORPSCON 6.0.1 downloaded from <http://www.agc.army.mil/corpscon/>.

Note 3: Health standard is for radium 228 + radium 226.

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well Sampling Results		Well BC-1	Well BC-1	Well BC-1	Well BC-1	Well BC-1 Arithmetic Mean + 1 Standard Deviation*	Human Health Standards ARSD 74:54:01:04	Proposed PAL for Well BC-1
Sample Collection Date		7/23/2012	8/20/2012	9/10/2012	10/2/2012			
Well Location, Elevation and Construction Details								
Northing (State Plane SD S NAD 27) ¹	feet	436026.65						
Easting (State Plane SD S NAD 27) ¹	feet	1029474.73						
Latitude (NAD 83) ²	degrees	43.471011532						
Longitude (NAD 83) ²	degrees	103.991102852						
Top of Casing Elevation (NGVD 29) ¹	feet AMSL	3639.84						
Casing and Screen Diameter	inches	2						
Screen Length	feet	15						
Well Stickup Above Ground Surface	feet	2.50						
Total Well Depth (Below Top of Casing)	feet	32.08						
Dedicated Tubing Intake (Below Top of Casing)	feet	24						
Field Measurements								
Water Level Below Top of Casing	feet	15.23	15.60	15.87	16.01			
Water Level Elevation (NGVD 29)	feet AMSL	3624.61	3624.24	3623.97	3623.83			
Well Volume	gal	2.7	2.7	2.6	2.6			
Volume Purged Prior to Sample Collection	gal	11	9	9	9			
Field pH	s.u.	7.05	7.03	7.18	7.10			
Field Temperature	°C	11.9	12.7	12.2	12.4			
Field Conductivity	mS/cm	3.5	3.3	3.64	3.75			
Clarity	observed	clear	clear	clear	clear			
Color	observed	clear	clear	clear	clear			
Odor	observed	none	none	none	none			
Physical Properties								
Lab pH	s.u.	7.08	7.09	7.17		TBD	6.5 - 8.5	TBD
Total Dissolved Solids	mg/L	3600	3700	3700		TBD	1000	TBD
Lab Conductivity	umhos/cm	3200	3630	3610		TBD		TBD
Common Elements and Ions								
Alkalinity, Total as CaCO ₃	mg/L	288	290	300		TBD		TBD
Bicarbonate as HCO ₃	mg/L	351	354	366		TBD		TBD
Calcium, Ca	mg/L	515	525	513		TBD		TBD
Carbonate as CO ₃	mg/L	< 5	< 5	< 5		TBD		TBD
Chloride, Cl	mg/L	28	25	25		TBD	250	TBD
Magnesium, Mg	mg/L	236	238	234		TBD		TBD
Nitrate, NO ₃ ⁻ (as Nitrogen)	mg/L	< 0.1	0.2	0.3		TBD	10	TBD
Potassium, K	mg/L	13	12	13		TBD		TBD
Sodium, Na	mg/L	206	175	185		TBD		TBD
Sulfate, SO ₄	mg/L	2360	2170	2160		TBD	500	TBD
Trace and Minor Elements								
Dissolved Arsenic, As	mg/L	< 0.001	< 0.001	< 0.001		TBD	0.01	TBD
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05	< 0.05		TBD	2	TBD
Dissolved Boron, B	mg/L	0.65	0.66	0.72		TBD		TBD
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001	< 0.001		TBD	0.005	TBD
Dissolved Chromium, Cr	mg/L	< 0.005	0.005	< 0.005		TBD	0.1	TBD
Dissolved Copper, Cu	mg/L	< 0.005	< 0.005	< 0.005		TBD	1.0	TBD
Dissolved Fluoride, F	mg/L	0.6	0.6	0.6		TBD	4	TBD
Dissolved Iron, Fe	mg/L	0.06	< 0.03	0.08		TBD		TBD
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001	< 0.001		TBD	0.015	TBD
Dissolved Manganese, Mn	mg/L	0.110	0.061	0.057		TBD		TBD
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001	< 0.0001		TBD	0.002	TBD
Dissolved Molybdenum, Mo	mg/L	0.005	0.005	0.005		TBD		TBD
Dissolved Nickel, Ni	mg/L	< 0.005	< 0.005	0.013		TBD		TBD
Dissolved Selenium, Se	mg/L	0.001	0.001	0.002		TBD	0.05	TBD
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001	< 0.001		TBD	0.1	TBD
Dissolved Uranium, U	mg/L	0.0757	0.0842	0.0854		TBD	0.03	TBD
Dissolved Vanadium, V	mg/L	< 0.01	< 0.01	< 0.01		TBD		TBD
Dissolved Zinc, Zn	mg/L	< 0.01	< 0.01	< 0.01		TBD		TBD
Radiological Parameters								
Dissolved Gross Alpha	pCi/L	65.9	71.1	78.7		TBD	15	TBD
Dissolved Gross Beta	pCi/L	4.4	-4	0.3		TBD	4 mrem/year	TBD
Dissolved Radium 228	pCi/L	0.5	0.7	1.1		TBD	5 ³	TBD
Dissolved Radium 226	pCi/L	0.4	0.1	0.3		TBD	5 ³	TBD
Total Radon 222	pCi/L	1870	1870	1730		TBD	300	TBD

Highlighted value exceeds ARSD 74:54:01:04 Human Health Standard.

* For results below the reporting limit, 1/2 the reporting limit was used to calculate the arithmetic mean and the standard deviation.

Note 1: Coordinates and elevation surveyed by Andersen Engineers, August 2012.

Note 2: Surveyed coordinates converted to latitude and longitude using CORPSCON 6.0.1 downloaded from <http://www.agc.army.mil/corpscon/>.

Note 3: Health standard is for radium 228 + radium 226.

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well Sampling Results		Well BC-2	Well BC-2	Well BC-2	Well BC-2	Well BC-2 Arithmetic Mean + 1 Standard Deviation*	Human Health Standards ARSD 74:54:01:04	Proposed PAL for Well BC-2
Sample Collection Date		7/23/2012	8/20/2012	9/10/2012	10/2/2012			
Well Location, Elevation and Construction Details								
Northing (State Plane SD S NAD 27) ¹	feet	434253.95						
Easting (State Plane SD S NAD 27) ¹	feet	1030548.07						
Latitude (NAD 83) ²	degrees	43.466282015						
Longitude (NAD 83) ²	degrees	103.986769497						
Top of Casing Elevation (NGVD 29) ¹	feet AMSL	3636.33						
Casing and Screen Diameter	inches	2						
Screen Length	feet	10						
Well Stickup Above Ground Surface	feet	2.43						
Total Well Depth (Below Top of Casing)	feet	28.03						
Dedicated Tubing Intake (Below Top of Casing)	feet	23						
Field Measurements								
Water Level Below Top of Casing	feet	5.91	6.29	6.47	6.23			
Water Level Elevation (NGVD 29)	feet AMSL	3630.42	3630.04	3629.86	3630.1			
Well Volume	gal	3.6	3.5	3.5	3.6			
Volume Purged Prior to Sample Collection	gal	10.8	10.5	10.5	12			
Field pH	s.u.	7.12	7.10	7.19	7.10			
Field Temperature	°C	10.3	10.1	10.3	10.1			
Field Conductivity	mS/cm	3.7	3.6	3.87	4.06			
Clarity	observed	clear	clear	clear	clear			
Color	observed	clear	clear	clear	clear			
Odor	observed	none	none	none	none			
Physical Properties								
Lab pH	s.u.	7.07	7.11	7.22		TBD	6.5 - 8.5	TBD
Total Dissolved Solids	mg/L	3800	3900	3900		TBD	1000	TBD
Lab Conductivity	umhos/cm	3430	3860	3850		TBD		TBD
Common Elements and Ions								
Alkalinity, Total as CaCO ₃	mg/L	230	234	234		TBD		TBD
Bicarbonate as HCO ₃	mg/L	280	285	285		TBD		TBD
Calcium, Ca	mg/L	544	516	521		TBD		TBD
Carbonate as CO ₃	mg/L	< 5	< 5	< 5		TBD		TBD
Chloride, Cl	mg/L	21	21	21		TBD	250	TBD
Magnesium, Mg	mg/L	200	218	220		TBD		TBD
Nitrate, NO ₃ ⁻ (as Nitrogen)	mg/L	< 0.1	0.2	0.2		TBD	10	TBD
Potassium, K	mg/L	12	13	13		TBD		TBD
Sodium, Na	mg/L	278	258	278		TBD		TBD
Sulfate, SO ₄	mg/L	2350	2390	2400		TBD	500	TBD
Trace and Minor Elements								
Dissolved Arsenic, As	mg/L	< 0.001	< 0.001	< 0.001		TBD	0.01	TBD
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05	< 0.05		TBD	2	TBD
Dissolved Boron, B	mg/L	0.44	0.46	0.51		TBD		TBD
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001	< 0.001		TBD	0.005	TBD
Dissolved Chromium, Cr	mg/L	< 0.005	< 0.005	< 0.005		TBD	0.1	TBD
Dissolved Copper, Cu	mg/L	0.006	< 0.005	< 0.005		TBD	1.0	TBD
Dissolved Fluoride, F	mg/L	0.8	0.7	0.7		TBD	4	TBD
Dissolved Iron, Fe	mg/L	< 0.03	< 0.03	< 0.03		TBD		TBD
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001	< 0.001		TBD	0.015	TBD
Dissolved Manganese, Mn	mg/L	0.042	0.045	0.039		TBD		TBD
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001	< 0.0001		TBD	0.002	TBD
Dissolved Molybdenum, Mo	mg/L	0.012	0.012	0.013		TBD		TBD
Dissolved Nickel, Ni	mg/L	< 0.005	< 0.005	0.011		TBD		TBD
Dissolved Selenium, Se	mg/L	< 0.001	< 0.001	0.002		TBD	0.05	TBD
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001	< 0.001		TBD	0.1	TBD
Dissolved Uranium, U	mg/L	0.0228	0.0240	0.0241		TBD	0.03	TBD
Dissolved Vanadium, V	mg/L	< 0.01	< 0.01	< 0.01		TBD		TBD
Dissolved Zinc, Zn	mg/L	< 0.01	< 0.01	< 0.01		TBD		TBD
Radiological Parameters								
Dissolved Gross Alpha	pCi/L	20.0	3.5	1.8		TBD	15	TBD
Dissolved Gross Beta	pCi/L	4.5	0.5	-10		TBD	4 mrem/year	TBD
Dissolved Radium 228	pCi/L	0.1	-0.1	0.3		TBD	5 ³	TBD
Dissolved Radium 226	pCi/L	0.07	0.3	0.3		TBD	5 ³	TBD
Total Radon 222	pCi/L	2860	2460	2480		TBD	300	TBD

Highlighted value exceeds ARSD 74:54:01:04 Human Health Standard.

* For results below the reporting limit, 1/2 the reporting limit was used to calculate the arithmetic mean and the standard deviation.

Note 1: Coordinates and elevation surveyed by Andersen Engineers, August 2012.

Note 2: Surveyed coordinates converted to latitude and longitude using CORPSCON 6.0.1 downloaded from <http://www.agc.army.mil/corpscon/>.

Note 3: Health standard is for radium 228 + radium 226.

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well Sampling Results		Well BC-3	Well BC-3	Well BC-3	Well BC-3	Well BC-3 Arithmetic Mean + 1 Standard Deviation*	Human Health Standards ARSD 74:54:01:04	Proposed PAL for Well BC-3
Sample Collection Date		7/23/2012	8/20/2012	9/10/2012	10/2/2012			
Well Location, Elevation and Construction Details								
Northing (State Plane SD S NAD 27) ¹	feet	438165.90						
Easting (State Plane SD S NAD 27) ¹	feet	1029035.98						
Latitude (NAD 83) ²	degrees	43.476822344						
Longitude (NAD 83) ²	degrees	103.993109146						
Top of Casing Elevation (NGVD 29) ¹	feet AMSL	3654.95						
Casing and Screen Diameter	inches	2						
Screen Length	feet	15						
Well Stickup Above Ground Surface	feet	2.29						
Total Well Depth (Below Top of Casing)	feet	27.56						
Dedicated Tubing Intake (Below Top of Casing)	feet	20						
Field Measurements								
Water Level Below Top of Casing	feet	12.25	12.73	13.05	12.96			
Water Level Elevation (NGVD 29)	feet AMSL	3642.7	3642.22	3641.9	3641.99			
Well Volume	gal	2.5	2.4	2.4	2.4			
Volume Purged Prior to Sample Collection	gal	7.5	7.5	7.5	7.5			
Field pH	s.u.	7.16	7.12	7.33	7.10			
Field Temperature	°C	10.3	10.8	10.8	10.9			
Field Conductivity	mS/cm	3.1	3.0	3.20	3.35			
Clarity	observed	clear	clear	clear	clear			
Color	observed	clear	clear	clear	clear			
Odor	observed	none	none	none	none			
Physical Properties								
Lab pH	s.u.	7.15	7.17	7.22		TBD	6.5 - 8.5	TBD
Total Dissolved Solids	mg/L	3200	3100	3100		TBD	1000	TBD
Lab Conductivity	umhos/cm	2870	3200	3200		TBD		TBD
Common Elements and Ions								
Alkalinity, Total as CaCO ₃	mg/L	254	256	256		TBD		TBD
Bicarbonate as HCO ₃	mg/L	310	312	312		TBD		TBD
Calcium, Ca	mg/L	532	531	535		TBD		TBD
Carbonate as CO ₃	mg/L	< 5	< 5	< 5		TBD		TBD
Chloride, Cl	mg/L	20	19	19		TBD	250	TBD
Magnesium, Mg	mg/L	150	148	152		TBD		TBD
Nitrate, NO ₃ ⁻ (as Nitrogen)	mg/L	0.3	0.3	0.3		TBD	10	TBD
Potassium, K	mg/L	11	11	12		TBD		TBD
Sodium, Na	mg/L	174	158	157		TBD		TBD
Sulfate, SO ₄	mg/L	2010	1850	1820		TBD	500	TBD
Trace and Minor Elements								
Dissolved Arsenic, As	mg/L	< 0.001	< 0.001	< 0.001		TBD	0.01	TBD
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05	< 0.05		TBD	2	TBD
Dissolved Boron, B	mg/L	0.44	0.45	0.49		TBD		TBD
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001	< 0.001		TBD	0.005	TBD
Dissolved Chromium, Cr	mg/L	< 0.005	< 0.005	< 0.005		TBD	0.1	TBD
Dissolved Copper, Cu	mg/L	< 0.005	< 0.005	< 0.005		TBD	1.0	TBD
Dissolved Fluoride, F	mg/L	0.6	0.6	0.6		TBD	4	TBD
Dissolved Iron, Fe	mg/L	0.05	< 0.03	< 0.03		TBD		TBD
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001	< 0.001		TBD	0.015	TBD
Dissolved Manganese, Mn	mg/L	0.498	0.461	0.447		TBD		TBD
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001	< 0.0001		TBD	0.002	TBD
Dissolved Molybdenum, Mo	mg/L	0.006	0.006	0.007		TBD		TBD
Dissolved Nickel, Ni	mg/L	< 0.005	< 0.005	0.012		TBD		TBD
Dissolved Selenium, Se	mg/L	0.002	0.003	0.005		TBD	0.05	TBD
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001	< 0.001		TBD	0.1	TBD
Dissolved Uranium, U	mg/L	0.0208	0.0214	0.0226		TBD	0.03	TBD
Dissolved Vanadium, V	mg/L	< 0.01	< 0.01	< 0.01		TBD		TBD
Dissolved Zinc, Zn	mg/L	0.02	< 0.01	< 0.01		TBD		TBD
Radiological Parameters								
Dissolved Gross Alpha	pCi/L	29.9	10.3	11.4		TBD	15	TBD
Dissolved Gross Beta	pCi/L	4.7	2	-1		TBD	4 mrem/year	TBD
Dissolved Radium 228	pCi/L	-0.1	-0.1	0.8		TBD	5 ³	TBD
Dissolved Radium 226	pCi/L	0.08	0.1	0.1		TBD	5 ³	TBD
Total Radon 222	pCi/L	1700	1710	1720		TBD	300	TBD

Highlighted value exceeds ARSD 74:54:01:04 Human Health Standard.

* For results below the reporting limit, 1/2 the reporting limit was used to calculate the arithmetic mean and the standard deviation.

Note 1: Coordinates and elevation surveyed by Andersen Engineers, August 2012.

Note 2: Surveyed coordinates converted to latitude and longitude using CORPSCON 6.0.1 downloaded from <http://www.agc.army.mil/corpscon/>.

Note 3: Health standard is for radium 228 + radium 226.

Powertech (USA) Inc. Dewey-Burdock Project Alluvial Compliance Well QA/QC Sampling Results		Well BC-3	Well BC-3 Duplicate	Well BC-1	Well BC-1 Duplicate	Well DC-4	Well DC-4 Duplicate	Well DC-2	Well DC-2 Duplicate	Well DC-2 Split	Human Health Standards ARSD 74:54:01:04
Sample Collection Date		7/23/2012	7/23/2012	8/20/2012	8/20/2012	9/10/2012	9/10/2012	10/2/2012	10/2/2012	10/2/2012	
Physical Properties											
Lab pH	s.u.	7.15	7.09	7.09	7.10	7.47	7.48				6.5 - 8.5
Total Dissolved Solids	mg/L	3200	3200	3700	3500	11000	11000				1000
Lab Conductivity	umhos/cm	2870	2860	3630	3630	10400	10300				
Common Elements and Ions											
Alkalinity, Total as CaCO ₃	mg/L	254	256	290	290	348	342				
Bicarbonate as HCO ₃	mg/L	310	312	354	354	424	417				
Calcium, Ca	mg/L	532	518	525	515	398	401				
Carbonate as CO ₃	mg/L	< 5	< 5	< 5	< 5	< 5	< 5				
Chloride, Cl	mg/L	20	20	25	25	117	118				250
Magnesium, Mg	mg/L	150	147	238	231	630	620				
Nitrate, NO ₃ (as Nitrogen)	mg/L	0.3	0.3	0.2	0.2	1.7	1.7				10
Potassium, K	mg/L	11	11	12	12	11	11				
Sodium, Na	mg/L	174	175	175	179	1820	1910				
Sulfate, SO ₄	mg/L	2010	2020	2170	2180	7330	7550				500
Trace and Minor Elements											
Dissolved Arsenic, As	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	0.001	0.002				0.01
Dissolved Barium, Ba	mg/L	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05				2
Dissolved Boron, B	mg/L	0.44	0.44	0.66	0.67	2.3	2.3				
Dissolved Cadmium, Cd	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001				0.005
Dissolved Chromium, Cr	mg/L	< 0.005	< 0.005	0.005	< 0.005	0.008	0.008				0.1
Dissolved Copper, Cu	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	0.008	0.011				1.0
Dissolved Fluoride, F	mg/L	0.6	0.6	0.6	0.6	2.6	2.7				4
Dissolved Iron, Fe	mg/L	0.05	0.05	< 0.03	0.04	< 0.03	< 0.03				
Dissolved Lead, Pb	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001				0.015
Dissolved Manganese, Mn	mg/L	0.498	0.494	0.061	0.059	0.002	0.002				
Total Mercury, Hg	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001				0.002
Dissolved Molybdenum, Mo	mg/L	0.006	0.006	0.005	0.005	0.003	0.003				
Dissolved Nickel, Ni	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	0.008	0.009				
Dissolved Selenium, Se	mg/L	0.002	0.002	0.001	0.001	0.042	0.042				0.05
Dissolved Silver, Ag	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001				0.1
Dissolved Uranium, U	mg/L	0.0208	0.0208	0.0842	0.0861	0.0171	0.0175				0.03
Dissolved Vanadium, V	mg/L	< 0.01	< 0.01	< 0.01	0.04	< 0.01	< 0.01				
Dissolved Zinc, Zn	mg/L	0.02	0.02	< 0.01	< 0.01	< 0.01	< 0.01				
Radiological Parameters											
Dissolved Gross Alpha	pCi/L	29.9	23.4	71.1	89.2	-10	16.4				15
Dissolved Gross Beta	pCi/L	4.7	7.1	-4	8.4	-100	-4				4 mrem/year
Dissolved Radium 228	pCi/L	-0.1	0.4	0.7	0.9	0.4	0.3				5 ³
Dissolved Radium 226	pCi/L	0.08	0.06	0.1	0.2	0.2	0.2				5 ³
Total Radon 222	pCi/L	1700	1640	1870	1800	4140	4390				300

Highlighted value exceeds ARSD 74:54:01:04 Human Health Standard.

LABORATORY DATA PACKAGE

R12090145



ANALYTICAL SUMMARY REPORT

October 24, 2012

Powertech USA Inc
PO Box 812
Edgemont, SD 57735

Workorder No.: R12090145 Quote ID: R411

Project Name: Alluvial Wells Dewey Burdock

Energy Laboratories Inc. Rapid City SD received the following 7 samples for Powertech USA Inc on 9/11/2012 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R12090145-001	DC-2	09/10/12 09:35	09/11/12	Aqueous	Metals by ICP/ICPMS, Dissolved Alkalinity Anion - Cation Balance Conductivity Mercury, Total Anions by Ion Chromatography pH Dissolved Filtration Digestion, Mercury by CVAA Gross Alpha, Gross Beta Radium 226, Dissolved Radium 228, Dissolved Radon 222 Solids, Total Dissolved
R12090145-002	DC-4	09/10/12 10:36	09/11/12	Aqueous	Same As Above
R12090145-003	DC-4 Dup	09/10/12 10:37	09/11/12	Aqueous	Same As Above
R12090145-004	BC-3	09/10/12 12:03	09/11/12	Aqueous	Same As Above
R12090145-005	BC-1	09/10/12 13:41	09/11/12	Aqueous	Same As Above
R12090145-006	BC-2	09/10/12 14:42	09/11/12	Aqueous	Same As Above
R12090145-007	DC-1	09/11/12 09:17	09/11/12	Aqueous	Same As Above

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

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

Report Approved By:

Linda K. Larson
Branch Manager

Digitally signed by
Linda Larson
Date: 2012.10.24 10:43:50 -06:00



CLIENT: Powertech USA Inc
Project: Alluvial Wells Dewey Burdock
Sample Delivery Group: R12090145

Report Date: 10/24/12

CASE NARRATIVE

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



LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Client: Powertech USA Inc
Project: Alluvial Wells Dewey Burdock
Lab ID: R12090145-001
Client Sample ID: DC-2

Report Date: 10/24/12
Collection Date: 09/10/12 09:35
Date Received: 09/11/12
Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
PHYSICAL PARAMETERS							
Conductivity @ 25 C	5540	umhos/cm		5.0		1	A2510 B 09/12/12 09:44/tb
pH	7.19	su		0.01		1	A4500-H B 09/12/12 09:01/tb
Solids, Total Dissolved TDS @ 180 C	4600	mg/L		40		1	A2540 C 09/17/12 09:26/jmh
Alkalinity, Total as CaCO3	264	mg/L		5		1	A2320 B 09/17/12 15:13/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B 09/17/12 15:13/ch
Bicarbonate as HCO3	322	mg/L		5		1	A2320 B 09/17/12 15:13/ch
INORGANIC PARAMETERS							
Chloride	753	mg/L	D	50		50	E300.0 09/11/12 23:42/tb
Fluoride	0.6	mg/L		0.1		1	E300.0 09/11/12 23:24/tb
Sulfate	1890	mg/L	D	50		50	E300.0 09/11/12 23:42/tb
DATA QUALITY PARAMETERS							
Anions	65.8	meq/L		1.00		1	A1030 E 10/23/12 00:00/lkl
Cations	69.1	meq/L		1.00		1	A1030 E 10/23/12 00:00/lkl
Conductivity, Calculated	5290	umhos/cm		1.00		1	A1030 E 10/23/12 00:00/lkl
TDS Ratio	ND			0.0100		1	A1030 E 10/23/12 00:00/lkl
A/C Balance	1.10	%				1	A1030 E 10/23/12 00:00/lkl
NUTRIENT PARAMETERS							
Nitrogen, Nitrate as N	0.3	mg/L		0.1		1	E300.0 09/11/12 23:24/tb
RADIONUCLIDES - DISSOLVED							
Gross Alpha	9.9	pCi/L	U			1	E900.0 09/20/12 16:37/eli-ca
Gross Alpha precision (±)	17.7	pCi/L				1	E900.0 09/20/12 16:37/eli-ca
Gross Alpha MDC	29.0	pCi/L				1	E900.0 09/20/12 16:37/eli-ca
Gross Beta	2.2	pCi/L	U			1	E900.0 09/20/12 16:37/eli-ca
Gross Beta precision (±)	22.0	pCi/L				1	E900.0 09/20/12 16:37/eli-ca
Gross Beta MDC	36.9	pCi/L				1	E900.0 09/20/12 16:37/eli-ca
Radium 228	0.6	pCi/L	U			1	RA-05 09/19/12 18:59/eli-ca
Radium 228 precision (±)	0.6	pCi/L				1	RA-05 09/19/12 18:59/eli-ca
Radium 228 MDC	0.9	pCi/L				1	RA-05 09/19/12 18:59/eli-ca
Radium 226	0.3	pCi/L				1	E903.0 09/24/12 13:01/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0 09/24/12 13:01/eli-ca
Radium 226 MDC	0.1	pCi/L				1	E903.0 09/24/12 13:01/eli-ca
RADIONUCLIDES - TOTAL							
Radon 222	2150	pCi/L				1	D5072-92 09/13/12 15:33/eli-c
Radon 222 precision (±)	152	pCi/L				1	D5072-92 09/13/12 15:33/eli-c

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Client: Powertech USA Inc
Project: Alluvial Wells Dewey Burdock
Lab ID: R12090145-001
Client Sample ID: DC-2

Report Date: 10/24/12
Collection Date: 09/10/12 09:35
Date Received: 09/11/12
Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/			Method	Analysis Date / By
				RL	QCL	DF		
RADIONUCLIDES - TOTAL								
Radon 222 MDC	208	pCi/L				1	D5072-92	09/13/12 15:33/eli-c
TOTAL METALS ANALYSES								
Mercury	ND	mg/L		0.0001		1	E245.1	09/14/12 11:38/eli-ca
DISSOLVED METALS ANALYSES								
Arsenic	0.002	mg/L		0.001		5	E200.8	09/28/12 13:03/eli-c
Barium	ND	mg/L		0.05		5	E200.8	09/28/12 13:03/eli-c
Boron	0.3	mg/L	D	0.1		5	E200.7	09/28/12 21:04/eli-ca
Cadmium	ND	mg/L		0.001		5	E200.8	09/28/12 13:03/eli-c
Chromium	0.005	mg/L		0.005		5	E200.8	09/28/12 13:03/eli-c
Copper	ND	mg/L		0.005		5	E200.8	09/28/12 13:03/eli-c
Iron	0.42	mg/L		0.03		5	E200.7	09/28/12 21:04/eli-ca
Lead	ND	mg/L		0.001		5	E200.8	09/28/12 13:03/eli-c
Manganese	3.13	mg/L		0.001		5	E200.8	09/28/12 13:03/eli-c
Molybdenum	0.004	mg/L		0.001		5	E200.8	09/28/12 13:03/eli-c
Nickel	0.010	mg/L		0.005		5	E200.8	09/28/12 13:03/eli-c
Selenium	0.003	mg/L		0.001		5	E200.8	09/28/12 13:03/eli-c
Silver	ND	mg/L		0.001		5	E200.8	09/28/12 13:03/eli-c
Uranium	0.0091	mg/L	D	0.0005		5	E200.8	09/28/12 13:03/eli-c
Vanadium	ND	mg/L		0.01		5	E200.8	09/28/12 13:03/eli-c
Zinc	ND	mg/L		0.01		5	E200.8	09/28/12 13:03/eli-c
Calcium	516	mg/L		1		5	E200.7	10/02/12 14:56/eli-ca
Magnesium	147	mg/L		1		5	E200.7	10/02/12 14:56/eli-ca
Potassium	7	mg/L		1		5	E200.7	10/02/12 14:56/eli-ca
Sodium	714	mg/L	D	2		5	E200.7	10/02/12 14:56/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.
 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: R12090145-002
Client Sample ID: DC-4

Report Date: 10/24/12
Collection Date: 09/10/12 10:36
Date Received: 09/11/12
Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
PHYSICAL PARAMETERS							
Conductivity @ 25 C	10400	umhos/cm		5.0		1	A2510 B 09/12/12 09:46/tb
pH	7.47	su		0.01		1	A4500-H B 09/12/12 09:03/tb
Solids, Total Dissolved TDS @ 180 C	11000	mg/L		100		1	A2540 C 09/17/12 09:27/jmh
Alkalinity, Total as CaCO3	348	mg/L		5		1	A2320 B 09/17/12 15:17/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B 09/17/12 15:17/ch
Bicarbonate as HCO3	424	mg/L		5		1	A2320 B 09/17/12 15:17/ch
INORGANIC PARAMETERS							
Chloride	117	mg/L		1		1	E300.0 09/12/12 00:00/tb
Fluoride	2.6	mg/L		0.1		1	E300.0 09/12/12 00:00/tb
Sulfate	7330	mg/L	D	100		100	E300.0 09/12/12 00:18/tb
DATA QUALITY PARAMETERS							
Anions	163	meq/L		1.00		1	A1030 E 10/23/12 00:00/lkl
Cations	151	meq/L		1.00		1	A1030 E 10/23/12 00:00/lkl
Conductivity, Calculated	11200	umhos/cm		1.00		1	A1030 E 10/23/12 00:00/lkl
TDS Ratio	1.01			0.0100		1	A1030 E 10/23/12 00:00/lkl
A/C Balance	4.59	%				1	A1030 E 10/23/12 00:00/lkl
NUTRIENT PARAMETERS							
Nitrogen, Nitrate as N	1.7	mg/L		0.1		1	E300.0 09/12/12 00:00/tb
RADIONUCLIDES - DISSOLVED							
Gross Alpha	-10	pCi/L	U			1	E900.0 09/20/12 16:37/eli-ca
Gross Alpha precision (±)	21.1	pCi/L				1	E900.0 09/20/12 16:37/eli-ca
Gross Alpha MDC	36.6	pCi/L				1	E900.0 09/20/12 16:37/eli-ca
Gross Beta	-100	pCi/L	U			1	E900.0 09/20/12 16:37/eli-ca
Gross Beta precision (±)	44.4	pCi/L				1	E900.0 09/20/12 16:37/eli-ca
Gross Beta MDC	77.7	pCi/L				1	E900.0 09/20/12 16:37/eli-ca
Radium 228	0.4	pCi/L	U			1	RA-05 09/19/12 18:59/eli-ca
Radium 228 precision (±)	0.6	pCi/L				1	RA-05 09/19/12 18:59/eli-ca
Radium 228 MDC	0.9	pCi/L				1	RA-05 09/19/12 18:59/eli-ca
Radium 226	0.2	pCi/L				1	E903.0 09/24/12 13:01/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0 09/24/12 13:01/eli-ca
Radium 226 MDC	0.1	pCi/L				1	E903.0 09/24/12 13:01/eli-ca
RADIONUCLIDES - TOTAL							
Radon 222	4140	pCi/L				1	D5072-92 09/13/12 15:33/eli-c
Radon 222 precision (±)	173	pCi/L				1	D5072-92 09/13/12 15:33/eli-c

Report RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

D - RL increased due to sample matrix.



LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Client: Powertech USA Inc
Project: Alluvial Wells Dewey Burdock
Lab ID: R12090145-002
Client Sample ID: DC-4

Report Date: 10/24/12
Collection Date: 09/10/12 10:36
Date Received: 09/11/12
Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/			Method	Analysis Date / By
				RL	QCL	DF		
RADIONUCLIDES - TOTAL								
Radon 222 MDC	207	pCi/L				1	D5072-92	09/13/12 15:33/eli-c
TOTAL METALS ANALYSES								
Mercury	ND	mg/L		0.0001		1	E245.1	09/14/12 11:44/eli-ca
DISSOLVED METALS ANALYSES								
Arsenic	0.001	mg/L		0.001		5	E200.8	09/28/12 13:54/eli-c
Barium	ND	mg/L		0.05		5	E200.8	09/28/12 13:54/eli-c
Boron	2.3	mg/L	D	0.2		10	E200.7	09/28/12 21:20/eli-ca
Cadmium	ND	mg/L		0.001		5	E200.8	09/28/12 13:54/eli-c
Chromium	0.008	mg/L		0.005		5	E200.8	09/28/12 13:54/eli-c
Copper	0.008	mg/L		0.005		5	E200.8	09/28/12 13:54/eli-c
Iron	ND	mg/L		0.03		10	E200.7	09/28/12 21:20/eli-ca
Lead	ND	mg/L		0.001		5	E200.8	09/28/12 13:54/eli-c
Manganese	0.002	mg/L		0.001		5	E200.8	09/28/12 13:54/eli-c
Molybdenum	0.003	mg/L		0.001		5	E200.8	09/28/12 13:54/eli-c
Nickel	0.008	mg/L		0.005		5	E200.8	09/28/12 13:54/eli-c
Selenium	0.042	mg/L		0.001		5	E200.8	09/28/12 13:54/eli-c
Silver	ND	mg/L		0.001		5	E200.8	09/28/12 13:54/eli-c
Uranium	0.0171	mg/L	D	0.0005		5	E200.8	09/28/12 13:54/eli-c
Vanadium	ND	mg/L		0.01		5	E200.8	09/28/12 13:54/eli-c
Zinc	ND	mg/L		0.01		5	E200.8	09/28/12 13:54/eli-c
Calcium	398	mg/L		1		10	E200.7	10/02/12 15:00/eli-ca
Magnesium	630	mg/L		1		10	E200.7	10/02/12 15:00/eli-ca
Potassium	11	mg/L		1		10	E200.7	10/02/12 15:00/eli-ca
Sodium	1820	mg/L	D	3		10	E200.7	10/02/12 15:00/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.
 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: R12090145-003
Client Sample ID: DC-4 Dup

Report Date: 10/24/12
Collection Date: 09/10/12 10:37
Date Received: 09/11/12
Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/			Method	Analysis Date / By
				RL	QCL	DF		
PHYSICAL PARAMETERS								
Conductivity @ 25 C	10300	umhos/cm		5.0		1	A2510 B	09/12/12 09:47/tb
pH	7.48	su		0.01		1	A4500-H B	09/12/12 09:08/tb
Solids, Total Dissolved TDS @ 180 C	11000	mg/L		100		1	A2540 C	09/17/12 09:27/jmh
Alkalinity, Total as CaCO3	342	mg/L		5		1	A2320 B	09/17/12 15:19/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B	09/17/12 15:19/ch
Bicarbonate as HCO3	417	mg/L		5		1	A2320 B	09/17/12 15:19/ch
INORGANIC PARAMETERS								
Chloride	118	mg/L		1		1	E300.0	09/12/12 00:36/tb
Fluoride	2.7	mg/L		0.1		1	E300.0	09/12/12 00:36/tb
Sulfate	7550	mg/L	D	100		100	E300.0	09/12/12 00:54/tb
DATA QUALITY PARAMETERS								
Anions	168	meq/L		1.00		1	A1030 E	10/23/12 00:00/lkl
Cations	154	meq/L		1.00		1	A1030 E	10/23/12 00:00/lkl
Conductivity, Calculated	11500	umhos/cm		1.00		1	A1030 E	10/23/12 00:00/lkl
TDS Ratio	0.980			0.0100		1	A1030 E	10/23/12 00:00/lkl
A/C Balance	4.85	%				1	A1030 E	10/23/12 00:00/lkl
NUTRIENT PARAMETERS								
Nitrogen, Nitrate as N	1.7	mg/L		0.1		1	E300.0	09/12/12 00:36/tb
RADIONUCLIDES - DISSOLVED								
Gross Alpha	16.4	pCi/L	U			1	E900.0	09/20/12 16:37/eli-ca
Gross Alpha precision (±)	23.3	pCi/L				1	E900.0	09/20/12 16:37/eli-ca
Gross Alpha MDC	37.9	pCi/L				1	E900.0	09/20/12 16:37/eli-ca
Gross Beta	-4	pCi/L	U			1	E900.0	09/20/12 16:37/eli-ca
Gross Beta precision (±)	31.1	pCi/L				1	E900.0	09/20/12 16:37/eli-ca
Gross Beta MDC	52.3	pCi/L				1	E900.0	09/20/12 16:37/eli-ca
Radium 228	0.3	pCi/L	U			1	RA-05	09/19/12 18:59/eli-ca
Radium 228 precision (±)	0.6	pCi/L				1	RA-05	09/19/12 18:59/eli-ca
Radium 228 MDC	0.9	pCi/L				1	RA-05	09/19/12 18:59/eli-ca
Radium 226	0.2	pCi/L				1	E903.0	09/24/12 13:01/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	09/24/12 13:01/eli-ca
Radium 226 MDC	0.1	pCi/L				1	E903.0	09/24/12 13:01/eli-ca
RADIONUCLIDES - TOTAL								
Radon 222	4390	pCi/L				1	D5072-92	09/13/12 15:33/eli-c
Radon 222 precision (±)	175	pCi/L				1	D5072-92	09/13/12 15:33/eli-c

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: R12090145-003
Client Sample ID: DC-4 Dup

Report Date: 10/24/12
Collection Date: 09/10/12 10:37
Date Received: 09/11/12
Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/			Method	Analysis Date / By
				RL	QCL	DF		
RADIONUCLIDES - TOTAL								
Radon 222 MDC	207	pCi/L				1	D5072-92	09/13/12 15:33/eli-c
TOTAL METALS ANALYSES								
Mercury	ND	mg/L		0.0001		1	E245.1	09/14/12 11:46/eli-ca
DISSOLVED METALS ANALYSES								
Arsenic	0.002	mg/L		0.001		5	E200.8	09/28/12 13:56/eli-c
Barium	ND	mg/L		0.05		5	E200.8	09/28/12 13:56/eli-c
Boron	2.3	mg/L	D	0.2		10	E200.7	09/28/12 21:25/eli-ca
Cadmium	ND	mg/L		0.001		5	E200.8	09/28/12 13:56/eli-c
Chromium	0.008	mg/L		0.005		5	E200.8	09/28/12 13:56/eli-c
Copper	0.011	mg/L		0.005		5	E200.8	09/28/12 13:56/eli-c
Iron	ND	mg/L		0.03		10	E200.7	09/28/12 21:25/eli-ca
Lead	ND	mg/L		0.001		5	E200.8	09/28/12 13:56/eli-c
Manganese	0.002	mg/L		0.001		5	E200.8	09/28/12 13:56/eli-c
Molybdenum	0.003	mg/L		0.001		5	E200.8	09/28/12 13:56/eli-c
Nickel	0.009	mg/L		0.005		5	E200.8	09/28/12 13:56/eli-c
Selenium	0.042	mg/L		0.001		5	E200.8	09/28/12 13:56/eli-c
Silver	ND	mg/L		0.001		5	E200.8	09/28/12 13:56/eli-c
Uranium	0.0175	mg/L	D	0.0005		5	E200.8	09/28/12 13:56/eli-c
Vanadium	ND	mg/L		0.01		5	E200.8	09/28/12 13:56/eli-c
Zinc	ND	mg/L		0.01		5	E200.8	09/28/12 13:56/eli-c
Calcium	401	mg/L		1		10	E200.7	10/02/12 15:04/eli-ca
Magnesium	620	mg/L		1		10	E200.7	10/02/12 15:04/eli-ca
Potassium	11	mg/L		1		10	E200.7	10/02/12 15:04/eli-ca
Sodium	1910	mg/L	D	3		10	E200.7	10/02/12 15:04/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.
 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: R12090145-004
Client Sample ID: BC-3

Report Date: 10/24/12
Collection Date: 09/10/12 12:03
Date Received: 09/11/12
Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
PHYSICAL PARAMETERS								
Conductivity @ 25 C	3200	umhos/cm		5.0		1	A2510 B	09/12/12 09:52/tb
pH	7.22	su		0.01		1	A4500-H B	09/12/12 09:10/tb
Solids, Total Dissolved TDS @ 180 C	3100	mg/L		20		1	A2540 C	09/17/12 09:28/jmh
Alkalinity, Total as CaCO3	256	mg/L		5		1	A2320 B	09/17/12 15:23/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B	09/17/12 15:23/ch
Bicarbonate as HCO3	312	mg/L		5		1	A2320 B	09/17/12 15:23/ch
INORGANIC PARAMETERS								
Chloride	19	mg/L		1		1	E300.0	09/12/12 01:12/tb
Fluoride	0.6	mg/L		0.1		1	E300.0	09/12/12 01:12/tb
Sulfate	1820	mg/L	D	50		50	E300.0	09/12/12 02:05/tb
DATA QUALITY PARAMETERS								
Anions	43.6	meq/L		1.00		1	A1030 E	10/23/12 00:00/lkl
Cations	46.4	meq/L		1.00		1	A1030 E	10/23/12 00:00/lkl
Conductivity, Calculated	3710	umhos/cm		1.00		1	A1030 E	10/23/12 00:00/lkl
TDS Ratio	1.09			0.0100		1	A1030 E	10/23/12 00:00/lkl
A/C Balance	-3.54	%				1	A1030 E	10/23/12 00:00/lkl
NUTRIENT PARAMETERS								
Nitrogen, Nitrate as N	0.3	mg/L		0.1		1	E300.0	09/12/12 01:12/tb
RADIONUCLIDES - DISSOLVED								
Gross Alpha	11.4	pCi/L				1	E900.0	09/20/12 16:37/eli-ca
Gross Alpha precision (±)	6.0	pCi/L				1	E900.0	09/20/12 16:37/eli-ca
Gross Alpha MDC	9.2	pCi/L				1	E900.0	09/20/12 16:37/eli-ca
Gross Beta	-1	pCi/L	U			1	E900.0	09/20/12 16:37/eli-ca
Gross Beta precision (±)	10	pCi/L				1	E900.0	09/20/12 16:37/eli-ca
Gross Beta MDC	16.8	pCi/L				1	E900.0	09/20/12 16:37/eli-ca
Radium 228	0.8	pCi/L	U			1	RA-05	09/19/12 18:59/eli-ca
Radium 228 precision (±)	0.6	pCi/L				1	RA-05	09/19/12 18:59/eli-ca
Radium 228 MDC	0.9	pCi/L				1	RA-05	09/19/12 18:59/eli-ca
Radium 226	0.1	pCi/L	U			1	E903.0	09/24/12 13:01/eli-ca
Radium 226 precision (±)	0.09	pCi/L				1	E903.0	09/24/12 13:01/eli-ca
Radium 226 MDC	0.1	pCi/L				1	E903.0	09/24/12 13:01/eli-ca
RADIONUCLIDES - TOTAL								
Radon 222	1720	pCi/L				1	D5072-92	09/13/12 15:33/eli-c
Radon 222 precision (±)	144	pCi/L				1	D5072-92	09/13/12 15:33/eli-c

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Client: Powertech USA Inc
Project: Alluvial Wells Dewey Burdock
Lab ID: R12090145-004
Client Sample ID: BC-3

Report Date: 10/24/12
Collection Date: 09/10/12 12:03
Date Received: 09/11/12
Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
RADIONUCLIDES - TOTAL							
Radon 222 MDC	204	pCi/L				1 D5072-92	09/13/12 15:33/eli-c
TOTAL METALS ANALYSES							
Mercury	ND	mg/L		0.0001		1 E245.1	09/14/12 11:47/eli-ca
DISSOLVED METALS ANALYSES							
Arsenic	ND	mg/L		0.001		2 E200.8	09/28/12 13:59/eli-c
Barium	ND	mg/L		0.05		2 E200.8	09/28/12 13:59/eli-c
Boron	0.49	mg/L		0.05		2 E200.7	09/28/12 21:29/eli-ca
Cadmium	ND	mg/L		0.001		2 E200.8	09/28/12 13:59/eli-c
Chromium	ND	mg/L		0.005		2 E200.8	09/28/12 13:59/eli-c
Copper	ND	mg/L		0.005		2 E200.8	09/28/12 13:59/eli-c
Iron	ND	mg/L		0.03		2 E200.7	09/28/12 21:29/eli-ca
Lead	ND	mg/L		0.001		2 E200.8	09/28/12 13:59/eli-c
Manganese	0.447	mg/L		0.001		2 E200.8	09/28/12 13:59/eli-c
Molybdenum	0.007	mg/L		0.001		2 E200.8	09/28/12 13:59/eli-c
Nickel	0.012	mg/L		0.005		2 E200.8	09/28/12 13:59/eli-c
Selenium	0.005	mg/L		0.001		2 E200.8	09/28/12 13:59/eli-c
Silver	ND	mg/L		0.001		2 E200.8	09/28/12 13:59/eli-c
Uranium	0.0226	mg/L		0.0003		2 E200.8	09/28/12 13:59/eli-c
Vanadium	ND	mg/L		0.01		2 E200.8	09/28/12 13:59/eli-c
Zinc	ND	mg/L		0.01		2 E200.8	09/28/12 13:59/eli-c
Calcium	535	mg/L		1		2 E200.7	10/02/12 15:08/eli-ca
Magnesium	152	mg/L		1		2 E200.7	10/02/12 15:08/eli-ca
Potassium	12	mg/L		1		2 E200.7	10/02/12 15:08/eli-ca
Sodium	157	mg/L		1		2 E200.7	10/02/12 15:08/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: R12090145-005
Client Sample ID: BC-1

Report Date: 10/24/12
Collection Date: 09/10/12 13:41
Date Received: 09/11/12
Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/			Method	Analysis Date / By
				RL	QCL	DF		
PHYSICAL PARAMETERS								
Conductivity @ 25 C	3610	umhos/cm		5.0		1	A2510 B	09/12/12 09:54/tb
pH	7.17	su		0.01		1	A4500-H B	09/12/12 09:13/tb
Solids, Total Dissolved TDS @ 180 C	3700	mg/L		40		1	A2540 C	09/17/12 09:29/jmh
Alkalinity, Total as CaCO3	300	mg/L		5		1	A2320 B	09/17/12 16:05/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B	09/17/12 16:05/ch
Bicarbonate as HCO3	366	mg/L		5		1	A2320 B	09/17/12 16:05/ch
INORGANIC PARAMETERS								
Chloride	25	mg/L		1		1	E300.0	09/12/12 02:59/tb
Fluoride	0.6	mg/L		0.1		1	E300.0	09/12/12 02:59/tb
Sulfate	2160	mg/L	D	50		50	E300.0	09/12/12 03:17/tb
DATA QUALITY PARAMETERS								
Anions	51.7	meq/L		1.00		1	A1030 E	10/23/12 00:00/lkl
Cations	53.2	meq/L		1.00		1	A1030 E	10/23/12 00:00/lkl
Conductivity, Calculated	4220	umhos/cm		1.00		1	A1030 E	10/23/12 00:00/lkl
TDS Ratio	1.10			0.0100		1	A1030 E	10/23/12 00:00/lkl
A/C Balance	-1.73	%				1	A1030 E	10/23/12 00:00/lkl
NUTRIENT PARAMETERS								
Nitrogen, Nitrate as N	0.3	mg/L		0.1		1	E300.0	09/12/12 02:59/tb
RADIONUCLIDES - DISSOLVED								
Gross Alpha	78.7	pCi/L				1	E900.0	09/20/12 16:37/eli-ca
Gross Alpha precision (±)	10.8	pCi/L				1	E900.0	09/20/12 16:37/eli-ca
Gross Alpha MDC	12.7	pCi/L				1	E900.0	09/20/12 16:37/eli-ca
Gross Beta	0.3	pCi/L	U			1	E900.0	09/20/12 16:37/eli-ca
Gross Beta precision (±)	11.0	pCi/L				1	E900.0	09/20/12 16:37/eli-ca
Gross Beta MDC	18.3	pCi/L				1	E900.0	09/20/12 16:37/eli-ca
Radium 228	1.1	pCi/L				1	RA-05	09/19/12 18:59/eli-ca
Radium 228 precision (±)	0.6	pCi/L				1	RA-05	09/19/12 18:59/eli-ca
Radium 228 MDC	0.9	pCi/L				1	RA-05	09/19/12 18:59/eli-ca
Radium 226	0.3	pCi/L				1	E903.0	09/24/12 13:01/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0	09/24/12 13:01/eli-ca
Radium 226 MDC	0.1	pCi/L				1	E903.0	09/24/12 13:01/eli-ca
RADIONUCLIDES - TOTAL								
Radon 222	1730	pCi/L				1	D5072-92	09/13/12 15:33/eli-c
Radon 222 precision (±)	143	pCi/L				1	D5072-92	09/13/12 15:33/eli-c

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Client: Powertech USA Inc
Project: Alluvial Wells Dewey Burdock
Lab ID: R12090145-005
Client Sample ID: BC-1

Report Date: 10/24/12
Collection Date: 09/10/12 13:41
Date Received: 09/11/12
Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
RADIONUCLIDES - TOTAL							
Radon 222 MDC	202	pCi/L				1 D5072-92	09/13/12 15:33/eli-c
TOTAL METALS ANALYSES							
Mercury	ND	mg/L		0.0001		1 E245.1	09/14/12 11:48/eli-ca
DISSOLVED METALS ANALYSES							
Arsenic	ND	mg/L		0.001		2 E200.8	09/28/12 14:02/eli-c
Barium	ND	mg/L		0.05		2 E200.8	09/28/12 14:02/eli-c
Boron	0.72	mg/L		0.05		2 E200.7	09/28/12 21:45/eli-ca
Cadmium	ND	mg/L		0.001		2 E200.8	09/28/12 14:02/eli-c
Chromium	ND	mg/L		0.005		2 E200.8	09/28/12 14:02/eli-c
Copper	ND	mg/L		0.005		2 E200.8	09/28/12 14:02/eli-c
Iron	0.08	mg/L		0.03		2 E200.7	09/28/12 21:45/eli-ca
Lead	ND	mg/L		0.001		2 E200.8	09/28/12 14:02/eli-c
Manganese	0.057	mg/L		0.001		2 E200.8	09/28/12 14:02/eli-c
Molybdenum	0.005	mg/L		0.001		2 E200.8	09/28/12 14:02/eli-c
Nickel	0.013	mg/L		0.005		2 E200.8	09/28/12 14:02/eli-c
Selenium	0.002	mg/L		0.001		2 E200.8	09/28/12 14:02/eli-c
Silver	ND	mg/L		0.001		2 E200.8	09/28/12 14:02/eli-c
Uranium	0.0854	mg/L		0.0003		2 E200.8	09/28/12 14:02/eli-c
Vanadium	ND	mg/L		0.01		2 E200.8	09/28/12 14:02/eli-c
Zinc	ND	mg/L		0.01		2 E200.8	09/28/12 14:02/eli-c
Calcium	513	mg/L		1		2 E200.7	10/02/12 15:12/eli-ca
Magnesium	234	mg/L		1		2 E200.7	10/02/12 15:12/eli-ca
Potassium	13	mg/L		1		2 E200.7	10/02/12 15:12/eli-ca
Sodium	185	mg/L		1		2 E200.7	10/02/12 15:12/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: R12090145-006
Client Sample ID: BC-2

Report Date: 10/24/12
Collection Date: 09/10/12 14:42
Date Received: 09/11/12
Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
PHYSICAL PARAMETERS							
Conductivity @ 25 C	3850	umhos/cm		5.0		1	A2510 B 09/12/12 09:56/tb
pH	7.22	su		0.01		1	A4500-H B 09/12/12 09:16/tb
Solids, Total Dissolved TDS @ 180 C	3900	mg/L		40		1	A2540 C 09/17/12 09:30/jmh
Alkalinity, Total as CaCO3	234	mg/L		5		1	A2320 B 09/17/12 16:16/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B 09/17/12 16:16/ch
Bicarbonate as HCO3	285	mg/L		5		1	A2320 B 09/17/12 16:16/ch
INORGANIC PARAMETERS							
Chloride	21	mg/L		1		1	E300.0 09/12/12 03:35/tb
Fluoride	0.7	mg/L		0.1		1	E300.0 09/12/12 03:35/tb
Sulfate	2400	mg/L	D	50		50	E300.0 09/12/12 03:53/tb
DATA QUALITY PARAMETERS							
Anions	55.2	meq/L		1.00		1	A1030 E 10/23/12 00:00/lkl
Cations	56.5	meq/L		1.00		1	A1030 E 10/23/12 00:00/lkl
Conductivity, Calculated	4490	umhos/cm		1.00		1	A1030 E 10/23/12 00:00/lkl
TDS Ratio	1.07			0.0100		1	A1030 E 10/23/12 00:00/lkl
A/C Balance	-1.31	%				1	A1030 E 10/23/12 00:00/lkl
NUTRIENT PARAMETERS							
Nitrogen, Nitrate as N	0.2	mg/L		0.1		1	E300.0 09/12/12 03:35/tb
RADIONUCLIDES - DISSOLVED							
Gross Alpha	1.8	pCi/L	U			1	E900.0 09/20/12 16:37/eli-ca
Gross Alpha precision (±)	7.0	pCi/L				1	E900.0 09/20/12 16:37/eli-ca
Gross Alpha MDC	11.6	pCi/L				1	E900.0 09/20/12 16:37/eli-ca
Gross Beta	-10	pCi/L	U			1	E900.0 09/20/12 16:37/eli-ca
Gross Beta precision (±)	11.8	pCi/L				1	E900.0 09/20/12 16:37/eli-ca
Gross Beta MDC	20.1	pCi/L				1	E900.0 09/20/12 16:37/eli-ca
Radium 228	0.3	pCi/L	U			1	RA-05 09/19/12 18:59/eli-ca
Radium 228 precision (±)	0.6	pCi/L				1	RA-05 09/19/12 18:59/eli-ca
Radium 228 MDC	0.9	pCi/L				1	RA-05 09/19/12 18:59/eli-ca
Radium 226	0.3	pCi/L				1	E903.0 09/24/12 14:34/eli-ca
Radium 226 precision (±)	0.1	pCi/L				1	E903.0 09/24/12 14:34/eli-ca
Radium 226 MDC	0.1	pCi/L				1	E903.0 09/24/12 14:34/eli-ca
RADIONUCLIDES - TOTAL							
Radon 222	2480	pCi/L				1	D5072-92 09/13/12 15:33/eli-c
Radon 222 precision (±)	151	pCi/L				1	D5072-92 09/13/12 15:33/eli-c

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Client: Powertech USA Inc
Project: Alluvial Wells Dewey Burdock
Lab ID: R12090145-006
Client Sample ID: BC-2

Report Date: 10/24/12
Collection Date: 09/10/12 14:42
Date Received: 09/11/12
Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
RADIONUCLIDES - TOTAL							
Radon 222 MDC	200	pCi/L				1 D5072-92	09/13/12 15:33/eli-c
TOTAL METALS ANALYSES							
Mercury	ND	mg/L		0.0001		1 E245.1	09/14/12 11:49/eli-ca
DISSOLVED METALS ANALYSES							
Arsenic	ND	mg/L		0.001		2 E200.8	09/28/12 14:05/eli-c
Barium	ND	mg/L		0.05		2 E200.8	09/28/12 14:05/eli-c
Boron	0.51	mg/L		0.05		2 E200.7	09/28/12 21:49/eli-ca
Cadmium	ND	mg/L		0.001		2 E200.8	09/28/12 14:05/eli-c
Chromium	ND	mg/L		0.005		2 E200.8	09/28/12 14:05/eli-c
Copper	ND	mg/L		0.005		2 E200.8	09/28/12 14:05/eli-c
Iron	ND	mg/L		0.03		2 E200.7	09/28/12 21:49/eli-ca
Lead	ND	mg/L		0.001		2 E200.8	09/28/12 14:05/eli-c
Manganese	0.039	mg/L		0.001		2 E200.8	09/28/12 14:05/eli-c
Molybdenum	0.013	mg/L		0.001		2 E200.8	09/28/12 14:05/eli-c
Nickel	0.011	mg/L		0.005		2 E200.8	09/28/12 14:05/eli-c
Selenium	0.002	mg/L		0.001		2 E200.8	09/28/12 14:05/eli-c
Silver	ND	mg/L		0.001		2 E200.8	09/28/12 14:05/eli-c
Uranium	0.0241	mg/L		0.0003		2 E200.8	09/28/12 14:05/eli-c
Vanadium	ND	mg/L		0.01		2 E200.8	09/28/12 14:05/eli-c
Zinc	ND	mg/L		0.01		2 E200.8	09/28/12 14:05/eli-c
Calcium	521	mg/L		1		2 E200.7	10/02/12 15:16/eli-ca
Magnesium	220	mg/L		1		2 E200.7	10/02/12 15:16/eli-ca
Potassium	13	mg/L		1		2 E200.7	10/02/12 15:16/eli-ca
Sodium	278	mg/L		1		2 E200.7	10/02/12 15:16/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: R12090145-007
Client Sample ID: DC-1

Report Date: 10/24/12
Collection Date: 09/11/12 09:17
Date Received: 09/11/12
Matrix: AQUEOUS

Analyses	Result	Units	Qual	RL	MCL/		Method	Analysis Date / By
					QCL	DF		
PHYSICAL PARAMETERS								
Conductivity @ 25 C	6350	umhos/cm		5.0		1	A2510 B	09/12/12 09:58/tb
pH	7.17	su		0.01		1	A4500-H B	09/12/12 09:19/tb
Solids, Total Dissolved TDS @ 180 C	6100	mg/L		100		1	A2540 C	09/17/12 09:32/jmh
Alkalinity, Total as CaCO3	392	mg/L		5		1	A2320 B	09/17/12 16:31/ch
Carbonate as CO3	ND	mg/L		5		1	A2320 B	09/17/12 16:31/ch
Bicarbonate as HCO3	478	mg/L		5		1	A2320 B	09/17/12 16:31/ch
INORGANIC PARAMETERS								
Chloride	85	mg/L		1		1	E300.0	09/12/12 04:11/tb
Fluoride	1.1	mg/L		0.1		1	E300.0	09/12/12 04:11/tb
Sulfate	3970	mg/L	D	50		50	E300.0	09/12/12 04:29/tb
DATA QUALITY PARAMETERS								
Anions	93.4	meq/L		1.00		1	A1030 E	10/23/12 00:00/lkl
Cations	108	meq/L		1.00		1	A1030 E	10/23/12 00:00/lkl
Conductivity, Calculated	7320	umhos/cm		1.00		1	A1030 E	10/23/12 00:00/lkl
TDS Ratio	0.950			0.0100		1	A1030 E	10/23/12 00:00/lkl
A/C Balance	-9.34	%				1	A1030 E	10/23/12 00:00/lkl
NUTRIENT PARAMETERS								
Nitrogen, Nitrate as N	7.7	mg/L		0.1		1	E300.0	09/12/12 04:11/tb
RADIONUCLIDES - DISSOLVED								
Gross Alpha	-0.4	pCi/L	U			1	E900.0	09/20/12 16:37/eli-ca
Gross Alpha precision (±)	17.8	pCi/L				1	E900.0	09/20/12 16:37/eli-ca
Gross Alpha MDC	30.0	pCi/L				1	E900.0	09/20/12 16:37/eli-ca
Gross Beta	5.7	pCi/L	U			1	E900.0	09/20/12 16:37/eli-ca
Gross Beta precision (±)	28.8	pCi/L				1	E900.0	09/20/12 16:37/eli-ca
Gross Beta MDC	48.1	pCi/L				1	E900.0	09/20/12 16:37/eli-ca
Radium 228	0.4	pCi/L	U			1	RA-05	09/19/12 18:59/eli-ca
Radium 228 precision (±)	0.6	pCi/L				1	RA-05	09/19/12 18:59/eli-ca
Radium 228 MDC	0.9	pCi/L				1	RA-05	09/19/12 18:59/eli-ca
Radium 226	0.9	pCi/L				1	E903.0	09/24/12 14:34/eli-ca
Radium 226 precision (±)	0.2	pCi/L				1	E903.0	09/24/12 14:34/eli-ca
Radium 226 MDC	0.1	pCi/L				1	E903.0	09/24/12 14:34/eli-ca
RADIONUCLIDES - TOTAL								
Radon 222	1810	pCi/L				1	D5072-92	09/13/12 15:33/eli-c
Radon 222 precision (±)	127	pCi/L				1	D5072-92	09/13/12 15:33/eli-c

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

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



LABORATORY ANALYTICAL REPORT

Prepared by Rapid City, SD Branch

Client: Powertech USA Inc
Project: Alluvial Wells Dewey Burdock
Lab ID: R12090145-007
Client Sample ID: DC-1

Report Date: 10/24/12
Collection Date: 09/11/12 09:17
Date Received: 09/11/12
Matrix: AQUEOUS

Analyses	Result	Units	Qual	MCL/		Method	Analysis Date / By
				RL	QCL		
RADIONUCLIDES - TOTAL							
Radon 222 MDC	173	pCi/L				1 D5072-92	09/13/12 15:33/eli-c
TOTAL METALS ANALYSES							
Mercury	ND	mg/L		0.0001		1 E245.1	09/14/12 11:51/eli-ca
DISSOLVED METALS ANALYSES							
Arsenic	0.001	mg/L		0.001		5 E200.8	09/28/12 14:07/eli-c
Barium	ND	mg/L		0.05		5 E200.8	09/28/12 14:07/eli-c
Boron	1.4	mg/L	D	0.1		5 E200.7	09/28/12 21:53/eli-ca
Cadmium	0.001	mg/L		0.001		5 E200.8	09/28/12 14:07/eli-c
Chromium	0.010	mg/L		0.005		5 E200.8	09/28/12 14:07/eli-c
Copper	0.009	mg/L		0.005		5 E200.8	09/28/12 14:07/eli-c
Iron	ND	mg/L		0.03		5 E200.7	09/28/12 21:53/eli-ca
Lead	ND	mg/L		0.001		5 E200.8	09/28/12 14:07/eli-c
Manganese	0.757	mg/L		0.001		5 E200.8	09/28/12 14:07/eli-c
Molybdenum	0.002	mg/L		0.001		5 E200.8	09/28/12 14:07/eli-c
Nickel	0.086	mg/L		0.005		5 E200.8	09/28/12 14:07/eli-c
Selenium	0.060	mg/L		0.001		5 E200.8	09/28/12 14:07/eli-c
Silver	ND	mg/L		0.001		5 E200.8	09/28/12 14:07/eli-c
Uranium	0.0184	mg/L	D	0.0005		5 E200.8	09/28/12 14:07/eli-c
Vanadium	ND	mg/L		0.01		5 E200.8	09/28/12 14:07/eli-c
Zinc	0.11	mg/L		0.01		5 E200.8	09/28/12 14:07/eli-c
Calcium	442	mg/L		1		5 E200.7	10/02/12 15:20/eli-ca
Magnesium	400	mg/L		1		5 E200.7	10/02/12 15:20/eli-ca
Potassium	14	mg/L		1		5 E200.7	10/02/12 15:20/eli-ca
Sodium	1210	mg/L	D	2		5 E200.7	10/02/12 15:20/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.
 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: 10/24/12
Work Order: R12090145

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2320 B								Batch: 120917A-ALK-SEL-W		
Sample ID: LCS1_120917A		Laboratory Control Sample				Run: PH_COND1-R_120917A		09/17/12 14:03		
Alkalinity, Total as CaCO3		968	mg/L	5.0	97	90	110			
Sample ID: MBLK1_120917A		Method Blank				Run: PH_COND1-R_120917A		09/17/12 14:06		
Alkalinity, Total as CaCO3		ND	mg/L	2						
Sample ID: R12090103-002AMS		Sample Matrix Spike				Run: PH_COND1-R_120917A		09/17/12 14:21		
Alkalinity, Total as CaCO3		302	mg/L	5.0	98	80	120			
Sample ID: R12090145-004ADUP	3	Sample Duplicate				Run: PH_COND1-R_120917A		09/17/12 16:01		
Alkalinity, Total as CaCO3		250	mg/L	5.0				2.4	10	
Carbonate as CO3		ND	mg/L	5.0					10	
Bicarbonate as HCO3		305	mg/L	5.0				2.4	10	
Sample ID: R12090145-005AMS		Sample Matrix Spike				Run: PH_COND1-R_120917A		09/17/12 16:11		
Alkalinity, Total as CaCO3		410	mg/L	5.0	91	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

Report Date: 10/24/12

Project: Alluvial Wells Dewey Burdock

Work Order: R12090145

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2510 B		Batch: 120912_1_COND-PROBE-W								
Sample ID: MBLK-1_120912		Method Blank					Run: PH_COND2-R_120912B			09/12/12 09:36
Conductivity @ 25 C		ND	umhos/cm		5					
Sample ID: R12090144-001ADUP		Sample Duplicate					Run: PH_COND2-R_120912B			09/12/12 09:42
Conductivity @ 25 C		6250	umhos/cm		5.0			0.0	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: 10/24/12
Work Order: R12090145

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C										Batch: TDS120917A
Sample ID: MB-1_120917A		Method Blank								
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	3						09/17/12 09:20
Sample ID: LCS-2_120917A		Laboratory Control Sample								
Solids, Total Dissolved TDS @ 180 C		550	mg/L	10	110	90	110			09/17/12 09:20
Sample ID: R12090133-003C MS		Sample Matrix Spike								
Solids, Total Dissolved TDS @ 180 C		2700	mg/L	40	102	90	110			09/17/12 09:23
Sample ID: R12090145-006A DUP		Sample Duplicate								
Solids, Total Dissolved TDS @ 180 C		3900	mg/L	40				1.0	5	09/17/12 09:31

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: 10/24/12
Work Order: R12090145

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B								Analytical Run: PH_COND2-R_120912A		
Sample ID: ICV-1_120912		Initial Calibration Verification Standard								09/12/12 08:44
pH		7.43	su	0.010	100	98	102			
Method: A4500-H B								Batch: 120912_1_PH-W		
Sample ID: ICV1-1_120912		Initial Calibration Verification Standard						Run: PH_COND2-R_120912A		09/12/12 08:42
pH		12.0	su	0.010	100	99	101			
Sample ID: R12090144-001ADUP		Sample Duplicate						Run: PH_COND2-R_120912A		09/12/12 08:59
pH		7.33	su	0.010				0.7	3	

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: 10/24/12
Work Order: R12090145

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: D5072-92										Batch: C_R164625
Sample ID: C12090392-004EDUP	3	Sample Duplicate					Run: SUB-C164625			09/13/12 15:33
Radon 222		3280	pCi/L					5.9	20	
Radon 222 precision (±)		159	pCi/L							
Radon 222 MDC		198	pCi/L							
Sample ID: MB-R164625	3	Method Blank					Run: SUB-C164625			09/13/12 15:33
Radon 222		40	pCi/L							U
Radon 222 precision (±)		70	pCi/L							
Radon 222 MDC		100	pCi/L							
Sample ID: LCS-R164625		Laboratory Control Sample					Run: SUB-C164625			09/13/12 15:33
Radon 222		480	pCi/L	86		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: 10/24/12

Project: Alluvial Wells Dewey Burdock

Work Order: R12090145

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7								Analytical Run: SUB-C165205		
Sample ID: ICV2	2	Initial Calibration Verification Standard								09/28/12 11:46
Boron		1.0	mg/L	0.10	105	95	105			
Iron		5.0	mg/L	0.030	100	95	105			
Sample ID: ICSA	2	Interference Check Sample A								09/28/12 12:14
Boron		-0.034	mg/L	0.10						
Iron		190	mg/L	0.030	96	80	120			
Sample ID: ICSAB	2	Interference Check Sample AB								09/28/12 12:18
Boron		-0.038	mg/L	0.10						
Iron		190	mg/L	0.030	95	80	120			
Method: E200.7								Batch: C_R165205		
Sample ID: MB-120928A	2	Method Blank								09/28/12 12:42
Boron		ND	mg/L	0.02						
Iron		ND	mg/L	0.001						
Sample ID: LFB-120928A	2	Laboratory Fortified Blank								09/28/12 12:46
Boron		0.94	mg/L	0.10	94	85	115			
Iron		0.94	mg/L	0.030	94	85	115			
Sample ID: R12090145-001B	2	Sample Matrix Spike								09/28/12 21:08
Boron		5.39	mg/L	0.13	100	70	130			
Iron		5.39	mg/L	0.030	98	70	130			
Sample ID: R12090145-001B	2	Sample Matrix Spike Duplicate								09/28/12 21:12
Boron		5.56	mg/L	0.13	103	70	130	3.2	20	
Iron		5.50	mg/L	0.030	100	70	130	2.0	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

Project: Alluvial Wells Dewey Burdock

Report Date: 10/24/12

Work Order: R12090145

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7		Analytical Run: SUB-C165319								
Sample ID: ICV	4	Initial Calibration Verification Standard								10/02/12 12:33
Calcium		50	mg/L	0.50	100	95	105			
Magnesium		49	mg/L	0.50	98	95	105			
Potassium		48	mg/L	0.50	97	95	105			
Sodium		50	mg/L	0.50	100	95	105			
Sample ID: ICSA	4	Interference Check Sample A								10/02/12 12:59
Calcium		490	mg/L	0.50	99	80	120			
Magnesium		480	mg/L	0.50	97	80	120			
Potassium		0.0063	mg/L	0.50						
Sodium		1.1	mg/L	0.50						
Sample ID: ICSAB	4	Interference Check Sample AB								10/02/12 13:03
Calcium		490	mg/L	0.50	98	80	120			
Magnesium		500	mg/L	0.50	99	80	120			
Potassium		-0.0015	mg/L	0.50						
Sodium		0.64	mg/L	0.50						
Method: E200.7		Batch: C_R165319								
Sample ID: MB-121002A	4	Method Blank				Run: SUB-C165319			10/02/12 13:23	
Calcium		ND	mg/L	0.06						
Magnesium		ND	mg/L	0.03						
Potassium		ND	mg/L	0.06						
Sodium		ND	mg/L	0.3						
Sample ID: LFB-121002A	4	Laboratory Fortified Blank				Run: SUB-C165319			10/02/12 13:27	
Calcium		48	mg/L	0.50	96	85	115			
Magnesium		46	mg/L	0.50	93	85	115			
Potassium		44	mg/L	0.50	89	85	115			
Sodium		45	mg/L	0.50	90	85	115			
Sample ID: R12090145-007B	4	Sample Matrix Spike				Run: SUB-C165319			10/02/12 15:24	
Calcium		668	mg/L	1.0	88	70	130			
Magnesium		637	mg/L	1.0	93	70	130			
Potassium		266	mg/L	1.0	99	70	130			
Sodium		1450	mg/L	1.6		70	130			A
Sample ID: R12090145-007B	4	Sample Matrix Spike Duplicate				Run: SUB-C165319			10/02/12 15:40	
Calcium		674	mg/L	1.0	91	70	130	0.9	20	
Magnesium		641	mg/L	1.0	95	70	130	0.6	20	
Potassium		269	mg/L	1.0	100	70	130	1.3	20	
Sodium		1440	mg/L	1.6		70	130	0.6	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

Report Date: 10/24/12

Project: Alluvial Wells Dewey Burdock

Work Order: R12090145

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual	
Method: E200.8										Analytical Run: SUB-C165201	
Sample ID: ICV	14	Initial Calibration Verification Standard							09/28/12 11:01		
Arsenic		0.0504	mg/L	0.0010	101	90	110				
Barium		0.0506	mg/L	0.0010	101	90	110				
Cadmium		0.0510	mg/L	0.0010	102	90	110				
Chromium		0.0512	mg/L	0.0010	102	90	110				
Copper		0.0508	mg/L	0.0010	102	90	110				
Lead		0.0508	mg/L	0.0010	102	90	110				
Manganese		0.0509	mg/L	0.0010	102	90	110				
Molybdenum		0.0503	mg/L	0.0010	101	90	110				
Nickel		0.0503	mg/L	0.0010	101	90	110				
Selenium		0.0515	mg/L	0.0010	103	90	110				
Silver		0.0210	mg/L	0.0010	105	90	110				
Uranium		0.0523	mg/L	0.00030	105	90	110				
Vanadium		0.0517	mg/L	0.0010	103	90	110				
Zinc		0.0503	mg/L	0.0010	101	90	110				
Method: E200.8										Batch: C_R165201	
Sample ID: LRB	14	Method Blank							Run: SUB-C165201 09/28/12 11:22		
Arsenic		ND	mg/L	0.00010							
Barium		5E-05	mg/L	3E-05							
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		3E-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		0.0008	mg/L	1E-05							
Vanadium		ND	mg/L	3E-05							
Zinc		ND	mg/L	0.0006							
Sample ID: LFB	14	Laboratory Fortified Blank							Run: SUB-C165201 09/28/12 11:25		
Arsenic		0.0503	mg/L	0.0010	101	85	115				
Barium		0.0510	mg/L	0.0010	102	85	115				
Cadmium		0.0495	mg/L	0.0010	99	85	115				
Chromium		0.0513	mg/L	0.0010	103	85	115				
Copper		0.0506	mg/L	0.0010	101	85	115				
Lead		0.0510	mg/L	0.0010	102	85	115				
Manganese		0.0506	mg/L	0.0010	101	85	115				
Molybdenum		0.0493	mg/L	0.0010	99	85	115				
Nickel		0.0490	mg/L	0.0010	98	85	115				
Selenium		0.0497	mg/L	0.0010	99	85	115				
Silver		0.0190	mg/L	0.0010	95	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

Report Date: 10/24/12

Project: Alluvial Wells Dewey Burdock

Work Order: R12090145

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										
Batch: C_R165201										
Sample ID: LFB	14	Laboratory Fortified Blank					Run: SUB-C165201			09/28/12 11:25
Uranium		0.0529	mg/L	0.00030	104	85	115			
Vanadium		0.0523	mg/L	0.0010	105	85	115			
Zinc		0.0515	mg/L	0.0010	103	85	115			
Sample ID: R12090145-001B	14	Post Digestion Spike					Run: SUB-C165201			09/28/12 13:06
Arsenic		0.253	mg/L	0.0010	101	70	130			
Barium		0.272	mg/L	0.050	102	70	130			
Cadmium		0.235	mg/L	0.0010	94	70	130			
Chromium		0.244	mg/L	0.0050	96	70	130			
Copper		0.237	mg/L	0.0050	93	70	130			
Lead		0.262	mg/L	0.0010	105	70	130			
Manganese		3.02	mg/L	0.0010		70	130			A
Molybdenum		0.250	mg/L	0.0010	98	70	130			
Nickel		0.236	mg/L	0.0050	91	70	130			
Selenium		0.248	mg/L	0.0013	98	70	130			
Silver		0.0907	mg/L	0.0010	91	70	130			
Uranium		0.288	mg/L	0.00050	111	70	130			
Vanadium		0.252	mg/L	0.010	100	70	130			
Zinc		0.234	mg/L	0.010	94	70	130			
Sample ID: R12090145-001B	14	Post Digestion Spike Duplicate					Run: SUB-C165201			09/28/12 13:09
Arsenic		0.254	mg/L	0.0010	101	70	130	0.4	20	
Barium		0.267	mg/L	0.050	100	70	130	1.9	20	
Cadmium		0.230	mg/L	0.0010	92	70	130	2.4	20	
Chromium		0.243	mg/L	0.0050	95	70	130	0.5	20	
Copper		0.238	mg/L	0.0050	94	70	130	0.6	20	
Lead		0.263	mg/L	0.0010	105	70	130	0.3	20	
Manganese		3.03	mg/L	0.0010		70	130	0.1	20	A
Molybdenum		0.243	mg/L	0.0010	95	70	130	2.8	20	
Nickel		0.238	mg/L	0.0050	91	70	130	0.5	20	
Selenium		0.245	mg/L	0.0013	97	70	130	0.9	20	
Silver		0.0899	mg/L	0.0010	90	70	130	0.9	20	
Uranium		0.291	mg/L	0.00050	113	70	130	1.3	20	
Vanadium		0.255	mg/L	0.010	101	70	130	1.1	20	
Zinc		0.232	mg/L	0.010	93	70	130	0.8	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: 10/24/12

Project: Alluvial Wells Dewey Burdock

Work Order: R12090145

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E245.1										Analytical Run: SUB-C164575
Sample ID: ICV		Initial Calibration Verification Standard								09/14/12 11:22
Mercury		0.0050	mg/L	0.00010	100	90	110			
Sample ID: CCV1		Continuing Calibration Verification Standard								09/14/12 11:24
Mercury		0.0051	mg/L	0.00010	102	95	105			
Method: E245.1										Batch: C_35028
Sample ID: MB-35028		Method Blank								09/14/12 11:27
Mercury		ND	mg/L	3E-05						Run: SUB-C164575
Sample ID: LCS-35028		Laboratory Control Sample								09/14/12 11:28
Mercury		0.0050	mg/L	0.00010	99	85	115			Run: SUB-C164575
Sample ID: R12090145-001C		Sample Matrix Spike								09/14/12 11:39
Mercury		0.0049	mg/L	0.00010	97	70	130			Run: SUB-C164575
Sample ID: R12090145-001C		Sample Matrix Spike Duplicate								09/14/12 11:43
Mercury		0.0049	mg/L	0.00010	98	70	130	0.7	10	Run: SUB-C164575

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: 10/24/12

Project: Alluvial Wells Dewey Burdock

Work Order: R12090145

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0		Analytical Run: DIONEX_120913A								
Sample ID: CCV091112-28	4	Continuing Calibration Verification Standard								09/12/12 01:30
Chloride		74.3	mg/L	1.0	99	90	110			
Fluoride		7.50	mg/L	0.10	100	90	110			
Nitrogen, Nitrate as N		7.25	mg/L	0.10	97	90	110			
Sulfate		72.4	mg/L	1.0	96	90	110			
Method: E300.0		Batch: R58045								
Sample ID: LFB091112-14	4	Laboratory Fortified Blank								09/11/12 21:37
Run: DIONEX_120913A										
Chloride		38.8	mg/L	1.0	97	90	110			
Fluoride		3.92	mg/L	0.10	98	90	110			
Nitrogen, Nitrate as N		3.80	mg/L	0.10	95	90	110			
Sulfate		37.9	mg/L	1.0	95	90	110			
Sample ID: R12090129-001BMS	4	Sample Matrix Spike								09/11/12 22:12
Run: DIONEX_120913A										
Chloride		46.6	mg/L	1.0	97	90	110			
Fluoride		4.15	mg/L	0.10	95	90	110			
Nitrogen, Nitrate as N		4.66	mg/L	0.10	93	90	110			
Sulfate		75.9	mg/L	1.0	102	90	110			
Sample ID: R12090129-001BMSD	4	Sample Matrix Spike Duplicate								09/11/12 22:30
Run: DIONEX_120913A										
Chloride		46.5	mg/L	1.0	97	90	110	0.2	10	
Fluoride		4.15	mg/L	0.10	95	90	110	0.0	10	
Nitrogen, Nitrate as N		4.67	mg/L	0.10	93	90	110	0.2	10	
Sulfate		76.3	mg/L	1.0	103	90	110	0.5	10	
Sample ID: R12090145-004AMS	4	Sample Matrix Spike								09/12/12 02:23
Run: DIONEX_120913A										
Chloride		2010	mg/L	50	93	90	110			
Fluoride		202	mg/L	5.0	97	90	110			
Nitrogen, Nitrate as N		195	mg/L	5.0	98	90	110			
Sulfate		3930	mg/L	50	106	90	110			
Sample ID: R12090145-004AMSD	4	Sample Matrix Spike Duplicate								09/12/12 02:41
Run: DIONEX_120913A										
Chloride		2010	mg/L	50	93	90	110	0.1	10	
Fluoride		203	mg/L	5.0	98	90	110	0.4	10	
Nitrogen, Nitrate as N		194	mg/L	5.0	97	90	110	0.6	10	
Sulfate		3950	mg/L	50	106	90	110	0.4	10	
Sample ID: R12090133-001BMS	4	Sample Matrix Spike								09/12/12 06:34
Run: DIONEX_120913A										
Chloride		49.1	mg/L	1.0	97	90	110			
Fluoride		4.16	mg/L	0.10	91	90	110			
Nitrogen, Nitrate as N		4.89	mg/L	0.10	122	90	110			S
Sulfate		1090	mg/L	1.0		90	110			A
Sample ID: R12090133-001BMSD	4	Sample Matrix Spike Duplicate								09/12/12 06:52
Run: DIONEX_120913A										
Chloride		49.1	mg/L	1.0	97	90	110	0.0	10	
Fluoride		4.19	mg/L	0.10	92	90	110	0.9	10	
Nitrogen, Nitrate as N		4.88	mg/L	0.10	122	90	110	0.3	10	S

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

Report Date: 10/24/12

Project: Alluvial Wells Dewey Burdock

Work Order: R12090145

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E300.0										
Batch: R58045										
Sample ID: R12090133-001BMSD										
4 Sample Matrix Spike Duplicate										
Run: DIONEX_120913A										
Sulfate		1090	mg/L	1.0		90	110	0.0	10	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: 10/24/12

Project: Alluvial Wells Dewey Burdock

Work Order: R12090145

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.0								Batch: C_GrAB-1355		
Sample ID: Th230-GrAB-1355	Laboratory Control Sample			Run: SUB-C164829			09/20/12 16:37			
Gross Alpha	192	pCi/L	94	80	120					
Sample ID: Sr90-GrAB-1355	Laboratory Control Sample			Run: SUB-C164829			09/20/12 16:37			
Gross Beta	149	pCi/L	81	80	120					
Sample ID: MB-GrAB-1355	6	Method Blank		Run: SUB-C164829			09/20/12 16:37			
Gross Alpha	-0.3	pCi/L								U
Gross Alpha precision (±)	0.6	pCi/L								
Gross Alpha MDC	1	pCi/L								
Gross Beta	-1	pCi/L								U
Gross Beta precision (±)	2	pCi/L								
Gross Beta MDC	3	pCi/L								
Sample ID: R12090145-006E	Sample Matrix Spike			Run: SUB-C164829			09/20/12 16:37			
Gross Alpha	970	pCi/L	67	70	130					S
- Spike response is outside of the acceptance range for this analysis. Since the LCS and the RPD for the MS MSD pair are acceptable, the response is considered to be matrix related. The batch is approved.										
Sample ID: R12090145-006E	Sample Matrix Spike Duplicate			Run: SUB-C164829			09/20/12 16:37			
Gross Alpha	810	pCi/L	55	70	130	19	20			S
- Spike response is outside of the acceptance range for this analysis. Since the LCS and the RPD for the MS MSD pair are acceptable, the response is considered to be matrix related. The batch is approved.										
Sample ID: R12090145-006E	Sample Matrix Spike			Run: SUB-C164829			09/20/12 16:37			
Gross Beta	1300	pCi/L	101	70	130					
Sample ID: R12090145-006E	Sample Matrix Spike Duplicate			Run: SUB-C164829			09/20/12 16:37			
Gross Beta	1200	pCi/L	93	70	130	8.5	14			
Sample ID: R12090145-007E	6	Sample Duplicate		Run: SUB-C164829			09/20/12 16:37			
Gross Alpha	-3.4	pCi/L				160	1627			U
Gross Alpha precision (±)	21	pCi/L								
Gross Alpha MDC	36	pCi/L								
Gross Beta	-15	pCi/L				450	532.6			U
Gross Beta precision (±)	30	pCi/L								
Gross Beta MDC	51	pCi/L								

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

S - Spike recovery outside of advisory limits.

U - Not detected at minimum detectable concentration



QA/QC Summary Report

Prepared by Rapid City, SD Branch

Client: Powertech USA Inc

Report Date: 10/24/12

Project: Alluvial Wells Dewey Burdock

Work Order: R12090145

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0								Batch: C_RA226-6229		
Sample ID: R12090145-001E		Sample Matrix Spike					Run: SUB-C165079			09/24/12 13:01
Radium 226		11	pCi/L	87		70	130			
Sample ID: R12090145-001E		Sample Matrix Spike Duplicate					Run: SUB-C165079			09/24/12 13:01
Radium 226		11	pCi/L	83		70	130	4.5	25.4	
Sample ID: MB-RA226-6229	3	Method Blank					Run: SUB-C165079			09/24/12 14:34
Radium 226		-0.04	pCi/L							U
Radium 226 precision (±)		0.08	pCi/L							
Radium 226 MDC		0.2	pCi/L							
Sample ID: LCS-RA226-6229		Laboratory Control Sample					Run: SUB-C165079			09/24/12 14:34
Radium 226		5.9	pCi/L	93		80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

U - Not detected at minimum detectable concentration



QA/QC Summary Report

Prepared by Rapid City, SD Branch

Client: Powertech USA Inc

Report Date: 10/24/12

Project: Alluvial Wells Dewey Burdock

Work Order: R12090145

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: RA-05								Batch: C_RA228-4221		
Sample ID: LCS-228-RA226-6229	Laboratory Control Sample			Run: SUB-C164757			09/19/12 18:59			
Radium 228		7.5	pCi/L	157	80	120				S
- LCS response is outside of the acceptance range for this analysis. Since the MB, MS, and MSD are acceptable the batch is approved.										
Sample ID: MB-RA226-6229	3	Method Blank		Run: SUB-C164757			09/19/12 18:59			
Radium 228		0.005	pCi/L							U
Radium 228 precision (±)		0.6	pCi/L							
Radium 228 MDC		1	pCi/L							
Sample ID: R12090145-007E	Sample Matrix Spike			Run: SUB-C164757			09/19/12 18:59			
Radium 228		10.9	pCi/L	111	70	130				
Sample ID: R12090145-007E	Sample Matrix Spike Duplicate			Run: SUB-C164757			09/19/12 18:59			
Radium 228		11.7	pCi/L	120	70	130	7.0		39.7	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

MDC - Minimum detectable concentration

S - Spike recovery outside of advisory limits.

U - Not detected at minimum detectable concentration



Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

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

Special Report/Formats: <input type="checkbox"/> DW <input type="checkbox"/> POTWWWP <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	Number of Containers Sample Type: A W S V B O DW Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water <i>As per quote</i>	ANALYSIS REQUESTED										Contact ELI prior to RUSH sample submittal for charges and scheduling - See Instruction Page Comments:	Shipped by: Cooler ID(s): Receipt Temp <i>5.6 °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
			SEE ATTACHED											
SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX											
1 <i>DC-2</i>	<i>9-10-12</i>	<i>9:35</i>	<i>Water</i>	<input checked="" type="checkbox"/>										
2 <i>DC-4</i>	<i>9-10-12</i>	<i>10:36</i>	<i>"</i>	<input checked="" type="checkbox"/>										
3 <i>DC-4 Dup</i>	<i>9-10-12</i>	<i>10:37</i>	<i>"</i>	<input checked="" type="checkbox"/>										
4 <i>BC-3</i>	<i>9-10-12</i>	<i>12:03</i>	<i>"</i>	<input checked="" type="checkbox"/>										
5 <i>BC-1</i>	<i>9-10-12</i>	<i>13:41</i>	<i>"</i>	<input checked="" type="checkbox"/>										
6 <i>BC-2</i>	<i>9-10-12</i>	<i>19:42</i>	<i>"</i>	<input checked="" type="checkbox"/>										
7 <i>708</i>	<i>9-10-12</i>	<i>15:24</i>	<i>"</i>	<input checked="" type="checkbox"/>										
8 <i>DC-1</i>	<i>9-11-12</i>	<i>9:17</i>	<i>"</i>	<input checked="" type="checkbox"/>										
9														
10														

Custody Record MUST be Signed	Relinquished by (print): <i>Allen Scott</i>	Date/Time: <i>9-11-12 13:58</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: _____	Relinquished by Laboratory: <i>Blue Foreland</i>	Date/Time: <i>9-11-12 13:58</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 for additional information, downloadable fee schedule, forms, and links.